S. Hrg. 110–235

EXCESSIVE SPECULATION IN THE NATURAL GAS MARKET

HEARING

BEFORE THE

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

OF THE

COMMITTEE ON
HOMELAND SECURITY AND
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

JUNE 25 AND JULY 9, 2007

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EXCESSIVE SPECULATION IN THE NATURAL GAS MARKET

MONDAY, JUNE 25, 2007

U.S. SENATE,
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS,
OF THE COMMITTEE ON HOMELAND SECURITY
AND GOVERNMENTAL AFFAIRS,
Washington, DC.

The Subcommittee met, pursuant to notice, at 11:03 a.m., in room 106, Dirksen Senate Office Building, Hon. Carl Levin, Chairman of the Subcommittee, presiding.

Present: Senators Levin, McCaskill, and Coleman.

Staff Present: Elise J. Bean, Staff Director and Chief Counsel; Dan Berkovitz, Counsel; Kate Bittinger, Detailee, GAO; Ross Kirschner, Counsel; Mary D. Robertson, Chief Clerk; Mark L. Greenblatt, Staff Director and Chief Counsel to the Minority; Mark D. Nelson, Deputy Chief Counsel to the Minority; Clifford C. Stoddard, Jr., Counsel the Minority; Timothy R. Terry, Counsel to the Minority; Emily T. Germain, Staff Assistant to the Minority; Jeremy Kress, Law Clerk; David Weinberg, Law Clerk; Genevieve Citrin, Intern; Edmund Zagorin, Intern; Peg Gustafson, McCaskill staff; Ruth Perez, Detailee, IRS; and Kunaal Sharma, Intern.

OPENING STATEMENT OF SENATOR LEVIN

Senator LEVIN. Good morning, everybody. Our Subcommittee meets today to look into the question of excessive speculation in natural gas prices.

In recent years, allegations of price manipulation and excessive speculation have erupted in almost every sector of our energy markets, from the ongoing litigation over Enron's distortion of electricity prices, to price manipulation charges in the propane market, to allegations of price gouging in gasoline.

Just one year ago our Subcommittee released a report showing how rampant speculation was inflating crude oil prices by $20 per $70 barrels of oil. When manipulation or excessive speculation distorts our markets, it is the American public that pays the price.

Today's hearing examines one case history that illustrates the current chaotic and dangerous vulnerability of U.S. energy markets to price manipulation and excessive speculation. Our focus is on an $8 billion hedge fund called Amaranth Advisors, LLC which, before its collapse in September 2006, was the dominant speculator in the U.S. natural gas market.

Natural gas is a vital U.S. energy source. It heats the majority of American homes, is used to harvest crops, powers 20 percent of our electrical plants, and plays a critical role in many industries including manufacturers of fertilizers, paints, and medicines. It is one of the cleanest fuels we have and we produce most of it ourselves, with only 15 percent being imported, from Canada primarily.

In 2005, alone U.S. consumers and businesses spent about $200 billion on natural gas. For much of 2006, until Amaranth collapsed, futures prices for winter gas were unusually high despite ample natural gas supplies. To understand why prices remained high despite ample supplies and why Amaranth went from billions to broke overnight, the Subcommittee subpoenaed and reviewed millions of trading records from the two leading U.S. commodity exchanges that trade energy, the New York Mercantile Exchange, (NYMEX) and the InterContinental Exchange, (ICE) as well as from Amaranth and other traders, all of whom cooperated with our inquiry.

The trading records show that in 2006 until its collapse, Amaranth dominated trading in the U.S. natural gas market. It bought and sold thousands of natural gas contracts on a daily basis and tens of thousands on some days. It used those trades to accumulate massive natural gas holdings called "positions."

The lead Federal agency that oversees energy trading, called the Commodity Futures Trading Commission, (CFTC) defines "large traders" for reporting purposes as any trader with 200 natural gas contracts. NYMEX examines a trader's position if it exceeds 12,000 natural gas contracts in a month. Amaranth at times held 100,000 natural gas contracts in a month, an amount equal to one trillion cubic feet of gas.

During 2006, Amaranth held about 40 percent of all of the outstanding natural gas contracts on NYMEX and as much as 75 percent of the natural gas contracts in a single month.

The report we are releasing today is filled with charts showing how Amaranth trades affected natural gas prices as far out as 5 years. Amaranth's trades had a common focus—that winter gas prices would be unusually expensive compared to summer and fall prices. In prior years, for example, futures contracts delivering natural gas in January cost $1 to $1.50 more than futures contracts delivering natural gas in October due to the higher demand that comes in January, the peak of the home heating season.

As Exhibit 2 shows,[1] however, in 2006, January futures contract prices skyrocketed, exceeding October prices by $4, more than twice the historic norm. This price difference is the largest between these two contracts in 5 years.

Amaranth's large scale trading, which went on day after day throughout the spring and summer of 2006, was the key driver in this $4 difference. At times during the summer, for instance, Amaranth held 75 percent of the outstanding futures contracts to deliver natural gas in November, 60 percent of those delivering natural gas in January, and 60 percent of those delivering natural gas in March. It was often the largest trader in winter gas futures.

Other traders told the Subcommittee staff that during the summer of 2006 the relative winter futures prices were "clearly out of

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[1] See Exhibit 2 which appears in the Appendix on page 712.

whack", "at ridiculous levels" and unrelated to supply and demand. They also told the Subcommittee that they were reluctant to bet on falling winter prices given Amaranth's demonstrated ability to boost prices through large trades.

The result was that anyone who used the futures market during the summer of 2006 to buy natural gas for delivery in the following winter paid unusually high winter prices compared to fall and summer prices. Natural gas consumers like utilities told the Subcommittee that when they went on the market in the summer to buy their winter gas and hedge against future price increases they knew the winter prices were very expensive and higher than made sense, given ample supplies. But they had to buy.

As one municipal utility told us, they could not afford to "roll the dice" and wait to see if natural gas prices fell later on. Their budget required them to make a decision during the summer. They paid the inflated prices and so did their customers.

Market prices are supposed to be the result of the interaction of many buyers and sellers, not the result of massive trades by a dominant speculator with market power to affect prices. But in 2006, Amaranth dominated the market and winter prices remained at extreme levels despite ample supplies.

It is one thing for a speculator like Amaranth to gamble on natural gas futures, in this instance, betting on unusually high winter prices. It is another thing for Amaranth to make that bet with such large-scale trades that it pushed up prices and, in effect, put heavy pressure on consumers in the market to take the same gamble and pay sky-high prices for future winter purchases.

Later, as Amaranth collapsed in September, winter prices fell dramatically, but by then many natural gas consumers were already locked in and could not take advantage of the lower prices.

Where were the regulators in all of this? Hamstrung by the law. The key law, the Commodities Exchange Act is riddled with exceptions, exemptions, exclusions, and limitations that make policing energy markets almost impossible. The biggest problem is the so-called Enron loophole which, at the request of Enron and others, was inserted into a bill at the last minute during a Senate-House conference in 2000.

The Enron loophole exempts from government oversight energy and metals commodities traded on an electronic exchange by large traders. This exemption has never made any sense. Why should U.S. regulators protect virtually every type of commodity against trading abuses—corn, pork bellies, you name it—but not energy when energy is so vital to our economy? Why should regulators have authority to police regulated markets like NYMEX but not unregulated markets like ICE when both affect energy prices?

Some argue that the exemption makes sense because large traders can take care of themselves on electronic exchanges and do not need government protection. But government protection is not for the traders, it is aimed at protecting the public from price shocks due to market manipulation and excessive speculation.

An example from the Amaranth case history shows how the Enron loophole makes it nearly impossible for regulators to prevent large-scale trading from triggering price spikes. By August 2006, Amaranth had huge natural gas holdings in the September and October futures contracts. NYMEX officials were alarmed. They were alarmed that Amaranth might try to make last-minute large-scale trades that would affect these contract prices. So they ordered Amaranth to reduce its holdings in both the September and the October contracts.

In response, Amaranth reduced its NYMEX holdings, but at the same time increased its holdings in those same contracts on ICE. Natural gas contracts are called futures on NYMEX and swaps on ICE, but there is no functional difference between them.

Exhibit 6[1] shows Amaranth's September natural gas holdings before and after NYMEX ordered it to reduce its size. The data shows that, in response to NYMEX's order to reduce, Amaranth simply switched its holdings to ICE where neither NYMEX nor the CFTC could limit its trading.

Over the next 2 weeks Amaranth then increased its holdings, outside of the scrutiny or regulatory reach of NYMEX and CFTC. By the end of August, Amaranth held almost 100,000 September contracts and 90,000 October contracts, mostly on ICE. Those holdings are so large that, for 100,000 contracts, a change of one penny in the price of the contract translates into a profit or loss of $10 million.

NYMEX's order, in the end, did nothing to reduce Amaranth's holdings; it just caused Amaranth's trading to move from a regulated to an unregulated market.

NYMEX also ordered Amaranth to refrain from large-scale trading during the final half hour of trading on the September contract, again to prevent any chance of price manipulation or excessive speculation. The last day for trading on that contract was August 29. The last half hour was from 2 to 2:30 p.m.

The last half hour is important because NYMEX calculates the final price for its futures contracts using a formula that focuses on the prices paid in the last 30 minutes of trading. The final contract price is important because many natural gas contracts, both on and off the exchanges, incorporate the "final settlement price" of the relevant NYMEX futures contract.

Amaranth stopped trading the September contract on both NYMEX and ICE around 1:15 p.m. on August 29. Amaranth explained that it stopped trading on ICE as well as NYMEX because its traders coordinate their trading on both markets and it did not want to trade on one without the other. In the days before August 29, Amaranth had engaged in a torrent of trading, selling tens of thousands of the September contract. On August 29, Amaranth continued making large sales all day, but its sales were counterbalanced by other traders buying those contracts, the largest of which was a hedge fund called Centaurus. In the last half hour of trading, Amaranth stopped selling, but Centaurus and other traders continued buying and the September contract price shot up 10 percent.

Altogether, on August 29, Amaranth sold about 16,000 September contracts while Centaurus bought about 12,000, almost all on ICE using swaps. NYMEX rules bar traders from holding more than 1,000 contracts in the last 3 days of trading on a contract. The

[1] See Exhibit 6 which appears in the Appendix on page 717.

ICE trading not only made a mockery of that limit, it clearly affected the NYMEX final price. For Amaranth, the last-minute price spike dropped the value of its holdings by nearly $500 million.

Amaranth appears to have gotten a dose of its own medicine on August 29, and it did not like it. On August 30, Amaranth wrote to the CFTC that the sudden September price increase did not reflect supply and demand but large scale trading by market participants who are not "trading in a responsible manner."

It demanded an inquiry. Amaranth's lead trader predicted in an e-mail to another trader: "boy, I'll bet you see some CFTC inquiries" into the September trading. The other trader reminded him, however, that most of the trades were on ICE, using swaps which were outside CFTC authority. He wrote: "until they monitor swaps, no big deal."

"No big deal." That is what one trader thought of CFTC oversight in the face of a torrent of trading and a huge last minute price spike. Why? Because current law strips the CFTC of any authority to regulate ICE, even though ICE is a major U.S. energy exchange.

Right now the law requires U.S. energy market regulators to work blind to ICE trades and powerless to limit ICE trading, even when that trading threatens U.S. consumers with price manipulation and excessive speculation.

Now understanding swaps, hedges, price spreads, and margin requirements is no easy task. Proving price increases were caused by excessive speculation is also difficult, especially since regulators have not provided clear criteria defining excessive speculation. But what is crystal clear and easy to understand is that Amaranth dominated the U.S. natural gas market in 2006. It used massive trades to bet the store that winter prices would be twice as high as summer and fall prices compared to previous years. When Amaranth made that bet, it forced a lot of natural gas consumers to make the same bet and pay sky high prices for winter gas because they could not take a chance and wait to see if prices fell.

When Amaranth collapsed in September, it was too late for many U.S. consumers to take advantage of the lower prices that followed.

Congress needs to do much more to safeguard U.S. energy markets from price manipulation and excessive speculation. The first step is to close the Enron loophole. Closing this loophole would make NYMEX and ICE subject to the same market oversight and put the cop on the beat in all U.S. energy markets. It would also level the regulatory playing field between the two exchanges.

Last week, the CFTC issued a proposed rule that would curb but not end the ill effects of the Enron loophole. The proposed rule would require all traders on regulated exchanges like NYMEX to disclose upon request from a regulator all holdings on unregulated exchanges like ICE. The CFTC notes the "close relationship" between regulated and unregulated commodity markets and the need to get a complete picture of a trader's holdings in order to prevent price manipulation and excessive speculation. The proposed rule is, in essence, a belated acknowledgment of the Amaranth facts. If finalized, this proposal would increase regulators' access to key market information. But getting key information is not enough if regulators remain powerless to act on what they see. Regulators must also be able to reduce holdings and limit trades to prevent price manipulation or excessive speculation. Only Congress can eliminate the Enron loophole once and for all, and restore regulatory authority over all U.S. energy markets.

In 2006, excessive speculation by a single hedge fund, Amaranth, altered natural gas prices, caused wild price swings, and socked consumers with high prices. It is one thing when speculators gamble with their own money; it is another when they turn U.S. energy markets into a lottery where everybody is forced to gamble with them, betting on prices driven by aggressive trading practices. Amaranth is not the only hedge fund to use large-scale trading in U.S. energy markets. To stop the abuses, we have got to put a regulatory cop back on the beat in all U.S. energy markets and give them stronger tools to stop price manipulation and excessive speculation.

Let me turn it over to Senator Coleman, again with thanks to him and his staff for their cooperation in working with us on a very complicated and very detailed investigation. As always, he has been helpful and we very much appreciate that kind of support.

OPENING STATEMENT OF SENATOR COLEMAN

Senator COLEMAN. Thank you, Mr. Chairman.

Today's hearing represents the culmination of the Subcommittee's extensive bipartisan investigation into the impact of speculative trading on U.S. energy markets. Our inquiry builds on the Subcommittee's prior focus on this issue, including a February 2006 field hearing held in my home State of Minnesota that focused on the impact of high natural gas prices on American consumers as well as the Subcommittee's June 2006 staff report.

These efforts, including today's hearing, have been bipartisan from their inception. I want to thank Chairman Levin and his staff for their hard work and dedication in ensuring the fairness and integrity of our energy markets.

I am not going to go through a recitation of the Amaranth facts. The Chairman did a very good job of that. In fact what he did, as I listened and made some notes, he took something that is very complicated and really simplified it. In its essence what we have heard and what we saw is when you have part of a market that is regulated, in this case by NYMEX, and you have part of a market that is not regulated, what happens is when the regulated market responds the activity shifts to the unregulated market. The question becomes what is the impact on American consumers?

As we noted in the Minority's views attached to the Subcommittee's report, different conclusions can be drawn from the same set of facts. Amaranth accumulated such large positions and traded such large volumes of natural gas that at times Amaranth appears to have moved the entire futures market. At other times, however, Amaranth appears to have been responding to the market rather than driving it. Nevertheless, when last year's hurricane season ended without a major event, it became clear that market fundamentals no longer supported Amaranth's bet on winter gas and traders moved quickly and aggressively against Amaranth's positions.

In just a couple of weeks from the end of August through mid-September, Amaranth's natural gas positions lost more than $2 billion in value. These tremendous losses ultimately necessitated Amaranth's liquidation of its entire natural gas portfolio. When the dust finally settled on September 20, Amaranth reported the greatest single losses ever by a hedge fund, more than the losses of Long Term Capital Management (LTCM).

Remarkably, the financial markets met one of the largest individual losses in financial history with relative calm. Amaranth privately negotiated the takeover of his positions. In contrast to the debacle involving LTCM, the Federal Reserve did not have to intervene to prevent financial panic.

The markets' ability to absorb Amaranth's losses is a sign of their vitality and strength. But to shrug off Amaranth's collapse as a rare and victimless event is both short-sighted and irresponsible. Amaranth's collapse fired a warning signal, illuminating a troubling level of high risk speculative trading that occurs on U.S. energy markets and underscoring the need for greater transparency on the over-the-counter electronic energy exchanges.

Today more than 500 energy-related hedge funds deploy a combined $67 billion in speculative capital in our energy markets. To be sure, these traders bring important liquidity and vitality to the markets in which they invest. But I am concerned that at times speculative trading overwhelms the real buyers and sellers like the utilities and industrial users of natural gas. Massive levels of speculation not only increase market volatility but also contribute to rising energy prices which ultimately are passed on to hard-working American families.

I'm reminded of the testimony I heard during the Subcommittee's field hearing last year in St. Paul. Too many Americans find themselves in circumstances similar to Diedre Jackson or Lucille Olson, two individuals who testified about the burdens caused by rising natural gas costs. In the case of Ms. Olson, her natural gas bill represented 30 percent of her monthly income. As a senior citizen trying to cope with the high cost of health insurance and prescription drugs, last year's spike in natural gas prices made it increasingly difficult for her to make ends meet.

Ms. Jackson, a hard-working mother of three and a college student, shared with me the financial jeopardy she faced as a result of a home heating bill that had increased by more than 100 percent.

These examples serve as powerful reminders of the real-world impacts of large spikes in natural gas prices. We must not forget that high energy costs place millions of Americans in financial jeopardy every year.

Nor should we overlook the impact that unchecked and unregulated speculation can have on the financial markets themselves. I am concerned that, last year, several large speculative traders appear to have impacted the natural gas market as a whole. Our financial system depends on investor confidence in the fairness and efficiency of our markets. If investors believe that speculative trading is able to separate prices from supply and demand fundamentals, or worse that a few dominate traders are able to cause unwarranted price changes, then the very integrity of our financial markets is threatened.

More than ever before it is imperative that the CFTC and other market regulators have the statutory authority and budget necessary to police our energy markets. Despite this pressing need for oversight, however, the CFTC's ability to conduct market surveillance has been eroded. Its ability to prevent excessive speculation and price manipulation has been diluted. This is a direct result of the fact that more and more energy trading takes place on unregulated over-the-counter electronic exchanges. It is simply unacceptable that this rapidly increasing segment of our energy markets remains largely unchecked.

As I stated earlier, Amaranth fired a warning shot that market participants and market regulars must not ignore. If they do, I can assure you that Congress will not. As a threshold matter, regulators should develop a clear definition of excessive speculation. Otherwise they will continue to have difficulty monitoring and preventing price distortions.

More important, as we noted in the Minority's views in the Subcommittee's report, Congress must ensure that any proposed cure is not worse than the disease. If we extend CFTC oversight and regulation to electronic over-the-counter exchanges, we must avoid unintended consequences. These exchanges have brought vital liquidity and increased transparency to our energy markets. Therefore, we cannot create incentives for traders to shift their business from the over-the-counter electronic exchanges like ICE to far less transparent and unregulated energy markets. Moreover, we cannot create incentives for the exchanges to move to less regulated offshore markets.

I look forward to the testimony from today's witnesses. And again I thank the Chairman for leading this important bipartisan effort. Today's hearing is an important reminder that the fairness of energy prices and the integrity of our financial markets are neither Democrat nor Republican issues. They are American issues.

Thank you, Mr. Chairman.

Senator LEVIN. Thank you very much, Senator Coleman.

Today's hearing is going to lay out what happened on the market and we are going to have a second day of hearings on July 9 to hear from the CFTC and from NYMEX and from ICE.

Let me now call our first panel of witnesses for today's hearing. We have with us Arthur Corbin, the President and CEO of the Municipal Gas Authority of Georgia in Kennesaw, Georgia.

Paul Cicio, the President of the Industrial Energy Consumers of America here in Washington, DC.

And Sean Cota, the Co-Owner and President of Cota and Cota, Inc. in Bellows Falls, Vermont, the President of New England Fuel Institute, in Watertown, Massachusetts, as well as the Northeast Chair of the Petroleum Marketers Association of America, in Arlington, Virginia.

We very much appreciate each one of you being with us today and we welcome you to the Subcommittee.

Pursuant to Rule 6 of this Subcommittee, all witnesses who testify before it are required to be sworn, and at this time I would ask all of you to please stand and to raise your right hand.

Do you swear that the testimony you are about to give before this Subcommittee will be the truth, the whole truth, and nothing but the truth, so help you, God?

Mr. CORBIN. I do.

Mr. CICIO. I do.

Mr. COTA. I do.

Senator LEVIN. We will use our usual timing system here today. About one minute before the red light comes on you will see the lights change from green to yellow and that will give you an opportunity to conclude your remarks. Your written testimony will be printed in the record in its entirety and we would ask that you limit your oral testimony to no more than 5 minutes.

Mr. Corbin, I think we will have you go first.

TESTIMONY OF ARTHUR CORBIN,[1] PRESIDENT AND CEO, MUNICIPAL GAS AUTHORITY OF GEORGIA, KENNESAW, GEORGIA, ON BEHALF OF THE AMERICAN PUBLIC GAS ASSOCIATION

Mr. CORBIN. Chairman Levin and Ranking Member Coleman, I appreciate this opportunity to testify before you today on the important issue of natural gas market transparency. My name again is Arthur Corbin and I am President and CEO of the Municipal Gas Authority of Georgia. The Municipal Gas Authority of Georgia is a non-profit natural gas joint action agency that supplies all of the natural gas requirements of its 76 member municipalities.

I am testifying today on behalf of the American Public Gas Association. All of our member cities are members of APGA. APGA is the national association for publicly-owned not-for-profit natural gas distribution systems. These retail distribution systems are owned by the public agencies and accountable to the citizens they serve. There are approximately 1,000 public gas systems in 36 States and almost 700 of these systems are APGA members.

Natural gas is a lifeblood of our economy and millions of consumers depend on natural gas every day to meet their daily needs. It is critical that the market for natural gas be fair, orderly, and transparent so that the price consumers pay for natural gas reflects the fundamental forces of supply and demand and are not the result of manipulative or abusive conduct.

An appropriate level of transparency currently does not exist and this has led to a growing lack of confidence by our members in the natural gas market.

The economic links between the natural gas futures contracts traded on NYMEX and those financial contracts in natural gas traded in the over-the-counter markets are beyond dispute. Without question a participant's trading conduct in one venue can affect and has affected the price of natural gas contracts in the other.

The impact of the activities of the Amaranth Advisors hedge fund is a perfect example of these economic links between markets. When the excessively large positions accumulated by Amaranth began to unwind gas prices decreased. Unfortunately, many gas distributors, including the Municipal Gas Authority of Georgia, had already locked in prices prior to the period Amaranth collapsed at

[1] The prepared statement of Mr. Corbin appears in the Appendix on page 107.

prices that did not reflect fundamental supply and demand conditions but rather were elevated due to the accumulation of Amaranth's very large positions. As a result of Amaranth's activities, the Gas Authority members were forced to pay an $18 million premium and pass it through to their customers on their gas bills.

Today the Commodity Futures Trading Commission has effective oversight of NYMEX, and the CFTC and NYMEX provide a significant level of transparency. But despite the economic links between prices on NYMEX and the OTC markets, the OTC markets lack such transparency. The simple fact is that the CFTC's large trader reporting system, its chief tool in detecting and deterring manipulative market conduct, generally does not apply with respect to transactions in the OTC markets. This lack of transparency in a very large and rapidly growing segment of the natural gas market leaves open the potential for a participant to engage in manipulative or other abusive trading strategies with little risk of early detection by the CFTC until after the damage has been done to the market. It simply makes no sense to have transparency with respect to one small segment of the market and none with respect to a much larger and growing segment.

Accordingly, APGA believes that transparency in all segments of the market, including those transactions that take place off exchanges and platforms is critical to ensure that the CFTC has a complete picture of the entire market. We believe that the CFTC does not currently have these tools necessary to police its beat.

The CFTC has done a good job in catching market abuses after the fact. However, by the time these cases are discovered using the tools currently available to government regulators, our members and their customers have already suffered the consequences of those abuses in terms of higher natural gas prices. Greater transparency with respect to large positions, whether entered into on a regulated exchange or in an OTC market in natural gas will provide the CFTC with the tools to detect and deter potential manipulative activity before our members and their customers suffer harm.

The current situation is not irreversible. Congress can provide American consumers with the protection they deserve by passing legislation that would turn the lights on in these currently dark markets. APGA looks forward to working with you to accomplish this goal and I will be happy to answer any questions you may have.

Senator LEVIN. Thank you so much, Mr. Corbin.

TESTIMONY OF PAUL N. CICIO,[1] PRESIDENT, INDUSTRIAL ENERGY CONSUMERS OF AMERICA, WASHINGTON, DC

Mr. CICIO. Chairman Levin, Ranking Member Coleman, thank you for the opportunity to testify.

The Industrial Energy Consumers of America is a non-profit trade association whose membership are significant consumers of natural gas from every major energy intensive sector. At the heart of the matter is that every consumer in the country assumes that the government is protecting their interests, and that markets are

[1] The prepared statement of Mr. Cicio appears in the Appendix on page 120.

working and operating on a level playing field. Nothing could be further from the truth.

The subject of excessive financial speculation, market power, market manipulation, first came to our attention in 2001 with the implementation of the Commodity Futures Modernization Act and concerns have continued to grow. The signs were obvious but because of the lack of market data transparency we could never prove it. This all changed with the implosion of the Amaranth Advisors hedge fund.

Amaranth provides a clear and troubling picture of how easy it is for large hedge funds, Wall Street trading companies to manipulate the market to the benefit of investors and to the detriment of every consumer in the country. Amaranth completely dispels the Wall Street myth that the market is too large for any one company to manipulate.

There is excessive financial speculation in the natural gas market but we can deal with it if we have transparency for the regulators to monitor the size of the natural gas volumes that any one individual is controlling. All market inefficiencies are paid for by us, the consumer, and even a relatively small increase in the price of natural gas such as 25 cents can result in a $5.5 billion price tag for consumers; 25 cents, $5.5 billion over the course of the year.

And unlike many other commodities such as currencies, gold, excessive speculation in natural gas has a direct impact on homeowners, farmers and manufacturers. And because natural gas supply is fragile it is particularly vulnerable to manipulation.

To illustrate the importance of natural gas, one only needs to look at two product examples. Natural gas represents 85 percent of the cost of making anhydrous, which is used to make fertilizer for our farmers, and it is 93 percent of the cost of making plastic, something we all consume. The majority of manufactures are dependent upon natural gas as a fuel and there is virtually no substitute.

We can assume that had Amaranth not continued to increase their control of the price by continuing to add to their positions market conditions would have driven the price lower. In fact, after Amaranth collapsed, so did the price. In September 2006 the price was $6.81. After the Amaranth collapse the price fell to $4.20, a difference of $2.61. If we assume that only one dollar of the $2.61 price was due to Amaranth it would have cost consumers an estimated $9 billion over the time period of April through August 2006.

The Amaranth event raises several important questions that Congress should address. The CFTC has known for a long time that a significant market oversight gap exists. Why hasn't the CFTC stepped forward to address the problem? Why isn't the CFTC responsive and accountable to the public interest? Did the Commodity Futures Modernization Act of 2000 go too far? Did it weaken CFTC's market oversight accountability? Is the relationship between the CFTC and the exchanges too cozy? Why isn't there time limits to prevent CFTC officials from taking top positions in the exchanges?

It is not without notice that last year large Wall Street-type companies weighed in on Congress to oppose the same reporting and transparency that would have prevented Amaranth's activities. Interestingly, these same companies do mark-to-market position accounting at the end of each trading day for internal financial management. Our question is what are they trying to hide?

IECA recommends that Congress take immediate action to give CFTC regulatory authority over NYMEX, ICE, and OTC market in general, require large traders to report their positions daily to the CFTC, give CFTC the ability to aggregate positions on both exchanges, establish daily trading volume limits, increase monitoring in all months, increase CFTC enforcement funding, and lastly, of course, increase the supply of natural gas.

Thank you very much.

Senator LEVIN. Thank you very much, Mr. Cicio. Now Mr. Cota.

TESTIMONY OF SEAN COTA,[1] CO-OWNER AND PRESIDENT, COTA AND COTA, INC., BELLOWS FALLS, VERMONT, PRESIDENT, NEW ENGLAND FUEL INSTITUTE, WATERTOWN, MASSACHUSETTS, AND NORTHEAST CHAIR, PETROLEUM MARKETERS ASSOCIATION OF AMERICA, ARLINGTON, VIRGINIA

Mr. COTA. Hon. Chairman Levin, Ranking Member Coleman, thank you for having me testify before you today.

I currently serve in the Petroleum Marketers Association of America, as its Northeast Regional Chair. PMAA is a national federation of 45 States, regional associations representing some 8,000 independent fuel marketers that collectively account for approximately half of the gasoline and 80 percent of the heating oil sold in the United States. I am also President of the New England Fuel Institute, (NEFI), a trade association outside of Boston. And as such, I represent 1,000 fuel dealers and related service companies located throughout New England. NEFI members deliver approximately 40 percent of the Nation's home heating oil.

I am President of one of those companies, Cota & Cota of Bellows Falls, Vermont, a third generation family business operating in Southern Vermont and Western New Hampshire. Unlike larger energy companies, heating fuel dealers like me are mostly small second and third-generation family-run businesses. Also unlike large energy companies, we deliver directly to American homes and small businesses.

Energy consumers are affected by excessive speculation and price volatility in the energy commodity markets in profound ways. We and our customers need public officials, including those in Congress and on the CFTC, to look after us and take a stand against profiteering traders and hedge fund managers that seek to artificially inflate prices for their own personal gain. We deserve to be made aware. In fact, we deserve to know the truth behind what is driving these prices, especially pertinent to market forces that may be contributing to volatility and price spikes.

The CFTC is currently not collecting data on a series of legislative and regulatory loopholes which exempt the over-the-counter exchanges and foreign boards of trade with U.S. destined contracts from Federal oversight. It is in these dark exchanges that traders may be tempted to engage in dubious manipulative trading practices free from the reach of U.S. regulators.

[1] The prepared statement of Mr. Cota appears in the Appendix on page 123.

My grandparents began serving the community with heating fuels in 1941. We have been offering fixed-price programs to our consumers for the past two decades. At first we filled our fuel tanks in the summertime and sold those gallons until our consumers ran out of those gallons. However my storage, although large by industry standards, is still very limited. We have 6 days of January supply.

It quickly became apparent that due to customer demand that we would need a different method for providing fixed-price programs. It was at that time that we began to enter into NYMEX-based futures contract with our suppliers so we could continue to offer these programs to our customers. These independent suppliers of wholesale fuels would purchase NYMEX contracts for future delivery and then, in turn, resell these contracts to us after a profit was added. This is typical for the industry.

Since we first began purchasing NYMEX-based contracts, volatility has increased dramatically. Traditionally when we purchased futures contracts, the coldest winter month, January, was more expensive than the warmest month of August. The rate of difference is usually a half a cent per gallon per month. In the past few years we have seen the difference between summer months and winter months be as high as 23 cents per gallon.

Up until about 4 years ago, it would have been abnormal to have a daily market move of more than one half cent per gallon. Today it is typical to see 5 cent daily moves and moves as high as 12 cents.

We used to offer insurance programs as an alternative to fixed-price programs for our consumers. These option-based programs have had the highest increase in volatility. Four years ago we were able to purchase an "at the money" put or call at a reasonable cost to our consumers. Four years ago the cost of this type of transaction for a January contract purchased in the summer would have been between 4 and 6 cents per gallon. Today the same program would cost me in the area of 40 cents per gallon.

Currently fixed-price programs make up 70 percent of my total sales. In a business that makes profit in cents per gallon, it is much more difficult to continue to offer these fixed-price programs to our consumers. Unlike many players in the market who make their commodity investments for pure financial gain, we as an industry are hedging directly for the consumer.

The annual U.S. heating oil industry volume for consumption is between 8 and 10 billion gallons per year. With ICE and other exchanges entering into this energy market in a large way, it is having the same effect as an elephant jumping into the bathtub.

These dark exchanges are expanding both offshore in Dubai and other countries and with ICE purchasing ChemConnect. Congress and enforcement authorities need to now rein in the excessive speculation and out of control profiteering on the energy commodity markets, including these dark exchanges.

Congress should, one, encourage the CFTC to revisit its use of no action letters. Two, investigate whether or not the Atlanta-based ICE intentionally established its operations in London to circumvent U.S. regulations. Three, require large position data collected on all U.S. destined contracts. Four, fully fund CFTC levels as appropriate to upgrade infrastructure and collect capacities and increase personnel. Encourage the CFTC to be vigilant in its data collection. And hold these dark exchanges to the same rule of law that NYMEX and the Chicago Mercantile Exchange have.

Thank you again, Mr. Chairman, for this opportunity to share my insight into this issue. I am open to any questions you may have.

Senator LEVIN. Thank you all for very valuable testimony.

Some people say that when Amaranth made these huge purchases and sales and had these massive trades, they only hurt themselves. They only lost their own investors' money, and no one else got hurt when those billions went down the drain.

But will you tell us in your own words whether, in your judgment, the massive purchases, trades, and sales by Amaranth of these future contracts hurt you and your customers? And, if so, how? Mr. Corbin, let me start with you.

Mr. CORBIN. Thank you. One of the things that we do as part of our function of providing gas supply to our member municipalities is to try to hedge or try to manage the risk of prices spiking, going a lot higher. The bulk of what we do buy is in the wintertime.

And so what we do is try to take a very managed approach and do not simply let our purchases ride and come to find that prices have, in fact, spiked and harmed our members. And so we try to, in advance, hedge against that price risk.

In 2006, when you look at what we are doing in our hedge program, we have some parameters that require us to go in and hedge those prices in advance of the winter. And we have time parameters because we have found that hope is not a good strategy. So you cannot wait until the last minute hoping that prices are going to come down. You need to go ahead and take a disciplined approach.

And so over the course of the summer of 2006 we are placing hedges for our members for the winter of 2006–2007. It is very clear to us, certainly even more clear today having the report that this Subcommittee has put forward, that through the very excessive positions that Amaranth had the winter price of 2006–2007 was well beyond what would be supported by underlying market fundamentals of supply and demand.

And so when we looked at what our positions were that we ended up putting on for the winter of 2006–2007, those positions versus where the market settled to when Amaranth was effectively required to exit through the meltdown, you take the difference and that is $18 million that it cost our members, which ultimately cost their consumers.

Senator LEVIN. Thank you. Mr. Cicio.

Mr. CICIO. Thank you, Mr. Chairman. To answer your question we have to put it in context, that in 2006 national natural gas inventories were at a 5-year level or above the 5-year level, and natural gas production was stable.

It is really impossible to put a definitive number on what it cost consumers. This is why in our testimony we used an example. We know that in the report that was put together by the Subcommittee that Amaranth significantly and continually increased their positions throughout the period of April through August 2006. We know that after Amaranth collapsed the price fell over $2.60.

So there is some portion of that $2.60 drop that was an artificial price, that was artificially higher than what it would have been had those large purchases not continued.

This is why we have come up with an illustration. If one dollar of that $2.60 higher price was the result of Amaranth's continually buying, owning as much as 100,000 contracts—and by the way let me give you a perspective. This morning I checked for the amount of open interest on the New York Mercantile for the last trading day, Friday, there were 90,500 open interests. What we saw in the Subcommittee report is that Amaranth was controlling at one point 100,000 contracts all by itself.

So a one dollar impact for Amaranth's purchases over the course of that time period of the spring would have amounted to a $9 billion premium that consumers would have paid.

Senator LEVIN. That is $9 billion across the entire industry?

Mr. CICIO. For the United States.

Senator LEVIN. For the United States, consumers in the United States paid $9 billion according to that estimate, which you acknowledge is an estimate.

Mr. CICIO. It is an estimate.

Senator LEVIN. Would you judge that is a fair estimate, a conservative estimate? How would you assess it? The best you can? Give us your best judgment. Is that a fair division of the $2.60? Is it an allocation that you think is a reasonable allocation?

Mr. CICIO. To be honest with you, we just do not know.

Senator LEVIN. How do you know then that there was an impact? Just from that action that occurred after they collapsed? That is what you deduced the impact from?

Mr. CICIO. Yes, sir.

Senator LEVIN. Is there other evidence of an impact beyond that? In other words, is the fact that there were huge purchases that were made by Amaranth and that winter price then went up with those huge massive purchases, is that part of the evidence of impact?

Mr. CICIO. Absolutely. The fact is that we had ample supply. The fact is that we had such a significant drop after the collapse illustrates that the price was higher than it should have been given basic laws of supply and demand.

Senator LEVIN. Thank you. Mr. Cota.

Mr. COTA. The impacts are dramatic and across the board. We have had a lot of discussion here with regard to natural gas. But the entire energy complex moves in unison. Movements in natural gas translate immediately into movements in heating oil, movements in gasoline, movements in all of the crude oil products and all of the derivative contracts that come off from that.

These future exchanges are the price discovery point for the energy industry in the United States instantly. In volatile energy markets I get price changes on a replacement cost basis from my suppliers as often as three times a day in a volatile market. Those things are translated to the consumer the next day. I do not do it three times a day but the next day.

So one way of measuring the impact of these volatile markets on the consumer is immediate in these pricing mechanisms.

Longer term, the consumers are paying. I am in a cents above business. Our profit margin, as a percentage, goes down as commodity prices go up. The consumers pay cent for cent. Everything—if my cost goes up, their cost goes up. So the direct impacts are immediate and direct to the consumer. When they buy futures contracts for futures purchase and there is added cost due to volatility, those consumers pay for that.

Currently the market has been in contango because of these large volatile trades. But when this thing turns, if it ever does turn, perhaps in response to oversight, the opposite could have an effect. Contango encourages inventories. We could be in a situation very rapidly where people short the market and inventories disappear within a matter of a month, at which point you are going to have another supply disruption which is going to again distort the market from another perspective. Again, the consumer will pay.

Your question that you had earlier with regard to is there evidence? Well, there is no data. Most of the data is not traded. The entire heating oil industry is 8 to 10 billion gallons per year in the United States. I would not doubt if you added up all these dark exchanges in addition to the NYMEX that is traded several times per day.

We need speculation. I could not offer my consumers price protection without speculators in the market. They are a key part. But at what point do you allow speculation to just run rampant?

So if there is no data, it is the same thing as having no cops with a judiciary. You cannot go to court if there is no cops to collect the evidence. I do not think, for a huge chunk of the market, that there are any cops on the beat. Where are the cops?

Senator LEVIN. In terms of setting natural gas prices in the futures market, how important is ICE? Just quickly, Mr. Corbin. Can it affect the price on NYMEX, the ICE prices?

Mr. CORBIN. Yes.

Senator LEVIN. Are they interrelated?

Mr. CORBIN. Yes. And we see, frankly, the entire natural gas marketplace, not just NYMEX, ICE, but also the bilateral market and voice broker, that activity can have an impact on the broad marketplace.

Senator LEVIN. Would you agree with that, Mr. Cicio?

Mr. CICIO. Absolutely. These markets and these exchanges, they are all interrelated.

Senator LEVIN. Mr. Cota.

Mr. COTA. It is a very close correlation.

Senator LEVIN. So would you all agree that we have to eliminate the Enron loophole in order to have regulation across the board? If it is going to have any impact in one place, it has got to have impact in all places? Would you agree with that Mr. Corbin?

Mr. CORBIN. Yes, except I am a little concerned that the focus is on simply electronic exchanges and believe that the CFTC needs to see the entire market.

Senator LEVIN. All over-the-counter market, including ICE?

Mr. CORBIN. Yes.

Senator LEVIN. Thank you. Mr. Cicio.

Mr. CICIO. We agree entirely with that. Just looking at the electronic exchange still is not giving us the necessary oversight. You need to go beyond that.

Senator LEVIN. Mr. Cota.

Mr. COTA. Nobody knows what the data is. Until the CFTC starts collecting data on the entire traded U.S. based energy commodity markets, you are not going to have any idea what is occurring in the market. Every market needs, in order to have a well regulated market and a clear functioning market, you need to see what the data is. That data is not being seen.

Senator LEVIN. In addition to seeing it, once you have the data is it also important they be able to issue the same kind of an order on ICE as they do on NYMEX?

Mr. COTA. The only thing that is more fungible than my commodity is the money that instantly changes from one market to another based upon regulation.

Senator LEVIN. I am not sure what the answer is.

Mr. COTA. Yes, you need to have an oversight on all markets. Just doing it on one will cripple the only regulated market and force it all into these offshore regulated United Kingdom based or wherever based commodity markets.

In the NYMEX, despite that they are frustrating if you trade every day, they are the best of what you have got.

Senator LEVIN. The NYMEX.

Mr. COTA. The NYMEX. And you do not want it to go to foreign exchanges without any regulation.

Senator LEVIN. When you say regulation and oversight, that includes having an order issue to reduce one's position as being excessive speculation?

Mr. COTA. Absolutely. I am concerned about the consumer. But if you are only concerned about the trader, to protect the traders you still need to have oversight, margin requirements that reflect volatility in the markets, and large trader positions that are limited so that they cannot sway a market. And you do not have that in huge amounts of the trade that is currently occurring.

Senator LEVIN. That is to protect the consumers, not just the traders?

Mr. COTA. I would like to protect the consumer but we are not protecting anybody.

Senator LEVIN. I have got you. Thank you. Senator Coleman.

Senator COLEMAN. Thank you, Mr. Chairman. I am trying to figure out how to get our arms around all of this.

Mr. Cota, you talked about these dark markets. So we have NYMEX which is clear, it is regulated, we know what is going on, it has the transparency that we talk about.

We are now talking about ICE, but ICE is only a piece of it. So we have the bilaterals and we have the foreign markets. One of the concerns we have seen generally with financial transactions is that there is a lot of movement, IPOs and everything, to other markets.

Is it your sense that the CFTC can regulate all of these? I will walk by each one. Is that the vision here? I am trying to figure out can we get our arms around all of it? Is it your sense that the CFTC is the body that should be regulating all of these transactions, the bilaterals, anything that is done, even on foreign markets? Can you give me a sense of how you accomplish that?

Mr. COTA. I would think that, as with any transaction, if I have a contract with my consumer, those contracts need to be kept. Current data collection requirements do not exist in a lot of these dark markets. I think that is an easy thing to accomplish.

If there is something fishy in the market that is done on one of these bilateral dark exchanges, some derivative deal, if you have got the data and the data is not destroyed, then you have got the ability to investigate it later.

The amount of these trades are huge. The money that moves into this market is a huge part of the world economy that moves in and out daily.

I no longer look at supply and demand when I am trying to judge for my consumers. I am looking at what is occurring in the currency market, what is occurring in the bond market. If there is a move in the bond market or the equity market, then I know commodities are going to go down for a little bit because of the amount of money that is moving in and out of these markets. It is no longer supply and demand. Even if you are a technical trader it does not follow technical trading. It is an imbalance of greed and fear, in my opinion.

Senator COLEMAN. I want all of you to respond, but I want to go to Mr. Corbin. Do you agree that it is not just about supply and demand today? If it is not, how do you protect your consumers? What is it that you can bring to the table that gives you the ability to maneuver through these markets?

Mr. CORBIN. I think taking it back to your previous question about can the CFTC get a handle on this huge market that has got a lot of different pieces to it, the CFTC has a large trader reporting system today, a very good one. They are only being reported to daily from NYMEX transactions.

Our view is that if you have somewhat—clearly, also ICE is voluntarily providing that information daily today, which we certainly applaud ICE for taking that step to do it voluntarily. If you have large traders that are in the bilateral market, we feel strongly that those folks, in managing their own business, they have very effective information systems to where they can mark-to-market on a daily basis literally their position in order to manage it.

And so we believe that they can plug into that large trader reporting system that we now have NYMEX reporting to daily, ICE voluntarily reporting to daily. We believe the other players in the market that are large players can also plug into that system.

That is going to help the CFTC to see positions across the market daily that we think will improve the authority they have today to do the special call for additional information and investigations. But if you do not really see that you really do not have enough information to go in and pursue something that you suspect is abusive or could be creating a problem in the market.

And so then, going to your second question, us as consumers, how do we get confidence? Well, we do not in the existing structure because we do not feel like the regulator has what he needs to do his job. He has got the authority to pursue it and he has pursued—the CFTC has done a good job pursuing bad actors in our business.

It just comes 2 and 3 years later, hundreds of millions of dollars in penalties and fines have been paid, as much as $2 billion. None of that goes to the consumer though. Those that have been harmed do not see any of that. It has gone back into the U.S. Treasury.

So we would like to get them more information, get them that information on a current daily basis so that they can see this stuff as it is occurring and can react a lot more quickly. Then the consumer does not pay for a position that got way to big.

Senator COLEMAN. Mr. Cicio, is there anything you want to add to that?

Mr. CICIO. Yes, sir. The large trader report is the solution. The CFTC keeps this information confidential. The common denominator of all trading is volume, the volume of natural gas that any one entity is buying or selling. And that is the kind of information that the CFTC needs to determine whether there is a significant enough volume that any one player is impacting the price.

And so we would agree with the others on that point. Thank you.

Senator COLEMAN. We are talking here about reporting requirements in terms of size. What about position limits?

Mr. CICIO. Yes. We believe that there should be limits to how many contracts a single entity should be able to control. What we saw in the Subcommittee report was that Amaranth controlled 100,000 contracts in 1 month. And what I shared with you just a moment ago is that for the August contract there is only 90,500 open interest contracts. That shows how significant Amaranth's position was and looks like market power.

If a manufacturer had that much market power for their product that they were selling, whether it is plastic or steel or aluminum, it would raise huge concerns by the antitrust and FTC people.

Senator COLEMAN. Mr. Corbin, is there benefit to having liquidity in the markets?

Mr. CORBIN. There is a great benefit. And so we would like—we think we need to be careful here in what you just asked Mr. Cicio. And that is with regard to limits. We think what is critical is let us get the transparency. Let us get the information in the hands of the CFTC across the market so they can see these positions across the market. And if the CFTC determines that there needs to be limits imposed because they are seeing the effects of larger positions held in order to make sure that we can get ahead of any kind of negative behavior and how it impacts the price of gas, then we think that information would help them make that determination.

At this point we are not advocating limits. We are advocating transparency through expanding the large trader reporting system.

Senator COLEMAN. Mr. Cota, two questions. One is are there benefits to having liquidity in the market? If so, what are they? And do you advocate position limits?

Mr. COTA. Without liquidity and speculation—speculation and liquidity are directly linked. You need to have speculation in the market in order to hedge anything out in the future.

What you want is to enable all speculators to have an even hand in taking a risk in that market, much like I, as a retailer, am taking risks in that market.

So the number and the margin and the percentage of the total market are all very relevant in order to have a well regulated market, in my opinion.

Senator COLEMAN. Position limits though, is that part of it?

Mr. COTA. Position limits, to me, may or may not necessarily be related to the actual numbers of contracts. As markets increase and decrease I think it needs to be relative to what the percentage of the total market is.

If I recall reading some of the study here on the Amaranth holdings, if they actually had to have those contracts delivered, one of their positions was almost equivalent to the entire natural gas industry. So if that were a smaller percentage yet it was over a trigger amount, it may not be as relevant. So I think it needs to relate to the total amount of contracts being traded in that market and how big is that market?

And I believe that the New York Mercantile Exchange does do evaluations on that and the other markets do not.

Senator COLEMAN. So it would be beneficial to have a definition of what excessive speculation is?

Mr. COTA. I think positions and margin, as measured through options or whatever other mechanism, would be a better indication of how to limit the volatility and speculation in the market. Speculation is important. You need to have speculation in order to have futures exchanges.

Senator COLEMAN. Mr. Corbin, would it be beneficial to have a definition of excessive speculation?

Mr. CORBIN. Yes.

Senator COLEMAN. Mr. Cicio.

Mr. CICIO. Yes, it would be helpful.

Senator COLEMAN. Thank you, Mr. Chairman.

Senator LEVIN. Thank you. Senator McCaskill.

OPENING STATEMENT OF SENATOR MCCASKILL

Senator MCCASKILL. Thank you.

In reviewing all of the materials, I apologize, I was not here for your testimony although I heard most of it in my office, as I was listening with one ear to a conference call and listening to you with the other ear.

It strikes me that regulation in this area is really driven by common sense in light of what happened with this one incident that has been the focus of the hearing today. And I have learned in the short period of time I have been here that ideas that sound so simple and have so much common sense behind them, it is unbelievable how difficult it is to move them forward in terms of legislation and actually to get the votes necessary to pass. What would appear to anyone who heard this story, would say well fix that, for gosh sakes. If you are going to do anything, fix that.

And there is this invisible force always behind everything, and that is the people who are lobbying the other side of the equation, the people who are saying do not go there, the people who are visiting member's offices and saying stop, stop, do not do this, you have no idea what you are doing. It will be bad.

All of those people generally have people they have hired to help them do that, to spread that information.

Who is working against this? Who is paying the lobbyists to oppose what would appear to be common sense at this point in terms of some kind of regulatory oversight in this area of a commodity that is an essential and not a luxury? Any of you?

Mr. CORBIN. I will take a shot at that. I do not know that I can answer and say who, but I think we have heard some of the things that are the difficult balancing act. And that is the question of liquidity. You do not want to restrict the market. It is very important that we have a well functioning liquid natural gas market. And so you want to be careful that you do not, in some way, inhibit it.

But I think you have also got to be careful that you do not have regulation in one place and then push people into a less transparent market segment.

The approach we have taken, and as far as expanding the large trading reporting system, the objection that we have heard is that it may be time consuming and costly. From our perspective, the CFTC already has a large trading reporting system that exists. Expanding it to include the over-the-counter market activity, we do not think it is a tremendous expense for them. I think they have got it and it is largely electronic and they can accept electronic transmissions to go almost straight into their system.

I think the people with large positions also have electronic systems to manage their position. And so providing the information should not be costly and, we do not believe, difficult.

I think what you do have is a lot of activity over the counter and the reason that the over-the-counter market exists is that NYMEX is a very standard product. It is at one point in the natural gas grid only and it is a fixed amount of gas. Well, people do not buy gas just at that one point and they do not just buy gas in that fixed quantity. And so the issue is how do you make it at all comparable in that reporting system?

And so Paul's point about you can break it down to volume, and I think you can break transactions down to whether they are a long position or a short position in the scheme of things, which I think could be done.

I do not think it is as difficult as the opponents make it to be but I think—

Senator MCCASKILL. Well, who are the opponents though? I am trying to figure it out who is against expanding the CFTC authority to be able to regulate large speculation in an essential commodity market? Who are these people?

Mr. CICIO. May I take a crack at that? Add up all the consumers and add up all of the producers of natural gas, and together they are, by the best data that I have seen available, insignificant players in this marketplace, insignificant. So it is all of the others.

All that consumers want to do is buy gas at a price, with a certainty. We hedge to get increase predictability of price so that we can price our product and reduce our risk.

Senator MCCASKILL. Right.

Mr. CICIO. Producers primarily want to set a price so that they can sell and that they have certainty in terms of profitability.

Senator MCCASKILL. Right.

Mr. CICIO. To answer your question, all other entities who want to take large positions for speculating, larger positions than, for example, that are available in the limits through NYMEX, are the organizations who oppose reporting.

Senator MCCASKILL. So gamblers?

Mr. CICIO. Well, people who are speculating to make a profit on speculation.

Senator MCCASKILL. Because they are not getting anything for what they are doing good. They are not receiving anything. They are just gambling that something might happen.

Mr. CICIO. They are speculators. And as we have all agreed, speculation is a necessary part of the marketplace.

Senator MCCASKILL. I do not quarrel that speculating is a necessary part of the marketplace. But I am trying to hone in on who is against this kind of regulation in order to provide some kind of certainty to consumers and suppliers which, by the way, is who we should be looking after here, not the gamblers. I mean, our job I think in this building is to look after the consumers and the suppliers as it relates to using a product that they have to have to heat their homes and to eat.

So it seems weird to me that the invisible hand of opposition are, in fact, the gamblers, not the consumers or the suppliers.

Mr. COTA. Senator McCaskill if I can take a stab at that, as well, your point on gamblers is right on. It seems to me sometimes the Nevada Gaming Authority has more authority—

Senator MCCASKILL. No question about it.

Mr. COTA [continuing]. Than what we see in this market. The financial players of all sorts worldwide are all players in this market. They are the ones that would like the least amount of regulation so that they can move money around quickly. The larger the player the more interest they have in having less oversight.

These financial players are also significant holders of physical product and that is very important. I actually trust major oil companies in my business less than I do some of the banks that actually hold product. I may not like the price that I pay, but they will always have product whereas the major oil companies will just, if things get too complex, they will shut it down. In my business, if I am out of fuel for a day, people freeze to death. So I need to have product and these people are important players in the market. But those are the people that are generally interested in not having oversight.

I have hope because the CFTC is the CFTC and not the SEC. CFTC, by being an agricultural based group means you have got a lot more folks across the country that will have a different perspective. So I think there is more hope in regulation in the commodities market because they relate——

Senator MCCASKILL. There is more diversity of interest.

Mr. COTA. Well, it is your internal politics, it is the Ag Committee's jurisdiction. So I think I have got more hope in the Ag Committee than I do in perhaps the other committees.

Senator MCCASKILL. Thank god for pork bellies.

Mr. COTA. Exactly.

Senator MCCASKILL. Thank you, Mr. Chairman.

Senator LEVIN. Thank you, Senator McCaskill.

Let me see if I can boil this down in this way: Senator McCaskill talked about common sense so let us start with the commonsense issue. We have got a NYMEX market. NYMEX told Amaranth they had to reduce its holdings. They have that power under law. They said there was excessive speculation going on or that the price impacts were going to be great if there were a lot of sales on a certain date. For whatever reason, NYMEX issued an order, reduce your holdings.

Now Exhibit 6,[1] that chart shows what happened on that day when NYMEX told Amaranth to reduce its holdings. At the time of the order the yellow was the holdings of Amaranth on NYMEX. The blue was on ICE. So the regulators said reduce your holdings and all they did was shift to ICE? Is that correct? Is that Exhibit 6?

That does not make commonsense, I assume, to anybody. I mean, if it is excessive under the law, and we have a law, Commodities Exchange Act, which directs the CFTC to prevent excessive speculation. And it says "Excessive speculation in any commodity under contracts for future delivery causing sudden or unreasonable fluctuations or unwarranted changes in the price of such commodity. It is an undue and unnecessary burden on interstate commerce and the CFTC shall fix such limits on the amount of trading as the Commission finds are necessary to diminish, eliminate or prevent such burden."

So they are carrying out the law and they tell their agent, NYMEX, CFTC tells NYMEX, you are our agent. NYMEX reaches a conclusion. We can be totally all overwhelmed and swamped with all of the words which all have to use swaps, margin requirements, price spreads, hedges, manipulation, speculation. We have lost probably most of our audience already or if we have not lost them before that.

But cut to the chase. The cop on the beat said reduce your position. They did not reduce their position, they shifted their position. So this is a glaring loophole we have in the law. It is called the Enron loophole. It does not make any sense to have a cop over on this side of the street say you are out of business, quit selling liquor to minors, and then the liquor store or whatever, the bar, goes across the street and sells liquor to minors. That is what we have got here. When you strip all of the complexity away, that is what we have.

And the question is whether or not we are not only going to give the regulator, CFTC, the power to get the information which you all have talked about but also the power to do on the over-the-counter exchanges what they do with NYMEX. That is the question.

Now I recognize what Senator Coleman said. I think we all have to appreciate you need some speculation in the market, otherwise you are not going to be able to hedge in the future. The question is excessive speculation. And should the CFTC be able to stop it wherever it occurs? That is the question, on the over-the-counter or whether it is NYMEX or ICE. I guess ICE is a form of over-the-counter because it is an electronic exchange.

[1] See Exhibit 6 which appears in the Appendix on page 717.

Mr. Corbin, I do not know if I have a question somewhere in there or not, but would you agree with that?

Mr. CORBIN. If there was a question in there, I agreed with it. The only thing I would caution against, because I think we saw it here. We have one loophole today and we see very pronounced how they shifted over to one exchange.

I would just caution, that we need to make sure that whatever structure we are putting in place does not have them just go over to another place——

Senator LEVIN. Another exchange.

Mr. CORBIN [continuing]. That is not transparent that we have not necessarily thought about.

So that is why we have used the broad term over-the-counter market entirely so that we do not have a future loophole. You have done a lot of work. We do not want to have another loophole after you are done.

Senator LEVIN. Jump into another block, across the street to another block.

Do you think that we are able to do that technically? Could we, given the technology out there, given the global economy, given exchanges in various parts of the world, are we able, do you believe as a practical matter, to prevent that from happening?

Mr. CORBIN. If you change the law?

Senator LEVIN. Yes.

Mr. CORBIN. Yes.

Senator LEVIN. We can rewrite the law so we can stop it and not just push it somewhere else?

Mr. CORBIN. Yes.

Senator LEVIN. Mr. Cicio.

Mr. CICIO. I would agree with everything that Mr. Corbin has said and I would like to strengthen it by making a statement that I said in the testimony that brings it all home.

Remember, it is how much volume that any one entity controls that is important. Every company that is in this market does a mark-to-market position for their internal financial purposes at the end of each trading day. They look at how many positions they are long, how many positions they are short, and they see whether they are making money or not making money.

So this data is available and it is available on a daily basis and, from our perspective, there is no reason why any company, including those on the OTC market, could not report.

Senator LEVIN. Mr. Cota, would you agree, if you can figure out what I said, with what I said?

Mr. COTA. I think I figured it out, Senator. The money that moves around in the world will continue to move around the world instantly and immediately based upon a market reaction. Will we be able to stop speculation, excess speculation? I am unclear as to whether or not we will be able to.

I do believe that what we do have a chance to do is to deal with U.S. based transactions. So if you have any commodity that is destined for the United States, I do think you can have oversight. I do think you can have a transparent market in those areas. And the transparency in itself, because we are defining the U.S. market, will have a worldwide impact.

I am sure the Russian commodity market would take whatever money wants to be thrown at it for speculative purposes. But we are a unique market, both because of our size, because the products are destined here, and because the world has had a faith in our regulatory oversight so that money continues to flow. And I think that is the way that you will be able to reduce the excessive speculation.

Senator LEVIN. This testimony is very important. We have had a debate on this very issue. We had a vote on this very issue. We had an amendment which would have covered all over-the-counter transactions. We lost that vote and we had to remove it and just go more limited. We had to go after the electronic exchanges and not the other over-the-counter exchanges, the bilateral exchanges.

So we have to figure out, can we get to those bilateral exchanges without creating bad consequences? We can get to the electronic exchanges; it was in the vote we lost. But can we get to the other over-the-counter exchanges, the bilateral exchanges, for instance?

Can we do that, Mr. Corbin?

Mr. CORBIN. I would like to comment on that. The CFTC has the authorization, where they believe there has been manipulation, they currently have the authority to go in, investigate, dig into it, figure it out, prosecute. And they have done that in some prior instances.

I think what we are talking about here is can we get the information in those other over-the-counter, the broad over-the-counter market, with regard to large positions so that they can be tracking what is happening across the entire complex.

Again, I say the answer is yes, you can do that.

Senator LEVIN. Do they have the power to act under current law if they have the information?

Mr. CORBIN. Yes.

Senator LEVIN. So the CFTC could stop this if they had the information, if there is excessive speculation with large purchases and sales?

Mr. CORBIN. Yes, they have the authority to investigate if they see. But right now they do not see that information so they do not have it until you have a very big event that they can then go in and investigate and 3 or 4 years later then you have fines and prosecution and all those. It didn't do anything.

Senator LEVIN. And that includes all over-the-counter exchanges? They have that authority now?

Mr. CORBIN. Yes.

Senator LEVIN. So it is just the information that is lacking? Do either of you want to comment on this before I call on Senator Coleman? Can we do this?

Mr. CICIO. I would agree with what Mr. Corbin says.

Senator LEVIN. Mr. Cota, do you agree with that?

Mr. COTA. I would agree with it. Until you find the data, until you count how much money you made you cannot charge any tax. It is the same sort of thing here.

Senator LEVIN. But my point is a little different. After you have the data, do you need any additional authority in law?

Mr. COTA. I think the current law is sufficient, provided that you have the data.

Senator LEVIN. For CFTC to stop excessive speculation with an order to reduce your speculation or to reduce your holdings?

Mr. COTA. I think they have the authority. Fraud is fraud. If you have got data, you can prove it. The BP example of attempting to corner the propane market is one example. And I personally believe that came out because the data was being collected.

Senator LEVIN. Do you have the power to limit a holding? A position? Under current law?

Mr. COTA. Again, I am a tiny little oil company in the middle of nowhere. I don't know.

Senator LEVIN. We will find out from the next panel.

Is it your understanding that CFTC has that authority under current law?

Mr. COTA. I am unclear as to whether they do or they do not.

Mr. CORBIN. Just to clarify, I would not say that the CFTC has the current authority to establish limits in the over-the-counter market, but they certainly do have the authority to go in and investigate and prosecute when they believe there has been manipulation. But they do not have the limits that you are talking about.

Senator LEVIN. OK. Senator Coleman.

Senator COLEMAN. Thank you, Mr. Chairman, important questions. Just a couple of observations.

I think it is both an authority and a resource issue, and that has to be addressed.

I do not want to defend the gamblers but my concern is we will get the gamblers and that we do not hurt the consumers. So consumers are the ones that, if they can hedge, if you can buy in August, against costs in January, if you are forced to wait until January, if you do not have the market, if we dry up liquidity, it is consumers who get hurt. Is that fair, Mr. Corbin?

Mr. CORBIN. Yes.

Senator COLEMAN. So as we look at the "gamblers" out there, it is the consumers who benefit by having liquidity in the market. The question about regulation then always becomes a question of do we do it in a way that allows consumers to benefit? Or in the guise of doing something that we think is positive, do we do something that is negative? It is this law or rule of unintended consequences, one of the great sins that we in Congress do.

I reflect on Sarbanes-Oxley, absolutely critical, absolute important, need to do it. Just a piece of it, Section 404, we are talking about right now. Originally we thought that it would cost small business $93,000. And after a study they said it would cost small business $930,000, 10 times the estimated cost of complying with something that had to be done.

My only concern in this area, and I am in accord with the Chairman, is we need to close the Enron loophole. I think the CFTC can certainly, we can move over into the ICE. My concern though, and it is perhaps the point you raise, Mr. Cota, is do we drive folks to—can we regulate the bilaterals? And if we can regulate the bilaterals, then do we drive them to London, easily London, and perhaps Russia and others? And then what is the impact on the consumers?

So just as we walk through this, I think we can get our arms around some of it. I just want to make sure we understand, as we get our arms around it, what is the impact? Do you think, Mr. Corbin, we can deal with the bilateral? There are bilateral trades that go on. Do we have the ability then for CFTC to oversee what happens in bilaterals?

Mr. CORBIN. I think that we could have the bilaterals included in their large position reporting system, where the CFTC starts when they are looking at behavior in the market that potentially is abusive.

Senator COLEMAN. Those are all electronic. What about non-electronic? Are you presuming everything is electronic?

Mr. CORBIN. I am assuming that the folks that have large positions in the bilateral market have electronic systems to manage their position and that they know every day what their position is.

Senator COLEMAN. What about the offshores?

Mr. CORBIN. I do not have much experience with that so I can't really speak to that.

Senator COLEMAN. One of the problems that we see now on the Wall Street side of it, 24 of the last 25 IPOs are not done in this country. They are going offshore. Has anyone done a study regarding the possibility of that here? Is there any way for us to have some control or some transparency in the offshores transactions? Mr. Cota.

Mr. COTA. Senator Coleman, I agree with a lot of your concerns. CFTC, even if they had the data, does not have enough money to do anything, in my opinion.

You are going to need a new financial—again, this is coming from a small company in the middle of nowhere. I think that you are going to need a different sort of overreaching world financial oversight in order to prevent anything like that.

The one advantage that we have got is that for U.S. destined products you can define what is a U.S. destined product.

I think that the speculation has been critical for the U.S. energy markets. In the energy business, in my industry, we used to have rationing and lines. The financial markets, as much as the market volatility is distasteful, it has ensured that we have had product at every day. And to me that is critical to serve the consumer.

So yes, I agree with your comments that the consumer can be hurt by unintended consequences. But having a market where a few players can manipulate the outcome is not in anyone's interest, neither the consumer nor the industry.

Senator COLEMAN. And we can certainly deal with that here in this country if it takes place here?

Mr. COTA. Yes.

Senator COLEMAN. Absolutely. Mr. Cicio.

Mr. CICIO. Senator Coleman, I always try to keep it very simple on this very complex issue, but even for the bilaterals, the common denominator is volume. It does not matter where that entity is located that is buying that natural gas, whether they are sitting in New York, Houston, Texas, San Francisco, or Dubai.

If that product is going to be for the U.S. consumption, then I would believe that it is responsible policy for the CFTC to be able to collect that information. I think it is that simple. And because these companies all do mark-to-market transactions for themselves, it appears to us that it would not be costly and would not be unreasonable to provide that information to CFTC.

Senator COLEMAN. Again, I am trying to get my arms around all of this. I think the work that the Chairman has done in this area has been extraordinary. This is complex and I think you have simplified this. And we understand there are some big gaps here and we have to deal with those.

I am thinking about the next step. It is one thing to get information. How do you enforce bilateral swap market positions? What kind of limits do you put on them without causing crippling effects on the market? I think we need this definition of excessive speculation. Even in the Amaranth investigation, there were some who argued that this is not excessive speculation. We need to have that so we have a marker in front of us.

If the markets are not electronic—Mr. Corbin presumes it is electronic and I agree with him—but if they are not electronic or there are bits and pieces out there, maybe we just have to tolerate that. Tolerate—maybe we get our arms around what we can get our arms around and provide protection where we can but understand it is not going to be a perfect system.

But I just think we have to be clear what we are doing and not tell people we have got our arms around this whole thing when, in fact, it is difficult and there is great cost.

Mr. Cota, you have brought the great gift the good lord gave us, common sense, to this. You bring it to this discussion. It does not matter how big you are. You are right. But there is an enforcement piece that we have not even talked about. And there is a cost to that enforcement. Two of us up here are former prosecutors. There is a cost to enforcement. And we, in the Congress, have to look that in the face and determine if we are prepared to do that.

Thank you, Mr. Chairman.

Senator LEVIN. Thank you, Senator Coleman. Senator McCaskill.

Senator MCCASKILL. Most of the questions I have I want to save for the academics on the next panel but I would just comment, Senator Coleman, that if we continue to use the analogy about the casino and whether or not we have a sufficient oversight, which is the set of rules that people feel like if they come to that casino they are not going to get cheated, they do more business. Because it is kind of what Mr. Cota referred to in terms of our markets here are attractive to international players because they have a sense that there is not corruption and cheating, that they can rely on a free market force.

If you are going to speculate or gamble, then you sure as heck do not want the house to be rigged. And that is attractive to the international gambler in this area and so I think we need to make sure we continue to promote that image that we have got a regulated market so no one thinks they are going to come and get cheated.

There is a certain irony to saying that we do not have enough money to do anything, the CFTC, when you realize the kind of vig we should be charging here. This is a reason everyone tries to beat each other to get casino licenses in the United States because the house is in a great position.

It seems to me we ought to figure a way to charge a high enough vig on these speculative ventures because the excessive speculation is driven by greed. That is the only thing behind excessive speculation is just greed. People thinking they are going to make more money. That is why they are excessive.

So it seems to me we ought to figure a way to charge a healthier vig on the excessive speculation in order to make sure we have enough money to go after the people that are putting the consumer in the worst position of all, and that is being held captive to somebody's greed.

So if any of you have a comment about the house charging a little higher vig to make sure they have enough money to go after bad guys, I would welcome your comments before I close for this panel.

Mr. CORBIN. I would agree with you that CFTC needs to have adequate amount of resources to do its job. So I think that is important in this whole equation.

Mr. CICIO. Without question it is very clear that the CFTC has not been funded appropriately to do the kind of enforcement. But quite frankly, our organization has not addressed the issue of fees so I really cannot respond to your question.

Senator MCCASKILL. I would be interested in your organization's perspective if you all have an opportunity to give it some thought. Coming from State Government that has become very dependent on the lottery I realize that kind of position government has in gambling right now and it appears—I used to think it ironic that we used to take children to the Kansas City Board of Trade to learn about gambling while we were busy opposing gambling in Missouri. I always thought that it was ironic that most people in Missouri did not understand that all they had to do if they wanted to gamble was go down there and get them a seat on the Kansas City Board of Trade and they could gamble with the big guys, so to speak.

Mr. COTA. Senator, I am not sure how are you going to get the vig balance correct. That is out of my area of expertise. But nobody likes a fixed table. And a well regulated market, no matter how much—speculation and gambling have a lot in common. But you need to know what the rules are well enough to be able to play with some consistency.

If certain players are controlling the rules on the table that day for that moment, that is not in anyone's interest.

Senator MCCASKILL. Right. Thank you all very much. Thank you, Mr. Chairman.

Senator LEVIN. Thank you.

I am just going to sum up the conclusion I am drawing very quickly. Everybody believes that we need a regulator to go after excessive speculation. It does not do any good to have a regulator on NYMEX that can prevent excessive or end excessive speculation and then just have that move over to say the electronic exchange.

We will start with that. I think you all would agree with that? Is that fair enough?

Mr. CORBIN. Yes, sir.

Mr. CICIO. Yes, sir.

Mr. COTA. Yes, sir.

Senator LEVIN. And then the question would be whether or not we can stop the excessive speculation, which everyone agrees is wrong. Speculation is necessary, but we all agree excessive speculation is bad for the market and bad for your consumers.

And the question then is can we go beyond the electronic exchange to get the over-the-counter bilaterals which are not on the electronic exchange? This seems to me to be an important issue but a different issue.

But at a minimum, what we saw happening in Amaranth makes utterly no sense. You have NYMEX saying stop, not that you did something illegal, not that you manipulated something illegal, but that you are doing something which must stop for the benefit of the market under the law which we have written.

What we saw with Amaranth, with just a shifting from NYMEX to the electronic market, makes no sense at all, and that at a minimum we can act to stop that. Would we have that kind of a consensus on the panel?

You are all nodding your heads yes.

Mr. COTA. I think that some of the oversight as it relates to excessive speculation is revealed by perhaps the New York Mercantile Exchange. NYMEX does a lot of the regulation it does by itself on its own and not as a direct result of what the CFTC requires. CFTC requires certain things but NYMEX has its own rules. The other markets do not.

Just having a market like the New York Mercantile Exchange in the other areas where there is no oversight, I think, will enhance both the market for the consumer and the speculators, as well.

Senator LEVIN. Do either of my colleagues have any other comments?

We thank you all very much, a very helpful panel and we excuse you with our gratitude.

Let us now welcome our second panel of witnesses for today's hearing. We have with us Vincent Kaminski, Professor at the Jesse Jones Graduate School of Management, Rice University in Houston, Texas; and Michael Greenberger, Law School Professor, University of Maryland School of Law in Baltimore.

We appreciate both of you being with us this morning. We welcome you to the Subcommittee.

As you know, we have a rule that requires all witnesses who testify before the Subcommittee to be sworn and we would ask you now to stand and raise your right hand.

Do you swear that the testimony you are going to give before the Subcommittee will be the truth, the whole truth, and nothing but the truth, so help you, God?

Mr. KAMINSKI. I do.

Mr. GREENBERGER. I do.

Senator LEVIN. You were here, I believe, when we described the timing system. I will not repeat that. Professor Kaminski, let us have you go first, and then Professor Greenberger.

TESTIMONY OF VINCENT KAMINSKI,[1] PROFESSOR, RICE UNIVERSITY, JESSE H. JONES GRADUATE SCHOOL OF MANAGEMENT, HOUSTON, TEXAS

Mr. KAMINSKI. Mr. Chairman and Members of the Subcommittee, my name is Vince Kaminski and I work currently at Rice University in the Jones Graduate School of Management in Houston where I teach courses related to energy markets, energy derivatives, and energy risk management.

My testimony today will address some of the issues that you identified in your invitation letter to this hearing. Those issues deal with the organization of the U.S. natural gas markets and the scope and consequences of excessive speculation I witnessed the last few years in those markets.

My opinions are based on 14 years of experience of working for energy trading corporations, including merchant energy companies, an independent power producer, a very big hedge fund, and one of the biggest financial institutions. I have also been consulting recently for FERC, helping the staff to analyze market related issues.

The opinions expressed today are my own and I do not necessarily represent the views of the institutions with which I am affiliated.

The energy markets have undergone a fundamental transformation during the last 14 years I spent working in the merchant energy business. In 1992, the year in which I made the transition to energy trading, the markets for different energy commodities were relatively isolated with limited linkages between different locations and physical products. Today the landscape of the energy business is much different. Energy markets are evolving towards a highly integrated global system with shocks propagating across different local markets and markets for specific physical commodities at a very high rate and through rapidly changing transmission channels.

The energy markets represent a network of related physical, financial, and credit markets with very complex interactions and interdependencies. And it is a flaw, in my view, to look at the physical markets in isolation from the financial markets.

In the coming years the energy markets will be affected by growing demand pressures from the fast growing emerging economies and the necessity to access more costly supply alternatives. The upward pressure on prices will increase the importance of efficient and transparent energy markets as sources of information about the costs and relative scarcity of different energy commodities and benefits of alternative production technologies.

Given growing integration of the markets any distortion of the price formation process will propagate and reverberate across the entire system and will affect both investment and consumption decisions. Well functioning energy markets will become ever more critical not only to the welfare of the U.S. citizens but also to the energy security of the United States. The integrity of energy markets deserves the same level of protection as the pipelines, refineries, ports, and other components of the physical infrastructure.

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[1] The prepared statement of Mr. Kaminski appears in the Appendix on page 133.

The energy markets and the commodity markets in general, given their complexity and rapid transformation, are often vulnerable to market manipulation. Nobody can deny this given our recent experience with the U.S. Western energy markets crisis of a few years ago.

What is more important is to recognize that the nature of market manipulation evolves and mutates over time as the energy markets become more complex. In the past, market manipulation was typically associated with squeezes, corners, and withholding of physical supplies from the market. Today market manipulation can be accomplished in many different ways by taking advantage of a variety of trading platforms and leverage offered by derivative instruments. A typical scheme evolves around taking positions on different trading platforms, platforms that often receive different levels of regulatory scrutiny.

Subsequently, a potential manipulator may engage in bursts of rapid fire trading in one market around specific contract expiration time when market liquidity dries up in order to influence the prices used for settlements of outstanding contracts on other platforms and in other markets. The losses incurred through such trading would be typically offset by gains on the positions taken on other platforms and other instruments.

Also, a potential manipulator can use different platforms to decompose a scheme into different pieces and the regulators, who can see only one part of the bigger scheme, will not detect the manipulation in time.

I am getting close to my time limit so I shall briefly summarize the recommendations I would like to make. In my view, the efficiency and transparency of the U.S. energy markets can be increased without sacrificing the risk-taking culture and the spirit of innovation. The critical element of the market reform is, in my view, an improved access to information. Such initiatives may be initially opposed by many market participants but in the long run the industry will benefit from them. Less opaque, more transparent markets will grow and flourish in the long run, as evidenced by many other examples.

My recommendations include regular reports of large transactions executed in the OTC markets; elimination of the Enron exemption; regular reports of trading activity on the ICE exchange available to the trading community.

Thank you. I will be glad to answer any questions.

Senator LEVIN. Thank you very much, Professor Kaminski.

Professor Greenberger.

TESTIMONY OF MICHAEL GREENBERGER,[1] LAW SCHOOL PROFESSOR, UNIVERSITY OF MARYLAND SCHOOL OF LAW, BALTIMORE, MARYLAND

Mr. GREENBERGER. Good afternoon and thank you for inviting me to the hearing. I would submit my testimony.

I really wanted to cut to the chase on this. I am more than happy to answer questions. You have asked excellent questions of the prior panel.

[1] The prepared statement of Mr. Greenberger appears in the Appendix on page 137.

Senator Klobuchar, who is on the other side of this?

Senator MCCASKILL. McCaskill, but that is OK.

Senator LEVIN. McCaskill.

Mr. GREENBERGER. McCaskill, I am sorry. Senator McCaskill.

Senator MCCASKILL. We get mistaken all the time. It is OK.

Mr. GREENBERGER. It is interesting that you are from Missouri because you should be talking to Congressman Graves, who got the Enron loophole largely undone on a floor vote on the House of Representatives when the Republicans controlled the House and natural gas was at $14 per million BTU. It is at $7 today. Why did he do that? Because the farmers of Missouri were dependant on natural gas and were dying on the vine, paying $14.

Who is on the other side of this? Go look at the advisory committees that the CFTC sets up to advise them. You are not going to find the prior panelists on those advisory committees. You are not going to find your constituents who are paying 35 percent of their income from natural gas. Go down the list. It is Goldman Sachs. It is Morgan Stanley.

The CFTC is a captive of the industry it regulates. There is just no doubt about it. And I am under oath and I take that position.

When Mr. Cicio went to the CFTC in June 2005 to talk about the Inter Continental Exchange and the question of whether they should continue to be regulated as a United Kingdom company, which for purposes of crude oil they are, Osama bin Laden could not have been treated any worse by the CFTC because that was a consumer voice coming in to an agency that is dominated by the International Swaps Dealers and Derivatives Association, the Futures Industry Association, the Securities Industry Association, the Bond Market Association, and I could go on.

And Senator McCaskill, you will meet those people believe me, if you want to do away with the Enron loophole. And they will give you every reason under the sun not to do it.

Amaranth. Nobody got burned besides the investors of Amaranth. Well, your prior panel made it clear and your constituents are telling you that they got burned. People locked in to prices that were artificially high in the summer of 2006 and turned around and the spot price was at least one-third lower than what they had to charge their consumers.

If you talk to people like the New England Fuel Institute, these are small businessman. When you ask them what is the global impact that is going to be, that is not what they are dealing with. And I will tell you what the global impact is going to be. But their consumers are furious with them. And they are not controlling this situation. They are trying to hedge.

Yes, you need speculators in this market. The markets could not function without speculation. But these are not casinos. Amaranth turned it into a casino. If you want to have gambling, go to Las Vegas.

This is for a commercial purpose to allow farmers and producers to hedge and the speculators are invited in to create liquidity. And the statute, because of the farmers who were taken to the cleaners by the Chicago Board of Trade at the turn of the 20th Century, the farmers were the ones who insisted there be no excessive speculation.

And by the way, the Enron loophole does not apply to the agricultural interests. If it did, you have wheat producers here complaining about what is happening on these markets. And the farmers are too smart and too vigorous to allow this to happen to them. Agriculture remains completely under the control of the CFTC.

Now with regard to people going over to London, the Inter Continental Exchange bought the British International Petroleum Exchange. And with that fig leaf, they present themselves as a U.K. company. And they want to take advantage of that.

But are they going and buying up London exchanges? No. They have just made a $12 billion bid for the Chicago Board of Trade. They bought the New York Board of Trade. They want to do business in the United States. These kinds of contracts are not—you cannot go to Dubai and hedge for natural gas that is going to be delivered in the United States. The United States is the industry here. ICE is dying. They want to take over the Chicago Board of Trade. They do not want to go to London.

The Enron loophole, if I might just conclude, Alan Greenspan, Secretary Summers, Chairmen Levitt and Rainer, the Chair of the CFTC, each told Congress do not pass the Enron loophole. The market is too much subject to manipulation. The House did not pass it. How did the Enron loophole get here? It was introduced in cover of darkness. It suddenly appeared.

And Senators Feinstein and Cantwell, after seeing the manipulation caused by EnronOnline, raising the price of electricity $40 billion for the consumers of California, ask them about these exchanges and what impact they do. You will hear their answer and you will hear Amaranth's people, they have an economist today who has testified in 83 different proceedings. I counted them. Your constituents do not have an expert who has testified in 83 different proceedings. You are the expert.

Yes, there should be speculation. There should not be excessive speculation. If you are worried about prosecution, cut it off in the beginning the way NYMEX tried. NYMEX told them do not go afar. We do not know what this is going to do, but you are going to cause a dysfunction in the market. Stop. That was not prosecution. That was prescriptive regulation that avoided prosecution.

This can be stopped in a flash.

And finally, with regard to bilateral, that is a very dangerous word, bilateral. Because EnronOnline, which needed the Enron exemption—by the way, Enron predefunctness set up their EnronOnline before they got the Enron exemption, they were so confident they were going to get it. It was grossly illegal and criminal but they had it running.

And by the way, when you look at this report and see who the Amaranth traders were, they were old Enron officials, traders rather. They brought Enron on. And Amaranth may have gone, Brian Hunter took home $75 million the year before the collapse. He does not have to give that back. And the next time we have a crisis like this, you are going to find the Amaranth traders have been hired by somebody else.

Senator LEVIN. Thank you, Professor, very much. Thank you both for your testimony.

Let us get to the point—we have tried very hard, some of us, to close the Enron loophole. We had a vote on it on the floor. We were not able to persuade our colleagues. We limited it at that time to the electronic exchanges, to add the electronic exchanges to NYMEX. We thought we could get that done. We have been unable to get that done.

If that is all we can do this, does that do the job? If we could cover the electronic exchanges, does that do the job?

Mr. KAMINSKI. Probably not. In my view, it is necessary to put in place reporting requirements for the OTC transactions which are typically arranged by the voice brokers. It is a challenging task because, unlike the NYMEX and ICE transactions, many OTC transactions are highly structured and nonstandardized. And also, in many cases, they extend over longer time periods and contain proprietary information.

But at the end of the day any trading corporation has to summarize the positions. They have to know how many MMBtus they sold or bought, what is the position, what is the tenor of the positions. If they do not have this information, they should not be in the business.

And this information can be aggregated, summarized, and reported. I do not see any technical challenges related to it?

Senator LEVIN. There is no technical challenge to getting to the whole over-the-counter market? Is that what you are saying?

Mr. KAMINSKI. Yes.

Senator LEVIN. You agree with that, Professor Greenberger?

Mr. GREENBERGER. My own personal view is, and it is not based on any scientific study, is I think the voice brokers play such a small role in this. If voice brokering was OK, you would not have ICE and you would not have had EnronOnline. I sat in meetings with people when the CFMA was discussed and people from Goldman Sachs and the financial markets said, oh my God, you are going to make us do things by voice brokerage? That takes time. I am one call. I want to go to a computer screen and press a button.

If I could just interrupt, Senator Levin, they call that bilateral trading because it is bilateral. They have entered into an agreement by pressing a button. That is multilateral trading. That must be covered and can be covered and should be and would be covered if the Enron loophole were eliminated.

Senator LEVIN. So that you basically believe we could technically write a law which would cover the trading which you just described if it were described by either electronic or by size?

Mr. GREENBERGER. Yes. The technical word has already been multilateral transaction execution facility. And you must be careful because the industry will come to you and say oh no, what we are doing is bilateral. But you want to look in what they are doing.

Senator LEVIN. I understand. But now if we are able to finally get the regulators into that area, will there be a move to true bilateral trading? Or is that so impractical for the traders that they will not move to a true bilateral trade?

Professor Kaminski.

Mr. KAMINSKI. I agree with my colleague. The days of market based on voice brokers are probably counted. The markets across the world are moving to electronic trading. And even if we have an initial reaction and some migration of trading from the electronic exchanges like ICE back to the broker market, it will not last long.

Senator LEVIN. And you agree with that, Professor Greenberger?

Mr. GREENBERGER. Yes, absolutely. You want to get to the multilateral computerized trading.

Senator LEVIN. And you have no concern that if we cover that, there will be a return to the true bilateral voice brokering? That is not a concern?

Mr. GREENBERGER. That is not a concern and my own view is it would be impractical to try and reach the bilateral voice brokering.

Senator LEVIN. Now who is going to be the enforcer? Who is the regulator here? Is it CFTC through NYMEX and through ICE?

Mr. GREENBERGER. The important point that I think has been lost in all of this is that each exchange, once they are regulated by the CFTC, is a self regulatory organization. They are the front line of protecting the consumer. The CFTC cannot do it all.

Senator LEVIN. Can ICE do it?

Mr. GREENBERGER. Yes, absolutely. But they are not required to right now.

Senator LEVIN. And who is going to do the multilateral trading regulation?

Mr. GREENBERGER. In that case you are quite correct, there would not be a self regulatory organization. But the multilateral transaction execution facility would report directly to the CFTC, as EnronOnline would have had they not achieved this still-of-the-night exemption.

Senator LEVIN. So they would report to the CFTC. Do you agree with that?

Mr. KAMINSKI. Yes, I do.

Senator LEVIN. Now, that then puts at least that part of the trading into the hands of an organization that you say is captured or owned by the people who are being regulated. Is that a problem?

Mr. GREENBERGER. Well, as I understand it—I may have misread things. But on Thursday there is a confirmation hearing for two commissioners. One of them is a former lobbyist for the International Swaps Dealers and Derivatives Association.

I do not know this is a fact, but I would bet that person has written more testimony in opposition to taking down EnronOnline than any person in the United States.

Senator LEVIN. I am not disagreeing or agreeing with you.

Mr. GREENBERGER. And she is being paired with a former aide of Senator Daschle, and that is the way it is done. But there are three vacancies on this commission, including the chair.

Senator LEVIN. I am not agreeing or disagreeing with your point, in terms of controlling CFTC. I am simply saying if that continues, then would there be a problem in relying on CFTC regulating that part of the market which is not self-regulating?

Mr. GREENBERGER. I think with Congressional direction, and I think you are seeing a little bit on that what happened Friday afternoon with this new proposed rule, with Congressional direction, the CFTC would be responsive. And I think in terms of oversight—and I know that is not your function, if the CFTC could be encouraged to welcome the people like who were on the former panel and put them on their advisory committees so they have a voice in the regulatory process, I do believe that eliminating the loophole with good Congressional oversight the CFTC could handle this.

Senator LEVIN. Have you had a chance to read our entire report, either or both of you?

Mr. GREENBERGER. I have.

Senator LEVIN. Have you Mr. Kaminski?

Mr. KAMINSKI. No, I started reading the report last night on the plane. I read about 40 percent of the report and so far I agreed with practically every statement contained in the report.

Senator LEVIN. Thank you. Professor Greenberger, could you give us reaction to the report?

Mr. GREENBERGER. I have worked in this area for 10 years. And what comes a close second to this report is the report that was put out under Senator Coleman's auspices a year ago dealing with the crude oil industry. This report had the advantage of market data.

Leaving aside where it comes out, it is the most full complete report giving you a major understanding of the markets, the need for hedging, the role of speculation, the problem with excessive speculation, and the way the statute works. I think is a first-rate piece of work and the Subcommittee is to be congratulated.

Senator LEVIN. We and our staff thank you both for those comments.

Now, let me go on to the final question that I have, and this has to do with that chart we had up there before.

There was a direct order to Amaranth to reduce its holdings. And the reason for that order was that the NYMEX saw a danger in what was about to happen. It was preventive.

Would you agree that we have got to act in order to prevent harm? And that it is not enough to simply rely on the manipulation provisions of law, which then punish actions that have taken place? Would you agree with that?

Mr. GREENBERGER. Absolutely.

Mr. KAMINSKI. Yes, I fully agree with this. The problem is that one could argue that there is no problem with excessive market manipulation and speculation if the losses are limited to a group of highly sophisticated investors who should know better when they invest in the hedge funds.

The problem is that in a market economy prices have consequences. And if prices are distorted through excessive speculation, this has a systemic impact on the markets. And I worry not so much about this unfortunate incident. I worry more about the systemic impact the excessive speculation will have on the future of the energy markets. This would be a greater concern to me than the specific case of consumers overpaying for natural gas last winter.

Senator LEVIN. I did have an additional question. That is, the CFTC rule last week, and whether or not by requiring traders on regulated exchanges to disclose their holdings on the unregulated markets, whether or not that goes anywhere close to what we are talking about here.

Mr. GREENBERGER. It goes a little bit of the way but not the whole way. For one thing, I am sure what the CFTC is saying to people now is they are getting data that they are required to get from NYMEX. ICE has "voluntarily" agreed to give them data.

What are they going to do with the data? They have got to have some standard. And the standard is excessive speculation. Congress has to tell the CFTC, you can deal with expressive speculation on ICE and multilateral exchanges like ICE, and what is excessive speculation.

Look, bookies even stop taking bets at some point because they are worried about what is going to happen. NYMEX stopped taking bets not because NYMEX was worried about the consumer interest. This was all done on borrowed money. Using a contract, you only put down 10 percent of the funds. Banks are funding the rest. Clearinghouses are guaranteeing the banks.

What NYMEX was worried about was Amaranth was going to fail and their clearing function would collapse.

So there is an economic measure here that needs to be followed. Clearly eliminating the Enron loophole would bring ICE into the measure. No prosecution, no enforcement. Just when you get to a certain level, thank you, you have provided liquidity to the market. Now you have to step back. Which is what NYMEX told Amaranth. It would have been in Amaranth's best interest to step back.

Senator LEVIN. It is going to take some direction from Congress. It is not enough that the information simply be available, that it is going to take the removal of the Enron loophole essentially, if we are going to cure this problem. You both agree with that?

Mr. GREENBERGER. Yes.

Mr. KAMINSKI. I do.

Mr. GREENBERGER. One other point about that rule is it does not require—NYMEX can get information about a trader under that rule, what the person is doing on ICE. If the person says hey, like Amaranth said, I do not want to get into this regulatory thing. I am just going to trade on ICE, that rule does not call for the information to be gathered. It only helps NYMEX. It does not help the regulator or the policymaker understand if all of the traders decide to do what Amaranth did and go to ICE. It does not affect that trading.

Senator LEVIN. It is only if they decide to continue on NYMEX that they would be covered.

Mr. GREENBERGER. Exactly.

Senator LEVIN. Senator Coleman.

Senator COLEMAN. Thank you, Mr. Chairman.

Professor Kaminski, I appreciate your reflections on systemic impact. And certainly the first panel's discussion talked about systemic impact. It is not just the traders who are impacted.

We have had a lot of discussion about excessive speculation. To both of you gentlemen, how difficult is it to define that? Is this accepted? And who does that? Is this something that Congress does? Can we leave it to the CFTC? Both of you gentlemen, Professor Kaminski.

Mr. KAMINSKI. Yes. It is very difficult to define excessive speculation and the term itself is a bit fuzzy and ambiguous. I would identify three or four different types of players in the energy markets. We have pure speculators and they are critical to the process because they provide the necessary lubrication to the process.

We have big market makers and the financial institutions which take proprietary positions and in this sense they speculate. But they also offer the risk management tools to the producers and consumers of energy. And they are a critical component of the system because they help to reduce the risk to those participants in the industry who are risk averse.

And finally, we have producers and consumers of energy who are interested in reducing somewhat the returns they get in return for reduction in risk.

My long-term concern is that the natural hedgers, the producers and end-users of energy, will depart this market if they are scared by excessive speculation. And we already have a lot of evidence that this is taking place.

Senator COLEMAN. Professor Greenberger.

Mr. GREENBERGER. I think you do not have to define it. I think you can give guidance. I think the CFTC can do it by rule. And the assurance here is NYMEX had already done it. They had accountability rules. That is what led NYMEX to tell Amaranth to stop. This is not rocket science. This can easily be done.

Do not forget a large trader is someone who trades 200 contracts. Amaranth had 100,000 contracts. As Mr. Cicio said, all of the contracts on NYMEX for the contract month he is talking about, by everybody buying contracts on NYMEX for the month he referred to is 90,000. Somewhere we can come to an agreement where speculation is good but you cross a line.

This is the kind of thing financial regulatory agencies do every day, capital rule requirements, what have you. You pick a figure based on guidance from Congress.

Senator COLEMAN. Professor Greenberger, you raise questions about CFTC that are not just legislative direction issues or regulation issues. It goes to basic structure, mindset.

Mr. GREENBERGER. That is correct. And I think there is a great opportunity for the U.S. Senate to put the right consumer oriented mindset. You have three vacancies coming up. It has been traditional that anybody who supports the industry gets passed on the Senate floor by a voice vote with no discussion. Senator Feinstein went to the floor in the last hours of the 109th Congress to stop the lobbyist from ISDA because she knows what ISDA's concept did to the electricity payers in California.

You have got three vacancies now. This is a great opportunity to reshape that agency.

Are there going to be industrial consumers represented in the Commission? Are there going to be regular consumers in the Commission? Are there going to be academics? Today, if the Financial Industry Association, the International Swaps Dealers Association, and the Bond Market Association give their blessing, the history has been the person goes through.

And even Republican commissioners, Joe Dial being the most famous, a former Texas Ranger, policeman not baseball player, and good friend of Phil Gramm from Texas was held on the floor of the Senate because he dared to question practices in the Chicago Board of Trade.

If you represent the consumer, you get stopped. If you are helping the banks, you sail right through. You have got to put a stop to that. These people who testified in the first panel and your constituents deserve representation. And if not representation, a majority interest in what the CFTC does.

It is no longer a backwater agency. This hearing shows that. Hundreds of millions of dollars are at stake, hundreds of millions and billions out of consumers' pockets.

If you let this sail through thinking it is some backwater agency, your constituents are going to pay through the nose and the Brian Hunter's of this world are going to take home $75 million a year.

Senator COLEMAN. Could you talk a little bit about financing regulation? There was some discussion about user fees a little while ago. I would be interested in your perspective.

Is there a point at which those user fees, in fact, drive folks to other markets? Is this something we should be concerned about?

Mr. GREENBERGER. There are user fees in every market except the futures market. I think user fees, let me tell you, if you try and put user fees in the CFTC, you are going to hear who the other side of the common sense because it will eliminate silk linings in suit jackets if they have to pay those user fees.

But I think user fees should be explored. I have not thought it through very carefully. There is no reason the U.S. public should have to pay to make sure that Brian Hunter keeps his trading limited to speculation as opposed to excessive speculation.

Senator COLEMAN. Do you have any concerns, Professor, about any shifting to opaque markets, any shifting to the bilateral or non-electronic markets? Is your sense that those are either small percentages or not practical questions?

Mr. GREENBERGER. I sat and heard people from Goldman Sachs tell me 10 years ago, voice brokering is a dying art. It is still done but that is not the way you make your silk lining in your suits. I am not worried about that.

And I think ICE is the primary example. They portray themselves, even though they are in Atlanta and even though the investment banks own large portions of it, U.S. investment banks, even though they are trying to buy Chicago Board of Trade, they can say to themselves we are going to go to London. They are not going to London. This is where, these markets are where things are being done.

I remember the Chicago Mercantile Exchange had a contract that paid off depending on what the interest rates that Russian banks paid. You won if you guessed right, you lost money if you guessed wrong. And they called up one day and said guess what, the Russian banks are meeting before the contracts closed and they are lowering their interest rates for a day. So that when the contract has to get paid, the interest rate drops, then the contract expires, they go back and meet and raise it again.

Do you think people are going to trade natural gas contracts in Russia? No.

Senator COLEMAN. Professor Kaminski, you have talked about a globalized market. You have raised concerns about balkanized regulatory infrastructure. Can you talk a little bit about the offshore markets, about the bilaterals and something that we should be concerned about as we move forward?

Mr. KAMINSKI. I do not believe that any responsible corporate entity will move to migrate to trading on an exchange established in a banana republic. The U.S. market is too big and too important and too sophisticated to really lose the business to other trading platforms.

If this happens, the business will go to the countries which have a regulatory infrastructure which is similar to ours if not more complete. The regulatory institutions in those countries, like for example FSA in the U.K. will cooperate with the U.S. Federal agencies.

So I do not see a big danger in U.S. energy trading, energy exchanges losing business in the long run to other platforms. If this happens, it will be more—it will happen on a relative basis and will be just a manifestation of the fact that other markets outside the United States are growing and catching up.

So the U.S. market is not going to shrink in size. It will continue to grow. It may be relatively smaller compared to other markets but it will not go away.

Senator COLEMAN. Thank you. Thank you, Mr. Chairman.

Senator LEVIN. Thank you. Senator McCaskill.

Senator MCCASKILL. Professor Kaminski, in your testimony I looked at your written testimony, and you talked about the various aspects of manipulation. The second one you talked about was the aggressive rapid and large volume trading near the expiration of a contract talking about the excessive speculation, which we have talked about at some length at this hearing today.

The first one that you talked about, however, was the exploitation of market power control by the control of physical assets or physical supply. I would like both of you to address what, if anything, can be done in that area by Congress?

It is interesting to me because most businesses there is an incentive to invest in the capital infrastructure. There is a bottom-line business incentive to keep the infrastructure strong, to keep the capital investment at peak performance.

The irony is in this area there is a disincentive because if you can fig leaf a lack of supply because of a problem with the delivery in terms of the capital infrastructure, then it is a way that you can, in fact, manipulate the market to your advantage.

What, if anything, can we do in terms of that manipulation issue as it relates to market control of the physical assets and then therefore of the physical supply?

Mr. KAMINSKI. Well, one fact to be recognized is that the energy market is global integrated. But at the same time there are local pockets of market power which have been due to the rigidities and imperfections of the physical infrastructure.

And often at the specific trading location, far away from NYMEX and ICE, is a company which is relatively small in size can establish a dominating position because it controls the transmission lines or it controls the pipelines in a given region and takes advantage of the fact that it dominates a local market. And then it may engage in very similar strategies, taking positions in the derivatives and trading high volumes in the physical markets to influence the benchmarks which are used for settlement, cash settlement of derivative transactions.

Senator MCCASKILL. What can we do in Congress to address that kind of manipulation?

Mr. KAMINSKI. Information and information again. Just reporting the positions taken in the OTC markets and on ICE will preclude it, because this form of manipulation happens typically outside NYMEX, happens through the OTC markets, and happens through the ICE.

Senator MCCASKILL. So the prescription for the second kind of manipulation will also cure the first kind?

Mr. KAMINSKI. In my view it will go a long way to address this problem.

Senator MCCASKILL. You both have kind of addressed this, and that is that the attractiveness of our market, in fact, is due to the regulation, which is not what you hear from people who are working against regulation. You hear oh, if we regulate, they are going to run off someplace else.

But essentially what both of you are saying with your expertise in this area is that it is the certainty that regulation provides that is the magnet for the investment in this regard because people know it is not going to be a fixed house. Is that a fair way of summarizing your position on that issue?

Mr. GREENBERGER. Certainly in the financial area that is absolutely true. The proof in the pudding is after this report came out today, NYMEX started putting out press releases saying you want to invest securely, invest in a regulated exchange. Yes, that is the answer.

When Long Term Capital Management failed, the Chicago exchanges put out a full-page ad in all of the financial newspapers saying this would have never happened if this trading had happened on the Chicago Board of Trade or the Chicago Merc.

And yes, you do not want having indices arbitraged in advance of payments on these contracts like it happened in Russia with their bank thing. That would not happen in the United States, even with the most minimal regulation. Good regulation does attract interest.

I would also say, with regard to the IPOs going over to Europe, I would look at the percentage U.S. investment banks take to put out an IPO. I think it is 7 percent versus 4 percent in Europe. That may have a big explanation why IPOs are being done in Europe.

Senator MCCASKILL. As opposed to it is a less stringent regulatory environment?

Mr. GREENBERGER. Absolutely. And the other point is, about this arbitrage, potentially Congress passes a law, does things strictly. There is something called the International Organization of Security Commissions. And by and large, I remember when Long Term Capital failed, they put out a report about what needed to be done to control hedge funds. Many of the securities commissions want to look to the United States for how to regulate effectively, and on their own adopt procedures to try and stop these malpractices from happening.

Now they do not have somebody buying 100,000 contracts over there. They have not been exposed to this kind of massive excessive speculation, if not manipulation. But they would be very sympathetic to the kind of discussion that you are having here today.

Senator McCASKILL. Let me finally address the comments you made, Professor Greenberger, about the CFTC and the oversight function that it has or has not based on the compilation of the board. I will tell you that it was fascinating to me maybe last week or the week before when we had a hearing in the Commerce Committee with the FCC. The commissioner from the FCC said well, the reason that they have not acted on this, if we can just talk the next panel into all agreeing, they would probably move forward. Of course, the next panel were all the industry players.

It was an absolute confession in a Senate hearing that the FCC was not capable of acting unless all of the people making money could, in fact, join hands and agree.

Are you saying that the CFTC has that same kind of dynamic, that they are dependent upon agreement of the big financial players in this area in order for them to do what they need to be doing right now?

Mr. GREENBERGER. I am going to be very candid with you, it is worse than that. It is a very small agency. It started out as an agricultural agency. And all of a sudden Goldman Sachs, Morgan Stanley, J.P. Morgan Chase, Bank of America, and all of these prominent people walked in the door and essentially unless you watch what happens, they take over.

If you look at the *Wall Street Journal*, I think it was December 13, 2001, there is a story there which I believe the protagonist agreed to where a lawyer from Sullivan and Cromwell called the commissioner over to the Washington, DC office of Sullivan and Cromwell and instructed that commissioner on how he should vote.

Now that would not happen at the FCC. It would not happen at the SEC. By the way, the commissioner came back and reported it immediately, and so maybe it did not happen at the CFTC either. But the fact that they thought that they could do that——

Senator McCASKILL. They could.

Mr. GREENBERGER [continuing]. And by and large if somebody from Goldman Sachs or the Managed Funds Association, which is the industry association for hedge funds, needs an appointment with a commissioner my experience was, in the 2 years I was there, the appointment happens that day.

By the way, there is a lot of talk about the fact that the CFTC should be part of the SEC because a lot of these instruments it is hard to tell whether they are futures, derivatives, or securities. So why have a fight over it? Let us put them all in one——

Senator McCASKILL. Put them all one place.

Mr. GREENBERGER. But I will tell you something, the people I am talking about do not want that to happen because they know that even with the present SEC that some people may think is more laissez-faire than traditional, they are not going to be able to say jump and hear the question back how high.

Senator McCASKILL. Professor Kaminski, do you think it would be a good idea to move the CFTC under the SEC?

Mr. KAMINSKI. I did not think about it. Given the growing integration of the U.S. financial markets, it definitely makes sense to improve coordination between different agencies, including FERC, SEC, and CFTC. Whether it makes sense to create one big institution, regulatory institution, regulating all the markets, looking at all the markets, I have not been thinking about it so I cannot give you an informed opinion.

Senator MCCASKILL. I would welcome both of your comments about both a user fee structure so that we are getting the vig that we need to run the place.

And second, whatever thoughts you have about if, in fact, due to the changing and evolving financial transactions as it relates to these kinds of products, particularly in light of the global nature and electronic transactions, if it does make sense for all of this to be under the umbrella of one regulatory realization as opposed to being split up the way it is. I would appreciate your input on that.

Finally, I will just say that the biggest enemy we have here is complexity. Invariably the public can be the best lobbyist in the world, if they are aware, informed and understand. Unfortunately in this area this is so complex that most people do not understand the relationship between what they are paying on their gas bill and hedge funds and the speculative market. And frankly, until 2 days ago, I had no idea what ICE even was. I did not even understand ICE.

To the extent that you all can present the view of consumers from a very educated position is invaluable to this Subcommittee. I only wish that you could, in fact, multiply and fan out throughout the capitol and begin to do one-on-one visits with all the senators that have votes because I can assure you the other side will do exactly that. Thank you very much.

Senator LEVIN. Thank you, Senator McCaskill. Just a couple more questions to get this on the record.

The size of the Amaranth position on the market and the significance for the market when the traders get to be that large, is that a significant matter?

Mr. KAMINSKI. It is a very significant matter and Amaranth's position were known to the market. The market knew about it. And when I was watching the situation last year it was like watching a train wreck in slow motion. It was obvious that it would end up in a crash.

Senator LEVIN. Does it also affect future prices when someone can dominate the market to that extent?

Mr. KAMINSKI. Absolutely.

Senator LEVIN. Professor Greenberger.

Mr. GREENBERGER. Absolutely. The futures markets, to the extent they are transparent, are used for price discovery. If you are affecting them, these kind of trading affects the market. The collapse of Amaranth and the drop in natural gas, you do not have to be a rocket scientist or have an algorithm to figure out why that happened.

Senator LEVIN. To get a direct answer for the record, then the size of the Amaranth trades affected future prices?

Mr. GREENBERGER. Absolutely.

Mr. KAMINSKI. Yes, it did.

Senator LEVIN. In terms of CFTC, does it pay to—end the Enron loophole—close it, even with the current CFTC? Even if we cannot do these kind of changes, we are not the people who appoint them and whether or not they are confirmed is kind of a different issue, and an important one. But is it worth pursuing and following the road that we are on, even if we cannot impact the makeup of the CFTC?

Mr. GREENBERGER. I think it definitely is. I think that as captive as it sometimes is, that the direction from Congress will have an influence.

And also, the Commodity Exchange Act has a private right of action point in it. I say that hesitantly. I do not want to look to private lawsuits to protect these things. But if you put down these mandates and all these malpractices are happening, Amaranth's lawyer was quick to point out there was no intent here, trying to stay one step ahead of manipulation. I am not so sure that they are one step ahead.

But yes, you definitely should do this. It is an easy fix. Alan Greenspan would agree with you on it. He did not want this to happen in 1999–2000. It should be fixed immediately.

Senator LEVIN. Do you agree with that Professor Kaminski?

Mr. KAMINSKI. I agree that removing the Enron exemption will be very helpful. But at the same time, CFTC should be given more firepower. It may be underfunded and understaffed currently.

I have been watching the energy markets not only in the United States but also in other markets. And the common denominator is complexity. This is what was mentioned a moment ago.

There were many cases of manipulation in other countries. The regulators came. They looked at the complexity of the trades and volume of the data and they threw their hands up in the air and left. They did not have resources to investigate the issues.

Senator LEVIN. Senator Coleman.

Senator COLEMAN. Nothing. Thank you.

Senator LEVIN. Thank you both. You have been a tremendous panel and we are very appreciative.

Let us now welcome our final witness for today's hearing, Shane Lee, who is a former natural gas trader at Amaranth, appearing here today at Amaranth's request, to answer questions about its trading.

Let me just clarify what I just said, that even though Amaranth is the one that selected Mr. Lee to represent them and to answer questions today, we obviously are the ones that asked Amaranth to identify a witness who could answer questions about its trading, and Mr. Lee was identified by Amaranth as that person. Mr. Lee worked at the Calgary office of Amaranth where the energy trading was carried out.

Mr. Lee, we appreciate your being with us this morning. We welcome you to the Subcommittee. As you have heard, all witnesses who testify before the Subcommittee are required to be sworn so we would ask that you stand at this time and please raise your right hand.

Do you swear that the testimony you will give before this Subcommittee will be the truth, the whole truth, and nothing but the truth, so help you, God?

Mr. LEE. I do.

Senator LEVIN. We have that system there where that light will go on a minute before the 5-minute mark, where we would hope that you could keep your oral testimony to. And we, again, appreciate your coming here. We know that you are coming here voluntarily and we have had your cooperation in terms of getting information. We will ask you now to proceed.

TESTIMONY OF SHANE LEE,[1] FORMER NATURAL GAS TRADER AT AMARANTH, LLC, CALGARY, ALBERTA, CANADA

Mr. LEE. Chairman Levin, Ranking Member Coleman, thanks for the opportunity today to appear to discuss the important issues that the Subcommittee is considering. As a bit of a background, I have been trading natural gas for 9 years now. During my career I have traded pretty much most conceivable products in the gas market at one time or another, including both physical and financial gas.

In April 2006, I began working at Amaranth. My job at Amaranth was to trade Northeast markets but I also did trade futures, swaps, and options. I managed my own portfolio, which was separate from Amaranth's much larger natural gas portfolio managed by my boss, Brian Hunter, who was the head of the natural gas desk.

I worked principally in the offices in Calgary, Alberta, and I was strictly a trader. I did not have any contact with investors and I did not play any role in the management of the company.

The Subcommittee has asked whether I believe Amaranth engaged in so-called excessive speculation. First, there is a common media misconception that Amaranth lost over $6 billion in wrong way energy bets and therefore must have engaged in speculation to absolute extremes. This is not necessarily true.

By mid-September 2006, Amaranth energy portfolios had given back around $2 billion it had been up at the end of August. My understanding was that Amaranth senior management became concerned it did not have the cash on hand to deal with any further margin calls and chose to sell its portfolios to competitors to remain solvent. The undeniable fact is that only a small portion of Amaranth's actual $4 billion, just a little bit over $4 billion, in real losses were truly a result of the energy trading losses. The rest was the sale of a distressed asset in a high volatility market due to a fundamental cash problem.

I commend the Subcommittee for making this extremely important inference in page one of its own report.

Was Amaranth's trading excessive? There is no question, the volume of Amaranth's trading was very large, compared to many of the other market participants. However there are a number of other players whose trading was probably just as large, just expressed in different forms of risk.

Whether Amaranth's trading was excessive is a question I really cannot answer and that is for two reasons. First of all, as a trader I have never had access to sufficient information about the activity of all market participants. Although regulatory agencies and exchange officials have access to some of the information, which is namely the information on NYMEX only, they do not have everything. A trader's position on NYMEX is typically only one part of a trader's position and they usually have a wide variety of products that are not traded or cleared on NYMEX exchange.

[1] The prepared statement of Mr. Lee appears in the Appendix on page 147.

And second, there is no clear definition for me as a trader for the term excessive speculation. Even if I complete information about everyone's positions, including my own, it would be impossible to say whether one is excessive or not because I do not have any point of reference. I need hard numbers as a trader, or at least further guidelines from a regulator or exchange personnel.

The Subcommittee's report suggests Amaranth's trading was the predominant cause of increased natural gas prices and wider spreads during the summer of 2006. I respectfully disagree with that. In my view, as the minority staff suggests, Amaranth was responding to the market rather than driving it. The market is driven by a lot of fundamental forces, such as weather, supply and demand, storage levels, producer hedging activity, cross commodity values, and multitudes of other factors. But in particular, in 2006 there were some sound fundamental reasons for why spreads did what they did and I would be very happy to answer questions about those at length.

The financial market for natural gas derivatives has a virtually unlimited supply and unlimited capacity to absorb trading activity. It would be impossible to corner, dominate, or otherwise exert any type of control on a financial market without access to the physical commodity, or at least another product that mimics that physical commodity. Prices are determined by fundamentals, whether those fundamentals happen to be financial or physical, and by the collective judgment of many participants in a large and efficient market.

The Subcommittee also asked me about my views on whether position permits and other regulatory requirements should be extended to cover unregulated exchanges. I absolutely support reporting requirements and accountability limits on ICE, the general over-the-counter market, and even the physical markets to some extent. But it must include all facets of the market to be effective.

In particular, reporting requirements would benefit market participants by making more information available to the public, the traders, and the regulatory agencies, and would make the market more transparent to all.

In terms of limits, policymakers must be very careful to evaluate the important pros and cons to make sure we do not have a capital flight from the market.

I have included further discussion of some of these issues in my written statement and I would be happy to elaborate on my views today.

Senator LEVIN. Thank you, Mr. Lee. How many natural gas traders did Amaranth have when you were there?

Mr. LEE. In terms of pure natural gas traders, I believe it had five.

Senator LEVIN. The head gas trader was Brian Hunter?

Mr. LEE. Yes, it was.

Senator LEVIN. Did you work with him?

Mr. LEE. Yes.

Senator LEVIN. Who designed the natural gas trading strategies for Amaranth?

Mr. LEE. Each one of those traders, or at least three of the five traders, had their own strategies. They could pretty much do whatever they wanted as long as they were concentrating the core of their strategies in what they were hired to do. Two of those five traders executed trades for the more senior traders.

Senator LEVIN. Amaranth bought or sold tens of thousands of natural gas contracts over the course of a single day; is that correct?

Mr. LEE. Yes.

Senator LEVIN. For instance, on July 31, you bought nearly 26,000 March 2007 futures contracts and you sold about 24,000 April 2007 contracts, according to your information. Does that sound right?

Mr. LEE. I recall them buying a lot of March/April contracts. I do not know the exact numbers.

Senator LEVIN. Did you know at the time how large Amaranth's trading was?

Mr. LEE. My only frame of reference at the time was relative to other companies I had worked at, and the relative sizes I had been able to take at other companies, as well. That was my only frame of reference. But I did not know exactly how they compared to the rest of the larger traders in the market.

Senator LEVIN. What was the size of the biggest trades that you made when you were at Amaranth?

Mr. LEE. When I was at Amaranth trades for my own portfolio, I would say would have been less than 5,000 at any time for a total position, let alone trading in a day.

Senator LEVIN. Could they be 5,000 at a time?

Mr. LEE. No, not for myself. But I was asked to execute for Brian Hunter at points during the summer when they were extremely busy. And at those times definitely we traded 5,000 at a time or more.

Senator LEVIN. What was the largest trade you ever made before going to Amaranth?

Mr. LEE. I would say something to the tune of about 5,000 lots.

Senator LEVIN. You made trades that large before you went to Amaranth?

Mr. LEE. Yes.

Senator LEVIN. Where was that?

Mr. LEE. At Citadel, an other hedge fund.

Senator LEVIN. What year would that have been?

Mr. LEE. That would have been 2005.

Senator LEVIN. Do you think that Amaranth's trading volumes were basically large?

Mr. LEE. I thought they were more than basically large. They were larger than I had ever seen, to be quite blunt about it. But relative—I mean, that was a part of the market I had never seen before, in terms of what I could call the big boys. So I did not know how large they compared to everyone else.

Senator LEVIN. Why did Amaranth engage in these scale tradings?

Mr. LEE. My understanding was it was simply a matter of capital. At a hedge fund you are given an amount of capital to trade with. It may not be so clear in those terms, maybe either as risk or capital. But you simply have to put that capital to work one way or the other. And Amaranth, for whatever reasons, because I only got there of April 2006, had given a lot of money to the energy trading side of the business.

Senator LEVIN. Did Amaranth believe that the January prices were going up?

Mr. LEE. Not necessarily. There were times during the year when they believed that. I think this is a chance for me to clear up one of the common misconceptions about—as I have seen in the report—about these January/October spreads and these January/November spreads, in particular. Buying one of those spreads does not necessarily represent a view of the market going up.

In fact, at least in my—you will have other traders disagree—but I think a good majority would agree when you buy one of those particular spreads, that typically means you think the market is going to go down. So it was more a view of October was going to go down rather than January was going to go up.

Senator LEVIN. Did you not overall, at that firm when you were there, believe that January prices were going to go up?

Mr. LEE. Yes.

Senator LEVIN. Did you trade on both the NYMEX and ICE?

Mr. LEE. Yes, I did.

Senator LEVIN. Did you consider natural gas contracts on ICE and NYMEX to be equivalent for risk purposes?

Mr. LEE. Those contracts were equivalent for risk purposes up until the point of settlement, at which point there are some extremely important fundamental differences. But if you were hedging in the future you could consider them identical for the most part.

Senator LEVIN. On August 8 and 9, NYMEX telephoned Amaranth, told it to reduce its positions in the September and October contracts. Is that correct?

Mr. LEE. That is my understanding, that is correct.

Senator LEVIN. Did Amaranth take issue with NYMEX's determination that your position was too large?

Mr. LEE. To be honest with you, I was not part of those conversations. That would have been done at the compliance level and maybe with whoever's position it involved, which would have likely been Brian's obviously. So I was not party to those conversations.

Senator LEVIN. But did you, in fact, comply? Did your company comply?

Mr. LEE. My understanding is that they complied and reduced their NYMEX holdings.

Senator LEVIN. And you were not given any instruction by anybody in terms of reductions at that time?

Mr. LEE. That would have not concerned my position. That would have concerned Brian's position at that point and I only executed for him from time to time.

Senator LEVIN. Were you aware of the fact that NYMEX gave that order?

Mr. LEE. I do not recall being aware of that order in particular. That would not be considered an extremely important event at the firm.

Senator LEVIN. How often did it happen that NYMEX would give an order that you have to reduce your position?

Mr. LEE. Not very often.

Senator LEVIN. So it would be considered an unusual thing, would it not?

Mr. LEE. I think from a compliance perspective they would have considered it unusual. But from a general market perspective—there is an entire market that exists to allow you to move between NYMEX and other exchanges. And it is a very liquid market. So from that perspective, being asked to do it caused no hardship on the company per se and it was something they were very easily able to do.

Senator LEVIN. Well, that is the point, it was too easy to do. But as a matter of fact, it was an unusual event, was it not, to be ordered to reduce your holdings?

Mr. LEE. Yes, it is unusual. There is usually rules in place on an exchange, and they are usually very set rules, that once you hit those rules you are going to get a talking to. The part that was unusual, though, is that over the course of the year—this is from my understanding only—was that those initial accountability levels were breached earlier on in the year and NYMEX continued to increase those for Amaranth and then eventually decided to have them liquidate.

Senator LEVIN. Do you know of any other time when NYMEX has issued an order like that?

Mr. LEE. I would never know about that because I believe those are private conversations with companies.

Senator LEVIN. Have you ever heard of a time from other companies, people you work with?

Mr. LEE. No.

Senator LEVIN. Now you say it was easy to comply with, and that is not the question. The question was whether or not it was unusual for NYMEX to issue that kind of an order. There may be other times that you do not know of, but you do not know of any other time when NYMEX has ever issued an order like that?

Mr. LEE. Correct.

Senator LEVIN. You did not reduce your position. What you do is shift your position to ICE, is that correct?

Mr. LEE. Yes. My understanding was that the order was to reduce their position of NYMEX contracts, not natural gas positions.

Senator LEVIN. Did they have any control over ICE?

Mr. LEE. Any control?

Senator LEVIN. NYMEX? Could they order——

Mr. LEE. No, they are separate companies.

Senator LEVIN. So you interpreted that to be just reduce your NYMEX position?

Mr. LEE. Yes.

Senator LEVIN. Were you involved in that discussion?

Mr. LEE. No, I do not recall being involved in that discussion.

Senator LEVIN. So that when the company was told to reduce its positions in these futures, you do not know whether there was discussion in the company as to whether to just simply shift over to ICE or to reduce its overall position?

Mr. LEE. For the reasons you explained yourself, from a risk management standpoint, there was essentially no difference between the two markets. So from that perspective it would not have been a big deal to do it.

Senator LEVIN. It would not have been a big deal for you to be able to implement but it is a very big deal in terms of what your holdings are in the overall market; and the impact on that market when you would sell them on all at one particular point. So that is where the difference lies. You say it was easy for you to shift. That is the problem. It was too easy for you to shift.

Should you be able to shift, do you believe, from one market to another? You are told you must reduce on this market, your position endangers the market, and then to be able just to simply shift to another market? Does that give you any kind of pause?

Mr. LEE. I believe it depends on the circumstances. I believe one of the reasons that NYMEX has specific limits in place and accountability levels is because during the settlement process if you do not get rid of your futures contract position you have to make or take delivery of the actual physical natural gas. The difference with the swap market is you do not do that. One settles, one references the settle.

Senator LEVIN. Do you think your positions have an impact on market prices?

Mr. LEE. Do positions have an impact on market prices?

Senator LEVIN. Yours. Do you think those positions, given the size of those positions, that they could have a significant impact on market prices?

Mr. LEE. To answer your question I think I have to explain it like this: There is no question that any time there is a capital infusion into a market or a flight from that market, that there is an initial temporary price change. But once the market has had the ability to react to that price change, I do not believe that any position in a market, as long as it is not the physical commodity, can have an overlasting effect on price.

Senator LEVIN. Do you think it has an impact on price, a large holding such as yours, 50 percent of the market, up to 75 percent in 1 month; could it have a significant impact on price, at least in the short term?

Mr. LEE. In the extreme short term I would agree with you. You also must remember you are talking about some of the open interest levels that were in NYMEX only. And in the greater context of the market, Amaranth was not as large as their holdings on NYMEX would have indicated.

Senator LEVIN. At the time that you wrote to Brian Hunter on September 7 last year, just before the collapse that "things were fine when we were holding the risk for the market because we could handle it. That risk in 30 other hands is a much more dangerous proposition."

What does it mean to "hold the risk for the market?"

Mr. LEE. As a speculator, that is exactly what you are doing out there. You are taking risks that your typical producer or consumer is not going to take. And it is going to react different in the hands of different people.

Senator LEVIN. Would the size of your holdings have an impact on that?

Mr. LEE. In the immediate. Yes, immediately. That is a liquidity issue.

Senator LEVIN. What is the problem with risks being in 30 other hands?

Mr. LEE. It is not a problem for the market. That could have been a problem for us at the time. We were talking about a point where we were getting ready to liquidate a distressed asset. The question I was asking there was do you want to do this all at once or do you want to give it to the market to do it for you? What do you think is the better option?

Senator LEVIN. But you were talking about holding the risk for the market and then you said "that risk."

Mr. LEE. Yes. The particular risk I was talking about—

Senator LEVIN. "That risk in 30 other hands is a much more dangerous proposition."

Mr. LEE. The particular risk I am talking about I am not sure. I believe it had to do with one of the spreads that I was describing at that time. But yes, I was insinuating that we were holding a good portion of that risk at that time and that our behavior might be different than if 30 other players held that exact same risk at that point in time.

Senator LEVIN. You also said in one of your e-mails that "there is no catalyst right now. That is the problem. You exit this size without one, without exiting every position in your book, and we have got a big problem."

What did you mean by the word "catalyst?"

Mr. LEE. By catalyst I meant a liquidity event. There is not a constant liquidity in natural gas markets, especially natural gas markets, due to its reliance on such fundamental things such as weather. To trade large positions you need liquidity events to sometimes enter them and sometimes exit them. Typically in the time period that we are talking about, like a September, you're in a low demand period, there was no hurricanes at the time, there is not a lot of weather. It is not a great time to do anything one way or the other if you want to get a good price for what you want to do.

Senator LEVIN. So the word catalyst in that context meant an external event such as a hurricane?

Mr. LEE. It would not have to be necessarily an external physical event. This could be something as simple as a buyer coming in. It could be physical or financial.

Senator LEVIN. But without that, if you sold all of your positions, the prices would fall sharply?

Mr. LEE. I am insinuating that, yes. But to fully answer that question you have to keep in mind the context of the time. Amaranth was dealing with an extremely big problem with their cash. And it was a decision whether to get rid of part of the position and see if the company could remain solvent or get rid of all of the positions so that there was no question that the company was solvent.

I am pretty sure that is what I was referring to there.

Senator LEVIN. Your next sentence, "that things were fine when we were holding the risk," does that not mean, in context then, that as long as you were the dominant holder of those positions and did not sell, that the prices would then not crash down?

Mr. LEE. No, I do not think I am insinuating that. I think I am insinuating that if one very large player with different risk perspectives than say other types of participants in the market is holding the risk, they are going to do something differently with it and they can handle greater swings and things like that.

There is different parts of the market that can not handle volatility. We are able to handle it for the most part up until September and I think that is what I am insinuating.

Senator LEVIN. So you did not believe at that time that your positions were so large that if you sold them all at once the prices would fall sharply? You did not believe that?

Mr. LEE. I do believe that because I do—

Senator LEVIN. Did you believe that?

Mr. LEE. Yes, I did believe that because of a liquidity event and because, as I said, I do agree that any trade in the market does have a short-term effect on prices.

Senator LEVIN. Senator Coleman.

Senator COLEMAN. I just want to get to a discussion of what is excessive. Do you have a definition of what constitutes excessive speculation?

Mr. LEE. I do not.

Senator COLEMAN. So it was not unusual for Amaranth to hold as much as 40 and sometimes 50 percent of the NYMEX open interest in certain contracts? Is that something you would consider excessive?

Mr. LEE. Postmortem, looking at that, it looks like they did that all the time. In terms of excessive, excessive relative to what? Relative to one exchange? You could make an argument for that.

But you have to take this in the context that there was more than just NYMEX trading. There was times when they had greater positions on ICE than NYMEX and to look at just one facet of the market and determine whether it was excessive, that is not for me to decide. That is for the exchange to decide or for the regulator to decide. Was it large? Sure. Was it large relative to the whole market? I would not know because I have no clear definition of what the entire market looks at, because only one part of the market reports.

Senator COLEMAN. So it is not up to the trader, but if the trader was given that definition by NYMEX or others, that is something you could deal with?

Mr. LEE. That is something I could deal with and abide by.

Senator COLEMAN. If NYMEX was so concerned about the size of the positions that they tell you to get out of your positions by August, is this an indication that speculation might be excessive?

Mr. LEE. It was at least an indication that they felt it could cause some problems for their market integrity. I do not know if it necessarily insinuates that the entire market could not handle that particular amount of speculation.

Senator COLEMAN. I am just trying to put myself in your frame. When NYMEX says you have to get out you move to ICE because you can do it. Was there ever any thought or discussion that you were doing this because NYMEX was coming down on you and you had another place you could go without transparency, without people knowing what you were doing?

Mr. LEE. That would not have been the business decision at the time. You have to keep in mind that Amaranth was running obviously very large positions in, I believe, upwards of 67 or 69 months.

To just get rid of two positions from a risk perspective could be extremely damaging, especially if you are only given—I do not know what the notice was to get out of those positions but let us say 24 hours. From a business perspective, because they were allowed to do this, it was best to move to the rest of the market and then they could therefore have more time to decide what to do from a risk perspective with their overall position rather than just dealing with one or two positions.

Senator COLEMAN. Was there ever any discussion about Amaranth's position and its effect on market liquidity?

Mr. LEE. Yes. I remember times when—I mean, it is a simple concept. If you hold a large position in one particular contract, there is obviously some disagreements with you on that price from a market participant standpoint. So if you need to get out of that contract very quickly there could definitely be a liquidity issue for you.

Senator COLEMAN. If you go to Exhibit 14,[1] if you have a copy of that. I believe it is Amaranth's May 2006 update to investors. The middle of the second paragraph. Do you have a copy of that?

Mr. LEE. I will momentarily. OK.

Senator COLEMAN. In the middle of the second paragraph, almost exactly in the middle. It says "In this case, as we endeavored to monetize gains and reduce risk within the portfolio, liquidity in the middle part of the natural gas forward curve seized up due to high volumes of producer hedging that oversaturated market demand for forward natural gas. While this was a humbling experience that led us to recalibrate how we assess risk in this business, we believe certain spread relationships involving natural gas remain disconnected from their fundamental drivers."

I want to get back to whether Amaranth's natural gas positions and trading volumes were large relative to the average. Is this document telling you that?

Mr. LEE. I do not think it is necessarily telling you that. It is just saying that any position—when you have an event like we had in May, and just let me kind of explain the background of it. We saw an amount of producer hedging that we had not ever remembered seeing since about 2001. I think the market, in general, had outsized itself for that type of event, us included, and prices rated accordingly.

Senator COLEMAN. So you do not believe that one of the lessons of Amaranth's collapse is that when a fund's positions are large relative to the average trading volume, the fund's risk model should account for the effect of its own activity on prices and liquidity?

Mr. LEE. I cannot say I disagree with that. I think that is a pretty novel concept and I think it is something risk managers should look at.

Senator COLEMAN. I am not sure whether your personal opinions have much impact but do you think that ICE and NYMEX should be regulated differently?

Mr. LEE. From a reporting standpoint and an accountability level standpoint, they should absolutely be the same. I see no reason

[1] See Exhibit 14 which appears in the Appendix on page 900.

why not. I do not think it creates that much of an administrative burden on anyone to do it.

Senator COLEMAN. But if they were the same, then perhaps you would not have been able to move from NYMEX to ICE and simply literally reverse your positions. When I say you, I mean Amaranth. If they were the same, you would not do that.

Mr. LEE. That is true.

Senator COLEMAN. Perhaps it tells us sitting here, that in part your motivation was to move from something that has regulators squeezing you to an area that you are not going to be squeezed because there is not transparency.

Mr. LEE. Keep in mind you are discussing the concept of limits, though, which is a lot tougher question to deal with. That is the part of the question, I think, where you could risk flight from market. Whereas with accountability levels and reporting, I do not think you take that risk or I cannot honestly believe anyone that would tell me that would be a risk.

Senator COLEMAN. Thank you, Mr. Chairman.

Senator LEVIN. On September 17, John Arnold of Centaurus wrote to the head of natural grass trading at Amaranth, Brian Hunter, saying that "In my opinion, fundamentally, the March/April spread is still a long way from fundamental value. . . . Even though that spread has collapsed over the last 2 weeks, the only reason it is still above $1 is because of your position."

That is what Arnold wrote to Hunter. Do you agree with Arnold's view now?

Mr. LEE. No, I do not. I believe this is John Arnold posturing. He was trying to buy a distressed asset for the cheapest price he could. And if I was in his position, I would have said the exact same thing.

Senator LEVIN. Did Hunter want to take that offer?

Mr. LEE. Yes, he did.

Senator LEVIN. Even though Arnold was posturing?

Mr. LEE. Yes. The total cost to Amaranth at that point, I had estimated, would have been in the $600 million to $800 million range, rather than the $4-plus billion that they eventually lost. But that is all in hindsight.

Senator LEVIN. A former colleague of yours at Amaranth wrote another energy trader about a different contract, "Boy, I will bet you see some CFTC inquiries for the last 2 days." The trader replied to Brian Hunter, "Until they regulate swaps, no big deal."

That trader told us that he thought manipulation can occur because there is no regulatory oversight of natural gas swaps on ICE. Do you agree?

Mr. LEE. I would agree.

Senator LEVIN. Do you think the regulators should be able to view both futures and swaps?

Mr. LEE. Yes, I do.

Senator LEVIN. And if there had been regulation of ICE, as I understood the answer to the question that was asked by Senator Coleman, you would not have switched over to ICE. Did I hear you correctly?

Mr. LEE. We would not have been allowed to. We would have had to follow the rules and Amaranth always followed the rules, and we would not have done the swap.

Senator LEVIN. Would you have tried something else? Looked for some other over-the-counter way to do it?

Mr. LEE. I do not think we would have, as a company—I mean, I cannot speak for the company. This was not my trade. But I do think the fact if there was certain other rules in the over-the-counter markets that do not exist today, that it is possible that some of our trading may not have been what it had and we may not have had that issue that we would have had to move because of limits.

Senator LEVIN. So you do not object to the limits that we have talked about on ICE?

Mr. LEE. In terms of limits, I would have to have some hard numbers to understated it. I believe there is a fundamental difference between the swap and the future but in terms of accountability and all that sort of stuff, absolutely. I think we should do it. I do not think it causes any administrative burden to anybody.

Senator LEVIN. In terms of excessive speculation being prohibited, do you have a problem with that?

Mr. LEE. No, as long as it is defined.

Senator LEVIN. Well, if it is defined by the regulator using all the factors before the regulators—is it defined now on NYMEX?

Mr. LEE. Postmortem, I have an idea what they think is excessive speculation. But at the end of the day as a trader, what I need as a trader is a hard fast number to abide by.

Senator LEVIN. Is there a hard fast number on NYMEX now?

Mr. LEE. There is only accountability limits. There is limits during the settlement period, the 3 days going into settlement period. But otherwise, it is just a matter of if you are going to get a phone call and they will ask you why.

Senator LEVIN. Do you have objection to the current approach on NYMEX relative to excessive speculation?

Mr. LEE. No.

Senator LEVIN. Even though there is no hard and fast——

Mr. LEE. No. I think as long as the regulators or exchange personnel is calling and telling you that they think it is going to cause a market integrity problem, then I think you need to listen to them. I do not think any trader would have a problem with that.

Senator LEVIN. If ICE had that same power? Do you have a problem with that?

Mr. LEE. If you had it?

Senator LEVIN. If they enforced it the same way that NYMEX does.

Mr. LEE. Then that would be no problem, as long as everyone knows the rules beforehand.

Senator LEVIN. Do you know the rules beforehand on NYMEX?

Mr. LEE. On NYMEX, yes, you do.

Senator LEVIN. If ICE enforced the same rules in the same way as NYMEX, would you have a problem with that?

Mr. LEE. No, I would not.

Senator LEVIN. Do you think that if we had the same regulatory system on ICE as we do on NYMEX that you or other traders would do bilateral deals over-the-counter?

Mr. LEE. I do not think that is going to happen so much as it would have 10 years ago. Everyone wants to sit in front of a computer screen now. It is the easiest thing in the world to do is, to trade on ICE or the NYMEX. To call up a voice broker or to call up someone directly, I think is such a smaller part of the market—you can still deal with a voice broker but it still gets cleared through these other exchanges. But to do a trade directly with another counter party through the voice brokers is becoming smaller, and smaller, and smaller by the day. so I think the main concern would be ICE.

Senator LEVIN. It is becoming smaller because there is another place where you can do unregulated trades.

Mr. LEE. Both are unregulated, yes.

Senator LEVIN. If ICE is put under regulatory regime the way NYMEX is, would there be a move then away from ICE, in a sense, to strictly bilateral trades, do you believe?

Mr. LEE. I think that comes down to how strict you make the limits or reporting. If it ends up creating a big burden on these speculators in the market, yes, I guess there is a chance that it could flee there. It could flee to another country. I am not sure. But as long as they are reasonable, I do not think you are going to see any flight away from the exchanges.

Senator LEVIN. I understand that you and Brian Hunter are working together to set up a new hedge fund called Solengo,[1] is that correct?

Mr. LEE. Yes, it is.

Senator LEVIN. Did I pronounce that correctly?

Mr. LEE. Yes, you did.

Senator LEVIN. Does that hedge fund intend to engage in energy trades?

Mr. LEE. Yes, it does.

Senator LEVIN. In natural gas and oil?

Mr. LEE. Yes, it does.

Senator LEVIN. Will it engage in large-scale trading?

Mr. LEE. No. We have addressed two of the problems that happened in the Amaranth situation with our new fund to reduce that possibility.[2] And one of those ways is to limit the amount of capital that can go into any one market. Two, is to limit the amount of margin you are allowed to put in any one market so that you do not have a cash situation, as well.

Senator LEVIN. So there will not be as large-scale trades in that hedge fund as there was with Amaranth?

Mr. LEE. No, there will not.

Senator LEVIN. Will there be significantly smaller trades?

Mr. LEE. Yes, there will.[3]

Senator LEVIN. The media has reported that potential investors in the new hedge fund include investors from the Middle East. Could you describe those investors in general terms, particularly

[1] See Exhibit 23, Note 1, which appears in the Appendix on page 998.
[2] See Exhibit 23, Note 2, which appears in the Appendix on page 998.
[3] See Exhibit 23, Note 3, which appears in the Appendix on page 998.

this, I do not need the names, but does it include persons from oil-producing companies that might have an interest in high U.S. energy prices?

Mr. LEE. To be quite blunt, I have never spoken to any of those investors. I have not been part of the fundraising process. I am not sure. I know some of the countries that these peoples live in and yes, they would have an interest in high oil prices.[1] But you must understand, we are talking to investors from all over the world and not just a few countries in the Middle East.

Senator LEVIN. But some of them are from the Middle East that would have that interest?

Mr. LEE. That is my understanding.

Senator LEVIN. Mr. Lee, we thank you. We thank you for your cooperation with our Subcommittee. We have gotten a lot of data from Amaranth and it has been helpful to us. You are excused.

Let me just briefly close by saying that it is obvious that Congress must do more to safeguard U.S. energy markets from price manipulation and excessive speculation. The first step is to close that Enron loophole, which never should have been opened. Closing the loophole would make NYMEX and ICE subject to the same market oversight, put the cop on the beat in all U.S. energy markets. It would also level the regulatory playing field between the two exchanges.

The new CFTC proposal goes a ways in the right direction, but we have got to close the Enron loophole because that is the critical step which has to be taken to avoid the excessive speculation and to prohibit manipulation in advance, not just to try to catch up with people who engage in it afterwards. So getting the key information is just not enough if regulators do not have the power to act on what they see. They have got to be able to reduce holdings, limit trades to prevent price manipulation and excessive speculation. And Congress alone can eliminate the Enron loophole which we created and restore regulatory authority to all U.S. energy markets.

The second step that we should take in safeguarding U.S. energy markets is to invigorate the statutory prohibition against excessive speculation. It must be enforced much more effectively with better criteria. The CFTC and exchanges need to police contracts in all months where speculative trading is affecting prices, not just in contracts about to expire.

The third step is for Congress to provide the funds that CFTC needs to do its job. Right now the CFTC's entire budget is $98 million per year to oversee commodity trades that are in the billions. It is one-eighth of the size of the SEC's budget of $880 million. The CFTC suffers from antiquated technology, shrinking staff, and inadequate oversight resources. To obtain the needed funds, Congress should authorize the CFTC, I believe, to collect user fees from the market that it oversees in the same manner as every other Federal financial regulator, including the SEC.

The CFTC has been starved for resources for too long and one way or another, whether or not it is from collection of user fees or

[1] See Exhibit 23, Note 4, which appears in the Appendix on page 998.

in some other authorization and appropriation, the CFTC must be provided the resources.

What we have seen here is that excessive speculation by a single hedge fund, Amaranth, altered natural gas prices, caused wild price swings and really hit consumers with high prices during 2006.

As I said before, it is one thing if gamblers gamble with their own money and if speculators gamble with their investors money. But it is a totally different thing when the U.S. energy markets are turned into a casino. Everyone is forced then to walk into that casino and gamble, betting on prices that are driven by highly aggressive trading practices. Amaranth is not the only hedge fund which uses large-scale trading in energy markets in the United States, but we have got to get the regulatory cop back on the beat in all of our energy markets in the United States. We have got to give them stronger tools to stop excessive speculation and prevent price manipulation.

So that is the chore before us. We are grateful to all of our panels. Our staff has done a terrific job in terms of putting together, I think, one million documents. I hedged; it is two million documents. It took, I believe, almost a year to do that. It is a lot of work. It has never been done before. It produced a report which we are very proud of because I think it really illuminates a problem here, which is you have regulation in one place and not in another. And without regulation in a much more competitive way, covering all of the bases, in effect, we are not really regulating it all.

The prices that our consumers pay is higher as a result. The swings in these prices are greater as a result. And it is up to Congress now to correct the problems that we have. This testimony today will hopefully help Congress do exactly that.

We will stand adjourned.

[Whereupon, at 2:16 p.m., the Subcommittee was adjourned.]

EXCESSIVE SPECULATION IN THE NATURAL GAS MARKET

MONDAY, JULY 9, 2007

U.S. SENATE,
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS,
OF THE COMMITTEE ON HOMELAND SECURITY
AND GOVERNMENTAL AFFAIRS,
Washington, DC.

The Subcommittee met, pursuant to notice, at 2:35 p.m., in room SD–342, Dirksen Senate Office Building, Hon. Carl Levin, Chairman of the Subcommittee, presiding.

Present: Senators Levin and Coleman.

Staff Present: Elise J. Bean, Staff Director and Chief Counsel; Dan Berkovitz, Counsel; Kate Bittinger, Detailee, GAO; Ross Kirschner, Counsel; Mary D. Robertson, Chief Clerk; Mark D. Nelson, Deputy Chief Counsel to the Minority; Jeremy Kress, Law Clerk; David Weinberg, Law Clerk; Genevieve Citrin, Intern; and Edmund Zagorin, Intern..

OPENING STATEMENT OF SENATOR LEVIN

Senator LEVIN. Good afternoon, everybody. At our hearing 2 weeks ago, we laid out the case history of Amaranth Advisors LLC. A lengthy staff report and testimony from witnesses told the story of how this large hedge fund dominated the U.S. natural gas market in 2006, until it collapsed in September 2006.

In 2006, Amaranth traded thousands of natural gas contracts daily, sometimes traded tens of thousands of contracts in a single day, and accumulated as many as 100,000 natural gas contracts for delivery of natural gas in a single month. At times during the summer, Amaranth held about 40 percent of all outstanding NYMEX natural gas contracts for the winter of 2006–2007, including 75 percent of the outstanding futures contracts to deliver natural gas in November 2006, 60 percent of those delivering natural gas in January 2007, and 60 percent of those delivering natural gas in March 2007. We heard at that hearing how Amaranth's trades and holdings were way beyond the norm and way beyond the economic capacity of most natural gas traders.

We also heard how Amaranth's trading practices pushed up prices for winter gas, contributed to price spikes, and socked consumers with extra costs. One public gas company in Georgia testified at the last hearing that it paid $18 million more than it should have for winter gas because of Amaranth's excessive speculation. An industry association told the Subcommittee that Amaranth's trading in winter gas likely cost consumers billions of dollars in extra costs.

The Amaranth hedge fund gambled on the natural gas market. It lost that gamble, but Amaranth's losses are not our concern. The real issue is that, by using massive trades to bet on natural gas prices, Amaranth raised relative 2006 winter prices for the whole market and caused consumers hedging their winter gas purchases to pay inflated prices. Those consumers could not afford to roll the dice and wait to see if prices came down later. They had to lock in their winter gas prices during the summer to ensure a stable supply and in order to carefully budget for the cost. Amaranth upped the cost, which means the public ultimately paid the price.

Just 1 year ago our Subcommittee released a report showing how widespread speculation in contracts for the future delivery of oil was inflating crude oil prices by about $20 per barrel of oil. The Amaranth case shows how a single hedge fund—backed up by large amounts of capital—produced an equally dramatic effect in the natural gas market. At our last hearing, I asked one of the Amaranth traders why they engaged in such large-scale trades, and he answered: "[I]t was simply a matter of capital. At a hedge fund you are given an amount of capital to trade with . . . [Y]ou simply have to put that capital to work one way or the other."

To Amaranth, it was simply a matter of putting capital to work. It had billions to invest and decided to invest those billions in the natural gas market. Amaranth did not produce natural gas, it did not supply natural gas, it did not use natural gas. It simply wanted to speculate and hopefully make a lot of money in the natural gas market. And they took users and consumers of natural gas along for the ride.

Excessive speculation and price manipulation are not confined to the natural gas market—they taint many sectors of the U.S. energy market, from Enron's distortion of electricity prices, to alleged price manipulation in the propane market, to alleged price gouging in gasoline. Unfair energy prices are causing real pain for the people we represent. The causes demand a remedy when they reflect manipulation or excessive speculation.

Today's hearing focuses on the role of market regulators to protect the public from unfair energy prices. The Commodity Futures Trading Commission (CFTC) is the key cop on the beat charged with policing U.S. commodity markets to stop price manipulation and excessive speculation. To carry out its mission, the CFTC has delegated authority to a number of exchanges, such as the New York Mercantile Exchange (NYMEX) to establish rules to monitor trading and prevent manipulation and excessive speculation. The CFTC has, for example, authorized regulated exchanges to impose trading limits on individual traders to prevent speculators from engaging in misconduct. These regulated exchanges provide the first line of defense against market misconduct; the CFTC provides the backup.

When it comes to energy, however, Congress has thrown the CFTC a curve that has made its oversight job much harder. In 2000, at the request of Enron Corporation and others, Congress amended the key Federal law, the Commodity Exchange Act, to exempt CFTC oversight of energy and metals commodities traded on the electronic energy exchanges which are used by large traders. The result of this so-called "Enron loophole" is that a leading U.S. electronic energy exchange, known as the Intercontinental Exchange, or ICE, is exempt from the normal regulatory system that applies to regulated exchanges. That means, unlike NYMEX, ICE has no authority or obligation to monitor trading, no authority or obligation to prevent price manipulation, and no authority or obligation to prevent excessive speculation from distorting prices. And due to the Enron loophole, the CFTC has no authority to limit trading on ICE to prevent price manipulation or excessive speculation.

NYMEX and ICE are the two biggest energy exchanges operating in the United States today. It makes no sense that one market is regulated and the other is not. Worse, the Amaranth case history shows how the operation of an unregulated market can make it impossible for a regulated market to effectively prevent price manipulation and excessive speculation.

That is because the current system allows traders to avoid restrictions against excessive speculation imposed by NYMEX, the regulated market, simply by switching their positions to ICE, the unregulated market. This switch costs a trader virtually nothing, and enables the trader to engage in unlimited trading on the unregulated market.

That is exactly what happened in August 2006, when NYMEX ordered Amaranth to reduce its holdings of the September 2006 NYMEX futures contracts. As this chart, Exhibit 6,[1] shows, when NYMEX gave that order on August 8 to Amaranth to reduce its holdings of the September 2006 futures contracts, on that date Amaranth held a short position of about 60,000 September contracts on NYMEX—which is a huge position. Concerned that Amaranth might engage in last-minute large-scale trading that could affect the final settlement price of the September contracts, NYMEX ordered Amaranth to reduce its September contracts, in an orderly manner, by the end of August.

In response, Amaranth reduced its NYMEX position down to about 10,000 contracts by the end of August. However, Amaranth also increased its position on ICE to about 80,000 September contracts, in trades that took place without NYMEX or CFTC scrutiny or limitations. In making the switch from NYMEX to ICE, Amaranth took advantage of the Enron loophole. The end result was that NYMEX's order did not cause Amaranth to reduce the size of its holdings. It, instead, led Amaranth to move from a regulated to an unregulated market.

Now consider the trading that took place on August 29, 2006, the last day of trading allowed on September contracts. On that date, Amaranth sold tens of thousands of contracts during the day, primarily on ICE. Despite those sales, the contract price did not fall much, because Amaranth's trades were counterbalanced all day by other traders, including another large hedge fund, Centaurus, that bought the September contracts that Amaranth was selling. In the last hour of trading, Amaranth stopped trading on NYMEX in response to the NYMEX directive that it refrain from trading during the final 30 minutes. Other traders, however, continued buying the

[1] See Exhibit 6 which appears in the Appendix on page 717.

September contract. Without Amaranth's sales to counterbalance the pressure on the contract price, in the last hour of trading the final contract price shot up 10 percent.

Almost all of the trades made by Amaranth and Centaurus on August 29 took place on ICE. Amaranth sold about 16,000 September contracts that day, while Centaurus bought about 12,000—10,000 of which were in the final 45 minutes of trading. NYMEX rules bar traders from holding more than 1,000 contracts in the last 3 days of trading on a contract. The torrent of ICE trading during those same 3 days not only nullified NYMEX's efforts to limit trading near the contract deadline, but also clearly affected the NYMEX final price. For Amaranth, because of all the short sales it made, the last-minute upward spike in the contract price dropped the value of its holdings by nearly $500 million.

Some of the questions we will examine today are, first, why any organized exchange with energy trading is exempt from routine CFTC oversight and regulation. Energy is a vital commodity to the United States. There is no rational reason to exempt energy commodities from normal market oversight to prevent price manipulation and excessive speculation. Second, we will examine why ICE is treated differently from NYMEX. Both exchanges affect energy prices. Both exchanges are used by the same traders whose trades lead to virtually identical energy prices on both markets. Both exchanges are vulnerable to misconduct that can inflate energy prices. And as the Amaranth case history illustrates, regulating one U.S. energy exchange without regulating the other is a recipe for failure since speculators restricted on NYMEX can simply move to ICE and carry out the very same trades.

The flaws in the current regulatory structure for U.S. energy trades are painfully obvious, but the CFTC has been slow to call for reform. For years, the CFTC has resisted requesting authority to monitor energy trades taking place outside the regulated markets. It has resisted recognizing the role of unregulated markets in affecting prices on regulated markets and the impact of excessive speculation in pushing up energy prices. It has also resisted asking for explicit authority to prevent price manipulation and excessive speculation on ICE.

Amaranth's excesses may have finally broken down some of that resistance. In late 2006, after Amaranth collapsed and the scale of its trading became widely known, the CFTC used its special call authority to require ICE, for the first time, to begin turning over daily trading data. Last month, the CFTC proposed a rule that would require traders on NYMEX, the regulated exchange, to disclose upon request their holdings on all exchanges, whether regulated or not. That would enable the CFTC to get a more complete picture of a trader's relevant holdings. But unless the CFTC can obtain the same information from ICE traders that it can from NYMEX traders, and unless ICE is subject to the same rules prohibiting excessive speculation as NYMEX, the ultimate effect of the proposed rule may be to create one more incentive for traders to choose trading on the unregulated ICE market over the regulated NYMEX market.

While the CFTC's recent innovations will help expand its access to essential energy trading data, they do not give the CFTC the authority needed to protect U.S. energy markets from price manipulation and excessive speculation. The CFTC must not only obtain the information it needs, it must also be able to act on that information to protect the public.

Our report presents three bipartisan recommendations to enable the CFTC to effectively police U.S. energy markets. The first is to close the Enron loophole by giving the CFTC equal oversight and regulatory authority over NYMEX and ICE energy trades. Second, the CFTC needs to strengthen enforcement of the prohibition against excessive speculation, including by monitoring speculative trades of contracts in all months, not just the contracts nearing expiration. Third, Congress needs to give the CFTC more funds to do its job, including, if necessary, authorizing the CFTC, like every other U.S. financial regulator, to collect user fees from the markets it oversees.

Right now, U.S. energy markets are dangerously vulnerable to price manipulation and excessive speculation. Regulators charged with protecting the public are hobbled by laws that create irrational rules for energy commodities, establish an uneven regulatory playing field between NYMEX and ICE, and render market regulators powerless to effectively stop inappropriate trading on electronic exchanges from affecting contract prices. We can and we must do more to protect the public. We must put the cop back on the beat in all U.S. energy markets.

Let me close by thanking Senator Coleman, the Subcommittee's Ranking Republican, for his continued support of these efforts. We also, I am sure, join in thanking his staff and my staff for their dedication and assistance in this truly joint effort.

Finally, I would like to thank each of our witnesses today—the CFTC, NYMEX, and ICE—for their cooperation with the Subcommittee's investigation. NYMEX and ICE, for instance, provided extensive data and responded to many Subcommittee requests in a timely manner. We appreciate their assistance, and we appreciate the assistance of the CFTC in unraveling the Amaranth case history.

Senator Coleman.

OPENING STATEMENT OF SENATOR COLEMAN

Senator COLEMAN. Thank you, Senator Levin.

Today's hearing is the culmination of an extensive Subcommittee investigation into the impact of excessive speculation on the natural gas market. These efforts, including today's hearing, have been bipartisan from their inception, and I want to thank Chairman Levin and his staff for their hard work on these important issues.

As Senator Levin noted in his opening statement, the evidence reviewed by the Subcommittee reveals fundamental flaws in our current regulatory structure. Section 2(h)(3) of the Commodity Exchange Act exempts from CFTC oversight and regulation a massive, and growing, volume of energy transactions that occurs on electronic, over-the-counter exchanges. In stark contrast to regulated exchanges, exempt exchanges have no responsibility to monitor trading, no responsibility to prevent excessive speculation or price manipulation, and no responsibility to ensure that trading is fair and orderly. The end result is a bifurcated regulatory regime. Futures exchanges like the New York Mercantile Exchange—NYMEX—are both self-regulated and regulated by the CFTC; whereas other, increasingly significant segments of our energy markets—namely, electronic OTC exchanges like the Intercontinental Exchange (ICE)—are neither self-regulated nor regulated by the CFTC.

The Amaranth case history illuminates the inadequacy of this bifurcated regulatory structure and underscores the need for greater transparency and regulation on electronic OTC energy exchanges. And the Chairman has gone into the history. I will just touch upon it briefly.

From early 2006 until its September collapse, Amaranth traded heavily on both NYMEX, a regulated futures exchange, and on ICE, an unregulated OTC exchange. As a regulated exchange, NYMEX was required to monitor Amaranth's trading and prevent Amaranth's holdings from becoming too large. As an exempted OTC exchange, ICE shared no such responsibility and made no attempt to limit Amaranth's speculative trading.

On numerous occasions in 2006, Amaranth exceeded NYMEX accountability levels and CFTC position limits for natural gas contracts. In August, NYMEX finally took action and directed Amaranth to reduce its holdings in the natural gas futures contracts for September and October. Amaranth complied with NYMEX's order and, as the Chairman has set forth in the chart illustrated, by the end of the month, had exited its positions in the two contracts. But rather than reducing its overall natural gas holdings, Amaranth simply shifted its trading to ICE, where accountability levels and position limits do not apply. Through trades on ICE, Amaranth not only maintained but actually increased its positions in September and October natural gas contracts. As a result, NYMEX's instructions did nothing to reduce Amaranth's size, but simply caused Amaranth to move its trading from a regulated market to an unregulated one.

I believe the Amaranth facts demonstrate the need for greater transparency and regulation on electronic OTC energy exchanges and raise serious concerns about the ability of the CFTC to prevent excessive speculation and price manipulation in our energy markets. Speculative energy traders should not be able to skirt CFTC oversight by simply shifting their positions to unregulated electronic energy exchanges. Yet this is exactly what our current regulatory scheme allows.

Amaranth's collapse revealed a troubling level of high-risk, speculative trading that occurs on U.S. energy markets. Indeed, more than 500 energy-related hedge funds deploy a combined $67 billion in speculative capital to our energy markets. These traders bring important liquidity and vitality to the markets in which they invest. At the same time, however, we must ensure that speculative capital does not overwhelm the real buyers and sellers, like utilities and industrial users of natural gas. Again, it is the consumers who are impacted. It is the public that pays the price, and clearly Amaranth upped the cost. More than ever before, it is imperative that the CFTC and other market regulators have the statutory authority and budget necessary to police our energy markets.

Despite this pressing need for oversight, the CFTC's ability to conduct market surveillance has been eroded; its ability to prevent excessive speculation and price manipulation has been diminished. This is a direct result of the fact that more and more energy trading takes place on unregulated electronic over-the-counter exchanges. I am concerned that incomplete information and inadequate authority make it difficult, if not impossible, for the CFTC to effectively monitor and prevent excessive speculation and price manipulation in our energy markets.

As we move forward, however, we must not overlook the fact that, like the traders who use them, electronic OTC exchanges have brought increased competition and liquidity to our energy markets. Nor should we overlook the fact that, in many cases, these exchanges offer far greater transparency to both traders and regulators than do other OTC markets. For example, pursuant to its "special call authority," the CFTC now receives significant market disclosures from ICE, including position reports for all traders of certain natural gas contracts. The enhanced transparency offered by ICE's comprehensive position reports is in stark contrast to the opaque off-exchange, OTC market, where there are not only no position limits but also no reporting requirements.

Therefore, as we noted in the Minority's Views on the Subcommittee's Report, Congress must ensure that any proposed cure is not worse than the disease. If we extend CFTC oversight and regulation to electronic over-the-counter exchanges, we must avoid unintended consequences—namely, creating incentives for the exchanges themselves to move to less regulated commodities markets offshore. And, again, the concern is the movement from regulated to unregulated. We must avoid creating incentives for traders to shift their business to far less transparent and unregulated OTC markets. This is a real concern. In fact, according to a recent piece from Dow Jones, there has been a "recent groundswell in off-exchange transactions" and "hundreds of little-known, under-the-radar brokerage shops . . . are fast gaining currency—and notoriety—in energy-trading strongholds." And, again, the concern is with the lack of transparency, the lack of regulation. In the end, it is the consumers who are hurt. This is not about the kind of money being played with and the ethos and somewhere out in a place that the average person isn't impacted. We heard in the testimony at the last hearing that Amaranth's trading had an impact on prices consumers paid. And so the concern as we move forward is to make sure that we do not push from regulated to unregulated.

I look forward to hearing the testimony from today's witnesses, and, again, I thank the Chairman for leading this important bipartisan effort. Thank you, Mr. Chairman.

Senator LEVIN. Thank you very much, Senator Coleman.

Let me now welcome our first panel to this afternoon's hearing: James Newsome, the President and Chief Executive Officer of the New York Mercantile Exchange (NYMEX); and Jeffrey Sprecher, Chairman of the Board and Chief Executive Officer of the Intercontinental Exchange, also known as ICE.

Gentlemen, we appreciate both you being here this afternoon. We welcome you to the Subcommittee, and, again, we appreciate the cooperation that you have shown and your staffs have shown to the Subcommittee.

Pursuant to Rule VI, all witnesses who testify before the Subcommittee are required to be sworn. At this time I would ask both of you to please stand and raise your right hand. Do you swear that the testimony you are about to give before this Subcommittee will be the truth, the whole truth, and nothing but the truth, so help you, God?

Mr. NEWSOME. I do.

Mr. SPRECHER. I do.

Senator LEVIN. We will use the usual timing system today. About 1 minute before the red light comes on, you will see the light change from green to yellow, giving you an opportunity to conclude your remarks. Your written testimony will be printed in the record in its entirety, and we would ask that you limit your oral testimony to no more than 10 minutes each.

Let me start with Mr. Newsome. We will have you go first.

TESTIMONY OF JAMES NEWSOME,[1] PRESIDENT AND CHIEF EXECUTIVE OFFICER, NEW YORK MERCANTILE EXCHANGE, INC., (NYMEX), NEW YORK, NEW YORK

Mr. NEWSOME. Thank you, Mr. Chairman, Mr. Ranking Member. I am Jim Newsome, President and CEO of the New York Mercantile Exchange. NYMEX is the world's largest forum for trading and clearing physical commodity-based futures contracts, including energy and metals products. NYMEX has been in the business for more than 135 years and is a federally chartered marketplace. NYMEX is fully regulated by the CFTC both as a clearing organization and as a designated contract market, or DCM, which is the highest and most comprehensive level of regulatory oversight to which a derivatives trading facility may be subject under current laws and regulations.

Prior to joining NYMEX, I served as a CFTC Commissioner and, subsequently, from 2001 to 2004, as chairman. As chairman, I led the CFTC's implementation of the Commodity Futures Modernization Act of 2000. The CFMA streamlined and modernized the regulatory structure of the derivatives industry. It also provided legal certainty for over-the-counter swap transactions. Specifically, the CFMA created new exclusions and exemptions from CFTC regulation for bilateral transactions between high net worth participants in financial derivatives and exempt commodity derivatives, such as energy.

As the designated contract market, NYMEX has an affirmative responsibility to act as a self-regulatory organization and to monitor and to police activity in its own markets. Thus, a DCM must monitor trading to prevent manipulation, price distortion, and disruptions of the delivery or cash settlement process. Furthermore, to reduce the potential threat of market manipulation or congestion, the DCM must adopt position limits or position accountability for a listed contract, where necessary and appropriate.

The principal tool that is used by DCMs to monitor trading for purposes of market integrity is the large trader reporting system.

[1] The prepared statement of Mr. Newsome appears in the Appendix on page 152.

For energy contracts, the reporting position levels are distinct for each contract listed by the exchange for trading. The levels are set by NYMEX and are specified by rule amendments that are then submitted to the CFTC, following consultation and coordination with the CFTC staff.

The CFMA also permitted bilateral trading on energy electronic platforms. Under CFTC rules, these electronic trading platforms are called “exempt commercial markets” and are subject only to the CFTC’s anti-fraud and anti-manipulation authority. Unlike the DCM, the exempt commercial markets are completely unregulated by the CFTC and, thus, have no self-regulatory obligations to monitor its own markets.

A series of significant changes have occurred in the natural gas market since the passage of the CFMA, including advances in trading technology, such that NYMEX, the regulated DCM, and ICE, an unregulated ECM, have become highly linked trading venues. As a result of these changes, which could not have been reasonably predicted only a few short years ago, the current statutory structure, in my opinion, no longer works for certain markets now operating as ECMs. Specifically, the regulatory disparity between the NYMEX and ICE, which are functionally equivalent, has created serious challenges for the CFTC as well as for NYMEX in its capacity as an SRO.

In August 2006, NYMEX proactively took steps to maintain the integrity of its markets by ordering Amaranth to reduce its open positions in the natural gas futures contract. However, as you pointed out, Mr. Chairman, Amaranth then increased its positions on the unregulated and nontransparent ICE electronic trading platform. Because the ICE and NYMEX trading venues for natural gas are tightly linked and highly interactive with each other, they are in essence components of a broader natural gas derivatives market. Therefore, Amaranth’s response to NYMEX’s regulatory directive did not reduce Amaranth’s overall market risk. Furthermore, the integrity of NYMEX markets continued to be affected by and exposed to Amaranth’s outsize positions in the natural gas market. Finally, NYMEX had no means to monitor Amaranth’s positions on ICE or to take steps to have Amaranth reduce its participation in that trading venue.

As in the past, I do not believe that the case has been made, and thus do not support regulation of derivatives transactions that are individually negotiated and executed off-exchange in the traditional bilateral OTC market. On the other hand, based upon recent experiences, I do believe that ECMs such as ICE that function more like a traditional exchange and trade products that are linked to established exchanges should be subject to regulation of the CFTC.

Consequently, legislative change may be necessary to address the real public interest concerns created by the current structure of the natural gas markets and the potential for systemic financial risk.

I will turn to the three specific recommendations, Mr. Chairman, included in the report and respond to each.

First, the report recommends the elimination of the exemption from regulatory oversight for electronic exchanges that host trading and exempt commodities such as energy. It is NYMEX’s view that these changes in the natural gas market structure provide clear support for legislative change. These developments include the exchange-like aggregation of financial risk in OTC energy products; the reality of a broader linked market that currently include the regulated and the unregulated trading venues; the contribution to or creation of price discovery for natural gas prices in the unregulated trading venues; and the ripple or spillover effects of activity on the unregulated venue onto the regulated trading venue, among others.

NYMEX believes that these changes in the natural gas market trigger a series of fundamental public policy and public interest concerns that necessitate appropriate oversight. The proper legislative response is a judgment for this Subcommittee and for Congress to make. However, where a market does manifest the characteristics just mentioned, NYMEX believes that a comparable regulatory level to that of a DCM would be appropriate.

Upon triggering the public interest concerns noted, an electronic trading facility becomes sufficiently comparable to a traditional organized exchange that CFTC oversight and regulation becomes appropriate. However, it is clear to NYMEX that these public policy issues necessitate mandated large trader reporting and position limits and position accountability requirements for ECMs that are highly linked to and functionally equivalent with regulated DCMs. Such ECMs should also be assigned SRO duties to police their own markets as a front line. NYMEX believes strongly that such regulations are necessary and would not negatively impact the core price discovery and hedging functions provided currently by derivatives markets.

Given the complexity of derivatives markets, it can be difficult to state with real precision when speculation may be deemed "excessive." Moreover, speculators do provide liquidity and other positive effects to derivatives markets. NYMEX agrees with the view expressed in the Minority Staff opinion that it is not necessary to make a final determination about whether Amaranth's trading was excessively speculative in order to conclude that legislative change in the form of greater authority for the CFTC may be necessary and appropriate.

On the second recommendation, given NYMEX's conclusion that NYMEX and ICE natural gas trading platforms essentially form a broader linked market, NYMEX believes that the CFTC should be given additional legal authority and should use such authorization to monitor aggregate positions on both ICE and NYMEX.

The CFTC began to receive certain data from ICE commencing last fall through use of the CFTC's "special call" procedures. These procedures, however, only commenced several months after the Amaranth meltdown had occurred, and thus long after any market impact resulting from Amaranth's trading.

As to the final recommendation, the report stated that the CFTC budget should be increased, and I express that I may be a bit biased on this as a former chairman. But it should be increased to provide staff and technology needed to monitor, integrate, and analyze real-time transactional data from all U.S. commodity exchanges, including NYMEX and ICE. NYMEX agrees with this assessment and supports an expanded budget for the CFTC so that it may properly carry out its regulatory mission. However, the report went on to recommend that necessary funding "should be obtained from user fees imposed on commodity markets." NYMEX respectfully disagrees with this component of the recommendation and notes that Congress has previously rejected such a user or transaction tax as bad public policy. The user fee or transaction tax being recommended by the Subcommittee would not be imposed on foreign boards of trade that are currently offering direct electronic access to their markets to market participants based in the United States. Additionally, the U.S. markets already impose a user fee on contracts to fund the National Futures Association, which is the industry-wide self-regulatory organization that performs a function on behalf of the industry that the CFTC would have to perform if it was not funded by the markets users itself.

Mr. Chairman, Mr. Ranking Member, I appreciate the opportunity to share the viewpoint of the New York Mercantile Exchange with you today, and I look forward to questions after my colleague's testimony.

Senator LEVIN. Thank you so much, Mr. Newsome. Mr. Sprecher.

TESTIMONY OF JEFFREY C. SPRECHER,[1] CHAIRMAN AND CHIEF EXECUTIVE OFFICER, INTERCONTINENTAL EXCHANGE, INC. (ICE), ATLANTA, GEORGIA

Mr. SPRECHER. Well, thank you, Mr. Chairman, Senator Coleman, Subcommittee Members, and staff members. My name is Jeff Sprecher, and I am the Chairman and Chief Executive Officer of Intercontinental Exchange, and as the Chairman mentioned, we are also known as "ICE."

I very much appreciate the opportunity to appear before you today to share with you our views on the regulation of the natural gas trading markets and the recent report of the Permanent Subcommittee on Investigations regarding the collapse of Amaranth and the related events in the markets. ICE was pleased to cooperate with the Subcommittee and the staff in providing the voluminous trading data and other market information that staff requested in preparing the report, and we commend the Subcommittee and staff for the thoroughness and diligence that they exhibited in the report's preparation. It is our hope that the report, together with the views of the various persons who have been invited to testify at these hearings, will serve to enhance the integrity of the energy markets and assist Congress in a better understanding of how these markets serve the interests of a broader marketplace.

ICE operates a leading global commodity marketplace, comprising both futures and over-the-counter markets, across agricultural and energy commodities, foreign exchange and equity indices. ICE owns and operates two regulated futures exchanges: ICE Futures, a London-based futures exchange overseen by the U.K. Financial Services Authority, and the Board of Trade of the City of New York, also known as the "NYBOT," which is a futures exchange regulated by the Commodity Futures Trading Commission.

ICE's electronic marketplace for OTC energy contracts serves customers in Asia, Europe and the United States and is operated

[1] The prepared statement of Mr. Sprecher appears in the Appendix on page 167.

under the Commodity Exchange Act as a category of marketplace known as an ECM. As an ECM, these markets are subject to the jurisdiction of the CFTC and to regulations of the CFTC imposing recordkeeping, reporting, and other requirements. And in the past year, ICE has established a daily position reporting program for the CFTC that we continue to enhance and support.

ICE has always been and continues to be a strong proponent of open and competitive markets in energy commodities and the related derivatives and of regulatory oversight of those markets. As an operator of global futures and over-the-counter markets and as a publicly traded company, we strive to ensure the utmost confidence in the integrity in our marketplace and in the soundness of the trading business model. To that end, we have continually worked with the CFTC and other regulatory agencies in the United States and outside the United States in order to ensure that they have access to relevant information available to ICE regarding trading activity in our markets. We will continue to work with relevant agencies in the future.

I want to take this opportunity to provide you with important background on the structure, operation, and regulatory status of ICE and to share with you our thoughts on the regulation of the natural gas markets and the PSI Report. I want to clarify a number of misunderstandings and inaccuracies in the report, which I will discuss in more detail.

First, ICE does not operate—nor have we ever operated—pursuant to an "Enron loophole" under the CEA. Enron Online, the electronic marketplace operated by Enron pursuant to a separate provision of the CEA, has nothing whatsoever to do with the operations of ICE. That provision was available to Enron because Enron Online was a "one to many" marketplace in which Enron was both a market participant as well as the market. Parties traded with a single counterparty—Enron. In stark contrast, ICE offers a transparent "many-to-many" electronic marketplace, where buyers and sellers of OTC energy contracts can transact in a fair and efficient marketplace, where no distinction is made between one market participant and another, and where the best executable price is available to any participant in the market, no matter how large or how small. It is simply erroneous and misleading to use the label "Enron loophole" to characterize ICE as somehow being connected to the Enron debacle.

Second, there are a number of fundamental distinctions that need to be drawn between the OTC markets in general and ICE's market in particular, on the one hand, and the futures markets, on the other hand, including the distinction between ICE's cash-settled natural gas swaps and physically delivered natural gas futures that are traded on the New York Mercantile Exchange. An understanding of these distinctions is essential to any analysis of potential regulatory changes, particularly the need for position limits, which the CFTC itself has said are unnecessary as they are designed to prevent squeezes on physically delivered products. Indeed, while the report criticizes the absence of position limits on ICE natural gas swaps, it completely ignores the fact that NYMEX's cash-settled natural gas swap—which is identical to the ICE contract and which was also traded by Amaranth—was not subject to position limits. If there is to be a "level playing field," it should be between comparable contracts.

Third, ICE is not "unregulated" nor is it a "dark" market. While ICE is not a "designated contract market," it is already subject to the oversight of the CFTC and to CFTC regulatory requirements, including reporting requirements.

Fourth, under current law, the CFTC and NYMEX have the legal authority and the ability to obtain any available information regarding trading by market participants on ICE, and no additional legislation or regulation is needed to fill this perceived "gap" in the system.

Finally, the ability of Amaranth to trade on ICE in no way "caused" its collapse, any more than its ability to trade on NYMEX did so.

ICE strongly supports several recommendations of the PSI Report, particularly the proposed increase in the CFTC's budget and the enhancement of its access to trading information. We also support the advancement of regulatory certainty by eliminating the "Enron loophole" although, as I pointed out, that provision has nothing to do with ICE. We do not believe that a complete overhaul of the current regulatory structure is either warranted or advisable. Moreover, any legislative or regulatory changes that are made need to reflect the nature of ICE and its market, the significant differences between ICE and the many other venues for trading OTC in the United States and outside the United States that exist today.

Thank you very much.

Senator LEVIN. Thank you very much, Mr. Sprecher.

Let me ask both of you, do you agree with the finding of our report that prices on one exchange affect prices on the other exchange? Do you agree with that, Mr. Newsome?

Mr. NEWSOME. I do agree with that, Mr. Chairman.

Senator LEVIN. Mr. Sprecher.

Mr. SPRECHER. I believe they are very related, yes.

Senator LEVIN. Now, the key Federal law in this area, the Commodity Exchange Act, directs the CFTC to limit trading to prevent excessive speculation. Would you both agree that excessive speculation can cause sudden unreasonable or unwarranted price changes that affect U.S. energy prices paid by consumers? Dr. Newsome.

Mr. NEWSOME. I think trading by any market participant in an individual contract has the ability to move prices. Certainly if someone is concentrated in one position, it can move the market in that direction. But that is how markets operate.

Senator LEVIN. Do you think we should have prohibitions on excessive speculation the way the law—should we keep that prohibition?

Mr. NEWSOME. I think in the case of NYMEX and the CFTC rules, we currently have rules to limit excessive speculation.

Senator LEVIN. And is the reason for that rule that excessive speculation, more than just normal speculation, can cause large unreasonable or unwarranted price changes?

Mr. NEWSOME. Yes. I think if someone is allowed to have a massive position without any kind of oversight, that adds strength to that position and that market, and definitely once they have that strength, then they can push other market participants around.

Senator LEVIN. All right. Now, Mr. Sprecher, do you disagree with any of that?

Mr. SPRECHER. No, I do not. I will make the footnote that I think speculation itself is a very important particular of a market, a functioning market. But anything in excess, whether it is speculation or hedging, is something that we all need to be aware of and make sure that we try to prohibit.

Senator LEVIN. Now, as we have both talked about and you both have spoken about, NYMEX told Amaranth in August 2006 to reduce their position in NYMEX futures contracts to deliver natural gas in September. Amaranth at that time had 60,000 NYMEX September futures contracts, or 45 percent of the outstanding contracts for that month.

In response to the NYMEX order, Amaranth reduced its holdings on NYMEX to 10,000 contracts but increased its ICE holdings, as Exhibit 6 shows,[1] to about 80,000 September contracts for a grand total of 90,000 September contracts.

Now, at NYMEX, was it your opinion that this was a necessary action on your part in order to either prevent excessive speculation or to overcome one or the other either?

Mr. NEWSOME. Mr. Chairman, we were concerned that the size of their position could be very disruptive to our markets. We were concerned with that size and their ability to push markets in their direction. Therefore, we chose to ask them to start unwinding positions.

Senator LEVIN. Now, would you both agree—and I will ask both of you this—that Amaranth's ability to shift its position from NYMEX to ICE meant that Amaranth could still conduct large-scale trading right up to the final settlement of the NYMEX contract?

Mr. NEWSOME. Yes, sir. They have the ability to do so.

Senator LEVIN. Mr. Sprecher.

Mr. SPRECHER. Yes, and I actually think that it was an important function of the market, that when Amaranth was asked to liquidate a large position that has never been explained how it was allowed to be accumulated well above these accountability levels, shifted its position in the over-the-counter market and then orderly liquidated it, which I think ultimately was probably better for the market than a single-day liquidation on a single exchange.

Senator LEVIN. I think it was both—it was ordered to be an orderly reduction, as I remember the NYMEX order. Is that correct?

Mr. NEWSOME. That is correct.

Senator LEVIN. Now, under the current rules, there was no prohibition on Amaranth's shifting its position to ICE. Is that correct under the current rules?

Mr. NEWSOME. That is correct.

Senator LEVIN. Now, let me ask you, Dr. Newsome, was the CFTC informed in August that NYMEX was going to order Amaranth to reduce its position?

[1] See Exhibit 6 which appears in the Appendix on page 717.

Mr. NEWSOME. We recognized the situation, became uncomfortable with that; we took action with Amaranth, made the Commission aware of the action that we were taking. Yes, sir.

Senator LEVIN. Did the CFTC support your determination that Amaranth should reduce its position?

Mr. NEWSOME. The CFTC seemed very satisfied in the action that we were taking with regard to Amaranth and the reduction of positions.

Senator LEVIN. Is ICE a competitor of yours, Dr. Newsome?

Mr. NEWSOME. A very good competitors of ours, Mr. Chairman.

Senator LEVIN. Does that mean also a strong competitor?

Mr. NEWSOME. Yes, absolutely.

Senator LEVIN. Do you believe it should be subject to the same rules that you are?

Mr. NEWSOME. I do so.

Senator LEVIN. Why?

Mr. NEWSOME. Because I think—a couple of reasons. I think the markets have changed very rapidly since the passage of the CFMA, and no one could have envisioned how rapidly the change would take place.

What, in a nutshell, happened is that you had the ECMs, as stated in the document, and OTC markets have also at the same time become more standardized over time versus being individually negotiated as they traditionally have been.

So I think the fact that you have got an exchange-type entity that is aggregating risk, aggregating positions thereby aggregating risk, versus that risk being spread among participants in a bilaterally negotiated marketplace, have led to changes that I think require oversight just because of the aggregation of risk and the opportunity for that risk to be systemic.

Senator LEVIN. Now, let me ask you, Mr. Sprecher, did you know in August 2006 that Amaranth had been asked by NYMEX to reduce its position in the September futures contract?

Mr. SPRECHER. We did not.

Senator LEVIN. If you had known of the NYMEX order, would it have affected your actions in any way?

Mr. SPRECHER. Most likely, frankly, not, because we, as you know, don't have any legislative authority to take action to prevent people from—or to order people to liquidate on our platform.

Senator LEVIN. Nor do you want it.

Mr. SPRECHER. No, that is not——

Senator LEVIN. Do you want legislative authority?

Mr. SPRECHER. I think there are things that we could do, yes, that would give us a better view.

Senator LEVIN. Not just a better view, but would you want the same responsibility in terms of position limits and in terms of the accountability levels that NYMEX has?

Mr. SPRECHER. Potentially, if we were given the commensurate ability to enforce those by doing the kinds of things that NYMEX does—ordering people to liquidate, taking action to fine people, to basically throw people off your exchange, which I do not have the ability to do right now.

Senator LEVIN. So you would welcome that authority?

Mr. SPRECHER. Yes, if Congress believes that we are the appropriate people to take it on. I think also one could argue that the CFTC could get a complete view of the market and take on those responsibilities in a manner further from what it is doing today.

Senator LEVIN. So you do not have any objection to Congress giving you the same authority that NYMEX has? You have no objection to Congress telling CFTC to give you that same authority?

Mr. SPRECHER. I don't, if I could give one footnote. In saying that, we are against and I think it would be a mistake to say we should be a DCM, or designated contract market. And the reason is I don't think retail customers should be trading these large commercial contracts. I don't think that Congress should say these are the sources of price discovery. These are large markets. Today on ICE you have to have $100 million in assets to trade. I think bringing that other element into these markets would be a mistake.

That being said, the core principles that govern DCMs and futures exchanges, which we operate in futures exchanges as well, I think could be adapted to the OTC markets. And we have proposed some legislation that your staff is aware of to try to bring it along, if you will, and serve this intermediary role between these dark pools and the regulated futures exchanges.

Senator LEVIN. Well, let me be very clear. CFTC has told NYMEX that they are to take action to prevent excessive speculation and manipulation. Do you have any objection to NYMEX being authorized and directed by Congress to give you that same responsibility?

Mr. SPRECHER. No.

Senator LEVIN. Senator Coleman.

Senator COLEMAN. Thank you, Mr. Chairman.

Just sort of stepping back historically, looking at Amaranth I presume the concerns that arose in August did not just crop up at that point in time. Did Amaranth have, by the way, preset accountability levels and position limits?

Mr. NEWSOME. Yes. Everyone that trades on the exchange has accountability levels and limits.

Senator COLEMAN. And do you know how many times Amaranth before August 2006, they exceeded the accountability limits and position limits?

Mr. NEWSOME. No, I do not have the direct answer to that today, Senator, but I would be glad to——

Senator COLEMAN. But it would be fair to say that they had prior to August 2006 exceeded the accountability and position limits.

Mr. NEWSOME. Correct.

Senator COLEMAN. At the time then that you moved to have Amaranth limit its positions—and you said CFTC, they thought that was a positive move—do you have any doubt in your mind that Amaranth had the ability or were you aware that Amaranth was simply able to move over to maintain its positions with ICE?

Mr. NEWSOME. Not only did we know that they had the ability to do so, they actually told us that they were going to do so when we were asking them to liquidate their positions.

Senator COLEMAN. So what is your reaction to that? If you have a concern that they are overextended, you want them to limit their position, they are just going to move over, was there any reaction to that? Was there any call to anybody to say, "Hey, this does not make sense"?

Mr. NEWSOME. Well, we reached out to the CFTC to make them aware of the actions that we were taking, and we had no other opportunity or authority to do anything beyond that.

Senator COLEMAN. What do you think the CFTC should have done, knowing that they simply are going to move over? You are issuing an order to—you have concerns, legitimate concerns. You give a directive to limit your positions. You now know that they are going to say, that is fine, we are just going across the street. What should CFTC have done at that time?

Mr. NEWSOME. Well, I do not think that the CFTC currently has the authority to impose any position limits on ICE. So I think the CFTC became aware of it, and I think that is what has led us to this hearing today to talk about making the regulatory changes that would give CFTC that authority.

Senator COLEMAN. Can we talk about playing it out then beyond ICE? I presume there are other markets out there; there are foreign markets out there. One of the concerns—I will touch on user fees in a second—is that if we take a certain action to shine the light on, we move from the NYMEX to ICE, there are other markets out there. Is there a concern that we are simply shifting, that we are not—let me back it up. Are we able to get our arms around this issue? Are we able to provide consumers and others with some sense of confidence that there really is transparency and accountability? Are we simply in a position where folks are going to shift over to another market? Mr. Newsome and then Mr. Sprecher.

Mr. NEWSOME. I think certainly that could be a potential risk, but I think when we focus strictly on the natural gas market, which we are primarily talking about, in talking to major market participants they estimate that roughly 90 percent of the over-the-counter gas markets are now cleared. And in order to do that trading, today you come to ICE or you come to NYMEX. You have the opportunity to do either.

First of all, there are no other energy exchanges that would even come close to the kind of volume and expertise at either ICE or NYMEX, none that have the opportunity to clear these over-the-counter trades. So I think while it is a risk, I think the likelihood of that happening is very low.

Senator COLEMAN. Mr. Sprecher.

Mr. SPRECHER. I respectfully disagree. In fact, I think in the report there is actually an episode that is dialogued where Amaranth called directly one of the other major funds and sought to move that position directly between market participants. And it was only after they could not successfully find the market participant did they come to ICE. And I am not sure any of us here knows what other positions they may have taken in the marketplace because it is as a result largely because ICE has recordkeeping requirements that we can see what happened on ICE. But we really don't know outside of ICE what happened. We have some anecdotal information as a result of somebody saving call records or other things.

There are 75 execution venues other than ICE in North America. Many of these are public companies, multi-billion-dollar public companies, euphemistically called "voice brokers," but generally using technology, not the telephone. And I think you have correctly pointed out we want to make sure if we move to more accountability, we move the entire marketplace and we do it in a method that will keep it in the United States and not move it offshore.

Senator COLEMAN. And I want to get my arms around this. Mr. Sprecher, I am troubled by the fact that you have a regulatory agency that directs Amaranth to limit positions and that we know and they know that as they are saying that, literally they are moving to ICE——

Mr. SPRECHER. Right

Senator COLEMAN [continuing]. In contravention of whatever the hopes, the desires were in terms of dealing with this regulatory issue. That troubles me greatly.

Mr. SPRECHER. It does me, too, by the way.

Senator COLEMAN. So the question is how do we get our arms around it. One of the other issues that has come to us was user fees, and, Mr. Newsome, you have expressed concern. I have talked to others who have expressed that concern. The question with user fees, I presume, is in this global market, financial markets that we have, that we drive people to other markets. We had a panel at the first hearing in which a number of professors said that we are not going to drive people to other markets, that they want the accountability, they want the transparency. And so my sense was that they would have concluded that user fees would not be problematic if they were being used for greater enforcement.

Could you respond to that, both Mr. Sprecher and Dr. Newsome, on that issue, on the impact of user fees? Dr. Newsome.

Mr. NEWSOME. I think the impact of user fees could be relatively widespread. Again, I think a lot of people miss the point that a user fee is already charged to customers trading futures contracts on designated contract markets, and those fees go to fund the National Futures Association, which does a fantastic job of recordkeeping, a lot of enforcement cases that the CFTC would have to do, would have to handle if it was not self-funded by the industry. So this would be a double tax that we would be asking the market users again to pay to fund increases in the CFTC.

Senator COLEMAN. Mr. Sprecher.

Mr. SPRECHER. I probably differ with most of the people in my industry in that I don't think it is such a bad idea. But I am sympathetic to the issue that is raised, which is how do you tax foreign entities. About half of ICE's revenue comes from outside the United States in energy trading, and there is no question that increasingly these 500 hedge funds that you are talking about are not necessarily American funds. And we are seeing a large shift in energy trading moving to London, which seems to be the city of choice. And so the issue is do we create an unlevel playing field by charging some—just simply U.S. customers. If we could solve that issue, then I think it is a good idea. If you cannot solve that issue, then I think it is a bad idea.

Senator COLEMAN. We faced the same issue, by the way, with IPOs, I think 25 being done in London markets. Again, I am trying to figure out where we go with this. There is a problem. I do not want to create a bigger problem in terms of what we do.

Could you give us some direction as to how far can we go in ensuring greater transparency and accountability at the same time without moving markets overseas?

Mr. SPRECHER. Sure. I think the one benefit we all have as the underpinning of these markets is that they work best when people have confidence in them, and confidence usually comes by having government oversight. So I do not believe that they necessarily will move just because there is more oversight. And as has been widely talked about here, ICE is now providing every trade electronically to the CFTC so that they can see what is going on in our markets. I think we could try to bring the rest of the markets into that venue, and I think the CFTC would have a unique view of what is going on in the market.

I do think that, really largely as a result of ICE, there has been a greater interplay between the CFTC and the FSA in London for information sharing. It is not that the London regulators don't have the same concern about transparent markets and what is going on under their jurisdiction.

So I do think we can evolve to a regulatory umbrella of the major economic centers and bring more transparency and information sharing in. Then with a full view of things the CFTC sees the next Amaranth, I think they are really the uniquely positioned entity to have that view, which means de facto they need more staff, they need more funding.

Frankly, ICE trades over 1,000 OTC swap markets. The CFTC right now is only looking at something like 960, 970 futures markets. Just bringing ICE into that purview will double the size of the view that they will have to have. So, clearly, they are going to need more funding.

Senator COLEMAN. Mr. Chairman, are we going to have a second round?

Senator LEVIN. Of course.

Senator COLEMAN. My time is up now, but I look forward to another round of questions. Thank you, Mr. Chairman.

Senator LEVIN. Thank you.

Well, first of all, I am delighted, Mr. Sprecher, that ICE is going to support Congress giving the CFTC the same authority to impose position limits on the ICE exchange in the same way that CFTC imposes them now on NYMEX. It comes as very good news, I believe, for consumers. I do not think ICE has ever taken that position before. I do not think NYMEX has ever heard ICE take that position before. But we are delighted to hear that.

There was a distinction which was drawn by ICE until now, and maybe still is drawn, between a contract which is financially settled and a contract which is physically settled—the contracts on NYMEX being contracts which presumably are physically settled until they are mainly financially settled. As I understand it—and, Dr. Newsome, give us some statistics on this—the vast majority, perhaps—what percent?—99 percent of the contracts on NYMEX are financially settled, would you say?

Mr. NEWSOME. Yes, 99.9 percent.

Senator LEVIN. All right. So that there is a distinction without a difference. The other attributes are pretty much the same. And as you said, Dr. Newsome, they are functionally equivalent.

I just wonder whether or not ICE has ever discussed with the CFTC what you have said here today.

Mr. SPRECHER. Let me be clear in making my case to you. I believe that ICE and NYMEX can take more accountability and have accountability limits. I don't think position limits for the swaps and derivatives market is a good idea because, really, position limits are in place to prevent squeezes of physical products—the old play that trades had years ago to try to squeeze a market going to delivery. There is no ability to do that on cash-settled markets, and as NYMEX in its own testimony says, on its cash-settled products it does not have position limits.

But what it does have and what I do think would be valid is some accountability for large traders. And I think just as Dr. Newsome has pointed out the problem with him seeing the whole market, ICE will also not be able to see the whole market. And I think that has to be aggregated to a senior view of most likely the CFTC so that somebody can see the market.

Senator LEVIN. Would you respond to that, Dr. Newsome, that distinction?

Mr. NEWSOME. Well, I think it is very critical for someone—the CFTC being the appropriate entity—to see the entire marketplace. I am very confident in NYMEX's ability to manage risk of what we can see, but, again, you can only manage what you can see. And there are a number of pieces of the pie, and the two pieces of the pie in which risk becomes aggregated are NYMEX and the Intercontinental Exchange.

So I think to me it is common sense that somebody should be able to see what is going on in both of the markets so that we can manage potential systemic risk.

Senator LEVIN. Would you comment on Mr. Sprecher's distinction relative to the position limits between the two exchanges?

Mr. NEWSOME. Well, we have hard limits on our physical contracts, and I want to make it clear that because we choose to trade the physical contracts, we know that there is a higher level of regulation that comes with that, because even though less than one-tenth of 1 percent gets delivered upon, it is the threat of that physical delivery that we use as a tool to keep people honest in the marketplace.

In the past, our financial contracts, the position limits were all aggregated into one, both the physical and the financial. We went to the CFTC last fall and asked them to allow us to disaggregate from hard position limits. So now we have the position accountability on our financial contracts, but the CFTC view was that it was very important for us to have that accountability because of the ability to see what was going on in our underlying physical contract. So they felt comfortable with the accountability because we could see the physical on our own market.

Senator LEVIN. Is the accountability level what triggers your prohibition against excessive speculation and manipulation? Is that what triggers it, that specific mandate to you?

Mr. NEWSOME. Well, either one can trigger what we consider to be excessive speculation. There is a bit more flexibility given to the exchange on accountability levels to determine when they develop discomfort and when they don't. The hard limits are hard limits, and they are what they are.

Senator LEVIN. But you go after excessive speculation or you are required to go after excessive speculation, at least in part because of those accountability levels. Is that correct?

Mr. NEWSOME. Correct.

Senator LEVIN. And you are willing to undertake that, Mr. Sprecher?

Mr. SPRECHER. Yes. Let me just say, I am not sure—with great respect to Dr. Newsome, I am not sure the current system, however, is working. So to just replicate it does not sound like a good idea.

Senator LEVIN. Well, whether the current system is working or whether it is going to be improved, you are willing to operate under that same system relative to accountability levels.

Mr. SPRECHER. Certainly, and just let me point out——

Senator LEVIN. That is new.

Mr. SPRECHER. Well, no, because what——

Senator LEVIN. You have not until now, have you? Are you bound by those accountability levels now?

Mr. SPRECHER. The debate that has always been presented to us is should these OTC swaps markets become designated contract markets; in other words, contract markets where retail investors can trade and where the government has specifically said they are designated as the source of price discovery. I really don't think these OTC markets, which are major dealers interchanging risk and hedging risk, is a place that we should say is the designated source of price discovery. Dr. Newsome's market really is that market. It is the price of natural gas that we read about in the paper, that we have all come to rely on, and I don't think that that should change, and that has been a consistent position.

Senator LEVIN. And that your swaps ultimately rely upon, right?

Mr. SPRECHER. They do. Absolutely.

Senator LEVIN. All right. Let me get to the specific question. Right now, the NYMEX, as a result of its mandate from CFTC, must go after excessive speculation under one of two requirements. Do you have any problem being required by CFTC to go after excessive speculation?

Mr. SPRECHER. No.

Senator LEVIN. All right. That would be new. That kind of requirement would be new, would it not?

Mr. SPRECHER. It would be new.

Senator LEVIN. All right.

Mr. SPRECHER. And what we are talking about, I think, is a common ground on how to bring these OTC markets into some accountability.

Senator LEVIN. All right. That is not only new, it is important new. And I think we are making progress here.

Mr. SPRECHER. It took an Amaranth.

Senator LEVIN. It took a long investigation, and maybe Amaranth, in order to get to this point, but at least we are making some progress. And we will have CFTC in front of us in a few minutes, and I hope they are willing to accept the responsibility now to make recommendations for changes in law because they are long overdue and we have paid a real heavy price for the failure of our law to have this mandate of the CFTC upon ICE.

There is a reference that you have made to the Enron loophole, and I want to just clarify that because we have a different definition of the "Enron loophole," and let me state it for the record.

How ICE defines the "Enron loophole" is one part of the Commodity Exchange Act that applied to Enron Online, a type of exchange called, as you put it, a "one-to-many" exchange, because all traders have to trade through one party—Enron—in the case of the Enron Online Exchange. And that is the way you define the "Enron loophole."

But we define it in a broader way, to include all of the provisions that others got included in the Commodity Futures Modernization Act to exempt energy and metals commodity trading from normal CFTC oversight. Those changes in the law created exemptions and exclusions that made it much tougher to police energy markets. And for this hearing, and for my opening statement, that is the way I used the Enron loophole, and I just want to get that out for the record, and I don't think you would disagree that there is a difference of definition here.

Mr. SPRECHER. I absolutely agree

Senator LEVIN. Your definition is a narrower one than mine.

Mr. SPRECHER. I agree. But we should for the record say that my understanding is Enron had absolutely no oversight by the CFTC; whereas ICE does and, in fact, pursuant to the "special calls," is now actually providing daily records to the CFTC.

Senator LEVIN. Records, but still no authority to direct.

Mr. SPRECHER. Correct.

Senator LEVIN. The way NYMEX has, not only the authority but the responsibility to direct in order to prevent excessive speculation and manipulation.

As I understand the question of swaps, there are accountability levels for NYMEX swaps. Is that correct, Dr. Newsome?

Mr. NEWSOME. That is correct for back month positions

Senator LEVIN. And the accountability levels are triggers for your reviews, and if a trade exceeds the accountability, NYMEX could order that trader to reduce its position in that contract. Is that correct?

Mr. NEWSOME. That is correct.

Senator LEVIN. All right. And are the NYMEX natural gas swaps any different from the ICE natural gas swaps?

Mr. NEWSOME. I think they are virtually the same.

Senator LEVIN. All right. I think you have already answered this question functionally, but let me ask you again. In your written testimony, Dr. Newsome, you said that the NYMEX price of a futures contract and the price of a related ICE swap typically differ by perhaps a tenth of a cent. Is that correct?

Mr. NEWSOME. Typically no more than that.

Senator LEVIN. Now, that would be about one-hundredth of a percent of the price of a futures contract. Is that correct?

Mr. NEWSOME. Yes, sir.

Senator LEVIN. OK. I think, Mr. Sprecher, you have already indicated that the price of the NYMEX contract and the price of the ICE contract stay very close to each other.

Mr. SPRECHER. They are definitely interrelated, yes.

Senator LEVIN. And as a matter of fact, the NYMEX price, the final NYMEX price, is indeed part of your swaps contract.

Mr. SPRECHER. Yes. In other words, they converge absolutely.

Senator LEVIN. Right. Senator Coleman.

Senator COLEMAN. I just want to make sure that we all agree on what we have here. As I understand it, NYMEX does not have set position limits on its natural gas swaps. Is that correct?

Mr. NEWSOME. We have position accountability on the back months.

Senator COLEMAN. Accountability.

Mr. NEWSOME. Yes.

Senator COLEMAN. So there are not limits, but there are kind of triggers that you look at.

Mr. NEWSOME. There are ranges that we set for market participants. Again, you have a bit more flexibility in the position accountability versus the hard position limits. But we have used that authority to talk to market participants and require an appropriate response.

Senator COLEMAN. And, by the way, does ICE in that sense have a regulatory—do they have a competitive advantage in having less regulatory costs?

Mr. NEWSOME. Well, I would certainly say yes.

Senator COLEMAN. What do you spend on regulation?

Mr. NEWSOME. In our Compliance Department, we spend over $6 million a year just on our direct costs at the exchange.

Senator COLEMAN. Mr. Sprecher.

Mr. SPRECHER. In that area of our business, we have much lower costs, although we do have a "know your customer" kind of responsibility in the OTC markets.

Senator COLEMAN. But trading ahead and market oversight are two different things. You have a market oversight responsibility, Dr. Newsome. Is that correct? Tied to working with CFTC.

Mr. NEWSOME. Correct

Senator COLEMAN. So I understand, in response to the Chairman's questions, ICE then is receptive or open to what I would call "market oversight." Is that correct, Mr. Sprecher?

Mr. SPRECHER. Yes. And I also, though, want to follow on with a line that has been consistent in your conversation, and that is, I don't think it should end at ICE. I think we really should try to bring the entire over-the-counter market into an accountability standard, because in a way we are pushing mercury around the table. If they come off of NYMEX onto ICE and off of ICE, where do they go next? I am not sure we have solved the problem. And because ICE has been a successful company, and a public company as well, sometimes we are viewed as a euphemism for the OTC market. We are just one part of the market.

Senator COLEMAN. And having somebody have that big picture—we will talk to the CFTC about that, but somebody needs to have the big picture; otherwise, we will be pushing mercury around. Dr. Newsome, do you agree with that?

Mr. NEWSOME. I agree completely with that.

Senator COLEMAN. And just so I understand, position limits, accountability limits, NYMEX right now, your natural gas futures,

futures contracts, those are physically settled. Do they have a different standard in your natural gas swaps?

Mr. NEWSOME. Yes. Until the fall, it was all aggregated into hard limits.

Senator COLEMAN. I understand. But the point is that with your futures, you have got hard limits.

Mr. NEWSOME. Right.

Senator COLEMAN. With your swaps, you have got triggers.

Mr. NEWSOME. We have accountability in the back months.

Senator COLEMAN. Is there a reason why they should not be the same?

Mr. NEWSOME. I think that all financial contracts should have position accountability at least in the back months.

Senator COLEMAN. Again, my concern as I sit here is I want to make sure that accountability does not result—first of all, that it has impact, that we have a big picture, and we are not simply pushing mercury around somewhere else. That is clearly a concern that I have. But the idea that—I mean, it is clear that, economically speaking, the physically settled, the futures, and the swaps are essentially the same economically. Mr. Sprecher, do you agree with that?

Mr. SPRECHER. The swaps settle on the final settlement price of NYMEX so they absolutely converge. But there is a distinct difference, and that is, if you hold the physical contract, ultimately you end up with natural gas. If you hold a swap contract, ultimately you end up with the final settlement price.

Senator COLEMAN. But 99.5 percent of those contracts are supposed to physically settle or financially settle, so maybe the word "functionally equivalent"?

Mr. SPRECHER. They are, but I want to be clear, they are used differently. The swaps are used by the very people I think we are trying to protect, which are hedgers who want to make sure that they hedge the exposure to the NYMEX price, and they want the final settlement price, and they cannot get that at NYMEX because, by default, you must trade out of the contract at least a minute or two before it finally settles; otherwise, you end up with natural gas.

So the hedgers use the swaps. The people that are actually discovering the price of natural gas use NYMEX's physical.

Senator COLEMAN. Let me just ask, so I understand where we are at today as we look to the future. Under current law, what responsibility does ICE have to monitor traders' energy positions and to ensure that they are not excessive?

Mr. SPRECHER. We have sort of a broad anti-fraud, anti-manipulation responsibility, which generally is passing on to the CFTC things that we may see, not because of specific oversight but just in the general course of things, and also more often the comments we get back from the marketplace, so we are more of a conduit for information that then gets passed up. But because we don't have any specific remedy capability, all we can do is pass that up to the CFTC.

Senator COLEMAN. And if we can just look back to Amaranth and look back at what happened and try to look to the future so it does not happen again, what changes then in terms of remedy capability do you think ICE should have and who should give it to you?

Mr. SPRECHER. Well, I think today, as we sit here, the CFTC would have a pretty good view of ICE and NYMEX, and my hope would be we could bring others into that. And, it may well be because a company may be, let's say, long 10,000 contracts on NYMEX, short 10,000 contracts on ICE, and technically be flat or have no position, in which case neither Dr. Newsome would see that nor would we see that.

So I think it would be up—the CFTC would have to help us have the view, and then one of the two of us, and maybe our other colleagues in the OTC market could ask for those positions to be brought down.

Senator COLEMAN. The last line of questioning. "Excessive speculation"—we use that phrase a lot in our analysis, in our view. We found substantial disagreement in the definition of "excessive speculation." There are those who looked at Amaranth and said that was not excessive speculation. I think the Amaranth trader may have testified to that.

To both witnesses, Dr. Newsome and Mr. Sprecher, I will put all the questions together. Can you define "excessive speculation"? Should Congress define it, or should the CFTC define it? Dr. Newsome.

Mr. NEWSOME. I think it is very difficult to define because it depends on the market that is being traded, and markets that are very liquid and deep and have multiple positions across months, it is just extremely hard to get a handle on.

I think one of the lessons that we learned from the Amaranth scenario was we—and the CFTC, I think, for the most part as well—concentrated on the front months because that was the price discovery component that everyone relies upon. We wanted to make sure that that was not disrupted.

We did not concentrate as much on the back months, and I think the lesson we learned from Amaranth was, as entities start building up these much larger positions in the back months, we have already taken corrective steps to look at flexibility limits. We have already started reaching out to customers to ask them to decrease positions because of the importance of the back months as well.

But when you start looking at speculation and limits, whether they are short one month, long another month, it is not just the fact that they have a position; it is what that position is that makes it very difficult to just, I think, draw a one-liner about what is excessive in terms of speculation.

Senator COLEMAN. Mr. Sprecher, could you take a shot at it?

Mr. SPRECHER. I certainly can't define it. Without putting words in your mouth, I suspect you would have difficulty defining it. I think by default it is going to have to be the CFTC.

The CFTC has in the past, for example, said that if a company has 25 percent of the contracts in a market, that is an alarm bell for them. We know from this report that Amaranth had 40 percent, even 60 percent of the contracts in a market. So I think that just seems like a big amount going into delivery of a contract. So whether 25 percent is the right number or something around that—we certainly, I think, could probably all agree that having 60 percent of the open contracts in a delivered contract is potentially a problem.

Senator COLEMAN. I would hope that the industry—I would hope that the CFTC would move forward in this area. If Congress defines it, you are probably not going to be happy with the way we define it. We tend to operate with lead gloves when surgical gloves are needed to—again, understand to keep markets vibrant, which was, I think, mentioned just briefly in the opening statement. The consumer benefits from the ability to speculate, from the ability to hedge. The consumer benefits from liquidity in the market. The consumer benefits from speculation. It is not just a gambler's game and for Wall Street bigwigs to make money. The consumer benefits if the markets function. But if they do not function, then we get concerned. And so I would hope that we would get a little help on that issue, which I know is a difficult one.

Thank you, Mr. Chairman.

Senator LEVIN. Thank you, and I think we probably would all agree—and I want to make sure Senator Coleman would agree with us because I would not want to suggest anything that he does not—give his last statement. But if there is excessive speculation, the consumer gets socked. Would you agree with that? Or could get socked.

Mr. NEWSOME. Yes.

Senator LEVIN. And that if there is manipulation, the consumer gets socked.

Mr. NEWSOME. Absolutely.

Senator LEVIN. And that is why you folks are given a responsibility to oversee the market to prevent excessive speculation and manipulation. Is that fair?

Mr. NEWSOME. That is fair.

Senator LEVIN. And that you, Mr. Sprecher, are willing to support that change to give you that same responsibility?

Mr. SPRECHER. Yes.

Senator LEVIN. I think that is very helpful. And I agree, by the way, with Senator Coleman, that we want folks to be able to hedge; we want folks to be able to speculate; we want liquidity. It is the excessive speculation and manipulation which our law is intended to stop and which that loophole allowed. And that is why I think now there is a growing—will be a growing momentum coming out of today's hearing. Hopefully, CFTC, who is here today, will join the momentum, but we will find out in a couple of minutes.

In any event, one question, and this follows up on something Senator Coleman also said, and that is the unintended consequences. Is the way that we could make sure there are no unintended consequences and we are not pushing mercury around to at least cover the organized electronic markets in any over-the-counter coverage? Would that be a way to describe it, organized markets or electronic markets which are organized? You do not want to get to the bilateral one-on-one conversation, right? No one is trying to get to that.

Mr. SPRECHER. Well, I think that your report shows that the first thing that Amaranth tried to do was a bilateral one-on-one deal to get out from underneath these. So I am not so sure we shouldn't try to bring that in. It may be slightly different——

Senator LEVIN. Of a certain size.

Mr. SPRECHER. Of a certain size or certain—I mean, just because these people are voice brokers doesn't mean they don't know what the position is. For crying out loud, they invoice the market participant for putting that trade together.

Senator LEVIN. Will you folks, both of you, be willing to submit suggestions as to how we could define that for possible legislation? Are you willing to do that, Dr. Newsome?

Mr. NEWSOME. Absolutely, Mr. Chairman.

Senator LEVIN. Would you do that, Mr. Sprecher?

Mr. SPRECHER. Sure, absolutely.

Mr. NEWSOME. And I think if I could just follow up on that, I talked about the aggregation of risk earlier and how these markets are linked, and the reality is that the same customers that trade ICE trade NYMEX. They trade the positions for predominantly the same reason. But when you get the aggregation of risk—and then the CFTC has already spent quite a bit of time looking at when a market starts to serve a price discovery function, that should be a trigger as well for transparency and openness as to the positions in that market.

So I think some work has been done, Mr. Chairman, and we will be more than happy to assist.

Senator LEVIN. Thank you both. We appreciate it.

We will now move to our second panel. Let me now welcome our second and final panel of witnesses for this afternoon's hearing from the Commodity Futures Trading Commission, CFTC. We are pleased to have the CFTC's Acting Chairman, Walter Lukken, and one of the CFTC's Commissioners, Michael Dunn.

Gentlemen, we are pleased to have you with us this afternoon. We welcome you to the Subcommittee. We again appreciate the cooperation of you and your Commission. You have heard the rule. I think you were both here before, so you know what the rules are of the Subcommittee, and I would like to at this point ask you both to stand and raise your right hand. Do you swear that the testimony you are about to give before this Subcommittee will be the truth, the whole truth, and nothing but the truth, so help you, God?

Mr. LUKKEN. I do.

Mr. DUNN. I do.

Senator LEVIN. Thank you. We will follow the same rule for timing. One minute before the red lights comes on, then you will see a yellow light, and that will give you an opportunity to complete your remarks. As I said before, we will print your entire testimony in the record, and we ask that you limit your testimony to no more than 10 minutes.

Mr. Lukken, why don't you go first.

TESTIMONY OF WALTER LUKKEN,[1] ACTING CHAIRMAN, AND MICHAEL DUNN, COMMISSIONER, COMMODITY FUTURES TRADING COMMISSION (CFTC)

Mr. LUKKEN. Thank you, Mr. Chairman, Senator Coleman. Commissioner Dunn and I appreciate the opportunity to discuss with you the CFTC, our role with respect to the energy markets, and your report's conclusions.

Under the Commodity Exchange Act, the concept of "excessive speculation" is based on trading that results in "sudden or unreasonable fluctuations or unwarranted changes in the price" of commodity futures. This language has provided helpful guidance for the agency in protecting the price discovery process. There is a distinction, however, between excessive speculation and manipulation. Manipulation of market prices is a clear and undeniable threat to the integrity of the marketplace and to the fundamental purposes of futures markets, risk management, and price discovery.

A longstanding body of law defines the parameters of futures market manipulation. Excessive speculation, on the other hand, is a more fluid concept which Congress has enabled the Commission and the exchanges to address by adopting rules or regulations establishing position limits or position accountability levels.

Futures markets require both speculators and hedgers. Speculators provide the market liquidity to allow hedgers to manage various commercial risks. Placing limitations on the amount of speculation that an individual or entity may engage in necessarily limits the amount of liquidity in the marketplace and may limit the ability for hedgers to manage their risks, as well as the flow of information into the marketplace. This in turn could negatively affect the price discovery process and the hedging function of the marketplace.

The Commodity Exchange Act provides that the Commission has exclusive jurisdiction with respect to commodity futures and options trading on designated contract markets, also known as DCMs, which can list for trading any type of contract and are open to all types of traders, including retail participants. DCMs are self-regulatory organizations subject to comprehensive oversight by the CFTC.

In the Commodity Futures Modernization Act of 2000, Congress included a provision permitting a new type of trading facility known as an exempt commercial market, or ECM, on which exempt commodities such as energy products may be traded. Only eligible commercial entities, generally institutional traders, may trade on ECMs, ensuring that these markets are open only to sophisticated parties that understand the risks associated with them.

ECMs, as well as transactions executed on them, are statutorily exempt from most provisions of the act. The Commission does retain fraud and manipulation authority over ECMs.

ECMs are subject to certain limited reporting requirements. In addition, ECMs must maintain for 5 years and make available for inspection upon request by the Commission certain records, including audit trail information sufficient to enable the Commission to

[1] The joint prepared statement of Mr. Lukken and Mr. Dunn appears in the Appendix on page 178.

reconstruct trading activity. The Commission also has the authority to issue what is known as a "special call" for any information from an ECM the Commission may deem appropriate.

Due in part to the lessons learned from the fall of Amaranth, the CFTC has been utilizing its special call authority to receive daily trader position information from ICE. This information helps us to get a more comprehensive picture of the marketplace and, given the similarities of ICE's natural gas contracts to those traded on NYMEX, assists us in overseeing the energy trading activities on that exchange.

Despite the difference in regulatory authorities over DCMs and ECMs, the Commission is aware that when markets trade similar products or products that can be arbitraged, information regarding activity in one market tends to be incorporated into the other. This is almost certainly the case when large numbers of traders operate in both markets, as is the case with NYMEX and ICE. This growing linkage of the markets along with the PSI's report on Amaranth is the basis for our regulatory discussion today.

After Amaranth's collapse, the CFTC's Office of the Chief Economist analyzed the situation using statistical evidence, including data obtained from ICE. Amaranth has positioned itself to profit on a spread position between the prices of natural gas contracts expiring in the winter and the natural gas contracts expiring in non-winter months. Such a strategy would have been profitable if the prices for winter delivery futures contracts had risen relative to prices for non-winter delivery contracts.

Amaranth began significantly ramping up this spread position in the spring of 2006. As the spread price began to fall during the last week of August 2006 through September, Amaranth's losses mounted. The unusually large spread price began to appear around the time of Hurricane Katrina in 2005. As the PSI report points out, this was the largest March/April spread ever observed. However, Amaranth did not begin accumulating its large position in this spread until the spring of 2006. In other words, the March/April spread was at a historically high level for many months before Amaranth began accumulating its large position.

The chief economist's analysis of Amaranth's trading data failed to conclude that Amaranth's trading was responsible for the spread price level observed during 2006. The study found that changes in Amaranth's positions influenced market prices, and at the same time changes in market prices influenced Amaranth's positions. If Amaranth were dominating markets, our economist would have expected these tests to have shown one-way causality where changes in Amaranth's positions would have influenced the market prices, but market prices would not have influenced Amaranth's positions. However, the study showed that Amaranth and the market appeared to have been reacting with each other reciprocally.

In the analysis, these changes in spread prices were consistent with market fundamentals at the time. Amaranth established a large spread position that could have only been profitable if the unusually high spread price had become even more unusually high. Such a profitable scenario would have occurred if winter natural gas supplies had been disrupted by, for example, an active hurricane season in the Gulf of Mexico. In fact, the Gulf hurricane season proved to be less active than predicted, and instead of a widening price relationship, the price difference narrowed considerably, resulting in significant trading losses to Amaranth.

There are more details about Amaranth in our written statement, but I would like to note that the Commission was aware of Amaranth's on-exchange activities in the months leading up to September through our regular financial and market oversight surveillance, and that Amaranth's account at its clearing broker was fully margined at all times.

The Commission does not pick winners and losers in the futures markets, but does work diligently, and did so in the case of Amaranth, to ensure market integrity and the protection of the price discovery process.

The futures markets have changed dramatically since the passage of the CFMA in 2000 and the creation of the exempt commercial markets. Congress established these institutional markets while calibrating the amount of oversight to the risks associated with them. However, as the Subcommittee's staff report lays out, the regulated futures markets and exempt commercial markets have become increasingly linked, and as a result, the public risks associated with these markets have changed. The CFTC has recognized this and has exercised its existing statutory authorities in order to keep pace with this industry growth. I mentioned earlier our special call for ICE trader information. More recently, the CFTC has proposed an amendment to clarify that our existing regulations require large traders on regulated DCMs to keep information relating to all of its positions in a commodity, including OTC trading information, and to provide that information to the Commission upon request.

However, the Commission is nearing the outer limits of its authority and it is appropriate to have this open dialogue with Congress and our fellow regulators about what other tools may be needed to adequately oversee this marketplace and ensure fair competition and integrity.

In closing, we appreciate the Subcommittee's inquiries into this complex and important area. The Subcommittee staff report looks at a number of issues related to the CFTC and makes recommendations and conclusions that warrant further debate, which we look forward to discussing with you today.

Thank you very much.

Senator LEVIN. Thank you very much, Chairman Lukken. I understand that statement represents the views of both of you. Is that the note I was given? Or, Mr. Dunn, would you like to give your own statement? You are free to proceed either way.

Mr. DUNN. Thank you, Mr. Chairman, and I would like to both associate myself and disassociate myself with my colleague at certain times. But at this particular time, I do associate with both the written and oral statement.

Senator LEVIN. Thank you, and thank you both.

Do you agree with our report that the prices on one of the two exchanges in front of us today affects the prices on the other?

Mr. LUKKEN. Absolutely, Mr. Chairman.

Senator LEVIN. Why don't we do this: If you differ with a statement, if you want to interrupt at any time, feel free to do so.

Mr. DUNN. I may never get to speak. [Laughter.]

Senator LEVIN. We will call on you at the end, then, to clean up all of the comments you want to correct or make reference to.

The key law here which is being discussed is the Commodity Exchange Act, which directs you folks to limit trading to prevent excessive speculation, and I want to ask you: Do you have any problem with that mandate? Congress has told you this. You are supposed to be stopping excessive speculation. Do you have any difficulty in enforcing that law?

Mr. LUKKEN. Absolutely not. I think as you have noted, excessive speculation, that leads to unwarranted price fluctuations and unreasonable price fluctuations. So I think that modification of that term is important because it talks about how excessive speculation leads to potential manipulation and artificial prices in the market. That is really where we have focused on our attention. In the expiration month of these contracts where we have seen in the past experience of corners and squeezes in these physically delivered products, that is how we have interpreted that provision of our act.

Senator LEVIN. Now, the NYMEX has adopted position accountability levels in order to avoid excessive speculation. That is one of the methods that has been used. They have also adopted position limits.

Does it make sense to you that when they order a speculator or trader to reduce its holding in order to avoid excessive speculation, that speculator can just move to an unregulated exchange and do the same thing? Does that make sense to you?

Mr. LUKKEN. I think when we looked at the situation, our mandate is to protect the benchmark, which, as your last hearing pointed out very effectively, is utilized by utilities, public utilities and others. That benchmark is NYMEX. They are the primary price discovery market that we try to protect. And certainly we do that through position limits, through surveillance, through our other authorities in that area. However, when these speculators, as you have noted through this chart,[1] have moved to ICE, even though these prices are interrelated, we still believe—I personally believe that we are still protecting the primary price discovery mechanism in NYMEX by putting position limits on those areas.

Now, we did recognize, as you have noted that——

Senator LEVIN. By putting position limits at NYMEX.

Mr. LUKKEN. Correct

Senator LEVIN. But there is no position limits at ICE.

Mr. LUKKEN. There is no position limits at ICE.

Senator LEVIN. OK. And there is no accountability levels at ICE.

Mr. LUKKEN. That is correct.

Senator LEVIN. So nothing is triggered at ICE, so all they do is run over to ICE and engage in the very trades which your agent, NYMEX, said they could not do anymore at NYMEX, and you just acknowledged again that the price that is set—or the price that is achieved at ICE affects the NYMEX price, right? They are interrelated.

Mr. LUKKEN. They are interrelated, correct.

[1] The chart referred to appears in the Appendix on page 190.

Senator LEVIN. So then let me ask you again. Is there any way that CFTC should not be supportive of a rule which avoids the circumvention of the NYMEX order?

Mr. LUKKEN. Well, I think, like I said, it has been our position that through the physical delivery of contract, the primary contract that is being utilized on ICE—or on NYMEX, excuse me, is protected by these position limits. Now, we have noted that there is interrelationship between these markets, and now we receive daily trading information to provide the transparency that your report talks about that is needed in these markets. Since that transparency has been provided to this marketplace, we have not seen shifting between regulated markets and unregulated markets, according to our surveillance staff.

So I think for the time being, we seem to be——

Senator LEVIN. Do you want to wait until that happens?

Mr. LUKKEN. Well, we are monitoring it right now and——

Senator LEVIN. And then what happens when you see it?

Mr. LUKKEN. Well, as noted, we do have full manipulation authority——

Senator LEVIN. No. I am talking about excessive speculation.

Mr. LUKKEN. Correct, but excessive speculation that leads to unwarranted price fluctuations that really is getting at manipulation in these markets. So we are not limited in any way in our manipulation authority and can bring any type of enforcement action against participants in these markets that may be trying to manipulate through moving positions around.

Senator LEVIN. Let us go back to excessive speculation. You keep going to manipulation. I keep talking about excessive speculation, so let's talk about excessive speculation. Your agent, NYMEX, entered an order, OK? Amaranth evaded that order by going on to ICE.

Mr. LUKKEN. Correct.

Senator LEVIN. It did so on an exchange which had an effect on the NYMEX price, and you agree to that.

Mr. LUKKEN. Correct.

Senator LEVIN. I am going to ask you again. By taking the position you have, which apparently is either neutral or non-involved or—well, I will leave it at that. Aren't you, in effect, putting your stamp of approval on the circumvention of the NYMEX order, your agent's order?

Mr. LUKKEN. Well, as I mentioned, I think that the positions that were on ICE, because we are trying to protect the benchmark, which is NYMEX, that was effective, the position limits on that contract. The ICE contracts, really the Amaranth positions that were put forward, were outer-month contracts. They weren't the nearby contracts that we were trying to protect, and that is one of the lessons that NYMEX had mentioned, is we need to start looking at some of these outer-month contracts as well, and we have started to do that. We have the software and resources now to try to do that.

Senator LEVIN. If you look at them and there is no authority to do anything about it, all you are doing is coming in after the fact and trying to find somebody after the damage has been done. Why not prevent it? You have told NYMEX, we have told you to tell

NYMEX, "Prevent it." Why should we not tell you to tell ICE to prevent it in order to sustain the NYMEX order? Why should you resist that? You seem to be resisting something, and I do not know why. You keep changing the subject when I talk about excessive speculation. You change it to manipulation. I am trying to find out why there is resistance on CFTC from supporting the NYMEX order that there be a reduction in the holdings by somebody—Amaranth—in order to avoid excessive speculation. Why are you resisting it or appear to be resisting it?

Mr. LUKKEN. I am not resisting it. What I am trying to say is that the hard limits, the position limits that typically are put on physically delivered contracts, such as the NYMEX position, are effective at ensuring that the futures and cash prices converge so that those prices function correctly, as they should.

ICE links itself to that benchmark. They in some ways freeload off of that price discovery mechanism. So by doing so, we are not as concerned with that influence and those prices because we are really concentrating on the physical delivered contract that is happening in ICE.

Senator LEVIN. Which occurs in one-hundredth of 1 percent of the time. You are concerned about a delivery that occurs almost never and seem not to be concerned when your agent, NYMEX, issues an order based on accountability levels. It was not a position limit. It was based on an accountability level which triggered an order. And if an order means something, and if we are going to protect the consuming public—I am not worried about, frankly, protecting the hedge fund or the speculator one darn bit. I am very much concerned about protecting the public that is affected by the prices which are impacted by that excessive speculation. They are impacted by it. They have to have a stable price. They have got to figure out what is it going to cost for winter gas because they are running an institution or they are running a utility, so they want a hedge. And it is a legitimate thing. They are the user, they are the consumer. They are not the speculator.

So I am trying to figure out—again, you talk about position limits; I talk about accountability levels which trigger an order. And I want to find out why the CFTC, if you speak for the CFTC, seems to be resisting something which even ICE accepts, at least as of today. Try me again.

Mr. LUKKEN. Yes, Mr. Chairman, I do not want to come over like I am being resistant to this idea. What I am trying to say is after the Amaranth situation, we decided that these markets were linked, as you had noted. We started to get more information, more transparency in these markets, and to date that seems to have been effective in these markets.

I think obviously, as a Commission, we have to adapt as these markets evolved and as these markets evolve. And certainly Commissioner Dunn and I want to try to address these, and certainly, as was noted by the prior panel, even on regulated exchanges, there is some uncertainty on what is the most effective manner in order to prevent either manipulation or excessive speculation that leads to unwarranted prices.

So I think this is something we need to be open to. I certainly think as a Commission we should discuss these ideas. But what I am trying to tell you today is that we have changed our practices to address this type of situation, that it has been effective, and that I think that we have the authority to address these things in the future.

Senator LEVIN. You say it has been effective, but a disaster has not come yet. You are going to wait for another disaster to give authority and direction to the market, which has these huge speculators in it—ICE.

Mr. LUKKEN. Sure.

Senator LEVIN. You are going to wait for the disaster, but you are not going to prevent the disaster because you are not willing, apparently, to tell ICE what you have told NYMEX: Prevent excessive speculation. Don't just clean up the act after the damage is done. Prevent it.

And so the way NYMEX has prevented it, your agent, is they have adopted an accountability level which triggers an action on their part. And then that action is subverted by the inability of ICE to take action to do exactly the same thing. ICE is willing, as of today, to be given the responsibility to stop that subversion and to protect the consumer. And yet you want to talk about openness and transparency. That is fine. That gets you halfway there. That gets you the information. But unless ICE does something about it and can do something about it to stop excessive speculation, you are not preventing the next Titanic, the next Amaranth.

Mr. LUKKEN. Right. And I think it is important to note, too, that even though we are discussing ICE, a lot of this occurred also on NYMEX, which does have these accountability levels, that they were exceeded several times, as they noted in the prior panel. So there is diligence that has to be on both fronts here, and we look forward to talking about these issues and determining how to best approach accountability levels, position levels, on both regulated and non-regulated exchanges. And hopefully I could talk to—someday we might have a few more—you mentioned Mr. Dunn is one of our Commissioners. He is our only Commissioner at the time. Hopefully we might have a few more Commissioners that we could talk about this, because obviously diversity of views is important as a Commission, as it is in the Senate, and also I want to mention my regulatory colleagues who are part of the President's working group. They have views on this. These decisions will affect some of their markets as well. So I think it is important that we talk.

As Senator Coleman had mentioned, there may be consequences to doing some of these actions. As you squeeze the balloon, where does it go? I think these are all important things to talk about. I don't want to sound resistant to ideas. I am open to all these ideas. But I am trying to say is that as of today, this seems to have stopped the activity that your report points out. And if more is needed, then we are open to those ideas.

Mr. DUNN. Mr. Chairman, if I may?

Senator LEVIN. Please.

Mr. DUNN. This is one of the times I would like to disassociate myself a bit from my colleague. I am very concerned when on the first panel the first day of these hearings, I read with a great deal of interest of what those LDCs and others had to say. The primary function for me of the futures and options market is to provide for risk mitigation and price discovery. Very clearly, those people that testified before you thought that did not happen, and the reason they thought it did not happen is because they thought there was excessive speculation as you point out in your study.

I gave a speech back on September 8, 2006 in which I said I wished that the Commission would do that type of study. But at the end of that, I said I don't really know if we would be in a position to pick among different economic uses of particular futures contracts, decide what should be discouraged, and what should not be discouraged.

But very clearly, there is a problem here based upon testimony that this Subcommittee has already seen, and that calls for us to take some type of action, and you have had a great deal of discussion between spec limits and the accountability level. Clearly, spec limits are hard and fast. It is something that the exchanges put together and say here is where you have got to go. They run it by us for our concurrence on this.

That doesn't happen with accountability levels. That is something that is more dynamic. It is an ongoing thing. We are not told when those accountability levels change out there, and that is because it is dynamic, and what happens is an exchange will call in that particular trader and say, "What is your game plan? What are you trying to accomplish here?" And then they have to consider as an SRO that what that individual is doing and whether or not it's going to have an impact in the marketplace.

I think your study points out that there were spikes in this market that took place that had an impact, especially on those other people that were using this market for risk mitigation, and the result of that alone should say we ought to take some type of action to make sure this doesn't happen in the future.

Senator LEVIN. Thank you very much. Senator Coleman.

Senator COLEMAN. Thank you. I have been pretty consistent about raising the issue of assessing the unintended consequences of extending CFTC regulation to electronic over-the-counter exchanges like ICE, because I think it is important that we have to—let's understand the impact of what we do.

Having said that, what is troubling, Mr. Lukken, from your testimony is when you talk about protecting the benchmark and feeling that you accomplished that when NYMEX told Amaranth that they have got to lessen their position, you do not seem at all troubled that Amaranth's response to that was to essentially disregard it by simply moving to another market.

So NYMEX says lessen; they do not lessen at all. They simply move from physical to swap; they move from regulated to unregulated, which clearly the economic distinctions are little—at least at that time. And so my concern is, as we move forward, that I want to make sure that the CFTC has a concern about if directives are given in one market that their folks can simply move somewhere else. And you do not seem troubled by that because "the benchmark is protected." I find that very troubling.

Mr. LUKKEN. Let me clarify what I meant, and I apologize if I came across as not caring that these positions may be moving.

We have, as I noted, adopted these positions—or this large-trader-like information that we are now receiving from ICE. My suggestion would be that when we see these types of movements, our surveillance staff in essence call these folks up and say, Well, why are you doing this? You were once on ICE—or NYMEX trading these positions. Now you are on ICE with the same speculative behavior. Why are you doing this? We have enforcement authorities that we can take against you. Do you have economic justification for doing this?

That sort of deterrence I think would be very effective. Again, we may not have every regulatory tool in the toolbox, but we have a big hammer with our manipulation authority that we can send subpoenas, we can bring these people into court, if we find that their activities are problematic.

So it is not that we are ignoring this information now. We see it. It is transparent, and we can take action with our enforcement authorities to go after this type of behavior.

Senator COLEMAN. So if NYMEX has accountability limits, if NYMEX allowed Amaranth to trade above its own established accountability limits, does it make sense for ICE to adopt the same accountability limits? I am trying to figure out where we go with—and, again, understanding that at a certain point someone has got to have the big picture. And you are the folks with the big picture.

Mr. LUKKEN. Right.

Senator COLEMAN. But you have got to be willing to use the authority. You have to be willing to say if there is a problem, we are going to deal with it, rather than simply saying we have protected a benchmark and anything beyond that does not seem to be our concern. You have clarified that somewhat.

Mr. LUKKEN. Yes.

Senator COLEMAN. But should NYMEX have the same accountability limits for its natural gas futures contracts and natural gas swaps, there is a distinction. NYMEX at least has some accountability; they have some triggers. Should ICE have the same triggers?

Mr. LUKKEN. Well, there should certainly be someone watching, whether it is ICE or us. And so, yes, if they are exceeding accountability levels on NYMEX and we feel that the activity on ICE is affecting NYMEX, that is a problem for us. We need to make sure that we are policing that correctly by calling those folks up—a lot of what we do in our surveillance activity is called "jawboning," where we just call them up and say, "What are you doing here? Why are you doing it?" It proves to be very effective. It is very limited that we have ever used our emergency authority to try to liquidate positions. It has only happened four times back in the 1970s, in fact. But most of the time it is this deterrent activity, this jawboning that allows us to get people to back away from these types of positions.

I would certainly, as Acting Chairman, encourage our staff to make those types of phone calls. When people exceed accountability levels on NYMEX and move those beyond into ICE, that is troubling. It should be troubling, and I think Commissioner Dunn and I both find that activity troubling.

Senator COLEMAN. I think Mr. Sprecher testified that accountability levels are needed on ICE and should be extended to that exchange. Do you agree with that?

Mr. LUKKEN. I think that is something we should be open to, certainly.

Senator COLEMAN. Mr. Dunn.

Mr. DUNN. I definitely think there ought to be accountability levels, and I think there also should be some exploration of actually putting in spec limits.

Senator COLEMAN. "Excessive speculation"—is there a clear definition of "excessive speculation," Mr. Lukken?

Mr. LUKKEN. I think it has to be tailored to the markets that you are looking at. It really depends on whether it is nearby months, outer months, the types of markets, physically delivered, cash settled. I think it really should be given to the experience of our surveillance economists who have hundreds of years of experience looking at these markets. But it is something that I think is worthy of a discussion. I think it is something that we as a Commission should look at to determine, OK, where is the guidance here, because we really haven't until this has happened, we really hadn't put forward much effort to look into what is excessive speculation.

Certainly as a Commission, I think it is worthy of discussion and study to determine if there is guidance in this area that is necessary to help us go through this, to help us provide some principles in this area so that we combat excessive speculation that may lead to unjustified or unwarranted price fluctuation.

Senator COLEMAN. There has been some discussion about the image of moving mercury around, so if we move forward with ICE having not just greater reporting requirements, which they have, but, in fact, some enforcement and account limits, which they do not have presently but appear to be open to, what is the danger of trading moving elsewhere? And how do you get yourself in a position to kind of see the big picture and to make sure that we are simply not moving something from a regulated to an unregulated environment? Mr. Lukken and then Mr. Dunn.

Mr. LUKKEN. Well, most of the natural gas trades are on an exchange-like facility. I think it is only 10 percent that happens in the bilateral market. So I don't think there is an enormous impact of things pushing into the bilateral market. These markets want exchange-like transparency, and the clearing that is available to them. That is important. But, this is always a concern I think you need to have, is how much regulation is necessary, and it needs to be tailored to the risks associated with them. I think your Subcommittee has adequately pointed out what the risks are here and how best to do that without pushing these markets either overseas or into these dark markets, as you have talked about. But, regulation shouldn't—we should make sure that we are meeting the risks, and unintended consequences, we should be aware of them, but unless we are addressing the risks to these marketplaces, that is the most important thing that we should consider here.

Senator COLEMAN. Mr. Dunn.

Mr. DUNN. Senator Coleman, I think a very important point that I thought I heard Mr. Sprecher say in his testimony was that he was open to having core principles apply to ICE, which they currently don't. That would imply to me that they would also have a compliance staff similar to what we currently see at NYMEX. That gives us someone with our staff to bounce things off of and so that we can talk about these situations. Since they don't have a compliance staff now, it is very difficult to call up and—do we call Mr. Sprecher and say, "We have got a problem here"? Just the makeup of how do you go about doing some of this I think would be taken care of if, in fact, we did have some kind of core principles that would apply to them as well.

Now, remember, there are only about 12 of these acting ECMs out there right now, and when we look at the future, I mean, we didn't think there would be one this big at this time when the CFMA was passed back in 2000. So we have to look at unintended consequences: What is it going to be in the future? What are we going to do when there are 10 or 20 ICEs out there? And how do we do our work? This is certainly something that you later make a recommendation on near and dear to my heart, is that we have adequate staffing and technology to be able to conduct oversight over what Congress has given us.

Senator COLEMAN. Let us make sure that we get a response to that. We have not had a lot of discussion about staffing and technology. But I presume all this comes at a cost.

Mr. LUKKEN. Absolutely. We are struggling to maintain our current mission at the agency of regulating DCMs. So anything that we add to the table means something drops off. I am happy to see that the Subcommittee for Appropriations that oversees our agency is marking up a bill tomorrow. Hopefully they give us appropriate resources to do our job. But certainly if other markets come into our purview, that is going to come at a cost. But, technology is something that is so important. We are a technology agency. Technology gives us the tools to do this type of surveillance. It is from Amaranth that we learned we need to start looking at these outer months, and now we have the surveillance technology to help do that. That I think was part of Recommendation 2. That is something that is important. But resources is definitely an issue for us, and whatever authorities are provided, it has to be matched with the resources to adequately uphold those authorities.

Senator COLEMAN. Thank you, Mr. Chairman.

Senator LEVIN. Thank you.

Mr. Lukken, do you think it is important to prevent another episode like Amaranth or just punish a perpetrator who violates the law?

Mr. LUKKEN. I think preventing is always the first priority at our agency.

Senator LEVIN. Why is it that you talk about your agency jawboning but seem to be resisting giving to ICE the same authority and responsibility that they are willing to accept that NYMEX has to do the jawboning and action themselves? Why differentiate there?

Mr. LUKKEN. Well, what I am saying is that we can accomplish much of what giving that to ICE would accomplish.

Senator LEVIN. But why? Why not tell ICE to do what NYMEX does?

Mr. LUKKEN. I think that is certainly an option.

Senator LEVIN. But why not exercise it? What is your reluctance?

Mr. LUKKEN. It is not reluctance.

Senator LEVIN. I am trying to get to—there is a resistance. I am trying to understand it, and I do not.

Mr. LUKKEN. Well, I think what we are trying to do is make sure that we accomplish the goal of preventing an Amaranth-type situation, either its collapse or the fact that maybe unreasonable prices may have happened as a result of that.

Senator LEVIN. Why wouldn't assigning ICE and other exchanges to do that, giving them responsibility the way you have NYMEX, achieve that goal?

Mr. LUKKEN. It would be one way of achieving it. Another way is, as I mentioned, us receiving information about this and using our own jawboning and surveillance techniques to prevent that type of build-up on an ICE-type platform.

Senator LEVIN. Why not do that with NYMEX? Why not take away their authority, their responsibility? Take it on yourself to jawbone the NYMEX speculators. Why not do it that way with NYMEX?

Mr. LUKKEN. Well, I think this is a legacy of self-regulatory organizations that—self-regulation existed before we existed in those exchanges, 200 years or 150 years ago. So this is a legacy issue.

But, as these markets evolve, as I mentioned we need to make sure that we are on top of these. There may be a point in time where we need to ask ICE to do this, but what I have said today is that the trading information that we receive, our ability to jawbone them as a result of that trading information has been shown to be effective so far.

Senator LEVIN. It was not shown effective with Amaranth. You received that information, didn't you?

Mr. LUKKEN. We were not receiving that information at the time of Amaranth.

Senator LEVIN. You did not know anything about the move to Amaranth? None of your staff was aware of that?

Mr. LUKKEN. I don't believe——

Mr. DUNN. Not until after the fact.

Mr. LUKKEN. Not at the time, Mr. Chairman.

Senator LEVIN. What about leveling the playing field between NYMEX and ICE? Do you support those efforts?

Mr. LUKKEN. As long as it is done on a regulatory basis. I think we are trying to match what the risks of each marketplace might be and the type of regulation we put on them. As I mentioned, ECMs are only institutional markets. There is no retail participation directly on those marketplaces. There is only principal-to-principal trading. A lot of what we do as an agency is try to prevent trading abuses where traders brokering for other traders may trade ahead of people. That doesn't exist on ICE, so those authorities are not necessary.

So, there are certain parts of these markets that are different, as Mr. Sprecher pointed out, that they are different, requiring a different tailoring of regulation than a full-blown DCM designation.

Senator LEVIN. But the speculation that occurs on ICE has an effect on the NYMEX price. You have agreed to that.

Mr. LUKKEN. It can.

Senator LEVIN. So how are you then protecting the NYMEX benchmark? If the speculation occurs unregulated on ICE and the

ICE price affects the NYMEX price, how is the NYMEX benchmark protected?

Mr. LUKKEN. Well, I think, as I mentioned, if this Amaranth-type situation would occur today, our staff would see that.

Senator LEVIN. How was it protected before?

Mr. LUKKEN. Well, it wasn't. As these markets have evolved and become more linked, this is something, a lesson that we learned from Amaranth.

Mr. DUNN. Mr. Chairman.

Senator LEVIN. Mr. Dunn.

Mr. DUNN. Could I address your first questions about what do we do and, in essence, how do we prevent this? I think in your first study that came out—and, by the way, let me commend the staff for both studies. But the first study, which said there has got to be a cop on the beat, is really something that bothers me, that there is a perception out there, in large part in the energy markets, that we are not watching, that no one is paying attention. In fact, we have got folks on tapes giggling about nobody's watching us, they can do whatever they want. And we don't have a cop on the beat, I think, in real time, in this particular instance, but we do have a very good enforcement group that can go back and look at fraud and manipulation.

I think a great deterrent to this is for us to be able to bring some cases, and certainly we did that in the Enron issues. We only have civil money penalties that we can give them. I have asked our enforcement people to share information with the Department of Justice, States' Attorney Generals, and others so that some criminal actions can take place in some of these issues as well so that there is a real consequence being paid by the individuals that partake in things that are purely and very clearly fraud and manipulation.

Mr. LUKKEN. I would just like to join my colleague, too. What is troubling—and your report points it out—is the perception out there that these markets are somehow not policed. And perception is very important in this. People are basing prices off of these markets, and I think that is something as a Commission we need to be more active in making sure to educate folks what we do, what the limitations are, are we doing enough, to talk with industry groups, to talk with other regulators in this area.

I have been on the job a week as acting chairman, so I hope to hit the ground running with Commissioner Dunn and hopefully a couple other commissioners once they get confirmed and try to look into some of these issues. Are we doing enough? Should more happen in this area? We have done some, but maybe more is needed. And I think it is important to keep the perception that we are doing our job. It is important that is the perception, that we are doing our job.

Mr. DUNN. There is a way, Mr. Chairman, Senator Coleman, that we can get that attention. According to the regulations, anytime that ICE gets a formal complaint, that is supposed to be passed on to the CFTC so that we can go out and examine that. So there are opportunities out there for someone who thinks that there has been manipulation or they have been damaged as a result of activities that take place on ICE, that it can get to us. And certainly, as I read those testimonies of those folks that were on your first day of hearings out there, there were a lot of people out there that feel that us going after somebody after the fact is too late, they have already spent too much money that affects them for their businesses and their heating of their home.

Senator LEVIN. Well, that is exactly right. Most of the function of the cop on the beat is to deter crime, not to chase the guy after he has shot somebody. And this is the way the CFTC describes its authority. This is CFTC now. "In contrast to its authority over designated contract markets and registered derivatives transaction facilities, the CFTC does not have general oversight authority over exempt commercial markets. Exempt commercial markets are not registered with or designated, recognized, licensed, or approved by the CFTC."

What I am afraid hearing today is you maybe want to keep it that way. I have to tell you, that is what comes through from your testimony today—not from Mr. Dunn's. From your testimony today where you draw some kind of a distinction, which I fail to understand, between why it is important that NYMEX have the authority to prevent, to deter, to go after excessive speculation before it causes damage, and your insistence that, well, you would rather the CFTC, when it comes to ICE, be the one that is going to get reports and oversee it does not give me much confidence that that is the way to go. And I do not understand the distinction. They are functionally equivalent. There is no difference about that. They are functionally equivalent markets. And yet CFTC, you are the cop ultimately, and you seem to say, hey, get NYMEX on those trades, but when that action of NYMEX is subverted by what is allowed, just move it over to an unregulated market, you are saying, well, we will get reports on that, and if there is a claim of fraud or manipulation, then we will move in after the shark is gone.

Mr. LUKKEN. It is not that I oppose that idea. I think it is something that we should be discussing as a Commission, also with other regulators. So as you mentioned, these markets have evolved over time. What was true 5 years ago is not true today. It is something we should discuss. Maybe that is needed. But there are consequences to adding additional regulation, as you have pointed out today.

Senator LEVIN. There always are. But there is regulation with NYMEX. That is a regulated market.

Mr. LUKKEN. Correct.

Senator LEVIN. It has got consequences. This is what the Amaranth head energy trader had to say in an e-mail: "Everybody is high on ICE these days." He is writing to somebody. "You think it had its day or more to go?"

And then he says, "One thing that's nice is there's no expiration limits, like NYMEX, clearing." In other words, this is a lot easier. "And this alone," he says, "will keep it—ICE—strong." No limits like NYMEX, and that is going to keep ICE strong. And I hope we are going to hear back from CFTC. If you say it is worthy of discussion, we hope you will take it up, discuss it, and let this Subcommittee know what you are going to do, if anything.

Senator Coleman.

Senator COLEMAN. Just to follow up, just to be optimistic, and I want to be optimistic that this report and these hearings hopefully have generated discussion, and obviously the concern that we have, the ability to simply move from regulated to unregulated is something that has to be dealt with. It puts consumers at risk.

It is interesting, because I have a different e-mail that I was looking at, again, from the Amaranth trader, who also talked about—said that we have exchange limits, and then somebody responded, "You got me confused." He says, "On NYMEX, not on ICE." And then he says, "For June expiration." But then he says, "They settle the same." And so, clearly, they get it. It is important that we get it.

Just one other area that I want to touch upon, and we are assuming—and I think we are moving at a path that—giving ICE the ability, the authority to regulate. If a concern is resources, wouldn't it make sense to extend some regulatory oversight responsibilities to ICE so that it is less of a burden on you at CFTC?

Mr. LUKKEN. That would make some sense, yes.

Senator COLEMAN. And if you do that—just, again, because I am concerned about squeezing the balloon, as you talked about—how do we handle the other 17 exempted electronic OTC energy exchanges? What can you do with that? How do you bring them into the mix?

Mr. LUKKEN. A lot of these markets are not in any way linked to our regulated markets. They are very innovative exchanges, in some ways incubator exchanges. There would be some way to have to distinguish between those markets and a market like ICE that really has become an exchange-like facility. And I am not sure—it is difficult to draw that delineation, but somehow that would have to be done.

Senator COLEMAN. One of the concerns—we have used this phrase "unintended consequences." I think perhaps we should discuss it. I presume a concern is that if we raise the cost of regulation to a certain degree, these exchanges, the small ones, simply move offshore.

Mr. LUKKEN. Correct.

Senator COLEMAN. And then we have no control, no transparency.

Mr. LUKKEN. Yes, the one in London—this is happening in our capital markets in some respect. So I think the concern is making sure that the regulation fits the risks, and that is, I think, what this Subcommittee is trying to do, what we as a Commission try to do. I want to say that I am optimistic, too. I don't want to sound like we are being resistant or I am personally being resistant. This is new territory for me, so I am hopeful that we can get together as a Commission to talk about these ideas and come back to this Subcommittee if we can reach some conclusions about what needs to be done in this area.

Senator COLEMAN. And raise the issue of the voice-brokered markets, with electronics today there are a lot of things that can go on. It was clear in Amaranth that they were looking to move, if they could have done a voice-brokered deal bilateral, they would have done that. Can you talk to me a little bit about monitoring preventive excessive speculation price manipulation when you are dealing with something as opaque as the voice-brokered markets?

Mr. LUKKEN. Some of it has to do with whether these are standardized contracts or individually negotiated contracts. It would be very difficult for us and very resource-intensive for us to take every individually negotiated bilateral contract and try to make some regulatory use of it. It would be sort of garbage-in, garbage-out type of a problem for us.

So we want to make sure that whatever we are getting has some relevance to the price discovery process. I think there are maybe some areas that have some relevance, but it is of limited use. So I think it is going to have to be a question of resources and cost/benefit analysis in that area.

My personal feeling is that bilaterals haven't been really impactful on the price discovery process. It has mainly been these standardized exchange-like facilities that have been linked.

Senator COLEMAN. And I look forward to that discussion. In a simplistic sense, we can regulate all of this, but there is then a cost and there is a price. And is it worth the price? And what is the cost? And, again, does it ultimately drive things to a more opaque place?

I look forward to the discussion, but it is very clear to me—and I have, again, been very concerned about the unintended consequences. But to listen to the Amaranth people and to listen to the ICE and NYMEX folks, who we issue an order—NYMEX issues an order, says to Amaranth, "You have got to lower your position," and it is like me telling my kids to do something and knowing that they are just going to go over and totally ignore that, and have people have a sense that we have accomplished something.

I would suggest that does not provide the protection that you were talking about and that piece has to be dealt with, and I think the question is how do we deal with it in a way that actually makes a difference.

Mr. LUKKEN. Right.

Senator COLEMAN. Thank you, Mr. Chairman.

Senator LEVIN. Thank you very much.

Just a couple questions. Do you know if the President's Working Group has taken a position on this matter?

Mr. LUKKEN. I am just a recent member of the President's Working Group, so I am not sure if they—on the matter of position limits or——

Senator LEVIN. No. On whether or not we should have ICE being given responsibility the way NYMEX has to enforce our laws.

Mr. LUKKEN. I am not aware. Not being a member of the President's Working Group until recently, I am unaware of whether they have.

Senator LEVIN. Whether there have been any discussions between CFTC and the working group on any of the issues we have discussed today?

Mr. LUKKEN. I think there has been discussion on Amaranth and the follow-up from Amaranth. The President's Working Group, I think, what were the concerns that arose out of Amaranth, including many of the issues we discussed today.

Senator LEVIN. And CTFC, have you had discussions on this?

Mr. LUKKEN. We have had some follow-up on Amaranth itself, and——

Senator LEVIN. No. In terms of the subject that we talked about today.

Mr. LUKKEN. We have not.

Senator LEVIN. How come? It has been a year.

Mr. LUKKEN. On the authority of whether 2(h) should be——

Senator LEVIN. Yes, how to avoid another Amaranth.

Mr. LUKKEN. Well, we certainly have taken measures since Amaranth within our existing authority to try to prevent that type of a situation in the future.

Senator LEVIN. In terms of additional authority, though, you have not discussed that?

Mr. DUNN. I have discussed it with my staff on what would be some——

Senator LEVIN. As a Commissioner, have you done it?

Mr. DUNN. I have not done it as a Commissioner.

Senator LEVIN. OK. Let me just summarize. Amaranth engaged in excessive speculation. The victims were consumers who got hit with inflated prices, distorted prices. CFTC did not realize what happened at the time. The Subcommittee has spent a lot of time analyzing this. We have analyzed the NYMEX and the ICE data to figure out what happened. It is clear what has happened here and that when a speculator or trader was told by the agent of the government agency to reduce its position, instead of carrying out that order, it bypassed it, undermined it, circumvented it by just going to an unregulated market. It seems to me that totally thwarts the purpose of our statute. It thwarts the purpose of the CFTC giving NYMEX the responsibility that you have given it to stop excessive speculation.

I do not see from what I have heard today that at least the acting chairman is aggressively interested in doing what apparently ICE is willing to do, which is to step into the breach and to enforce some rules against excessive speculation. There is a willingness to talk about it, apparently, but that does not seem to be very responsive to what is an obvious willingness on the part of ICE to do what NYMEX does, which is to stop something which hurts people.

We all agree excessive speculation hurts consumers. Everyone agrees with that. There is a law against it. It may not be defined in the law. It is enforced. And if it needs definition, you folks should give it definition. That is your responsibility. We have not heard any murmurs from you folks about defining “excessive speculation.” If it needs to be defined, go ahead and define it. But it is not acceptable to this Senator to just have the independent agency which is supposed to be enforcing law against excessive speculation to take a fairly lukewarm response, to give a lukewarm response when there is such a proven problem here which has cost a lot of people, a lot of consumers, a lot of users a lot of money.

I hope that the CFTC will do what you, the acting chairman, now say it will do. Long overdue, as far as I am concerned. I hope you will take it up, discuss the possibilities, give us your thoughts and your recommendations in terms of legislation. These have been extremely valuable reports and hearings. I think everybody will acknowledge that, regardless of what position they are in or what view they take of the issue. Our staffs have done an extraordinary job of digging for over a year. Millions of transactions have had to be analyzed, and what has been demonstrated is something which is pretty shocking and which has got to be prevented, not just responded to after the fact.

So I will turn to Senator Coleman and see if he has any final comment.

Senator COLEMAN. I think you have done an excellent job of summing up. I look forward to the ongoing conversations and, beyond that, subsequent action to increase accountability and increase transparency. Clearly, there are lessons to be learned from Amaranth, and I would hope—and I firmly believe that we all understand the key is to make sure it does not happen again, to use the powers that we have, and if there is additional power that is needed, either the agency itself or, again, even working with ICE and others, that we would move forward in that direction.

I thank the Chairman and again want to applaud the staff, who I think has done a tremendous job. Thank you.

Senator LEVIN. Thank you. Thank you all.

Mr. DUNN. Mr. Chairman.

Senator LEVIN. Excuse me. Please, Mr. Dunn.

Mr. DUNN. In earlier testimony, one of the folks that testified here used an excerpt of a speech that I gave back on September 8 of last year. I would like for the record to insert the entire excerpt that I gave on the energy matter during that speech, if I may, please.[1]

Senator LEVIN. Of course. That will be made part of the record.

Mr. DUNN. Thank you, sir. Thank you both.

[Whereupon, at 4:59 p.m., the Subcommittee was adjourned.]

[1] See Exhibit 16 which appears in the Appendix on page 904.

APPENDIX

1

TESTIMONY OF ARTHUR CORBIN

PRESIDENT & CEO,

MUNICIPAL GAS AUTHORITY OF GEORGIA

ON BEHALF OF THE AMERICAN PUBLIC GAS ASSOCIATION

BEFORE THE SENATE HOMELAND SECURITY AND GOVERNMENT AFFAIRS

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

JUNE 25, 2007

Chairman Levin, Ranking Member Coleman and Members of the Committee, I appreciate this opportunity to testify before you today and I thank the Committee for calling this hearing on the important subject of natural gas market transparency. My name is Arthur Corbin and I am the President & CEO of the Municipal Gas Authority of Georgia. The Municipal Gas Authority of Georgia is the largest non-profit natural gas joint action agency in the United States. Our agency is made up of 76 publicly-owned natural gas distribution system members in five states: Georgia; Alabama; Florida; Pennsylvania; and Tennessee. Our principal role is to supply all the natural gas requirements of these systems. Together, our members meet the gas needs of approximately 243,000 customers.

I testify today on behalf of the American Public Gas Association (APGA). APGA is the national association for publicly-owned natural gas distribution systems. There are approximately 1,000 public gas systems in 36 states and almost 700 of these systems are APGA members. Publicly-owned gas systems are not-for-profit, retail distribution entities owned by, and accountable to, the citizens they serve. They include municipal gas distribution systems, public utility districts, county districts, and other public agencies that have natural gas distribution facilities.

APGA's number one priority is the safe and reliable delivery of affordable natural gas. To bring natural gas prices back to a long-term affordable level, we ultimately need to increase the supply of natural gas. However, equally critical is to restore public confidence in the pricing of natural gas. This requires a level of transparency in natural gas markets which assures consumers that market prices are a result of fundamental supply and demand forces and not the result of manipulation or other abusive market conduct. APGA strongly believes that this level of transparency currently does not exist and this has directly led to a lack of confidence in the natural gas marketplace.

The economic links between the natural gas futures contracts traded on the New York Mercantile Exchange ("NYMEX") and those contracts, agreements and transactions in natural gas traded in the over-the-counter ("OTC") markets are beyond dispute. Without question, a participant's trading conduct in one venue can affect, and has affected, the price of natural gas contracts in the other. Today, the Commodity Futures Trading Commission ("CFTC") has effective oversight of NYMEX, and the CFTC and NYMEX provide a significant level of transparency with respect to NYMEX's price discovery function. But, the OTC markets lack such price transparency.

This lack of transparency in a very large and rapidly growing segment of the natural gas market leaves open the potential for a participant to engage in manipulative or other abusive trading strategies with little risk of early detection; and for problems of potential market congestion to go undetected by the CFTC until after the damage has been done to the market. It simply makes no sense to have transparency over one small segment of the market and none over a much larger segment, especially when the OTC markets are the fastest growing sectors of the natural gas marketplace. APGA strongly believes that it is in the best interest of consumers for Congress to rectify this situation by passing legislation that would ensure an adequate level of transparency with respect to OTC contracts, agreements and transactions in natural gas.

The Market in Natural Gas Contracts

The market for natural gas financial contracts is composed of a number of segments. Contracts for the future delivery of natural gas are traded on NYMEX, a designated contract market regulated by the CFTC. Contracts for natural gas are also traded in the OTC markets. These may be traded in direct, bi-lateral transactions between counterparties, through voice brokers or on electronic trading facilities. OTC contracts may be settled financially or through physical delivery. Financially-settled OTC contracts often are settled based upon NYMEX settlement prices and physically delivered OTC contracts may draw upon the same deliverable supplies as NYMEX contracts, thus linking the various financial natural gas market segments economically.

Increasingly, the price of natural gas in many supply contracts between suppliers and local distribution companies ("LDC"), including APGA members, is determined based upon monthly price indexes closely tied to the monthly settlement of the NYMEX futures contract. Accordingly, the futures market serves as the centralized price discovery mechanism used in pricing these natural gas supply contracts. Generally, futures markets are recognized as providing an efficient and transparent means for discovering commodity prices.[1] However, any failure of the futures price to reflect fundamental supply and demand conditions results in prices for natural gas that are distorted and which do not reflect its true value. This has a direct effect on consumers all over the U.S., who as a result of such price distortions, will not pay a price for the natural gas that reflects bona fide demand and supply conditions. If the futures price is manipulated or distorted, then the price a consumer pays for the fuel needed to heat their home and cook their meals will be similarly manipulated or distorted.

Regulatory Oversight

NYMEX, as a designated contract market, is subject to pervasive oversight by the CFTC. The primary tool used by the CFTC to detect and deter possible manipulative activity in the regulated futures markets is its large trader reporting system. Using that regulatory framework, the CFTC collects information regarding the positions of large traders who buy, sell or clear natural gas contracts on NYMEX. The CFTC in turn makes available to the public aggregate information concerning the size of the market, the number of reportable

[1] *See* the Congressional findings in Section 3 of the Commodity Exchange Act, 7 U.S.C. §1 et seq. ("Act"). Section 3 of the Act provides that, "The transactions that are subject to this Act are entered into regularly in interstate and international commerce and are affected with a national public interest by providing a means for . . . discovering prices, or disseminating pricing information through trading in liquid, fair and financially secure trading facilities."

positions, the composition of traders (commercial/non-commercial) and their concentration in the market, including the percentage of the total positions held by each category of trader (commercial/non-commercial).

The CFTC also relies on the information from its large trader reporting system in its surveillance of the NYMEX market. In conducting surveillance of the NYMEX natural gas market, the CFTC considers whether the size of positions held by the largest contract purchasers are greater than deliverable supplies not already owned by the trader, the likelihood of long traders demanding delivery, the extent to which contract sellers are able to make delivery, whether the futures price is reflective of the cash market value of the commodity and whether the relationship between the expiring future and the next delivery month is reflective of the underlying supply and demand conditions in the cash market.[2]

Although the CFTC has issued "special calls" to one electronic trading platform, and that platform reportedly has determined to voluntarily provide the CFTC with information on traders' large positions,[3] the CFTC's large trader reporting surveillance system does not routinely reach traders' large OTC positions. Despite the links between prices for the NYMEX futures contract and the OTC markets in natural gas contracts, this lack of transparency in a very large and rapidly growing segment of the natural gas market leaves open the potential for participants to engage in manipulative or other abusive trading strategies with little risk of early detection and for problems of potential market

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[2] *See* letter to the Honorable Jeff Bingaman from the Honorable Reuben Jeffery III, dated February 22, 2007.
[3] *Id*, at 7.

congestion to go undetected by the CFTC until after the damage has been done to the market, ultimately costing the consumers or producers of natural gas. It simply makes no sense to have transparency with respect to one segment of the market and none with respect to another, particularly given that the OTC markets are one of the fastest growing sectors of the natural gas marketplace and are linked to pricing on the regulated futures market in natural gas.

Amaranth Advisors LLC

Last year's blow-up of the Amaranth Advisors LLC and the impact it had upon prices exemplifies these linkages and the impact they can have on natural gas supply contracts for LDCs. Amaranth Advisors LLC was a hedge fund based in Greenwich, Connecticut, with over $9.2 billion under management. Although Amaranth classified itself as a diversified multi-strategy fund, the majority of its market exposure and risk was held by a single Amaranth trader in the OTC derivatives market for natural gas.

Amaranth reportedly accumulated excessively large long positions and complex spread strategies far into the future. Amaranth's speculative trading wagered that the relative relationship in the price of natural gas between summer and winter months would change as a result of shortages which might develop in the future and a limited amount of storage capacity. Because natural gas cannot be readily transported about the globe to offset local shortages, the way for example oil can be, the market for natural gas is particularly susceptible to localized supply and demand imbalances. Amaranth's strategy was reportedly based upon a presumption that hurricanes during the summer of 2006 would make natural gas more expensive in 2007, similar to the impact that hurricanes Katrina and Rita had had on prices the previous year. As reported in the press, Amaranth held open positions to buy or sell tens of billions of dollars of natural gas.

As the hurricane season proceeded with very little activity, the price of natural gas declined, and Amaranth lost approximately $6 billion, most of it during a single week in September 2006. The unwinding of these excessively large positions and that of another previously failed $430 million hedge fund—MotherRock— further contributed to the extreme volatility in the price of natural gas.

Many natural gas distributors locked-in prices prior to the period Amaranth collapsed at prices that in hindsight were elevated due to the accumulation of Amaranth's positions. In the case of the Municipal Gas Authority of Georgia, Amaranth's activities had a significant impact on the price we, and ultimately our members' customers, paid for natural gas. To reduce volatility and mitigate additional price spikes on supplies of natural gas, the Gas Authority's hedging procedures required that we hedge part of our 2006-2007 winter natural gas in the spring and summer of 2006. In the spring of 2006 we knew natural gas prices were still extremely high, but it would have been irresponsible if we were to gamble and not hedge a portion of our winter gas in the hope that prices would eventually drop. As a result, we hedged half of our winter gas prior to September 2006. By hedging earlier in 2006 when natural gas prices were high as a result of Amaranth's market activities, our members incurred hedging losses of $18 million over the actual market prices during the winter of 2006-07. The Gas Authority's members were forced to pay an $18 million premium and pass it through to their customers on their gas bills as a result of the excess speculation in the market by Amaranth and others.

The lack of OTC transparency and extreme price swings surrounding the collapse of Amaranth leave bona fide hedgers reluctant to participate in the markets for fear of locking-in prices that may be artificial.

Greater Transparency Needed

Our members, and the customers served by them, do not believe there is an adequate level of market transparency under the current system. This lack of transparency leads to a growing lack of confidence in the natural gas marketplace. Although the CFTC operates a large trader reporting system to enable it to conduct surveillance of the futures markets, it cannot effectively monitor trading if it receives information concerning positions taken in only one segment of the total market. Without comprehensive large trader position reporting, the government is currently handicapped in its ability to detect and deter market misconduct. If a large trader acting alone, or in concert with others, amasses a position in excess of deliverable supplies and demands delivery on its position and/or is in a position to control a high percentage of the deliverable supplies, the potential for market congestion and price manipulation exists. Unless Congress moves forward to enable the CFTC to increase transparency with respect to OTC contracts, agreements or transactions in natural gas, the government will continue to be woefully unprepared to: (1) detect a problem until it is too late; (2) protect the public interest; and (3) ensure the price integrity of the markets, thus impairing our ability as a nation to maintain the flow and deliverability of a fundamental fuel.

Over the last several years, APGA has pushed for a level of market transparency in financial contracts in natural gas that would routinely, and prospectively, permit the CFTC to assemble a complete picture of the overall size and potential impact of a trader's position irrespective of whether the positions are entered into on NYMEX, on an OTC trading platform or through bi-lateral or voice-brokered OTC transactions. Such a comprehensive large trader reporting system would have enabled the CFTC to spot the relative size of Amaranth's OTC position prior to its collapse. A comprehensive large trader reporting system would enable the CFTC, while a scheme is unfolding, to determine whether a trader is using the OTC natural gas markets to corner deliverable supplies and manipulate the price in the futures market.[4] A comprehensive large trader reporting system would also enable the CFTC to better detect and deter other types of market abuses, including for example, a company making misleading statements to the public or providing false price reporting information designed to advantage its natural gas trading positions, or a company engaging in wash trading by taking large offsetting positions with the intent to send misleading signals of supply or demand to the market. Such activities are more likely to be detected or deterred when the government is receiving information with respect to a large trader's overall positions, and not just those taken in the regulated futures market.

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[4] *See e.g. U.S. Commodity Futures Trading Commission* v. *BP Products North America, Inc.*, Civil Action No. 06C 3503 (N.D. Ill.) filed June 28, 2006.

The need to provide the CFTC with additional surveillance tools is not meant to imply that the CFTC has not been vigilant in pursuing wrongdoers. Experience tells us that there is never a shortage of individuals or interests who believe they can, and will attempt to, affect the market or manipulate price movements to favor their market position. The fact that the CFTC has assessed over $300 million in penalties, and has assessed over $2 billion overall in government settlements relating to abuse of these markets affirms this. These efforts to punish those that manipulate or otherwise abuse markets are important. But it must be borne in mind that catching and punishing those that manipulate markets after a manipulation has occurred is not an indication that the system is working. To the contrary, by the time these cases are discovered using the tools currently available to government regulators, our members, and their customers, have already suffered the consequences of those abuses in terms of higher natural gas prices. Greater transparency with respect to traders' large positions, whether entered into on a regulated exchange or in the OTC markets in natural gas will provide the CFTC with the tools to detect and deter potential manipulative activity before our members and their customers suffer harm.

Accordingly, APGA has petitioned Congress to pass legislation that would expand the large trader reporting system to mandate the reporting of positions held in financial contracts for natural gas in all segments of the market. Specifically, we believe that large traders should report their positions regardless of whether they are entered into on designated contract markets, on trading platforms, in the voice-brokered or in bilateral OTC markets. This would treat all trading positions in natural gas contracts equally in terms of reporting requirements. Extending large trader reporting to OTC natural gas positions and to positions entered into on electronic trading platforms will provide the CFTC with a complete picture of the natural gas marketplace and ensure that the cop on the beat has the tools necessary to be effective.

Greater Transparency is a Reasonable Response to Conditions in the Natural Gas Market.

It is important to note that the APGA's proposal is narrow in scope. First, APGA is requesting a comprehensive large trader reporting system only with respect to financial contracts, agreements and transactions in natural gas. The legislation that APGA is seeking is not intended to, and would in no way effect financial swaps. Natural gas contracts are more susceptible to manipulation than other commodities or instruments because the deliverable supply of natural gas is often small relative to the size of the derivatives positions held by large traders and, as mentioned previously, natural gas is constrained by the manner in which it can be delivered. These conditions do not necessarily pertain to other commodities or instruments which are "exempt commodities" under the Act[5] and they most certainly do not pertain to contracts, agreements or transactions in the "excluded commodities" under the Act. [6] Accordingly, it must be emphasized that APGA's proposal is limited to contracts in natural gas. It would have no effect with respect to the OTC markets in financial swaps or in any other contracts, agreements or transactions on an "excluded commodity" or in any "exempt commodity"

[5] "Exempt commodities" are defined in Section 1a(14) of the Act as, "a commodity that is not an excluded commodity or an agricultural commodity." Thus, for example, exempt commodities include other energy commodities and base and precious metals.

[6] "Excluded commodities" are defined in Section 1a(13) of the Act and include interest rates, currency, indexes and various other types of financial instruments or interests.

other than natural gas. Moreover, APGA's proposal with respect to contracts, agreements or transactions in natural gas is merely a reporting requirement and would not impose any regulatory requirements with respect to such transactions.

Second, the CFTC's large trader reporting system would not in any way result in the public release of information relating to an individual entity's trading positions. Information collected through the CFTC's large trader reporting system is used for the government's market surveillance purposes only and is kept confidential by the CFTC in accordance with Section 8 of the Act. Any information which is made publicly available by the CFTC, as described above, is on an aggregated basis and does not disclose individual trading positions. APGA is not advocating a change in this practice.

Finally, although some have raised concerns about the costs of expanding the large trader reporting system, we believe the costs would be reasonable. Insofar as the CFTC's large trader reporting system is already operational, the CFTC will not be creating an entirely new program to collect this information. In addition, large traders, such as those which would be required to report to the CFTC, will likely have automated recordkeeping systems for their own internal risk management purposes that could be adapted for the purpose of reporting positions to the CFTC. Finally, as discussed above, certain trading platforms have already taken steps to make information available to the CFTC. Accordingly, APGA believes that the costs of a comprehensive large trader reporting system for natural gas would be reasonable and are far outweighed by the benefits in terms of helping assure consumers that the market price is a reflection of appropriate market forces.

* * * * *

Natural gas is a lifeblood of our economy and millions of consumers depend on natural gas every day to meet their daily needs. It is critical that the price those consumers are paying for natural gas comes about through the operation of fair and orderly markets and through appropriate market mechanisms that establish a fair and transparent marketplace. Without giving the government the tools to detect and deter manipulation, market users and consumers of natural gas who depend on the integrity of the natural gas market cannot have the confidence in those markets that the public deserves. The current situation is not irreversible. Congress can provide American consumers with the protection they deserve by passing legislation that would expand the CFTC's large trader reporting requirements to include financial contracts for natural gas that are currently exempt from reporting. APGA and its approximately 700 public gas system members stand ready to work with you towards accomplishing that goal.

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TESTIMONY OF PAUL CICIO
INDUSTRIAL ENERGY CONSUMERS OF AMERICA
BEFORE THE
SENATE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

"THE EFFECT OF EXCESSIVE SPECULATION"
JUNE 25, 2007

Chairman Levin and Ranking Member Coleman, thank you for the opportunity to testify before this subcommittee on the important issue of excessive speculation in the natural gas market.

The Industrial Energy Consumers of America (IECA) is a non-profit trade association whose membership are significant consumers of natural gas and from every major energy intensive manufacturing sector. Corporate board members are top energy procurement managers who are leaders in their industry, technical experts, strongly committed to energy efficiency and environmental progress. IECA membership represents a diverse set of industries including: plastics, cement, paper, food processing, aluminum, chemicals, fertilizer, brick, insulation, steel, glass, industrial gases, pharmaceutical, construction products, automotive products, and brewing.

At the heart of the matter is that every consumer in the country assumes that the government is protecting their interests and that markets are working and operating with a level playing field. Neither is true. The Commodities Futures Trading Commission (CFTC) knows there are significant market oversight gaps and have failed to act in the public interest. There is excessive speculation but we can deal with it 'if' we have transparency for the regulators to monitor the size of the natural gas volumes that any one player is controlling.

We believe that markets work better when market participants know there is strong government oversight that has the ability to catch and severely penalize market manipulation. Unfortunately there is neither sufficient government oversight nor sufficient penalties to deter manipulation.

All market inefficiencies are paid for by us, the consumer. And, even a relatively small increase in the price of natural gas such as $0.25 cents, amount to significant cost impact of $5.5 billion over the course of a year. And, unlike, many other commodities such as currencies or gold, excessive speculation of natural gas has a direct impact on all sectors of the economy including homeowners, farmers and the manufacturing sector.

The subject of excessive speculation, market power and market manipulation first came to our attention in 2001 and has continued to grow in concern. The signs were obvious but because of the lack of transparency, we could never prove it. This all changed with the implosion of the Amaranth Advisors hedge fund. The fund reportedly lost $6.0 billion on natural gas trades. The Wall Street Journal reported that Amaranth controlled at least 100,000 natural gas contracts which mean they controlled the equivalent of 1 trillion cubic feet of natural gas – the equivalent of 54 percent of our country's monthly demand. Clearly, this looks like market power and market manipulation to a consumer.

IECA member companies are some of the world's largest consumers of natural gas. Natural gas is used as a feedstock and fuel. Member company competitiveness is impacted directly and indirectly from the price of natural gas and the functioning of natural gas markets. Indirectly, the price of natural gas is impacting the price of electricity across the country which further increases the cost impact of higher natural gas prices.

For example, natural gas represents 85% of the cost of making anhydrous which is used to make fertilizer for our farmers. Much of our plastics today are made from either ethylene or propylene and a substantial portion of U.S. capacity is produced using natural gas as the feedstock. In this case 93% of the cost of ethylene and propylene is attributable to the cost of natural gas. Most manufacturers use natural gas as a fuel for their boilers and to co-generate electricity and steam to operate their facilities. There is virtually no substitute.

Member companies historically use hedging practices to protect themselves from volatility and to increase predictability of the purchase price of natural gas. Since 2001, volatility has significantly increased in large part due to excessive speculation which has also increased the cost to hedge. For example, using a ATR (Average True Range 15 week moving average) and comparing May 2000 to June 2007, the volatility is up greater than 100%. If we compare May 2000 to the September 2006 (the time period after the Amaranth implosion) the volatility increased by 475%. Volatility is a manufacturer's nightmare and a trader's dream. Volatility makes it extremely difficult for manufacturers to plan product pricing, capital expenditures and plant operations.

It is now a well known fact that Amaranth continued to increase the volume of natural gas they controlled on the NYMEX and Inter Continental Exchange (ICE) during the spring and summer of 2006. Doing so resulted in higher prices than what would have otherwise been the case. National inventories at the time were above the five year average and domestic production was stable. It is impossible for anyone to accurately determine the premium consumers paid because of Amaranth. However, we can provide perspective.

We can assume that had Amaranth not continued to increase their control of the price by continuing to add to their positions, market conditions would have driven the price lower. In fact, after Amaranth collapsed, so did the price of natural gas. In September 2006, the price was $6.81 per mm Btu and after the Amaranth collapse the price fell in October 2006 to $4.20 per mm Btu, a $2.61 difference. If we assume that only one dollar of the $2.61 price was due to Amaranth, it would have cost consumers an estimated $9 billion over the time period of April thru August of 2006!

The clear responsibility of the CFTC is to ensure that the natural gas market is functioning efficiently, fairly and that the derived market price is trustworthy. That is, without manipulation. They cannot succeed in doing so without greater jurisdiction to provide oversight of both the NYMEX and ICE. It is well known to all market participants that because CFTC has oversight of NYMEX and requires large players to report their positions to the "Commitment of Trader Report", that traders have moved much of their trading volumes to ICE where there is no reporting. Without jurisdiction over ICE, it is impossible for the CFTC to either reduce excessive speculation or make sure that market power and market manipulation does not occur.

The CFTC has known for a long time that a significant oversight gap exists. Because the Chairman of the CFTC has not stepped forward to say there is a problem should raise serious questions by Congress. Why aren't they responsive to the public interest and why haven't they brought these concerns to the Congress? Is a change in their charter necessary?

At least one CFTC commissioner has said there is a problem. Below are the remarks of CFTC Commissioner Michael V. Dunn before the National Grain Trade Council on September 8, 2006.

"However, a large portion of energy trading occurs in the over-the-counter market, mostly beyond the scrutiny of any federal agency. The Commission's enforcement actions continue to uncover repeated examples of people and companies trying to game the energy markets, often in the belief that no one is watching, or that if someone is, there is nothing that can be done to them."

"Because the CFTC is barred from regulating the OTC energy markets, it cannot collect large trader data from unregulated energy markets, or conducting regular surveillance of them. It is virtually impossible to know, therefore, the extent of fraud and manipulation that may be occurring in the over-the-counter markets."

CFTC opines it has subpoena power. It does. But that is not the type of government oversight that is needed. Subpoena power is used after the damage to markets has already been done. We want a preemptive approach that effectively monitors markets and prevents manipulation.

IECA recommends that at minimum, CFTC have oversight of both the NYMEX and ICE and require large traders to report their positions weekly to the Commitment of Traders Report. We also recommend Congress increase the funding to the CFTC for enforcement purposes.

Asking only 'large traders' to report their position to the CFTC, just like the NYMEX does today, is not asking too much of these companies. These same companies do 'mark-to-market' position accounting at the end of each trading day for internal reasons anyway. This is not asking much when the public trust is at stake. Thank you.

Mr. Sean Cota
Co-Owner & President, Cota & Cota, Inc.
Northeast Chair, Petroleum Marketers Association of America
President, New England Fuel Institute

Testimony before the
Committee on Homeland Security & Governmental Affairs
Permanent Subcommittee on Investigations

United States Senate
Washington, DC
June 25, 2007

Honorable Chairman Levin, Ranking Member Coleman and distinguished members of the committee, thank you for the invitation to testify before you today. I appreciate the opportunity to provide some insight on the way that excessive speculation and volatility on the energy commodity markets has impacted small business fuel dealers and the American energy consumer. I trust that my many years of experience in the industry will help shed light on this issue and assist you in your policy-making and oversight endeavors.

I currently serve the Petroleum Marketers Association of America (PMAA) as its Northeast Regional Chair. PMAA is a national federation of 45 states and regional associations representing some 8,000 independent fuel marketers that collectively account for approximately half of the gasoline and 80 percent of the heating oil sold in the United States.

I am also President of the New England Fuel Institute (NEFI), a 60-year-old regional trade association located just outside Boston, and as such, I am here representing well over 1,000 fuel dealers and related services companies located throughout Maine, New Hampshire, Vermont, Massachusetts, Connecticut and Rhode Island. NEFI member companies deliver 40 percent of the nation's home heating oil, and many also market bioheat, biodiesel, propane, kerosene, jet fuel, diesel fuel and gasoline.

I am Co-Owner and President of one of those companies, Cota &Cota, Inc. of Bellows Falls, Vermont. Cota & Cota is a third generation family-owned and operated home heating fuel provider in southern Vermont and western New Hampshire and has helped to keep New Englanders warm for over 60 years. Unlike larger energy companies, heating fuels dealers like me are mostly small, second and third generation family-run businesses. Also unlike larger energy companies, we deliver heating fuel *directly* to American homes and small businesses, and therefore have developed close relationships with our customers, their families, and our local communities.

Just to give you an idea of the size of heating fuel providers, the average heating fuel dealer has approximately 4,016 heating oil customers and delivers approximately 3.3 million gallons per year, and those selling propane average about 1,900 customers and 789,000 gallons per year. Most companies are small, many family owned, and most full service fuel companies average just over thirty employees.[1] In a joint NEFI-PMAA member survey of heating fuel providers earlier this year, excessive volatility and the need for greater transparency and accountability in the energy commodity markets ranked as the number one public policy concern for our member companies.

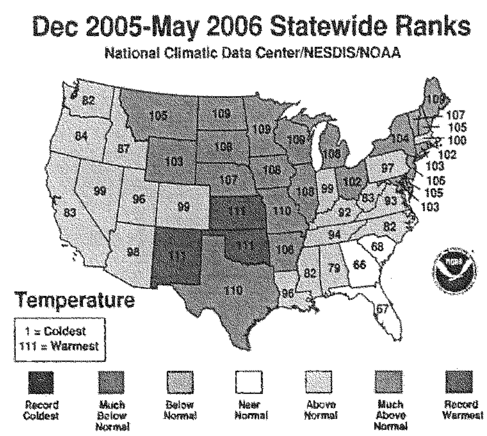
[1] Information courtesy the "2006 Oilheat Survey," Gray Gray & Gray,LLP, Westwood, MA, 2006.

Energy consumers are affected by excessive speculation and price volatility in the energy commodity markets in profound ways. When excessive speculation and volatility result in astronomical prices for gasoline and other motor vehicle fuels, Americans can simply choose not to fuel their car or truck. This may have devastating consequences for our nation's economy, businesses, and lifestyle. But when heating oil, natural gas and other heating fuels skyrocket to unprecedented levels, it places at risk the health and welfare of Americans families – especially low income and elderly households – who rely on these products to heat their homes and keep warm. Additionally, unexpected spikes in heating fuel prices can strain the credit lines of small business fuel dealers (and their lenders), and make it more difficult for them to buy the fuel they need, when they need it. According to NEFI estimates, market conditions have increased the credit requirements of heating oil dealers three-fold in the past ten years as the cost of fuel to the dealers has risen and consumer ability to pay within terms has declined.

We and our customers need our public officials, including those in Congress and on the Commodity Futures Trading Commission (CFTC), to look after us and take a stand against profiteering traders and hedge fund managers that seek to artificially inflate prices for their own personal gain. We deserve to be made aware – in fact we deserve to know - the truth behind what is driving these prices, especially pertinent market forces that might be contributing to volatility and price spikes.

In the winter of 2005-2006, much of the country, especially in the Northeast, the National Oceanic and Atmospheric Administration (NOAA) reported state average temperatures in the coldest regions of the nation running significantly higher than normal (figure 1, below).

Figure 1



Additionally, the Energy Information Administration repeatedly reported that national stocks of distillate fuel oil remained high as a result of the decreased demand due to the warm weather. However, despite the warm weather, decreased demand and high inventories of these fuels, heating oil prices remained high, with New York Harbor spot prices averaging $1.82 per gallon throughout the season.[2] In an effort to find the cause of this anomaly, the New England Fuel Institute commissioned a study to find the root cause of the market's strange behavior in light of these facts. However they ran up against a wall because of the inability to gather the data needed on over-the-counter trades, upon which a majority of price setting activities occur. Without this valuable information, the report remained incomplete.

[2] "New York Harbor No. 2 Heating Oil Spot Prices History," Department of Energy, Energy Information Administration.

The reason, we were surprised to find out, was that the principle regulatory body responsible for collecting data and policing the energy commodity markets, the CFTC, was not collecting the data due to a series of legislative and regulatory loopholes exempting over-the-counter exchanges and foreign boards of trade with U.S. destined contracts from federal oversight.[3] It is upon these "Dark Exchanges" that traders may be tempted to engage in dubious and manipulative trading practice, free from the reach of U.S. regulators.

Do not be mistaken. We do not oppose the free exchange of commodity futures on open, well regulated and transparent exchanges that are subject to the rule of law and accountability. In my own company, for example, I rely on these markets to hedge my product for the benefit of my consumers. In an effort to protect my customer against roller-coaster-like price volatility on the energy commodity exchanges, I engage in hedging activities.

My Grandparents began our company and serving the community with heating fuels in 1941. We have been offering fixed price programs to our customers for the past two decades. At first, we filled our fuel storage in the summertime and sold those gallons to our customers until we ran out of those gallons. However, my storage, although large by industry standards, is still very limited. We have available six days of January supply in storage capacity.

[3] These "legislative and regulatory loopholes" were outlined by this committee in last year's extensive and bipartisan report on excessive speculation in the energy commodity markets, "The Role of Market Speculation in Rising Oil and Gas Prices: A Need to Put the Cop Back on the Beat," June 27, 2006.

It quickly became apparent, due to customer demand, that we would need a different method of providing fixed price programs. It was at that time that we began to enter into New York Mercantile Exchange (NYMEX) based futures contracts with our suppliers so that we could continue to offer these programs to our customers. These independent suppliers of wholesale fuels would purchase NYMEX contracts for future delivery and, in turn, resell these contracts to me after a profit was added. This is the current system in which we continue to financially hedge heating fuels for our customers. This is typical for the industry.

Because heating demand is a bell curve where January is much colder than other months, customers buy a single annual contract from me while I, in turn, purchase ten NYMEX monthly contracts to match temperature and demand. Because my minimum hedge is ten contracts, or 420,000 gallons, with the typical customer purchasing 900 gallons per year, I hedge for approximately 450 customers at a time.

There have been significant changes in the behavior of the market since we first began purchasing NYMEX based contracts, the largest of which is market volatility. Traditionally, when we purchased futures contracts the coldest winter month, January, was more expensive than the warmest summer month of August. The rate of difference was usually something slightly larger than the interest cost of money. The past few years we have seen the difference between the summer months and the winter month, ("contango" or "carry") be as high as 23 cents per gallon.

Up until about four years ago, it would have been abnormal to have a daily move in the market of larger than one half (1/2) of a cent. Today it is typical to see five cent daily moves and moves as high as 12 cents. In recent years we have witnessed energy market moves of more than one dollar per gallon. We use to offer insurance programs as an alternative to fixed pricing for our customers. These "option-" based programs have had the highest increase in volatility. Four years ago we were able to purchase an "at the money," "put" and "call" at a reasonable cost for our customers. This transaction would enable customers to be protected if prices went up or down from the current price. Four years ago my cost on this type of transaction for a January contract purchased in the summer would have been between 4 and 6 cents per gallon. Today that same program would cost me in the area of 40 cents per gallon. We have seen it as high as 50 cents per gallon.

Currently, these fixed price programs make up 70 percent of my total sales, approximately 65 percent of which is heating oil, 30 percent is propane, and five percent home heating kerosene. In a business that makes profit in cents per gallon, these are some of the reasons why it is much more difficult to continue to provide these fixed price programs to our customers. Unlike many players in the market, who make these commodity investments for pure financial gain, we, as an industry, are hedging directly for consumers. Consumers are being injured by these huge financial players speculating on the market.

The annual heating oil industry volume for U.S. consumption is approximately 8 to 10 billion gallons per year. With ICE, NYMEX, other exchanges and derivative deals, I would not be surprised if the annual consumption is traded several times per day. Speculators are important in our market; without them we would not be able to hedge future demand for our consumers. But with huge hedge funds and other speculators entering into the market, sometimes it seems to have the effect of an "elephant jumping into the bathtub."

The collapse of the Amaranth natural gas positions in August of last year is but one piece of a broader problem. My company and my customers are no longer subject to the market fundamentals that drove price discovery functions on the commodity markets in years past. American consumers and small businesses should be put on alert that prices are now set by greed and fear and manipulation on energy markets that are completely free of government oversight and accountability. This is the new reality of the world we live in, and this is real "price gouging" on a global scale.

The Dark Exchanges are increasing in both number and reach. On June 1, 2007, the New York Mercantile Exchange opened a Dubai-based Mercantile Exchange and launched an Oman crude oil futures contract. The CFTC was quick to issue a "no-action letter" exempting the exchange from its oversight rules.[4] And just a few weeks ago, the Atlanta-based (but U.K.-regulated) InterContinental Exchange (ICE) purchased "ChemConnect," owner of the "Chalk Board," an electronic trading platform, thus virtually adding an array

[4] http://www.cftc.gov/files/tm/letters/07letters/tm07-06.pdf (Accessed June 20, 2007)

of vital commodities, including propane, butane, and ethanol to its portfolio overnight.[5] Members of the Committee will recall that ChemConnect is the platform upon which the CFTC last year accused BP of manipulating TET propane prices in the winter of 2004.[6] A potential increase in futures prices and volatility for propane, as a result of this transaction, is of concern to me because propane constitutes a significant portion of my business.

Congress and enforcement authorities need to act now and reign in excessive speculation and out of control profiteering on the energy commodity markets. They need to show their constituents that they are serious about shining light on the Dark Exchanges.

We recommend that Congress take the following actions...

(1) Encourage the CFTC to revisit its use of "no-action" letters, which virtually exempt foreign boards of trade that allow electronic U.S. access to their platforms.

(2) Investigate whether or not the Atlanta-based ICE intentionally established its operations in London to circumvent U.S. regulation.

(3) Require that large position data collection requirements for all U.S. destined contracts of commodities essential to the health and welfare of American citizens, including heating oil, propane, and natural gas.

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[5] "ICE Buys Commodity Unit of ChemConnect," by Jeremy Grant, MSNBC, June 4, 2007. <http://www.msnbc.msn.com/id/19033516> (Accessed June 20, 2007)

[6] "U.S. Commodity Futures Trading Commission Charges BP Products North America, Inc. with Cornering the Propane Market and Manipulating the Price of Propane," CFTC Press Release, Washington DC, June 28, 2006.

(4) Fully fund the CFTC to levels appropriate to upgrade infrastructure, data collecting capabilities and to meet necessary personnel requirements.

(5) Encourage the CFTC to be more vigilant in its enforcement of its own data collection requirements and hold the Dark Exchanges to the same rule of law that is expected of Designated Contract Markets such as the NYMEX and the Chicago Mercantile Exchange (CME).

(6) Continue to hold energy exchanges, financial firms, market traders and hedge fund managers to account; continue to conduct hearings and collect information in the years to come; and moreover, make every effort to educate your constituency – U.S. public – on the truth of this issue.

I thank you again, Mr. Chairman, for this opportunity to share my insight into this issue. I am open to any questions that you might have.

TESTIMONY OF DR. VINCENT KAMINSKI

Rice University, Jesse H. Jones Graduate School of Management
Before the Permanent Subcommittee on Investigations of the Committee on Homeland Security and Governmental Affairs

June 25, 2007

Mr. Chairman and members of the Subcommittee, my name is Vincent Kaminski and I work currently at Rice University in Houston where I teach courses related to energy markets, energy derivatives and energy risk management.

My testimony today will address some of the issues that you identified in your invitation letter to this hearing. Those issues deal with the organization of the US natural gas markets and the scope and consequences of excessive speculation I witnessed over the last few years in those markets. My opinions are based on 14 years of experience of working for energy trading operations, including merchant energy companies, an independent power producer, a hedge fund, and a very big financial institution. I have been also consulting recently for FERC, helping the staff to analyze market related issues.

The Importance of Efficient Energy Markets

The energy markets have undergone a fundamental transformation during the last 14 years I spent working in the merchant energy business. In 1992, the year in which I made a transition from a Wall Street fixed income business to energy trading, the markets for different energy commodities were relatively isolated, with limited linkages between different locations and physical products. Today, the landscape of the energy business is much different:

1. Energy markets are evolving towards a highly integrated, global system, with shocks propagating across different local markets and markets for specific physical commodities at a very high rate and through rapidly changing transmission channels. A proverbial "rain in Spain" may affect natural gas prices in the United States and in the North Atlantic Basin.
2. The energy markets represent a network of related physical, financial and credit markets, with very complex interactions and interdependencies.
3. Price formation in the physical markets cannot be analysed in isolation from the financial markets and vice versa. Many physical transactions are hedged with derivative instruments (swaps, options, and swaptions) and the prices established in the physical markets are used as benchmarks for settlement of derivative transactions.
4. The distinction between different types of trading platforms becomes increasingly fuzzy. Transactions that are structured as mirror images of the NYMEX contracts are traded actively on ICE and in the OTC markets. NYMEX Clearport platform, a great contribution made by this exchange to the US energy markets, allows the transformation of a variety of OTC transactions into functional equivalents of the futures contracts.
5. Techniques developed for the valuation of financial derivatives are increasingly used for the valuation of physical assets.
6. Growing volatility and levels of energy prices have resulted in increased public awareness of the importance of energy markets and will increase the level of scrutiny these markets receive in the media.
7. Energy markets are still relatively immature and are vulnerable to manipulation. The specific strategies may vary from market to market, but in recent years they have become more effective through the use of multiple trading platforms and leverage offered by derivative instruments.
8. The US regulatory infrastructure had been lagging for a long time behind the evolution of the energy markets, and its fragmented and balkanized design did not recognize the accelerating integration of the merchant energy industry and complex interactions between the physical and financial markets. The Energy Policy Act of 2005 went a long

way to address and fix this problem but some imperfections still exist. The most serious challenge is the existence of blind spots in data collection about the volumes of transactions executed on the different trading platforms (ICE and OTC) that makes early detection of potential market abuses more difficult.

In the coming years, the energy markets will be affected by growing demand pressures from the fast growing emerging economies and the necessity to access more costly supply alternatives. The upward pressures on prices will increase the importance of efficient and transparent energy markets as sources of information about the costs and relative scarcity of different energy commodities and benefits of alternative production technologies. Given growing integration of the markets, any distortions of the price formation process will propagate and reverberate across the entire system and will affect both investment and consumption decisions. Well functioning energy markets will become ever more critical not only to the welfare of the US citizens but also to the energy security of the United States. The integrity of energy markets deserves the same level of protection as the pipelines, refineries, ports and other components of the physical infrastructure.

The energy markets and the commodity markets in general, given their complexity and rapid transformation, are often vulnerable to market manipulation and the nature of manipulation changes over time as the markets evolve. Based on my experience in the industry I can identify several patterns of manipulation in the energy markets.

1. Exploitation of market power that exists through the control of physical assets and / or physical supply. The most obvious example is withholding physical supply from the market or denying access to storage and transportation facilities to the other market players. The critical aspect of this form of manipulation is that even a relatively small company can acquire local market power by exploiting rigidities and imperfections of the physical infrastructure. Any rational manipulator will try to influence the market outcome under the conditions of low inventories and supply disruptions, which in turn will offer a convenient excuse for any subsequent increase in prices.

2. Very aggressive rapid fire and large volume trading close to specific contract expiration time in certain markets which are used as benchmarks for settlement of derivative contracts which can be established in other parts of the market, subject to very limited and partial regulatory scrutiny. For example, a company may take a huge position in the OTC derivatives or ICE derivatives with a cash settlement based on a monthly natural gas index, and then engage in massive trading in the market which sets the index, minutes away from the end of trading, when the volume dries up. One of the most important markets, critical from the point of view of price discovery, is the NYMEX natural gas contract and I will make additional comments on this subject later.

3. Abuse of obsolete and balkanized regulatory infrastructure, which uses different levels of oversight and routine data collection for different segments of the markets. In the past, the design of the regulatory system relied on the false distinction between the physical and financial markets, which failed to recognize the growing integration of the energy markets and interactions and linkages between these two markets. The regulatory system could be compared to an arrangement under which state troopers are authorized to chase red cars and the local police are allowed to chase green cars. If a car is painted red on one side and green on the other, we would have had endless debates over jurisdiction. A red car with green polka dots would be probably allowed to speed at will. These flaws have been addressed to a large extent in the last few years but, to use my speed limits analogy one more time, many sections of the highways are still not patrolled on a regular basis. Some trading platforms are exempted from the same, or similar, reporting requirements as NYMEX, to the disadvantage of this exchange.

4. Submission of false price reports to the newsletters publishing price indices. This form of manipulation, at some point in time endemic in the energy markets, has been stopped due to the efforts of the FERC Market Oversight and Investigations unit.

5. Dissemination of rumors, false news, etc. This form of manipulation is as old as the markets and will never be fully eradicated.

Some market manipulators will combine different types of strategies. For example, they can take a position in options, exploiting the advantages of leverage inherent in these instruments, and then push the market, through aggressive trading or by spreading rumors, in the desired direction. A significant change in market prices starts a process that feeds on itself. The stop loss orders are triggered and the option sellers rebalance their hedge positions, engaging in the so-called delta trades. Such forms of manipulation are difficult to track down because they span multiple trading platforms.

NYMEX Trading

Ability to manipulate a market is a combination of the specific market design (market microstructure) and financial resources of an entity engaging in market manipulation. In the case of natural gas NYMEX contracts, the settlement price of an expiring contract is determined as a weighted average of the transaction prices taking place during the last 30 minutes of trading between 14:00:00 and 14:30:00 EST. Based on my experience and years of immersion in energy business, the trading on the last 30 minutes of trading on the expiration day is often characterized by a very high concentration of trading volumes on both the buy and sell side, with more concentration observed on the buy side. In other words, a few big players tend to dominate the markets. Most of the big players accounting for the significant percentage of volumes represent pure financial players who are unable to take their positions to physical delivery, either at Henry Hub, or at other locations (through ADPs or EFPs). In my view, many of the high volume players are transacting in their own proprietary accounts, and not on behalf of clients. A high degree of volume concentration on the buy side produces an upward pressure on prices which can be on some occasions offset by the countervailing pressure of highly concentrated selling.

The Consequences of Excessive Speculation

A market based exclusively on speculation is not viable in the long run. In the long run, a healthy and sustainable market requires active participation of the end-users and producers of energy. The market makers make money by selling financial instruments used for risk management and by assisting the physical players in management of the supply and distribution chains. Excessive speculation crowds out the natural hedgers from the market. This happens for a number of reasons but the most important factor is related to the practices used by the industry in management of credit risk. A hedging entity that incurs losses on its hedge positions (which may cover a period of a few years) has to post collateral equal to the entire unrealized hedging loss (or a significant part of it), the unrealized loss incurred across the entire time interval of the hedge and resulting from the changes across the entire spectrum of the forward prices. Of course, the hedging loss is offset (if the hedge is well designed) by the gains related to the hedged item. The problem is that the gains on the underlying position are realized one day at a time, and the collateral has to be posted for the entire time horizon of the hedge. The cash flow consequences of the hedges are amplified by increased price volatility and produce adverse consequences in the US energy industry. Sudden request for additional collateral when forward prices become distorted through market manipulation may result in a liquidity crisis and a forced liquidation of the hedges, which transforms unrealized losses into realized losses. As a result, many firms abandon hedging as a corporate policy or negotiate credit facilities with their financial institutions which extend automatic loans to allow their clients to meet collateral requirements. In either case, this is not an optimal outcome: the result is a financially weakened entity, either with a higher level of debt or no hedges.

What Can Be Done?

The efficiency and transparency of the US energy markets can be increased without sacrificing the risk taking culture and the spirit of innovation. The critical element of the market reform is, in my view, an improved access to information. Such initiatives may be initially opposed by many industry participants but in the long run the industry will benefit from them. Less opaque markets grow and flourish in the long run, as evidenced by the example of the NASDAQ market. My recommendations include:

1. Regular reports of large transactions executed in the OTC markets comparable to the weekly reports of the NYMEX futures positions compiled by the CFTC
2. Elimination of the "Enron exemption" that currently limits the extent of the CFTC oversight over important and growing segments of the energy markets
3. Regular reports of trading activity on the ICE exchange, available to the trading community

Testimony of

Michael Greenberger
Law School Professor
University of Maryland School of Law
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Before the U.S. Permanent Subcommittee on Investigations of the Committee on Homeland Security and Governmental Affairs

Regarding

Excessive Speculation in the Natural Gas Futures Market

Monday, June 25, 2007
11:00 a.m.
106 Dirksen Senate Office Building

My name is Michael Greenberger.

I want to thank the committee for inviting me to testify on the important issue that is the subject of today's hearings.

After nearly 24 years in private legal practice, I served as the Director of the Division of Trading and Markets ("T&M") at the Commodity Futures Trading Commission ("CFTC") from September 1997 to September 1999. In that capacity, I supervised approximately 135 CFTC personnel in CFTC offices in DC, New York, Chicago, and Minneapolis, including lawyers and accountants who were engaged in overseeing the Nation's futures exchanges. During my tenure at the CFTC, I worked extensively on regulatory issues concerning exchange traded energy derivatives, the legal status of over-the-counter ("OTC") derivatives, and the CFTC authorization of computerized trading of foreign exchange derivative products on computer terminals in the United States.

While at the CFTC, I also served on the Steering Committee of the President's Working Group on Financial Markets ("PWG"). In that capacity, I drafted, and oversaw the drafting of, portions of the April 1999 PWG Report entitled "Hedge Funds, Leverage, and the Lessons of Long-Term Capital Management," which recommended to Congress regulatory actions to be taken in the wake of the near collapse of the Long Term Capital Management ("LTCM") hedge fund, including Appendix C to that report which outlined the CFTC's role in responding to that near collapse. As a member of the International Organization of Securities Commissions' ("IOSCO") Hedge Fund Task Force, I also participated in the drafting of the November 1999 IOSCO Report of its Technical

Committee relating to the LTCM episode: "Hedge Funds and Other Highly Leveraged Institutions."

After a two year stint between 1999 and 2001 as the Principal Deputy Associate Attorney General in the U.S. Department of Justice, I began service as a Professor at the University of Maryland School of Law. At the law school, I have, *inter alia*, focused my attention on futures and OTC derivatives trading, including academic writing and speaking on these subjects. I have also served as a media commentator on the role of unregulated financial derivatives in recent major financial scandals, including the failure of Enron and the now infamous Western electricity market manipulation of 2001-2002 caused by market manipulation of Enron and others. Besides addressing these issues in a variety of commercial and financial regulatory law courses, I have designed and now teach a course entitled "Futures, Options, and Derivatives," in which the collapse of the hedge fund Amaranth Advisors LLC ("Amaranth") is featured as a case study of the way in which unregulated or poorly regulated futures and derivatives trading causes dysfunctions within those markets and within the U.S. economy as a whole, including causing the needlessly high prices which energy consumers now pay because of excessive speculation and illegal manipulation within unregulated OTC energy derivatives markets.

The Permanent Subcommittee on Investigations ("PSI") is to be congratulated on its excellent work in shedding light on these opaque markets and on the substantial economic damage that the lack of regulation has caused America's energy consumers. The bipartisan June 2006 PSI staff report, *The Role of Market Speculation in Rising Oil and Gas Prices: A Need to Put the Cop Back on the Beat*, [1] is the most complete analysis of the manner in which excessive speculation in the oil and gasoline futures and derivatives markets is, by the estimation of many prominent analysts, almost certainly adding approximately 20% to the prevailing price of crude oil, which was in June 2006 (and which is again today) hovering in the $70 per barrel range – a price that far exceeds the approximately $18 a barrel price as recently as January 2002.[2]

The authors of that June 2006 report were quick to recognize, however, that that it was based only on publicly available information and that the staff therefore had "gaps in available market data."[3] Those kinds of gaps were eliminated in the bipartisan report released by the PSI staff today: "*Excessive Speculation in the Natural Gas Market*."[4] Today's report is the result of accessing all encompassing data pertaining to the natural gas futures and derivatives markets, including the analysis of "millions of natural gas

[1] Permanent Subcommittee on Investigations of the Committee on Homeland Security and Governmental Affairs, THE ROLE OF MARKET SPECULATION IN RISING OIL AND GAS PRICES: A NEED TO PUT THE COP BACK ON THE BEAT (June 27, 2006) [hereinafter Permanent Subcomm. June 2006 Report].
[2] Jad Mouawad & Heather Timmon, *Trading Frenzy Adds to Jump in Price of Oil*, N.Y. TIMES, Apr. 29, 2006, at A1.
[3] Permanent Subcomm. June 2006 Report, *supra* note 1, at p. 6.
[4] Permanent Subcommittee on Investigations of the Committee on Homeland Security and Governmental Affairs, EXCESSIVE SPECULATION IN THE NATURAL GAS MARKET, (June 25, 2007) [hereinafter June 25 Report].

transactions from trading records" and "numerous interviews of natural gas market participants."[5]

Not only is today's report a thorough analysis of the destabilization in the natural gas markets caused by a lack of adequate regulation; it is the most complete and scholarly description of the way in which futures and derivatives markets operate as a whole and the critical role appropriate regulation plays in allowing those markets to operate consistent with basic free market principles.

The report makes clear that the failure to regulate these markets properly has distorted and sabotaged free market principles. It has cut those markets off from the moorings of economic fundamentals. It has turned them into nothing more than casinos serving neither those who need them to hedge for commercial purposes nor those who wish to speculate based on honest fundamentals.[6]

Today's report is so complete that it is difficult to find anything to add. It may be worth restating, however, its basic findings.

First, even though these markets were established principally to afford commercial hedging, the natural gas futures markets from sometime in 2004 through at least mid-September 2006 were overwhelmingly dominated by a single institution, which had no commercial stake in natural gas. The staff dramatically describes the dominance of a single hedge fund, Amaranth, as follows:

> "[T]he CFTC defines a 'large trader' . . . in the natural gas market as a trader who holds at least 200 contracts; . . . Amaranth held as many as 100,000 natural gas contracts in a single month, representing 1 trillion cubic feet of natural gas, or 5 % of the natural gas used in the entire United States in a year. At times Amaranth controlled 40% of all of the outstanding contracts on NYMEX [(one of the two major exchanges on which natural gas is traded in the U.S.)] for the winter season (October 2006 through March 2007), including as much as 75% of the outstanding contracts to deliver natural gas in November 2006."[7]

Second, Amaranth's dominance of this market caused extensive price volatility. As recently January 2002, the spot price of natural gas was approximately $3 MMBtu.[8] By late July, 2006, the futures price of the October 2006 natural gas contract was at a yearly high of $8.45 MMBtu. After Amaranth collapsed in September 2006, the futures

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[5] June 25 Report at p. 2.
[6] Today's report is also fully corroborated by a sophisticated economic study conducted during the 2006 natural gas futures market destabilization period. See AN ANALYSIS OF SPOT AND FUTURES PRICES FOR NATURAL GAS: THE ROLES OF ECONOMIC FUNDAMENTALS, MARKET STRUCTURE, SPECULATION, AND MANIPULATION (August 2006), *available at* http://www.pulp.tc/Nat_Legal_Policy_Center_Gas_Manip_August_29_2006.pdf.
[7] June 25 Report at p. 2.
[8] FEDERAL ENERGY REGULATORY COMMISSION (FERC), NATURAL GAS MARKET OVERVIEW (2007) [hereinafter MARKET OVERVIEW], *available at* www.ferc.gov ("Market Oversight" to "Natural Gas Markets, National Overview," then "Henry Hub Spot Prices").

price dropped "to just under $4.80 per MMBtu . . ., the lowest level for that contract in two and one-half years. . . The Electric Power Research Institute described this price collapse as 'stunning . . . one of the steepest declines ever.' . . . Throughout this period, the market fundamentals of supply and demand were largely unchanged."[9]

Third, the staff makes clear that "[t]he price of natural gas directly affects every segment of the U.S. economy, from individual households to small businesses to large industries. 'Natural gas is used in over sixty million homes. Additionally, natural gas is used in 78% of restaurants, 73% of lodging facilities, 51% of hospitals, 59% of offices, and 58% of retail buildings.'"[10]

Fourth, because of the heavy correlation between futures and spot prices (i.e., the prices actually paid for natural gas), "end users were forced to purchase natural gas at inflated prices," i.e., "they were forced to purchase contracts to deliver natural gas in the [2006] winter months at prices that were disproportionately high when compared to the plentiful supplies in the market."[11]

Fifth, as reflected in substantial commentary presented to the staff by end users of natural gas, including, *inter alia*, the Minnesota Municipal Utilities Association, the staff concluded that "'the lack of transparency in the over-the-counter (OTC) market for natural gas and the extreme price swings surrounding the fallout of Amaranth have, in their wake, left bona fide hedgers reluctant to participate in the markets for fear of locking in prices that may be artificial[ly high].'"[12]

Sixth, the Commodity Exchange Act ("CEA") bars excessive market speculation or the "sudden or unreasonable fluctuations or unwarranted changes" in the price of commodities traded on a regulated exchange.[13] However, the staff aptly concluded that there are two critical problems in enforcing that prohibition. First, the PSI staff found that the CFTC's enforcement of that prohibition has been very limited in its focus and "the CFTC and energy exchanges need to reinvigorate the CEA's prohibition against excessive speculation."[14] Second, even to the extent that the limited enforcement of the excessive speculation ban was applied to Amaranth in August 2006 by the NYMEX exchange, "Amaranth moved those [NYMEX] positions to [the Intercontinental Exchange or "ICE"].[15] Because of the infamous "Enron loophole"[16] enacted in December 2000 as part of the Commodity Futures Modernization Act, "ICE, [unlike NYMEX,] operates with no regulatory oversight, no obligation to ensure its products are traded in a fair and orderly manner, and no obligation to prevent excessive speculation."[17] "As a result, NYMEX's instructions to Amaranth did nothing to reduce Amaranth's size,

[9] June 25 Report at pp. 1-2 (internal citations omitted).
[10] *Id.* at 11 (internal citations omitted).
[11] *Id.* at 114.
[12] *Id.* (inside citations omitted).
[13] 7 U.S.C. §6a(a) (2006).
[14] June 25 Report at p. 120.
[15] *Id.* at p. 120.
[16] *Id.* at p. 119. *See* 7 U.S.C. §2(h)(3), (g) (2006).
[17] June 25 Report at p. 119.

but simply caused Amaranth's trading to move from a regulated market to an unregulated one."[18] Thus, "[a]lthough both NYMEX and ICE play an integral role in natural gas price formation, the two exchanges are subject to vastly different regulatory restrictions and government oversight under current federal law"[19] even though "NYMEX and ICE are functionally equivalent markets."[20]

Seventh, the bipartisan June 25, 2007 staff report recommends that: (1) the "Enron loophole" be abolished and that the similarly situated NYMEX and ICE exchanges both be subject to the protections afforded hedgers and other traders under the CEA; (2) the excessive speculation ban within the CEA be upgraded and be applied vigorously to both NYMEX and ICE; and (3) CFTC staffing and technological resources be upgraded to meaningfully apply the protections of the CEA.[21]

Again, the June 25, 2007 bipartisan report submitted by the PSI staff is thorough and complete. I would add only the following few comments:

First, it should be emphasized that the "Enron loophole" adopted in December 2000 – which allows energy futures trading facilities to be unregulated even though they are functionally equivalent to those exchanges which are regulated – was far from a carefully considered legislative measure. The loophole was added at the last minute to a 262 page bill, which was itself belatedly and quite suddenly attached in a lame duck session on the Senate floor by then Senate Finance Chairman Gramm to an 11,000 page consolidated appropriation bill for FY 2001.[22] Over the express and emphatic opposition of the President's Working Group on Financial Markets (including Fed Chairman Alan Greenspan, Treasury Secretary Lawrence Summers, and SEC Chairman Arthur Levitt),[23] the Enron loophole exempted OTC energy derivative markets (even though functionally equivalent to the regulated exchanges) from CFTC and all other federal regulation.[24] This exemption was called the "Enron loophole" because Enron (upon whose board, Wendy Gramm, Senator Gramm's wife, then sat) at that time was seeking to authorize retroactively its now defunct Enron Online energy trading facility, which began operation even in advance of the passage of the CFMA.[25] While this legislation retained CFTC authority to investigate fraud and manipulation (but not excessive speculation) in OTC energy markets,[26] the CFTC, as a practical matter, read this legislation as generally

[18] *Id.* at p. 3.
[19] *Id.* at p. 40.
[20] *Id.* at p. 3.
[21] *Id.* at pp. 119-132.
[22] *See* Sean Gonsalves, Opinion, *Enron Exemplifies 'Genius of Capitalism'*, SEATTLE POST-INTELLIGENCER, Jan. 22, 2002, at B5; PHILIP MCBRIDE JOHNSON & THOMAS LEE HAZEN, COMMODITIES REGULATION § 1.01, at 3 (3d ed. Supp. 2002).
[23] *See* PRESIDENT'S WORKING GROUP ON FINANCIAL MARKETS, OVER-THE-COUNTER DERIVATIVES MARKETS AND THE COMMODITY EXCHANGE ACT 16 (1999).
[24] Edward J. Rosen & Geoffrey B. and Goldman, *SWAPs & Other Derivatives in 2001*, *in* THE COMMODITY FUTURES MODERNIZATION ACT OF 2000, PLI article at 581-88 (PLI Corporate Law and Practice, Course Handbook Series No. B0-0168, 2001).
[25] *See* Jeff Gosmano, *Electronic Trading Could Change; Enron Situation Rolls Markets*, NATURAL GAS WEEK, Nov. 12, 2001, *available at* WLNR 8879099 (noting Enron Online's launch in November 1999).
[26] Rosen & Goldman, *supra* note 24, at 585.

constricting its authority to call for regular OTC energy reporting in the absence of pre-existing demonstrative evidence of fraud or manipulation. Needless to say, given the last minute nature of this amendment, there were no hearings, committee reports, or floor debates justifying this legislation or the reason it should have been passed over the contrary guidance of Messrs. Greenspan, Summers, and Levitt.

The "Enron loophole" almost immediately caused havoc in energy markets. It is now beyond doubt that manipulation of futures and derivatives contracts pursuant to that loophole dramatically increased the market price of electricity in the Western United States during 2001-2002. This resulted in needless widespread and rolling blackouts, along with a surge in corporate bankruptcies during that time period.[27] Enron and others, using such unregulated trading facilities as Enron Online, "gamed" the energy derivatives markets to drive up the cost of electricity in a manner that bore no relationship to underlying economic fundamentals.

Between 1999 and 2001, California's electricity bill rose by more than $40 billion.[28] Because the explanation at that time – as it often is today with the price of oil and natural gas – was that this sudden and highly disruptive price spike was caused by economic fundamentals, California and other Western states, as well as energy dependent public authorities and industries within those states, entered into long term supply contracts. These contract prices vastly exceeded what history would prove was the market's fundamental equilibrium: long term supply contracts costing $700 million during the electricity crisis would only cost $350 million by March 2002.[29]

Only after internal Enron memos that outlined manipulation strategies were uncovered in unrelated proceedings did the CFTC begin serious investigations into the then recently deregulated OTC energy derivatives market. The CFTC ultimately assessed hundreds of millions of dollars in damages and fines for what it found to be widespread, devastating, and costly futures and derivatives market manipulation in this otherwise unregulated market.[30]

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[27] *See* Press Release, Sen. Dianne Feinstein, Sens. Feinstein, Cantwell Press for Public Release of Enron Evidence, Citing Implications for Oil Markets (May 2, 2006), *available at* http://feinstein.senate.gov/06releases/r-enron-evidence.pdf.

[28] Peter Navarro & Michael Shames, *Aftershocks—And Essential Lessons—From the California Electricity Debacle*, 24 ELECTRICITY J. 2003, at 24.

[29] 148 CONG. REC. March 7, 2002, p. S1653 (daily ed. Mar. 7, 2002) (statement of Sen. Cantwell); Senators Propose Bill Regulating OTC Markets, ENERGY COMPASS, Feb. 14, 2002; *see also e.g.* Navarro *supra* note 28, at 24 ("[T]he state remains saddled with almost $40 billion of long-term contracts that are roughly twice the actual market value of the electricity and that will institutionalize high electricity rates in the state for years to come."). Similarly, the rising cost of natural gas in the summer of 2006 caused utility companies to hedge at inflated costs; these costs were then passed on to consumers. *See* text accompanying notes 8-9 *supra*.

[30] U.S. GENERAL ACCOUNTING OFFICE, REPORTS & TESTIMONY NO. GAO-04-420T, NATURAL GAS: FACTORS AFFECTING PRICES AND POTENTIAL IMPACTS ON CONSUMERS 21 (2006), *available at* http://www.gao.gov/new.items/d06420t.pdf.
http://www.bloomberg.com/apps/news?pid=20670001&refer=&sid=aHAgHb.3Gdzg.

In addition to malpractices in the Western United States electricity markets, last year's PSI staff report corroborated independent economic analysis demonstrating that excessive speculation on unregulated OTC energy trading facilities has caused (and almost certainly is causing) an estimated unnecessary 20% increase in the cost of crude oil.[31]

Finally, the overwhelming influence of Enron on these unregulated markets is evidenced by the June 25, 2007 staff report's finding that when Amaranth in 2002 "added energy trading to its slate of strategies" to boost its earnings, "it hired several former Enron traders to its staff."[32] Doubtless those former Enron traders were well educated in the school for scandal that constituted the Western United States electricity manipulation.

In short, there is every evidence that the hastily enacted and poorly examined Enron loophole has done nothing but add billions of dollars to prices charged the American consumers for such important everyday commodities as electricity, heating oil, natural gas, and gasoline. As the staff has recommended, the Enron loophole should be repealed.

Second, there is an additional chapter that might be added to this subcommittee's June 25, 2007 bipartisan staff report. As mentioned above, today's report notes that Amaranth drove October 2006 natural gas contract up to the 2006 high of $8.45 per MMBtu and then down to a $4.80 per MMBtu – a two and one half year low – upon that hedge fund's failure.[33] Yet, the spot price of natural gas now hovers around $7.00 per MMBtu. One might well ask about the reason for this increase. Again, market fundamentals have not changed. Of course, the staff investigation leading to today's exhaustive report stopped in October 2006 shortly after the Amaranth failure. It does not require a great leap of logic to wonder if that investigation had examined trading data well into 2007, one might have found that other large financial institutions with deep pockets have picked up Amaranth's "torch" and that the natural gas market is still being driven by excessive speculation – but on exempt or unregulated OTC markets. In the absence of regulation and in the presence of opaque markets, we are left to speculate why the price of natural gas has almost returned to the highs seen when Amaranth dominated these markets.

In this regard, and as the June 25, 2007 staff report points out, those who oppose further regulation in this area are quick to contend that there was no systemic risk associated with the Amaranth failure. As the staff report so rightly demonstrates,[34] however, this argument overlooks the billions of dollars American consumers (including industrial consumers) had to pay trying to lock in prices based on the "price discovery" function NYMEX and ICE were purportedly playing in the summer of 2006. Moreover, the contentment over the lack of systemic problems does not take into account that just as the collapsed Enron provided a template for Amaranth, a collapsed Amaranth may be

[31] *See supra* note 2 and accompanying text.
[32] June 25 Report at p. 57.
[33] *See supra* p. 3-4.
[34] June 25 Report at p. 21.

providing a template for one or more large financial institutions in today's natural gas markets. This complacency also overlooks those investors who were badly hurt by the Amaranth fiasco. The San Diego County Employees Retirement Association is suing Amaranth for over $150 million in lost retirement savings invested with the hedge fund.[35] Finally, and perhaps most importantly, it takes great optimism to conclude that repetition of these kinds of exorbitant losses incurred by Amaranth in just a few days in September 2006 will not, especially if several funds were to implode at the same time, cause systemic risk to the economy. It is now undisputed that the near failure of Long Term Capital Management, which lost less money than Amaranth, raised the prospect of systemic financial collapse.[36] Within the last few weeks, the Bank of Montreal (certainly not a commercial hedger in these markets) experienced "trading losses of between $313 million and $403 million as a result of natural gas trading strategies that went awry."[37] Policy makers have to ask themselves whether they are prepared to allow this kind of excessive speculation fueled in large part by borrowed funds continue to go unmonitored merely because Amaranth's failure did not cause the collapse of the American economy. No less a free marketeer than Alan Greenspan counseled against allowing this kind of opaque and unregulated energy futures trading which is the result of the Enron loophole.

Third, the bipartisan nature of the June 25, 2007 staff report is reflective of the widespread adverse impact the high price of natural gas has had on all sectors of the economy all over the Nation. In this regard, it should be remembered that on December 14, 2005, the then Republican-controlled House led by conservative Republican Congressman Sam Graves of Missouri, passed, at the behest of the farming community then suffering from all time record high natural gas prices, a version of the CFTC Reauthorization Act of 2005 (H.R. 4473), which included a Title II,[38] mandating an aggressive regulatory posture by the CFTC in overseeing "any contract market" engaged in the trading of natural gas futures and derivatives. At that time, the cost of natural gas had "float[ed] at a high near $14 MMBtu."[39] Even though the CFTC reauthorization has yet to make it through Congress, the spot price of natural gas dropped by roughly one third after Congressman Grave's December 2005 action and there was considerable analysis at that time that the mere threat of aggressive regulation by a Republican controlled House markets may have been responsible for that price decline.[40] Similarly, adoption of the recommendations of the staff report at issue will almost certainly cause a similar decline, because the markets will then be controlled by commercial interests rather than by excessive speculation.

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[35] SDCERA v. Maounis, No. 07-CV-2618 (S.D.N.Y., complaint filed March 29, 2007).
[36] U.S. GENERAL ACCOUNTING OFFICE, REPORTS & TESTIMONY NO. GAO/GGD-00-3, LONG-TERM CAPITAL MANAGEMENT: REGULATORS NEED TO FOCUS GREATER ATTENTION ON SYSTEMIC RISK (1999), *available at* http://www.gao.gov/archive/2000/gg00003.pdf.
[37] *U.S. CFTC Wants to Adopt New Market Rules*, HOUSTON CHRONICLE, June 22, 2007, *available at* http://www.chron.com/disp/story.mpl./ap/fn/4912831.html.
[38] 151 CONG. REC. H11554 (daily ed. Dec. 14, 2005).
[39] 151 CONG. REC. H11561 (daily ed. Dec. 14, 2005) (statement of Rep. Pombo).
[40] *See, e.g.*, AMERICAN PUBLIC POWER ASS'N, LONG TERM STRATEGIES ARE KEY IN ACHIEVING STABLE NATURAL GAS PRICES 6 (2006), *available at* http://www.appanet.org/files/PDFs/NaturalGasPriceOutlook306.pdf.

Fourth, the bipartisan June 25, 2007 staff report lays to rest another argument often advanced by CFTC commissioners, as well as banking and hedge fund speculators, when fighting the regulation of the OTC energy markets. They contend that it will be impossible for either the regulated exchanges or CFTC staff to make sense out of the flood of market data that would result from re-regulating those markets.[41] However, the subcommittee staff, which has far fewer resources than even the now depleted CFTC, has been able to digest and cogently explain a multi-year trading period that is now widely recognized as one of the most volatile in natural gas market history. They have done so with a coherent narrative aided by the creation of numerous highly instructive charts. They have included a helpful history of these markets, a complete description of the relevant exchanges and traders, and a full explanation of the relevant statute, rules, and regulations. They have presented a report that far exceeds the investigative materials that would have been needed by CFTC staff to commence an enforcement action in these circumstances. Moreover, if the PSI staff's recommendations were adopted, the exchanges, in their capacity as self regulatory institutions, could put a stop to excessive speculation with far less data than has been collected for the instant report. The report adduced today gives a global multi-year history of a volatile trading period. A regulated exchange or the CFTC itself could put a stop to excessive regulation with information collected over a period of days, as evidenced by the actions NYMEX took in August 2006 in its attempt to limit Amaranth's excessive speculation.[42]

Finally, and perhaps most importantly, I have one concern about what might be a mistaken impression left by the report that was doubtless unintended by its authors. One could very well be left with the impression after reading the June 25, 2007 report that the CFTC, as presently constituted, is fully supportive of receiving the new statutory authority that the authors' recommendations would provide it. However, it must be remembered that two successive Chairmen of the CFTC, Messrs. Newsome and Jeffery, as well as (and perhaps most especially) the intervening Acting Chair, Ms. Brown-Hruska, have strongly resisted undoing the Enron loophole. Moreover, Mr. Newsome and Ms. Hruska, and until recently Mr. Jeffery, have proudly pointed to reduced Commission staffing as a worthy dividend of the CFMA[43], i.e., of deregulating both the OTC markets and substantially reducing regulation of the established exchanges, which now adhere to governing principles rather than a rule-based regime.[44] One has every

[41] *CFTC Member Says Her Agency Can Provide Necessary Oversight of OTC Markets, Dismisses Claims About Excessive Market Speculation*, FOSTER ELECTRIC REP., Apr. 5, 2006, at 13.
[42] June 25 Report at p. 53.
[43] *See*, e.g., Peter A. McKay, *CFTC Chairman Opposes Plan to Broaden Regulators' Power*, WALL STREET JOURNAL, July 25, 2002 ("The futures industry's top government watchdog [, Chairman James E. Newsome,] said his agency has adequate authority and staff to regulate the nation's commodity markets, despite the Enron Corp. and Dynegy Inc. scandals. He warned against a proposal in Congress to broaden regulators' power.").
[44] PHILIP MCBRIDE JOHNSON & THOMAS LEE HAZEN, DERIVATIVES REGULATION § 1.18 [2], at 323 (2004) ("The CFMA decreased significantly the degree of market regulation over designated contract markets. Rather than affirmative day-to-day regulation that was imposed under the former regulatory regime, under the . . . CFMA, the [CFTC] is charged with an oversight role with respect to contract markets."). Indeed, the House regulatory measure concerning the natural gas futures markets, *see* text at n. 38 *supra*, was driven in considerable part because of widespread complaints that NYMEX's daily trading "limits" rules (as well as the CFTC's oversight of them) were deemed to be unusually weak and, according to many

reason to worry that the CFTC would welcome that part of today's report that increases staffing and funding while resisting the bipartisan staff recommendation pertaining to additional regulatory responsibility concerning the OTC energy markets and more rigorous enforcement of the excessive speculation bar.

I should add that I do not draw complete comfort from the proposed rule issued by the CFTC late this last Friday afternoon making it clear, as I read it, that NYMEX should now have the authority to request from a trader all of its "other positions" in particular commodity, including positions in "over-the-counter" markets.[45] Under this proposal, Amaranth would have had to report to NYMEX its ICE natural gas positions. However, this proposed rule does not require anyone trading exclusively on an exempt OTC trading facility to report positions, i.e., a trader executing contracts almost exclusively on ICE would not have to report positions to the CFTC. Thus, even if adopted as a permanent rule after completion of the proposed rule's comment period, this suggested regulation does not address the heart of the problems caused by the Enron loophole (regulating exempt exchanges); nor does it reinvigorate the CEA's bar against excessive speculation.

In this regard, it is important to note that the CFTC now only has three of its full complement of five commissioners. After Chairman Jeffery is confirmed to become Undersecretary Secretary of State for Economic, Energy, and Agricultural Affairs, only two commissioners will remain. One proposed commissioner is a former high ranking lobbying employed by the International Swaps and Derivatives Association ("ISDA"). On the long list of financial industry associations which strongly oppose regulation of the OTC energy markets, ISDA is undoubtedly, at the very least, first among equals. If the Senate truly wants to protect the American consumer and to reduce the prices those consumers are paying for gasoline, heating oil, natural gas, and crude oil, it must exercise with care its advice and consent role with regard to the three new commissioners. The CFTC is in desperate need of new commissioners who represent the consumer interest. Congress can pass all of the laws it wants to ensure that the energy derivatives markets are not overrun and made dysfunctional by excessive speculation. If the CFTC commissioners do not believe in those laws, the American consumer will continue to take a back (and highly uncomfortable) seat to the large banks, hedge funds, and other market speculators.

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traders' and end users' complaints, encouraged extraordinary volatility in NYMEX's natural gas futures contracts. *See, e.g.*, Alistair Barr, *Bill Limiting Natural Gas Speculation to be Introduced*, MARKETWATCH, (Apr. 13, 2005). Because the CFMA encourages the most passive CFTC oversight of the even the most regulated contract markets, and the December 14, 2005 House amendment as passed affirmatively addresses that problem insofar as natural gas trading is concerned.

[45] Maintenance of Books, Records and Reports by Traders, 72 Fed. Reg. 120 (proposed June 22, 2007).

Shane Lee

Senate Committee on Homeland Security and Governmental Affairs

Permanent Subcommittee on Investigations

"Excessive Speculation in the Natural Gas Market"

June 25, 2007

Chairman Levin, Ranking Member Coleman, thank you for the opportunity to appear here to discuss some of the issues that the Permanent Subcommittee on Investigations (the "Subcommittee") is considering in this hearing. I am appearing here voluntarily, and I have previously provided information to the Subcommittee Staff in connection with its investigation.

I have been trading energy products since 1998, including NYMEX strategies, locational trades (basis) and options, and I have experience as both a financial and physical trader. I began working as a trader at Amaranth Advisors (Calgary) ULC (collectively, with Amaranth Advisors LLC, "Amaranth") in April 2006. I was based in an office in Calgary, Canada, rather than at Amaranth's headquarters in Greenwich, Connecticut. Amaranth was a hedge fund that invested in a variety of investment strategies, including energy trades. In particular, in 2006, Amaranth's natural gas portfolio consisted of futures contracts, financially-settled swaps, and options positions based on various strategies. Amaranth never took or made delivery of physical natural gas. In September 2006, Amaranth suffered dramatic losses and is now out of business. I left Amaranth in September 2006.

I traded my own portfolio at Amaranth, consisting of locational markets (basis), NYMEX futures/swaps and options. Although I sometimes traded significant volume for my own portfolio at Amaranth, this represented only a small portion of Amaranth's overall natural gas portfolio. I was one of numerous members of the natural gas team at Amaranth. I did not meet any Amaranth investors and I did not have any authority over risk management. During the summer of 2006, from time to time, I also executed trades for Brian Hunter, another energy trader at Amaranth.

The Subcommittee has requested that I address particular matters to assist its understanding of the issues in the present investigation. In this Statement, I offer my views, from my perspective as a trader, on the following issues: (1) my experience as a natural gas trader in 2006; (2) whether Amaranth engaged in so-called "excessive speculation;" (3) whether Amaranth dominated the natural gas market; (4) whether NYMEX futures and ICE natural gas swaps are comparable products; (5) what actions Amaranth took in August 2006 in response to a directive from NYMEX to reduce its natural gas positions; and (6) whether new statutory or regulatory provisions are required for ICE.

In response to the Subcommittee's request for my experience trading in the natural gas markets in 2006, I offer the following observations. Price levels in 2006 were generally higher than earlier in the decade, as they were in most energy commodities, although natural gas prices had fallen from higher peak levels in 2005. In my view, the reasons for those higher price levels in 2006 were fundamental factors such as higher crude oil and crude oil products prices, coal prices, perceived hurricane risks (whether warranted or not) and general demand growth. Similarly, there were periods of extreme volatility in 2006, which appeared to have been caused by such fundamental factors as hurricane scares, extreme heat in late July and early August 2006 and the unusually warm winter of 2005. There were also periods in 2006 when prices went below prior levels because of historically high natural gas storage levels.

Was Amaranth engaged in "excessive speculation"? Because Amaranth was not a producer or user of natural gas, and did not engage in physical delivery, its trading was by definition "speculative." Amaranth's trading volume was large in comparison to my own prior trading experience at other companies. But I did not consider Amaranth's trading to be "excessive." The information available to market participants regarding the size of the overall market is incomplete and limited to "snapshots" of open interest on the NYMEX futures market. Because of that lack of information, I did not know exactly how Amaranth's positions compared to the size of the overall market. However, I understood that other market participants engaged in trading that was comparable in size to that of Amaranth.

Although I believe that, like any market participant, Amaranth's positions were reflected in short-term price changes, I do not believe that Amaranth's trading dominated the natural gas market. I also do not believe that Amaranth's trading on unregulated exchanges contributed to any price distortions. The exchanges in question are high-volume, extremely liquid markets, which are capable of absorbing transactions of the size of Amaranth's trading.

The Subcommittee has requested that I provide information on whether natural gas futures contracts on NYMEX and natural gas swaps on ICE are comparable products. Although futures contracts and swaps are similar, there are fundamental differences. The principal difference is that futures contracts require the holder to make or take physical delivery unless the position is exited before it expires, while a swap is financially settled and the holder is not required to make or take physical delivery. The markets for futures contracts and swaps behave similarly until the settlement period when they can diverge. During the settlement period, the price of a futures contract can be extremely volatile, and the price of the swap contract tends to decline in volatility during the settlement period as confidence increases in the settlement price.

I generally preferred swaps on ICE to futures contracts on NYMEX because swaps do not require physical delivery. Amaranth never took physical delivery. Other reasons for using ICE are the greater level of confidentiality (that is, the lower risk that one's position will be revealed to competing traders), the often greater liquidity and lower execution prices, and the differing margin requirements.

The Subcommittee has also requested that I address what actions Amaranth took in August 2006 in response to the directive from NYMEX to reduce its position in the natural gas futures market. It is my understanding that on August 29, 2006, the NYMEX contacted Amaranth's Compliance Director to request that Amaranth reduce its September 2006 natural gas position and not trade that position during the settlement period. Amaranth advised the energy trading desk, which in turn exited its positions in the September 2006 futures contract prior to the settlement period. I had little or no knowledge of, or involvement in, Amaranth's response to that directive.

In addition, the Subcommittee has requested my views on whether trading on NYMEX and ICE should be subject to the same position limits and treated the same. As a trader, I am familiar with position limits on NYMEX and abide by those limits. In general, limits can have costs and benefits to traders and other market participants. As a trader, rather than a policymaker, I do not have strong views on whether position limits should be imposed on other exchanges. I do think that any such position limits should be confined to products that are identical, from a risk perspective, to futures.

Finally, the Subcommittee has requested that I address whether ICE should be subject to the same statutory and regulatory provisions as the regulated exchanges. Implementing accountability and reporting requirements on ICE would impose administrative burdens on OTC participants and ICE. However, such measures would increase transparency, allow hedge funds and other traders to monitor the amount of open interest, and help deter any potentially improper conduct.

Once again, I thank the Subcommittee for the opportunity to appear and discuss some of the issues that it is considering.

Testimony of

Dr. James Newsome, CEO

New York Mercantile Exchange, Inc.

Senate Committee on Homeland Security and Governmental Affairs

Permanent Subcommittee on Investigations

Concerning

"Excessive Speculation in the Natural Gas Market"

July 9, 2007

Mr. Chairman and members of the Subcommittee, my name is Jim Newsome and I am the President and Chief Executive Officer of the New York Mercantile Exchange, Inc. (NYMEX or Exchange). NYMEX is the world's largest forum for trading and clearing physical-commodity based futures contracts, including energy and metals products. NYMEX has been in the business for more than 135 years and is a federally chartered marketplace, fully regulated by the Commodity Futures Trading Commission (CFTC) both as a "derivatives clearing organization" and as a "designated contract market" (DCM), which is the highest and most comprehensive level of regulatory oversight to which a derivatives trading facility may be subject under current law and regulation.

Prior to joining NYMEX, I served as a CFTC commissioner and, subsequently, from 2001 to 2004, as the Chairman. As Chairman, I led the CFTC's implementation of the Commodity Futures Modernization Act of 2000 (CFMA). The CFMA streamlined and modernized the regulatory structure of the derivatives industry and provided legal certainty for over-the-counter (OTC) swap transactions by creating new exclusions and exemptions from substantive CFTC regulation for bilateral transactions between institutions and/or high net-worth participants in financial derivatives and exempt commodity derivatives, such as energy and metals.

On behalf of the Exchange, its Board of Directors and shareholders, I thank you and the members of the Permanent Subcommittee on Investigations (PSI) for the opportunity to participate in today's hearing on the topic of "excessive speculation in the natural gas market," which was the title of the recently released PSI Report (Report).

OVERVIEW

NYMEX is fully regulated by the CFTC as a DCM, the highest level of regulation for a trading platform under the Commodity Exchange Act (CEA) and, as a DCM, NYMEX has an affirmative responsibility to act as a self-regulatory organization (SRO) and to monitor and to police activity in its own markets. The DCM statutory category encompassed existing futures exchanges and established a number of "Core Principles" for regulation of DCMs. The CFMA also permitted bilateral trading of energy on electronic platforms. Under CFTC rules, these electronic trading platforms are called "exempt commercial markets" (ECM) and are subject only to the CFTC's antifraud and anti-manipulation authority. Unlike the DCM, the ECM is completely unregulated by the CFTC and thus has no self-regulatory obligations to monitor its own markets.

A series of profound changes have occurred in the natural gas market since the passage of the CFMA, including technological advances in trading, such that the regulated DCM, NYMEX, and the Intercontinental Exchange (ICE), an unregulated ECM, have become highly linked trading venues. As a result of this phenomenon, which could not have been reasonably predicted only a few short years ago, the current statutory structure no longer works for certain markets now operating as "ECMs". Specifically, the regulatory disparity between the NYMEX and certain ECMs, particularly the ICE, which are functionally equivalent, has created serious challenges for the CFTC as well as for NYMEX in its capacity as an SRO.

From its vantage point as a DCM, NYMEX was able to observe first-hand how this regulatory disparity operated in the Amaranth situation. In August of 2006, NYMEX proactively took steps to maintain the integrity of its markets by ordering Amaranth to reduce its open positions in the Natural Gas futures contract. However, as detailed in the Report, Amaranth then sharply increased its positions on the unregulated and nontransparent ICE electronic trading platform. Because the ICE and NYMEX trading venues for natural gas are tightly linked and highly interactive with each other and essentially are components of a broader natural gas derivatives market, Amaranth's response to NYMEX's regulatory directive admittedly reduced its positions on NYMEX but did not reduce Amaranth's overall market risk nor the risk of Amaranth's guaranteeing clearing member. Furthermore, the integrity of NYMEX markets continued to be affected by and exposed to Amaranth's outsize positions in the natural gas market. Moreover, NYMEX had no efficient means to monitor Amaranth's positions on ICE or to take steps to have Amaranth reduce its participation in that trading venue.

We do not believe that the case has been made and, thus, we do not support any new regulation of derivatives transactions that are individually negotiated and executed off-exchange, i.e., not on a trading facility, between eligible participants in the traditional bilateral OTC market. On the other hand, we do believe that ECMs such as ICE that function more like a traditional exchange and that are linked to an established exchange should be subject to the full regulation of the CFTC. In addition, the continuing exchange-like aggregation and mutualization of risk at the clearinghouse level from trading on active ECMs such as ICE, where large positions are not monitored, raise concerns about spill-over or ripple implications for other clearing members and for various clearing organizations that share common clearing members. Consequently, legislative change may be necessary to address the real public interest concerns created by the current structure of the natural gas market and the potential for systemic financial risk from a market crisis involving significant activity occurring on the unregulated trading venue.

NYMEX'S ROLE AND RESPONSIBIILITES AS A DCM

NYMEX operates as a designated contract market. As the benchmark for energy prices around the world, trading on NYMEX is transparent, open and competitive and fully regulated by the CFTC. NYMEX does not trade in the market or otherwise hold any market positions in any of its listed contracts and, being price neutral, does not influence price movement. Instead, NYMEX provides trading forums that are structured as pure auction markets for traders to come together and to execute trades at competitively determined prices that best reflect what market participants think prices will be in the future, given today's information. Transactions can also be executed off-Exchange, i.e., in the traditional bilateral OTC arena, and submitted to NYMEX for clearing via the NYMEX ClearPort® Clearing website through procedures that will substitute or exchange a position in a regulated futures or options contract for the original OTC product.

Unlike securities markets, which serve an essential role in capital formation, organized derivatives venues such as NYMEX provide an important economic benefit to the public by serving two key functions: (1) competitive price discovery and (2) hedging by market participants. A CFTC glossary of standard industry terms informally defines hedging as follows:

> "[T]aking a position in a futures market opposite to a position held in the cash market to minimize the risk of financial loss from an adverse price change; or a purchase or sale of futures as a temporary substitute for a cash transaction that will occur later. One can hedge either a long cash market position (e.g., one owns the cash commodity) or a short cash market position (e.g., one plans on buying the cash commodity in the future)."

The public benefits of commodity markets, including increased market efficiencies, price discovery and risk management, are enjoyed by the full range of entities operating in the US economy, whether or not they trade directly in the futures markets. Everyone in our economy is a public beneficiary of vibrant, efficient commodity markets, from the U.S. Treasury, which saves substantially on its debt financing costs, to every food processor or farmer, every consumer and company that uses energy products for their daily transportation, heating and manufacturing needs, and anyone who relies on publicly available futures prices as an accurate benchmark.

As a result of the CFMA, which is discussed in further detail below, NYMEX as a DCM must comply with a number of broad, performance-based Core Principles applicable to DCMs that are fully subject to the CFTC's regulation and oversight. These include eight Core Principles that constitute initial designation criteria, as well as 18 other ongoing Core Principles for DCMs.

In general, as a DCM, NYMEX has an affirmative obligation to act as a self-regulatory organization (SRO). As such, NYMEX must police its own markets and maintain a program that establishes and enforces rules related to detecting and deterring abusive practices. Of particular note in relation to the Report is the series of Core Principles that pertain to markets and to market surveillance. Thus, a DCM can list for trading only those contracts that are not readily susceptible to manipulation. In addition, a DCM must monitor trading to prevent manipulation, price distortion and disruptions of the delivery or cash-settlement process. Furthermore, to reduce the potential threat of market manipulation or congestion, the DCM must adopt position limits or position accountability for a listed contract, where necessary or appropriate.

NYMEX has numerous surveillance tools that are used routinely to ensure fair and orderly trading on our markets. The principal tool that is used by DCMs to monitor trading for purposes of market integrity is the large trader reporting system. For energy contracts, the reportable position levels are distinct for each contract listed by the Exchange for trading. The levels are set by NYMEX and are specified by rule amendments that are submitted to the CFTC, typically following consultation and coordination with the CFTC staff.

For the physically delivered NYMEX natural gas futures contract (which is referenced by NYMEX by the commodity code NG), the reportable position level is 200 contracts. The NYMEX Market Surveillance staff routinely reviews price activity in both futures and cash markets, focusing, among other things, on whether the futures markets are converging with the spot physical market as the NYMEX contract nears expiration. Large trader data are reviewed daily to monitor customer positions in the market. On a daily basis, NYMEX collects the identities of all participants who maintain open positions that exceed set reporting levels as of the close of business the prior day. These data are used to identify position concentrations requiring further review and focus by Exchange staff. These data are also published in aggregate form for public display by the CFTC on its website in a weekly report referenced as the Commitments of Traders (COT) report. Historically at NYMEX, the open interest data included in large trader reports reflects approximately 80% of total open interest in the applicable contracts.

Any questionable market activity results in an inquiry or formal investigation. NYMEX closely monitors the natural gas futures market at all times in order to enforce orderly trading and liquidations. NYMEX staff additionally increases its market surveillance reviews during periods of heightened price volatility.

By rule, NYMEX also maintains and enforces limits on the size of positions that any one market participant may hold in a listed contract. These limits are set at a level that greatly restricts the opportunity to engage in possible manipulative activity on NYMEX. It is the tradition in futures markets that futures and options contracts generally are listed as a series of calendar contract months. For an expiring contract month in which trading is terminating, NYMEX uses a hard expiration position limit for NG of 1,000 contracts. For the NG futures contract, NYMEX maintains an any one month/all months combined position accountability level of 12,000 contracts. When position accountability levels are exceeded, Exchange staff conducts heightened review and inquiry, which may result in NYMEX staff directing the market participant to reduce its positions. Breaching the position limit can result in disciplinary action being taken by the Exchange. Finally, NYMEX also maintains a program that allows for certain market participants to apply for targeted exemptions from the position limits in place on expiring contracts. Such hedge exemptions are granted on a case-by-case basis following adequate demonstration of bona fide hedging activity involving the underlying physical cash commodity or involving related swap agreements.

Beyond the formal regulatory requirements, NYMEX staff works cooperatively and constructively with CFTC staff to assist them in carrying out their market surveillance responsibilities. NYMEX staff and CFTC staff regularly engage in the informal sharing of information about market developments. In addition to the Exchange's self-regulatory program, the CFTC conducts ongoing surveillance of NYMEX markets, including monitoring positions of large traders, deliverable supplies and contract expirations. The CFTC also conducts routine "rule enforcement" reviews of our self-regulatory programs. NYMEX consistently has been deemed by the CFTC to maintain adequate regulatory programs and oversight, in compliance with its self-regulatory obligations under the Commodity Exchange Act.

Moreover, NYMEX staff can and do make referrals to CFTC staff for possible investigation, such as with respect to activity by a market participant that is not a NYMEX member or member firm. Thus, for example, in an investigation of a non-member market participant, the Exchange would lack direct disciplinary jurisdiction and the consequent ability to issue effective sanctions (other than denial of future access to the trading of our products). In that situation, NYMEX staff could and has in the past turned over the work files and related information to CFTC staff. All such referrals are made on a strictly confidential basis. Similarly, CFTC staff on occasion makes confidential referrals to NYMEX staff as well.

Overall, there is a strong overlap between the CFTC's regulatory mission and NYMEX's SRO role in ensuring the integrity of trading in NYMEX's contracts. NYMEX itself has a strong historic and ongoing commitment to its SRO responsibilities. As noted in the Report, the NYMEX regulatory program has a current annual budget of approximately $6.2 million, which reflects a significant commitment of both staff and technology.

NATURAL GAS MARKET

Natural gas accounts for almost a quarter of United States energy consumption, and the NYMEX NG natural gas futures contract is widely used as a national benchmark price. The Report includes a detailed description of the nature of the natural gas market. While industrial use of natural gas has been increasing in recent years, the Report correctly notes that one of the major uses of natural gas continues to be for home heating, which adds a pronounced seasonal nature to the trading of this commodity. This fundamental shift in demand has led to increased volatility in natural gas prices in recent years.

Currently, NYMEX's core energy futures contracts trade simultaneously by open outcry on the Exchange floor during the day and electronically on the Chicago Mercantile Exchange (CME) Globex® electronic trading platform (pursuant to a services agreement between NYMEX and the CME). The core or flagship natural gas futures contract (NG) trades in units of 10,000 million British thermal units (mmBtu). As noted, NYMEX's futures and options contracts are listed and traded by calendar month. For energy contracts, trading terminates in the month preceding the month of actual delivery of the underlying commodity The NG price is based on delivery of the physical product at the Henry Hub in Louisiana, the nexus of 16 intra- and interstate natural gas pipeline systems that draw supplies from the region's prolific gas deposits. The pipelines serve markets throughout the U.S. East Coast, the Gulf Coast, the Midwest, and up to the Canadian border. An options contract and calendar spread options contracts provide additional risk management opportunities.

NYMEX also offers a financially settled version of the NG futures contract, which is referenced by NYMEX by the commodity code of NN. Furthermore, because of the volatility of natural gas prices, a vigorous basis market has developed in the pricing relationships between Henry Hub and other important natural gas market centers in the continental United States and Canada. The Exchange makes available for trading a series of basis futures contracts whose terms were modeled upon those of products trading in the traditional phone broker bilateral OTC venue and that are quoted as price differentials between approximately 30 natural gas pricing points and Henry Hub. The basis contracts are listed for trading in units of 2,500 mmBtu on the NYMEX ClearPort® electronic trading platform.

With regard to the volume of natural gas trading on NYMEX, in 2006, approximately 38.6 million futures and options contracts in the natural gas commodity were executed on and/or cleared by NYMEX. More recently, during the first quarter of 2007, 9.86 million futures and options contracts in the natural gas commodity were executed on and/or cleared by NYMEX.

With respect to the number and types of natural gas traders, aside from the daily large trader reports that are filed with the CFTC, the CFTC's weekly COT reports indicate, among other statistics, the number of traders reflected in that week's report. As a sample analysis, NYMEX staff reviewed the first weekly report issued by the CFTC for each month from July of 2005 through January 2007 and then calculated an average of that data. Based on that review, Exchange staff calculated that there were on average 208 "large traders" for natural gas in the sample of CFTC reports that were analyzed. As noted previously, the large trade data collected by NYMEX typically reflects approximately 80% of the open interest in a futures contract. Insofar as the types of traders in the market, while the COT generally categorizes open positions as either commercial or non-commercial, there is a broad range of participants that would include end users such as utilities, marketers, traders, integrated oil companies, market makers, hedge funds and individuals.

STATUTORY CONTEXT

In order to better understand the circumstances surrounding the demise of Amaranth, it may be useful first to establish the regulatory and market context that provided a backdrop to Amaranth's activities. For many years, the CFTC has had exclusive jurisdiction over the regulation of contracts for a commodity for future delivery, i.e., futures contracts. Moreover, a longstanding requirement was that futures contracts could only be traded on a futures exchange that was directly regulated by the CFTC. A contract deemed by the CFTC to be a futures contract that was not executed on a regulated futures exchange was viewed as an illegal off-exchange transaction and would be subject to CFTC enforcement action. Additionally, there was legal uncertainly concerning the execution of swaps, including energy swaps, on an electronic trading facility. During the 1990s, the OTC swap market began to increase substantially in size, and swap agreements began to be more standardized and strikingly similar to futures contracts. This transition created additional legal uncertainty around the trading of OTC swaps.

Because of the growing legal uncertainty regarding whether such products were or were not futures contracts, Congress directed the President's Working Group on Financial Markets (PWG) to conduct a study of OTC derivatives markets and to provide legislative recommendations to Congress. The PWG Report entitled "Over-the-Counter Derivatives Markets and the Commodity Exchange Act," was issued in 1999 and focused primarily on swap and other OTC derivatives transactions executed between eligible participants. Among other things, the PWG Report recommended exclusion from the CEA for swap transactions in financial products between eligible swap participants. However, the PWG Report explicitly noted that "[t]he exclusion should not extend to any swap agreement that involved a non-financial commodity with a finite supply." (Report of the PWG, "Over-the-Counter Derivatives Markets and the Commodity

Exchange Act" (November 1999) at p. 17.) The collective view at the CFTC at that time was that the jury was still out as to whether or not energy commodities were susceptible to manipulation and, therefore, energy commodities should not be excluded from the Act.

Thereafter, in December 2000, Congress enacted the CFMA. The CFMA provided greater legal certainty for derivatives executed in OTC markets, established a number of new statutory categories for trading facilities, and shifted away from a "one-size-fits-all" prescriptive approach to futures exchange regulation to a more flexible approach that included use of core principles for DCMs.

The CFMA also included new section 2(h) to the CEA; in particular, new subsections 2(h)(3)-(6), which exempted energy commodities from CFTC regulation and allowed the trading of energy swaps on an electronic trading platform. Under CFTC rules, these platforms are known as "Exempt Commercial Markets" (ECM). While transactions executed on an ECM generally are subject to anti-fraud and anti-manipulation authority, the ECM itself is essentially exempt from all substantive CFTC regulation and oversight. In addition, the ECM by statute has no affirmative requirements to engage in any self-regulatory activities to monitor its markets or otherwise seek to prevent any manner of market abuses. When the CFMA was adopted in 2000, there was a broad consensus in the industry, including the regulated commodity exchanges, for the various components of the CFMA.

Subsequent to the passage of the CFMA in late 2000, derivatives markets, especially natural gas derivatives markets, evolved in just a few short years to an extent and at a rate that would have been very difficult to predict in 2000. When the CFTC was in the midst of proposing and finalizing implementing regulations and interpretations for the CFMA in 2001, even shortly following the wake of the Enron meltdown in late 2001, the natural gas market continued to be largely focused upon open outcry trading executed on the regulated NYMEX trading venue. At that time, NYMEX offered electronic trading on an "after-hours" basis, which contributed only approximately 7-10% of overall trading volume at the Exchange. Electronic trading (of standardized products based upon NYMEX's natural gas contracts) was at best a modest proportion of the overall market. Moreover, it was more than six months following the Enron meltdown before the industry began to offer clearing services for OTC natural gas transactions.

But, in determining to compete with NYMEX, ICE not only copied all of the relevant product terms of NYMEX's core or flagship natural gas futures contract, but also misappropriated the NYMEX settlement price for daily and final settlement of its own contracts. ICE's misappropriation of NYMEX's intellectual property remains a matter of dispute in ongoing litigation between the two exchanges that is now under judicial appeal. However, as things stand today, natural gas market participants have the assurance that they can receive the benefits of obtaining NYMEX's settlement price, which is now the established industry pricing benchmark, by engaging in trading either on NYMEX or on ICE.

For some period of time following the launch of ICE as a market, ICE was the only trading platform that offered active electronic trading during daytime trading hours. In September of 2006, NYMEX began providing "side-by-side" trading of its products--listing products for trading simultaneously on the trading floor and on the electronic screen. Since that time, there has been active daytime electronic trading of natural gas on both NYMEX and ICE The share of electronic trading at NYMEX as a percentage of overall transaction volume has shifted dramatically to the extent that electronic trading now accounts for 80-85% of overall trading volume at the Exchange. The existence of daytime electronic trading on both NYMEX and ICE has fueled the growth of arbitrage trading between the two markets. Thus, for example, a number of market participants that specialize in arbitrage activity have established computer programs for electronic trading that automatically transmit orders to one market when there is an apparent price imbalance with the other market or where one market is perceived to offer a better price than the other market. As a result, there is now a relatively consistent and tight spread in the prices of the competing natural gas products. Hence, the two competing trading venues are now tightly linked and highly interactive and in essence are simply two components of a broader derivatives market. No one could have predicted in 2000, when the exemption was crafted for energy swaps, how this market would have evolved.

In addition to the misappropriation of NYMEX's settlement price, the ICE market now has a significant market share of natural gas trading, and a number of observers have suggested that most of the natural gas trading in the ICE Henry Hub swap is subsequently cleared by the London Clearing House, the clearing organization contracted by ICE to provide clearing services. Thus, there is now a concentration of market activity and positions occurring on the ICE market as well as the exchange-like concentration and mutualization of financial risk at the clearing house level from that activity.

At the time that the CFMA was being formulated in Congress, there may have been a notion that the public interest was not implicated by trading on markets such as ICE because larger market participants did not need a regulatory agency to protect them from trading with each other. Yet, what has become clear in the last several years is that the changing nature and role of ECM venues such as ICE do now trigger public interest concerns in several ways, including with respect to the multiple impacts on other trading venues that are regulated as well as through the exchange-like aggregation of financial risk.

The Report analyzes the extent to which trading on one venue of a product whose price is linked to the final settlement price of a NYMEX product contributes or influences the price of that NYMEX product. First, it is worth noting that the CFTC acknowledged in its recent proposed rule-making that there is "a close relationship among transactions conducted on reporting markets and non-reporting transactions. (72 Fed. Reg. 34, 413, at 34,414 (2007) (proposed June 22, 2007.) Second, it is also relevant to consider the recent statement issued on June 14, 2007 by the Department of Justice (DOJ) Antitrust Division announcing the closure of its review of the proposed acquisition by Chicago Mercantile Exchange Holdings Inc. of CBOT Holdings Inc. based upon the DOJ's determination that neither that acquisition nor the clearing agreement between the two exchanges was likely to reduce competition substantially. NYMEX believes that this announcement is based upon a tacit recognition by the Antitrust Division that, with regard to analysis of the relevant market, at a minimum, regulated futures trading and over-the-counter trading are simply components of a broader market (that also might be defined to include some cash market activity as well).

Because ICE price data are available only to market participants, NYMEX does not have the means to establish conclusively the extent to which trading of ICE natural gas swaps contributes to or influences or affects the price of the related natural gas contracts on NYMEX. However, what is clear is that, as a consequence of the extensive arbitrage activity between the two platforms and ICE's use of NYMEX's settlement price as well as other factors, the two natural gas trading venues are now tightly linked and highly interactive. These two trading venues serve the same economic functions and are now functionally equivalent to each other NYMEX staff has been advised that, during most of the trading cycle of a listed futures contract month, there is a range of perhaps only five to twelve ticks separating the competing NYMEX and ICE products. (The NYMEX NG contract has a minimum price fluctuation or trading tick of $.001, or .01 cents per mmBtu.) NYMEX staff has also been advised by market participants who trade on both markets that a rise (fall) in price on one trading venue will be followed almost immediately by a rise (fall) in price on the other trading venue. This may occur because prices rise first on ICE and then follow on NYMEX, or because prices rise first on NYMEX and then follow on ICE. These observations of real-world market activity support the conclusion that trading of ICE natural gas swaps do in fact contribute to, influence and affect the price of the related natural gas contracts on NYMEX.

Aside from a lawsuit brought by NYMEX against ICE for the use of NYMEX's settlement prices, which as noted is a matter that remains under appeal in a federal court of appeals, NYMEX does not otherwise have any other ongoing formal relationship with ICE. In particular, as ICE and NYMEX are in competition with each other, there are currently no arrangements in place, such as information-sharing, to address market integrity issues. As stated previously, NYMEX as a DCM does have affirmative self-regulatory obligations; ICE as an ECM has no such duties. Yet, from a markets perspective, the ICE and NYMEX trading venues for natural gas are tightly linked and highly interactive; trading activity and price movement on one venue can quickly affect and influence price movement on the other venue.

In connection with the Exchange's ongoing routine market surveillance programs and procedures that were described previously, NYMEX staff was aware of and monitored all open positions that Amaranth maintained in NYMEX trading venues, including the physically delivered NG natural gas futures contract. NYMEX conducted regular reviews of Amaranth's open positions in excess of position accountability levels prescribed in NYMEX Rule 9.26. NYMEX notes that various other contracts which are offered by NYMEX, such as American and European options on Natural Gas as well as various other futures contracts are aggregated into the Natural Gas Futures Contract (NG) for monitoring accountability levels on a futures equivalent basis. During the period in question of the Report, the NYMEX financially-settled Henry Hub Natural Gas futures contract (NN), was also aggregated into the Natural Gas Futures Contract (NG) for monitoring accountability levels on a "futures equivalent" basis, i.e., across several related NYMEX contracts. As such, Amaranth's positions at NYMEX, when taken on a futures equivalent basis, were of significantly less magnitude on a percentile basis than is the case when reviewing the NG contract in isolation on a "futures-only" basis. NYMEX staff did routine monitoring of back month positions, based upon the application of position accountability levels applied on a futures equivalent protocol, which is the current standard procedure for U.S. futures exchanges. In addition to conducting market surveillance on Amaranth's activities, NYMEX staff also conducted daily analytical "stress" tests of Amaranth's carrying clearing member.

As accurately represented in the Subcommittee's Report, NYMEX staff members directed Amaranth in early August 2006 to reduce its open positions in the first two nearby contract months based upon what they believed to be a significant concentration in NYMEX markets in Natural Gas (relying upon an NG "futures only" approach). NYMEX believes that such a directive was prudent and also was effective with respect to reducing positions carried on our platform. As previously stated, NYMEX maintains no information sharing agreement of any kind with ICE; the Exchange also observes that, during the period in question, the CFTC was not receiving any regular information from ICE as to positions on its platform. Thus, a shift of positions by Amaranth from NYMEX to ICE was undetectable both by NYMEX and the CFTC.

It is important to distinguish the activity of Amaranth, which had accumulated open positions to the extent that a trading facility with SRO duties would direct that such positions should be reduced, from the category of hedge funds as a class of market participant. NYMEX issued a study in March of 2005, which was an internal market data study of trading volume and open interest analyzing the participation of hedge funds (broadly defined) in two of the Exchange's largest futures markets during 2004. The study analyzed the influence of hedge fund participation on price volatility and included a statistical test for causality. The findings were that hedge fund participation as a class of market participant did not cause volatility and, in fact, appeared to dampen volatility. In the natural gas futures contract, hedge funds made up 9.05% of trading volume. As a percentage of open interest, hedge funds constituted 20.4% in the natural gas futures market. In general, the study found that hedge funds tended to hold positions significantly longer than other market participants, indicating that they can be a non-disruptive source of liquidity to the market. An update conducted by Exchange staff for the first nine months of 2006 found that while the percentage of volume contributed by hedge funds had increased (to 20.86%), the overall findings of the original study remained the same.

NYMEX is not supplied position data regarding other venues on a regular basis by either a market participant or another trading venue (for example ICE or other OTC platforms). However, NYMEX by rule has broad authority to request from time to time and to be supplied "information" with respect to a position in excess of the prescribed accountability levels. NYMEX did gather information regarding expiring contracts in the process of approving hedge exemptions subject to NYMEX Rule 9.26 for Amaranth where they represented offsetting exposure.

On February 16, 2007, in an effort to cooperate with the Federal Energy Regulatory Commission and following consultation with CFTC staff, NYMEX issued a compliance advisory in the form of a policy statement related to exemptions from position limits in NYMEX Natural Gas (NG) futures contracts NYMEX adopted this new policy on an interim basis in a good faith effort to carry out its self-regulatory responsibilities and to address on an individual exchange level the market reality demonstrated by Amaranth's trading on both regulated and unregulated markets. However, as detailed below, this experience has had an adverse impact on NYMEX's trading venues and is seemingly creating the result of shifting trading volume (during the critically important NG closing range period at NYMEX on the final day of trading) from our regulated trading venue to unregulated trading venues.

Pursuant to that advisory, NYMEX instituted new uniform verification procedures to document market participants' exposure justifying the use of an approved hedge exemption in the NG contract. These procedures apply to all market participants who carry positions above the standard expiration position limit of 1,000 contracts going into the final day of trading for the expiring contract. Specifically, prior to the market open of the last trading day of each expiration, NYMEX now requires all market participants with positions above the expiration position limit of 1,000 contracts to supply information on their complete trading "book" of all natural gas positions linked to the settlement price of the expiring NG contract. Positions in excess of 1,000 contracts must offset a demonstrated risk in the trading book, and the net exposure of the entire book must be no more than 1,000 contracts on the side of the market that could benefit by trading by that market participant during the closing range.

NYMEX has now experienced five expirations of a terminating contract month in the NG futures contract since this new compliance advisory went into effect. To date, only two market participants have participated in this advisory and supplied information to the Exchange on their complete trading book. By comparison, NYMEX staff has observed a number of instances where market participants have reduced their positions before the open of the final day of trading rather than share sensitive trading information about proprietary trading with Exchange staff. As a result, NYMEX has observed reduced trading volume on the final day of trading in an expiring contract month relative to the final day of trading for the same calendar contract month in the prior year. The average volume on the final day of trading for the March, April, May, June and July 2007 NG contracts was 30,400 versus 37,122 for the corresponding contract month in the prior year, or an 18% reduction

Even more significantly, the closing range volume for the 30-minute closing period on the final day of trading is sharply lower than for volume during the final day closing range for the same calendar contract month in the prior year. In most instances, the volume in the closing range is less than half of the volume in the closing range for the same calendar contract month in the prior year. The average closing range volume on the final day of trading for the March, April, May, June and July 2007 NG contracts was 14,048 versus 23,165 for the corresponding contract month in the prior year, or a 39% reduction.

Overall market volatility in the natural gas market is somewhat lower this spring and summer than from comparable periods a year ago. This lower volatility stems from a lack of price volatility in the underlying physical cash commodity and in our opinion not from our implementation of this advisory. That stated, the lower volumes seen during the recent 30-minute closing ranges on the final day of trading since the implementation of the new policy actually create the potential for even greater volatility in the event of any significant market move. Thus, the new interim policy implemented by NYMEX on a good-faith basis has not only led to reduced volume on NYMEX during the critical 30-minute closing range period, which presumably has shifted to the unregulated trading venues, but has also failed to solve the structural imbalances brought to light by Amaranth's trading. In addition, this policy could create new problems by diminishing the vitality of the natural gas industry's pricing benchmark. Consequently, NYMEX believes that legislative change may be necessary and appropriate.

RESPONSE TO REPORT RECOMMENDATIONS

Report Recommendation #1: Congress should eliminate the "Enron Loophole" that exempts electronic energy exchanges from regulatory oversights.

NYMEX understands the Report to be referring colloquially to Enron in proposing that the Exempt Commercial Market category be eliminated from the Commodity Exchange Act.

NYMEX agrees with the Subcommittee that developments have occurred in the natural gas market subsequent to the implementation of the CFMA that need to be taken into account. Furthermore, it is NYMEX's view that these profound changes in natural gas market structure provide clear support for legislative change. These developments include:

- the exchange-like aggregation of financial risk as a great majority of the Henry Hub natural gas swap transactions executed on ICE are submitted for clearing;
- the reality of a broader linked market that includes the regulated and the unregulated trading venues;
- the copying of product terms and the appropriation of settlement prices of a regulated futures product by an unregulated market;
- the contribution to or creation of price discovery for natural gas prices in the unregulated trading venues;
- the ripple or spillover effects of activity on the unregulated venue onto the regulated trading venue; and
- the growing concentration of natural gas trading activity on the unregulated trading facility.

NYMEX also believes that these changes in the natural gas market trigger a series of fundamental public policy and public interest concerns that necessitate appropriate regulation that reflects the current realities of natural gas trading. The proper legislative response is a judgment call for Congress to make. Where a market does manifest the characteristics listed above, NYMEX believes that regulation that is the same as or comparable to the level of regulation of a DCM would be appropriate. More specifically, NYMEX believes that triggering the public interest concerns noted above renders an electronic trading facility sufficiently comparable to a traditional organized exchange that CFTC oversight and regulation is appropriate. The specification of the triggers to be utilized and the extent of CFTC oversight would require follow-up discussion and review, and NYMEX is more than willing to work with policymakers and others to provide further detail to that approach. What is clear is that these public policy concerns necessitate routine mandated large trader reporting and position limits and position accountability requirements for ECMs that are highly linked to and functionally equivalent with regulated DCMs. Such ECMs also must be assigned SRO duties to police their own markets. NYMEX believes strongly that such regulations are necessary and appropriate and would not negatively impact the core price discovery and hedging functions provided by derivatives markets. To the extent that the CFTC concludes that its current authority over ECMs does not authorize the agency to impose such regulations, then legislative change may be necessary and appropriate.

Given the complexity of derivatives markets, it can be difficult to state with real precision when speculation may be deemed to be "excessive." Moreover, speculators do provide liquidity and other positive effects to derivatives markets. Consequently, NYMEX agrees with the view expressed in the Minority Staff opinion that it is not necessary to make a final determination about whether Amaranth's trading was excessively speculative in order to conclude that legislative change in the form of greater authority for the CFTC may be necessary and appropriate.

Recommendation #2: If given additional legal authority, the CFTC should monitor aggregate positions on NYME and ICE. The CFTC and exchanges should strengthen their monitoring and oversight to prevent excessive speculation for all of the months in which contracts are traded, not just for contracts near expiration.

Given NYMEX's conclusion that the NYMEX and ICE natural gas trading platforms essentially form a broader linked market, the Exchange believes that, as noted, if the CFTC believes that it does not currently have such authority, then the CFTC should be given additional legal authority and should use such authority to monitor aggregate positions on both ICE and NYMEX. Although the CFTC began to receive certain data from ICE commencing last fall through use of the CFTC's "special call" procedures, this process only commenced several months after the Amaranth meltdown had occurred, and thus long after any impact resulting from Amaranth's trading had been imposed on the natural gas market. Moreover, the CFTC recently commented in a proposed rule-making that its use of the special call procedure was intended and designed to be infrequent in nature (rather than a routine and standard component of market surveillance oversight).

From a historical perspective, the market participants who have apparently sought to engage in attempted manipulation or in excessive speculation have generally focused upon the first few listed contract months of a listed futures contract. From the standpoint of price causality, NYMEX's periodic analyses of trading in its trading venues, including for natural gas, support the conclusion that the front few months are the dominant causal force across the full "curve" of listed contract months. Thus, it has been general industry practice among U.S. futures exchange compliance staff (as well as the CFTC) to have focused market surveillance efforts upon these first few listed months, while not ignoring the back months.

In reflecting, though, upon the lessons learned from the Amaranth experience, NYMEX compliance staff has shifted additional monitoring and oversight to the back contract months of its listed contracts and to the spread positions for certain natural gas winter/summer positions In addition, NYMEX staff has increased its financial and market surveillance of hedge funds. NYMEX has placed all hedge funds with sizable positions on its daily staff "Watch List," which mandates that the carrying clearing members supply daily account information including margin requirements and flows across both its cleared regulated (NYMEX) and cleared non-regulated/non-segregated (e.g., ICE) trading venues. Finally, in the spring of 2006, NYMEX financial surveillance staff had initiated a new program of heightened review of the risk management tools and programs utilized by clearing members for whom NYMEX had audit obligations. NYMEX has continued with and has further expanded this financial integrity oversight program.

Recommendation #3: Congress should increase the CFTC budget and authorize CFTC user fees to help pay for the additional cost.

The Report stated that the CFTC's budget should be increased "to provide the staff and technology needed to monitor, integrate, and analyze real-time transactional data from all U.S. commodity exchanges, including NYMEX and ICE." NYMEX agrees with this assessment and supports an expanded budget for the CFTC so that it may properly carry out its regulatory mission.

However, the Report then went on to recommend that necessary funding "should be obtained from user fees imposed on commodity markets." NYMEX disagrees strongly with this recommendation. Previously, Congress has repeatedly rejected such a user or transaction tax as bad public policy. As NYMEX understands it, this user fee or transaction tax being recommended by the PSI would not be imposed on foreign boards of trade that listed competing products and that are currently offering direct electronic access to their markets to market participants based in the U.S.

Thus, the proposed tax runs directly counter to the high-level efforts by key policymakers to strengthen the global competitiveness of U.S markets. In a November 2006 speech on the competitiveness of U.S. capital markets, Treasury Secretary Hank Paulson stated that "competitive capital markets will pave the way for continued economic growth that benefits all Americans." In addition, a study of New York's financial services industry released by Senator Chuck Schumer and New York Mayor Michael Bloomberg warned that "to maintain our success in the long run, we must address a real and growing concern: in today's ultra-competitive global marketplace, more and more nations are challenging our position as the world's financial capital." Implementing a tax on transactions conducted on U.S. commodity markets would cause existing business to leave U.S. markets to avoid taxation. Equally as concerning, the tens of thousands of jobs that the industry provides in the United States may move or disappear as well.

U.S. futures exchanges such as NYMEX currently spend millions of dollars every year on internal self-regulatory programs. In addition, the U.S. futures regulatory system already assesses our customers a fee to provide for the self-regulation performed by the National Futures Association (NFA), a self-regulatory organization authorized by Congress. Taxing market participants twice is both burdensome and unfair. It could encourage major market participants to avoid trading on U.S. futures exchanges and instead shift trading overseas. Any such loss of market liquidity would harm hedgers and other U.S. businesses that look for the most cost-efficient venue to hedge the price risks they face every day. In addition, imposing this tax burden on U.S. market participants is particularly inappropriate given the public interests served by the U.S. futures markets, and the price discovery and dissemination benefits conferred by the exchange markets on many thousands of non-market participants.

The user tax recommended in the Report would also greatly increase the trading costs of market-makers who provide liquidity vital to U.S. exchange markets. Their profit margins are razor thin, yet they provide critical liquidity that makes U.S. exchange markets more efficient and cost-effective to all customers who use them to manage risk. These individuals and small businesses would be forced to bear the weight of the tax, without regard to their profitability.

CONCLUSION

A series of profound changes have occurred in the natural gas market since the passage of the CFMA, including technological advances in trading, such that the regulated DCM, NYMEX, and the Intercontinental Exchange, an unregulated ECM, have become highly linked trading venues. As a result of this phenomenon, which could not have been reasonably predicted only a few short years ago, the current statutory structure no longer works for certain markets now operating as ECMs. Specifically, the regulatory disparity between the NYMEX and certain ECMs, particularly the ICE, which are functionally equivalent to each other, has created serious challenges for the CFTC as well as for NYMEX in its capacity as an SRO.

We do not believe that the case has been made and, thus, we do not support any new regulation of derivatives transactions that are individually negotiated and executed off-exchange, i.e., not on a trading facility, between eligible participants in the traditional bilateral OTC market. On the other hand, we do believe that ECMs such as ICE that function more like a traditional exchange and that are linked to an established exchange should be subject to the full regulation of the CFTC. In addition, the continuing exchange-like aggregation and mutualization of risk at the clearinghouse level from trading on active ECMs such as ICE, where large positions are not monitored, raise concerns about spill-over or ripple implications for other clearing members and for various clearing organizations that share common clearing members. Consequently, legislative change may be necessary to address the real public interest concerns created by the current structure of the natural gas market and the potential for systemic financial risk from a market crisis involving significant activity occurring on the unregulated trading venue.

I thank you for the opportunity to share the viewpoint of the New York Mercantile Exchange with you today. I will be happy to answer any questions members of the Subcommittee may have.

TESTIMONY OF JEFFREY C. SPRECHER
CHAIRMAN AND CHIEF EXECUTIVE OFFICER,
INTERNCONTINENTALEXCHANGE, INC.
BEFORE THE SENATE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

JULY 9, 2007

Mr. Chairman, Senator Coleman, Subcommittee Members and Staff Members, my name is Jeff Sprecher and I am the Chairman and Chief Executive Officer of IntercontinentalExchange, Inc., or "ICE." We very much appreciate the opportunity to appear before you today to share with you our views on the regulation of the natural gas trading markets and the recent report of the Permanent Subcommittee on Investigations regarding the collapse of Amaranth and related events in the markets. ICE was pleased to cooperate with the Subcommittee and Staff in providing the voluminous trading data and other market information that the Staff requested in preparing the Report, and we commend the Subcommittee and Staff for the thoroughness and diligence they exhibited in the Report's preparation. It is our hope that the Report, together with the views of the various persons who have been invited to testify at these Hearings, will serve to enhance the integrity of the energy markets and assist Congress in better understanding how these markets serve the interests of the broader marketplace.

ICE operates a leading global commodity marketplace, comprising both futures and over-the-counter ("OTC") markets, across a variety of product classes, including agricultural and energy commodities, foreign exchange and equity indexes. ICE owns and operates two regulated futures exchanges -- ICE Futures, a London-based energy futures exchange overseen by the U.K. Financial Services Authority, and the Board of Trade of the City of New York, or "NYBOT," an agricultural commodity and financial futures exchange regulated by the Commodity Futures Trading Commission ("CFTC"). ICE's electronic marketplace for OTC energy contracts serves customers in Asia, Europe and the U.S. and is operated under the Commodity Exchange Act ("CEA") as a category of marketplace known as an "exempt commercial market," or ECM. As an ECM, these markets are subject to the jurisdiction of the CFTC and to regulations of the CFTC imposing recordkeeping, reporting and other requirements. In addition, and as I will discuss later, ICE has established a daily position reporting program to the CFTC in its cleared natural gas markets that we continue to enhance and support. ICE has always been and continues to be a strong proponent of open and competitive markets in energy commodities and related derivatives, and of regulatory oversight of those markets. As an operator of global futures and OTC markets and as a publicly-held company, we strive to ensure the utmost confidence in the integrity our markets and in the soundness of our business model. To that end, we have continuously worked with the CFTC and other regulatory agencies in the U.S. and abroad in order to ensure that they have access to all relevant information available to ICE regarding trading activity on our markets and we will continue to work with all relevant agencies in the future.

I want to take this opportunity to provide you with important background on the structure, operation and regulatory status of ICE and to share with you our thoughts on the regulation of the natural gas markets and the Permanent Subcommittee Report. I also want to clarify a number of misunderstandings and inaccuracies in the Report, which I will discuss in more detail later in my testimony. First, ICE does not operate -- and has never operated – pursuant to an "Enron Loophole" under the CEA. Enron Online, the electronic marketplace operated by Enron pursuant to a separate provision of the CEA that has nothing whatsoever to do with the operations of ICE. That provision was available to Enron because Enron Online was a "one-to-many" marketplace in which Enron was both a market participant and the market – parties traded with a single counterparty, Enron. In stark contrast, ICE offers a transparent "many to many" electronic marketplace, where buyers and sellers of OTC energy contracts can transact in a fair and efficient marketplace, where no distinction is made between one market participant and another, and where the best executable price is available to any participant in the market, no matter how large or small. It is simply erroneous and misleading to use the label "Enron Loophole" to characterize ICE as somehow being connected to the Enron debacle.

Second, there are a number of fundamental distinctions that need to be drawn between the OTC markets in general and ICE's market in particular, on the one hand, and the futures markets, on the other hand, including the distinction between ICE's cash-settled natural gas swaps and the physically settled natural gas futures contract traded on the New York Mercantile Exchange ("NYMEX"). An understanding of these distinctions is essential to any analysis of potential regulatory changes, particular the need for any position limits, which the CFTC itself has said are not necessary in the context of cash-settled contracts. Indeed, while the Report criticizes the absence of position limits on ICE natural gas swaps, it completely ignores the fact that NYMEX's cash-settled natural gas swap -- which is virtually identical to the ICE contract and which was also traded by Amaranth -- is also not subject to position limits. If there is to be a "level playing field," it should be between comparable contracts. Third, ICE is not an "unregulated" or "dark" market. As I will explain, while ICE is not required to register as a "designated contract market," or "DCM," it is subject to the oversight of the CFTC and to CFTC regulatory requirements, including reporting requirements. Fourth, under current law, the CFTC and NYMEX have (and had at the time of Amaranth's trading) the legal authority and ability to obtain any available information regarding trading by market participants on ICE, and as a result no additional legislation or regulation is needed to fill this perceived "gap" in the system. Finally, the ability of Amaranth to trade on ICE in no way "caused" its collapse, any more than its ability to trade on NYMEX did so.

ICE strongly supports several of the recommendations of the Permanent Subcommittee Report, particularly the proposed increase in the CFTC's budget and the enhancement of its access to trading information. We also support the advancement of regulatory certainty by eliminating the "Enron Loophole" although, as pointed out above, that provision has nothing to do with ICE. However, we do not believe that a complete overhaul of the current regulatory structure is either warranted or advisable. Moreover, any legislative or regulatory changes that are made need to reflect the nature of ICE and its markets and the significant differences between ICE and the many other venues for OTC trading that exist today.

ICE Operates its Over-the-Counter Platform as an ECM

Broadly, because OTC markets tend to be global in nature, most OTC markets are now conducted electronically across asset classes, including OTC markets for U.S interest rate instruments, foreign exchange and debt securities. ICE responded to the transparency and speed enjoyed in other OTC markets by establishing its many-to-many electronic marketplace for trading physical energy commodities and financially-settled over-the-counter derivatives, primarily swaps, on energy commodities. ICE in effect performs the same function as a "voice broker" in the OTC market, but does so through an electronic platform that provides full market transparency to market participants, timely market information, greater speed of trade execution, recordkeeping efficiency and a more reliable and complete audit trail with respect to orders entered, and transactions executed, on our platform than exists with respect to traditional, non-electronic OTC venues. The introduction and development of ICE's platform have promoted competition and innovation in the energy derivatives market, to the benefit of all market participants and consumers generally. The reliability of ICE's markets has also resulted in an increasing preference for electronic trading in these markets. Participants on ICE enter bids and offers electronically and are matched in accordance with an algorithm that executes transactions on the basis of time and price priority. Participants executing a transaction on our platform may settle the transaction in one of two ways – on a bilateral basis, settling the transaction directly between the two parties, or on a cleared basis through LCH.Clearnet using the services of a futures commission merchant that is a member of LCH.Clearnet. In addition to providing the clearing house with daily settlement prices, ICE is also responsible for maintaining data connectivity to the clearing house.

It is important to note that there are substantial differences between ICE's OTC market, other portions of the OTC market, and the NYMEX futures market, and that these differences necessarily inform and guide the appropriate level of oversight and regulation of our markets. First, ICE is only one of many global venues on which market participants can execute OTC trades. A significant portion of OTC trading in natural gas is executed through voice brokers or direct bilateral negotiation between market counterparties. Of the available forums, only ICE (and any other similarly-situated ECMs) is subject to CFTC jurisdiction and the CFTC's regulations, or to limitations on the nature of its participants. ICE also provides far greater transparency, efficiency and data reliability for the benefit of market participants and regulators alike than voice brokers or other OTC market mechanisms. Second, participants in the futures markets must either become members of the relevant exchange or trade through a futures commission merchant that is a member. In contrast, ICE's OTC market, by law, is a "principals only" market in which participants must have trades executed in their own names on the system, providing greater transparency with respect to trader-level transaction data due to the absence of a "middle man." Third, the OTC market offers a substantially wider range of products than the futures markets, including, for example, hundreds of derivatives contracts on natural gas and pricing against a large number of delivery points, of which there are approximately 100 in North America.

Fourth, ICE's natural gas swap contract is a financially-settled contract requiring one party to pay to the other a cash amount determined by reference to settlement prices in the NYMEX natural gas futures contract. The natural gas contracts traded on ICE do not, and cannot, result in the physical delivery or transfer of natural gas. Our natural gas contract constitutes an important commercial hedging vehicle and has served as an important complement to and a hedge for the NYMEX natural gas futures contract. However, our contract cannot affect physical delivery in the market and it therefore ultimately has limited ability to drive the pricing of natural gas, particularly as the relevant futures contract approaches delivery. An understanding of the differences between the NYMEX and ICE markets and contracts is critical to any determination of the appropriate regulation of these markets, as I will explain more fully later.

ICE operates its OTC platform as an "exempt commercial market," or "ECM," under the CEA. The ECM category was adopted as part of the Commodity Futures Modernization Act of 2000 ("CFMA"). The creation of the ECM category reflected Congress's recognition that "electronic voice brokers," such as ICE, occupy a middle ground between completely unregulated OTC brokers and market participants and fully regulated exchanges. Congress therefore sought to strike a balance between providing for oversight and regulation of these electronic markets, due to the more extensive participation in their markets by commercial and institutional entities, while still allowing them to function as OTC markets, which hold a vital place in commodity market structure, rather than as futures markets, which would alter their role as a hedging mechanism. The ECM category accomplished this objective. Pursuant to the CFMA, an electronic market can operate as an ECM if it limits its participants to "eligible commercial entities," or "ECEs." Transactions and participants on ECMs are fully subject to the antifraud and antimanipulation provisions of the CEA and the CFTC has jurisdiction over such transactions and participants.

As an ECM, ICE is itself subject to a certain level of regulation by the CFTC. In particular, ICE is required, pursuant to the CEA and CFTC regulations specifically addressed to ECMs, to:

- prepare and maintain for five years records of all transactions executed on its markets;
- report to the CFTC certain information regarding transactions in products that are subject to the CFTC's jurisdiction and that meet specified trading volume levels;

- report to the CFTC certain trader information on the execution of transactions in ICE's cleared natural gas market, pursuant to a special call for information from the CFTC;

- record and report to the CFTC complaints of alleged fraud or manipulative trading activity related to certain of ICE's products; and

- if it is determined by the CFTC that any of ICE's markets for products that are subject to CFTC jurisdiction serve a significant price discovery function (that is, they are a source for determining the best price available in the market for a particular contract at any given moment), publicly disseminate certain market and pricing information free of charge on a daily basis.

The information that ICE reports to the CFTC on a daily basis regarding natural gas contract positions for transactions executed on our platform is particularly instructive. This information is being provided pursuant to a special call from the CFTC for this data, which illustrates the CFTC's statutory and regulatory authority to obtain available information regarding transactions executed on ICE. It also illustrates ICE's commitment to ensuring that the CFTC has access to the information it needs, to the extent available to ICE, to conduct appropriate market surveillance or to take appropriate actions. ICE has worked extensively with the CFTC, and has expended substantial resources, to develop and provide position reporting information to the CFTC notwithstanding the fact that ICE does not have this information readily available due to the fact that, unlike NYMEX, it is not the party that actually clears such transactions (this is done by LCH.Clearnet). This information can be used by the CFTC alongside the information that NYMEX provides for a more comprehensive, but not complete, view of the market. The fact that ICE does not itself clear transactions executed on its platform, and does not control the clearing house through which transactions are cleared, means that there are certain limitations on the position information that ICE can provide in that positions can be moved within a clearing house. In addition, the fact that ICE represents only a small portion of the much larger OTC marketplace means that the CFTC's view will necessarily be incomplete. However, we will continue to work with the CFTC to enhance the nature and quality of the information that we provide and we are committed to furnishing any information needed by the CFTC that is available to ICE.

ICE Does Not Operate Under the "Enron Loophole" and is Not "Unregulated"

The Permanent Subcommittee Report refers repeatedly to the so-called "Enron Loophole" and claims that ICE operates under this "loophole" and is "unregulated." These characterizations are simply false and reflect a fundamental misunderstanding of ICE's regulatory status. The "Enron Loophole" is the term used to describe a provision of the CFMA that completely excused Enron from the CEA and the CFTC's jurisdiction in all respects in connection with its operation of "Enron Online," an electronic dealer network. The basis for this immunity was that Enron Online functioned as a "one-to-many" platform, with Enron serving as a party to every transaction executed on its system. Enron, as a trading entity, was the market with respect to Enron Online. As a result, under Section 1a(33) of the CEA, Enron was excluded from the definition of a "trading facility" and was therefore not subject to any provisions of the CEA at all. None of this is applicable to ICE. ICE is not eligible for the immunity under which Enron operated and has never claimed or sought to operate as such. Indeed, ICE fully supports the closing of the so-called "Enron Loophole" and endorses the Report's recommendations in this regard without reservation.

In contrast to Enron, ICE operates pursuant to Section 2(h)(3) of the CEA, which imposes a number of substantive requirements on ICE, and is subject to the CFTC's jurisdiction and to recordkeeping, reporting and other regulatory obligations. For this reason, it is also inaccurate to claim, as does the Report, that ICE is "unregulated." Enron clearly was "unregulated" pursuant to the "Enron Loophole" and was not subject to any provisions of the CEA or CFTC rules. Transactions on ICE, in contrast, are fully subject to the antifraud and antimanipulation provisions of the CEA, and ICE itself is subject to the CFTC's oversight authority and to recordkeeping and reporting requirements. It is of course accurate to state that ICE is not regulated in the same manner as designated contract markets, but this is largely due to the practicalities of the OTC market structure discussed herein, including the nature of the participants, the large number of products, the use of cleared and bilateral trading, various levels of product standardization, and the reliance on futures exchanges and third party index providers for settlement prices. The assertion that ICE is "unregulated," or is somehow comparable to Enron, however, is simply false and derisive -- if this assertion were true, it would clearly not engender the confidence in our markets required to attract and maintain our customers, the majority of which are commercial energy firms.

The CFTC and NYMEX Have Access to Information Regarding Trading on ICE

The Permanent Subcommittee Report further contends that the CFTC and NYMEX were unable to conduct proper surveillance of natural gas trading by Amaranth because they did not have access to and could not obtain information about Amaranth's trading on ICE. The contention that the CFTC and NYMEX could not obtain this information is not accurate.

As noted above, the CFTC has the authority to make special calls to ICE for any information that it requires, and the CFTC has in fact exercised this authority to require additional information from ICE both before and since the events described in the Report. In addition, the CFTC recently proposed amendments to its regulations clarifying its existing requirement that large traders on DCMs maintain books and records of their transactions and to make such books and records available to the CFTC. In proposing these amendments, the CFTC noted that "The Act [the CEA] provides ample authority to require keeping books and records and providing pertinent information with respect to non-reporting transactions [i.e., those not executed on a futures exchange]." 72 Fed. Reg. 34413 (June 22, 2007). It also pointed out that the CFTC previously interpreted its rules "to include position and transaction data for non-reporting transactions" and that it "has received such information in response to requests made pursuant to the Regulation." While the CFTC believed it appropriate to clarify the obligations of participants in the futures markets, therefore, it also made it clear that the CFTC currently has the power to obtain the information.

In a recent speech, subsequent to the Amaranth events but prior to the recent rule proposal, CFTC Commissioner Walter Lukken noted that

> ICE is prominent in the trading of natural gas swaps that are pegged to regulated NYMEX futures contracts. This competition has led to significant innovation over the last several years both in the OTC and regulated marketplaces. From a risk perspective, this competition raises the possibility that traders could take positions on one market in order to profit off positions on the other. To address this concern, the CFTC has recently utilized its authorit[y] to request information from ICE regarding trader position data for these pegged contracts on an ongoing basis similar to what we receive from large traders on regulated exchanges. This has allowed our surveillance staff a more comprehensive view of this marketplace. These tailored actions developed from risk considerations—primarily protecting the financial integrity of the *regulated* marketplace and the price discovery process for energy products.

Speech by Commissioner Walter Lukken, May 3, 2007.

As a self-regulatory organization, or "SRO," NYMEX similarly has the power under its rules to request information from its members regarding their trading on other markets, including ICE, and to compel its members to produce such information, in connection with assessing positions held in its portfolio. Specifically, even prior to the events related to Amaranth, NYMEX rules required its members to disclose to NYMEX, upon its request, their trading strategies, including those on other markets, in connection with positions exceeding NYMEX accountability levels. Moreover, if NYMEX believes that its current rules are inadequate to permit it to view members' positions on other markets, including ICE, it clearly has the power to amend its rules or adopt new rules to compel members to provide this information. To the extent that the CFTC and NYMEX did not have any necessary information regarding trading by Amaranth on ICE, it is inaccurate to suggest that they lacked such information because they had no authority or the ability to obtain it.

Position Limits or Accountability Requirements on ICE's Markets are Not Necessary and Are Inappropriate

The Permanent Subcommittee Report concludes that Amaranth was motivated and able to circumvent regulatory constraints by trading on ICE in part because ICE participants are not subject to position limits or position accountability rules. This assertion again reflects a misunderstanding of ICE's markets, the regulation of ICE and the distinctions between ICE and the futures markets. First, as noted previously, ICE currently provides the CFTC with reports of all transactions executed by participants in its Henry Hub cleared natural gas swaps, pursuant to a special call from the CFTC issued after the Amaranth's trading losses. Because ICE is a principals-only market, this information is provided at the trader level and therefore gives the CFTC information on the activity of participants in our markets and facilitates the ability of the CFTC to take appropriate action in connection with potentially problematic or illegal conduct. Second, ICE's natural gas swap is a cash-settled contract, with settlement priced *against* the physical NYMEX natural gas futures contract. The CFTC itself has acknowledged that there is less of a need for market surveillance in connection with cash settled contracts. Specifically, the CFTC has stated that "[t]he size of a trader's position at the expiration of a *cash-settled* futures contract cannot affect the price of that contract because the trader cannot demand or make delivery of the underlying commodity. The surveillance emphasis in cash-settled contracts, therefore, focuses on the integrity of the cash price series used to settle the futures contract." (CFTC Website, www.cftc.gov/opa/backgrounder/opasurveill.htm; emphasis added.) For this reason, the ICE cash-settled swap -- *like the NYMEX cash-settled swap* -- is not subject to position limits.

As previously noted, NYMEX offers -- and Amaranth traded -- a cash-settled natural gas swap, through its "Clearport" facility. The Report acknowledges this, but ignores the fact that, because the NYMEX swap is cash-settled, there are no position limits on this contract, which is subject only to position accountability. As an article in "The Desk" recently reported, "NYMEX puts limits on NG [the natural gas futures contract] but not NN [the cash-settled natural gas swap]. NN has no limits. The [Permanent Subcommittee] Report never mentions this. Yet for some reason, financial contracts on ICE should be limited. Where is the logic there? NYMEX lifted the NN limits earlier in the year and clamped down on NG, which is the true pricing mechanism. NN reporting is still there but not the limits. It was a brilliant and appropriate maneuver." The Desk, June 29, 2007. We believe that there are compelling reasons for different treatment of the NYMEX natural gas futures contract and ICE's cash-settled swap; there is no clear reason whatsoever to treat the ICE contract differently from NYMEX's identical cash-settled swap, and yet that is what the Report advocates. If Congress seeks to implement a "level playing field," it should be between substantively similar contracts and, if ICE's natural gas swap is to be compared to any other product, it should be the NYMEX natural gas swap and all other OTC swaps offered by voice brokers, not the NYMEX futures contract. Otherwise, the impact would be commercially- oriented rulemaking that codifies preference for one venue despite identical products and reporting structures. In any event, the CFTC has ample authority under current law to require ICE to obtain or provide to the CFTC additional information regarding its participants' trading activities if the CFTC believes such action to be necessary or appropriate.

Third, we note that NYMEX (not the CFTC) imposes *position limits* on its physical natural gas futures contract <u>only during the final three days of trading</u> in its natural gas futures contract and, at all other times, requires only accountability reports from certain participants. Moreover, as the Permanent Subcommittee Report itself points out, over the course of several months NYMEX took no action as Amaranth consistently exceeded its accountability levels; in fact, NYMEX increased the limits applicable to Amaranth, apparently based solely on Amaranth's unsubstantiated requests and without seeking information about Amaranth's trading on ICE or other markets, despite its ability to request and obtain such information from market participants.

The balance created under the CFMA was designed to allow ECMs to function effectively in the OTC market while providing the CFTC with ample authority to oversee their activities and trading by their participants. ECMs like ICE operate in an environment that is qualitatively distinct in a number of fundamental respects from that of the futures markets, despite the surface similarities. Congress and the CFTC recognized these distinctions and have sought to create a regulatory environment that allows OTC markets to perform their important role in the markets while still ensuring market integrity and the protection of participants, as well as using technology, transparency and innovation to promote the advancement of these goals. The judgments made by Congress and the CFTC are fair, appropriate and effective and have promoted competition and transparency in the OTC markets and in the broader derivative markets as well. Indeed, the development of markets, such as ICE, has benefited users of the energy markets by tightening market spreads centralizing liquidity and attracting participants by bringing more transparency to the markets. This evolution has also forced member-dominated exchanges, such as NYMEX, to overcome their traditional hostility to electronic trading and preference for floor-based markets to provide a more efficient, accessible and transparent means of trading to end users of the markets. As Senator Coleman noted in his statement in the Hearings on the Report, "If we extend CFTC oversight and regulation to electronic, over-the-counter exchanges, we must avoid unintended consequences. These exchanges have brought vital liquidity and increased transparency to our energy markets. Therefore, we cannot create incentives for traders to shift their business from over-the-counter electronic exchanges like ICE, to far less transparent and unregulated markets."

The Markets and Regulatory System Effectively Managed the Collapse of Amaranth

It is of course an unwelcome event when any market participant suffers losses of any size and certainly losses of the magnitude sustained by Amaranth. That is true even when, as in this case, the participants absorbing those losses were institutions or sophisticated investors. To the extent that other market users or consumers incurred losses or higher costs as a result of Amaranth's losses, which we do not believe to be the case, that is obviously regrettable. However, it is not the responsibility of Congress or the regulators to protect market participants against fundamentals, poor decisions or major losses. Their role is to ensure that the markets are able to function properly, free of abuses such as manipulation and fraud, and that all market participants are treated fairly. Despite the collapse of Amaranth, the fact is that the markets and regulatory system did their job, neither the price nor supply of natural gas experienced any significant impact, and the effects of Amaranth's collapse were largely contained to a discrete time period and, unlike other hedge fund issues, did not lead to a bail out or market contagion.

As Commission Lukken noted in his recent speech, cited above, "[d]espite the stress to the system incurred by Amaranth's falter, the CFTC's regulatory safeguards – as well as those of the exchanges, clearinghouses and intermediaries – worked as intended and the impact of this failure did not spread systemically beyond the firms involved." The Federal Energy Regulatory Commission ("FERC") as well noted, in the aftermath of the Amaranth collapse, that "despite Amaranth's loss and subsequent sale of its natural gas positions, activity in the futures market related to this time period has remained fairly stable at record levels, not decrease [sic]. To some degree, that level of interest may be seasonal. Still despite a spectacular failure by an active participant in financial gas markets, winter positions remain significant." FERC Report, 2006-07 Natural Gas Summary, http://www.ferc.gov/EventCalendar/Files/20061019110945-A-3-talking.pdf. While, as I will discuss, we support enhancements to the current oversight of the markets, these events simply do not warrant any wholesale changes to the level or nature of regulation.

ICE Supports Many of the Report's Recommendations

Notwithstanding the issues raised above, we believe that the Permanent Subcommittee Report will result in further enhancements to the current regulatory structure and we strongly support a number of its recommendations. First, we share the Subcommittee's view that the funding of the CFTC should be increased and its staffing and resources significantly expanded. The CFTC is obviously a critical component in the system of market controls and oversight and its role is critical in ensuring the continued integrity of all markets within its jurisdiction. With the growth of these markets and the introduction of new types of market participants, it is essential that the CFTC have the tools it needs to oversee the markets and to perform its vital functions. Second, we support the closing of the "Enron Loophole." While ICE does not operate under this provision, and, to our knowledge, it is not currently being relied upon by other market participants, it creates an unnecessary opportunity for dealers to operate OTC markets completely outside of the CFTC's regulatory jurisdiction. There is no reason why all electronic platforms, including single-dealer platforms, should not be subject to the same requirements as ECMs. Finally, we fully endorse enhancements to the quality and quantity of information currently available to the CFTC and, in particular, its ability to integrate data from ICE and NYMEX.

We understand the surface appeal of the so-called "level playing field" argument for treating and regulating ICE and NYMEX's futures market similarly. However, these markets are fundamentally different in significant respects, and any regulatory approach must take those differences into account. Also, this argument ignores the much larger OTC market outside of both ICE and NYMEX. Indeed, as we have noted, if there is a comparison between ICE and NYMEX products to be made, it is the comparison between ICE's OTC market and NYMEX's cash-settled swap, not its futures market. While we support the maintenance of a "level playing field," we do not believe that this can or should result in regulating cash-settled OTC contracts in the same manner as physically-settled futures contracts because they are fundamentally different products.

Thank you for the opportunity to share our views with you on these important issues. We once again commend the Subcommittee and its Staff on their excellent work in this area. I would be happy to answer any questions you may have.

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Testimony

Written Testimony of
Acting Chairman Walter Lukken and Commissioner Michael Dunn
Commodity Futures Trading Commission
Before the Permanent Subcommittee on Investigations
Committee on Homeland Security and Governmental Affairs
United States Senate
July 9, 2007

Thank you, Mr. Chairman and members of the Subcommittee. On behalf of the Commodity Futures Trading Commission (CFTC or Commission), we appreciate the opportunity to discuss the CFTC, our role with respect to the futures markets, our view of the markets as the government regulator charged with overseeing them and your report's conclusions.

CFTC Mission

The CFTC's mission is two-fold: to protect the public and market users from manipulation, fraud, and abusive practices; and to promote open, competitive and financially sound markets for commodity futures and options.

Congress created the CFTC in 1974 as an independent agency with the mandate to regulate commodity futures markets, and later option markets, in the United States. To do this, the Commission employs a highly-skilled and dedicated staff who work within three major programs – Market Oversight, Clearing and Intermediary Oversight, and Enforcement. These divisions have distinct and separate charges and standards to meet, while working in conjunction to ensure market integrity and economic opportunity. The three major Commission programs are complemented by other offices, including the Office of the Chief Economist, Office of the General Counsel, Office of International Affairs and Office of Proceedings. The Chairman and Commissioners' offices provide agency direction, and stewardship over CFTC's human capital, financial management, and information technology resources. Given the Committee's interest in our exchange oversight operations, we'll begin by describing that function, and provide additional background on the Commission's other main operating divisions. I will address the Committee's questions and concerns relating to "excessive speculation" and oversight of exempt commercial markets, and conclude our remarks with comments on Amaranth and certain budgetary concerns relating to the Commission.

CFTC Division of Market Oversight

The Commodity Exchange Act (CEA or Act) provides that the Commission has exclusive jurisdiction with respect to accounts, agreements, and transactions involving commodity futures and options contracts that are required to be traded or executed on a designated contract market, also known as a "DCM" or an exchange. One of the purposes of the CEA is "to serve the public interests . . . through a system of effective self-regulation of trading facilities . . . under the oversight of the Commission."[1] DCMs are regulated entities that are self-regulatory organizations (SROs) subject to comprehensive oversight by the CFTC. DCMs can list for trading any type of contract, they can permit intermediation, and all types of traders (including retail traders) are permitted to participate in their markets. The CFTC's Division of Market Oversight (DMO) is responsible for monitoring and evaluating a DCM's operations and it conducts surveillance of all activity on DCMs, as described below.

DCMs must comply with a number of designation criteria and core principles as a condition for initial CFTC approval and continuing operation. Once operational, DCMs, as SROs, must establish and devote resources toward an effective oversight program, which includes surveillance of all activity on their markets to detect and deter manipulation and trading abuses. That responsibility includes, among other things, ensuring that listed contracts are not readily susceptible to manipulation, addressing conflict of interest situations, ensuring fair trading, providing for the financial integrity of contracts, utilizing effective rules to deal with market emergencies, and complying with comprehensive reporting and recordkeeping requirements. DMO staff review all exchange new product and rule filings to ensure that they comply with the core principles set forth in the Act and the Commission's regulatory requirements.

DMO's market surveillance mission regarding DCM activity is to ensure market integrity and customer protection in the futures markets. Traders establishing positions on DCMs are subject to reporting requirements so that DMO staff and the DCM can evaluate position sizes to detect and deter manipulation. In addition, trade practice surveillance involves compilation and monitoring of transactional-level data by the Commission and the DCM to detect and deter abusive trading such as wash sales, money laundering and trading ahead of customers (trade practice surveillance). The surveillance staff conducts active market and trade practice surveillance of all futures and options trading activity that occurs on DCMs.

Under the CEA, the primary mission of market surveillance is to identify situations that could pose a threat of manipulation and to initiate appropriate preventive actions. Each day, for the estimated 1,400 active futures and option contracts in the U.S., DMO market surveillance staff monitors the activities of large traders, key price relationships, and relevant supply and demand factors to ensure market integrity.

The market surveillance staff focuses, for example, on looking for large positions, especially in comparison to potential deliverable supply of the commodity. Such a dominant position might provide a trader an opportunity to cause a price manipulation, such as in a "squeeze," in which, for example, a single trader might hold a large long (buy-side) position and demand delivery of

[1] CEA Section 3(b), 7 U.S.C. § 5(b).

more of a commodity than is available for delivery. In such a situation, traders holding short (sell-side) positions may have no alternative but to buy back their positions at artificially high prices dictated by the dominant long trader.

The market surveillance program uses many sources of daily market information. Some of this information is publicly available, including data on: the overall supply, demand, and marketing of the underlying commodity; futures, option and cash prices; and data on trading volume and open contracts. Some of the information is highly confidential, including position and trading data that the Commission regularly receives from DCMs, intermediaries, and large traders.

DCMs report to the Commission the daily positions and transactions of each of their clearing members. The data are transmitted electronically during the morning after the "as of" trade date. They show separately, for proprietary and customer accounts, the aggregate position and trading volume of each clearing member in each futures and option contract. The data are useful for quickly identifying the firms that clear the largest buy or sell volumes or hold the biggest positions in a particular market. The clearing member data, however, do not identify the beneficial owners of the positions.

To address this limitation, DMO uses a large-trader reporting system. Under this system, clearing members, futures commission merchants (FCMs), and foreign brokers (collectively called "reporting firms") electronically file daily reports with the Commission. These reports contain the futures and option positions of individual traders that hold positions above specific reporting levels set by Commission regulations, and allow DMO staff to review the beneficial owners of futures positions. If, at the daily market close, a reporting firm has a trader holding a position at or above the Commission's reporting level in any single futures month or option expiration, it reports that trader's entire position in all futures and options expiration months in that commodity, regardless of size.

Since traders frequently carry futures positions through more than one FCM, and since individuals sometimes control or have a financial interest in more than one account, the Commission routinely collects information that enables its surveillance staff to aggregate related accounts. Reporting firms file information with the CFTC to identify each new account that acquires a reportable position. In addition, once an account reaches a reportable size, the account owner periodically is required to file a more detailed report to further identify accounts and reveal any relationships that may exist with other accounts or traders.

Surveillance economists prepare weekly summary reports for futures and option contracts that are approaching their expiration periods. Regional surveillance supervisors immediately review these reports. Surveillance staff advises the Commissioners and senior staff of significant market developments at weekly surveillance meetings (which are non-public, closed meetings) so they will be prepared to take action if necessary.

Typically, the Commission gives the DCM, as the front-line regulator, the first opportunity to resolve any issue arising in its markets. If a DCM fails to take actions that the Commission deems appropriate, the Commission has broad emergency powers under the CEA to order the DCM to take specific actions. Such actions could include limiting trading, imposing or reducing limits on positions, requiring the liquidation of positions, extending a delivery period, or closing a market. Fortunately, most issues are resolved without the need to use the Commission's emergency powers. The fact that the Commission has had to take emergency action only four times in its history demonstrates its commitment to refrain from intervening in the futures markets unless all other efforts have been unsuccessful.

In addition to market surveillance, DMO staff monitors trading activity on DCMs in order to detect and prevent possible trading violations. To help accomplish this mission, staff engages in various analyses to profile trading activity and conducts trade practice investigations. These functions require the collection of trade data and the ability to process those in various ways for further analysis. In this regard, DMO currently operates the Electronic Database System (EDBS), a system developed in the mid-1980s, to process and maintain information concerning trading activity on DCMs. EDBS is an older system with limited capabilities, especially with respect to trading data collected from electronically traded markets. The Commission is in the process of replacing EDBS with a more robust tool, the Trade Surveillance System (TSS). The primary function of TSS is to collect and make all trade data accessible to staff so they can retrieve, organize, and analyze trade data to assess DCM compliance with the Act and Commission regulations. TSS will assist staff in conducting timely, customized analyses of all trading activity; examining side-by-side trading (same contract trading simultaneously on an exchange floor and an electronic trading platform) and cross-market activity (similar or identical contracts trading on different exchanges); and detecting novel and complex patterns of potential trading violations involving electronic trading. TSS also will allow DMO staff to respond to fast-moving market events, which is crucial to effective trade practice surveillance. The identification of potential trading violations results in referrals to relevant DCMs and to the Commission's Division of Enforcement.

It should be noted that surveillance of DCM trading is not conducted exclusively by the Commission. As SROs, DCMs have significant statutory surveillance responsibilities.[2] Typically, however, surveillance issues are handled jointly by Commission staff and the relevant DCM. Surveillance information is shared and, when appropriate, corrective actions are coordinated. Situations of particular surveillance interest are jointly monitored and, if necessary, verbal contacts are made with the brokers or traders who are significant participants in the market in question. These contacts may be for the purpose of asking questions, confirming reported positions, alerting the brokers or traders to the regulatory concern regarding the situation, or warning them to conduct their trading responsibly. Throughout its history, the Commission, together with the DCMs, has been quite effective in using these methods to resolve issues at an early stage.

Another key DMO oversight role involves staff oversight and assessment of the regulatory and oversight activities of DCMs. This involves periodic examinations of DCMs' self-regulatory programs on an ongoing, routine basis to evaluate their compliance with applicable core principles under the Act and the Commission's regulations. These examinations, known as "Rule Enforcement Reviews," result in reports that evaluate a DCM's compliance and surveillance capabilities. The reports set forth recommendations for improvement, where appropriate, with respect to a DCM's trade practice surveillance, market surveillance, disciplinary, audit trail, and dispute resolution programs. These reviews promote and enhance continuing, effective self-regulation and ensure that exchanges rigorously enforce compliance with their rules. The reports are made public and are posted on the Commission's Website.

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[2] *See, e.g.,* Sections 5(b)(2) and 5(d)(4) of the CEA, 7 U.S.C. §§ 7(b)(2), 7(d)(4).

In conclusion, the Commission has a comprehensive market oversight program to detect and prevent disruption of the economic functions of all the commodity futures and option markets that it regulates.

CFTC Division of Clearing and Intermediary Oversight

The Commission's Division of Clearing and Intermediary Oversight (DCIO) is responsibile for and plays an integral role in ensuring the financial integrity of all transactions on the markets that it regulates.

DCIO meets these responsibilities through an oversight program that includes the following elements: (1) conducting risk-based oversight and examinations of industry SROs responsible for overseeing FCMs, commodity trading advisors, commodity pool operators, and introducing brokers, to evaluate their compliance programs with respect to requirements concerning fitness, net capital, segregation of customer funds, disclosure, sales practices, and related reporting and recordkeeping; (2) conducting risk-based oversight and examinations of all Commission-registered derivatives clearing organizations (DCOs) to evaluate their compliance with core principles, including their financial resources, risk management, default procedures, protections for customer funds, and system safeguards; (3) conducting financial and risk surveillance oversight of market intermediaries to monitor compliance with the provisions of the CEA and Commission regulations; (4) monitoring market events and conditions to evaluate their potential impact on DCOs and the clearing and settlement system and to follow-up on indications of financial instability; and (5) developing regulations, orders, guidelines, and other regulatory approaches applicable to DCOs, market intermediaries, and their SROs. Collectively, these functions serve to protect market users, the general public and producers, to govern the activities of market participants, and to enhance the efficiency and effectiveness of the futures markets as risk management mechanisms. DCIO's most important function is to prevent systemic risk and ensure the safety of customer funds.

The DCOs that the Commission currently regulates are located in New York, Chicago, Kansas City, Minneapolis and London, England. The intermediaries overseen by the Commission are located throughout the United States and in various other countries.

CFTC Division of Enforcement

At any one time, the Division of Enforcement (Enforcement) is investigating and litigating with approximately 700 to 1000 individuals and corporations for alleged fraud, manipulation, and other illegal conduct. Working closely with the President's Corporate Fraud Task Force, Enforcement is staffed with skilled professionals who prosecute cases involving complex over-the-counter (OTC) and on-exchange transactions. Enforcement also routinely assists in related criminal prosecutions by domestic and international law enforcement bodies.

During the last five years, Enforcement has maintained a record level of investigations and prosecutions in nearly all market areas, including attempted manipulation, manipulation, market squeezes and corners, false reporting, hedge fund fraud, off-exchange foreign currency fraud, brokerage compliance and supervisory violations, wash trading, trade practice misconduct, and registration issues.

In the energy sector alone, Enforcement investigated Enron and dozens of national and international energy companies, as well as hundreds of energy traders and hedge funds around the country. As a result of those efforts, the Commission prosecuted numerous traders and corporate entities. At the same time, in other market sectors, Enforcement prosecuted more than 50 hedge funds and commodity pool operators for various violations, and filed actions against more than 360 individuals and companies for off-exchange foreign currency fraud and misconduct.

Enforcement receives referrals from several sources: the CFTC's own market surveillance staff; the compliance staff at exchanges; market participants and members of the public; and other State, Federal, and international regulatory authorities. During an investigation, the CFTC may grant formal administrative subpoena authority, which enables Enforcement to obtain relevant materials (for example, audio recordings, e-mail and trade data) and testimony from witnesses.

If warranted, at the conclusion of its investigation, Enforcement will recommend to the Commissioners that the CFTC initiate a civil injunctive action in Federal district court or an administrative proceeding. The CFTC may obtain temporary statutory restraining orders and preliminary and permanent injunctions in Federal court to halt ongoing violations, as well as civil monetary penalties, appointment of a receiver, the freezing of assets, restitution to customers, and disgorgement of unlawfully acquired gains. Administrative sanctions may include orders suspending, denying, revoking, or restricting registration; prohibiting trading; and imposing civil monetary penalties, cease and desist orders, and orders of restitution.

The CFTC also refers enforcement matters to the Department of Justice. Criminal activity involving commodity-related instruments can result in prosecution for criminal violations of the CEA and for violations of Federal criminal statutes, such as mail fraud or wire fraud.

CFTC Speculative Position Limits and "Excessive Speculation"

Under the CEA, the concept of "excessive speculation" is based on trading that results in "sudden or unreasonable fluctuations or unwarranted changes in the price" of commodities underlying futures transactions.[3] When Congress enacted the CEA in 1974, it included a number of statutory provisions specifically relating to market price distortions. Several of these provisions prohibit market manipulation, making it a violation of the Act to manipulate the price of a commodity in interstate commerce or for future delivery.[4] Congress also included an enabling provision stating that excessive speculation is a burden on interstate commerce.[5] This provision does not make excessive speculation a *per se* violation of the Act, but rather, requires the Commission to enact regulations to address such trading (for example, through speculative position limits).

The rationale for the distinction between manipulation and "excessive speculation" is two-fold. Manipulation of market prices is a clear and undeniable threat to the integrity of the marketplace and to the fundamental purposes of futures markets – risk management and price discovery – and there is a long-standing body of law defining the parameters of futures market manipulation.[6]

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[3] CEA Section 4a(a), 7 U.S.C. § 6a(a).
[4] CEA Sections 6(c), 6(d), 9(a)(2), 7 U.S.C. §§ 9, 13, 13b, 15.
[5] CEA Section 4a(a), 7 U.S.C. § 6a(a).
[6] *See, e.g., In the Matter of Indiana Farm Bureau Coop. Ass'n* [1982-1984 Transfer Binder] Comm. Fut. L. Rep. (CCH) ¶ 21,796 (CFTC 1982).

"Excessive speculation," on the other hand, is an undefined concept. Futures markets require both speculators and hedgers. Speculators provide the market liquidity to allow hedgers to manage various commercial risks. Placing limitations on the amount of speculation that an individual or entity may engage in necessarily limits the amount of liquidity in the marketplace and may limit the ability for hedgers to manage risks, and may limit information flow into the marketplace, which could in turn negatively affect the price discovery process and the hedging function of the marketplace.

Congress recognized the difference between these two concepts in enacting separate and distinct manipulation and excessive speculation provisions in 1974. Manipulation, a clear market threat, is a violation of the Act, while "excessive speculation" (a more ambiguous concept) is addressed by the CFTC exercising its regulatory expertise through rulemaking.

Accordingly, pursuant to Section 4a of the Act, the Commission has utilized its authority to set limits on the amount of speculative trading that may occur or speculative positions that may be held in contracts for future delivery. The speculative position limit is the maximum position, either net long or net short, in one commodity future (or option), or in all futures (or options) of one commodity combined, that may be held or controlled by one person (other than a person eligible for a hedge exemption) as prescribed by a DCM and/or by the Commission. Moreover, CEA Section 5(d)(5)[7] requires that an exchange, "to reduce the potential threat of market manipulation or congestion, especially during trading in the delivery month . . . shall adopt position limitations or position accountability for speculators, where necessary and appropriate."

All agricultural and natural resource futures and options contracts are subject to either Commission or exchange spot month speculative position limits – and many financial futures and options are as well. With respect to such exchange spot month speculative position limits, the Commission's guidance specifies that DCMs should adopt a spot month limit of no more than one-fourth of the estimated spot month deliverable supply, calculated separately for each contract month. For cash settled contracts, the spot month limit should be no greater than necessary to minimize the potential for manipulation or distortion of the contract's or underlying commodity's price.

The focus on spot month position limits is because these are the futures months that are most vulnerable to manipulation. This vulnerability results, in general, from the fact that a futures contract at expiration must result either in physical delivery—which can be used to cause a squeeze—or in a final cash settlement—which can be manipulated by heavy trading that distorts the index used for the final settlement. These rules are designed to prevent traders from accumulating concentrations of contracts of a size that could potentially lead to manipulation or disrupt a market.

As part of its routine, ongoing surveillance program, Commission staff monitor daily large-trader reports to ensure compliance with Commission and DCM position limits. When market surveillance staff detect an instance of a position limit violation, it takes prompt remedial action to require the trader to reduce its position to be in compliance with the position limit. In instances of a violation of Commission position limits, market surveillance staff send a warning letter to the trader advising that the violation is considered a serious matter, and that any further violation could lead to formal action that could result in the suspension or denial of the trader's

[7] 7 U.S.C. § 7(d)(5).

trading privileges and assessment of a substantial fine. In instances of violations of exchange position limits, market surveillance staff refer the violation to the exchange and request to be advised of what action is taken in the matter. In instances of repeated violations of Commission and/or exchange position limits by a trader, market surveillance staff refer the matter to the Commission's Division of Enforcement for investigation and possible initiation of formal Enforcement action.

With respect to trading outside the spot month, the Commission typically does not require speculative position limits. Under the Commission's guidance, an exchange may replace position limits with position accountability for contracts on financial instruments, intangible commodities, or certain tangible commodities. If a market has accountability rules, a trader – whether speculating or hedging – is not subject to a specific limit. Once a trader reaches a preset accountability level, however, the trader must provide information about his position upon request by the exchange. In addition, position accountability rules provide an exchange with authority to restrict a trader from increasing his position if so ordered by the exchange.

Finally, in order to achieve the purposes of the speculative position limits, the Commission and the DCMs treat multiple positions held on a DCM's market that are subject to common ownership or control as if they were held by a single trader. Accounts are considered to be under common ownership if there is a 10 percent or greater financial interest. The rules are applied in a manner calculated to aggregate related accounts.

Violations of exchange-set or Commission-set limits are subject to disciplinary action, and the Commission, or a DCM, may institute enforcement action against violations of exchange speculative limit rules that have been approved by the Commission. To this end, the Commission approves all position limit rules, including those for contracts that have been self-certified by a DCM.

It is important to note that the fundamental thrust of the Commission's manipulation and excessive speculation provisions has not changed in any of the Commission's six reauthorizations since 1974. In other words, in the three decades since enactment of the Act, Congress has not determined in any one of its comprehensive reviews of the CEA, to make "excessive speculation" a *per se* violation of the CEA, but rather has continued to rely on the agency and the self-regulatory organizations to address excessive speculation through regulatory measures.

Oversight of Exempt Commercial Markets

Congress included a provision in the Commodity Futures Modernization Act of 2000 (CFMA) to govern a new type of trading facility known as an Exempt Commercial Market (ECM).[8] As outlined in Section 2(h)(5)(F) of the CEA, ECMs are not "registered with, or designated, recognized, licensed or approved by the Commission." ECMs, as well as transactions executed on ECMs, are statutorily exempt from most provisions of the CEA. Trading on an ECM such as the Intercontinental Exchange in Atlanta (ICE) is not subject to regular, ongoing market surveillance oversight by the Commission. Under current law, the Commission does not have the legal authority to limit the size of a trader's position on an ECM. Nor are ECMs required to comply with the self-regulatory obligations required of DCMs, such as adopting position

[8] CEA Sections 2(h)(3)-(5), 7 U.S.C. §§ 2(h)(3)-(5).

limitations or position accountablility rules. The Commission does retain fraud and manipulation authority over ECMs. To assist the Commission in carrying out its fraud and manipulation authority, ECMs are required to maintain a record of allegations or complaints received by the trading facility concerning instances of suspected fraud or manipulation and to forward them to the Commission.[9]

ECMs are also subject to certain limited reporting requirements that are authorized under Section 2(h)(5)(B)(i) of the CEA and spelled out in Commission Regulation 36.3(b).[10] Pursuant to these provisions, an ECM is required to identify those transactions conducted on the facility with respect to which the ECM intends to rely on the statutory Section 2(h)(3) exemption, and which averaged five trades per day or more over the most recent calendar quarter. With respect to such transactions, the ECM is required to transmit weekly to the Commission certain basic trade information, including "the commodity, the [delivery or price-basing] location, the maturity date, whether it is a financially settled or physically delivered instrument, the date of execution, the time of execution, the price, [and] the quantity."[11] The reports filed pursuant to Regulation 36.3(b) can provide Commission surveillance staff with information regarding price spikes or unusual divergence between the price of a commodity traded on an ECM and the price of a related commodity traded on a DCM. The Regulation 36.3(b) reports, however, do not require ECMs to identify the individual traders holding positions on the ECM.

In addition, an ECM must maintain for five years, and make available for inspection upon request by the Commission, records of its activities related to its business as an electronic trading facility, including audit trail information sufficient to enable the Commission to reconstruct trading activity, and the name and address of each participant authorized to enter into transactions on the facility.[12] Should the Regulation 36.3(b) reports, or other information obtained by surveillance staff (including information from futures market large trader reports), indicate a need for further information from an ECM, Section 2(h)(5)(B)(iii) of the CEA and Commission Regulation 36.3(b)(3) give the Commission authority to issue what is known as a "special call." Under the CEA, the Commission can obtain from an ECM "such information related to its business as an electronic trading facility exempt under paragraph [2(h)](3) . . . as the Commission may deem appropriate." The issuance of a special call to an ECM is simply an indication that the Commission's staff is seeking additional information. A special call, in and of itself, is not evidence of improper or illegal market behavior.

Finally, if the Commission determines that an ECM performs a significant price discovery function for transactions in the cash market for the commodity underlying any agreement, contract, or transaction traded on the facility, the ECM must publicly disseminate, on a daily basis, information such as contract terms and conditions, trading volume, open interest, opening and closing prices or price ranges, or other price information approved by the Commission.[13] To date, the Commission has not made such a determination.

In part due to the lessons learned from the fall of Amaranth, the CFTC has been regularly utilizing its special call authority to request information from ICE. This information assists us in

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[9] Commission Regulation 36.3(b)(iii), (iv), 17 C.F.R. § 36.3(b)(iii), (iv).
[10] 17 C.F.R. § 36.3(b).
[11] ICE has been submitting such trade data for natural gas transactions meeting the regulatory reporting threshold since January 1, 2005.
[12] CEA Section 2(h)(5)(B)(ii), 7 U.S.C. § 2(h)(5)(B)(ii).
[13] CEA Section 2(h)(4)(D), 7 U.S.C. § 2(h)(4)(D); Commission Regulation 36.3(c)(2), 17 C.F.R. § 36.3(c)(2).

the regulation of activities on DCMs, and we believe it helps us to get a more comprehensive picture of the marketplace, given the similarity of ICE's natural gas contracts to those traded on the New York Mercantile Exchange (NYMEX). On September 28 and December 1, 2006, respectively, the Commission issued two special calls to ICE that required ICE to provide position data to the Commission, on an ongoing basis, related to transactions in ICE's most heavily traded natural gas swap contracts. Specifically, these separately-issued special calls required that ICE provide the Commission with clearing member position data and individual trader position data in the various ICE natural gas contracts that are cash-settled based on NYMEX natural gas contracts.

The special call for clearing member position data was issued by the Commission on September 28, 2006, and the Commission has been receiving responsive data from ICE, on a daily basis, since October 10, 2006. The individual trader position data special call was issued on December 1, 2006. ICE found it necessary to make various technical adjustments to its systems in order to produce the requested materials, which it has done. Those adjustments are now in place, and the Commission received the first batch of individual trader daily position data on February 16 (showing positions as of February 15) and continues to receive that information on an ongoing basis.

These two special calls were issued primarily in order to assist Commission staff in its surveillance of the related NYMEX natural gas contracts. Compliance with special calls is not voluntary, but mandatory. The special calls were not issued as part of an investigation of any particular market participant or trading activity on either ICE or NYMEX. Nor were they issued in order to conduct regular market surveillance of ICE contracts themselves. The information provided by ICE through the special calls is comprehensive, but it does not duplicate the information that the Commission collects through its DCM surveillance programs.

Despite the difference in regulatory authorities over DCMs and ECMs, the Commission is aware that when markets trade similar products or products that can be arbitraged, information regarding activity in one market tends to be incorporated into the other. This is almost certainly the case when large numbers of traders operate in both markets, as is the case between NYMEX and ICE.

On the last trading day, NYMEX contracts are settled by physical delivery of natural gas, whereas ICE contracts are settled based on the NYMEX final settlement price. Because the ICE contracts settle off of the NYMEX price, it is clear that NYMEX prices affect ICE prices. It appears that price discovery in the natural gas contract may occur at both trading facilities. That is to say, information first affecting the ICE price is immediately conveyed to NYMEX and information first affecting the NYMEX price is immediately conveyed to ICE.

Given that price discovery may be conducted at both ICE and NYMEX, successful manipulation of the ICE price would be reflected in the NYMEX price. Arbitrage between ICE and NYMEX makes it possible for ICE prices to influence NYMEX prices. Since the Commission has not conducted a review of surveillance practices at ICE, our response cannot be as soundly based as would be the case were we asked about manipulation possibilities at NYMEX. However, the ability to manipulate prices on either has likely been reduced, given that ICE has broadened participation in contracts for natural gas.

Amaranth: CFTC Chief Economist's Overview

Understanding how the CFTC operates within its statutory authority is important when analyzing market events like the collapse of Amaranth in early fall of 2006.

In September 2006, funds managed by Amaranth Advisors, LLC, lost approximately $6 billion, or two-thirds of their value. The losses were due largely to Amaranth's natural gas positions at NYMEX and at ICE. As Figure 1 shows, Amaranth had positioned itself to profit on a widening difference between the prices of natural gas contracts expiring in the winter and natural gas contracts expiring in non-winter months. Such a strategy would have been profitable if prices for winter-delivery futures contracts had risen relative to prices for non-winter-delivery contracts.

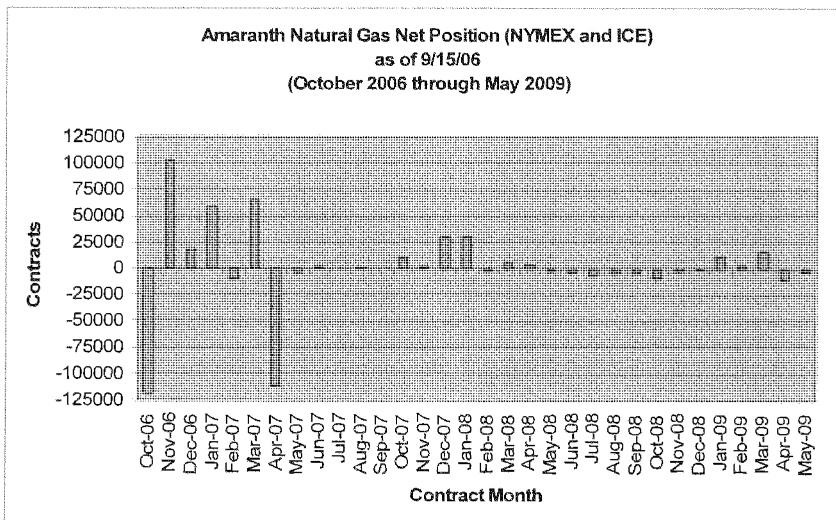

Figure 1.

Figure 2 illustrates one component of Amaranth's strategy. This Figure shows the spread position held by Amaranth in NYMEX natural gas futures contracts (and futures equivalent option contracts) for the delivery months of March and April 2007. The Figure shows that Amaranth held a "long" position in the March 2007 contract while simultaneously holding a "short" position in the April 2007 contract. Amaranth held a similar position on ICE. Amaranth began significantly ramping up this spread position in the spring of 2006. The difference between the March price and the April price is referred to as the "spread price," which is also displayed in Figure 2. As can be seen in the Figure, the spread price began to fall during the last week of August 2006. As the March/April spread fell from $2.50 per mmBTU in August to $.75 per mmBTU in mid-September, Amaranth's losses mounted.

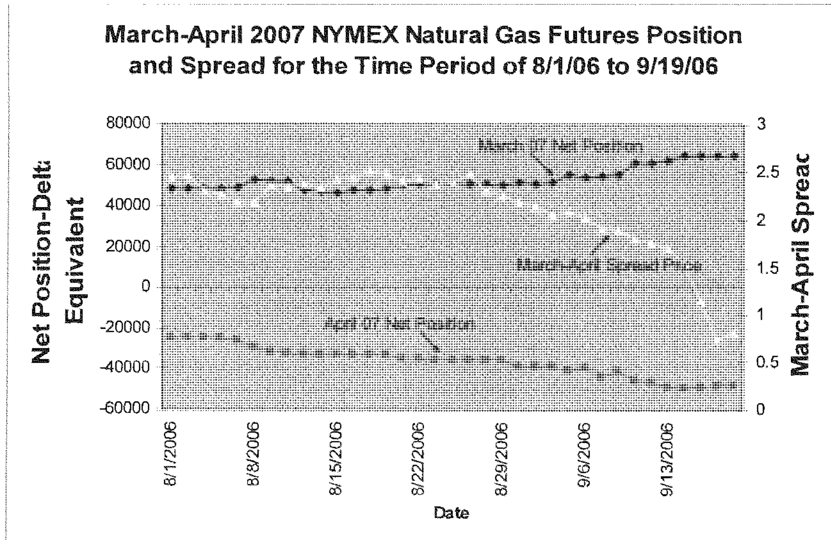

Figure 2.

After Amaranth's collapse, the CFTC's Office of the Chief Economist (OCE) analyzed the situation using statistical evidence. It is important to provide a historical context of the market in which Amaranth was operating. As can be seen in Figure 3, the unusually large level of the spread price began to appear around the time of Hurricane Katrina in 2005. The spread was the largest March/April spread ever observed. However, Amaranth did not begin accumulating its large position in the March/April 2007 spread until the spring of 2006. In other words, the March/April spread was at a historically high level for many months before Amaranth began accumulating its large March/April position.

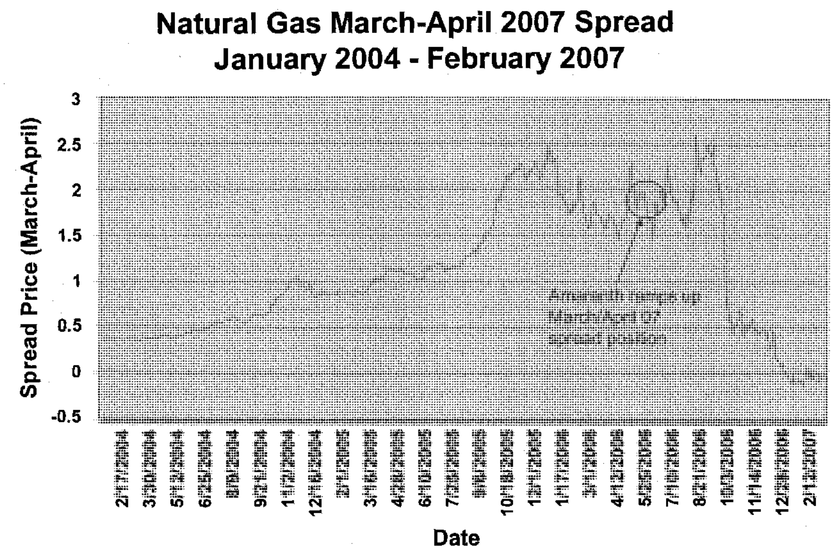

Figure 3.

The OCE analysis of Amaranth trading data failed to conclude that Amaranth's trading was responsible for the spread price level observed during 2006. The OCE analysis looked at the statistical relationship between changes in Amaranth positions, and changes in spread prices. In particular, the analysis focused on whether changes in Amaranth's positions caused short-term or longer-term changes in spread prices. The analysis found evidence of a causal relationship between changes in Amaranth's spread positions and changes in spread prices during 2006. Using a subset of 2006 data (April 15 to August 25) there is evidence of "two-way causality" – meaning that changes in Amaranth's positions influenced market prices at the same time changes in market prices influenced Amaranth's positions.

If Amaranth were dominating markets, OCE would have expected the statistical tests to have shown "one-way causality," where changes in Amaranth's positions would have influenced market prices but market prices would not have influenced Amaranth positions. That would have demonstrated statistically that Amaranth's positions were clearly driving the price. As noted above, OCE believes that Amaranth and the market appear to have been reacting to each other reciprocally.

On another point, interpreting open interest figures to discern market power, such as in the Committee staff report, requires special care. In futures markets, open interest is not a fixed level but can expand or contract depending on whether traders open or close contracts. Although Amaranth held the largest share of open interest, it was not holding a concentrated position of a fixed inventory of contracts. The market was completely open to other traders forming contracts at prices they found mutually agreeable. There were no barriers foreclosing the possibility of other traders entering the market. Because other traders were free to enter the market at any time, one must be cautious before concluding that Amaranth's level of open interest on one side of the market represented market power that dictated the level of the spread price.

Open interest represents trades made in the past. The futures price at any point in time is determined where a bid meets an offer. Open interest, by itself, cannot exert any influence on the prevailing level of bids and offers. Open interest can be an important factor in determining how a trader will behave in the future. For example, if it is known that a trader holds a large open position, other traders must consider the possibility that the large trader will change its position in the future.

In the OCE analysis, all of the data are consistent with the hypothesis that the March/April spread, and similar winter/summer spreads, declined due to changes in perception of market fundamentals. Amaranth established a large spread position that could only have been profitable if the unusually high spread price had become even more unusually high. Such a profitable scenario would have occurred if winter natural gas supplies had been disrupted by, for example, an active hurricane season in the Gulf of Mexico. In fact, the Gulf hurricane season proved to be less active than predicted, and instead of a widening price relationship between winter and non-winter natural gas futures contracts, the price difference narrowed considerably, resulting in significant trading losses to Amaranth.

There were particular dates in which changes in Amaranth's positions corresponded with temporary changes in spread prices. July 31 is one such date where the March/April spread price rose to an all-time high of $2.61 per mmBTU on the day that Amaranth significantly increased its position in this spread. However, the spread dropped back in the next trading session. Trading on this day was affected by a number of news stories about natural gas storage numbers (news released the previous day) and revised weather forecasts. Because of multiple events on this day it is difficult to attribute the spread increase to any one factor, including Amaranth's trading activity. If Amaranth was responsible for this temporary change in the spread price, the result is consistent with a story of a large trader trading in an illiquid market. Over time, sellers of the spread were attracted to the market and the spread price was quickly returned to a normal level for that time.

While OCE's economic analysis of what happened with Amaranth occurred after the fact, the Commission was aware of Amaranth's activities in the months leading up to September through our regular financial and market oversight surveillance.

JP Morgan Futures, a Commission-registered FCM was Amaranth's clearing broker at NYMEX. As the clearing broker, JP Morgan Futures was the NYMEX's counterparty for all positions that it cleared in the customer account with NYMEX, including the positions held by Amaranth. In the futures industry, customers have no legal relationship with clearing organizations and must eventually have all positions cleared and carried at clearing organizations, like NYMEX, by a clearing broker. Customers only have a legal relationship with their brokers. However, in exercising prudential risk management NYMEX also reviewed the positions and margin requirements of JP Morgan Futures' customers.

NYMEX staff periodically spoke with JP Morgan Futures staff about the Amaranth portfolio of cleared NYMEX positions. Under NYMEX rules, JP Morgan Futures was subject to capital based position limits. These rules limit the size of the positions a clearing member can carry in its proprietary and customer accounts according to the amount of capital it has. JP Morgan

Futures never exceeded these limits. Only ten to twelve NYMEX firms had sufficient capital to carry an account the size of Amaranth.

As part of its routine financial surveillance, Commission staff first contacted NYMEX staff about the Amaranth account in June 2006. When the Commission began receiving information about the losses experienced by Amaranth, the financial surveillance staff began actively monitoring the Amaranth account in early August 2006. Staff reviewed position information for NYMEX cleared products from the CFTC's large trader reporting system. Staff also reviewed information it received from NYMEX each day about the daily settlement and margin requirements for JP Morgan Futures.

Throughout this period, JP Morgan Futures met all of its obligations to NYMEX and staff had evidence that the Amaranth account at JP Morgan Futures was fully margined at all times during this period. Therefore, from a risk perspective, staff had no basis to recommend to the Commission that steps be taken to limit the size of Amaranth's positions. Further, staff had no evidence that the losses incurred by Amaranth would have significant negative impacts on other market participants.

Through its large-trader reporting system, the Commission is aware of the positions of all traders in all contracts traded on DCMs, such as NYMEX, that have positions above reportable levels. Accordingly, Commission staff was aware of the size of Amaranth's positions in natural gas contracts traded on NYMEX at all times during 2006. However, Commission staff was not aware of the size of Amaranth's positions on ICE until after Amaranth's announcement of substantial trading losses on September 18, 2006.

Commission market surveillance staff monitored Amaranth's compliance with NYMEX's position limit, position accountability, and hedge exemption rules. Commission staff was aware of NYMEX's action in early August 2006 to limit the size of Amaranth's NYMEX positions in the September, October, and November 2006 natural gas futures contracts. The Commission's staff was satisfied that NYMEX was properly monitoring Amaranth's position, and properly enforcing its position accountability rules. Commission staff did not view the size of Amaranth's NYMEX positions – especially in non-nearby futures months – as per se evidence of improper or manipulative trading. While natural gas forward curve spreads were unusual during this period, it was not at all clear that this was caused by excessive speculation. The summer of 2006 was forecast to be a very active hurricane season, and the market clearly remembered the devastating impact of the hurricanes of 2005 on the Gulf Coast's natural gas infrastructure, and the resultant sharp increase in winter month natural gas prices. Given this recent history and the forecast for another active hurricane season, it was certainly plausible that the unusual forward curve spreads incorporated a significant hurricane risk premium. Some market participants and observers may have believed that the risk premium was too high, but there was no apparent constraint preventing those holding such a view from incorporating that view into the price discovery process by selling the risk premium.

The Commission does not pick winners and losers in the futures markets based on any given trading strategy, but does work diligently – and did so in the case of Amaranth – to ensure market integrity and customer protections.

CFTC Budget

The current budget that funds the divisions, the technology and surveillance operations, and other support staff, is approximately $98 million for the current Fiscal Year (FY). The FY 2008 President's Budget request for the CFTC is for an appropriation of $116 million and 475 staff – an increase of approximately $18 million and 17 staff over the FY 2007 continuing resolution appropriation which supports a level of 458 staff.

We are grateful for the Administration's recognition of the need for increased funding for our agency. The FY 2008 Budget request is a good down payment in an effort to reverse a recent downward trend in resources at the Commission, but it is, in perspective, a small recognition of the challenge we face.

Since the CFMA was enacted, there has been a seven-fold increase in the rate of new product listings by U.S. exchanges. Nine new DCMs and nine new DCOs have been approved by the CFTC. Electronic trading has soared to approximately 60 percent of total volume this year, and that percentage is steadily increasing. The competition, product innovation, and increasing use of technology fostered by the CFMA meant exponential growth in the futures and option markets, especially during the last few years. It has also meant continuing evolution of these markets in the form of new trading venues, new trading strategies, new risk management tools, and new customers.

The CFMA replaced the prior "one size fits all" regulatory model with a flexible, practical, principles-based model for exchanges. U.S. exchanges also were given the authority to approve new products and rules through a self-certification process without prior CFTC approval, which encouraged innovation and enabled exchanges to act quickly in response to fast-changing market conditions. The CFMA also permitted the establishment of non-intermediated trading platforms such as ECMs, the growth of which has rapidly matured in recent years.

During this period of unprecedented growth for the futures industry, however, the CFTC's resources have been steadily diminishing. The CFTC needs additional staff resources in almost every program area. Currently, the Commission operates with a staff of 436 – an historic low at a time when the industry we regulate is at an all-time high by almost any measure: more volume, more trading platforms, more products, more complexity and a more global marketplace. Commission employees work hard, work smart, and use technology effectively, but given the complexity of the markets we oversee, they are stretched. We have the resources to carry out the Commission's mission on a daily basis – by asking more of staff and putting off some technological needs and other programs – but it is clear that the agency can continue at this funding level only for the short-term.

With regard to the adequacy of our surveillance resources, it is useful to consider that the number of actively traded contracts trading on U.S. exchanges has more than quintupled in the last decade, with most of that growth seen in the last five years. Staff devoted to surveillance today is 46; ten years ago, it was 58.

As for Enforcement, staff has fallen from 154 to 110 during the same ten-year period. The CFTC prides itself on its vigorous enforcement efforts. However, in derivatives markets that are exploding in size and complexity, coupled with its reduced staffing, the CFTC's enforcement professionals are struggling to keep up with the volume and size of its cases. For comparison purposes, the enforcement division at the Securities and Exchange Commission is funded with a budget that is more than twenty times larger than that for the CFTC's enforcement operations.

We are forced to make hard choices every day on how to prioritize our investigative and litigation efforts.

Technology is critical to enable our professional staff to adequately oversee the markets. However, budget constraints have required the Commission to put new systems development initiatives and hardware and software purchases on hold. For example, Commission investment in technology, as a percentage of total budget, has fallen from approximately 10 percent to around 7 percent. This trend is unsustainable given that so much of the growth in the futures industry is directly attributable to investments in technology. It is important that the Commission not be overwhelmed by the technologically innovative industry we regulate.

Conclusion

The CFTC's last reauthorization expired in 2005, and Congress has worked hard during the past two years to try to reauthorize the CFTC and update our statutory mandate. We appreciate the efforts of our authorizers, the Senate and House Agriculture Committees, as they continue those efforts.

A part of the reauthorization debate has been regulation of ECM energy markets. It is a complicated policy decision that encompasses consideration of a number of issues, including: economic opportunity and competition at home and abroad; ensuring customer protections and market integrity; promoting growth and innovation of U.S. exchanges; and ensuring a level playing field for competitors. Congress, regulators and industry participants have varied opinions on the topic and the debate continues. It is important to hear all sides to strike the right balance in this complex economic and policy discussion.

The futures markets have changed dramatically since the passage of the CFMA and the creation of the ECM category in section 2(h) of the CEA. This designation was intended to encourage innovation for these institutional markets while calibrating the amount of oversight to the risks associated with them. However, as the Subcommittee's staff report lays out, the regulated futures markets and exempt commercial markets have become increasingly linked and as a result, the public risks associated with these markets have changed. The CFTC has recognized this and exercised its existing statutory authorities in order to keep pace with industry growth, as needed. For example, through our ECM special call authority, the CFTC is obtaining the ongoing production of natural gas trading information from ICE because it helps us in our oversight of NYMEX, a regulated DCM, and helps to provide a more comprehensive picture of the marketplace. More recently, the CFTC proposed an amendment to clarify that our existing regulations require large traders on regulated DCMs to keep information relating to all their positions in the commodity subject to the reporting requirements – including information regarding transactions executed outside the regulated exchange – and to provide that information to the Commission upon request.

However, the agency is nearing the outer limits of its authority and it is appropriate to have this open dialogue with Congress and our fellow regulators about what other tools are needed to adequately oversee this marketplace and ensure fair competition and the integrity of the futures markets. Policymakers should be measured when considering additional regulation given these electronic markets can move offshore and have done so in the past. However, protecting the integrity of the price discovery process should be our utmost priority given its broad impact on consumers. The Commission continues to devote its resources and energies on addressing this important matter and looks forward to working with the Congress to ensure an appropriate amount of oversight.

This is truly a dynamic time in the futures markets, given the growth in trading volume, product innovation and complexity, and globalization – in all commodities, including energy. The Commission will continue to work to promote competition and innovation by proactively taking down unnecessary barriers to trading in our markets, while at the same time, fulfilling our mandate under the CEA to protect the public interest and to enhance the integrity of, and public confidence in, U.S. futures markets.

In closing, we appreciate the Committee's inquiries into this complex and important area. The Subcommittee staff report looks at a number of issues related to the CFTC and makes a number of recommendations and conclusions that warrant further debate, which we look forward to discussing with you.

Thank you.

United States Senate
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
Committee on Homeland Security and Governmental Affairs

Carl Levin, Chairman
Norm Coleman, Ranking Minority Member

EXCESSIVE SPECULATION IN THE NATURAL GAS MARKET

STAFF REPORT

WITH ADDITIONAL MINORITY STAFF VIEWS

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

UNITED STATES SENATE

RELEASED IN CONJUNCTION WITH THE
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
JUNE 25 AND JULY 9, 2007 HEARINGS

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EXCESSIVE SPECULATION IN THE NATURAL GAS MARKETS

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# # #

EXCESSIVE SPECULATION IN THE NATURAL GAS MARKET

JUNE 25, 2007

I. EXECUTIVE SUMMARY

Since 2001, the U.S. Senate Permanent Subcommittee on Investigations ("the Subcommittee") has been examining the structure and operation of U.S. energy markets. In June 2006, the Subcommittee issued a bipartisan staff report, *The Role of Market Speculation in Rising Oil and Gas Prices: A Need to Put the Cop Back on the Beat,*[1] analyzing the extent to which the increasing amount of financial speculation in energy markets has contributed to the steep rise in energy prices over the past few years. The report concluded: "Speculation has contributed to rising U.S. energy prices," but also that "gaps in available market data" made quantification of the speculative component problematic.[2] The report endorsed the estimate of various analysts that the influx of speculative investments into crude oil futures accounted for approximately $20 of the then-prevailing crude oil price of approximately $70 per barrel. The report's analysis was based entirely on publicly available data about the overall level of financial investments in energy markets and publicly available data on energy prices and supplies.

The Subcommittee's staff report recommended that the Commodity Futures Trading Commission ("CFTC") be provided with the same authority to regulate and monitor electronic energy exchanges, such as the Intercontinental Exchange ("ICE"), as it has with respect to the fully regulated futures markets, such as the New York Mercantile Exchange ("NYMEX"), to ensure that excessive speculation did not adversely affect the availability and affordability of vital energy commodities through unwarranted price increases. Congress has not taken any action since then to authorize CFTC oversight of unregulated energy markets like ICE.

Shortly after the Subcommittee issued the report in 2006, the natural gas market entered a period of extreme price volatility punctuated by the collapse in September 2006 of Amaranth Advisors LLC ("Amaranth"), one of the largest hedge funds in the natural gas market. From the last week in August until the middle of September 2006, Amaranth's natural gas positions lost over $2 billion in value, precipitating the liquidation of the entire portfolio of the $8 billion fund.

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[1] S. Prt. 109-65, 109th Congress, 2nd Session (June 27, 2006).
[2] *Id.*, at p. 6.

In late summer, natural gas prices began falling. For example, the price of the NYMEX futures contract to deliver natural gas in October 2006 fell from a high of $8.45 per MMBtu in late July to just under $4.80 per MMBtu in September, the lowest level for that contract in two and one-half years. The difference in price between the NYMEX natural gas futures contract for March 2007 and for April 2007 – called the price spread – fell from a high of nearly $2.50 per MMBtu in July to less than 60 cents in September, a drop of 75 percent. The price for the immediate delivery of natural gas, called the spot price, fell from $7.49 per MMBtu in late August to $3.66 per MMBtu in early October, the lowest level in four years.[3] The Electric Power Research Institute described this price collapse as "stunning . . . one of the steepest declines ever."[4]

Throughout this period, the market fundamentals of supply and demand were largely unchanged. Natural gas supplies were plentiful, and the amount of natural gas in storage remained higher than average throughout the summer and into the early fall. The large price variations in the face of steady supply and demand trends raises several questions: If the underlying supply and demand factors were unchanged, what was causing the large price swings? To what extent was the collapse of Amaranth related to the fall in prices? If Amaranth's collapse either caused or accelerated the price drops, then were Amaranth's positions responsible for the higher prices and large spreads that prevailed throughout the summer? Was there adequate market oversight to ensure that large hedge funds were not distorting natural gas prices?

In October 2006, the Subcommittee began its investigation into the behavior of natural gas prices earlier in the year. The Subcommittee analyzed millions of natural gas transactions from trading records obtained from NYMEX and ICE, the two principal exchanges for energy commodities, and from Amaranth and other traders. In addition, the Subcommittee conducted numerous interviews of natural gas market participants, including natural gas traders, producers, suppliers, and hedge fund managers, as well as exchange officials, regulators, and energy market experts. NYMEX, ICE, Amaranth, and many traders cooperated with detailed inquiries. The Subcommittee also reviewed commodity market statutes and regulations, and researched a variety of legal issues.

The trading records examined by the Subcommittee disclosed that from early 2006 until its September collapse, Amaranth dominated trading in the U.S. natural gas financial markets. Amaranth bought and

[3] Federal Energy Regulatory Commission (FERC), Winter 2006-07 Energy Market Assessment, Item No.: A-3, October 19, 2006, at p. 2.
[4] Electric Power Research Institute, Natural Gas Issues: Turnaround Prospects, Energy Markets and Generation Response, October 2006, at p. 1.

sold thousands of natural gas contracts on a daily basis, and tens of thousands of contracts on certain days. It accumulated tens of thousands of natural gas holdings, or "positions," on both NYMEX and ICE. The CFTC defines a "large trader" for reporting purposes in the natural gas market as a trader who holds at least 200 contracts; NYMEX examines a trader's position if it exceeds 12,000 natural gas contracts in any one month. Amaranth held as many as 100,000 natural gas contracts in a single month, representing 1 trillion cubic feet of natural gas, or 5 percent of the natural gas used in the entire United States in a year. At times Amaranth controlled 40 percent of all of the outstanding contracts on NYMEX for natural gas in the winter season (October 2006 through March 2007), including as much as 75 percent of the outstanding contracts to deliver natural gas in November 2006.

Amaranth's large positions and trades caused significant price movements in key natural gas futures prices and price relationships. For example, Amaranth's purchases of contracts to deliver natural gas in the winter months, in conjunction with Amaranth's sales of natural gas contracts for delivery in the summer months, drove winter prices far above summer prices. These differences between winter and summer prices, called "price spreads," were far higher in 2006 than in previous years - until the collapse of Amaranth, when the price spreads returned to more normal levels. On several specific dates, Amaranth's massive trades were responsible for large jumps in the price differences between the futures contracts for March and April 2007. Traders interviewed by the Subcommittee said that during the spring and summer of 2006 the differences between winter and summer prices were "clearly out-of-whack," at "ridiculous" levels, and unjustified by supply or demand.

Purchasers of natural gas during the summer of 2006 for delivery in the following winter months paid inflated prices due to Amaranth's large-scale speculative trading. Businesses such as utilities had to either absorb this added expense or pass the higher costs onto the ultimate consumer, such as residential users who paid higher home heating bills.

The current regulatory system was unable to prevent Amaranth's excessive speculation in the 2006 natural gas market. Under current law, NYMEX is required to monitor the positions of its traders to determine whether a trader's positions are too large. If a trader's position exceeds pre-set "accountability levels," the exchange may require a trader to reduce its positions. The Amaranth case history demonstrates two critical flaws. First, NYMEX has no routine access to information about a trader's positions on ICE in determining whether a trader's positions are too large. It is therefore impossible under the current system for NYMEX to have a complete and accurate view of a trader's position in determining whether it is too large.

Second, even if NYMEX orders a trader to reduce its positions on NYMEX, the trader can simply shift its positions to ICE where no limits apply. This is precisely what Amaranth did after NYMEX finally told Amaranth, in August 2006, to reduce its positions in two contracts nearing expiration, contracts to deliver gas in September and October 2006. In response, Amaranth reduced its positions on NYMEX and increased them on ICE, maintaining the same overall positions in the market. Within a few days, Amaranth resumed increasing its positions, mostly on ICE. By the end of August, Amaranth held nearly 100,000 short positions in the September contract, mostly on ICE, and a total of nearly 90,000 short positions for the October contract on both ICE and NYMEX. These were huge positions - each variation of one cent in a position of 100,000 contracts changes a trader's profit or loss by $10 million. As a result, NYMEX's instructions to Amaranth did nothing to reduce Amaranth's size, but simply caused Amaranth's trading to move from a regulated market to an unregulated one.

The data analyzed by the Subcommittee, together with trader interviews, show that NYMEX and ICE are functionally equivalent markets. Natural gas traders use both markets, employing coordinated trading strategies. In many instances the volumes on ICE are comparable to or greater than the volumes on NYMEX. Traders use the natural gas contract on NYMEX, called a futures contract, in the same way they use the natural gas contract on ICE, called a swap, for risk management and economic purposes. The data show that prices on one exchange affect the prices on the other. Given their equivalence, there is no sound basis for one exchange to be regulated and the other not.

The disparity in regulation between NYMEX and ICE results from the so-called "Enron loophole" in the Commodity Exchange Act. The Enron loophole, which was inserted into the law in 2000 at the request of Enron and others, exempts electronic energy exchanges such as ICE from CFTC oversight and regulation. Unlike NYMEX, there are no limits on the trading on ICE, and no routine government oversight. The Amaranth case history demonstrates that the disparity in regulation of the two markets prevents the CFTC and the exchanges from fully analyzing market transactions, understanding trading patterns, and compiling accurate pictures of trader positions and market concentration; it requires them to make regulatory judgments on the basis of incomplete and inaccurate information; and it impedes their authority to detect, prevent, and punish market manipulation and excessive speculation.

Natural gas traders are well aware of the consequences of this limitation. For example, when Amaranth's lead energy trader predicted in an email that "boy I bet you see some CFTC inquiries" into a price spike that affected the final price of the September 2006 futures contract, another trader reminded him that most of the trades had taken place on ICE using swaps. The trader wrote: "Until they monitor swaps no big deal." His comment captures the problem – current law requires our regulators to oversee U.S. energy markets with incomplete information and inadequate authority.

To repair the broken regulatory system, Congress needs to require currently unregulated exchanges, such as ICE, to comply with the same statutory obligations as regulated markets, such as NYMEX, and operate under the same rules to prevent market manipulation and excessive speculation from affecting the price of vital energy commodities.

Some market observers contend that Amaranth's collapse proved the energy markets are functioning well because an overly risky trader met its demise without harming other traders or the natural gas market as a whole. In fact, however, many other market participants were harmed by Amaranth's massive speculative trading. For example, utilities that provide gas-powered electricity or heating to homes, schools, hospitals, and industries that use natural gas in manufacturing paid inflated prices. Many of their costs were passed onto consumers. Some companies told the Subcommittee that extreme price swings in the natural gas futures market make it more difficult and expensive to use the futures market for hedging. Still others told the Subcommittee that they have lost confidence in the natural gas market, viewing it not as a mechanism to set prices reflecting supply and demand, but as a market increasingly responsive to a few dominant traders with sufficient capital to affect prices.

If given authority to police all U.S. energy commodity markets, the CFTC should use this authority to monitor aggregate positions taken by traders on both NYMEX and ICE, and to analyze trading data from both exchanges. Regulators should also strengthen their monitoring and oversight to prevent excessive speculation for all of the months in which contracts are traded, not just contracts near expiration. The Amaranth experience demonstrates how excessive speculation can distort prices of futures contracts that are many months from expiration, with serious consequences for other market participants. To prevent excessive speculation from causing unwarranted price changes, commodity regulators need to conduct oversight over both a broader market and for a longer time horizon than the next few months.

A final major problem is the inadequate oversight capabilities of the CFTC. The CFTC suffers from antiquated technology systems, a shrinking staff, and flat budgets. In part, these budgetary woes have occurred because Congress has never authorized the CFTC, as it has virtually every other federal financial regulator, to collect user fees from the markets it oversees. Congress needs to provide the CFTC with adequate resources to do its job, and authorize user fees to pay for the additional expense.

Energy is a critical factor in the future of the U.S. economy. How it is priced is of vital concern. The Amaranth case history is not just the story of a single hedge fund dominating the market, but of a broken regulatory system that has left our energy markets vulnerable to any trader with sufficient resources to alter energy prices for all market participants.

The remainder of this Report details the Amaranth case history. Section II presents the staff findings and recommendations from the Subcommittee's investigation. Section III provides general information on the importance of natural gas to the U.S. economy, its production, economic uses, and the fundamentals of natural gas supply and demand. Section IV provides general information on the cash and financial markets for natural gas, and an overview of the regulatory structure for the various types of energy exchanges. Section V describes the unusual and extreme behavior of natural gas prices in the spring and summer of 2006, and analyzes the role of Amaranth and other hedge funds in forming those prices. Section V also describes the impact of Amaranth's trading on other market participants. Sections VI and VII offer recommendations to restore the integrity of energy commodity markets in the United States and protect them against market manipulation and excessive speculation. Section VIII contains additional Minority Staff views on the Report.

II. FINDINGS AND RECOMMENDATIONS

A. FINDINGS

(1) A single hedge fund, Amaranth Advisors LLC, dominated the U.S. natural gas market in 2006.

(a) Amaranth accumulated massive natural gas holdings on NYMEX and ICE spanning five years, from 2006-2010.
(b) Amaranth accumulated such large positions and traded such large volumes of natural gas in 2006, on both NYMEX and ICE, that it had a direct effect on U.S. natural gas prices and increased price volatility in the natural gas market. The larger than usual differences between winter and summer futures prices that prevailed during the spring and summer of 2006 were largely the result of Amaranth's large-scale trades rather than the normal market interaction of many buyers and sellers.
(c) Amaranth's 2006 positions in the natural gas market constituted excessive speculation.

(2) In August 2006, Amaranth traded natural gas contracts on ICE rather than on NYMEX so that it could trade without any restrictions on the size of its positions.

(a) When NYMEX directed Amaranth to reduce its positions in September 2006 and October 2006 natural gas futures contracts, Amaranth simply transferred those positions to ICE, an unregulated market, thereby maintaining its overall speculative position in the natural gas market.
(b) NYMEX's attempt to limit speculative trading during the last day of trading on the September 2006 natural gas futures contract failed, because neither NYMEX nor the CFTC had any authority, mandate, or ability to limit trading on ICE that affected the pricing of the NYMEX futures contract.

(3) Amaranth's actions in causing significant price movements in the natural gas market demonstrate that excessive speculation distorts prices, increases volatility, and increases costs and risks for natural gas consumers, such as utilities, who ultimately pass on inflated costs to their customers.

(a) Purchasers of natural gas during the summer of 2006 for delivery in the following winter months paid inflated prices due to Amaranth's speculative trading.

(b) Many of these inflated costs were passed on to consumers, including residential users who paid higher home heating bills.

(4) The two major U.S. exchanges that trade natural gas – NYMEX and ICE – affect each other's prices.

(a) Significant volumes of natural gas are traded on both NYMEX and ICE, and both markets play a key role in setting U.S. natural gas prices.
(b) The contracts used on NYMEX and ICE to trade natural gas, called futures contracts on NYMEX and swaps on ICE, are equivalent financial products that serve the same risk-management purposes.
(c) Traders routinely buy and sell natural gas contracts on both NYMEX and ICE, and hold positions in both markets.
(d) The price of NYMEX futures and ICE swaps are virtually identical up until the final half hour of the last trading day of the NYMEX contract, when NYMEX and ICE prices typically differ by a few cents at most.

(5) Current restraints on speculative trading to prevent manipulation and price distortions are inadequate.

(a) The CFTC lacks statutory authority to establish or enforce speculative position limits on the trading of natural gas on ICE or other Exempt Commercial Markets.
(b) When large traders choose to trade on ICE rather than NYMEX, it is difficult, if not impossible, for NYMEX to prevent price manipulation or excessive speculation from distorting NYMEX prices, because NYMEX does not have information regarding, or the jurisdiction to limit, trading on ICE even though ICE trades affect NYMEX futures prices.
(c) The CFTC's primary strategy to stop excessive speculation has been to prevent manipulation of the final price of a futures contract that is about to expire, rather than to generally review speculative trades affecting a range of futures contract prices.

(6) The CFTC is unable to meet its statutory mandate to prevent market manipulation and excessive speculation from causing sudden, unreasonable, or unwarranted energy prices.

(a) The CFTC lacks statutory authority to effectively oversee U.S. energy commodity markets, because the "Enron Loophole" prevents the CFTC from overseeing ICE.
(b) The CFTC lacks budgetary, staff, and technological resources to effectively monitor energy commodity markets.

(c) As a result of the lack of legal authority and budgetary resources, the CFTC was unable to prevent excessive speculation in the natural gas market in 2006.
(d) If the CFTC is not provided with additional legal authority and resources, the CFTC will remain unable to accomplish its statutory mission.
(e) The inability of the CFTC to accomplish its statutory mission with respect to the trading of energy commodities presents a threat to the energy and economic security of the United States.

B. RECOMMENDATIONS

(1) Congress should eliminate the "Enron Loophole" that exempts electronic energy exchanges from regulatory oversight. Experience since passage of the Commodity Futures Modernization Act of 2000, demonstrates there is no sound rationale for exempting electronic energy exchanges from regulatory oversight. Excessive speculation that occurred on electronic exchanges in 2006 contributed to the overall distortion of energy prices in the natural gas market, to the detriment of American consumers, businesses, industry, and utilities. Exempt Commercial Markets, such as ICE, should be required to comply with the same statutory obligations as Designated Contract Markets, such as NYMEX, and should be regulated in the same manner by the CFTC to prevent market manipulation and excessive speculation. To ensure fair energy pricing, it is time to put the cop back on the beat in all U.S. energy commodity markets.

(2) If given additional legal authority, the CFTC should monitor aggregate positions on NYMEX and ICE. The CFTC and exchanges should strengthen their monitoring and oversight to prevent excessive speculation for all of the months in which contracts are traded, not just for contracts near expiration.

(3) Congress should increase the CFTC budget and authorize CFTC user fees to help pay for the additional cost. The CFTC's budget should be increased to provide the staff and technology needed to monitor, integrate, and analyze real-time transactional data from all U.S. commodity exchanges, including NYMEX and ICE. Needed funding should be obtained from user fees imposed on commodity markets.

III. THE ROLE OF NATURAL GAS IN THE U.S. ECONOMY

> *"Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done."*
> --John Maynard Keynes, 1936[5]

To understand the behavior of the natural gas market in 2006, and the significance of those events, it is useful to review how natural gas is produced and used, the fundamentals of natural gas supply and demand, and how the various natural gas futures and derivatives markets affect the price of natural gas paid by natural gas users, such as homeowners, businesses, manufacturers, and electric utilities.

A. Uses of Natural Gas

Natural gas is one of the main sources of energy for the United States, fueling nearly one-quarter of the nation's energy consumption. (Figures 1a and 1b). Natural gas is the cleanest burning of the fossil fuels – for an equivalent amount of heat produced, the burning of natural gas emits fewer atmospheric pollutants and greenhouse gases than either coal or petroleum.[6]

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[5] The General Theory of Employment, Interest and Money (1936).

[6] NaturalGas.org, Natural Gas and the Environment, at http://www.naturalgas.org/environment/naturalgas.asp. Compared to the burning of either coal or oil, the burning of natural gas emits virtually no particulates, no sulfur dioxide, no mercury, and significantly reduced levels of nitrogen oxides. To generate a given amount of heat energy, the use of natural gas emits about 30 percent less carbon dioxide than petroleum and about 45 percent less carbon dioxide than coal. *Id.* However, methane, the principal component of natural gas, traps heat 21 times more effectively than carbon dioxide, and is therefore a more potent greenhouse gas. Nonetheless, the overall contribution to global warming from the use of natural gas as an energy source is much less than the contribution from the other fossil fuels. U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990-2004 (April 2006), USEPA #430-R-06-002, Executive Summary.

Figure 1a

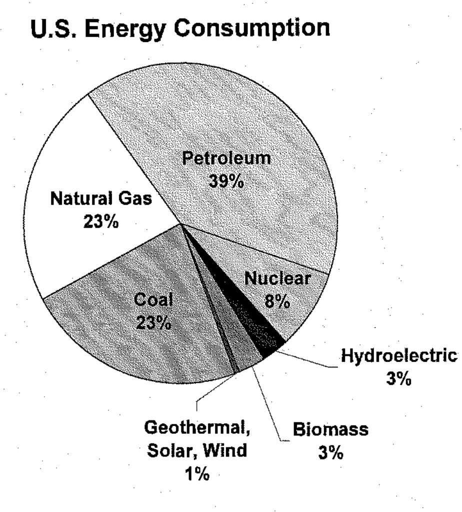

Fig. 1a. Natural gas supplies nearly one-quarter of the energy consumed in the United States. Data source: U.S. Department of Energy, Energy Information Administration ("EIA").

Figure 1b

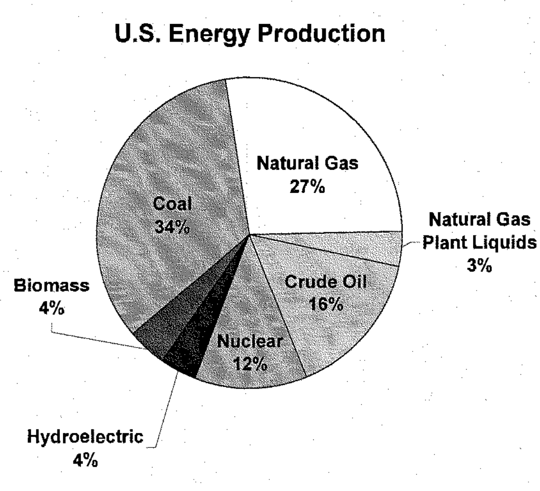

Fig. 1b. Natural gas generates about one-quarter of the energy produced in the U.S. Data source: EIA.

The price of natural gas directly affects every segment of the U.S. economy, from individual households to small businesses to large industries. "Natural gas is used in over 60 million homes. Additionally, natural gas is used in 78% of restaurants, 73% of lodging facilities, 51% of hospitals, 59% of offices, and 58% of retail buildings."[7] Natural gas generates approximately one-fifth of the domestically produced electricity in the United States.[8] The majority of American homes are heated with natural gas.[9] Additionally, natural gas is used for a variety of industrial products, including fertilizer, paints, carpets, plastics, dyes, photographic film, antifreeze, medicines, and explosives.[10] (Figure 2).

Figure 2

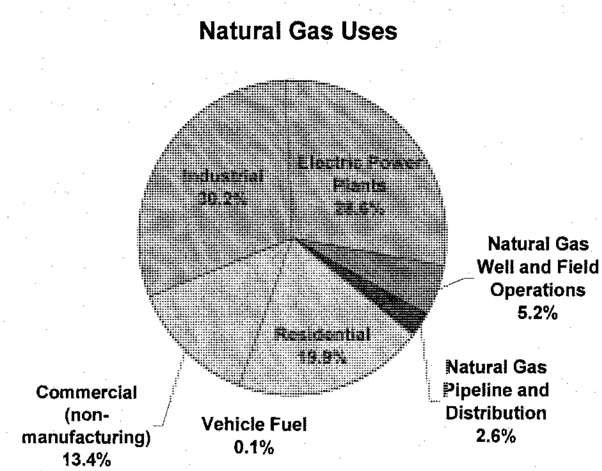

Fig. 2. Natural gas is used in a variety of economic sectors. Data source: EIA.

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[7] American Petroleum Institute (API), Issue: Natural Gas, April 7, 2006, available at API website, http://www.naturalgasfacts.org/.

[8] U.S. Department of Energy (DOE) Energy Information Administration (EIA), Natural Gas Basics, EIA website, http://www.eia.doe.gov/oil_gas/natural_gas/info_glance/natural_gas.html.

[9] A 2001 EIA survey found that 54 percent of all U.S. households use natural gas as the main heating fuel.

[10] U.S. Department of Energy (DOE) Energy Information Administration (EIA), Natural Gas Basics, EIA website.

The total domestic demand for natural gas is highly seasonal. Total demand increases in the winter as temperatures fall and the demand for natural gas for residential heating rises. Demand for natural gas is at its lowest during the summer months, although in recent years summertime demand for natural gas has risen to meet short-term needs of electric utilities during heat waves. Industrial and commercial use of natural gas is fairly constant year-round. (Figure 3).

Figure 3

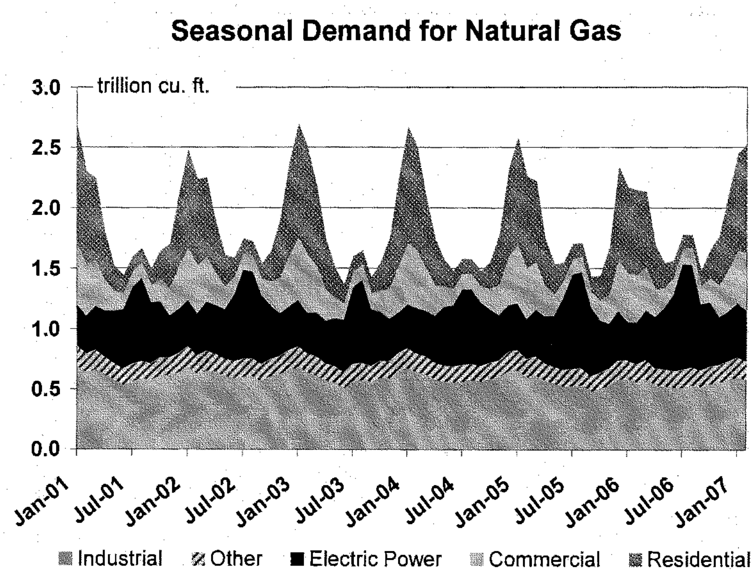

Fig. 3. Demand for natural gas is seasonal. Data source: EIA.

Table 1 presents the total expenditures in 2005, by State, for natural gas delivered to residential, commercial, and industrial consumers and electric power plants. For the United States as a whole, these expenditures for natural gas totaled approximately $205 billion.

Table 1
Natural Gas Expenditures, by State, 2005 (in dollars)

State	Residential	Commercial	Industrial	Electric Power	Total
Texas	2,309,343,446	1,675,701,340	11,208,553,667	11,908,056,792	27,097,637,264
California	6,729,138,905	2,858,617,684	7,264,780,158	5,628,487,850	21,475,532,962
New York	6,769,094,146	4,059,906,352	750,687,104	2,830,505,002	14,214,393,600
Louisiana	541,005,654	365,492,753	7,803,877,846	2,002,181,053	10,731,458,445
Illinois	5,064,492,761	2,281,060,715	2,507,966,080	823,425,166	10,676,959,744
Ohio	4,795,042,391	1,945,127,275	2,291,072,028	266,273,555	8,793,536,249
Pennsylvania	3,482,856,525	1,800,415,220	2,087,250,527	810,555,998	8,291,117,369
Michigan	3,783,843,795	1,530,555,504	1,990,011,418	730,764,939	8,035,075,461
New Jersey	3,106,519,076	2,225,130,067	844,390,547	1,235,970,374	7,411,610,387
Florida	326,887,872	709,125,297	656,827,153	5,518,095,890	7,205,612,063
Indiana	1,734,438,281	864,647,722	2,662,697,539	308,890,501	5,611,674,043
Georgia	2,085,172,894	782,510,293	1,261,786,238	1,097,294,529	5,226,897,059
Massachusetts	1,830,265,680	809,746,252	603,077,308	1,467,595,851	4,760,879,353
Oklahoma	782,686,591	430,327,185	1,079,457,619	2,224,213,533	4,516,661,763
Wisconsin	1,585,400,402	863,577,981	1,283,452,456	514,082,737	4,267,212,956
Colorado	1,278,511,707	582,013,865	1,086,604,062	698,320,980	3,644,409,515
Virginia	1,293,128,432	780,182,243	798,612,777	644,068,957	3,515,992,409
Alabama	658,410,142	360,019,243	1,438,796,878	1,012,283,956	3,469,508,529
Minnesota	1,441,839,789	974,506,544	807,424,911	220,384,000	3,444,504,879
Missouri	1,358,853,883	707,480,034	728,199,054	259,930,650	3,054,466,661
North Carolina	982,250,959	610,710,211	974,528,815	229,036,499	2,796,526,564
Arizona	554,289,557	314,864,591	144,810,786	1,792,077,727	2,735,250,589
Mississippi	321,682,759	243,159,903	846,960,587	1,275,641,244	2,692,454,553
Maryland	1,293,570,411	834,523,899	288,306,573	212,155,507	2,635,354,550
Tennessee	864,378,931	876,871,713	854,240,032	47,715,612	2,573,205,294
Washington	938,791,887	918,839,333	285,125,594	456,970,225	2,610,725,631
Kentucky	734,901,018	452,890,889	1,108,843,887	145,897,220	2,442,133,015
Iowa	826,293,404	480,229,410	908,825,747	188,555,026	2,403,442,642
Arkansas	439,712,591	321,509,375	835,481,351	430,795,433	2,028,501,750
Connecticut	783,040,526	404,892,402	206,075,193	594,871,445	2,021,808,574
Kansas	783,813,576	339,426,479	750,503,272	109,740,516	1,983,643,647
Nevada	453,205,117	275,504,657	135,056,236	1,102,182,788	1,966,593,115
Oregon	513,401,814	287,911,738	536,263,536	592,226,412	1,929,893,500
South Carolina	423,485,274	302,941,079	741,522,597	381,887,401	1,849,431,255
New Mexico	370,320,737	225,168,280	213,972,795	349,431,239	1,158,892,051
Utah	563,608,453	283,406,083	185,951,322	103,786,009	1,136,845,767
Nebraska	405,445,072	258,935,056	343,222,799	65,814,978	1,073,419,905
West Virginia	397,333,073	309,822,459	352,262,812	33,656,125	1,097,107,593
Rhode Island	282,307,039	147,081,601	65,167,519	425,072,655	920,639,214
New Hampshire	155,741,078	134,759,226	64,226,916	360,444,201	725,352,672
Idaho	228,775,358	130,456,142	101,728,678	86,885,213	547,844,400
Wyoming	121,427,742	94,403,340	357,093,741	3,337,097	546,262,109
Maine	18,584,197	69,912,609	36,573,146	412,524,567	536,594,379
Montana	212,227,606	140,557,523	160,945,021	1,998,205	515,727,155
Delaware	150,746,116	108,617,285	165,685,904	109,175,907	534,450,215
D.C.	233,625,504	252,870,434	0	0	486,574,938
Alaska	103,305,825	83,320,917	138,076,232	134,350,537	457,962,830
South Dakota	152,639,459	101,221,959	97,505,230	35,247,134	386,017,832
North Dakota	121,882,100	102,299,707	110,681,626	8,082	334,881,589
Vermont	37,875,052	23,283,917	20,160,505	337,283	83,351,227
Hawaii	15,991,296	46,819,930	7,198,765	0	69,979,551
U.S. Total	61,719,782,998	35,649,695,651	57,744,340,049	49,776,351,560	205,172,167,187

Table 1. Data source: EIA, Natural Gas Monthly, March 2007.

B. Sources of Natural Gas

Like the other fossil fuels, natural gas is generated when decayed organic matter is trapped beneath the surface of the earth and subject to high pressures and temperatures over long periods of time. Natural gas is extracted through wells drilled into porous rock in regions of oil and gas deposits. Natural gas consists primarily of methane, but also contains butane, pentane, and other gaseous and liquid hydrocarbons.

In 2005, there were over 425,000 natural gas and gas condensate wells in the United States.[11] The leading areas of gas production within the United States are located in the States of Texas, Oklahoma, Wyoming, New Mexico, Louisiana, and in Federal waters in the Gulf of Mexico. (Figure 4).[12]

Figure 4

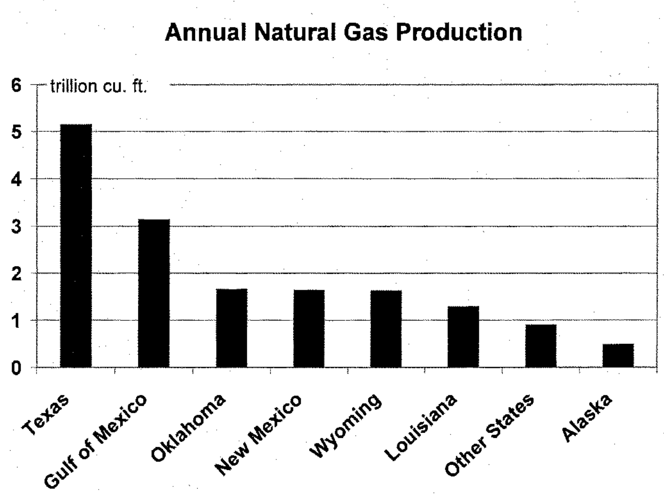

Fig. 4. Texas and the Gulf of Mexico account for over half of domestic production of natural gas. Data source: EIA.

[11] U.S. Department of Energy (DOE) Energy Information Administration (EIA), Number of Producing Gas and Gas Condensate Wells, EIA website.
[12] EIA, Natural Gas Monthly, March 2007, Table 6.

How Natural Gas is Measured

In the United States, natural gas is measured by volume (**cubic feet)** and by energy content (**British Thermal Unit, or Btu)**. One Btu is the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit. One cubic foot of natural gas contains about 1031 Btu, or approximately the same amount of energy as in a candy bar. Natural gas usually is measured in quantities of thousands of Btu (**MBtu)** or millions of Btu (**MMBtu**). For retail sales, natural gas is often measured in units of **therms (th)**. One therm equals 100,000 Btu.

As domestic consumption of natural gas now exceeds production, the United States relies on imports for approximately 15 percent of its natural gas supply (Figure 5). Nearly all of the natural gas imported by pipeline comes from Canada. Since 2000, the United States has imported substantial quantities of liquefied natural gas (LNG), mostly from Trinidad and Tobago (Figure 6).

Figure 5

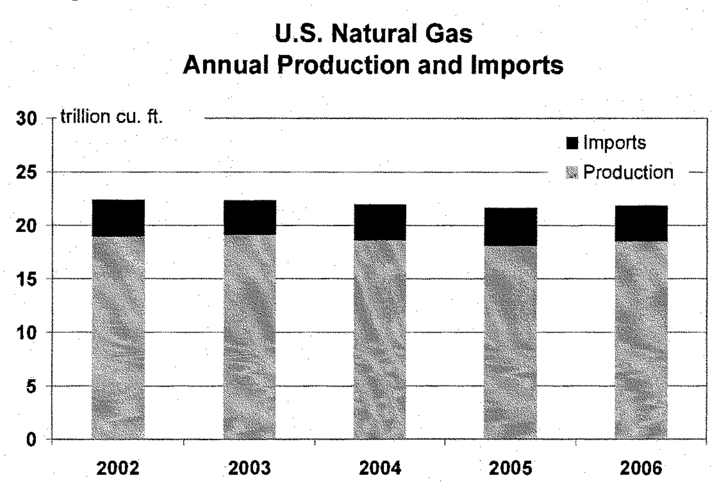

Fig. 5. The U.S. imports approximately 15 percent of its natural gas supply. Data source: EIA, Natural Gas Monthly, March 2007, Table 1.

Figure 6

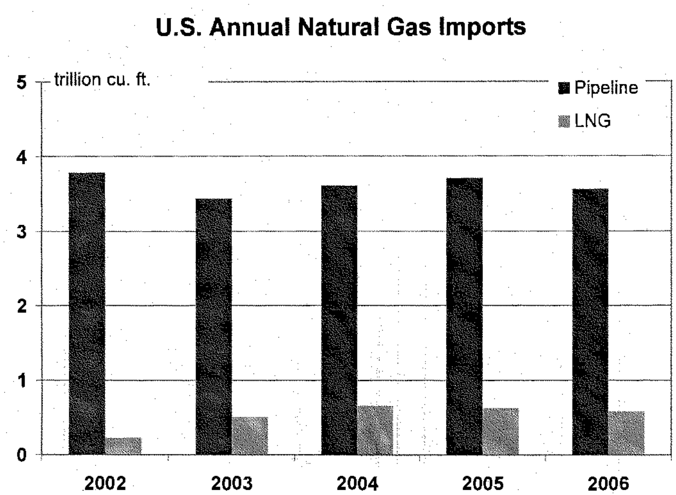

Fig. 6. Imports of Canadian natural gas by pipeline account for approximately 85 percent of total U.S. imports. Data source: EIA Natural Gas Monthly, March 2007, Table 5.

C. Natural Gas Processing, Distribution, and Storage

After natural gas is produced from a well, it is sent by pipeline from the wellhead to a natural gas processing plant to separate the methane gas from the other liquid and gaseous components. The unwanted liquids are separated and the unwanted gases are vented and flared, while the other useful gases, such as ethane, propane, butane, and iso-butane, are collected for distribution elsewhere.[13]

After processing, the dry natural gas, which is now almost entirely methane, is transported by pipelines either directly to large industrial or electricity-generating end-users, to natural gas marketers, to storage facilities, or to local distribution companies (LDCs). The LDCs, in turn, deliver natural gas to consumers, including households. LDCs are either investor-owned or owned by local governments.

[13] NaturalGas.org, Natural Gas – From Wellhead to Burner Tip, at http://www.naturalgas.org/naturalgas/ naturalgas.asp.

The price of natural gas as a commodity is the largest component of residential natural gas prices, accounting for about half of each residential bill. The cost of local distribution is the second-largest component of residential prices. (Figure 7).

Figure 7

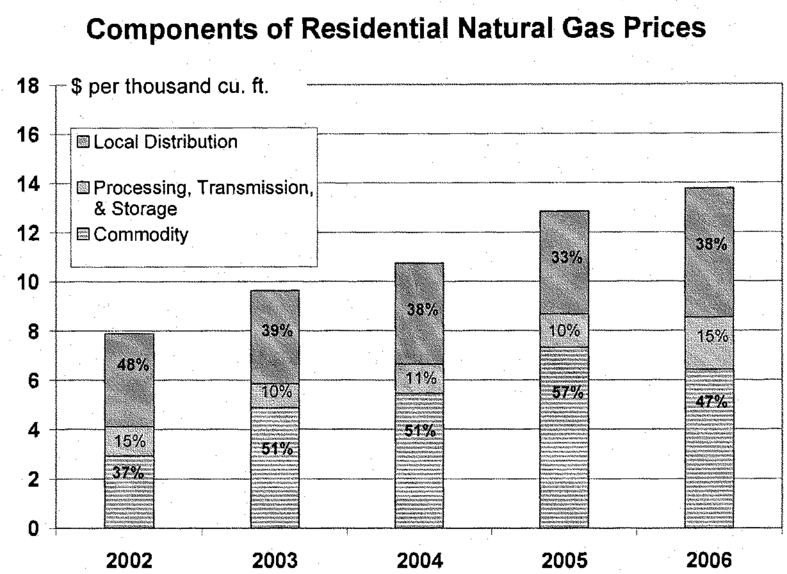

Fig. 7. The commodity cost of natural gas accounts for approximately half of a residential natural gas bill. Data source: EIA, Natural Gas Monthly, March 2007.

Because one of the major uses of natural gas is for home heating, natural gas demand peaks in the winter months and ebbs during the summer months. During the summer months, when supply exceeds demand, natural gas prices fall, and the excess supply is placed into underground storage reservoirs. During the winter, when demand for natural gas exceeds production and prices increase, natural gas is removed from underground storage. (Figure 8).

Figure 8

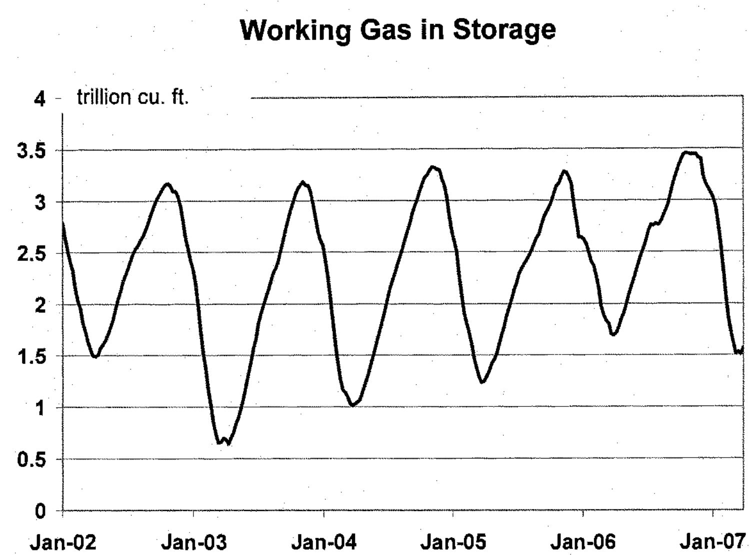

Fig. 8. Natural gas storage levels are seasonal. Natural gas is injected into storage during the summer and taken out of storage during winter. Data source: EIA, Weekly Working Gas in Underground Storage.

Generally, storage reservoirs are created by pumping natural gas into either depleted gas reservoirs, caverns excavated in subsurface salt formations, or underground aquifers. Not all of the gas in underground storage can be recovered because some of the gas must remain to provide adequate pressure to pump out the recoverable gas. The volume of natural gas in a storage reservoir that can be recovered is referred to as the amount of "working gas" in storage.

D. Fundamentals of Natural Gas Supply and Demand

Natural gas production in the United States peaked in 2001. Although high prices have stimulated the drilling of many new wells (Figure 9), many of the larger, mature fields, particularly in the Gulf of Mexico, are being depleted, so that overall domestic production has declined over the past few years (Figure 10).

Figure 9

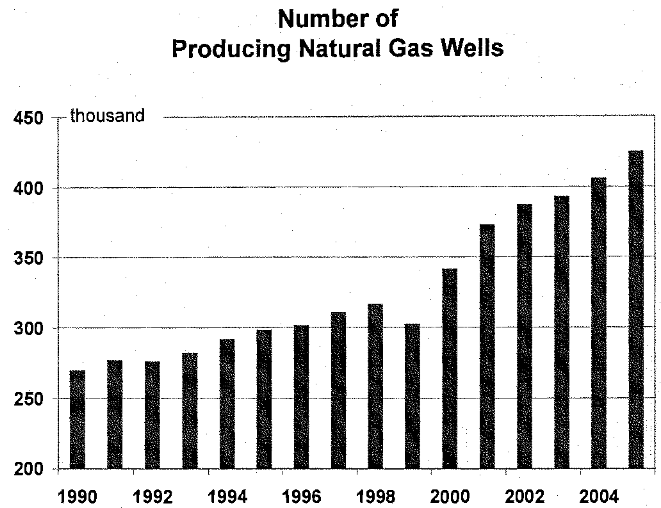

Fig. 9. Rising natural prices stimulated the drilling of new wells. Data source: EIA, Number of Producing Gas and Condensate Wells.

Figure 10

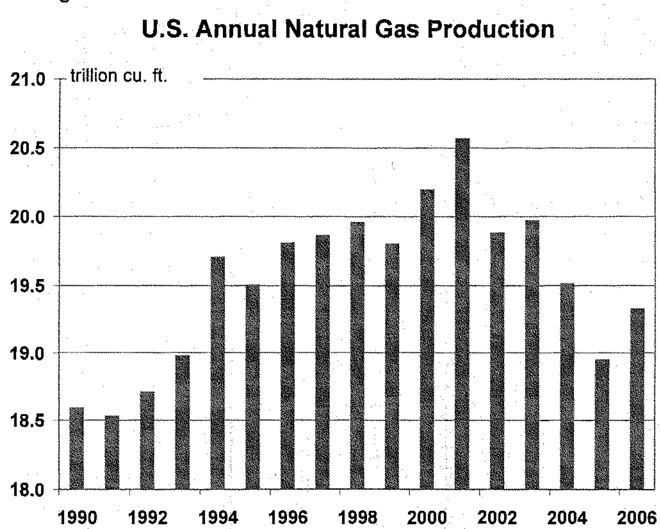

Fig.10. Despite the increasing number of natural gas wells, domestic production is declining. Hurricane Katrina significantly reduced production in 2005. Data source: EIA.

At the same time, demand for natural gas for the generation of electricity is continuing to increase. Because natural gas burns cleaner than either coal or oil, and permits for gas-fired generation are easier to obtain than for other types of fuel, natural gas has been a popular choice for new electrical generating capacity. The amount of natural gas used to generate electricity increased by more than 50 percent between 1996 and 2005, and the capacity of natural gas-fired electrical generating facilities has tripled since 1999.[14] (Figure 11).

Figure 11

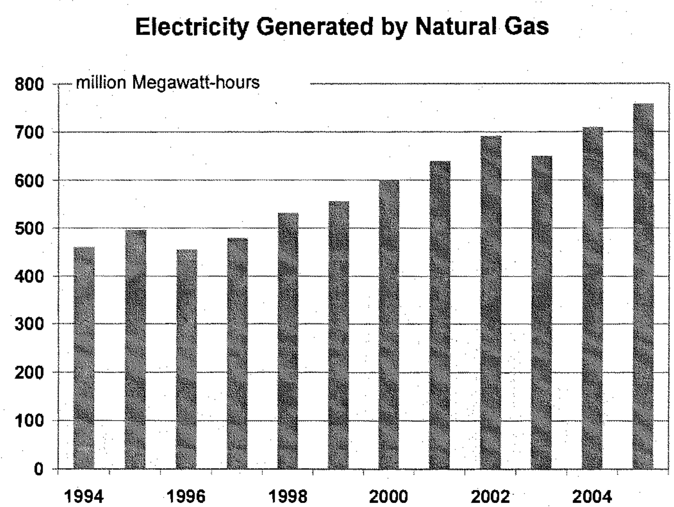

Fig. 11. Demand for natural gas to generate electricity has been increasing. Data source: EIA, Electric Power Annual with data for 2005, Table 1.1.

Declining production of natural gas in the face of increasing demand and limited storage capacity has contributed to the rise in natural gas prices over the past several years. Various other factors also have pushed up prices. These include rising crude oil prices, which enables the price of substitute fuels, such as natural gas, to rise without creating any economic incentives for fuel switching. Hurricanes during the summers of 2004 (Ivan) and 2005 (Katrina, Rita, and Wilma) destroyed oil and gas drilling platforms in the Gulf of Mexico, resulting

[14] American Petroleum Institute, Understanding Natural Gas Markets (2006), at p. 9.

in significant production losses. Other extreme weather conditions in each of the past few years, such as arctic blasts during the wintertime and heat waves during the summer, have also increased demand and price volatility. As a result of these various factors, wellhead and residential natural gas prices have doubled over the past six years (Figure 12).

Figure 12

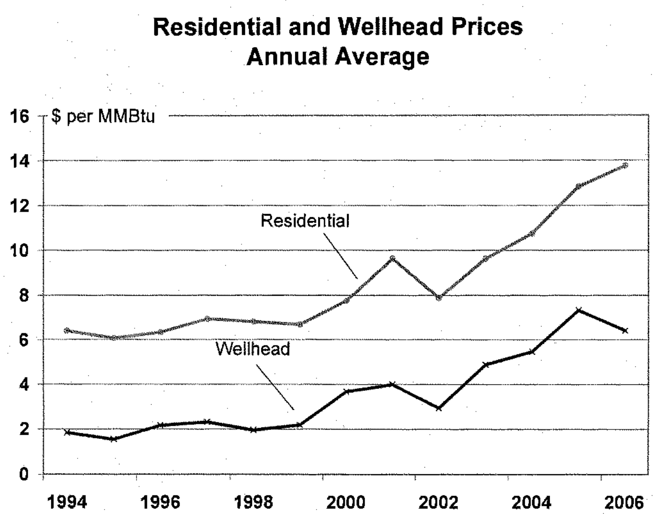

Fig. 12. Average natural gas prices have doubled since 2000. Data source: EIA.

These price increases have resulted in large cost increases for the average household that uses natural gas for home heating. For example, the average household in the Midwest using natural gas for heating paid approximately $750 for natural gas during the 2003-2004 heating season (October through March), $855 for the 2004-2005 heating season, and $1,101 for the 2005-2006 heating season.[15]

Because most of the demand for natural gas in the winter is inelastic - people will pay to heat their homes and cook their food regardless of how expensive it gets - demand increases or supply shortfalls during the winter months can lead to sharp price spikes. Price spikes have occurred in most of the recent winters. (Figure 13). Tight

[15] EIA, Residential Natural Gas Prices, What Consumers Should Know, DOE/EIA-X046 (November, 2006), at p. 4.

supplies and cold weather led to a steep rise in natural gas prices in late 2000 that carried into 2001.[16] In February 2003 frigid temperatures that froze production wells nearly doubled natural gas prices.[17] In mid-January 2004, New England "faced its coldest weather since 1943," leading to record-high spot prices in New England of as much as $75 per MMBtu.[18] The Federal Energy Regulatory Commission (FERC) concluded that the 2004 spike "appeared to be the result of a supply shortage driven by extraordinary demand that left little residual supply available for allocation through the price-driven spot market. Buyers were willing to pay record prices because the consequences of failure to obtain supply exceeded the cost of paying these unusually high prices."[19] In late 2005, U.S. gas supplies "faced unprecedented disruption from hurricanes Katrina and Rita. These severe supply disruptions led to sharp price increases that were most severe in the eastern United States."[20] As production was disrupted for several months, prices stayed high until early 2006, when warmer winter weather and increased production elsewhere ameliorated the effects from the hurricanes.

Figure 13

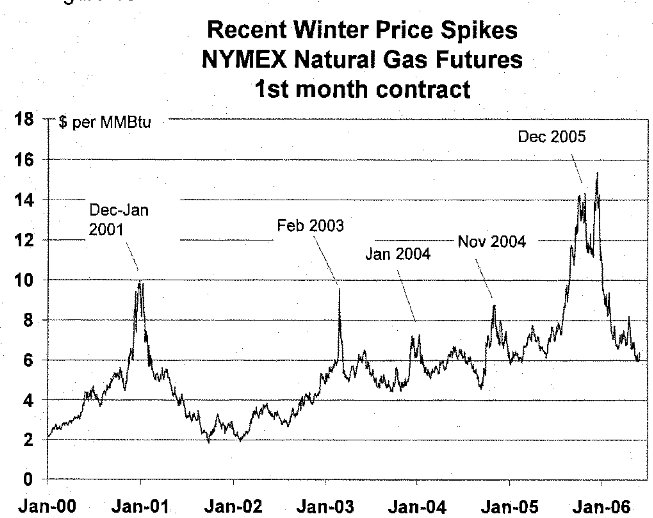

Fig. 13. Natural gas prices have spiked in five of the past six winters. Data source: EIA, from NYMEX price data.

[16] EIA, U.S. Natural Gas Market: Recent Trends and Prospects for the Future (May 2001), at p. ii.
[17] FERC, Report on the Natural Gas Price Spike of February 2003 (July 23, 2003), at p. 3.
[18] FERC, 2004 State of the Markets Report (June 2005), at pp. 12-14.
[19] *Id.*
[20] FERC, 2006 State of the Markets Report (undated), at p. 3.

IV. NATURAL GAS MARKETS

"If orgies of speculation are permitted to spread too far . . . the ultimate collapse is certain not only to affect the speculators themselves, but also to bring about a general depression involving the entire country."
-- Paul M. Warburg, 1929[21]

Natural gas prices are determined through the interaction of the two major types of markets for natural gas: the cash (or "physical") markets, which involve the purchase and sale of physical quantities of natural gas; and the financial markets, which involve the purchase and sale of financial instruments whose prices are linked to the price of natural gas in the physical market.

This section reviews the nature of these markets and their role in establishing natural gas prices. It then provides an overview of the laws and regulations applicable to the major markets for energy futures and derivatives.

A. The Cash Market

When natural gas is physically transferred from one firm to another during the process of production, transportation, storage, and distribution, the price of the gas is generally set by negotiation between the parties who either agree on a fixed price or incorporate a reference to the prevailing market price for natural gas at that stage of the process at that particular location. If a transaction takes place at a location where there is not a reliable reference price, then the price may be set at a differential to the prevailing price at the nearest location where there are enough transactions to provide a reference price.

Publishers of industry newsletters, such as *Platts* and *Natural Gas Intelligence*, take surveys of the price of transactions at the key locations where natural gas is sold or delivered, and publish daily summaries and monthly "indexes" of those prices. These key locations are often referred to as "hubs," a location where natural gas pipelines converge, or "citygates" where gas is delivered to a local distribution company.[22] One such location is known as the Henry Hub in Louisiana where a large number of natural gas pipelines converge.

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[21] Commercial and Financial Chronicle, March 9, 1929, cited in Edward Chancellor, *Devil Take the Hindmost: A History of Financial Speculation* (Farrar Straus Giroux, New York, 1999), at p. 210.

[22] See, e.g., *Platts*, Methodology and Specifications Guide, North American Natural Gas, February 2007.

The published daily prices and monthly indices are often used as reference points in contracts setting the price of subsequent natural gas transactions. "In Platts' daily gas survey the number of transactions now typically exceeds 3,000."[23] Rather than individually negotiating a contract price, buyers and sellers often base the price of the gas on the published prices for similar transactions at that location, or at a specified differential to a published price in the event that the gas is to be delivered at a different geographic location.

Large natural gas users, such as industrial users or local distribution companies, usually purchase natural gas in the spot market on a daily basis for immediate delivery, or on a monthly basis for a fixed amount of gas to be delivered each day of the specified month or months. Monthly contracts may be entered into one or more months in advance of the delivery month.

Until recently, most natural gas delivered pursuant to a monthly contract in the physical market was priced according to a published index price for the delivery month. Determining the monthly index price for natural gas is a process steeped in industry tradition. Historically, the focus has been on transactions which occur during the "bidweek," which is the last five days of the month preceding the month in which the gas is to be delivered. *Platts*, for example, surveys fixed-price transactions entered into during the bidweek, as reported by a large number of major gas sellers, and then uses the reported prices to compute a monthly index price for gas to be delivered during the following month.[24] Monthly purchases of natural gas in the physical market typically use that monthly index price, unless the parties have negotiated their own fixed-price deal.

In recent years, instead of using a published monthly index price derived from reported prices, buyers and sellers are increasingly referencing the relevant NYMEX futures contract for delivery of natural gas and using the price that is finally settled on for delivery of gas under that standard monthly contract. The final settlement price for each NYMEX contract is determined by taking the volume-weighted average of prices on the NYMEX during the last half hour of trading on the date that the NYMEX contract expires, which is on the third-to-last business

[23] Comments of *Platts,* Before the Federal Energy Regulatory Commission, Transparency Provisions of the Energy Policy Act of 2005 (November 1, 2006), Docket No. AD06-11-000, at p. 4.

[24] According to *Platts*, "Eight of the 10 largest gas marketers report prices to publishers, and publishers capture 80% of the physical gas volumes sold by the top 25 marketers. Many major gas sellers, primarily producers, have made the necessary commitment to report prices in accordance with FERC's policy statement. However, participation in price surveys by large gas buyers, primarily local distribution companies, has been notably lower." Comments of *Platts,* Before the Federal Energy Regulatory Commission, Transparency Provisions of the Energy Policy Act of 2005 (November 1, 2006), Docket No. AD06-11-000, at p. 1.

day of each month. The final NYMEX settlement price is publicly posted shortly after the close of trading.

Natural gas contracts that reference the NYMEX settlement price are called "physical basis" deals. If a physical basis deal seeks to deliver natural gas at a location other than the Henry Hub, the delivery point in all standard NYMEX natural gas contracts, the contract adds a price differential to the standard settlement price to take into account differences in natural gas prices between the Henry Hub and the actual delivery location.

In its most recent "State of the Market" report, FERC took note of the growing reliance on the NYMEX settlement price as the basis for pricing monthly transactions in the cash market:

> By 2006, most of the transactions that set these [monthly] indices in the Northeast United States and along the Gulf Coast were *physical basis* deals. But many of these physical basis deals set their price as the final settlement price for the Nymex futures contract at Henry Hub plus a fixed, agreed-upon differential. Consequently, in these locations, index prices are effectively an average of these fixed, agreed-upon differentials added to the final Nymex settlement price. In those areas, index prices reflect the Nymex price.[25]

In 2007, *Platts* reported to FERC that its surveys had found: "Physical basis deals [were] used at 33 of 41 delivered-to-pipeline locations and at 14 of 22 market center locations in the monthly survey. ... In February [2007], for the 47 points where basis is used, basis trade represented 54.1 percent of total volume and 53.4 percent of the number of deals."[26]

The close relationship between the NYMEX settlement price for natural gas futures contracts and the *Platts* monthly index price for natural gas in the cash market is shown in Figures 14a and 14b. FERC summarized the reasons for the linkage between prices in the cash and futures markets as follows:

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[25] FERC, 2006 State of the Markets Report, at p. 49 (emphasis in original).

[26] Supplemental Comments of *Platts* Before the Federal Energy Regulatory Commission, Transparency Provisions of the Energy Policy Act of 2005, Docket No. AD06-11-000, at pp. 1-2. The American Gas Association (AGA) reports that LDCs continue to rely heavily on monthly price indices for their long- and mid-term supply agreements. American Gas Association, LDC Supply Portfolio Management During the 2005-2006 Winter Heating Season, (September 7, 2006), at p. 3. The AGA also found that most of these LDCs use financial instruments to hedge at least a portion of these purchases: "Eighty-seven percent of the companies responding to the AGA survey indicated use of financial instruments to hedge at least a portion of their supply purchases. . . . For this past winter, twenty-two of the sample companies providing data hedged up to 50% of their gas supply purchases during the winter." *Id.* at p. 4.

As a practical matter, monthly cash physical and futures natural gas prices are and must be closely related to one another, if markets are working effectively. The fact that many participants can engage in both futures and monthly cash physical markets means that any material differences will be arbitraged away. That is, at least some market participants will pick the least expensive way to establish a position using different combinations of products. In doing so, they will force the values of those different combinations to converge. Consequently, big changes in cash physical market values naturally affect futures trading, and vice versa.[27]

Figure 14a

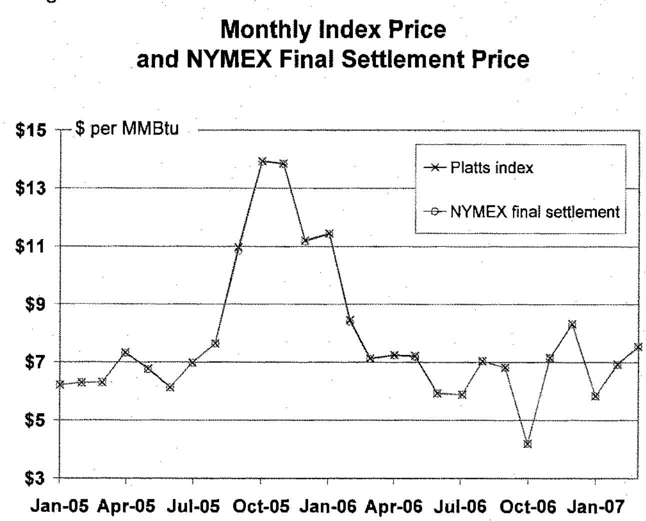

Fig. 14a. The Platts monthly index price and the NYMEX final settlement price are closely linked. Data source: Platts.

[27] FERC, 2006 State of the Markets Report, at p. 48.

Figure 14b

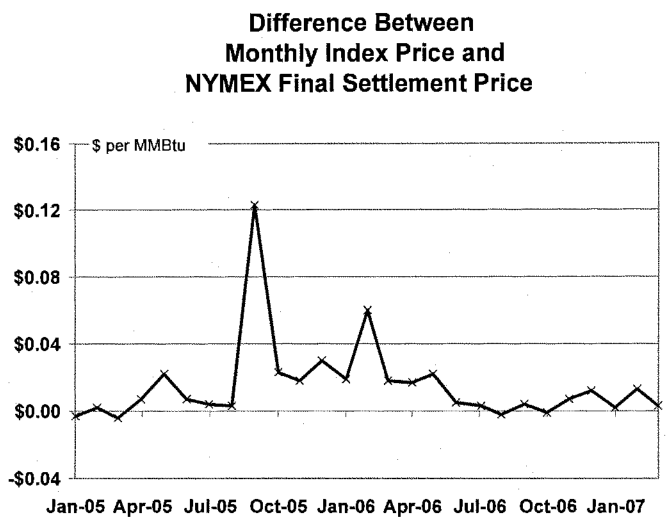

Fig. 14b. The NYMEX futures contract price and the Platts monthly index price typically differ by only a few cents. The 12-cent differential in September 2005 was due to market disruptions from Hurricane Katrina. Data source: Platts.

B. The Financial Market

The natural gas physical or cash market focuses on transactions involving the physical transfer of natural gas. Natural gas financial markets, in contrast, focus on the purchase and sale of financial instruments whose price is linked to the price of natural gas in the physical market but that rarely result in the physical delivery of natural gas.

The financial markets for energy commodities are often described as consisting of two types of markets: "futures exchanges" and "over-the-counter" (OTC) markets. This grouping has traditionally turned on whether a particular financial instrument being traded meets the statutory definition of a "futures contract" under the Commodity Exchange Act (CEA). Under the CEA, financial instruments that meet the statutory definition of a futures contract must be traded on a futures exchange regulated by the CFTC. Financial instruments that do not meet the legal definition of a futures contract are not required to be traded on a regulated exchange. The markets in which these other financial instruments are traded - including both exchanges and bilateral transactions - are often referred to as the OTC market.

Because the definition of a futures contract involves arcane legal considerations regarding the wording and elements of a particular type of contract, another analytical approach is to group the energy commodity markets according to the economic function and nature of the financial instruments being traded. This approach also produces two categories of markets: one market consists of the organized commodity exchanges on which standardized contracts for energy commodities are traded; the other consists of off-exchange transactions between two parties involving contracts that may or may not be standardized.

The major organized commodity exchanges that trade standardized contracts for natural gas and other energy commodities in the United States are NYMEX, which is located in New York City, and ICE, whose headquarters is located in Atlanta, Georgia. NYMEX is a fully regulated futures exchange overseen by the CFTC, whereas ICE is a virtually unregulated exchange that operates largely outside CFTC oversight and the confines of the CEA.

1. Energy Commodity Exchanges: NYMEX and ICE

(a) Characteristics of a Commodity Exchange

Although brokers and others use a variety of methods and technologies to match buyers and sellers of financial instruments, a commodity exchange has three key features: (i) trading is limited to listed, standardized contracts whose price is linked to the price of the commodity in the physical market; (ii) buyers and sellers do not enter contracts directly with each other, but rather trade through clearing firms and a clearinghouse; and (iii) the bids and offers are transparent to all market participants, and the prices and volumes of completed transactions are immediately posted for public review.[28]

(i) Standardized Contracts

The standardization of contracts is one of the major advantages of trading on an exchange as compared to individually negotiating bilateral deals. To execute a trade involving a standardized contract, the only term that must be negotiated is the price. A standardized contract specifies all other terms for the commodity transaction, such as quantity, quality, whether and where physical delivery of the commodity is to occur, and how any subsequent financial settlement of the contract is to be calculated.

[28] Some exchanges charge a fee for access to real-time price and volume information.

Standardized contracts can be more easily traded than individually negotiated contracts. They can be traded many times, to many different people. The standardization of contract also improves the price discovery process, as it provides a common reference point for comparing transactions.

On a commodity exchange, the price negotiation takes place through either the open outcry system, which is the traditional system of traders and brokers gesturing and shouting to each other bids and offers in trading pits located on the exchange floor, or through an electronic system in which bids and offers are posted on computer screens located anywhere and matched electronically without any face-to-face contact between the parties or their brokers.

Three basic types of standardized financial instruments are traded on commodity exchanges: futures, swaps, and options.

Futures contracts. A futures contract is a standardized contract by a buyer to accept and a seller to deliver a specified quantity of a particular commodity at a specified place and time in the future for a price specified at the time the contract is entered. Rather than provide a mechanism for the actual delivery of physical volumes of natural gas, the primary purposes of futures contracts are to allow market participants to protect themselves against future price changes and provide a market-based mechanism for price discovery.[29] The vast majority of traders who buy or sell futures contracts do not intend to make or take delivery of the commodity under the futures contract. Speculators buy and sell futures contracts in an attempt to profit from changes in prices over time. Hedgers use the futures market to lock in the price of future purchases or sales. All of these market participants and others look to the futures market for information about anticipated trends in supply, demand, and prices.

Trading on a futures contract is required to be concluded at the end of the month before delivery is due. Most traders who are holding futures contracts ("long" positions) will sell an equivalent number of contracts so they will not have to take delivery of the underlying commodity. Similarly, in the last month of trading, most traders who have sold futures contracts ("short" positions) will then buy an offsetting number of futures contracts so they will not have to make delivery of the commodity.

Take, for example, a producer of natural gas who has a contract to deliver gas to a client several months into the future, and will be paid for

[29] One of the major differences between a forward contract and a future contract is that in the former delivery is intended whereas in the latter is not. See *Commodity Futures Trading Comm. v. Co. Petro Marketing Group, Inc.*, 680 F.2d 573 (9th Cir. 1982).

that gas according to the price in the cash market (the "spot" price) at the time of delivery. The producer is concerned that the spot market price for natural gas may fall and reduce or eliminate its profits. At the same time, an industrial user who has to purchase gas in the future may be concerned that the spot price in that future month may be too high. By entering into a futures contract that fixes the price of natural gas to be delivered in the future month, both the producer and the industrial user can protect themselves against adverse price movements.

In addition to natural gas producers and end-users, market speculators may also be willing to buy or sell futures contracts and bear the risk of price movements in return for the possibility of obtaining a financial gain from the price changes. Many speculators routinely trade futures and other financial instruments to profit from changes in the price of the underlying commodity. A certain amount of speculation, therefore, plays a vital function in bringing liquidity to the market.

Swaps. Like a futures contract, a commodity swap locks in the value of a commodity at a particular price. Unlike a futures contract, however, swaps do not involve the delivery of the commodity. In one of the most common types of commodity swaps, the seller of the swap agrees to pay the buyer for any increases in the price of the underlying commodity above an agreed-upon value (the price of the swap) at the time when the swap expires, and the buyer agrees to pay the seller for any decreases below the agreed-upon value. As with a futures contract, a seller of a swap is protected against any decreases in the price of the commodity, and a buyer is protected against any price increases.

Swaps were originally developed in the financial markets to provide a means to hedge against fluctuations in currency exchange rates, interest rates, bond rates, and mortgage rates. Commodity traders adopted these instruments to provide a better hedge against price risks that could not be fully covered by the standardized futures contracts traded on the exchanges.

Buyers and sellers of commodity swaps soon recognized, however, that the standardization of commodity swaps would facilitate the trading of these instruments and enhance the overall liquidity of the swap market. Standardized swaps were developed to parallel the performance of futures contracts, and electronic exchanges developed to provide for the electronic trading of these standardized swaps, which were often called "futures look-alikes." Today, ICE is the leading exchange for the trading of energy commodity swaps in natural gas and electricity.

The ICE natural gas swap and the NYMEX natural gas futures contract perform the same economic functions. The ICE swap contract even provides that its final settlement price will equal the final settlement price of the NYMEX futures contract for the same month, which means that the final price for two financial instruments will always be identical.

The major difference between the two is that the ICE swap is "financially settled," meaning that the holder of a swap at expiration is not under any obligation to make or take delivery of the commodity, but rather will either pay, or be paid, the difference in the price paid for the swap and the final settlement price of the swap. A person who has bought or sold a financially-settled contract that has not offset that position before the contract expires will either pay or be paid a dollar amount based on the price of the contract at expiry; no physical delivery of any commodity is involved.

Unlike the holder of a futures contract, the buyer or seller of a financial swap contract does not have to trade out of that position prior to expiration of the contract to avoid having to make or take delivery of the commodity.

If a trader buys a swap for $8, for example, and the final settlement price is $9, then the trader would be paid $1. This economic result is the same as if the trader had purchased a NYMEX futures contract for $8 and then either sold a NYMEX futures contract at settlement for the final settlement price of $9, or taken delivery of the natural gas at settlement, and sold the gas for $9 in the cash market. Because ICE fixes the final settlement price for its main natural gas swap equal to the final settlement price of the corresponding NYMEX futures contract, NYMEX futures contracts and ICE swaps provide economically identical hedging and risk-management functions for natural gas users and traders.

Options. An options contract gives the holder of the contract the right, but not the obligation, to buy or sell the underlying futures contract at a certain price for a specified time. On the opposite side, the seller, or writer of an options contract, incurs an obligation to perform should the options contract be exercised by the purchaser.[30] Options can also be used for swaps.

(ii) Clearing

In addition to standardized financial instruments, another key feature of an exchange is the clearinghouse, which is operated by or on behalf of the exchange. In many exchanges, firms that are members of the exchange own and operate the clearinghouse. In addition to keeping

[30] NYMEX website, Frequently Asked Questions, at http://www.nymex.com/faq.aspx.

track of all the trades that occur on the exchange each day, the clearinghouse actually clears each individual trade and guarantees performance on all the contracts traded on the exchange. Traders on an exchange do not actually enter into contractual relationships with each other; rather each trades through the clearinghouse which, in effect, acts as a party to every transaction.

To guarantee contract performance, the members of the clearinghouse deposit funds into the clearinghouse. The rules of the exchange also require brokers trading through the clearinghouse and their customers to post deposits or "margins" related to the value of the positions taken in their trades to cover any losses that may occur. At the end of each day of trading these margin accounts are "marked-to-market" – the exchange collects money from accounts that have lost value and credits those accounts that have gained value – so that sufficient funds to guarantee performance are on deposit at all times.[31] In this manner, "counterparty risk" – the risk that the other party to a trade will default on performance – is greatly reduced.

Traditionally, one of the major advantages of trading on an approved exchange has been that the exchange guarantees financial performance and removes counterparty risk. According to the Chicago Board of Trade (CBOT), which uses a clearinghouse, "the success of this system is obvious. Since its start in 1925, no customer within or outside of the [CBOT] exchange has lost money due to default on a futures position."[32] This advantage to trading on an approved exchange has diminished in recent years as clearing services have been developed for traders entering into standardized contracts off-exchange.

ICE, for example, has contracted with a clearinghouse for traders who trade standardized, cleared products. Unlike NYMEX, ICE does not require its participants to become formal members of its exchange or to join a clearinghouse. Instead, ICE allows any large commercial company qualifying as an "eligible commercial entity" under the CEA to trade on ICE's electronic exchange without having to become a member of the exchange, pay a fee, or employ a broker. ICE has contracted with a third party to provide clearing services for traders who desire to have their trades cleared. By trading only with other cleared traders, a party trading on ICE can eliminate the risk of default by the other party just as if the trade was conducted on a futures exchange. Many of the same

[31] Marked-to-market is defined by NYMEX as a "[d]aily cash flow system used by U.S. futures exchanges to maintain a minimum level of margin equity for a given futures or options contract position by calculating the gain or loss in each contract position resulting from changes in the price of the futures or options contracts at the end of each trading day." NYMEX website, Glossary, at http://www.nymex.com/glossary.aspx.
[32] Chicago Board of Trade, *Action in the Marketplace*.

large firms that are clearing firms for trading on NYMEX also have contracted to be clearing firms for trading on ICE.

ICE extols the virtues of trading through its clearinghouse: "The introduction of cleared OTC trading has revolutionized the market by reducing bilateral credit exposure while improving capital efficiency and increasing market liquidity."[33] ICE has also stated the following in a filing with the Securities and Exchange Commission (SEC):

> The use of a central clearinghouse rather than the reliance on bilateral trading agreements [has] resulted in more participants becoming active in the OTC markets. In addition, clearing through a central clearinghouse typically offers market participants the ability to reduce the amount of capital required to trade as well as the ability to cross-margin positions in various commodities.[34]

(iii) Transparency

The third key feature of an exchange is that bids, offers, and basic data about transactions are transparent to all market participants, whether or not they are parties to a particular trade. On the floor of an open-outcry exchange, bids and offers are either shouted or gestured for all floor brokers and traders to see and hear; on an electronic exchange the bids and offers are electronically posted to everyone with an access terminal.

Each time a transaction is completed on an exchange, the exchange records the names of the parties and the time and terms of the transaction, including the price and the volume. The prices and volumes of each transaction are immediately posted on the exchange "ticker" for all market participants to see.

[33] ICE, "You Are Cleared to Trade," ICE website, at https://www.theice.com/otc_cleared.jhtml.
[34] Intercontinental Exchange Inc., Form 10-Q, filed May 2, 2006 ("ICE 10-Q"), at p. 16. ICE derives significant revenues from its cleared transactions. In its most recent 10-K filed with the SEC, ICE reported, "Transaction fees derived from trade execution in cleared OTC contracts were $131.2 million for the year ended December 31, 2006 and represented 71.8% of our total OTC revenues during the year ended December 31, 2006, net of intersegment fees." Intercontinental Exchange Inc., Form 10-K, filed February 26, 2007, at p. 9. ICE also wrote: "While we derive no revenue directly from providing access to these clearing services, we believe the availability of clearing services and attendant improved capital efficiency has attracted new participants to the markets for energy commodities trading." *Id.*

(b) NYMEX Natural Gas Futures and ICE Natural Gas Swaps

In the United States, the major exchange-traded financial contracts used for natural gas are the NYMEX natural gas futures contract and the corresponding ICE natural gas swap (called "the Henry Hub" swap).

The standard natural gas futures contract traded on NYMEX is for a volume of 10,000 MMBtu of natural gas to be delivered at the Henry Hub during the month specified in the contract. The contract directs that, "All deliveries shall be made at as uniform as possible an hourly and daily rate of flow over the course of the delivery month."[35] Traders can buy or sell a standardized NYMEX futures contract to deliver natural gas in any future month in any year for up to five years into the future.

Under NYMEX rules, trading on a futures contract terminates on the third business day prior to the month in which delivery of the natural gas is due. A futures contract is said to "expire" after the last day of permitted trading. The final price of the futures contract is determined using a formula that focuses on the trades made during the last half hour of trading on the last day of trading. Trading ends each day at 2:30 p.m. The last half hour is often referred to as the "final settlement period," and the final contract price is often referred to as the "final settlement price." The final settlement price is important, because many natural gas contracts, both on and off exchange, state that the price to be used in the contract will equal the final settlement price of the corresponding NYMEX futures contract.

NYMEX futures contracts often experience the most trading in the last few months before the contract expires. It is not uncommon for many trades to take place during the last trading day, and even during the last half hour. The CFTC and NYMEX have focused significant attention on the trading that takes place near the expiration of a futures contract in an attempt to prevent large trades from inappropriately affecting the final settlement price. For example, the CFTC has imposed a "position limit" that bars any trader from buying or selling more than 1,000 contracts during the last half hour of trading, unless the trader has obtained an exemption or made another arrangement with regulators.

Many natural gas producers and users buy or sell futures contracts for up to 12 months in the future to hedge their purchases or sales. The volume of trading in natural gas contracts more than 18 months in the

[35] NYMEX, Natural Gas Futures, Specifications, NYMEX website at http://www.nymex.com/NG_spec.aspx.

future is not large, and most of the trading this far into the future is done by speculators.

The ICE natural gas swap has many features similar to the NYMEX futures contract, but there are also some differences. Table 2 presents the standard specifications applicable to both types of natural gas contracts:

Table 2
NYMEX and ICE Basic Natural Gas Contract Specifications

	NYMEX Natural Gas Futures Contract	**ICE Natural Gas Henry Hub Swap**
Trading Unit	10,000 MMBtu	2,500 MMBtu
Price Unit	$ per MMBtu	Same as NYMEX
Last Trading Day	Trading terminates three business days prior to the first calendar day of the delivery month.	Same as NYMEX
Settlement Type	Physical	Financial
Final Settlement Price	Volume-weighted average of prices of trades during the last half-hour of Last Trading Day (2:00 to 2:30 PM).	Same as NYMEX Final Settlement Price on Last Trading Day
Delivery Location	Henry Hub, Louisiana	N/A
Delivery Period	First calendar day of delivery month through last calendar day of delivery month.	N/A
Trading Hours	Open outcry: 9:00 AM - 2:30 PM Electronic trading: 6:00 PM of the prior trading day to 5:15 PM of the trading day.	Electronic trading: 2:30 PM of the prior trading day to 2:30 PM of the trading day.

As Table 2 indicates, the NYMEX natural gas futures contract is physically settled, meaning that a trader that is a net buyer of futures contracts for a particular month (a "long" position) must either sell an equivalent number of contracts for that month prior to the expiration of the contract or take delivery of the amount of gas in the contracts at the contract delivery location, which for natural gas futures contracts is the Henry Hub in Louisiana. Similarly, a trader that is a net seller of futures contracts for a particular month (a "short" position) must either buy an equivalent number of contracts prior to expiration or make delivery of the net volume of natural gas in the trader's short position at the contract delivery location.

Like other commodity traders, natural gas traders rarely make or take delivery pursuant to a futures contract. Buyers and sellers of physical quantities of natural gas use futures contracts to hedge their exposure to price changes in the physical market rather than as a means to acquire physical quantities of natural gas. Many large traders nonetheless have acquired the capability to make or take delivery of natural gas in order to obtain the flexibility at contract settlement to not have to buy or sell futures contracts if the prices in the futures market are less favorable to the trader than the prices in the cash market.

NYMEX futures contracts can be bought or sold either on the floor of the exchange in New York, through the open outcry process, or through the NYMEX electronic trading platform, called Globex, where the bids and offers appear on a computer screen, which can be located anywhere. Since its introduction last summer, the Globex electronic trading system has become a widely used platform for trading the NYMEX natural gas futures contract.[36] The prices and volumes of all completed transactions are immediately posted to the market and can be viewed from the floor of the exchange, on an electronic trading screen, or through paid subscription. Basic daily trading data, including daily trading volume, the closing and daily settlement price, and open interest, is available for free on NYMEX's website.[37]

The main natural gas contract traded on ICE is functionally equivalent for risk management purposes to the NYMEX natural gas futures contract, but is labeled by ICE as a "swap" rather than a futures contract. As previously explained, because the final settlement price of the ICE Henry Hub natural gas swap is pegged to the final settlement price for the corresponding NYMEX futures contract, these two types of

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[36] NYMEX exchange-wide statistics indicate that as of mid-April 2007, the volume of futures contracts traded electronically was greater than twice the volume traded on the NYMEX floor. NYMEX.com: Estimated Exchange Wide Volume, 04/13/2007, at http://www.nymex.com/volume.aspx.

[37] The Commodity Exchange Act requires regulated markets to publish daily information about settlement prices, volume, open interest, and opening and closing ranges for all actively traded contracts. 7 U.S.C. § 7(d). Open interest is defined by the CFTC as "the total of all futures and/or option contracts entered into and not yet offset by a transaction, by delivery, by exercise, etc." Open interest held or controlled by a trader is referred to as that trader's position. See CFTC Backgrounder, *The Commitment of Traders Report*, at http://www.cftc.gov/opa/backgrounder/ opacot596.htm.

contracts behave identically for risk-management purposes.[38] All bids and offers are immediately posted on the ICE trading screen, as are the price and volume of all completed trades. Basic daily trading data is available for a fee.[39]

All of the traders interviewed by the Subcommittee considered NYMEX natural gas futures and ICE natural gas swaps to be functionally equivalent and interchangeable for risk management purposes. These traders stated their decisions on which type of contract to trade – futures or swaps – are based on which of the two markets has greater liquidity and on which contract is more favorably priced. Data provided to the Subcommittee shows that many traders have positions in multiple contracts on both exchanges at the same time.

Several traders explained to the Subcommittee that there is significant volume of arbitrage trading between the ICE swaps market and the NYMEX futures market. Arbitrage traders seek to exploit any differences in price that temporarily emerge during the course of trading; by buying the lower-priced contract and then selling the higher-priced contract, an arbitrage trader will make a profit as the two prices converge. As more and more traders pursue this strategy, however, the lower-priced contract rises in price, and the higher-priced contract falls in price, so that any price differences soon disappear.

Figures 15a and 15b show how closely the price of an ICE swap matches the price of the corresponding NYMEX futures contract. The interrelatedness of the price curves for these two types of contracts means that the price risks from purchasing an ICE swap are identical to the price risks from purchasing a NYMEX futures contract.

[38] Because the final settlement price for the ICE swap is defined to be the final settlement price of the NYMEX futures contract for the same month, the most significant divergence in price between the two contracts often occurs during the final 30 minutes of trading for the NYMEX contract, which is used to compute the final NYMEX contract price. (The NYMEX final settlement price is computed by taking the volume-weighted average price of all trades during the final 30-minute period.) Most of the trading during these final 30 minutes will occur on NYMEX rather than ICE, and hence the NYMEX price often will "lead" the ICE price during this period. Based on the ICE and NYMEX data reviewed by the Subcommittee, as well as trader interviews, this final settlement period is the only period in which it can be categorically stated that one exchange "leads" the other in price.

[39] Under the Commodity Futures Modernization Act, the CFTC may require exempt commercial markets to publish similar information if the CFTC determines that the market "performs a significant price discovery function" for the underlying cash market. 7 U.S.C. § 2(h)(4)(D). The CFTC has not made this determination for any of the futures look-alike contracts traded on ICE.

Figure 15a

NYMEX Futures and ICE Swaps for October 2006 Daily Prices

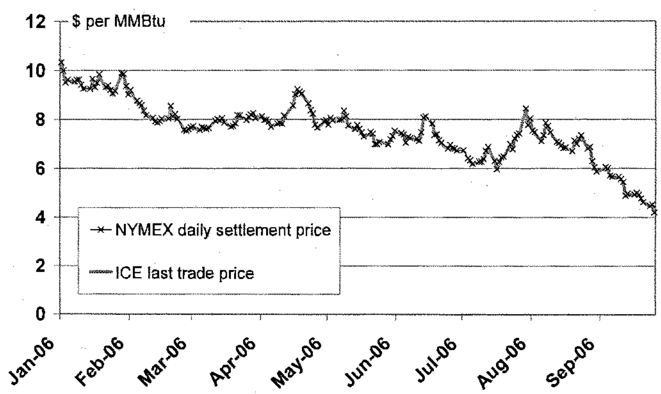
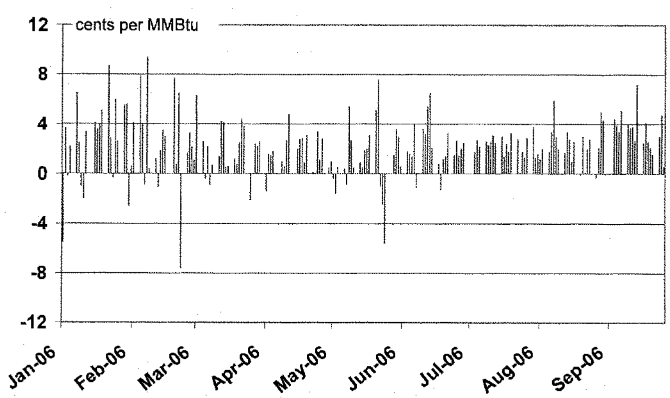


Figure 15b

NYMEX Futures and ICE Swaps for October 2006 Difference in Daily Price



Figs. 15a and 15b. Although ICE and NYMEX prices closely track each other, the NYMEX contract often is priced a few cents higher than the ICE swap. (Traders differ on why.) For each trading day, these charts show the NYMEX daily settlement price and the last traded daily price on ICE. Data sources: NYMEX and ICE.

Since both types of exchange-traded contracts are cleared, there is no greater counterparty risk from trading in one market rather than the other. In sum, the structure of the ICE swaps and NYMEX futures contracts, the virtually identical prices of these two contracts, and the testimony of traders provide compelling evidence that the NYMEX natural gas futures contract and the corresponding ICE natural gas Henry Hub swap are economically indistinguishable financial instruments for risk-management purposes.

2. Off-Exchange Bilateral Transactions

In addition to using an organized exchange to find a counterparty and a suitable price, traders often seek to find a counterparty on their own or through a broker. Traders also can use the ICE trading screen to enter into bilateral, non-cleared transactions rather than cleared transactions.

Traders who use a broker to facilitate a trade pay the broker a commission for his or her services in locating a counterparty. Although the firms that specialize in bringing parties together for off-exchange energy commodity trades have historically been referred to as "voice brokers" because of the way they traditionally conducted their business – over the telephone – this term no longer accurately describes their practices. Today, much of the process of soliciting and communicating with potential counterparties is conducted through the use of e-mails and instant messaging. In many instances, voice communication is used only to formally acknowledge acceptance of terms that already have been agreed to by means of electronic communication.[40]

Unlike trades conducted on an exchange, where each party to a trade remains anonymous to the other, each party to a bilateral off-exchange transaction learns the identity of the other party. Unless the parties to an off-exchange transaction agree to submit their trade for clearing, each party to a bilateral, non-cleared transaction must bear the risk of non-performance by the other party, and thus needs to know the identity of that party to determine their creditworthiness.[41] In addition, because a bilateral deal is entered into off-exchange, the price and volume of the trade is not posted for other market participants. Hence,

[40] Subcommittee interviews of natural gas traders.
[41] Typically, traders provide brokers with a list of acceptable potential counterparties. The brokers will then seek to facilitate trades only between mutually acceptable counterparties. In these brokered transactions, a trader may not learn the actual identity of a counterparty until after the trade has been agreed to, although the trader will know that the counterparty is acceptably creditworthy. Similarly, traders that choose to use the ICE electronic trading screen to identify counterparties for bilateral, non-cleared transactions will inform ICE of the firms with which it has appropriate credit arrangements; the ICE trading screen observed by that trader will then show bids and offers only from such approved counterparties. Once the bilateral transaction is executed, each party learns the actual identity of the other party. *Id.*

these bilateral deals do not provide a real-time price discovery mechanism for other traders to nearly the same extent as the trades conducted on an exchange do.

Both NYMEX and ICE provide clearing services for parties that want to reduce their counterparty risk by having their off-exchange bilateral transactions cleared. Although there is no market-wide data on the percentage of off-exchange bilateral trades that are submitted for clearing; anecdotal evidence presented to the Subcommittee and the trading data reviewed by the Subcommittee indicates that most off-exchange bilateral transactions involving standardized natural gas contracts – perhaps as much as 80-90 percent – are later submitted for clearing. To submit a trade for clearing, each party must have established an account with a clearing firm and the transaction must involve one of the standardized contracts approved by the exchange. Unlike transactions completed on an exchange, there is no real-time reporting of the prices and volumes of off-exchange transactions that are subsequently submitted for clearing.[42]

ICE will accept for clearing a bilateral transaction that involves a standardized contract that is also traded on the ICE electronic exchange. Hence, ICE provides a trader with three different ways to accomplish risk-management goals: (1) use of the electronic exchange to enter into a trade involving a cleared standardized contract; (2) use of the ICE electronic exchange trading screen to identify a counterparty to a bilateral non-cleared transaction involving one of the standardized contracts traded on ICE; and (3) use of ICE to clear a standardized ICE-traded bilateral contract entered into off-exchange.

The NYMEX ClearPort system also provides both a trading and clearing service. According to NYMEX:

> NYMEX ClearPort gives market participants unparalleled flexibility to either trade this extensive slate of derivatives through the NYMEX ClearPort trading system or, to conduct their own transactions off-exchange, negotiate their own prices, and still take advantage of the financial depth and integrity of the Exchange clearinghouse by submitting the transactions through NYMEX ClearPort clearing.[43]

[42] The ICE screen displays the price and volume of off-exchange transactions submitted for clearing (ICE calls these "block" trades), but there may be a significant time delay from when the initial transaction is completed and when it is sent to ICE for clearing. Several traders stated to the Subcommittee that because of this potential delay they do not view the reported prices and volumes of block trades as a reliable indicator of current prices and volumes.

[43] NYMEX, NYMEX ClearPort Services, at http://www.nymex.com/cp_overview.aspx. Although substantial volumes of off-exchange contracts are submitted to ClearPort for clearing, the ClearPort trading platform has yet to develop a substantial volume of exchange-type trading.

Because the CEA prohibits the trading of futures except on a regulated exchange, traders cannot enter into natural gas futures contracts off-exchange and then submit them for clearing. NYMEX, however, offers a swap contract for trading or clearing through ClearPort that, like the ICE Henry Hub natural gas swap, is economically equivalent to its natural gas futures contract. Like the ICE swap, the NYMEX natural gas swap financially settles at the final settlement price of the NYMEX natural gas futures contract, and the standard volume is one-quarter the volume of the natural gas futures contract. In contrast with ICE, however, the NYMEX Henry Hub natural gas swap is considered to be a part of the natural gas futures market for regulatory purposes, and thus NYMEX applies the same regulatory oversight to the trading of this contract as it does to the trading of the natural gas futures contract.[44]

Figure 16 shows the volumes of the basic Henry Hub natural gas futures contracts and swaps traded on ICE and NYMEX for a single contract month, October 2006. As shown in these charts, the volumes of the natural gas swaps traded on the ICE electronic exchange are comparable to – and on some days even greater than – the volumes of the natural gas futures contracts traded on NYMEX, particularly in the last couple of months prior to the expiration of the contract.

Additional figures for additional contract months are provided in Appendix A. Generally, these figures indicate that for more distant contract months, trading volumes are greater for the NYMEX natural gas futures contract than the comparable ICE swap, making it the more liquid contract in the distant months. The data also suggest that off-exchange bilateral transactions may represent a significant portion of outstanding positions in these long-dated contracts.

Overall the 2006 trading data show that NYMEX and ICE are active commodity markets, in competition with each other, and whose traders play a central role in determining natural gas prices in the United States.

[44] Interview with NYMEX, March 27, 2007.

Figure 16

NYMEX and ICE Trading Volumes
Natural Gas Contracts for October 2006

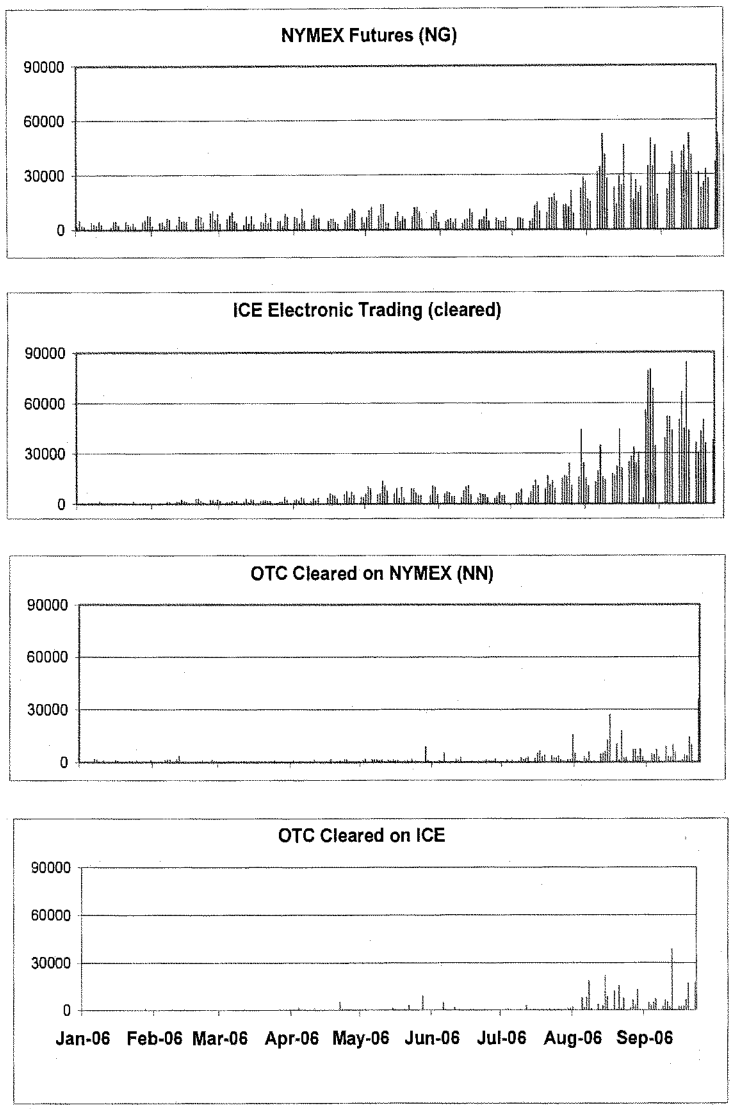


Fig. 16. Volume of contracts traded and cleared on NYMEX and ICE for natural gas contracts for October 2006. Data source: NYMEX and ICE.

C. Market Regulation

Although both NYMEX and ICE play an integral role in natural gas price formation, the two exchanges are subject to vastly different regulatory restrictions and government oversight under current federal law.

Section 3 of the CEA states that the purpose of the Act is to establish "a system of effective self-regulation of trading facilities, clearing systems, market participants and market professionals under the oversight of the [Commodity Futures Trading] Commission." Under this tiered regulatory structure, the exchanges have the primary responsibility for market surveillance and oversight. The CFTC's regulatory program is designed to rely on the market oversight and surveillance conducted by the exchanges, but the CFTC also supplements the exchanges' efforts with its own surveillance and oversight of trading. One of the key purposes of the CFTC's commodity market surveillance and oversight is "to deter and prevent price manipulation or any other disruption to market integrity."[45]

Due to provisions in the Commodity Futures Modernization Act of 2000 (CFMA) that are often referred to as the "Enron loophole," electronic energy exchanges are exempt from this system of regulation.[46] The result is that one type of energy exchange – represented by NYMEX – is both self-regulated and regulated by the CFTC, whereas the other type of energy exchange – exemplified by ICE – is not required to be self-regulated and is not regulated by the CFTC. As will later be shown, ICE's exemption from regulatory oversight has undermined the effectiveness and market integrity of both ICE and NYMEX in pricing U.S. energy commodities.

1. Regulated Markets (NYMEX)

The CEA, as amended by the CFMA, requires that all futures contracts be traded on a futures exchange that has been approved by the CFTC as a "Designated Contract Market" (DCM). To qualify as a DCM, an exchange must develop a market regulation and oversight program that complies with the core principles set forth in the CEA. These core principles require a DCM to maintain certain programs and capabilities to prevent market manipulation and to ensure fair and orderly trading:

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[45] 7 U.S.C. § 5(b) (2006).

[46] The legislative history of the Enron loophole is set forth in the Subcommittee's previous reports. See Minority Staff of the Permanent Subcommittee on Investigations, *U.S. Strategic Petroleum Reserve: Recent Policy Has Increased Costs to Consumers but not Overall U.S. Energy Security*, S. Prt. 108-18, at p. 185, 108th Congress, 1st Sess. (Mar. 5, 2003).

- "the ability to prevent market manipulation through market surveillance, compliance, and enforcement practices and procedures, including methods for real-time monitoring of trading and comprehensive and accurate trade reconstructions;"[47]

- the enforcement of rules to ensure fair and equitable trading;[48]

- the enforcement of disciplinary rules that authorize the board of trade to discipline, suspend, or expel market participants that violate the rules of the exchange; [49]

- the trading only of contracts that are "not readily susceptible to manipulation;"[50]

- the monitoring of trading "to prevent manipulation, price distortion, and disruption of the delivery or cash-settlement process;"[51]

- the adoption of position limits or position accountability for speculators "to reduce the potential threat of market manipulation or congestion, especially during trading in the delivery month;"[52]

- the emergency authority to suspend trading in any contract, require traders to liquidate positions, or impose special margin requirements;[53] and

- daily publication of trading information.[54]

NYMEX is one of thirteen exchanges the CFTC has designated as a contract market.[55] To meet its obligations to monitor trading, prevent manipulation, and ensure the financial integrity of its markets, NYMEX has established a regulatory program, which is headed by a Chief Regulatory Officer, to monitor daily trading, determine overall and daily margin requirements, oversee and evaluate the conduct of brokers and

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[47] 7 U.S.C. § 7(b)(2) (2006).
[48] 7 U.S.C. § 7(b)(3) (2006).
[49] 7 U.S.C. § 7(b)(5) (2006).
[50] 7 U.S.C. § 7(d)(3) (2006).
[51] 7 U.S.C. § 7(d)(4) (2006).
[52] 7 U.S.C. § 7(d)(5) (2006).
[53] 7 U.S.C. § 7(d)(6) (2006).
[54] 7 U.S.C. § 7(d)(7) (2006). The CFTC's regulations at 17 C.F.R., Part 38, Appendix A, provide guidance on maintaining compliance with these core principles.
[55] See CFTC.gov, Designated Contract Markets Registered with the CFTC, at http://www.cftc.gov/dea/deadcms_table.htm?from=home&page=epexchcontent#Designated_Contract_Markets.

traders, monitor the performance of clearing firms, establish and enforce position limits, investigate complaints, and bring enforcement actions for violations of the exchange's rules of conduct. The NYMEX regulatory program has an annual budget of approximately $6.2 million, most of which supports the salaries of the nearly 60 people in that program.

2. Unregulated Markets

(a) ICE

None of these core principles apply to ICE. ICE has no legal obligation to monitor trading, no legal obligation to prevent manipulation or price distortion, and no legal obligation to ensure that trading is fair and orderly. In addition, the CFTC has no authority or obligation to monitor trading on ICE. As a result, there is no regulatory oversight of trading on ICE.

ICE's unregulated status is due to the 2000 enactment of the so-called Enron loophole in the CFMA, which added section 2(h)(3) to the CEA. Section 2(h)(3) exempts from CFTC oversight all agreements, contracts, and transactions in energy and metals ("exempt commodities") that are traded on electronic trading facilities between "eligible commercial entities" (ECEs).[56] Generally, an ECE must be a large financial institution, insurance company, investment company, corporation or individual with significant assets, employee benefit plan, government agency, registered securities broker, or futures commission merchant. An ECE may not act as a broker for another party. A market operating under section 2(h)(3) is deemed an "exempt commercial market" (ECM) – exempt from CFTC oversight.[57]

The CEA imposes few requirements on exempt commercial markets. An ECM is subject to the CEA's general statutory prohibitions against fraud and price manipulation. An ECM must report summary market data to the CFTC and if the CFTC determines that the market performs a significant price discovery function in the cash market – which the CFTC has never done for any market – the ECM must provide volume and price data to the public. An ECM also must keep trading records and inform the CFTC of complaints it receives about trading practices. Other than these broad provisions, an ECM is exempt from the CFTC's regulatory oversight.

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[56] 7 U.S.C. § 2(h)(3) (2006).
[57] 7 U.S.C. § 1a(11) (2006).

The CFTC describes its lack of authority over exempt commercial markets as follows:

> In contrast to its authority over designated contract markets and registered derivatives transaction facilities, the CFTC does not have general oversight authority over exempt commercial markets. Exempt commercial markets are not registered with, or designated, recognized, licensed, or approved by the CFTC.[58]

The CFTC does not apply any of the oversight or monitoring measures it uses to oversee regulated futures markets like NYMEX to exempt commercial markets like ICE. Table 3 compares the oversight mechanisms that apply to the two types of exchanges.

Table 3
NYMEX and ICE
Differences in Measures to Prevent Price Manipulation

Measure to Prevent Price Manipulation	Does the Measure Apply to:	
	Futures Markets (NYMEX)	Exempt Markets (ICE)
CFTC Market Surveillance Program		
• CFTC staff monitoring of daily trading reports	Yes	No
• Weekly reports and reviews for expiring contracts	Yes	No
• Option of special data call by CFTC	Yes	Yes
Core Principles for Exchange Operation		
• Exchange is responsible for monitoring compliance with market rules	Yes	No
• Traded contracts must not be readily susceptible to manipulation	Yes	No
• Exchange must monitor trading to prevent manipulation, price distortion, and disruption of the delivery or cash-settlement process	Yes	No

[58] See CFTC, Exempt Commercial Markets That Have Filed Notice with the CFTC, at CFTC website at http://www.cftc.gov/dea/dea_ecm_table.htm.

Measure to Prevent Price Manipulation	Does the Measure Apply to:	
	Futures Markets (NYMEX)	**Exempt Markets (ICE)**
• Position limits for speculators to reduce the threat of manipulation or congestion	Yes	No
• Emergency authority to liquidate positions, suspend trading, or impose special margin requirements	Yes	No
• Daily submission of trading data to CFTC	Yes	Limited
• Daily publication of trading data	Yes	No
• Exchange must keep records of trading	Yes	Yes
Large Trader Reporting		
• Large trader reporting by clearing members	Yes	No
• Large trader reporting by exchanges	Yes	Voluntarily provided by ICE
• Trading account information filed by traders	Yes	No

(b) Off-Exchange Bilateral Transactions

Several provisions of the CFMA also exempt from government oversight bilateral transactions in energy commodities that are individually negotiated by the parties and that are "not executed or traded on a trading facility." Under section 2(g) of the CEA, for example, which was added to the CEA by the CFMA in 2000, energy swaps are placed outside of the Act's requirements. Section 2(g) provides that all agreements, contracts, and transactions "in a commodity other than an agricultural commodity" between "eligible contract participants" that are individually negotiated by the parties and that are "not executed or traded on a trading facility" are fully exempt from all regulation under the CEA.[59]

[59] 7 U.S.C. § 2(g) (2006). The term "eligible contract participant" (ECP) includes financial institutions; insurance companies; corporations, trusts, and partnerships with total assets greater than $10 million; large pension benefit plans, governmental entities, natural persons with assets greater than $5 million who are entering the transaction for risk management purposes, and certain others. *Id.* at § 1a(12). The term 'trading facility' means a person or group of persons that constitutes, maintains, or provides a physical or electronic facility or system in which multiple participants have the ability to execute or trade agreements, contracts, or transactions by accepting bids and offers made by other participants that are open to multiple participants in the facility or system." *Id.* at § 1a(33). An "electronic trading facility" is a trading facility that

Section 2(h)(1) of the CEA provides a similar exclusion. Section 2(h)(1) was intended to exempt from regulation dealer markets and one-to-many trading platforms, such as the defunct "Enron Online," in which one person or firm would act as the counterparty to many or all other traders. This section provides that all agreements, contracts, and transactions in an "exempt commodity," which includes both energy and metal commodities, between "eligible contract participants" and "not entered into on a trading facility" are generally exempt from the requirements of the CEA.[60] Unlike the swap transaction exclusion, this exemption applies even if the agreement, contract, or transaction is not individually negotiated.

One of the sources of confusion following the passage of the CFMA is the inconsistency between sections 2(g) and 2(h)(1) – whereas section 2(g) totally excludes energy and metals swaps that are individually negotiated from the CEA, section 2(h)(1) exempts energy and metals transactions from the exchange-trading and other requirements but generally applies the anti-fraud and anti-manipulation provisions to over-the-counter transactions in these commodities. It is not clear whether the exclusion provision takes precedence over the exemption provision, or vice versa.

Moreover, to the extent that a negotiation over price can be considered "an individual negotiation," it would appear that sections 2(g) and 2(h)(1) cover the same transactions and are in direct conflict regarding the applicability of the CEA's anti-fraud and anti-manipulation provisions. The CFTC staff interprets the term "individual negotiation" to include price negotiations; under this interpretation there is no difference between sections 2(g) and 2(h)(1). Under this interpretation, all instruments traded under section 2(h)(1) on "one-to-many" facilities or through dealer-brokers could be considered excluded swaps.

Off-exchange bilateral transactions that would be wholly or partially exempt from CFTC regulation under either of these exemptions may be brought under CFTC regulation if those transactions are submitted for clearing to a CFTC-regulated market. Thus, for example, off-exchange bilateral transactions that are subsequently submitted to NYMEX for clearing are regulated as futures contracts. Off-exchange

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"operates by means of an electronic or telecommunications network" and maintains an audit trail of bids, offers, orders, and transactions on the facility. *Id.* at § 1a(10).

[60] 7 U.S.C. § 2(h)(1) (2006). "The term 'exempt commodity' means a commodity that is not an excluded commodity or an agricultural commodity." *Id.* at § 1a(14). "Excluded commodities" are a variety of financial derivatives, including interest rate, currency, equity, debt, credit, weather, economic index, and other derivatives based on one or more commodities for which there is no cash market or whose price levels are not within the control of any party to the transaction. *Id.* at § 1a(13).

bilateral transactions that are subsequently submitted to ICE for clearing, however, are still generally exempt from CFTC regulation.

D. Excessive Speculation

In addition to requiring market regulation and oversight, and prohibiting market manipulation, the CEA prohibits excessive market speculation. Section 4a(a) of the CEA directs the CFTC to establish limits on speculation in order to prevent "sudden or unreasonable fluctuations or unwarranted changes" in the price of commodities traded on an exchange:

> Excessive speculation in any commodity under contracts of sale of such commodity for future delivery made on or subject to the rules of contract markets or derivatives transaction execution facilities causing sudden or unreasonable fluctuations or unwarranted changes in the price of such commodity, is an undue and unnecessary burden on interstate commerce in such commodity. For the purpose of diminishing, eliminating, or preventing such burden, the Commission shall . . . fix such limits on the amounts of trading which may be done or positions which may be held by any person.[61]

The CFTC explains, "All agricultural and natural resource and many financial futures and options contracts are subject to speculative position limits. For several markets (corn, oats, wheat, soybeans, soybean oil, soybean meal, cotton), the limits are determined by the Commission and set out in Federal regulations. For all other markets, the limits are determined by the exchanges according to standards established by the Commission."[62]

Because the potential for congestion, disruption, and price manipulation is highest during the month in which a contract expires (termed either the "spot" or "expiration" month), the CFTC applies and requires more stringent speculative position limits during the spot month. CFTC's regulations state: "For physical delivery contracts, the spot month limit level must be no greater than one-quarter of the estimated spot month deliverable supply."[63] For the spot month in cash-settled markets, an exchange must establish speculative position limits

[61] 7 U.S.C. § 6a(a) (2006).
[62] CFTC, Backgrounder: Speculative Limits, Hedging, and Aggregation in Commodity Futures and Options, CFTC website, at http://www.cftc.gov/opa/backgrounder/opaspeclmts.htm. In calculating position limits, the CFTC and the exchanges will aggregate multiple positions that are subject to common ownership as if they were held by a single trader, and will combine futures and options positions on those futures to obtain an aggregate futures-equivalent position in that contract.
[63] 17 C.F.R. § 150.5 (2002).

"no greater than necessary to minimize the potential for manipulation or distortion of the contract's or the underlying commodity's price."[64]

CFTC regulations and exchange rules allow a trader to be granted an exception to the speculative position limits if they are engaged in "bona fide hedging" rather than speculating. By definition, traders who are using the futures market to offset or "hedge" a risk in the physical market are not speculating on price changes in either the physical or futures market; because of their hedge they neither gain nor lose from price changes in the futures market. To achieve this price neutrality, a trader needs to be able to take a position in the futures market that is equal to and opposite to their position in the cash market. Hence, the CFTC's regulations allow a trader to apply for and receive a "hedge exemption" for positions or transactions whose purpose is "to offset price risks incidental to commercial cash or spot operations and such positions are established and liquidated in an orderly manner in accordance with sound commercial practices."[65] Traders seeking a hedge exemption must apply for a specific exemption and supply documentation to support the application.

For certain futures markets, including the energy markets, the CFTC has authorized exchanges to establish "accountability levels" rather than position limits for traders holding contracts in months other than the spot month.[66] The CFTC explains:

> If a market has accountability rules, a trader - whether speculating or hedging - is not subject to a specific limit. Once a trader reaches a preset accountability level, however, he must provide information about his positions upon request by the exchange. Depending on the size of the market and type of commodity, any trader over the accountability level must also consent to stop increasing his position if so ordered by the exchange.[67]

In compliance with the CFTC's directives, NYMEX has established position limits and accountability levels for various energy contracts.[68] The NYMEX position limits and accountability levels are shown in Table 4.

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[64] *Id.*
[65] 17 C.F.R. § 1.3(z) (2002).
[66] See 17 C.F.R. § 10.5(e) (2002).
[67] CFTC, Backgrounder on Speculative Limits.
[68] NYMEX.com: Exchange Rulebook, §§ 9.26A, 9.27, 9.27A, at NYMEX website, at http://nymex.com/ rule_main.aspx.

Table 4
Position Limits and Accountability Levels for NYMEX Energy Futures Contracts

Market	Position Limits (# of contracts)	Accountability Levels (# of contracts)	
	Expiration Month	Net Single Month (other than expiration)	Net All Months Combined
Natural Gas	1,000 for last 3 days	12,000	12,000
RBOB Gasoline	1,000 for last 3 days	7,000	7,000
Heating Oil	1,000 for last 3 days	7,000	7,000
Crude Oil	3,000 for last 3 days	20,000	20,000

In contrast to NYMEX, ICE has established no position limits or accountability levels for its traders. That means a trader can speculate without limit by trading on ICE, where no such restrictions apply. As the Subcommittee has found in this investigation, when NYMEX attempted to limit Amaranth's speculative positions in the natural gas market, Amaranth simply switched its positions to ICE.

As currently written, the CEA does not directly prohibit traders from engaging in excessive speculation. Rather, the CEA directs the CFTC to issue position limits to prevent excessive speculation from causing sudden, unreasonable, or unwarranted price changes. To enforce this provision of the CEA in the energy markets, the CFTC has issued fixed position limits for specific energy commodities and contracts, and authorized regulated exchanges to issue accountability limits to trigger reviews of trader positions. If an exchange determines that a position is excessively concentrated, the exchange can order the trader to reduce that position. Violations of a position limit or an order to reduce a position are considered civil violations of the CEA, punishable in the same manner as violations of other statutory and regulatory provisions. NYMEX policy is to send warning letters on the first two occasions that a trader violates a position limit; for subsequent violations traders are subject to civil monetary penalties and even forfeiture of their trading privileges on the exchange. These types of violations are not treated as crimes, unless they are part of an effort to manipulate commodity prices or commit some other criminal offense.

E. Market Manipulation

The CEA states that the manipulation of commodity prices is a felony punishable by a fine of up to $1 million and imprisonment of up to five years.[69] Although it is one of the core provisions of the law, neither the CEA nor its implementing regulations provides a specific definition of manipulation. The CEA states only that it is against the law for "[a]ny person to manipulate or attempt to manipulate the price of any commodity in interstate commerce, or for future delivery on ... any registered [exchange], or to corner or attempt to corner any such commodity."[70]

The case law interpreting the CEA's prohibitions against market manipulation is confusing and contradictory. The current test for establishing manipulation requires the following four elements to be established by a preponderance of the evidence:

(1) the accused had the ability to influence market prices;
(2) the accused specifically intended to influence market prices;
(3) artificial prices existed; and
(4) the accused caused the artificial prices.[71]

F. Natural Gas Trading

To understand the natural gas market, it is important to examine not only the nature of the commodity, the cash and financial markets, and CFTC regulation and oversight, but also the key trading strategies that many natural gas traders follow.

In general, natural gas producers and marketers are less concerned with the absolute price of natural gas than with ensuring they obtain an adequate margin of profit for the gas they sell. What matters most to producers and marketers is whether they can sell the gas for more than it cost to acquire. End users of natural gas have a slightly different perspective – they are most concerned with obtaining natural gas at the lowest price relative to their other costs and expenses. Speculators have a third perspective: they seek to profit from the frequent price changes in the natural gas market – devising strategies to profit from both price differences and price volatility.

Price Spreads. Typically, rather than purchase a contract that locks in an absolute price level for a particular month, natural gas traders use trading strategies that involve relative price levels between different

[69] Section 9 of the CEA.
[70] 7 U.S.C. § 13(a)(2). For more information, see the Subcommittee's detailed discussion of this provision of the law in its 2003 Report, Appendix 1, pp. 125-37.
[71] *In the matter of Cox and Frey*, 1987 Westlaw 106879 (C.F.T.C.).

months. These strategies - called "spread trading" - involve the simultaneous purchasing of a futures contract for one month - called the "long" month - and the selling of the same number of futures contracts for a different month - called the "short" month. The purchases are linked together in the exchange's trading records with the price difference between the two shown as the price spread. For example, if a trader buys a contract for March at $7.50, and in the same transaction sells a contract for April at $7.25, the exchange will list both trades together as a single transaction with a price spread of $0.25.

A natural gas distributor, for example, may use a spread strategy to buy a futures contract for natural gas to be delivered to the distributor in the summer, when prices are low, and at the same time sell a futures contract for natural gas to be delivered in the winter, when prices are high. In this manner, the distributor can lock in a profit by selling natural gas for more than it cost the distributor to purchase the gas. A distributor is likely to pursue this type of strategy if the difference in price between the winter and summer contracts - the price spread - is greater than the distributor's costs in storing the physical gas between those summer and winter months. Large winter/summer price spreads therefore provide a financial incentive for marketers and distributors to accumulate gas in storage during the summer months for sale during the winter months.

On the other side of the trade, a speculator may believe that a price spike is likely to occur in the upcoming winter, as has occurred in most of the previous years, and therefore that winter prices will be much higher than the summer prices. To profit from the difference in prices, the speculator may buy a winter/summer spread, meaning that the speculator will buy a futures contract for a winter month and at the same time sell a futures contract for a summer month. For example, a speculator who buys 100 January contracts for $7.50 each and simultaneously sells 100 July contracts for $7.25 can be said to be "buying 100 January/July spreads at 25 cents," which will cost the speculator a total of $2.50. If the speculator had instead bought 100 January contracts, without any offsetting July contracts, it would have had to pay $75.00 for those contracts. As this example shows, spread trading can be a lot less expensive than buying contracts for single months.

The "Forward Curve." To aid in their analysis of price spreads in the natural gas markets, traders use a type of chart called the "forward curve." The forward curve shows, for any given date, the price of each NYMEX futures contract for successive future months. The forward curve for natural gas clearly depicts the differences in natural gas futures prices between the winter and summer months. Figure 17 displays, for example, the forward curve for natural gas on June 1, 2007. The points that make up the forward curve reflect the final, actual NYMEX price on that date to buy a futures contract to deliver natural gas in each future month over the next five years. The points form curves that look like waves because, in each year, the futures prices for the winter months are higher than the futures prices for the summer months, reflecting a higher anticipated demand for natural gas during the winter heating seasons.

Figure 17

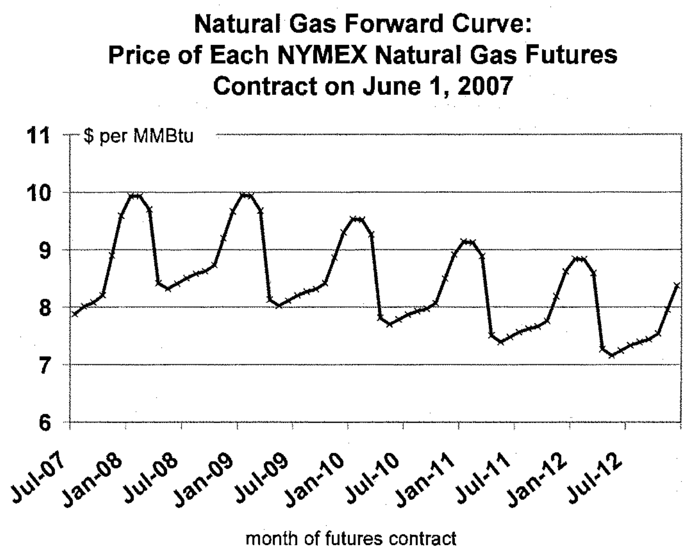

Fig. 17. The seasonality of natural gas demand is reflected in the "forward curve," which shows for a specified date the price of each natural gas futures contract for future months. The natural gas forward curve peaks in the winter months and falls in the summer months. Data source: NYMEX.

Figure 18 shows what the forward curve looked like in mid-August of each year from 2002 through 2006. Not only did the absolute level of futures prices rise from 2002 to 2006, but the difference in futures prices between summer and winter months – the winter/summer spread – increased as well, reflecting the market's view that natural gas prices during the winters would continue to be at a premium. The reason for the unusually high prices and large differences between the winter and summer prices in 2006 is discussed in the next section. Amaranth's excessive speculation in natural gas futures played a central role.

Figure 18

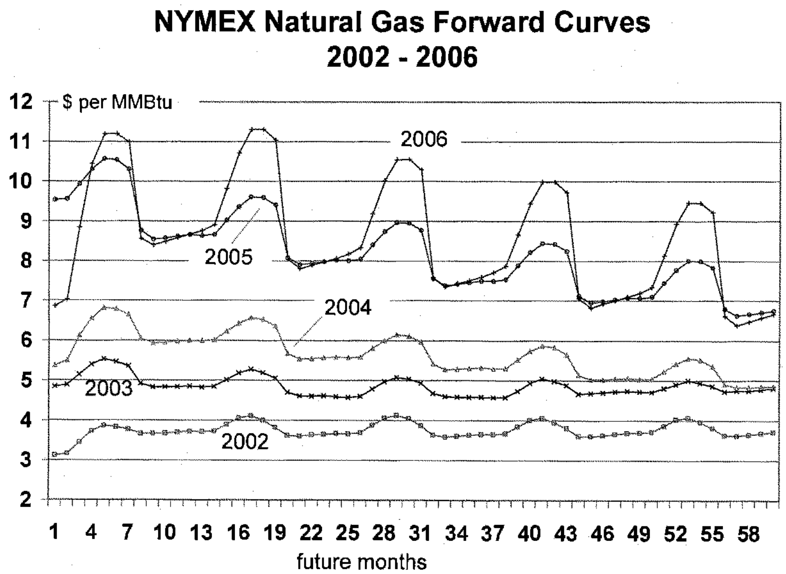

Fig. 18. The forward curve in 2006 was higher and the winter/summer price spreads were larger than in previous years. Data source: NYMEX.

V. EXCESSIVE SPECULATION IN THE NATURAL GAS MARKET IN 2006

"Nowhere does history indulge in repetitions so often or so uniformly as in Wall Street. When you read contemporary accounts of booms or panics the one thing that strikes you most forcibly is how little either stock speculation or stock speculators to-day differ from yesterday. The game does not change and neither does human nature."
--Edwin Lefevre, *Reminiscences of a Stock Operator* (1923)[72]

A. Overview

In early 2006, it began to be clear that the effects of Hurricanes Katrina and Rita on natural gas supplies had dissipated. Due to a warm winter, a large amount of natural gas remained in storage, indicating there would be a relatively high level of supply for the upcoming summer, and likely an above-average amount of natural gas in storage for the next heating season. Despite above-average amounts of natural gas in inventories, the price of natural gas in the futures markets remained extremely volatile, and the difference in price - or "spread" - between natural gas futures contracts for the next winter and the upcoming summer kept increasing. The paradox of unusually high winter/summer price spreads in the face of above-average supplies persisted throughout the summer and into early September. Then, in mid-September, the winter/summer price spreads suddenly collapsed. As these price spreads collapsed, so did Amaranth, the largest single trader in the natural gas markets. Reports indicated that Amaranth lost more than $2 billion in the natural gas market during the first three weeks of September, precipitating the liquidation of the entire $8 billion fund.

The Subcommittee began this investigation in October 2006 to understand why certain natural gas futures prices, particularly the winter/summer price spreads, had remained so high in the face of above-average supplies and whether the large-scale trading conducted by Amaranth had contributed to those high prices. To conduct this investigation the Subcommittee subpoenaed natural gas trading records from NYMEX, ICE, Amaranth, and other traders.[73] The Subcommittee's analysis of this trading data, which includes several million individual trades, indicates that the extreme levels of winter/summer price spreads were driven by Amaranth's excessive

[72] J. Wiley & Sons, New York, 1994, at p. 180.
[73] The Subcommittee appreciates the responsiveness of both NYMEX and ICE in providing extensive trading records in user-friendly electronic formats in a timely manner. The Subcommittee also appreciates the co-operation of Amaranth and its former personnel, and of persons from other firms who provided information to the Subcommittee.

speculative trading in natural gas contracts on both NYMEX and ICE, persisting over several months.

Prior to its collapse, Amaranth dominated trading in the U.S. natural gas market. It bought and sold thousands of natural gas contracts on a daily basis, and tens of thousands of contracts on certain days. All but a few of the largest energy companies and hedge funds consider trades of a few hundred contracts to be large trades. Amaranth held as many as 100,000 natural gas futures contracts at once, representing one trillion cubic feet of natural gas, or 5 percent of the natural gas used in the United States in a year. At times Amaranth controlled up to 40 percent of all of the open interest on NYMEX for the winter months (October 2006 through March 2007). Amaranth accumulated such large positions and traded such large volumes of natural gas futures that it distorted market prices, widened price spreads, and increased price volatility.

Amaranth's fundamental view was that winter natural gas prices would be much higher than summer natural gas prices. It pursued its fundamental view largely through two major trading strategies: (1) buying futures contracts for January 2007 while selling futures contracts for November 2006 - the "January/November spread" - representing a bet that January prices would be much higher than November prices; and (2) buying futures contracts for March 2007 while selling futures contracts for April 2007 - the "March/April spread" - representing a bet that March prices would be higher than April prices, when demand for natural gas for home heating diminishes significantly.

Amaranth pursued these strategies to an extreme. On almost every day from mid-February through July, Amaranth held more than 50 percent of the open interest on NYMEX in the January 2007 and November 2006 contracts. In late July, Amaranth held a total of more than 80,000 NYMEX and ICE contracts for January 2007 - representing a volume of natural gas that equaled the entire amount of natural gas eventually used in that month by U.S. residential consumers nationwide. Amaranth's large-scale trading was a major driver behind the rise of the January/November price spread from \$1.40 in mid-February to \$2.20 in late April, an increase of more than 50 percent.

Amaranth also held large positions in the March/April spread, meaning it had bought a large volume of March contracts and sold a large number of April contracts. Amaranth's effect on this price spread was evident on particular dates when it traded extraordinarily large numbers of these contracts. For example, on July 31, Amaranth bought over 10,000 March 2007 futures contracts on NYMEX and sold about the same number of April 2007 futures contracts. Amaranth's trading represented almost 70 percent of the total NYMEX trading volume in each of these contracts on that date. Similarly, on July 31, Amaranth bought 13,000 March 2007 natural gas swap contracts on ICE, and sold nearly 11,000 April contracts. These trades accounted for about 60 percent and 50 percent of the volume of trading in these contracts on ICE, respectively. Amaranth's large volume of trading was the prime reason the March/April price spread increased by 72 cents on July 31. This increase was an extremely large one-day jump in price.

Amaranth also held large positions in other winter and summer months spanning the five-year period from 2006-2010. In aggregate, Amaranth amassed an extraordinarily large share of the total open interest on NYMEX. During the spring and summer of 2006, Amaranth controlled between 25 and 48 percent of the outstanding contracts (open interest) in all NYMEX natural gas futures contracts for 2006; about 30 percent of the outstanding contracts (open interest) in all NYMEX natural gas futures contract for 2007; between 25 and 40 percent of the outstanding contracts (open interest) in all NYMEX natural gas futures contracts for 2008; between 20 and 40 percent of the outstanding contracts (open interest) in all NYMEX natural gas futures contracts for 2009; and about 60 percent of the outstanding contracts (open interest) in all NYMEX natural gas futures contracts for 2010.

The current regulatory regime proved ineffective in limiting Amaranth's excessive speculation. Neither the CFTC nor NYMEX had a full view of Amaranth's trades, positions, or overall market presence because Amaranth's trades on ICE were exempt from regulatory oversight and scrutiny. Moreover, unlike NYMEX, ICE had no legal obligation to monitor positions held by traders, or to report positions to CFTC.

Without a view of natural gas trades on ICE, neither the CFTC nor NYMEX had a full appreciation or understanding of how speculative trading in natural gas contracts was affecting the price of natural gas. NYMEX's attempts to prevent Amaranth's large volume of trading from disrupting the orderly settlement of the NYMEX futures contract for September 2006 were unsuccessful due to Amaranth's ability to conduct its speculative trading without any limitation on ICE. In early August, NYMEX directed Amaranth to reduce its holdings in the September and in the October 2006 contracts. Amaranth responded by moving its positions in the September and October contracts to ICE.

After moving its September and October positions from NYMEX to ICE, Amaranth placed even more trades on ICE, further increasing its overall positions for these contracts. It continued to trade very large volumes of September and October contracts on ICE until just before the

September contracts expired at the end of August. Amaranth's large-scale trading in the days and hours leading up to the expiration of the September contract increased the price volatility of the September contract.

On August 29, the last day of trading on the September contract, Amaranth repeatedly made large-scale trades on ICE, selling the September contract and buying the October contract. Its trades were counterbalanced during the day by other traders taking the opposite positions, buying the September contract and selling the October contract. Altogether, Amaranth sold about 16,000 September contracts on ICE, while the largest opposing trader, a hedge fund called Centaurus, bought about 12,000. Due to a request from NYMEX to limit its trading on the September contract, Amaranth ceased trading on both NYMEX and ICE an hour before trading closed. Centaurus continued to buy the September contract, and its price rose dramatically in the final hour. Amaranth suffered substantial losses and, on August 30, charged that it had been the victim of a price spike caused by large-scale trading rather than market forces, and requested an investigation by regulators.

In late August, the market moved sharply against Amaranth. The amount of natural gas in storage was very high, and there had been no major hurricanes to disrupt production. The winter/summer spread positions that Amaranth had invested in during the spring and summer began to fall. Amaranth's margin requirements grew to over $2 billion, and eventually reached nearly $3 billion. As a result, Amaranth no longer had the capital to buy large positions in the face of falling prices. As other traders perceived that at long last prices were finally returning to their fundamental value, the market began to fall even faster, compounding Amaranth's losses. By mid-September, Amaranth was forced to sell its positions to its clearing firm, JPMorgan Chase, and another hedge fund, Citadel, and liquidate the rest of the holdings in the $8 billion fund.

B. Setting the Stage: Natural Gas Market Fundamentals in Early 2006

In mid-summer 2005, U.S. natural gas storage facilities were nearly full, and natural gas was plentiful. When Hurricanes Katrina and Rita hit in the late summer, however, they caused major damage to natural gas pipelines and wells in the Gulf of Mexico, resulting in a sharp drop in natural gas production and a spike in natural gas prices.[74]

[74] According to DOE's Energy Information Administration, "Hurricane Katrina destroyed 44 [natural gas] platforms in the Gulf of Mexico and damaged 20 others, while Hurricane Rita destroyed 69 platforms and damaged 32 others." As of June 2006, almost 1 billion cubic feet per day of production remained off-line – representing about 9 percent of daily production in the

Fortunately, these adverse conditions lasted for only a few months. Mild winter temperatures in early 2006, including the warmest January on record, greatly reduced the demand for natural gas.[75] By the spring of 2006, overall U.S. natural gas production had returned to pre-hurricane levels, with increased production from new wells offsetting the declines in the Gulf of Mexico. (Figure 19).

Figure 19

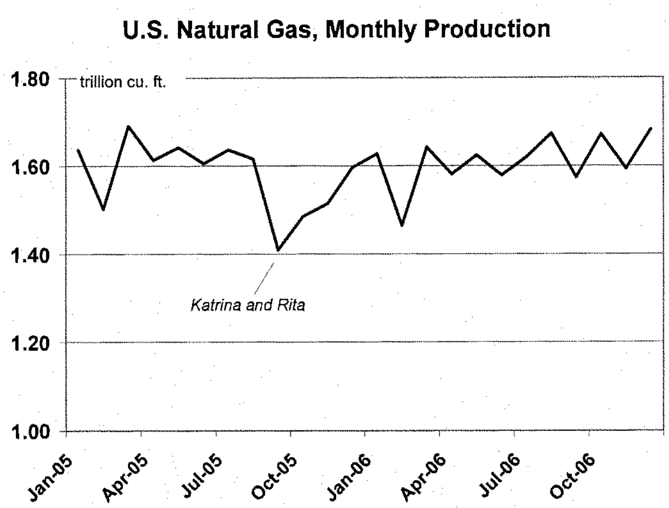

Fig. 19. By spring 2006, natural gas production levels had returned to pre-hurricane levels. Data source: EIA, Natural Gas Gross Withdrawals and Production.

By April 1, natural gas inventories were nearly 40 percent above the previous five-year average.[76] Inventories would remain above the five-year average for the remainder of 2006. (Figure 20). The turnaround in the natural gas supply outlook dampened the record high prices that followed the hurricanes in 2005. By late spring, near-term futures prices had returned to pre-hurricane levels. (Figure 21).

Gulf of Mexico and about 5 percent of total U.S. daily production. EIA, Natural Gas Year-In-Review 2006, at p. 3.

[75] EIA, Natural Gas Year-In-Review 2006 (March 2007); FERC, 2006 State of the Markets Report.

[76] FERC, 2006 State of the Markets Report, at p. 8.

Figure 20

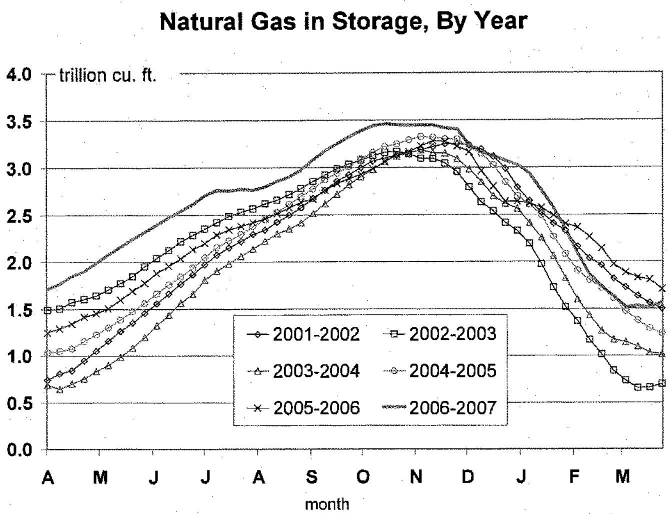

Fig. 20. In April 2006, at the start of the 2006-2007 natural gas injection (storage) season, the amount of natural gas in inventories was higher than at any time in the previous 5 years. Throughout the rest of 2006 inventory levels remained higher than in any of the previous five years. Data source: EIA.

Figure 21

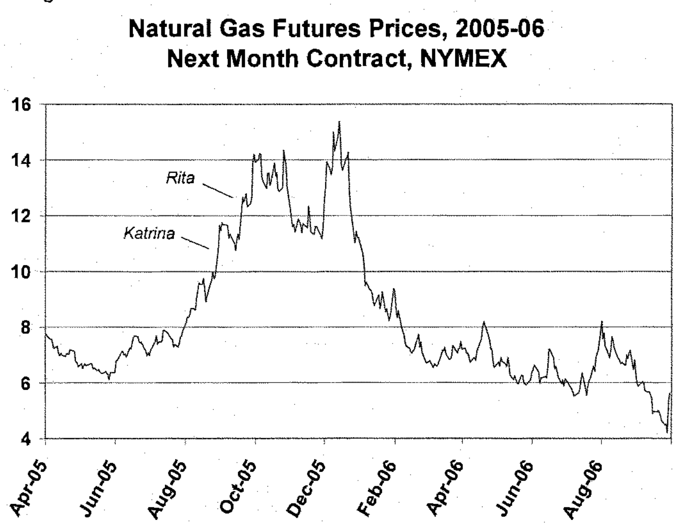

Fig. 21. By spring 2006 natural gas next-month futures prices had returned to pre-hurricane levels. Data source: EIA.

At the same time that near-term futures prices began falling in early 2006 to pre-hurricane levels, prices for futures contracts for the months further into the future also were much lower. Figure 22 displays forward curves on two dates - reflecting the final prices of NYMEX futures contracts on those dates for all of the future months in which NYMEX contracts can be traded. The first curve is from October 2005, shortly after the Katrina and Rita hurricanes, and the second is from February 2006 toward the end of the mild winter. Figure 22 shows how the price of every natural gas futures contract from March 2006 through March 2007 was lower in February 2006 than it had been in October 2005, just after Katrina and Rita. This downward adjustment in prices reflected a general belief in early 2006 that the effects from the hurricanes would not be as severe on natural gas prices as initially feared.

Figure 22

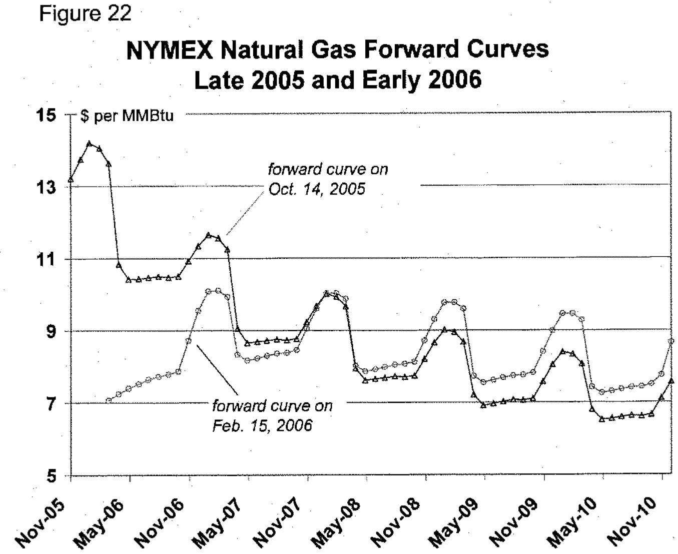

Fig. 22. By early 2006, futures prices for the next 12 months had fallen significantly from their post-hurricane levels, reflecting a lessening concern regarding the long-term effects of those hurricanes on natural gas prices. Data source: NYMEX.

Some traders, however, thought winter prices would increase. Amaranth, for example, told the Subcommittee that, with increasing domestic demand for natural gas, their traders expected supply shortages, delivery bottlenecks, and weather-related disruptions to develop during the winter and boost prices. In their view, the fundamentals of supply and demand justified much higher spreads between the natural gas winter and summer prices, and presented Amaranth with a profit-making opportunity. Over the next seven months, Amaranth aggressively pursued this market view.

C. The Rise of Amaranth

> *"But to tell the truth, Sam, I had sort of made up my mind to keep out of speculation since my last little deal. A man gets into this game, and into it, and into it, and before you know he can't pull out – and he don't want to."*
> -- Frank Norris, *The Pit: A Story of Chicago* (1902)

Amaranth Advisors, LLC, was created in 2000 as a multi-strategy hedge fund. Nicholas Maounis, the founder and Chief Executive Officer of Amaranth, had previously worked at another hedge fund, Paloma Partners Management Company ("Paloma"), where he both traded and managed teams of traders. Mr. Maounis brought with him a trading team from Paloma, consisting of four portfolio managers, eight analysts, five traders, four quantitative analysts, and various technical support personnel. Paloma held a minority interest in the newly spun-off fund and provided additional back-office and administrative support. Amaranth began operation with approximately $600 million in capital and sought to employ "a diverse group of arbitrage trading strategies," particularly featuring convertible bonds, mergers, and utilities.[77]

In 2002, Amaranth added energy commodity trading to its slate of strategies and hired several former Enron traders to its staff. JPMorgan Chase, which served as Amaranth's clearing firm for its commodity trades, explained: "Due to the bankruptcy of Enron North America and its departure as the largest market maker in a number of energy derivatives exchanges and OTC markets the Fund manager views this as an expansion/diversification opportunity for Amaranth."[78] The clearing firm noted: "Initially only 2% of Amaranth's capital will be allocated to energy related trading."

During its first few years Amaranth generated excellent returns, exceeding 29 percent in 2001, 15 percent in 2002, and 21 percent in

[77] JPMorgan Chase, CP Leveraged Funds Due Diligence, Annual Review 2001, Bates No. JPM-PSI 00007004; Interview with Amaranth officials, December 20, 2006. Convertible bond arbitrage consists of buying a convertible bond and short selling the underlying common stock that the bond can be converted into. Merger arbitrage consists of investing in securities of companies that may be involved in mergers, takeovers, recapitalizations, or other types of corporate restructuring. Utilities arbitrage consists of buying one basket of utility stocks and selling short another basket of utility stocks and hoping to profit from the changes in the price differentials between the two baskets.
[78] *Id.*

2003. In 2004, however, Amaranth found it increasingly difficult to maintain these high returns through its existing arbitrage strategies. Amaranth's core strategy of convertible bond arbitrage had yielded no return at all for the first seven months of 2004, and its overall net return across all strategies was just over 3 percent, well below the fund's previous performance.[79]

During this period of low returns Amaranth decided to increase its exposure to potentially higher-yielding markets, particularly energy. In mid-2004, Amaranth hired Brian Hunter as a natural gas trader; in 2005, Mr. Hunter was promoted to co-head of Amaranth's commodities group. As the convertible bond market continued to falter into 2005, Amaranth shifted more capital into energy trading. Whereas in mid-2004 energy trading was a negligible fraction of Amaranth's portfolio, by mid-2005, Amaranth had devoted approximately 30 percent of its capital to energy arbitrage.

Amaranth employed a variety of energy trading strategies. JPMorgan Chase described them as follows:

> The Fund has hired a couple of former Enron energy traders to build an Energy Arbitrage desk. Energy arbitrage opportunities can also take a number of forms due to the significant amount of available "Energy" products. A generic geographical energy arbitrage can be trading the difference of price in a given commodity either in the same location or in [a] different geographical location. Other arbitrage opportunities include Grade arbitrage which encompasses trading the difference in price of two related crude oil based commodities such as the spread between WTI and Brent Crude. Generally these arbitrage opportunities are created by fundamental news affecting production and inventory. In addition trades may also be on the perceived price volatility of crude oil and other crude products such as gasoline, jet fuel and heating oil and or the correlation between one another. These views have been expressed through calendar spreads. In addition, deep out-of-the-money call options are purchased as a cheap way to take advantage of price shocks. Leverage ranges from 5-8x.[80]

[79] Interview with Amaranth officials, Dec. 20, 2004; JPMorgan Chase, CP Leveraged Funds Due Diligence, Annual Review 2004, Bates No. JPM-PSI 0007031.
[80] *Id.*

Amaranth's purchase of inexpensive deep out-of-the-money call options paid off handsomely when natural gas prices spiked after Hurricanes Katrina and Rita. The purchase of these options allowed Amaranth to buy very expensive natural gas futures contracts at a steep discount.

The effect of these options and Amaranth's other natural gas positions on Amaranth's overall performance in 2005 was dramatic. For the first six months of 2005, Amaranth lost money; the net return was negative one percent. In August and September, largely due to Amaranth's natural gas positions, Amaranth's domestic portfolio gained nearly 15 percent. By year-end, the portfolio had gained just over 21 percent.

JPMorgan Chase reported, "For [the domestic Amaranth funds] the majority of the positive performance for 2005 came from profits in the energy book, approximately 98 percent of the funds' [year-to-date] performance was related to energy trades. Energy trading profits/losses are derived primarily from natural gas calendar swaps."[81] Reports indicated that, in 2005, as a result of these trades, Mr. Hunter personally made $75 million.[82]

Table 5
Amaranth Returns
2005

Month	Monthly Return (%)	Year-to-Date Return (%)
Jun 05	3.03	-0.98
Jul 05	2.39	1.38
Aug 05	5.19	6.65
Sep 05	7.49	14.63
Oct 05	-0.90	13.60
Nov 05	3.48	17.53
Dec 05	3.13	21.21

By 2006, in part due to its energy trading successes, Amaranth had grown significantly, both in terms of the number of its employees and in net asset value. It now had approximately $8 billion in assets under management. It employed more than 400 people in offices around the world, including Greenwich, Connecticut; London; Toronto; Singapore; Calgary; and Houston. Its staff included a Chief Risk Officer and 12 risk "lieutenants" to monitor the risks in the various trading books.[83]

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[81] JPMorgan Chase, CP Leveraged Funds Due Diligence, Annual Review 2005, Bates No. JPM-PSI 0007051.
[82] Ann Davis et al., *Hedge-Fund Hardball, Amid Amaranth's Crisis, Other Players Profited*, Wall St. J., Jan. 30, 2007, at A1.
[83] *Id.*

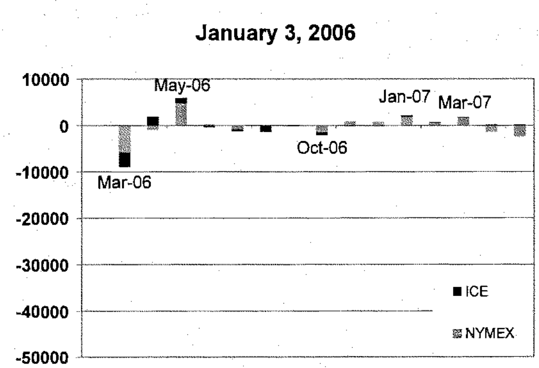
D. January-April 2006: Amaranth Buys and Profits from Large Spread Positions

"How are you going to buy a big block of a stock in a bull market without putting up the price on yourself? That would be the problem."
--Reminiscences of a Stock Operator, p. 233.

According to Amaranth, in January 2006, as the warmer-than-usual weather mitigated the post-hurricane concerns over the adequacy of supplies, Amaranth's traders believed that natural gas prices would fall.[84] Over the course of January, Amaranth made a series of trades that resulted in its acquisition of huge natural gas positions, selling nearly 30,000 natural gas contracts for March 2006, and ending the month with a total short position for March of about 40,000 contracts. Amaranth held about two-thirds of its positions on NYMEX and the other third on ICE.

Figure 23

Amaranth's Positions in January 2006



[84] All of the data and information in this Report regarding Amaranth's trading is derived from trading data obtained from Amaranth, ICE, and NYMEX and Subcommittee interviews with Amaranth officers and traders.

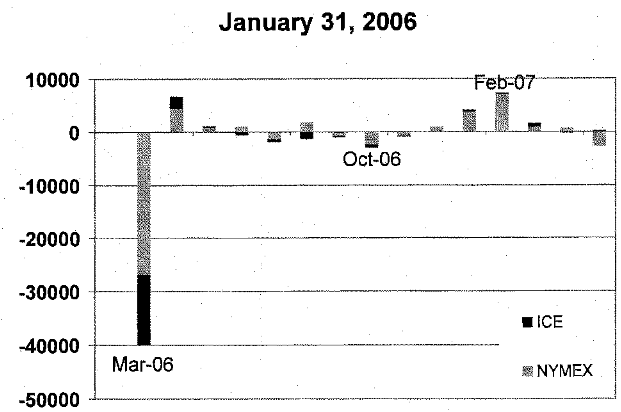


Fig. 23. In January 2006, Amaranth built a short position of about 40,000 March 2006 contracts, about 2/3 of which were on NYMEX and 1/3 on ICE. Positions beyond May 2007 are not displayed. Data source for charts on Amaranth's positions: NYMEX, ICE, and Amaranth.

During February 2006, Amaranth shifted its short March positions into April, maintaining its bet that natural gas prices would continue to fall. By the middle of the month, as the relatively mild weather continued, Amaranth concluded that the growing glut of gas would carry through the summer and into the fall. Amaranth began selling futures contracts for the fall months and buying futures contracts for the winter months with the expectation that the price of winter gas would be at a premium. In particular, Amaranth bought contracts for January 2007 and sold contracts for November 2006 (the "January/November spread"), in effect betting that January prices would rise faster than November prices. Amaranth invested heavily in its trading strategy, finishing the month with a short position of more than 25,000 November contracts and a long position of more than 25,000 January contracts.

Figure 24

Amaranth's Positions in February 2006

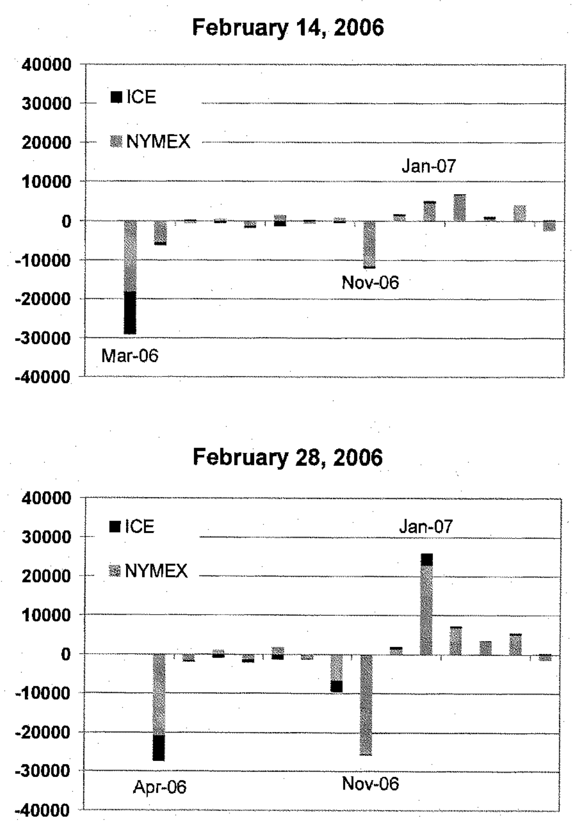


Fig. 24. In mid-February, Amaranth began building a large spread position between January 2007 and November 2006. Most of the trading in these contracts occurred on NYMEX.

Amaranth pursued a similar strategy in March 2006; it maintained a short position in the nearby spring months, shifting 30,000 short April contracts into May. It also maintained its large spread position between the upcoming fall and winter months. Although Amaranth began building this spread by selling November 2006 contracts and buying January 2007 contracts, in March, Amaranth shifted some of its short positions from November 2006 contracts into October 2006 contracts. To build these positions, Amaranth traded primarily on NYMEX, and to a lesser amount on ICE.

Figure 25

Amaranth's Positions in March 2006

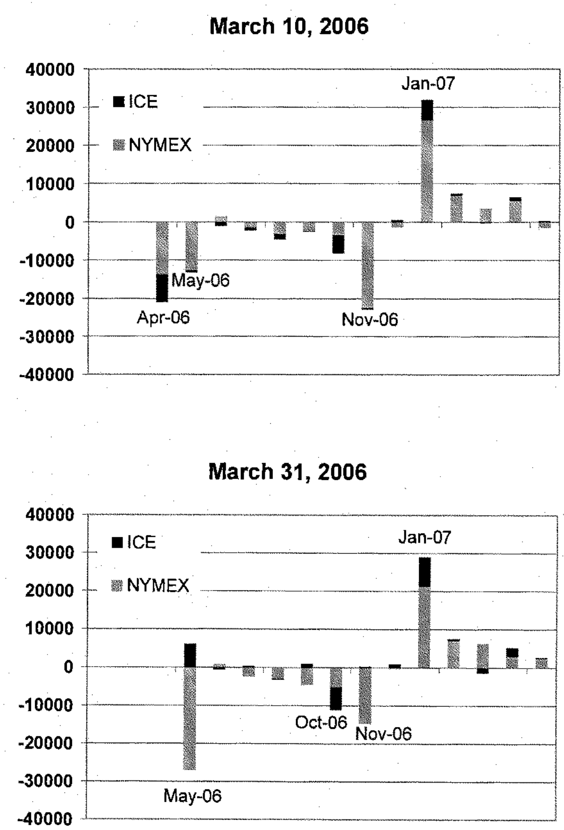


Fig. 25 During March Amaranth continued to hold a short spring position and a spread between the fall months of October and November 2006, and January 2007.

Amaranth continued the same strategies in April. It rolled its short May 2006 contracts into short June 2006 contracts and increased its January/November spread position by several thousand contracts. By the end of April, Amaranth was short approximately 30,000 contracts for November 2006, and long more than 34,000 contracts for January 2007. Amaranth had also accumulated significant short positions in the summer and fall months and significant long positions in the winter months. All of these positions reflected Amaranth's fundamental market view that the price of natural gas during the winter would be very expensive as compared to the summer.

Figure 26

Amaranth's Positions in April 2006

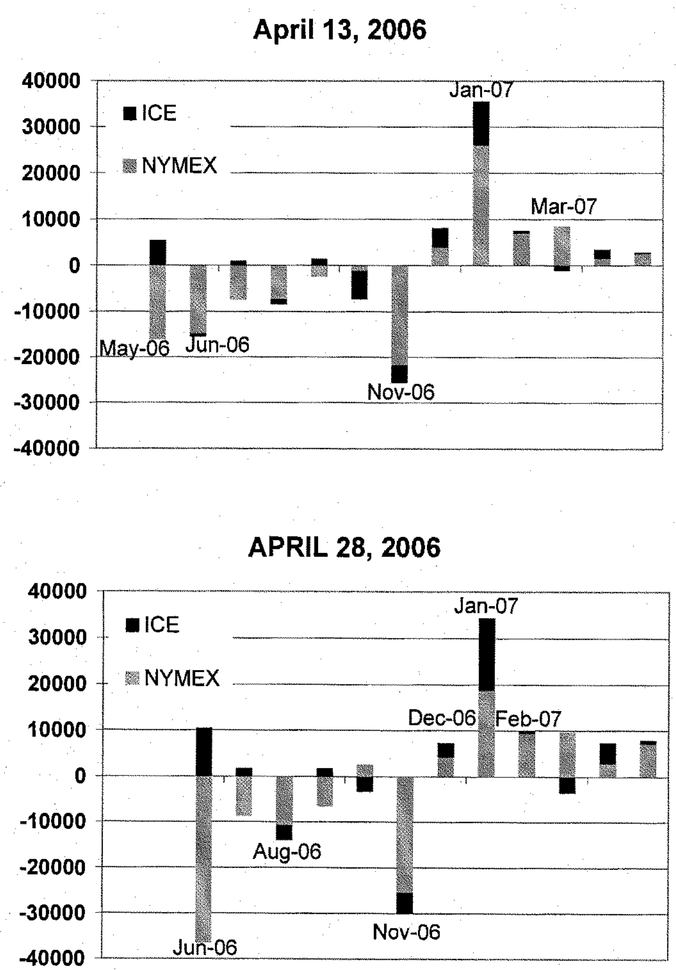


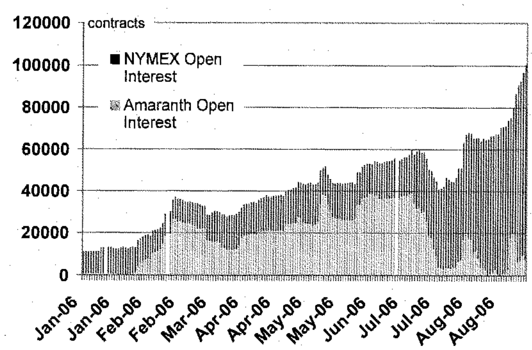
Fig. 26. In April Amaranth maintained its short position in the nearby spring and summer months and slightly increased its winter/fall spread position.

According to traders interviewed by the Subcommittee, Amaranth's fundamental market outlook in early 2006 was not unreasonable under the circumstances. What was striking about Amaranth's positions, and unknown to other traders, was the size of Amaranth's natural gas holdings. By the end of February, Amaranth held nearly 70 percent of the open interest in the NYMEX natural gas futures contract for November 2006 (Figure 27), and nearly 60 percent of the open interest in the NYMEX natural gas futures contract for January 2007 (Figure 28). In other words, Amaranth's long position in the January contract accounted for about 60 percent of all of the futures contracts for January that had been bought and had not yet been sold back. Similarly, Amaranth's short position in November accounted for about 70 percent of the November contracts that had been sold but had not yet been bought back. These were extremely large positions.

Figure 27

Amaranth Open Interest, NYMEX Natural Gas Contract for November 2006

Compared to Total NYMEX Open Interest



As % of NYMEX Open Interest

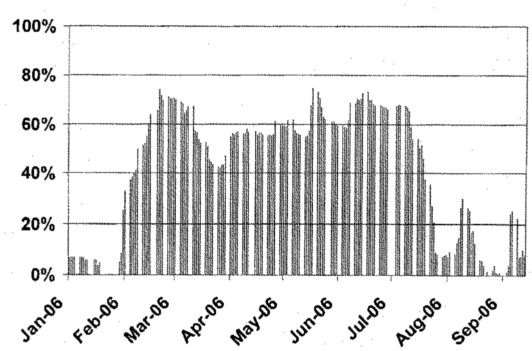
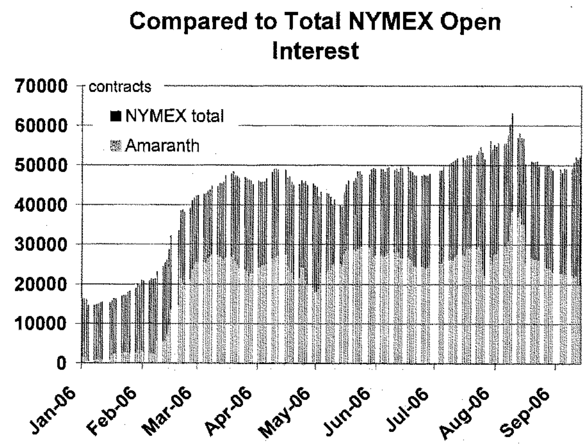
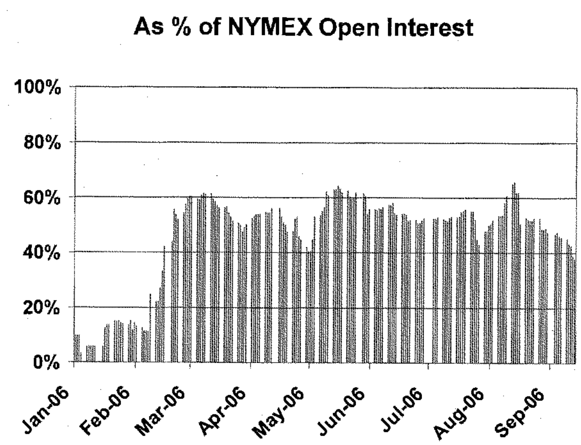


Figure 28

Amaranth Open Interest, NYMEX Natural Gas Contract for January 2007





Figs. 27 and 28. Amaranth held extremely large shares of open interest in the November 2006 and January 2007 NYMEX natural gas futures contracts. Data source: Amaranth and NYMEX.

Table 6
NYMEX Natural Gas Futures:
Cost of Position Size

Number of Contracts	Margin Requirement*	Profit or Loss From Price Change of 1¢
1	$6,750	$100
10	$67,500	$1,000
100	$675,000	$10,000
1000	$6,750,000	$100,000
10,000	$67,500,000	$1,000,000
100,000	$675,000,000	$10,000,000

**Initial Margin requirement for 1st month natural gas futures contract for traders not a Member of the Exchange. Margin requirements will be less for spread positions.*

Although Amaranth traders and officers told the Subcommittee that they did not consider any of Amaranth's positions or trades to be unusually large or risky, very few, if any, other traders appeared to hold positions as large as Amaranth or to trade as much volume as Amaranth. Generally, except for large energy companies and multi-billion dollar funds, positions of a few thousand contracts are beyond the financial capability and risk tolerance of most traders.

All traders are required to post funds - called "margin" - with their clearing firms to ensure that they have the financial resources to perform under the contract and make up for any losses incurred in their positions. Large holdings incur large margin requirements. An outright position of 10,000 contracts, for example, requires the posting of a margin of over $67 million. Assuming the price of natural gas is about $7.50 per MMBtu, an outright position of 10,000 NYMEX futures contracts would be worth $750 million. A change of just one cent in a position of 10,000 futures contracts, whether an outright position or a spread position, would change that trader's profit or loss by $1 million. At times, from late April through mid-August 2006, Amaranth held more than 100,000 natural gas futures

How big is 100,000 contracts?

From late April through mid-August, Amaranth had a total open interest on NYMEX of more than 100,000 natural gas futures contracts – more than 40 percent of the total open interest on NYMEX during this period. By late summer, Amaranth also had built total positions on NYMEX and ICE of nearly 100,000 contracts in individual months.

100,000 contracts represent an amount of natural gas equivalent to:

- 1 trillion cubic feet of natural gas;
- 23 percent of the amount of natural gas consumed by residential users in 2006;
- 5 percent of the total amount of natural gas consumed in the United States in 2006.

contracts. Amaranth's total margin requirements routinely exceeded $1 billion.

Amaranth's short-term and long-term positions yielded good returns in April 2006. The spread between the November 2006 contract and the January 2007 contract widened from $1.59 to $2.22. Amaranth's short June position did very well in April too, as the price of the June 2006 contract fell from $7.42 to $6.55 during the month of April. The March/April spread in 2008 increased from $1.97 to $2.48, and the March/April spread for 2010 increased from $1.99 to $2.40. In total, Amaranth's energy portfolio gained more than $1 billion in value in April 2006, by far the largest contribution to Amaranth's overall return of more than 14 percent for the month and more than 30 percent for the year-to-date.[85]

Amaranth explained its successful April in a monthly letter on the fund's performance sent to Amaranth's investors:

> Our energy and commodities portfolios generated outsized returns due to unusual volatility across the crude oil, natural gas, and metals businesses. Primary drivers of returns included (1) natural gas spread trades, which benefited from the significant increase in crude oil prices and the glut of summer 2006 natural gas relative to storage capacity and prospective summer demand, and (2) a profound increase in base metals prices (copper in particular) with an associate volatility spike. As volatility increased during the month, we took the opportunity to reduce exposure in our natural gas and metals portfolios and realized profits.[86]

Table 7
Amaranth Returns: January – April 2006

Month	Monthly Return (%)	Year-to-Date Return (%)
Jan	6.45	6.45
Feb	4.30	11.03
Mar	2.91	14.26
Apr	14.42	30.73

[85] Amaranth, Performance and Net Asset Value Report—September 2006 YTD, provided to JPMorgan Chase, Bates No. JPM-PSI 00006995.
[86] Amaranth investor letter in April 2006 monthly update to JPMorgan Chase, Bates No. JPM-PSI 00006978.

Upon closer analysis, Amaranth itself appears to have been a significant contributor to the "unusual volatility" in the natural gas market that added so much to its "outsized returns" for April. Amaranth purchased large numbers of January contracts, coupled with large sales of the November contract, a trading strategy called "buying a spread position." By buying one contract and selling the other in linked transactions, Amaranth helped to widen the difference in price between these two contracts. Amaranth was the predominant buyer of the January contract during this period; its long January position constituted as much as 60 percent of the amount of open interest in that contract on NYMEX. At the same time, Amaranth was the predominant seller of the November 2006 contract; its short November position constituted as much as 75 percent of the amount of open interest in that contract on NYMEX. As Figure 29 shows, Amaranth's large purchases of NYMEX natural gas futures contracts for January 2007 are highly correlated with movements in the price spread between the January 2007 and November 2006 contracts (the January/November price spread).

Figure 29a

Amaranth's Purchases of January 2007 Contracts Are Highly Correlated with Spread Prices

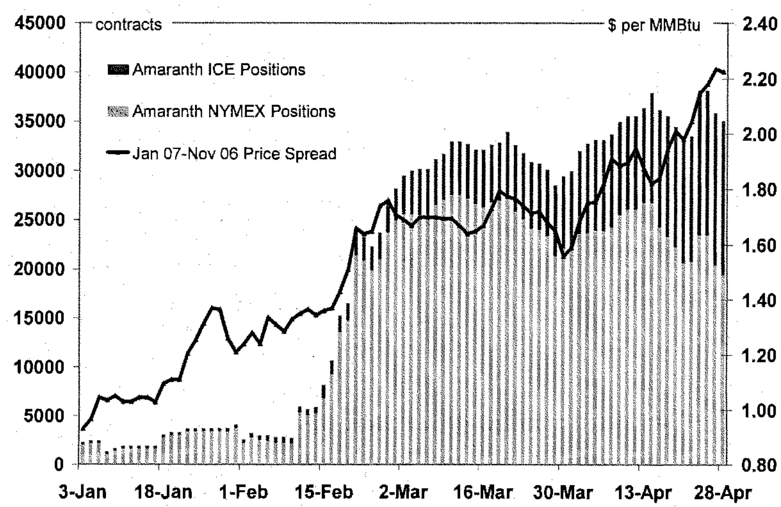


Fig. 29a. From mid-February through April, Amaranth's large sales of November 2006 futures contracts and purchases of roughly the same number of January 2007 futures contracts increased the price spread between the two contracts. Data source: NYMEX and ICE.

Figure 29b

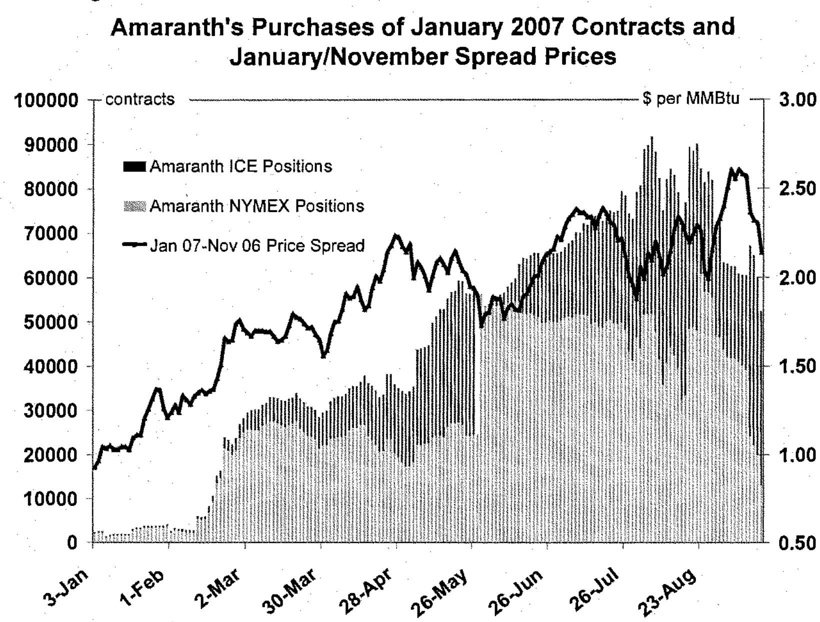


Fig. 29b. The size of Amaranth's position in the January-November spread (and the January/October spread) was highly correlated with the January-November prices spread during the winter, spring, and summer of 2006. Data sources: NYMEX and ICE.

Table 8
Correlations Between Amaranth Positions in the Jan 07 Natural Gas Contract and the Jan 07-Nov 06 Price Spread

	Correlation Between:		
	NYMEX Positions and Spread Price	ICE Positions and Spread Price	Total Positions and Spread Price
1/3-4/28	0.86	0.90	0.93
1/1-8/31	0.78	0.75	0.87

Statistically, there is also a high degree of correlation between Amaranth's spread positions and the price of the January/November spread. For the time period from January 3, 2006 through April 28, 2006, the correlation coefficient between the January/November price spread and Amaranth's net long position in NYMEX futures and ICE swaps for January 2007 equals 0.93.

A high degree of statistical correlation between two variables does not, by itself, establish a causal relationship between the two. Two highly correlated variables may each be caused or partially explained by an independent third variable and thus bear no causal relationship to each other.[87]

Several factors, however, support the conclusion that Amaranth's trades were a major cause of the increase in these price spreads. First, the nature of a commodity market dictates that the price is the dependent variable. The interactions between buyers and sellers through bids and offers immediately determine the price of the commodity. When there are more buyers than sellers prices rise, and when there are more sellers than buyers prices fall.

Because Amaranth was overwhelmingly the predominant buyer of January contracts and the predominant seller of November contracts during this period, meaning the predominant buyer of the January/November spread, Amaranth's actions must be considered to be the predominant cause of the increase in the January/November price spread. Amaranth's predominant buying of the January contract is reflected in the open interest percentages for that contract - Amaranth held more than half of all outstanding contracts that had been bought. Amaranth's predominant selling of the November contract is reflected in the open interest percentages for that contract - Amaranth had sold more than half of all outstanding contracts that had been sold.[88]

Other traders who bought or sold this spread position also would have contributed to the price of the spread. However, since Amaranth acquired and held the majority of long open interest in the January 2007 contract and the majority of short open interest in the November contract, it follows that Amaranth alone contributed more to the increase in the price of these spreads than all of the other buyers of this spread combined.

[87] For example, the day after Thanksgiving is usually the busiest shopping day of the year. Although there is a high correlation between the consumption of turkey and consumer spending in late November, it would be incorrect to conclude that eating lots of turkey in late November causes people to buy gifts. Rather, there is a high correlation between the two variables because another independent variable – the end-of-year holiday season – causes both results.

[88] Open interest reflects not just past activity - who has bought and held the most contracts, for example - but also gives an indication of who must do most of the selling and buying in the future, before the contract expires. A trader that acquires a large share of open interest not only may have had a significant effect on the current price structure, but can have a significant effect on future prices depending on how it reduces its open interest. For example, if a trader with a large share of long open interest suddenly decides to sell its contracts, it likely will push down the price of the contract. On the other hand, if a trader with a large share of open interest decides to hold onto those contracts and wait for a higher price before selling, the price will move down more slowly, if at all, because there will be much less selling pressure.

Moreover, Amaranth did not confine its natural gas trading to just November and January contracts. It also acquired a large share of the open interest in the surrounding months. From mid-February through mid-September, Amaranth always held at least 30 percent, and on occasion as much as 45 percent, of the total open interest in the NYMEX futures contracts for the 2006-07 heating season (October through March). Until its September collapse, Amaranth had by far the largest positions of any single trader in the 2006 U.S. natural gas financial markets.

Figure 30

Amaranth Open Interest, NYMEX Natural Gas Contracts for Winter, 2006-07

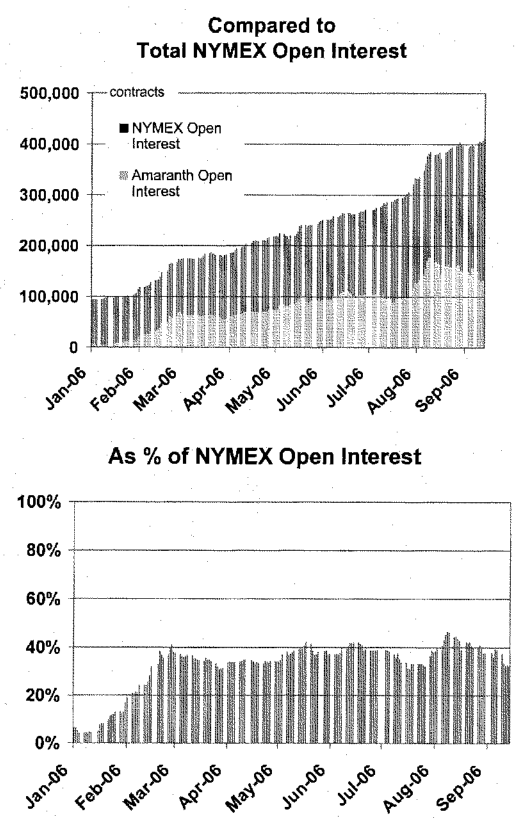


Fig. 30. Amaranth held nearly 40 percent of the total open interest in NYMEX futures contracts for the winter of 2006-07 (October through March). Data source: Amaranth and NYMEX.

Table 9, which provides selected data from these figures, shows how Amaranth's open interest in natural gas contracts increased from February to April 2006. The significant growth in Amaranth's positions in other winter and summer contracts during this period is further evidence that Amaranth's large buys of winter contracts and large sales of summer contracts were the major cause of the widening difference in price between the winter and summer contracts.

Table 9
Growth in Amaranth Positions in Early 2006

		NYMEX Contract Month									
		Jun 06	Jul 06	Aug 06	Sep 06	Oct 06	Nov 06	Dec 06	Jan 07	Feb 07	Mar 07
% of NYMEX open interest held by Amaranth on:	2/1/06	9	2	12	0	1	9	5	12	53	20
	4/28/06	32	14	27	18	3	61	16	45	40	38

Amaranth's trades were not the sole cause of the increasing price spreads between the summer and winter contracts; rather they were the *predominant* cause. This analysis does not draw any conclusions regarding whether the underlying market conditions provided a sound rationale for investing in the January/November price spread; rather it focuses on how large buys and sells of futures contracts by a single trader, whatever the underlying market conditions and regardless of the trader's motivation, were responsible for producing most of the price variation in that spread. The trading data show, in short, that the sheer volume of Amaranth's trades and size of its positions affected the November and January contract prices and the resulting price spread.

Table 10
Correlations Between January/October and January/November Price Spreads

Year (of Nov contract)	Correlation Between Spreads
2002	0.97
2003	0.97
2004	0.89
2005	0.98
2006	0.89

The trading data also indicate that Amaranth's effect on the January/November price spread affected other key price spreads. For example, because the fundamentals of natural gas supply and demand for October are so closely related to the supply and demand fundamentals for November, the price of the October contract is typically closely related to the price of the November contract. Hence, the difference in price between the January contract and the November contract is closely related to the difference in price between the January contract and the October contract. Because October is warmer than November, the January/October spread will generally be larger than the January/November spread, and changes in the January/October spread will generally be larger than the corresponding changes in the January/November spread.

In early 2006, as the price spread between the November futures contract and the January futures contract widened, the spread between the January futures contract and the October futures contract also widened. There is an extremely high correlation between the behavior of these two price spreads in 2006, as reflected in Table 10.[89] As Amaranth's trades increased the January/November price spread, the January/October price spread increased too. (Figure 31).

[89] Correlations are calculated for the time period preceding the October contract from the first trading day in January through the date in August of expiry of the September contract.

Figure 31

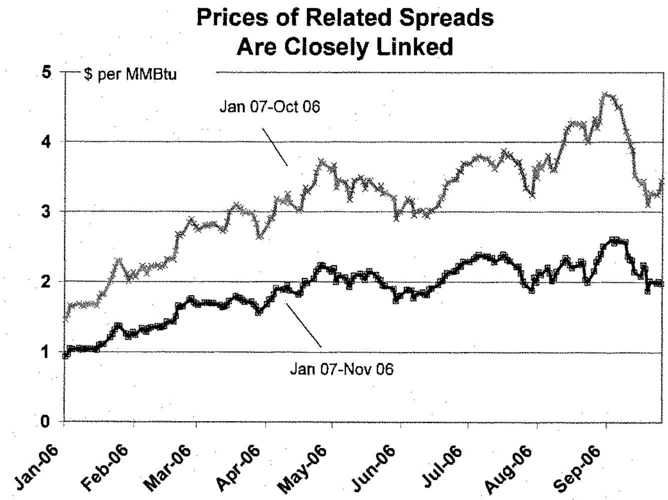


Fig. 31. The large increases in the January/November price spread contributed to even larger increases in the January/October price spread. Data source: NYMEX.

Moreover, a significant change in just one price spread can have a cascading effect on a whole suite of price spreads. Indeed, the data show that, as both the January/November and the January/October spreads widened, a variety of other spreads involving the months close to October, November, and January also widened.[90] The increases caused by Amaranth in the January/November price spread thus appear to have contributed to increases in other related price spreads as well.

The behavior of the two price spreads in early 2006 differed dramatically from previous years. Figure 32, which depicts the historical behavior of January/November price spreads, and Figure 33, which depicts the same information for the January/October price spreads, show how the 2006 price spreads were significantly greater and displayed more volatility than previous years.[91] Many traders told the Subcommittee they attributed the increased price spreads to heightened concerns about the vulnerability of natural gas production to hurricanes or other disruptions. Many traders interviewed by the Subcommittee

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[90] Arbitrage trading between futures contracts for different months strengthens these relationships.

[91] Amaranth acquired the majority of the long open interest in the January 2007 contract as a result of its purchases of the January/November spread. On several occasions, Amaranth switched some of its short positions from the November 2006 contract to the October 2006 contract. For the purposes of this analysis, it does not make a difference whether the short leg of the spread was in the October or November contract.

also stated that they considered both spreads to be overpriced and that they did not reflect a rational market response to the hurricane risk.

Figure 32

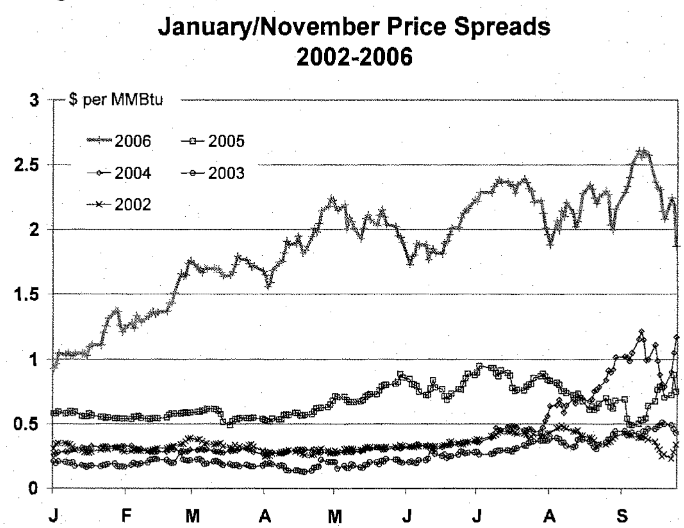
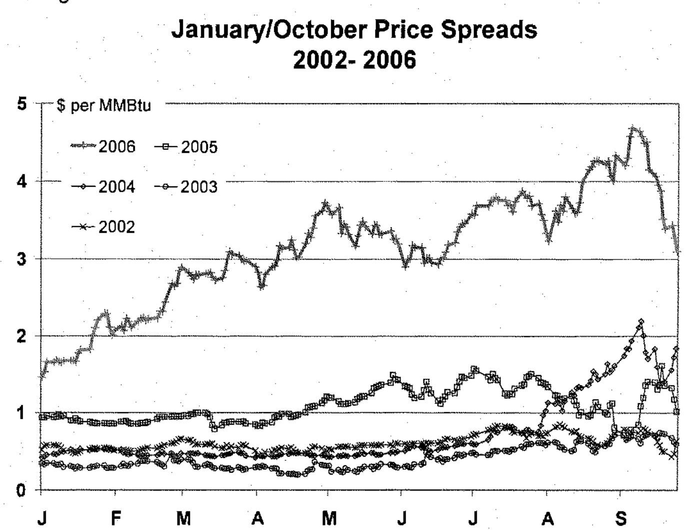


Figure 33



Figs. 32 and 33. Amaranth's trading in early 2006 caused extreme volatility in the price spreads for natural gas for the winter of 2006-2007. Data source: NYMEX.

In sum, in early 2006, Amaranth accumulated tens of thousands of natural gas contracts in multiple months, primarily on NYMEX but also on ICE. In late spring, this strategy looked extremely successful; Amaranth's books showed that its energy trading gains in April alone exceeded $1 billion.

E. May 2006: Liquidity Evaporates

"There is no sense in marking up the price to a very high level if you cannot induce the public to take it off your hands later."

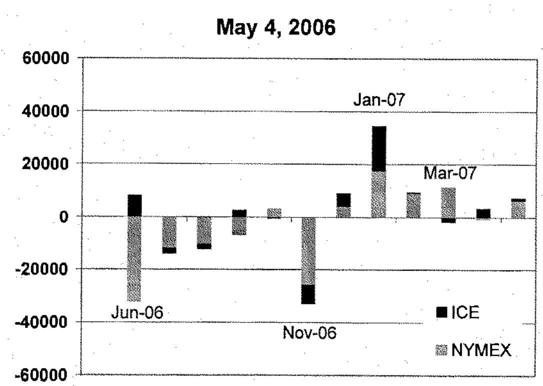
--Reminiscences of a Stock Operator, p. 245.

Amaranth's natural gas trading strategy was highly profitable in April 2006. In May, the market took all those profits back.

In May, Amaranth increased the size of its position in the January/November price spread to nearly 60,000 contracts. It also increased its total short position for the next few summer months to nearly 70,000 contracts. (Figure 34).[92] During this period, Amaranth continued to hold between 60 and 70 percent of the open interest for the NYMEX natural gas futures contract for November 2006, and between 50 and 60 percent of the open interest for the NYMEX natural gas futures contract for January 2007. (Figures 27 and 28, *supra*).

Figure 34

Amaranth's Positions in May 2006



[92] Following its losses during the last week of May, Amaranth switched its positions on ICE to NYMEX to reduce its margin requirements. E-mail from Damir Durkovic to Jim Glynn, David Chasman, Jeff Baird, Brian Hunter, May 30, 2006, Bates No. AALC_REG0154959.

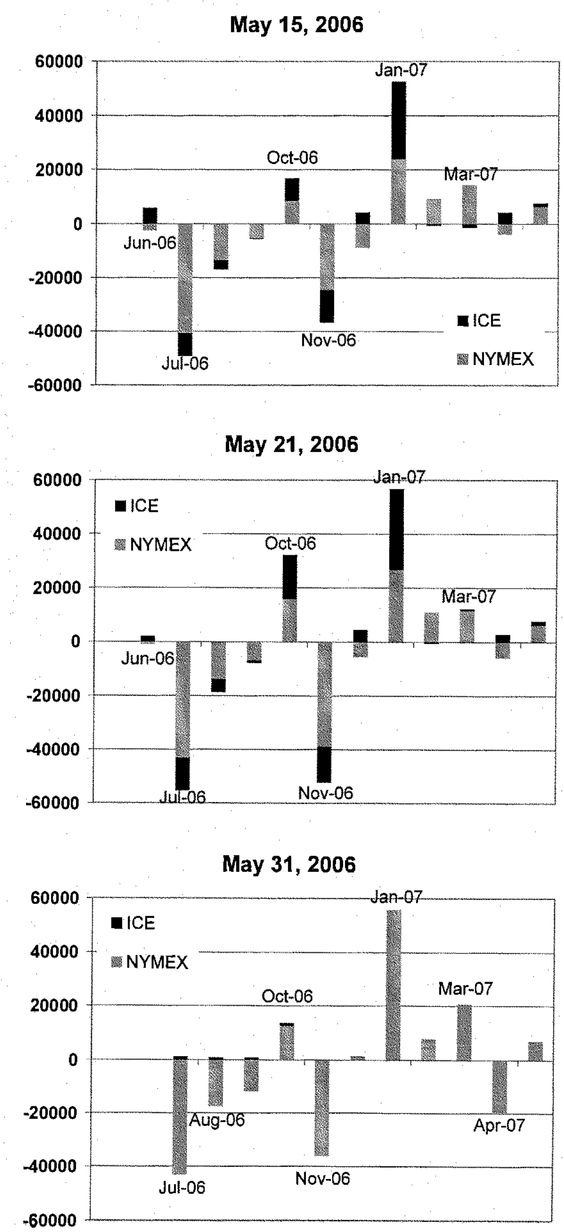


Fig. 34. In May 2006, Amaranth increased the size of its position in the January/November price spread while simultaneously increasing its short position for the next few summer months.

In mid-May Amaranth tried to reduce some of its positions and realize some of the gains in the value of its holdings. Amaranth found it difficult to find enough buyers willing to pay the prevailing market prices for these positions. Additionally, toward the end of the month a number of other large traders sold futures contracts while prices were high. This pushed prices down, making it even harder for Amaranth to find buyers at the prices it wanted to lock in its profits. Amaranth's traders debated whether to hold their positions and wait for buyers at higher prices, or to begin selling its positions and give back some of their previous gains.

During the last week of May the market turned sharply against Amaranth. All of the winter/summer price spreads fell sharply. The January/November price spread, for example, fell from $2.15 to $1.73, a drop of about 20 percent. In total, Amaranth lost more than $1.16 billion in the value of its energy contracts during the last week of May. Nevertheless, due to its large gains in the previous months, Amaranth was able to report to its investors a net return of more than 15 percent for the first five months of the year.

In its monthly letter to investors Amaranth described May 2006 "as the worst month since inception." Amaranth's officers explained that after the successful month of April the fund had tried to reduce its positions and capture some of its gains but was unable to do so:

> Historically, the market has provided sufficient liquidity and opportunity for us to tailor the portfolio as desired despite rapidly changing market dynamics. This "expansion/contraction" approach has enabled us to generate more profits than if we had required the team to unwind trades aggressively whenever markets moved in our favor. In this case, as we endeavored to monetize gains (and reduce risk) within the portfolio, liquidity in the market seized up due to high volumes of producer hedging that oversaturated market demand for forward natural gas. While this was a humbling experience that has led us to recalibrate how we assess risk in this business, we believe certain spread relationships remained disconnected from their fundamental value drivers.[93]

[93] Amaranth letter to investors from JPMorgan Chase, May 2006 Update, Bates No. JPM-PSI 00006981. In interviews with the Subcommittee, Amaranth traders provided similar explanations for their May losses.

It is not surprising that Amaranth had difficulty finding buyers when it tried to sell its high-priced spread positions. Generally, a buyer will be able to build a large position if he or she is willing to pay escalating prices to do so. As prices are rising, there will be plenty of sellers. The presence of many sellers at high prices, however, does not mean there will be many buyers at high prices. If a very few or only one trader had been doing all the buying as prices were rising, there may be even fewer or no buyers at all at the resulting high prices.

In addition, there is an inherent imbalance between buyers and sellers in the natural gas futures market. Generally, the producers of natural gas use the futures market to hedge their future sales and thus are generally sellers of futures contracts. Many end users, such as residential customers and even some LDCs, do not use the futures market to hedge their future purchases. The end result is that the natural gas market consists of more "natural" sellers than buyers.

Speculators in the natural gas market help balance out the buyers and sellers. By purchasing futures when they believe them to be under-priced, speculators help make up for the structural shortage of buyers and help producers hedge their future sales.[94] Amaranth had no difficulty finding sellers when it was buying contracts for the winter months while spread prices were high. In this instance, the presence of more sellers than buyers worked to Amaranth's advantage. When Amaranth decided to try to sell those high-priced positions, however, it could not find nearly enough buyers who were willing to pay even higher prices to take those positions from Amaranth. In this instance, the natural shortage of buyers worked against Amaranth.

Amaranth's inability to find buyers at the prevailing prices is additional evidence that most traders considered the market to be overpriced. Winter/summer spread prices were at unusually high levels compared to past years. Although Amaranth may have believed that its positions reflected fundamental values, few other traders appear to have shared that view. One hedge fund trader told the Subcommittee that the level of the January/October spread at that point in time was "totally out-of-whack;" another trader said that it was "ridiculous."

The sheer size of Amaranth's positions made it difficult to find enough buyers to purchase its holdings. On 18 of 21 trading days in May, Amaranth's positions accounted for more than 50 percent of the open interest in the January 2007 NYMEX natural gas futures contract. On all trading days in May, Amaranth accounted for at least 55 percent of the open interest in the November 2006 contract. Amaranth's open

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[94] For a more detailed discussion of the financial strategies of producers and speculators, see also Hillary Till, *EDHEC Comments on the Amaranth Case: Early Lessons from the Debacle* (2006).

interest in the November contract was greater than the total open interest in each of the NYMEX November contracts during the month of May in each of the preceding three years. (Figure 35a). Similarly, in May 2006, Amaranth held as much or more open interest in the NYMEX January contract than all NYMEX traders combined in the month of May in each of the prior three years. (Figure 35b). In other words, in 2006, Amaranth's positions in each of these two contracts was about as large as the entire NYMEX market for these contracts over a similar time period in each of the three previous years. Put simply, Amaranth was too big for the market it had created.

Figure 35a

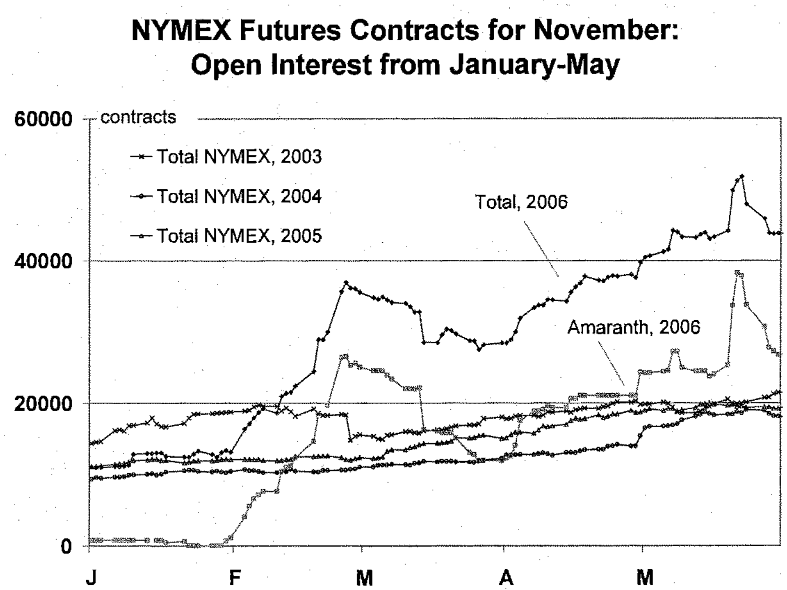
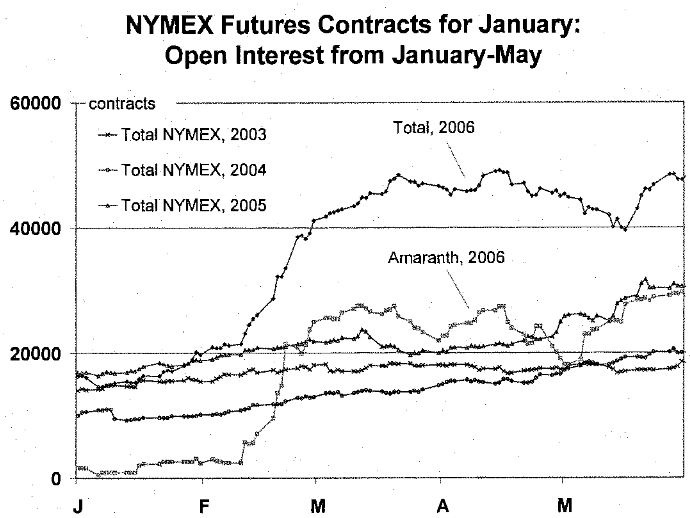


Figure 35b



Figs. 35a and 35b. From March through May 2006, Amaranth held more open interest in the November NYMEX futures contract than was held by all other traders combined in the November contract in a similar time period in previous years. Amaranth also held as much or more open interest in the January contract than all other traders combined in previous years. Data source: NYMEX.

The box that Amaranth built and found itself inside of - buying up the market, bidding up the prices, and then finding a lack of other persons to whom to sell those positions - had detrimental consequences for many other market participants. The prevailing price levels, especially the extraordinary price spreads that arose in the spring of 2006, did not arise from the interaction of many buyers and sellers or reflect the "consensus" market view of the fundamentals of supply and demand. Rather, the market largely reflected the actions of a single trader whose steady buying and accumulation of very large positions exerted a continuing upward push on prices over this time period.

On the last trading day in April before the May futures contract expired, Amaranth made a sizeable last-minute sale that caught the attention of the NYMEX market surveillance program. The last day of trading for the May 2006 NYMEX futures contract was on April 26, 2006. On that day, Amaranth sold just over 3,000 May futures contracts, 2,527 of which were sold during the final 30 minutes of regular trading, the period in which the final settlement price for the expiring May contract was determined. According to NYMEX, "Of these 2,527 contracts, Amaranth sold 99%, or 2,517 contracts, during the final four minutes of regular trading hours. Of these 2,517 contracts, Amaranth sold 75%, or 1,897 contracts, during the final minute of regular trading hours. Amaranth further sold 517 contracts during the 'post-close' trading session."[95]

Amaranth was the largest seller of contracts during the final minutes of the settlement period, accounting for about 15 percent of the trading volume during the last eight minutes of trading. During that period, the price of the May contract fell significantly. At 2 p.m., the start of the settlement period for the May contract, the price of the May contract was around $7.15 per MMBtu. Over the next 10 minutes the price rose about 12 cents to around $7.27. The price remained at that level for about 12 minutes. During the last eight minutes of trading, the price fell 17 cents to around $7.10. The final settlement price for the May contract, which is calculated to be the volume-weighted average of the prices during the 30-minute settlement period, was fixed at $7.198.

After noting Amaranth's large volume of trading near the close of this contract, NYMEX asked Amaranth to "provide a written explanation of the commercial need and justification for their trading."[96] In its response, Amaranth stated that in early 2006 its "primary natural gas trading strategy was to hold long winter month positions and short summer month positions (which consisted of NG, ICE OTC Cleared, OTC and ClearPort Contracts)."[97] After its gains in April, Amaranth wrote, it began to develop strategies to reduce these positions.[98]

Amaranth told NYMEX that on the date of the expiration of the May 2006 contract it was waiting to see how many long winter contracts it could sell before deciding how to dispose of its summer 2006 contracts. "Amaranth monitored the winter natural gas market on April 26 hoping to sell winter, and roll the long May NG to June on a spread. Towards the end of the trading day it became apparent that Amaranth would not be able to sell the winter contracts at attractive prices. Thus, Amaranth decided (to the best of its recollection), at some time between

[95] Letter from Anthony V. Densieski, Senior Director, Market Surveillance, NYMEX, to Mike Carrieiri, Chief Compliance Officer, Amaranth, August 2, 2006, Bates No. NX-USSEN-00096. Post-close trading refers to a two-minute period of trading that occurs after natural gas trading has ended for the day. NYMEX reopens the markets to trading during this time, but does not count trading during this period toward that day's settlement price. See NYMEX Rule 6.57, "Post-Close Trading Session."

[96] *Id.*

[97] Letter from Mike Carrieiri, Chief Compliance Officer, Amaranth, to Anthony V. Densieski, Senior Director, Market Surveillance, NYMEX, August 15, 2006, Bates No. Amaranth_Senate 012551-3.

[98] Amaranth wrote that "One effective strategy had been to sell winter positions and cover short summer positions by allowing financially settled swaps to expire and by either selling or rolling futures prior to their expiration." *Id.*

approximately 2:17-2:23 p.m., to sell the May NG contracts outright."[99] Amaranth explained that its trading of May 2006 contracts during the settlement period "was motivated by the desire to achieve an aggregate reduction in the risk of its portfolio." The CFTC has an ongoing investigation into Amaranth's trading activities on that date.

Amaranth's energy portfolio showed a loss of $1 billion during the month of May. Reports of Amaranth's large losses spread through the natural gas market. One trader told the Subcommittee: "Bad news travels fast in this industry. You can't lose a billion dollars and not have a lot of people find out about it." The size of the losses also alerted the market to the potential size of Amaranth's natural gas holdings. "A big hedge fund that shows big losses must have big positions that were losing money," a trader told the Subcommittee. "It didn't take rocket science to figure out there was one player in the market, and who that player was. No one else could have taken positions of this size."

This same trader told the Subcommittee that, based on the size of the losses and the volume of trading activity, it was not difficult to discern what Amaranth's positions were. He guessed that Amaranth was behind the unprecedented price spread between the October and January contracts. He observed that, "The October-January spread had never done anything like this." This trader also concluded that Amaranth was long on the March 2007/April 2007 price spread, and long on the November/January spread, since both those price spreads were out of proportion to historical norms. "It was naïve to think that they could get out of the market with a size of 100,000 positions," the trader added. "I knew Amaranth would eventually implode. It was just a question of when."

[99] Letter from Amaranth to NYMEX, August 15, 2006. The term "NG" refers to natural gas.

F. June and July 2006: Amaranth Increases its Positions

"Who cares about the fundamentals?"
--James J. Cramer, 2007[100]

"It is not wise to disregard the message of the tape, no matter what your opinion of crop conditions or of the probable demand may be."
--Reminiscences of a Stock Operator, p. 124.

By the end of May, at least some of Amaranth's traders and officers were aware of the firm's predicament – that it had accumulated larger natural gas positions than it could sell profitably. According to Amaranth traders interviewed by the Subcommittee, the firm decided to wait and see if more liquidity would develop for Amaranth to be able to reduce the size of its winter/summer spread positions at favorable prices. The alternative would have been to unwind some of its positions and take the loss that would result from selling those positions in a falling market. "We thought about pulling the trigger and taking the loss," an Amaranth trader said. "We had many discussions about it. We figured we could get out for maybe a billion dollars. But we decided to ride it out and see if the market would come around," he explained.

(1) Increasing Summer and Winter Positions

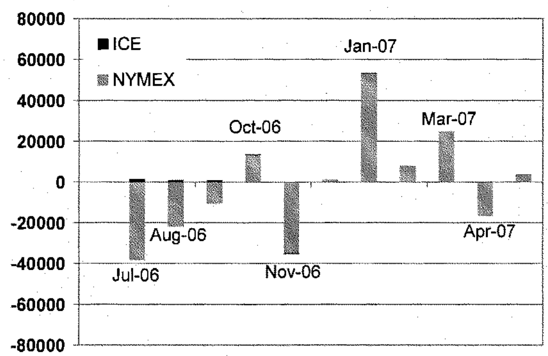
In June and July 2006, Amaranth did not, however, pare down its spread positions; it enlarged them. At the beginning of June, Amaranth held around 53,000 January 2007 contracts, virtually all of which were on NYMEX. Over the course of the month, Amaranth increased its January 2007 position by about 13,000 contracts, mostly by trading on ICE. By the end of June, Amaranth held short positions of about 44,000 contracts for August 2006, 46,000 contracts for September 2006, and 51,000 contracts for November 2006. It was long about 26,000 contracts for October 2006, and 60,000 contracts for January 2007. These positions were the largest Amaranth had held to date.

[100] Interview from TheStreet.com, December 2006.

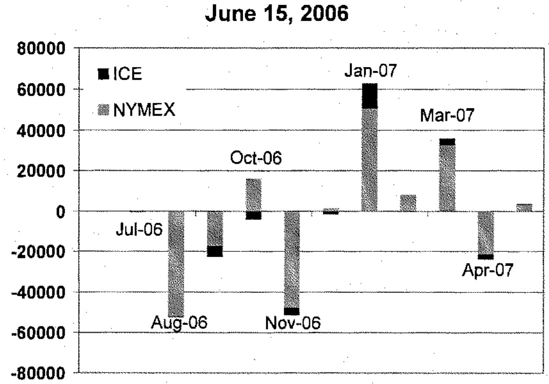
Figure 36

Amaranth Positions in June 2006

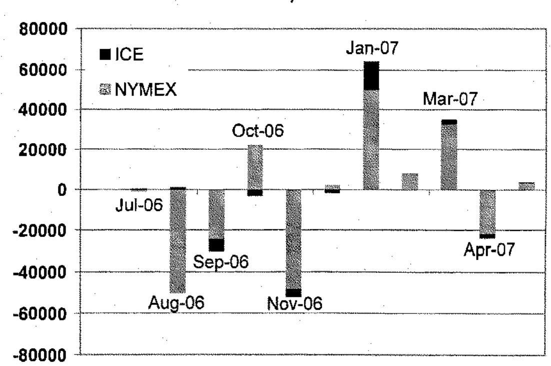
June 5, 2006



June 15, 2006



June 21, 2006



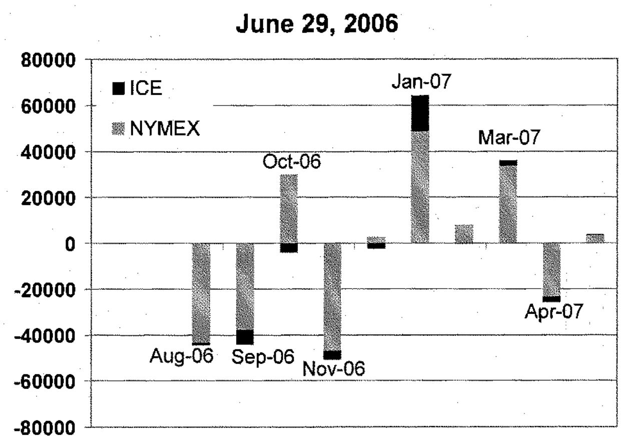
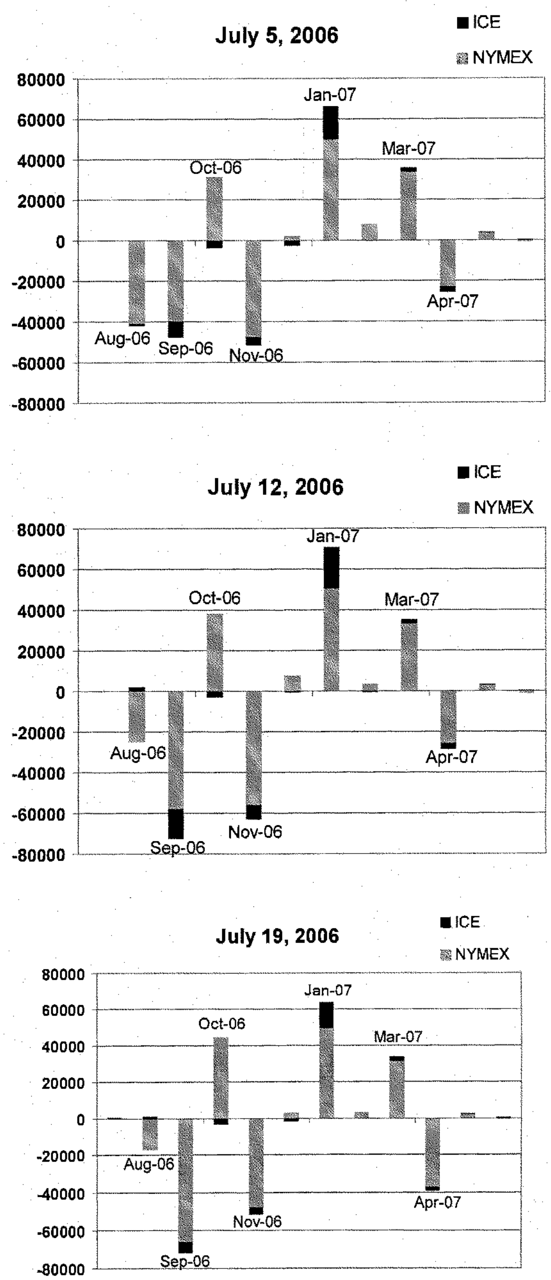


Fig. 36. In June 2006, Amaranth continued to increase the size of its position, mostly by trading on ICE.

Amaranth continued to build these positions throughout July. By the end of July, for example, Amaranth had increased its long position for January 2007 to nearly 80,000 contracts. The amount of natural gas represented by a position size of 80,000 natural gas contracts for January 2007 is nearly equal to the entire amount of natural gas that was actually used by U.S. residential consumers nationwide during January 2007. It was an extraordinary large position in a single futures month.

Figure 37

Amaranth Positions in July 2006



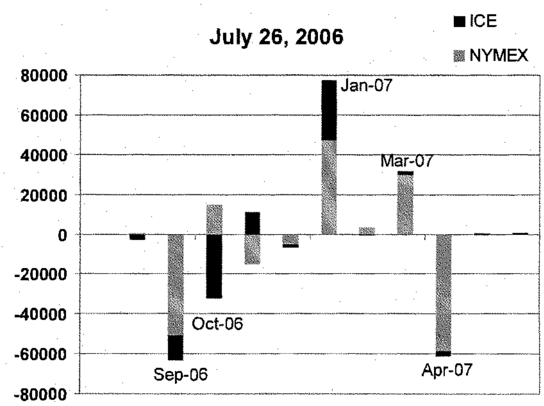


Fig. 37. Amaranth continued to increased the size of its position during July 2006, ending the month with 80,000 contracts for January 2007, approximately the amount of natural gas that was eventually used by U.S. residential consumers nationwide in January 2007.

In addition to building its long position for the winter months, Amaranth added to its short position for the upcoming summer and fall months. For example, Amaranth rolled short positions in the August contract that was expiring into the contract for the following month of September.[101] By the end of July, Amaranth held a short position for September of about 63,000 contracts.

[101] "Rolling" a position consists of shifting a position from one month to the next. Rolling a short position requires purchasing futures contracts for the first month and then selling an equivalent number of contracts for the second month, thereby finishing with no net position for the first month and a net short position in the second month. Rolling a long position requires selling futures contracts for the first month and then buying an equivalent number of contracts for the second month, effectively shifting the long position from the first month to the second month.

(2) March/April Price Spread

Throughout June and July, Amaranth added to another spread position as well, this time between two consecutive months, March 2007 and April 2007. By the end of July, Amaranth was long approximately 59,000 contracts for March, and short about 80,000 contracts for April. By any measure, both positions were substantial.

Natural gas futures prices for two consecutive months are normally similar, since the two months are likely to share similar weather and be subject to similar supply and demand trends. The months of March and April, however, are an exception. March is the last month of the winter heating season, when natural gas supplies are low but gas is still being withdrawn from storage, and April is considered the first month of the summer season, when gas storage facilities begin to be refilled. The price difference between March and April contracts, therefore, is one of the most volatile natural gas price spreads. As a result of this unpredictability, taking a position in the March/April spread is sometimes referred to as "the widowmaker" bet.[102]

Amaranth's pattern of trading with respect to the March and April contracts differed from its trading pattern with respect to the January and November contracts. Amaranth steadily built its positions in the January/November spread over the course of a number of weeks, and the price spread steadily rose over a similar period of time. (Figure 29b). In contrast, the March/April spread already was at a relatively high level when Amaranth began taking positions in those contracts. On several specific dates, Amaranth increased its positions in both contracts by huge amounts, which significantly boosted the price spread on those dates. These spikes not only resulted in higher prices on the specific dates on which Amaranth made large purchases, but also resulted in higher prices than otherwise would have been the case in the days following those spikes. These price spikes, which all traders could see had been driven by large scale trading, deterred some traders from pursuing their view that prices should fall. Traders feared that additional price spikes resulting from this large-scale trading would prevent prices from falling, despite market fundamentals.

Trading data show that Amaranth's purchases of the March/April 2007 spread significantly affected the price of the spread. On two dates in particular, May 26 and July 31, Amaranth purchased very large amounts of this spread. On these dates, the price spread increased significantly as a direct result of Amaranth's trading.

[102] Davis, Hedge Fund Hardball, supra note 83.

Table 11
Amaranth Purchases of March/April 2007 Spread Positions on May 26, 2006

		Mar 07	Apr 07
NYMEX NG	Total volume	5,423	4,816
	Amaranth volume	+2,599	-2,605
	Amaranth volume (% of total)	48%	54%
	Amaranth open interest (% of total)	27%	14%
Clearport NN	Total volume	5,444	6,161
	Amaranth volume	+4,900	-4,900
	Amaranth volume (% of total)	90%	80%
	Amaranth open interest (% of total)	4%	21%
ICE Electronic	Total volume	14,051	11,738
	Amaranth volume	+8,347	-8,284
	Amaranth volume (% of total)	59%	71%
ICE OTC	Amaranth volume	+125	-125

On May 26, Amaranth's purchases of the March 2007 NYMEX natural gas futures contract accounted for nearly 50 percent of the total volume of the March 2007 contract on that date. On the same date, Amaranth's sales of the April 2007 futures contract accounted for just over 50 percent of the volume of the NYMEX April contract. As Table 11 indicates, Amaranth also accounted for the vast majority of trading in natural gas swap contracts for March 2007 and April 2007 on ICE and on NYMEX Clearport.

Amaranth's large trades were a major factor in the 25-cent increase in the price spread that occurred on that date. As reflected in Figure 39, this was the third-largest increase in this price spread during 2006.

Figure 38

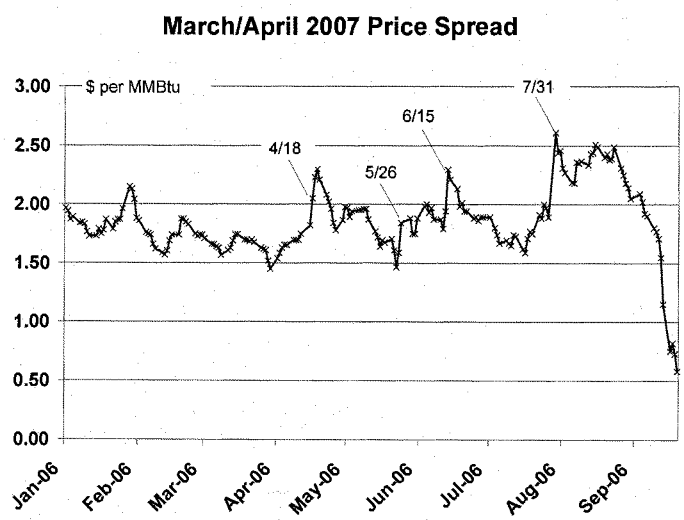


Fig. 38. From January through August, the March/April spread for 2007 ranged between $1.50 and $2.50. The price curve of this spread was punctuated by several price spikes. Data source: NYMEX.

Figure 39

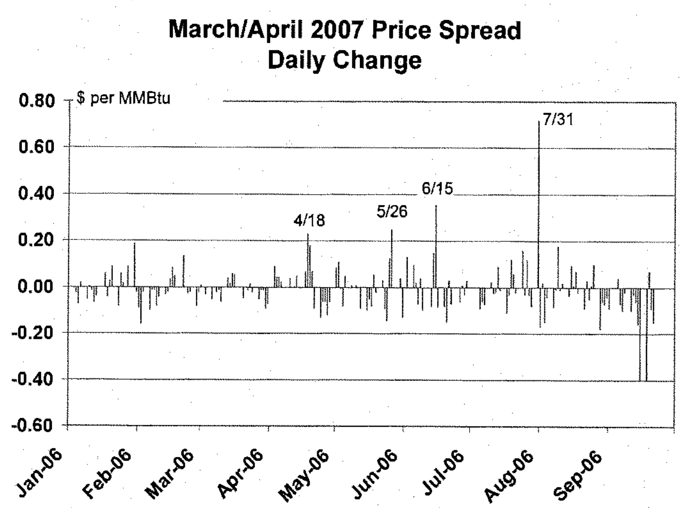


Fig. 39. Three of the four largest spikes in the March/April 2007 price spread occurred on days of large-scale trading by Amaranth. Data sources: Amaranth, NYMEX, and ICE.

As Figure 39 shows, another spike in the price spread between the March and April contracts occurred on June 14 and 15. Over the course of these two dates, the price spread between these contracts increased by 51 cents. This increase is also, in large part, attributable to Amaranth's large trading on these dates.

Table 12
Amaranth Purchases of
March/April 2007 Spread Positions
on June 14 and 15, 2006

		June 14		June 15	
		Mar 07	Apr 07	Mar 07	Apr 07
NYMEX NG	Total volume	6,281	6,140	4,271	2,731
	Amaranth volume	+3,699	-3,699	+2,325	-200
	Amaranth volume (% of total)	59%	60%	54%	7%
	Amaranth open interest (% of total)	42%	25%	44%	24%
Clearport NN	Total volume	823	426	2,312	1,414
	Amaranth volume	-16	0	+1,169	-30
	Amaranth volume (% of total)	0%	0%	51%	2%
	Amaranth open interest (% of total)	32%	40%	36%	40%
ICE Electronic	Total volume	4,705	4,540	3,156	2,896
	Amaranth volume	+1,217	-841	+752	-376
	Amaranth volume (% of total)	26%	19%	24%	13%
ICE OTC	Amaranth volume	--	--	--	--

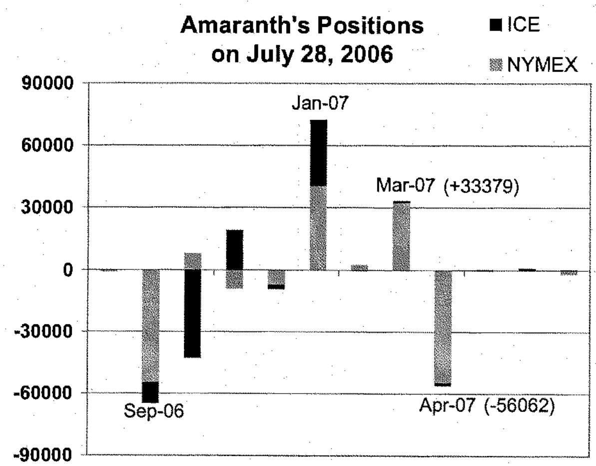
Amaranth's trades on July 31 had a significant effect upon the March/April spread price. These purchases followed a record-setting heat wave in July that caused the first-ever summertime withdrawal of natural gas from storage. From mid- through late-July, intense heat waves in the West, Midwest, and East led to a large spike in the demand for electricity for air conditioning, prompting a surge in demand for natural gas. "Conditions seen last week were the most extreme in many years, shattering previous records for U.S. electricity production and power sector consumption of natural gas," one analyst noted.[103] "For the first time in the weekly data for the warmer months of May through September from 1994 to the present," DOE's EIA reported, "[last week's data] showed a net withdrawal of 7 Bcf [Billion cubic feet] for the week, contrasting sharply with the 5-year average net injection of 65 Bcf and last year's net injection of 41 Bcf. This week's net withdrawal was driven largely by higher temperatures and price incentives prevailing during much of the week."[104]

Amaranth's purchases of the March/April contracts on July 31 dominated the trading of both natural gas contracts on NYMEX and ICE for that date. On July 31, the difference in the prices of the March and April contracts increased by 72 cents, an extraordinarily large jump in the price spread between these two contracts.[105] Figure 40 shows the change in Amaranth's positions on July 31; Table 13 shows how large these trades were relative to the market.

[103] Energy Trader, "Cooling demand prompts first-ever drawdown of gas in storage during summer months: EIA," July 28, 2006.
[104] EIA, Natural Gas Weekly Update, July 27, 2006.
[105] Statistically, the 72-cent increase on July 31 was a seven-standard deviation event, in relation to the changes in the price of this spread between January 3 and August 31, 2006. If the market were truly an efficient market, in which price movements were random and no single trader had the ability to move the price, a daily price change of seven-standard deviations would be expected once every several hundred million years. Several market experts told the Subcommittee, however, that the natural gas market does not conform to any simple statistical model. One trader said, "Seven-standard deviations events happen all the time in this market."

Figure 40

Amaranth's Purchases of the March/April 2007 Spread on July 31, 2007



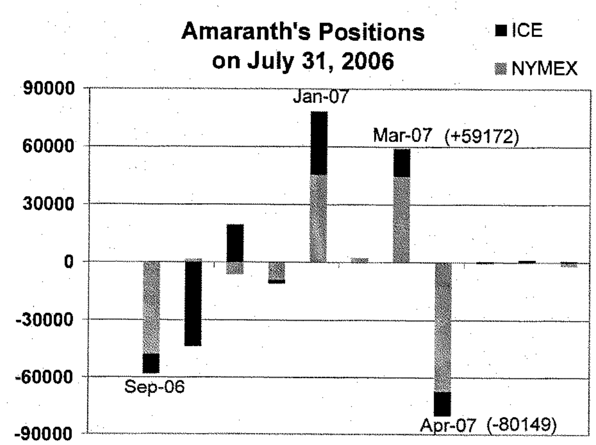


Fig. 40. On July 31, Amaranth bought nearly 26,000 natural gas contracts for March 2007 and sold about 24,000 contracts for April 2007.

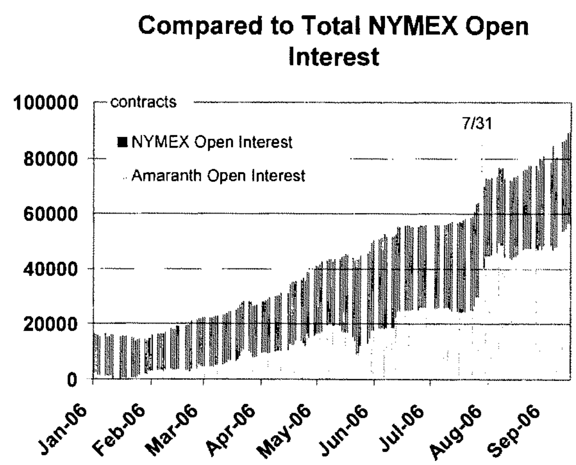
Table 13
Amaranth Purchases of March/April 2007 Spread Positions on July 31, 2006

		Mar 07	Apr 07
NYMEX NG	Total volume	15,594	15,541
	Amaranth volume	+10,670	-10,613
	Amaranth volume (% of total)	68%	68%
	Amaranth open interest (% of total)	58%	47%
Clearport NN	Total volume	2,836	1,943
	Amaranth volume	+541	-478
	Amaranth volume (% of total)	19%	25%
	Amaranth open interest (% of total)	16%	52%
ICE Electronic	Total volume	22,087	21,265
	Amaranth volume	+13,000	-10,931
	Amaranth volume (% of total)	59%	51%
ICE OTC	Amaranth volume	+562	-560

Figure 41 shows how Amaranth's purchases of the March contract increased its share of the open interest in that contract to about 60 percent. Figure 42 shows how Amaranth's sales of the April contract increased its share of the short open interest in that contract to nearly 50 percent of the open interest in the April contract.

Figure 41

Amaranth Open Interest
NYMEX Natural Gas Futures Contract for March 2007



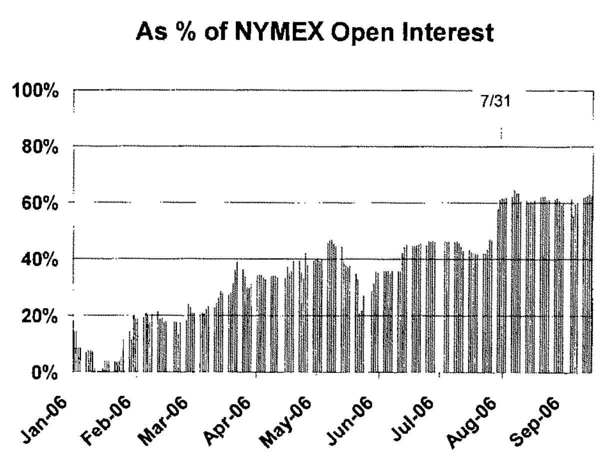
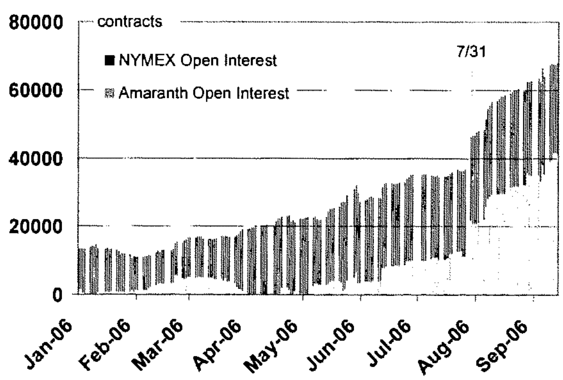


Fig. 41. By July 31, Amaranth held around 60 percent of the open interest in the March 2007 contract. Data source: NYMEX.

Figure 42

Amaranth Open Interest
NYMEX Natural Gas Futures Contract for April 2007

Compared to Total NYMEX Open Interest



As % of NYMEX Open Interest

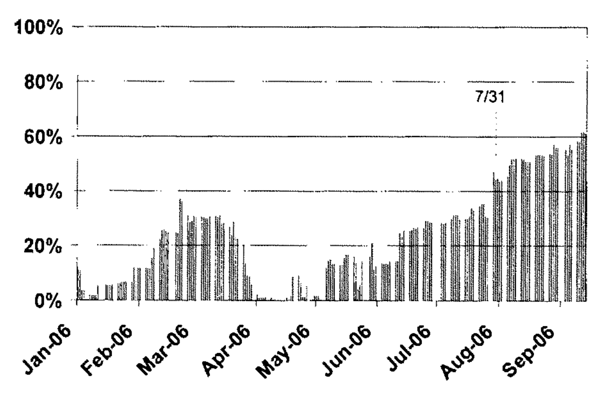


Fig. 42. By July 31, Amaranth held nearly 50 percent of the open interest in the April 2007 contract. Data source: NYMEX.

The clearest explanation for the extreme magnitude of the price spread increase on July 31 is Amaranth's large volume of trading in the March and April contracts. Amaranth was the largest trader on both NYMEX and ICE.[106] Figure 43 shows the relationship between Amaranth's long positions in March 2007 natural gas futures contracts on NYMEX and corresponding ICE natural gas swaps. Figure 43 shows how the large increases in the March/April price spread during the summer of 2006 tracks the changes in Amaranth's position in that spread.

Figure 43

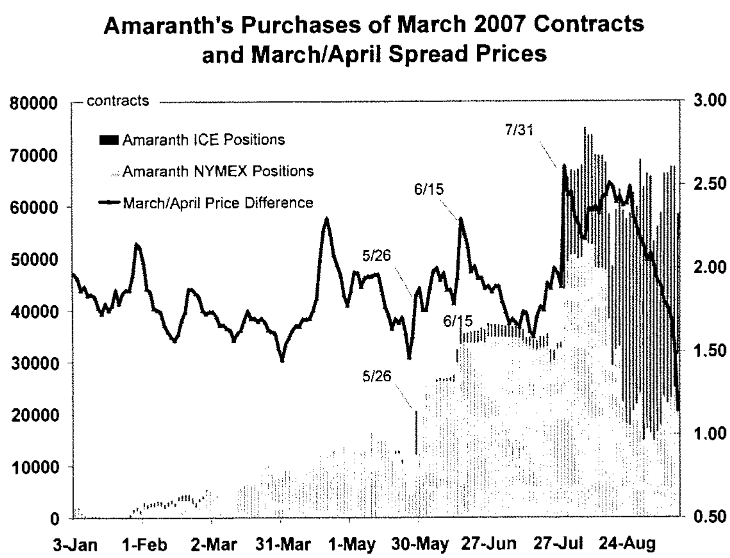


Fig. 43. Amaranth's large purchases of the March and April 2007 contracts on May 26, June 14-15, and July 31, 2006, were a major cause of the price spread increases on those dates. Data Sources: NYMEX and ICE.

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[106] In instant message obtained by the Subcommittee, a trader wrote Brian Hunter on the afternoon of July 31, 2006: "Brian, u busy...what the hell is going on out there, rumour is you are getting even more rich!!! ...I heard March April swap spd [spread?] you made a killing... so according to the market you are brilliant!!!!!! Can do no wrong... ever!" Message obtained by Subcommittee from Amaranth, Bates No. AALLC_0627973.

The trade publication *Inside FERC* interviewed several traders who explained the price rise at the end of July as being driven by speculation rather than market fundamentals. One analyst was quoted: "You don't move $1 in a day without the hedge funds in it. You just don't. No change in weather can take credit for a $1 change in pricing."[107]

By the end of July, Amaranth was short nearly 60,000 contracts for September, 42,000 contracts for October, and 80,000 contracts for April 2007; it was long 80,000 contracts for January 2007, 60,000 contracts for March 2007, and 29,000 contracts for December 2007. Amaranth held about 40 percent of the total open interest in the NYMEX natural gas market for all of the winter months (October 2006 through March 2007).

G. Early August 2006: NYMEX Limits Amaranth; Amaranth Moves to ICE

"It is obviously better in every way for a stock to be held by a thousand people than by one man - better for the market in it."

--Reminiscences of a Stock Operator, p. 245.

During 2006, NYMEX repeatedly reviewed Amaranth's natural gas holdings to determine whether they exceeded NYMEX's established position limits or accountability levels. On several occasions, Amaranth traded large numbers of contracts near their expiration date, triggering NYMEX notices that the firm had violated NYMEX position limits; a CFTC investigation of one of these instances is still ongoing.

In August 2006, NYMEX took more forceful action to limit Amaranth's trading, directing Amaranth to reduce its positions in the NYMEX futures contracts not just for the September contracts that were about to expire, but also for its contracts in the following month of October. In response, Amaranth reduced its positions in those contracts on NYMEX, but at the same time increased its positions in the corresponding contracts on ICE. The end result was that Amaranth maintained and even increased its positions in contracts for September and October and preserved its ability to engage in large-scale trading as the September contract neared expiration. In fact, Amaranth's move enhanced its ability to conduct large-scale trading near the contract expiration, because, under current law, no market surveillance or position limits apply to trading on ICE.

[107] Inside FERC, *Hedge fund headed by ex-NYMEX chief folds amid sizeable gas market losses*, Gas Market Report, August 11, 2006.

1. Position Limits and Accountability Levels

As explained earlier, NYMEX officials are responsible for conducting day-to-day oversight of the exchange to ensure orderly trading and prevent fraud, manipulation, and excessive speculation. The CFTC is also responsible for reviewing the trading on regulated exchanges to prevent trading abuses, but it relies on the exchanges themselves to be the first line of defense against misconduct and to alert them to any concerns.

As part of its monitoring efforts, NYMEX compliance officials routinely review the positions of NYMEX traders to ensure they fall within NYMEX position limits and accountability levels. With respect to energy commodities, NYMEX has established a fixed position limit that applies during the last three days of trading of a futures contract. The NYMEX rule states: "No person may own or control a net long position or a net short position in the expiration or current delivery month in excess of [1,000 contracts]."[108]

For all months other than the expiration month, neither the CFTC nor NYMEX has chosen to establish any fixed position limits. Instead, for energy commodities, the CFTC has directed approved exchanges to establish "accountability levels" which, when exceeded, require a trader, upon request of the exchange, to provide information about its positions and, if ordered by the exchange, to reduce those positions. NYMEX has established three accountability levels for positions held by natural gas traders: (1) a net position of 12,000 natural gas contracts in a single month (called the "Any One Month Accountability" level);[109] (2) a net position of 12,000 natural gas contracts across all months (called the "All Month Accountability" level);[110] and (3) a net position of 1,000 NYMEX natural gas swaps within the last three trading days of the related physically settled futures contract (called the "Expiration Position Accountability" level).[111]

Traders are not prohibited from exceeding the NYMEX accountability levels, but NYMEX has the authority to require traders who exceed the levels to reduce those positions. Alternatively, NYMEX can temporarily increase the accountability levels for a particular trader if NYMEX concludes the trader's overall position in the

[108] NYMEX Exchange Rulebook, 9.27 and Chapter 9, Appendix A.
[109] NYMEX Exchange Rulebook, 9.26 and Chapter 9, Appendix A.
[110] *Id.*
[111] NYMEX Exchange Rulebook, 9.27A and Chapter 9, Appendix A. The trader's net position is determined by adding up all the long positions and subtracting all the short positions.

market is not excessively concentrated in a particular commodity or contract. In making the determination of whether a trader's position is excessively concentrated, NYMEX considers only the trader's positions on the NYMEX exchange. NYMEX has no legal authority to place trading limits on another exchange, particularly an exempt commercial market like ICE.[112]

NYMEX surveillance officials routinely review the positions of NYMEX traders in relation to the accountability levels. Once a trader's futures contracts exceed an accountability level, NYMEX will review the trader's positions in relation to the overall open interest in the contract to determine whether to allow the trader to maintain or increase its position, or whether to direct the trader to reduce its position.

Evaluating a trader's positions in relation to the NYMEX accountability levels may entail a detailed analysis of the trader's positions and the size of the market in a variety of related contracts. CFTC and NYMEX rules provide, for example, that, in addition to reviewing a trader's long and short futures contracts, NYMEX may consider the trader's positions in related NYMEX options and swaps. For example, if a trader has more than 12,000 futures contracts in one month, but also holds an offsetting position in NYMEX options for the same month, NYMEX may, and probably will, permit that trader to continue to hold that number of futures contracts, since the trader's overall position in the market is neutral.

Another key factor in the NYMEX analysis is the trader's position relative to the whole market. A position of 12,000 contracts may be of extreme concern if the contract is near expiration and the total open interest in the contract is fewer than 20,000 contracts—in that instance, the trader's position is dominant relative to the rest of the market. On the other hand, a position of 12,000 contracts when expiration is several months away and the total open interest is over 100,000 contracts will be of much less concern. It is also not unusual for futures contracts that will not expire for several years to have contracts held by only a handful of traders, and therefore some will hold a high percentage of the open interest. In many cases, NYMEX will determine that these traders' holdings do not constitute excessive market concentration.

After conducting this market analysis, NYMEX has frequently permitted individual traders to trade in excess of the Any and All position accountability levels set forth in its rules. In doing so, NYMEX

[112] Section 2(h)(3) of the CEA specifically states that "nothing in this Act shall apply to an agreement, contract, or transaction in an exempt commodity" entered into on an electronic trading facility, other than specifically provided in the following paragraph. Section 2(h)(4) does not confer any authority, or authorize the CFTC to delegate any authority, to a designated contract market over trading on an exempt commercial market.

has concluded, in effect, that these traders' holdings do not pose a sufficient risk of excessive speculation to harm the market. NYMEX accountability levels thus function, not as bright lines that no one may cross, but as triggers for further review.

Given the importance of the individualized market analysis that NYMEX performs in deciding how to apply its accountability limits to a particular trader, it is important to note that, when evaluating that trader's positions, NYMEX compliance personnel cannot obtain a complete view of the market and are forced to act with incomplete information. In particular, NYMEX personnel have no routine access to trading data on ICE, the other leading U.S. commodities market whose swaps and options have a direct impact on NYMEX prices.[113] This lack of access means that NYMEX personnel have no information on the trader's positions on ICE and no information on how those positions relate to the rest of the natural gas financial market. Despite the fact that many energy traders use both NYMEX and ICE, current law places NYMEX and the CFTC in the untenable position of having to evaluate traders' positions based upon their holdings on NYMEX, while blind to their holdings on ICE. Furthermore, even if the CFTC were to obtain information about a trader's positions on both exchanges showing that the trader's aggregate positions were excessive, under current law the CFTC has no authority to limit that trader's positions on ICE.

2. NYMEX Reviews of Amaranth's Positions

In 2006, Amaranth exceeded the NYMEX position limit for natural gas contracts on several occasions and repeatedly exceeded its natural gas accountability limits. During the year, NYMEX sent two warning letters to Amaranth regarding specific position limit violations, and repeatedly considered whether to require Amaranth to reduce its positions. As a result of information produced from NYMEX surveillance, the CFTC initiated an investigation into one incident involving Amaranth's trading near the expiration of the May 2006

[113] Recently, in an effort to strengthen the enforceability of its position limit during the contract expiration month, NYMEX issued a new policy that requires any trader seeking an exemption from the position limit to disclose all of its positions over 1,000 contracts, including on other exchanges. NYMEX Compliance Advisory #01-07 – Policy Statement Related to Exemptions from Position Limits in NYMEX Natural Gas (NG) Futures Contracts, Notice No. 07-91, February 16, 2007. This policy, however, does not apply to any of NYMEX's accountability levels and so will not provide NYMEX with the information about a trader's positions that are not on NYMEX when evaluating whether to increase a trader's accountability levels. As of June 19, 2006, NYMEX has received only two applications for a position limit exemption in which a trader has disclosed positions outside of NYMEX. NYMEX's experience to date with its new policy suggests that absent a legal obligation upon a trader to disclose all of its positions to an exchange or to the CFTC, an exchange like NYMEX may, in fact, have no practical ability to obtain such information. Moreover, it is possible that additional NYMEX disclosure requirements may simply lead traders to increase their trading on other venues where such disclosure is not requested.

contract. Apart from attempting to limit Amaranth's positions in contracts that were about to expire, however, NYMEX did not attempt to limit Amaranth's overall speculative size.

Amaranth first attracted the attention of NYMEX compliance personnel in 2005, when it exceeded the NYMEX accountability levels several times. Each time NYMEX became aware of Amaranth's large holdings in a particular contract, it reviewed Amaranth's positions and determined that the size of the positions in relation to the overall open interest on the contract were acceptable. NYMEX accordingly temporarily increased the firm's accountability levels on several occasions.

This pattern continued into 2006. Virtually every month Amaranth exceeded the NYMEX accountability levels, triggering a NYMEX review of its positions. NYMEX records indicate that Amaranth was one of many traders who exceeded the NYMEX accountability levels during this period. During the first few months of 2006, NYMEX did not take any action to limit Amaranth. By the end of the spring, however, following several violations of the expiration position limits, and as Amaranth's size kept growing larger, NYMEX began to scrutinize Amaranth's positions more closely.

Amaranth's first position limit violation occurred at the end of February 2006. On March 13, NYMEX cited Amaranth for violating the expiration position limit on trading near the expiration of the March contract. In a letter of violation sent to Amaranth, NYMEX wrote: "At the close of business on February 23, 2006, Amaranth maintained an open commitment of 3,646 short contracts, 1,146 contracts over its spot month hedge exempt position limit. . . . Owing to your firm's violation of the spot month NG position limit, and in accordance with the provisions of Exchange Rule 9.36, this letter shall constitute a warning to your firm."[114]

Several weeks later, on April 7, 2006, NYMEX personnel reviewed Amaranth's short position of about 32,000 May contracts, which exceeded the elevated accountability level of 25,000 contracts that NYMEX had previously granted to Amaranth. The NYMEX compliance officer determined that Amaranth should not be allowed to increase its position in the expiring May contract. "I do not think that Amaranth ANY month level should be increased any further in this case because May06 is the front month contract," the NYMEX compliance officer wrote.[115] He recommended contacting Amaranth or its clearing

[114] Letter from Nancy M. Minett, Vice President, Compliance Division, NYMEX, to Mike Carrieri, Chief Compliance Officer, Amaranth LLC, March 13, 2006, Bates NX-USSEN 081909.
[115] Memo from Corey Traub to Anthony Densieski, April 7, 2006, Bates NX-USSEN 081782.

firm to reduce Amaranth's position. Trading records indicate that Amaranth began reducing its position in the May futures contract after the NYMEX review.

On April 26, the last day of trading on the May futures contract, Amaranth sold more than 3,000 contracts in the final minutes of trading. As described earlier, this last-minute sale eventually triggered not only a NYMEX letter asking Amaranth to explain its trading, but also an investigation by the CFTC. [116]

In May, NYMEX sought to limit Amaranth's trading at the expiration of the June contract. In this instance, after reviewing Amaranth's positions in the June contract, NYMEX contacted Amaranth's clearing firm, JPMorgan Chase, to remind it that Amaranth needed to comply with its expiration position limits. After receiving this message from NYMEX, one JPMorgan Chase official wrote to another, "Would you please remind Amaranth that they need to be at/below their NYMEX Nat Gas exempt level COB May 23."[117]

Amaranth did not heed these instructions. On May 31, following the expiration of the June contract, NYMEX sent a second warning letter to Amaranth. NYMEX wrote:

> The records of the Exchange show that Amaranth, LLC ("Amaranth") exceeded its current delivery month ("spot month") hedge exempt position limit of 2,500 contracts on two trade dates. At the close of business of May 23 and May 26, 2006, Amaranth maintained open commitments of 8,488 short and 3,363 long contracts, respectively. These open commitments exceeded your firm's spot month hedge exempt position limit by 5,988 and 863 contracts, respectively.
>
> Owing to your firm's violations of the spot month NG position limit, and in accordance with the provisions of Exchange Rule 9.36, this letter shall constitute a warning to your firm. Please note that a previous violation of this rule was addressed in a warning letter issued to your firm on March 13, 2006. Any further violation of the Exchange's position limit rules will be handled pursuant to Rule 9.36 and may ultimately result in extraordinary sanctions as specified by this rule.[118]

[116] From NYMEX records, it is unclear when NYMEX first observed Amaranth's violation of the expiration limits on April 26.
[117] E-mail from Vincent J. Leale to Aldo J. Solares, May 19, 2006, Bates NX-USSEN 028552.
[118] Letter from Nancy M. Minett, Vice President, Compliance Division, NYMEX, to Mike Carrieri, Chief Compliance Officer, Amaranth LLC, May 31, 2006, Bates NX-USSEN 081734. In issuing these two warning letters, NYMEX was acting pursuant to the procedures specified in

The next day, June 1, Amaranth yet again appeared on the list of traders exceeding NYMEX accountability levels. On this occasion, the reviewing official recommended increasing Amaranth's All Month Accountability levels which, at this time were fixed at 23,000 long contracts and 35,000 short contracts. Specifically, the reviewing official recommended that Amaranth's accountability level be increased from 23,000 to 40,000 for long contracts, while maintaining the limit on short positions at 35,000 contracts. At the time, Amaranth had a net long position of about 34,000 contracts.

The NYMEX official also recommended increasing Amaranth's Any Month Accountability levels to 40,000 contracts, both for long and short positions. In making this determination, the official reviewed Amaranth's large positions in the July 2006, November 2006, January 2007, March 2007, and March 2008 contracts, and compared Amaranth's total positions in NYMEX futures, options, and swap contracts to the overall open interest in futures, options, and swaps in those contracts. Although the official recommended a temporary increase for Amaranth in the accountability levels, he also noted: "***This customer holds a very large percentage of open interest in floor traded NG futures (Not FEQ) in outer months.*** Please let me know if you want more (Non-FEQ) figures."[119]

A couple weeks later, the NYMEX compliance officer provided senior NYMEX compliance officials with the futures-only data mentioned in his previous e-mail. This data indicated that Amaranth held 46 percent of the open interest in the August 2006 NYMEX natural gas futures contract, and high percentages of open interest in other

the rules of the exchange for violations of position limits. NYMEX Rule 9.36(B) provides that a first violation "will not be deemed a rule violation, however, it will result in a warning letter being issued by the Compliance Staff to the customer." NYMEX Rule 9.36(C) states "The occurrence of a second speculative position limit by a customer will subject the customer to a warning letter issued by the Compliance Staff stating that any future violation by the customer of the speculative position limits rules may result in extraordinary sanctions, including, but not limited to, conditioning, limiting, or denying access of such customer to the market." On July 11, 2006, NYMEX rescinded the violation pertaining to trading on May 23, but retained the violation and warning regarding Amaranth's positions on May 26. Letter from Anthony V. Densieski, Senior Director, Market Surveillance, NYMEX, to Mike Carrieri, Chief Compliance Officer, Amaranth LLC, July 11, 2006. Bates NX-USSEN 081736. See also instant message, Bates AALLC_REG0595133 (Brian Hunter sends a message to another trader. "thanks for the Nymex/ICE... we were kind of hung...[Amaranth trader Matt] Donohoe messed up." Other trader responds, "what is that about... ar [are] they not the same thing?" Hunter says, "we have exachnge [exchange] limits." Trader: "u got me very confused." Hunter: "on Nymex not on ICE... for June expiry... they settle the same... but Nymex sends out warning letter... which is bad for fund.").

[119] Memo from Corey Traub to Anthony Densieski, June 1, 2006. Bates NX-USSEN 081586. NG is an abbreviation for natural gas. FEQ is an abbreviation for "Futures Equivalent." Positions in options and swaps can be represented by an "equivalent" number of futures positions, so these positions can be measured against each other.

futures contracts, ranging from 41 percent to 79 percent.[120] (Table 14). However, when NYMEX again compared all of Amaranth's natural gas positions, including NYMEX options and swaps, to the entire market open interest in those contracts, Amaranth's share of the market appeared less. NYMEX therefore did not take any action to require Amaranth to reduce its positions.

Table 14
NYMEX Review of
Amaranth Market Concentration
June 13, 2006

Contract Month	Amaranth's NYMEX Future Contracts as % of NYMEX Open Interest, NYMEX Futures Contracts Only	Amaranth's Total NYMEX Position (Futures, Options, Swaps) as % of NYMEX Open Interest, All NYMEX Contracts
Aug 2006	46%	22%
Nov 2006	57%	23%
Jan 2007	52%	26%
Mar 2007	41%	16%
Mar 2008	79%	39%

In mid-July, Amaranth's increasing size triggered still another NYMEX review. NYMEX compliance officials conducted another analysis of Amaranth's share of the open interest in several NYMEX futures contracts and another analysis of Amaranth's share of the total open interest in all NYMEX futures, options, and swaps for that contract month. The results of this analysis are shown in Table 15.

[120] Memo from Corey Traub to Anthony Densieski, June 14, 2006, Bates No. NX-USSEN 081583. This memo does not indicate, other than for August 2006, to which futures months the open interest data applies. Comparing this data to the Subcommittee's data, it appears that the months are the same months that are referenced in the previous memo—November 2006, January 2007, March 2007, and March 2008.

Table 15
NYMEX Review of
Amaranth Market Concentration
July 24, 2006

Contract Month	Amaranth's NYMEX Future Contracts as % of NYMEX Open Interest, NYMEX Futures Contracts Only	Amaranth's Total NYMEX Position (Futures, Options, Swaps) as % of NYMEX Open Interest, All NYMEX Contracts
Sep 2006	41%	15%
Oct 2006	22%	7%
Jan 2007	50%	21%
Mar 2007	48%	16%
Apr 2007	41%	30%
Dec 2007	81%	41%

When NYMEX performed its market analysis of Amaranth's positions in June and July, however, it did not have a complete view of Amaranth's positions in the natural gas financial market. NYMEX officials reviewed and addressed only Amaranth's positions on NYMEX. As shown in Table 16 and Figure 44, Amaranth also had extensive positions on ICE, which were significant components of Amaranth's total positions in the contract months addressed by NYMEX, but NYMEX officials did not have access to this data. NYMEX's analysis and determinations were based upon incomplete information.

Table 16
Amaranth Positions
NYMEX, ICE, and Total
on July 24, 2006

	Amaranth Positions		
Contract Month	**NYMEX**	**ICE**	**Total**
Sep 2006	-54074	-16879	-70953
Oct 2006	24136	-21881	2255
Jan 2007	48692	25605	74297
Mar 2007	32549	2459	35008
Apr 2007	-46210	-4047	-48893

Figure 44

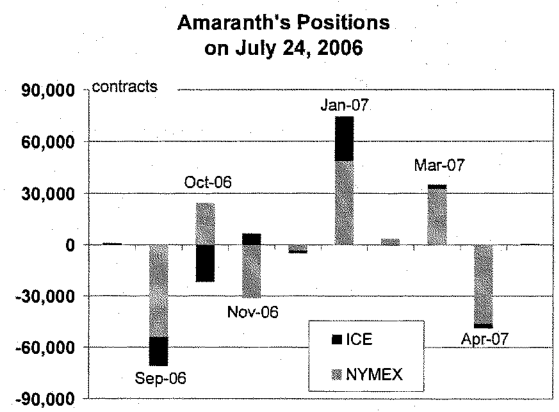


Table 16 and Figure 44. On July 24, when NYMEX reviewed Amaranth's positions, it did not have a complete view of Amaranth's market size. Data sources: NYMEX and ICE.

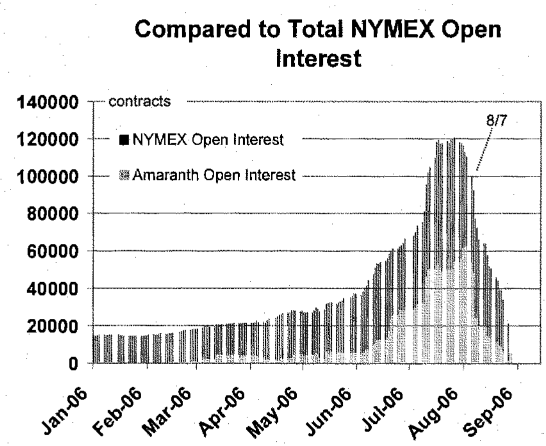
About ten days later, on August 4, NYMEX examined Amaranth's positions once again, and calculated that Amaranth then held about 51 percent of the open interest in the September natural gas futures contract, which would expire at the end of the month. (See Figure 45). NYMEX determined that this level of open interest in an expiring contract was too large and decided to tell Amaranth to reduce its positions.

Table 17
NYMEX Review of Amaranth Market Concentration
August 4, 2006

Contract Month	Amaranth's NYMEX Futures Contracts as % of NYMEX Open Interest, Futures Contracts Only	Amaranth's Total NYMEX Position (Futures, Options, Swaps) as % of NYMEX Open Interest, All NYMEX Contracts
Sep 2006	51%	18%
Dec 2006	16%	18%
Jan 2007	48%	21%
Mar 2007	64%	19%
Apr 2007	49%	29%

Figure 45

Amaranth Open Interest, NYMEX Natural Gas Futures Contract for September 2006



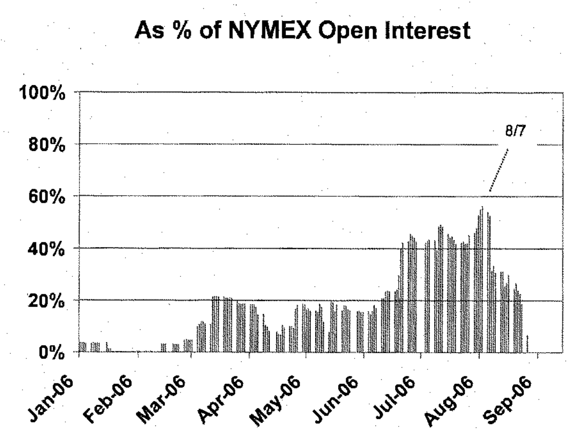


Fig. 45. On August 9, Amaranth had a short position of more than 60,000 futures contacts in the expiration month. This represented nearly 60 percent of the expiring contract. As a result, NYMEX directed Amaranth to reduce these positions. Data source: NYMEX.

On August 8, NYMEX compliance officials told Amaranth "of the Exchange's concern with their % of September open interest and outright Natural Gas futures positions of -49,616, specifically its potential weight in the marketplace based on 44.95% of open interest."[121] A NYMEX official wrote a contemporaneous account of this telephone conversation with Amaranth's compliance officer, Mr. Carrieri. According to this account:

> [NYMEX] accentuated the fact that we expect him to begin bringing the position down in a commercially reasonable manner to a more comfortable figure below his current percentage. Told him that we are generally comfortable with a customer not exceeding about 1/3 of the market, and expect trading to be orderly.[122]

The next day, August 9, NYMEX held two conference calls with Amaranth. During the first call, at 9:15 a.m., Tom LaSala, NYMEX's Chief Regulatory Officer told Michael Carrieri, Amaranth's Chief Risk Officer, he was "extremely uncomfortable with September position of -44,285 Natural Gas futures and current 44.34% of open interest . . . Tom accentuated his extreme concern with the percentage portion of the front month position, specifically in the natural gas futures, and informed Amaranth of our general comfort levels between the 30-40% of open interest range." NYMEX directed Amaranth to be "mindful that it is carrying weight in the marketplace and to trade in an orderly fashion."

During a second call on August 9, NYMEX cautioned Amaranth that it should not reduce its September position simply by shifting those positions into October contracts. It told Amaranth that their October position "represented 51.87% of open interest in that natural gas futures, was too large, and we were concerned that as he brought down the September position, Amaranth would further increase the October position."

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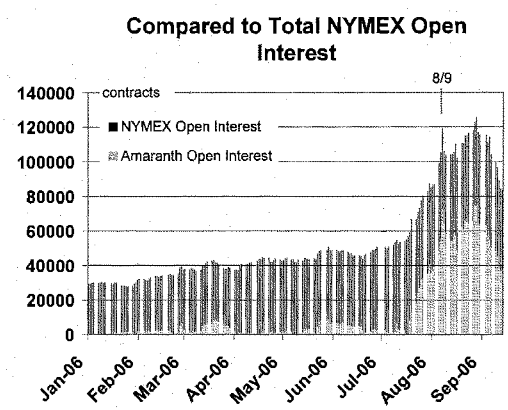
[121] Memo to Files From Bonnie Yerga, Re: Amaranth LLC September 2006 and October 2006 Natural Gas Open Positions, Bates No. NX-USSEN 081835-37.
[122] *Id.*

Figure 46

Amaranth Open Interest
NYMEX Natural Gas Futures Contract for October 2006



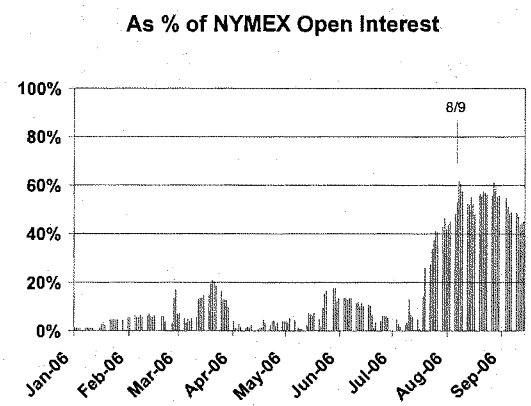


Fig. 46. In early August 2006, Amaranth held 40-60 percent of the open interest (short) in the October 2006 NYMEX futures contract. As a result, NYMEX directed Amaranth to reduce these positions. Data source: NYMEX.

Amaranth told NYMEX it had "understood [NYMEX's] concern to be the spot month only," and so had "brought its September 2006 position down through rolls into the October [contract], so that its October position is higher at this point." Amaranth also told NYMEX that it was "almost net-flat insofar as risk." Mr. LaSala "informed [Mr.

Carrieri] that the outright natural gas future position of -51,615 was a concern in addition to the earlier stated September position."[123]

Table 18
Amaranth: NYMEX Natural Gas Futures

	Sep 06	Oct 06
8/7	-53,979	-47,995
8/8	-48,600	-55,650
8/9	-24,290	-73,210
8/10	-24,277	-63,994

On August 10, Mr. LaSala told Mr. Carrieri of his "alarm at Amaranth's position of -66,837 natural gas futures in the October 2006 contract, 63.47% of open interest. Mike was informed that this percentage was unacceptable and that it must begin bringing the position down immediately. Once again, Tom stressed commercially reasonable trading manner." Mr. Carrieri replied that Amaranth would comply with NYMEX's directives, noting that "the increase in the October position was due to traders rolling the September position to bring the percentage of September positions into line and that those trades occurred prior to our midday conversation on August 9."[124]

On August 11, Mr. LaSala and Mr. Carrieri again spoke. Based on Amaranth's reduction to a short position of about 22,000 natural gas futures contracts for September 2006, which represented about 29 percent of the NYMEX open interest, and an overall short position on NYMEX of about 14,000 contracts, NYMEX told Amaranth its revised position "was a comfortable percentage of open interest." Mr. LaSala cautioned Amaranth "to be mindful of his open interest percentage as the spot open interest begins dropping and to manage his position accordingly in line with the figures of 30-40% of open interest as discussed with Tom"[125]

Amaranth complied with NYMEX's directions and reduced its positions on NYMEX in the September and October futures contracts. At the same time, however, Amaranth increased its positions in the corresponding September and October swaps on ICE. Although NYMEX succeeded in reducing Amaranth's positions in the expiring natural gas futures contract, Amaranth maintained a comparable number of positions in the expiring ICE swaps. Soon afterwards, Amaranth even increased those positions on ICE. By switching its positions to ICE, Amaranth preserved its ability to trade large volumes of an expiring contract near the expiration of that contract.

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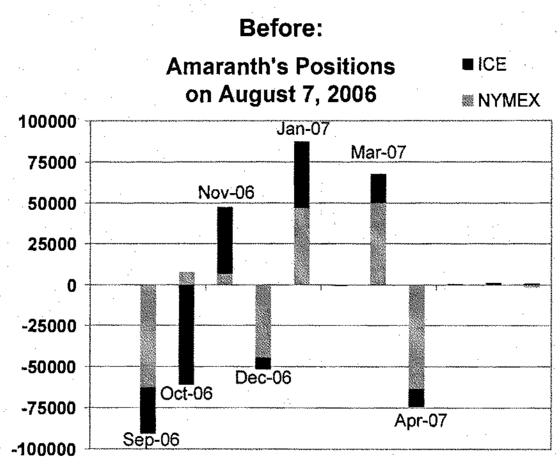
[123] *Id.*
[124] *Id.*
[125] *Id.*

Figure 47

Amaranth Positions
Before and After NYMEX Directed Amaranth to Reduce Positions



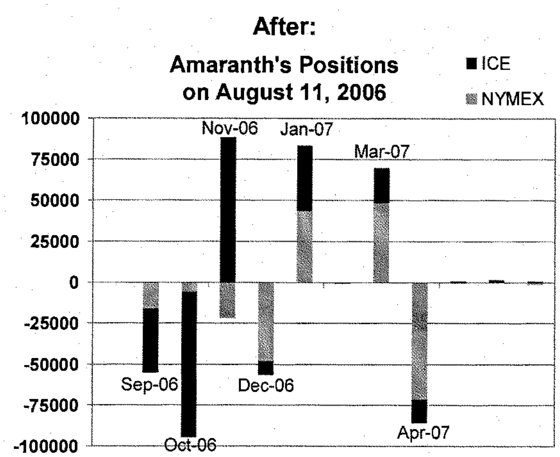


Fig. 47. On August 8, NYMEX instructed Amaranth to reduce its NYMEX positions in the September and October futures contracts. Amaranth complied with the NYMEX order but increased its positions in the related ICE swap contracts, thereby maintaining - and even increasing - its position and risk profile for those months. Data sources: NYMEX and ICE.

Indeed, it is clear from Amaranth's records that Mr. Hunter viewed the absence of position limits as a major reason to trade on ICE rather than on NYMEX. In an instant message conversation on April 25, 2006 - the day prior to the expiration of the May contract - another trader wrote to Mr. Hunter, "everyone is high on ICE these days. You think its had its day or more to go?" Mr. Hunter replied: "one thing that's nice is there are no expiration limits like Nymex clearing."[126]

Looking back upon the series of NYMEX reviews of Amaranth's positions, it is possible to conclude, with hindsight, that NYMEX should have acted sooner to reduce Amaranth's huge natural gas positions. Certainly, by the end of May, NYMEX officials recognized that Amaranth had very large concentrations in multiple natural gas futures contracts, holding tens of thousands of contracts and controlling up to 40 percent of the open interest in a variety of months. These concentration levels alone provided sufficient justification for NYMEX to require Amaranth to reduce its positions. Instead, after reviewing Amaranth's positions on NYMEX, NYMEX repeatedly raised Amaranth's accountability levels and chose not to limit Amaranth's overall speculative position except in contracts nearing expiration. It is important to acknowledge, however, that, in making these decisions, NYMEX never had an accurate view of Amaranth's overall positions and, due to the limitations in the law, never had the legal authority to obtain the information necessary to acquire a complete view of the market and of Amaranth's holdings. NYMEX was required to make significant decisions based upon incomplete information.

The Amaranth case history demonstrates that, for regulators to make informed decisions to protect energy markets against trading abuses and unfair pricing, they need comprehensive information about trader positions. It is not reasonable to expect NYMEX or the CFTC to make sound regulatory judgments based upon incomplete and potentially misleading information about a trader's positions. Unless comprehensive data on trader positions is made available, the regulated exchanges and the CFTC will continue to be unable to prevent excessive speculation from causing unreasonable changes in the price of energy commodities.

[126] Instant Message between Brian Hunter and another trader, April 25, 2006, Bates No. AALLC_REG0592988.

H. Late August 2006: The Market Turns Against Amaranth

"OCTOBER. This is one of the peculiarly dangerous months to speculate in stocks in. The others are July, January, September, April, November, May, March, June, December, August, and February."
--Mark Twain, *Pudd'nhead Wilson's Calendar* (1893).

By late August, the resolution of Amaranth's dilemma - how to trade out of its large, high-priced spread positions without causing the price of those spreads to fall - could not be postponed for much longer. In previous months, Amaranth had rolled its short positions into the next month, hoping that market conditions would change and enable it to unload its positions. There were no more summer months into which it could roll these positions. By late August, with hurricane season almost over and natural gas supplies plentiful, it appeared likely there would be adequate supplies for the winter. The market fundamentals were strongly indicating that the winter/summer price spreads should fall. This would be particularly disastrous for Amaranth, which was still holding large positions that it had obtained when these spread prices were high.

Another problem for Amaranth was its increasing margin requirements. In mid-August, Amaranth's margin requirements reached $2 billion. This huge sum caused Amaranth's clearing firm, JPMorgan Chase, to become alarmed about the size of Amaranth's positions, the attendant risks to Amaranth's solvency, and JPMorgan Chase's own potential obligations, if the market turned against Amaranth. The clearing firm concluded, on August 23, that "a more senior level discussion with Amaranth about their energy risk position is needed."[127]

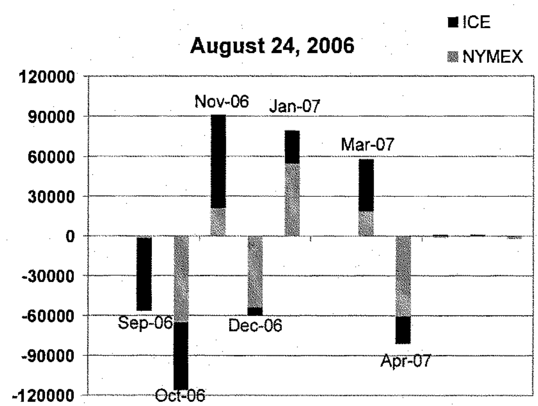
Amaranth's traders told the Subcommittee that, as the last day for trading on the September contract approached, Amaranth's trading strategy was to: (1) let some of its September contracts, which were now all ICE swaps, expire; and (2) use ICE to sell more September contracts, while buying more October contracts to offset its short position in that month. By selling September contracts and buying October contracts, Amaranth was in effect betting that the September contract price would fall faster than the price of the October contract.

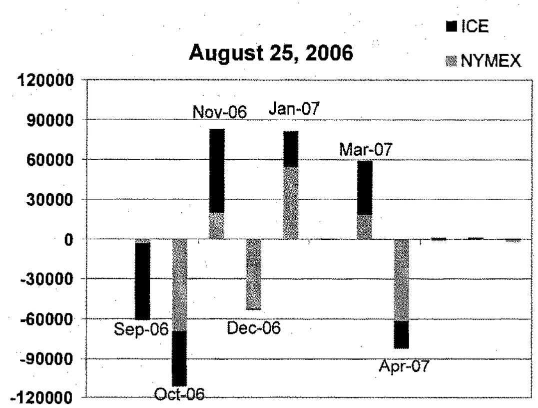
[127] Time line summarizing JPMorgan Chase's interactions with Amaranth through September 21, 2006; Bates No. JPM-PSI 00006031.

Amaranth's overall positions in the week leading up to the expiration of the September 2006 contract are shown in Figure 48. During this week Amaranth increased its short position in the September contract and decreased its short position in the October contract.[128]

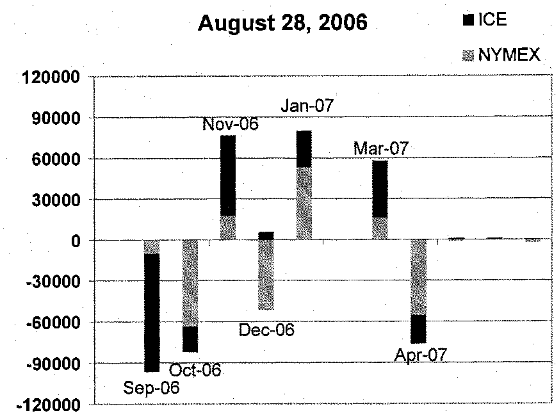
Figure 48

Amaranth's Positions on August 24-29, 2006





[128] Amaranth also had sold a large number of put options on the October 2006 futures contract which, upon their expiration on August 28, 2006, substantially reduced Amaranth's short position in the October contract. A put option gives the option holder the option to sell the underlying futures contract to the seller, at the strike price specified in the option. Because this option to sell, when exercised by the buyer of the option, in effect results in the seller of the option receiving a futures contract, for risk management purposes selling a put option is akin to the holding of a long position in the underlying futures contract, and is calculated as such in determining a trader's overall position.



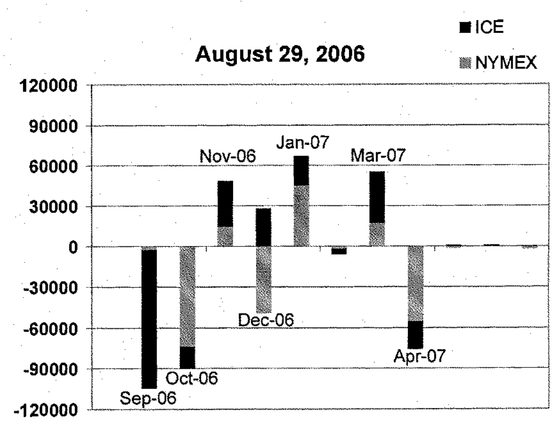


Fig. 48. In late August, Amaranth increased its short position in the September contract and decreased its short position in the October contract. Data source: NYMEX and ICE.

As can be seen in Table 19, the volume of Amaranth's trading in the September contract was a significant share of the overall volume of trading on ICE during the last week in August. In particular, on August 28, the day before the September contract expired, Amaranth sold over 37,000 September contracts on the ICE electronic exchange, accounting for over 40 percent of the total exchange-traded volume on ICE on that date, and over 25 percent of the entire volume of exchange traded futures and swaps on NYMEX and on ICE on that date. Amaranth also traded large amounts of the October contract (Table 20). Figure 49 presents the total volumes on NYMEX and ICE traded on these dates.

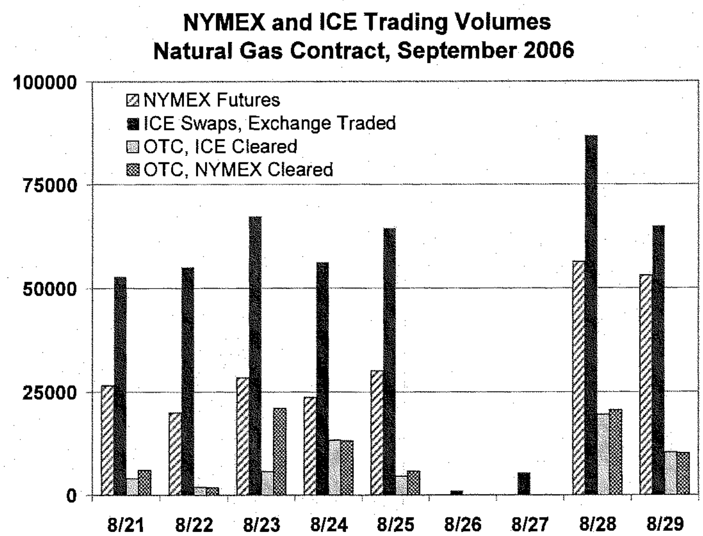
Table 19
Amaranth Trading Volumes on August 21-29
Natural Gas Contract for September 2006

	Trading Volumes				Net Position
	ICE Electronic Exchange	NYMEX Futures	OTC ICE Cleared	OTC NYMEX Cleared	NYMEX + ICE
8/21	-8,580	3,870	--	-2,500	-56,423
8/22	-5,940	-450	--	--	-60,573
8/23	-7,260	2,300	2,500	13,750	-55,394
8/24	-2,048	670	1,830	-2,620	-56,487
8/25	-6,458	2,350	3,470	-600	-60,992
8/27	-3,825	--	--	--	-64,817
8/28	-37,275	4,989	12,711	-7,564	-96,403
8/29	-15,893	6,721	--	-4,008	-104,707

Table 20
Amaranth Trading Volumes on August 21-29
Natural Gas Contract for October 2006

	Trading Volumes				Net Position
	ICE Electronic Exchange	NYMEX Futures	OTC ICE Cleared	OTC NYMEX Cleared	NYMEX + ICE
8/21	-3,317	-13,548	11,650	-9,050	-113,451
8/22	4,348	1,025	200	-200	-111,639
8/23	2,666	-4,609	15,000	-17,200	-112,991
8/24	-628	539	250	-850	-116,105
8/25	1,402	53	7,000	-2,000	-111,651
8/27	2,689	--	--	--	-114,340
8/28	-10,680	-423	100	650	-82,164
8/29	-11,317	-9,055	--	-4,008	-90,232

Figure 49



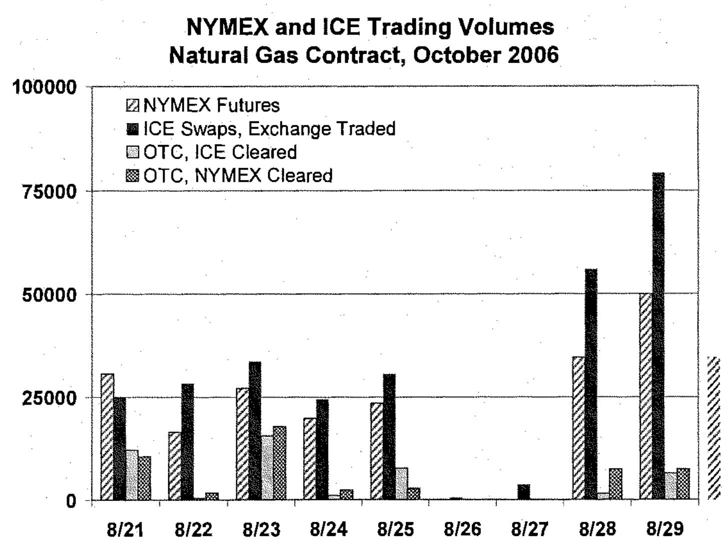


Fig. 49. During the last week in trading of the September contract, daily volumes for the September and October ICE swaps were greater than the daily volumes in the corresponding NYMEX futures contracts. Data sources: NYMEX and ICE.

In the last week of August, the price of the September contract fell from nearly $8 per MMBtu to less than $7, a substantial drop. The precise extent to which Amaranth's large-scale selling of the September contract contributed to the decline in the contract's price cannot be determined because the price in the physical market for natural gas for September delivery was also declining during this period. At the very least, because Amaranth's large-scale selling represented a significant share of the overall volume on ICE and NYMEX during this period, it would have been a significant contributing factor to the price's decline.

Figure 50

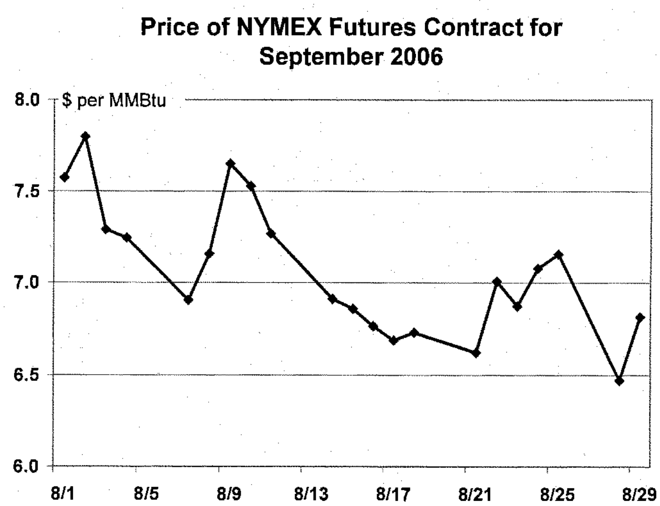


Fig. 50. Due to an abundance of natural gas in storage and diminishing concern regarding potential hurricanes, the price of the September futures contract fell during August 2006. Data source: NYMEX.

The decline in the price of the September contract during the very last trading days of the month was particularly striking when compared to the price of the October contract. Typically, these contracts trade within 7 or 8 cents of each other.[129] Throughout the summer of 2006, however, this spread had been much more volatile than in previous years, widening to about 50 cents on several occasions. During the last week of August, the price spread had returned to a level in accordance

[129] NYMEX data. In 2003, the price of the September contract rose 20 cents above the price of the October contract at the expiration of the September contract; in 2004, the spread widened to about 15 cents on a couple of trading dates. *Id.*

with the norm of prior years. But on August 28 - the date when Amaranth's September contract sales represented a major portion of the trading volume in that contract - the spread dramatically widened again to about 34 cents.

Traders interviewed by the Subcommittee stated they did not know why the spread in price between the October and September contracts widened so suddenly at the end of August. These traders said that they believed the widening of the spread to such a large degree was not in accordance with market fundamentals, and they believed the spread had to narrow as the contract neared expiration.[130] Several of these traders took positions in accordance with this belief. These positions were directly opposite to the positions taken by Amaranth.

Figure 51

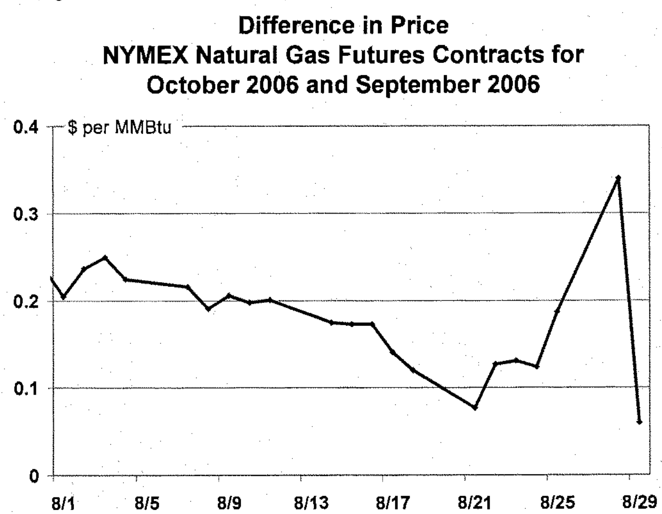


Fig. 51. The price of the October/September spread spiked to about 34 cents on August 28, the date before expiration of the September contract. Data source: NYMEX.

[130] In addition to the 35-cent spread between the October and September contracts, traders stated there were significant yet inexplicable increases in the price of an ICE-traded contract called the "Hub combo," and a significant yet inexplicable increase in the price of over-the-counter exchanges of futures for swaps. According to these traders, these anomalies indicated that natural gas futures were under-priced, and arbitrage trades between the under-priced futures market and the physical market would cause the price of the futures contract to rise prior to expiration. This explanation offers yet another example of how the price of contracts traded on ICE can have a material effect upon the trading of the related NYMEX futures contract.

On the last day of trading in the September 2006 contract, August 29, Amaranth sold nearly 16,000 contracts on ICE. Most of these September contracts were linked to purchases of ICE swaps for October 2006; in other words Amaranth was buying the price spread between the October and September contracts and betting that the October price would be higher. Amaranth dominated the buying of this spread on ICE on August 29, accounting for about 45 percent of the volume of the trading on that date.

The largest of the traders that took a position opposite Amaranth was Centaurus, another hedge fund. Centaurus sold nearly 12,000 October/September spreads on the last day of trading, August 29. According to Centaurus traders interviewed by the Subcommittee, Centaurus believed the October/September price spread was overpriced, that the September contract was out of line with prices in the physical market, and that the difference in price between the September contract and the October contract would narrow.

Both Amaranth and Centaurus traded primarily on ICE, though both also traded some contracts on NYMEX. For most of the day on August 29, the total volume of trading in September natural gas contracts on ICE was greater than for the corresponding September contract on NYMEX. In fact, the volume of trading on ICE exceeded the volume on NYMEX until the final twenty minutes.

As the final day of trading approached for the September contract, NYMEX officials had become concerned that Amaranth might conduct a large volume of trading during the last half hour of trading, in the same manner it had on several occasions in the spring. The last half hour of trading is called the final settlement period because, as explained earlier, NYMEX uses the prices paid during that final half hour to calculate the expiring contract's final price. At approximately 11 a.m. on August 29, NYMEX compliance officials telephoned Amaranth's compliance officer, Mr. Carrieri, and informed him that Amaranth should trade in an orderly manner throughout the trading session, especially during the final half hour. According to NYMEX officials, they informed Amaranth that they did not want Amaranth to conduct a large volume of trading within the final settlement period in order to avoid distortions in the final settlement price. Mr. Carrieri relayed these instructions to the Amaranth traders.

Figure 52

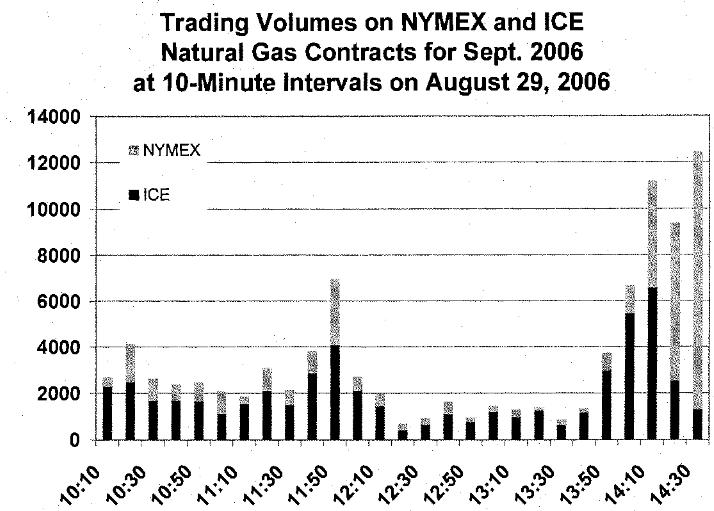


Fig. 52. Prior to the last twenty minutes of trading, the majority of trading on the final settlement day for the September futures contract occurred on ICE. Data sources: NYMEX and ICE.

Figure 53

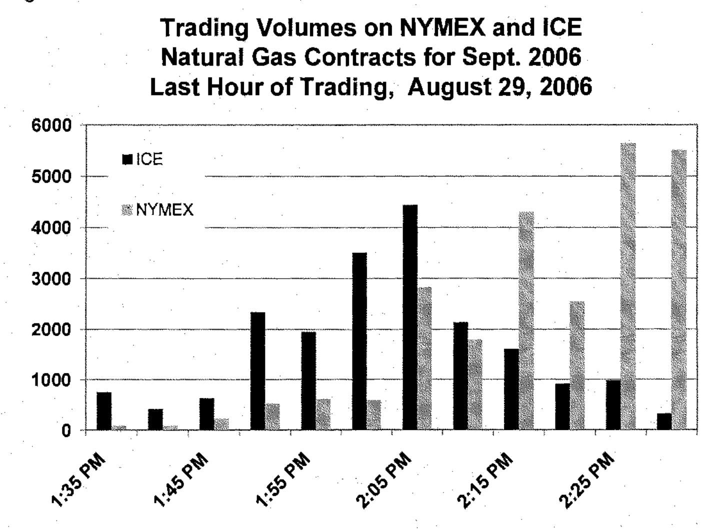


Fig. 53. From 1:30 to 2:05 pm on August 29 - which is the half hour before the settlement period - the volume of trading of ICE swaps was significantly greater than the volume of trading of NYMEX futures contracts. Data sources: NYMEX and ICE.

In accordance with NYMEX's instructions, Amaranth concluded its trading on NYMEX around 1:15 p.m. Shortly afterwards, Amaranth concluded its trading on ICE. Amaranth traders explained to the Subcommittee that it considers its positions on NYMEX and ICE as components of an overall position, and hence, to keep its overall portfolio balanced, it needed to conclude the bulk of its trading on ICE at the same time as it concluded its trading on NYMEX. Amaranth explained that when it exited trading on NYMEX, it had largely achieved the risk profile it had sought for the day, and did not contemplate additional trading on ICE. As the September contract price and the September-October price spread had remained within satisfactory parameters from Amaranth's perspective during the trading prior to 1:15 p.m., it did not believe it was at significant risk by completing its trading at that time.

Shortly after Amaranth exited the market - around 1:40 p.m - the price of the September contract began to rise, and the price difference between the September and October contracts began to narrow. During this period, most of the trading was still taking place on ICE. ICE trading records indicate that for most of the day, there was one very large seller (Amaranth) and one very large buyer (Centaurus) of September contracts. Amaranth believed the price of the September contract would fall; Centaurus believed the price would rise. For most of the day, the buying pressure from Centaurus had been matched up against the selling pressure from Amaranth, and vice versa. The price of the September contract stayed relatively flat during this period. Centaurus intended to keep on buying as long as the difference in price between the October contract and the September contract was unusually wide. This could not happen while Amaranth was selling, as Amaranth's selling helped keep the spread wide. After Amaranth finished its selling, however, Centaurus's bidding for more September contracts was no longer matched by Amaranth's selling, and the price of the September contract began to rise. The rising price of the September contract narrowed the spread between the October and September contract.

In the last 45 minutes of trading on August 29, Centaurus bought nearly 10,000 September contracts on ICE and about 3,000 on NYMEX, including approximately 9,000 contracts between 1:40 and 2:10 p.m. Centaurus's buys represented a significant share of the total volume traded on both exchanges during that period for the September contract, including nearly 50 percent of the trading volume in the last hour of trading on ICE. As Figure 55 shows, just prior to the final half hour of trading, Centaurus's volume of buying was approximately equal to the total volume generated by all of the other buyers on NYMEX and ICE *combined.*

Figure 54

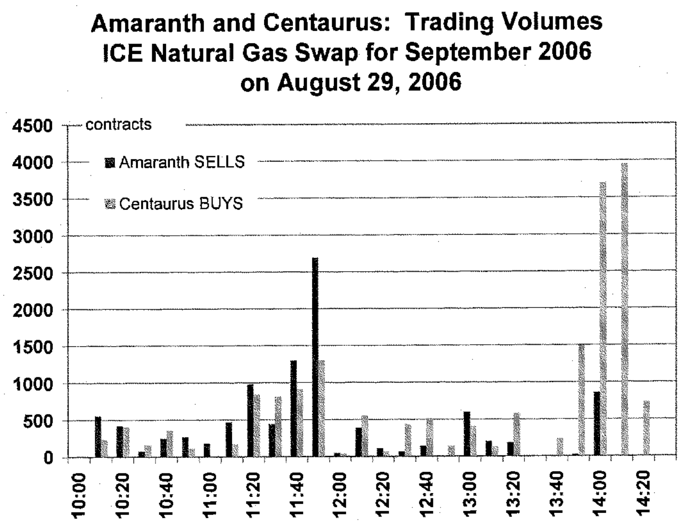


Fig. 54. Amaranth and Centaurus trading volumes in the September 2006 ICE natural gas swap, by 10-minute intervals, on the date of expiration of the contract. Data source: ICE.

Figure 55

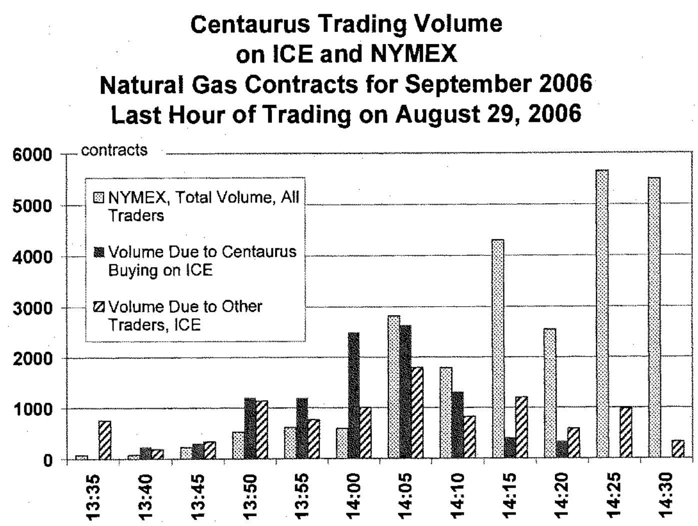


Fig. 55. From about 1:30 p.m. until about 2:00 p.m., the volume of trading on ICE in the expiring September 2006 contract due to Centaurus exceeded the volume generated by all of the other traders on ICE. Data source: ICE and NYMEX.

Figure 56

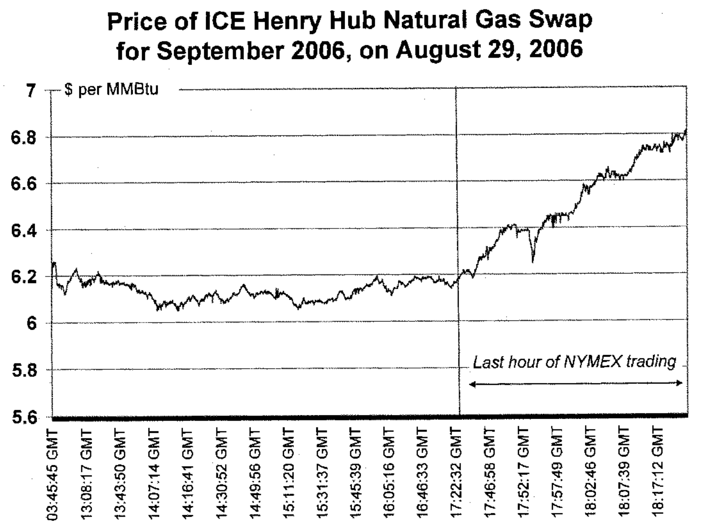


Fig. 56. The price of the ICE natural gas swap contract for September rose sharply around 1:45 p.m. on August 29. Times are expressed in Greenwich Mean Time (GMT) due to the manner in which trade times are recorded in the ICE database. In August, Daylight Savings Time (DST) is four hours earlier than GMT. Data source: ICE.

Figure 57

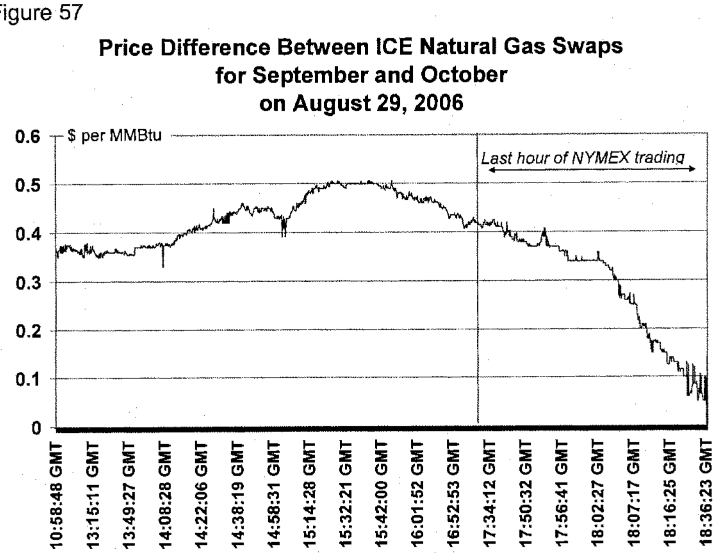


Fig. 57. The price of the October/September spread fell sharply at the same time the price of the September contract rose sharply. Data source: ICE.

The price data underlying Figure 57 indicates that the price of the October/September spread opened at 36 cents, and fifteen minutes later began to rise. In just about an hour, from about 10:10 a.m. to 11:23 a.m., the price of the spread jumped from about 37 cents to 50 cents. This period, in which the price of the spread rose significantly, was the same time period in which Amaranth's buying of the spread was most heavily concentrated. At the end of the day, after Amaranth's buying had stopped, the price of the spread fell dramatically – about 40 cents in one hour. Similarly, during the final hour of trading, the price of the September contract jumped by about 60 cents – an increase of nearly 10 percent.

The day after trading concluded on the September contract, Amaranth charged that it had been the victim of apparent price manipulation and requested an investigation by market regulators. In a letter sent to NYMEX dated August 30, 2006, Amaranth wrote:

> As you are no doubt aware, during the last 60 minutes of trading in the September NG [natural gas] contract, the price of the September NG contract spiked up by approximately 10%. We believe that such price movements did not reflect bona fide supply and demand market forces. . . . We also believe that the trading that caused the price movements during the closing range of the September NG contract was motivated by the desire by one or more market participants to affect the settlement price of the September NG contract, which the public relies on as a key price benchmark for physical and financial contracts involving natural gas.[131]

Amaranth noted that "as a responsible market participant we abided by your request" not to execute any large orders during the last half hour of trading, and had "completely liquidated our September NG position by approximately 1:15 pm." "It is apparent to us," Amaranth contended, "that certain market participants are not trading in a responsible manner." Amaranth requested that NYMEX "immediately initiate an investigation into the trades and traders that caused yesterday's artificial price spike."

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[131] Letter from Michael Carrieri, Compliance Director, Amaranth, LLC, to Anthony Densieski, Senior Director, Market Surveillance, NYMEX, August 30, 2006, Bates No. NX-USSEN-000969.

The Subcommittee interviewed NYMEX officials and numerous traders who were active in the natural gas market on August 29 about the events of that date and the reasons for the price spike. Based on these interviews, Amaranth's perception that the price spike towards the end of trading was "artificial" appears to be correct. There were no changes in the underlying fundamentals of supply and demand that suddenly emerged in the last hour of trading to precipitate the price spike. Rather, this volatility appears to have been caused in large part by the pattern of trading between the two largest traders in the natural gas market Amaranth's complaint that the September price spike in the final hour reflected the effects of large-scale trading rather than market forces is an observation that could equally be applied to its own trading earlier in the day.

In an instant message conversation with another trader right after the close of trading on August 29, Amaranth's top energy trader, Brian Hunter, complained about the trading activity during settlement:

> Brian Hunter: classic pump and dump boy I bet you see some CFTC inquiries for the last two days
>
> crummertd: until they monitor swaps no big deal its all swaps now
>
> Brian Hunter: any time there is a 70 cent rally in 40 minutes on no fundamental event ... it will get investigated ... for sure[132]

Although Mr. Hunter expressed certainty about a CFTC inquiry into the trading on August 29, the other trader seemed to dismiss any CFTC investigation as "no big deal," because the CFTC had no authority to monitor trading on ICE, where most of the trades had taken place. His observation underscores the reality that exempting ICE from CFTC oversight harms not only that unregulated market, but also NYMEX, a fully regulated market, by making both more vulnerable to market manipulation, excessive speculation, and unfair pricing.

[132] Amaranth Instant Message, Bates No. AALLC_REG0650031.

I. September 2006: Amaranth Collapses

"The combination of precise formulas with highly imprecise assumptions can be used to establish, or rather to justify, practically any value one wishes . . . Calculus . . . [gives] speculation the deceptive guise of investment."
--Benjamin Graham, 1949[133]

The 60-cent increase in the price of the September contract and the associated drop in the price of the October/September spread caused a huge loss for Amaranth. On August 29, its daily profit and loss statements recorded a loss in the value of its natural gas holdings of nearly $600 million. Despite this enormous one-day loss, Amaranth still finished August with a net gain of $631 million for the month.

More ominous for Amaranth's long-term survival, however, were the margin calls that accompanied the deterioration in its positions. Because its natural gas holdings had lost value, on August 30, Amaranth's margin requirements increased by $944 million. According to an internal memorandum from JPMorgan Chase, Amaranth's clearing firm, this margin call "resulted from Amaranth's activity on the ICE yesterday."[134] On August 31, Amaranth's margin requirements on ICE and NYMEX exceeded $2.5 billion; by September 8 they had surpassed $3 billion.

During the first week of September, from Amaranth's perspective, more bad news arrived. Other natural gas prices began falling. Two spreads of particular concern to Amaranth were the March/April 2007 price spread and the January2007/October 2006 price spread. The March/April spread had begun a free fall, dropping nearly 25 percent, from $2.49 on August 25 to $2.05 on September 1. The falling March/April spread increased Amaranth's margin woes. During the first two weeks in September, the January/October spread also went into a steep decline, falling from $4.68 on September 1 to $4.15 on September 11, to $3.52 on September 15.

During the summer, Amaranth had viewed falling prices as an opportunity to increase its positions in those contracts. Its large-scale buying had the effect of propping up the prices - either preventing them from falling further or actually boosting them higher. A number of traders told the Subcommittee that they believe the winter/summer price spreads remained overpriced during the summer for so long for two major reasons: (1) traders were aware that someone had taken a very

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[133] Benjamin Graham, The Intelligent Investor, 4th ed. (New York, 1973), at pp. 315-321.
[134] Time line summarizing JPMorgan Chase's interactions with Amaranth through September 21, 2006; Bates No. JPM-PSI 00006032.

large position in the spreads – some suspected it was Amaranth – and, in their view, that person had kept making large purchases to keep the prices up; and (2) traders were concerned that one or more hurricanes could increase prices as well, as had happened after Hurricanes Katrina and Rita the previous year. In light of Amaranth's demonstrated ability to push up the spread prices, and the possibility of supply disruptions, many traders were reluctant to take the opposite position, even if they viewed the spreads as overpriced from the standpoint of market fundamentals.[135]

In early September, however, faced with margin requirements of several billion dollars, Amaranth no longer had the capital to add to any of its positions, as it had done several times during the spring and summer. As prices fell, it could only stand by and watch. In an attempt to reduce its market risk, in early September Amaranth bought MotherRock's positions from ABN Amro, MotherRock's clearing firm, which had assumed MotherRock's portfolio. MotherRock's offsetting positions helped to reduce Amaranth's risk.

As hurricane season neared an end, however, and natural gas supplies remained plentiful, more and more traders viewed the winter/summer price spreads as overpriced. This analysis precipitated more selling, and prices began to collapse. Amaranth's positions went into free fall.

[135] An increase in the price of the spread would be harmful to a trader who had taken the opposite position because it would result in an increase in margin requirements.

Figure 58

NYMEX Natural Gas Futures Prices
All Months
August 29 - September 21, 2006

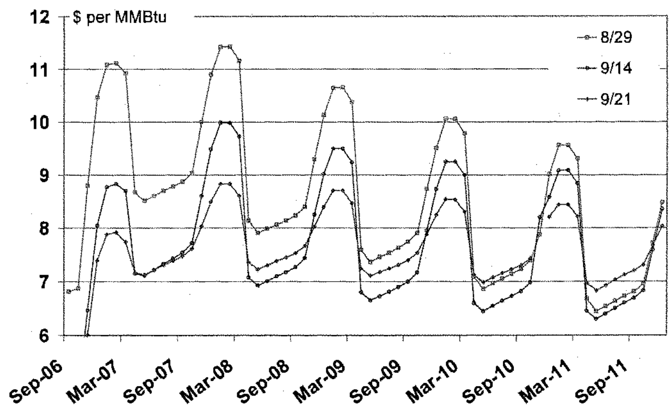

Fig. 58. From August 29 through September 21, the forward curve for natural gas futures contracts fell significantly. Although market fundamentals were largely unchanged between the end of August and the latter part of September, absolute price levels fell by 25 percent or more and winter/summer price spreads fell by as much as 75 percent. Data source: NYMEX.

By September 15, as Amaranth's natural gas positions continued to deteriorate and its cash position weakened considerably, Amaranth began to seek a counterparty to buy its energy book. One of the counterparties Amaranth approached was Centaurus. Late on Saturday, September 16, Amaranth's senior energy trader Brian Hunter asked John Arnold, Centaurus CEO, whether the hedge fund would like to make a bid for some of Amaranth's positions. Early the next morning, Mr. Arnold offered a bid after making the following observations:

> I was not in the office on Friday but I understand you were selling h/j [March/April]. The market is now loaded up on recent, bad purchases that they will probably try to be spitting out on Monday if there is a lower opening given that spread has been in free fall. ***In my opinion, fundamentally, that spread is still a long way from fundamental value.***
>
> Over the past couple years the market has put a big risk premium into that spread yet it has paid out on expiry once in ten years. We'll be at all time high storage levels with

> mediocre s/d [supply and demand] and an el nino. ***Even though that spread has collapsed over the past 2 weeks, the only reason it's still $1 is because of your position.*** Historically, that spread would be well below $1 at this point given the scenario.[136]

Mr. Arnold gave Mr. Hunter two price quotes for the March/April spread: 45-60 cents for the March/April 2007 spread which had closed the previous trading day at $1.15; and $1.00-$1.20 for the March/April spread in 2008 and beyond, which had closed the previous day at between $2.10 and $2.20. Mr. Hunter declined Mr. Arnold's offer. Mr. Arnold's prediction of the behavior of these spreads, however, turned out to be remarkably accurate. On September 21, the last day of Amaranth's trading in the natural gas market, the March/April 2007 spread stood at 58 cents, and the March/April spreads for 2008 and beyond ranged from $1.18 to $1.25.

After several days of frantic negotiations with several brokerages and banks, on September 20, Amaranth formally sold its energy book to its clearing firm, JPMorgan Chase, and Citadel, another hedge fund. To meet its margin calls and satisfy client requests, Amaranth liquidated the remainder of its $8 billion portfolio.

J. Amaranth's Market Impact

Until its September collapse, Amaranth dominated trading in the 2006 U.S. natural gas market. It bought and sold thousands of natural gas contracts on a daily basis. It frequently held 40 percent or more of the open interest in natural gas futures in a particular contract month. At some points during the year, it held more than 100,000 natural gas contracts. Its trading moved prices and increased price volatility.

Amaranth's trading did not take place in a vacuum; its largely unregulated trading and price distortions harmed other market participants. Some natural gas end users were forced to purchase natural gas at inflated prices. Others were unable to hedge their natural gas expenses due to the unpredictability and volatility of the market. Still others suffered large losses.

Inflated Natural Gas Prices. Some natural gas distributors and end users told the Subcommittee that, due to the higher than normal price spreads during the spring and summer of 2006, they were forced to purchase contracts to deliver natural gas in the winter months at prices

[136]Email from John Arnold to Brian Hunter, Sept. 17, 2006, Bates No. AALLC_REG0251227-28 (Emphasis added).

that were disproportionately high when compared to the plentiful supplies in the market.

The American Public Gas Association told the Subcommittee, for example, that many local gas distributors were forced to pass on high natural gas prices to their customers, including residents, schools, hospitals, small businesses, and local electrical plants powered by natural gas. One of its members, the Minnesota Municipal Utilities Association, complained of being locked into unfairly high prices in a 2007 letter to the House Committee on Agriculture: "Many natural gas distributors locked in prices prior to and during the period Amaranth collapsed that in hindsight were distorted due to Amaranth's accumulation of an extremely large position. The lack of transparency in the over-the counter (OTC) market for natural gas and the extreme price swings surrounding the fallout of Amaranth have, in their wake, left bona fide hedgers reluctant to participate in the markets for fear of locking in prices that may be artificial."[137]

The Municipal Gas Authority of Georgia (MGAG) told the Subcommittee that to reduce volatility and mitigate additional price spikes on supplies of natural gas for the 2006-07 winter, its hedging procedures required it to hedge part of its winter natural gas in the spring and summer of 2006. MGAG officials explained that they knew natural gas prices were still extremely high, but they could not "roll the dice" and hope prices would eventually drop, so they hedged half of their winter gas prior to September 2006. By hedging earlier in 2006 when natural gas prices were high, MGAG told the Subcommittee that its customers incurred hedging losses of $18 million over the actual market prices during the winter of 2006-07. MGAG officials characterized the extra $18 million, which resulted in higher natural gas bills for their customers, as a "premium" forced on them by excess speculation in the market by Amaranth and others. MGAG officials also told the Subcommittee that, due to unexplained price swings and price spikes in natural gas prices during the year, their members had lost confidence that the market would fairly reflect natural gas costs. MGAG member and industrial customer hedge volumes to date during 2007 are down sharply from 2006, which they believe is attributable to the lack of confidence in the forward market. MGAG's risk manager indicated that last winter's hedging was very expensive, but now the lack of hedging by its members leaves its customers exposed to price spikes in the future. MGAG concluded by telling the Subcommittee that, contrary to reports that no one was hurt by Amaranth's trading practices, their

[137] Letter from the Minnesota Municipal Utilities Association to U.S. House of Representatives Committee on Agriculture, March 22, 2007, http://www.apga.org/Peterson%20CFTC%20Letter_3.22.07.pdf.

customers were forced to pay millions of dollars in extra natural gas costs unrelated to fundamental supply and demand.

The New England Fuel Institute framed the issue this way: "Unnecessary volatility in the energy markets leads to unexpectedly high heating costs. . . When gas and diesel prices are driven up by adverse market forces, people will simply drive less. But when the prices of heating fuels are set by market players looking for a quick buck, people are left out in the cold."[138]

American industry was also affected. The Industrial Energy Consumers of America, a nonprofit association that represents manufacturers powered by natural gas, wrote: "Wall Street type trading companies are making enormous profits trading energy. While we have nothing against generating an honest profit, those profits must be paid for by someone through higher prices or more volatile markets."[139] At a 2007 business conference on natural gas issues, panelists condemned high natural gas prices and price volatility in the United States.[140] For example, the natural gas manager for steel giant Arcelor Mittal noted that, in 2006 alone, his company spent $1 billion on natural gas. "Our biggest concern as an end user is price," the panelist said. "Our second concern is price and our third concern is price." A panelist from Tyson Foods stated: "Natural gas at $4 may not have a big impact on earnings, but $15 gas has an impact." A panelist from chemical manufacturer FMC Corporation added: "The pricing impact of natural gas impacts our global competitiveness."

Unpredictable Prices. Other natural gas distributors and users told the Subcommittee that the wide price spreads and extreme price volatility in the 2006 natural gas market made it difficult for them to hedge risks and protect against adverse price changes. Some told the Subcommittee that the influx of speculative trading from hedge funds had exacerbated market volatility to the extent that small players felt uncomfortable entering the market. One public utility expressed to the Subcommittee a lack of confidence in its ability to effectively hedge against large and unpredictable swings in natural gas prices.

At the same 2007 business conference on natural gas issues, a seminar was held on "Managing Price Risk in a $5 - $10/MMbtu World," with panelists offering a variety of trading strategies to try to

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[138] Sean Cota, President, New England Fuel Institute, statement before the Senate Democratic Policy Committee, May 8, 2006.
[139] Industrial Energy Consumers of America letter to U.S. Senate Committee on Agriculture, April 5, 2006.
[140] "Natural gas price a concern for US business – panel," Reuters, May 11, 2007. All panelist quotations are taken from this article reporting on the conference panel.

deal with the extreme price volatility in the market.[141] One energy trader from Cargill Risk Management, after presenting a chart showing volatile natural gas prices in 2006, asked the audience "Did you watch in disbelief trying to decide when to enter the market?"[142] He also offered this warning from John Keynes: "Markets can remain irrational longer than you can remain solvent."

Industrial Energy Consumers of America has stated: "[O]ver the last five years U.S. natural gas prices have been the most volatile commodity in the world."[143] A group of four Attorneys General from the Midwest issued a lengthy 2006 report that described U.S. natural gas prices as "whacky," unrelated to supply and demand, and subject to "irrational swings." The report noted a "striking correlation between large increases in trading and increases in the volatility and level of natural gas prices." The American Public Gas Association has concluded that the problem worsened in 2006: "The unwinding of Amaranth's excessively large natural gas positions in the OTC led to even greater price volatility in an already volatile regulated market. Because of the lack of transparency of the OTC market, the full effect of Amaranth's trading on natural gas prices may never be fully determined, and the American public likely will continue to feel the effects of Amaranth's trading for a substantial period of time."[144]

Trading Losses. It was not just local gas distributors, municipalities, industry, and small businesses that expressed concern about the 2006 natural gas market, the Subcommittee also heard from traders angry at the ability of a single hedge fund to distort market prices. One trader told the Subcommittee that many traders were reluctant to take positions opposite Amaranth, regardless of their view on market fundamentals, due to Amaranth's demonstrated ability to affect natural gas prices through large trades.

Other traders told of large losses incurred in response to sudden price movements attributed to Amaranth's trading. One dramatic example involves MotherRock LP, a $300 million hedge fund that was headed by the former NYMEX chairman Bo Collins and was heavily invested in natural gas futures. Part of MotherRock's trading strategy was based upon its view that natural gas prices and spreads for the upcoming winter were overvalued in light of plentiful supplies and moderate demand. It bet that futures prices for winter contracts would

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[141] "Managing Price Risk in a $5-$10/MMbtu World." GasMart 2007 conference. Chicago, IL: May 10, 2007.
[142] Jerry Afdahl, Cargill, "Managing Price Risk in a $5-$10/MMbtu World." GasMart 2007 conference. Chicago, IL: May 10, 2007.
[143] Industrial Energy Consumers of America letter to U.S. Senate Committee on Agriculture, April 5, 2006.
[144] American Public Gas Association letter to the Federal Reserve Board of Governors, February 22, 2007.

fall in relation to the summer prices; it sold a significant number of futures contracts for March 2007 and bought contracts for April 2007. This position was directly opposite Amaranth's position.

As Amaranth's large positions and trades continued to push up winter contract prices, MotherRock's positions lost value, especially its position in the March/April price spread. On July 31, 2006, when Amaranth's trading caused a sudden 72 cent jump in the March/April price spread, a number of MotherRock's positions were directly affected, and MotherRock was unable to meet its margin call. Shortly afterwards, MotherRock announced that, due to losses it had suffered in the natural gas market over the summer, it no longer had sufficient funds to continue operations. The hedge fund folded soon after.

At the time, a number of traders and analysts stated publicly that market conditions did not justify the extreme price movements on July 31. "What's distressing is that this move in natural gas prices that took MotherRock out, and will ultimately wind up taking others out as well, wasn't really the effect of record-breaking heat or hurricanes," one natural gas trader said. The trader explained:

> This move was less about the real fundamental drivers, and more about other funds triggering a massive short covering rally, which inflicted big financial pain on all of those traders who were positioned for more of a downside move. Because let's face it, even with record breaking heat, there's not one real rational reason why we should see nearly $9 gas, when we all know we're going to end the refill season with more gas than we know what to do with.[145]

When asked by the Subcommittee, another trader described Amaranth's effect on MotherRock as follows: "Bo [Collins, CEO of MotherRock] opposed Brian [Hunter, Amaranth's senior energy trader] on March/April and on October/January. Bo thought March/April was overpriced. Brian came in with another tranche [of buying March and selling April contracts at the end of July] and killed Bo."

This trader described Amaranth's senior energy trader, Mr. Hunter, as "doing so much action [trading] on the exchange that he was a one-man industry." This trader said it was "a lopsided game," in which it was nearly impossible to take a position opposite Amaranth, regardless of market fundamentals. "You could take either of two positions," the trader said. "You could either jump on the bandwagon and go with the

[145] Alan Lammey, *Spike in Gas Futures Prices Collapses 'Short' Hedge Fund, Possibly More*, Natural Gas Week, August 7, 2006. See also Gerelyn Terzo, *MotherRock Wont Be Nat Gas' Last Victim; The volatility that undermined this hedge fund shows no sign of slowing*, Investment Dealers Digest, August 14, 2006.

strong hand or oppose that position and endure months and months of pain for a moment of instantaneous gratification when Amaranth imploded. There are only a few people in this market who can endure that kind of pain."

In an email obtained by the Subcommittee, a hedge fund analyst wrote the following to a colleague in early August:

> Bo [Collins] is done, Monday [July 31] blew them up. ... Market going nuts with Amaranth the featured FU player, they took it to Mother Rock on Monday in the h/j [March/April] spread."[146]

Still another trader told the Subcommittee that "everyone in the market knew Amaranth killed MotherRock."[147]

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[146] E-mail dated August 4, 2006, Re: Collins, Bates No. xxx-PSI-009788. NYMEX futures contracts are generally designated by a two-letter symbol signifying the commodity, followed by the two-digit designation for the year, and a one-letter designation for the month. The letters used to designate months are F, G, H, J, K, M, N, Q, U, V, X, and Z. Thus, NG07F is the NYMEX designation for the natural gas contract for January 2007, whereas a simple combination of letters, such as h/j, refers to the March/April spread.

[147] Interview with Subcommittee staff, May 16, 2006.

VI. PROTECTING U.S. ENERGY AND ECONOMIC SECURITY

The health of the U.S. economy depends in part upon well-functioning capital markets, including the commodity markets that now play such a large part in determining U.S. energy prices. Since the 1930s, federal law has prohibited market fraud, manipulation, and excessive speculation to protect the vibrancy and efficiency of U.S. capital markets.[148] Federal agencies like the SEC, CFTC, and FERC have built a system of checks and balances, including market surveillance capabilities, trade analysis, regulatory actions, and criminal prosecutions, to detect, prevent, and punish persons who attempt to interfere with the free and fair functioning of U.S. capital markets. But those systems are inadequate when it comes to energy trading.

In 2006, Amaranth's massive trading distorted natural gas prices and increased price volatility. Other market participants have complained of unfair market practices and unfair prices. Some have lost confidence in the ability of the futures market to provide a fair price, and are therefore reluctant to invest in the natural gas market, hedge their price risks in these markets, and participate in the trading that produces a market consensus on correct pricing. Discredited markets, reluctant market participants, and ineffective pricing do nothing but harm U.S. economic and energy security interests.

Three key steps would help protect our energy markets, reduce trading abuses, and better ensure fair pricing. First, Congress should make energy exchanges that are currently exempt from the CFTC's regulatory system, such as ICE, subject to the same statutory and regulatory requirements as the regulated exchanges, such as NYMEX. Second, the CFTC and the exchanges should reinvigorate the statutory prohibition against excessive speculation. Third, the Congress should increase funding for the CFTC and authorize it to collect user fees from the commodity markets.

A. Close the Enron Loophole.

The key law establishing government oversight and regulation of U.S. commodity markets is the CEA. Right now, the CEA is burdened with complex exemptions, exclusions, and limitations that make it extremely difficult to ensure U.S. energy markets operate in a fair, transparent, and efficient manner.

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[148] See, e.g., Securities and Exchange Act of 1934, 15 U.S.C. § 78a et seq.; Grain Futures Act of 1922, later amended to become part of the Commodity Exchange Act, 7 U.S.C. § 1 et seq.

The primary problem is Section 2(h)(3) of the CEA, which exempts energy commodities traded on electronic energy exchanges by large traders from routine government oversight. Section 2(g) also excludes energy swaps from the law. Both provisions were added to the CEA in 2000, at the request of Enron and others, creating the "Enron loophole," that exempts key energy commodities from government oversight. These provisions have resulted in the irrational situation in which one key U.S. energy exchange, the NYMEX, is subject to extensive regulatory oversight and obligations to ensure fair and orderly trading and to prevent excessive speculation, while another key energy exchange, ICE, operates with no regulatory oversight, no obligation to ensure its products are traded in a fair and orderly manner, and no obligation to prevent excessive speculation. The Amaranth case history demonstrates that trading in both markets affects energy prices, that trading in each market affects prices in the other market, and that traders view futures contracts and swaps to be equivalent financial instruments for risk-management and speculation. The existing provisions in the law that exempt energy contracts traded on ICE from regulatory oversight make no economic sense.

The Amaranth case history also shows that when a regulated market such as NYMEX takes steps to prevent price manipulation or excessive speculation, a trader can still trade without limitation simply by replacing its futures contracts on NYMEX with swaps on ICE. After NYMEX directed Amaranth to reduce its natural gas positions in August 2006, Amaranth moved those positions to ICE. The net result was that the action by the regulated exchange, pursuant to the CFTC's requirements, did nothing to reduce Amaranth's size in the marketplace; it simply caused trading to move from a regulated market to an unregulated market. Natural gas prices were not protected from Amaranth's subsequent large-scale trading.

The Amaranth case history also illustrates the stumbling blocks thrown up by the current system that impede market regulators from making informed decisions. Right now, energy market regulators have direct, routine access only to trading data from regulated exchanges and not from the unregulated exchanges. In the Amaranth case, for example, NYMEX officials reviewing Amaranth's trading positions were able to examine only Amaranth's trades on NYMEX, missing highly relevant information about equivalent trades on ICE. The result was that NYMEX officials were forced to make significant regulatory decisions regarding market manipulation and excessive speculation based upon incomplete and possibly misleading trading data. A regulator denied critical trading information cannot make informed decisions to protect the integrity of U.S. energy markets.

Eliminating the Enron loophole would level the regulatory playing field between the NYMEX and ICE exchanges, increase energy price transparency, and strengthen the ability of the CFTC to analyze market transactions and police U.S. energy commodity markets. It is time to put the cop back on the beat in all U.S. energy markets.

B. Reinvigorate the Prohibition Against Excessive Speculation

In addition to closing the Enron loophole, the CFTC and energy exchanges need to reinvigorate the CEA's prohibition against excessive speculation. Amaranth's trading demonstrates that excessive speculation can distort futures prices not only in the next month or two, but for many months into the future. Currently, the major focus of the CFTC and the exchanges is to prevent excessive speculation from disrupting orderly trading of a contract near the expiration of that contract. The CFTC and the exchanges need to be vigilant to ensure that traders' speculative positions in futures contracts several seasons, or even several years, in advance are not distorting prices. Regulators should obtain and analyze aggregate position and trading data for large traders and develop flexible criteria for when to require reductions in large positions. Presently, the only factor that is identified for consideration in whether a trader's position is excessive is the aggregate position size. Other factors could include, for example, market concentration relative to total open interest, relationships between positions in different months such as spread positions, and past trading patterns.

Again, however, these tasks cannot be accomplished unless the CFTC and the exchanges have more comprehensive information about traders' positions. It is unreasonable to expect the CFTC to prevent excessive speculation if the CFTC cannot see all of the market or lacks the authority to limit a trader's positions on the unregulated exchanges.

Amaranth's positions and trades in futures contracts expiring months or even years later had a real-time affect on energy prices, forced some natural gas distributors and users to lock in future delivery contracts at high prices, and drove at least one competitor out of business. Yet NYMEX regulators monitoring Amaranth's trades weighed in only when Amaranth's positions appeared likely to affect the prices of futures contracts that were about to expire. Our energy regulators need to have a longer time horizon than the next 60 days.

C. Increase CFTC Resources

Congress should also provide adequate resources to the CFTC so that it can effectively perform its oversight function, a recommendation discussed in the final section of this Report.

VII. CFTC RESOURCES TO MONITOR NATURAL GAS MARKETS

Another obstacle to the CFTC's ability to detect or prevent price distortions and excessive speculative trading is the agency's inability to obtain adequate staff, technology, and budget resources.

Over the last ten years, commodities trading has exploded in U.S. markets. Trading volumes have quintupled to 3 billion contracts per year.[149] The number of different futures contracts and options being actively traded has increased nearly sevenfold, from 179 in 1995, to an estimated 970 in 2006, to a projected total of 1,120 in 2008.[150] An entire new energy commodities exchange, ICE, has been established and is now trading hundreds of thousands of contracts daily. Investments in futures commission merchant accounts have quadrupled, increasing from \$33 billion to \$137 billion.[151] Investments in major U.S. commodity indices have grown more than tenfold, climbing from a combined total of less than \$10 billion in investments in 2000 to an estimated \$145 billion in early 2007.[152] Commodity traders have become featured in financial publications as the new market stars pulling in tens or hundreds of millions of dollars in compensation each year.[153]

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[149] CFTC FY2008 budget request and briefing documents supplied to the Subcommittee.
[150] *Id.*
[151] *Id.*
[152] These figures are based primarily on the Goldman Sachs Commodity Index (GSCI) and Dow Jones-AIG Commodity Index (DJ-AIGCI). See "Strong Asset Momentum Underpins Metals Markets," Commodities Now (March 2006) for commodity investment level in 2000; Goldman Sachs press release stating that the GSCI had \$110 billion in investments in January 2007, available at http://www2.goldmansachs.com/gsci/articles/ gsci_061106125458.html; and Dow Jones-AIG press release stating that the DJ-AIGCI had an estimated \$35 billion in investments in February 2007, available at http://www.djindexes.com/mdsidx/index.cfm?event=showAigNews.
[153] See, e.g., Rich Blake and Andrew Barber with Robert LaFranco, *The Trader Monthly 100; Earn, Baby, Earn,* Trader Monthly, April/May 2006.

Figure 59

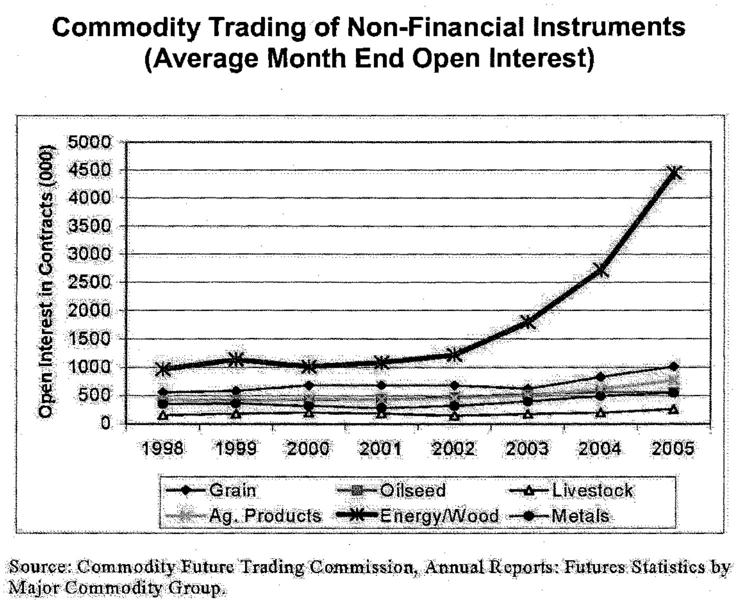

Fig. 59. Reproduced from: Mark N. Cooper, The Role of Supply, Demand and Financial Commodity Markets in the Natural Gas Price Spiral, at p. 11, March 2006.

Despite the overwhelming explosion in commodity trading, the CFTC has experienced declining staff numbers, aging technology systems, and flat budgets. One key problem is that, unlike its sister organizations, the SEC and FERC, the CFTC is not funded through user fees, and is instead required to compete against all other governmental functions to secure appropriated funds. Its fiscal year 2007 budget of $98 million is one-eighth the size of the SEC budget of $881 million; its current staff of 450 is one-eighth the size of the SEC staff of 3,500. For fiscal year 2008, the CFTC requested a budget increase of $17.9 million for hiring new staff and technology upgrades.

Without a significant upgrade in staff, technology, and budget resources, the CFTC will continue to be unable to effectively monitor the energy markets, prevent manipulation and excessive speculation, and punish misconduct.

A. CFTC Market Surveillance and Enforcement

The CFTC is an independent regulatory agency created in 1974. Its mission is "to protect market users and the public from fraud, manipulation, and abusive practices related to the sale of commodity and financial futures and options, and to foster open, competitive, and financially sound futures and option markets."[154]

The CFTC oversees 13 regulated commodity exchanges that meet the requirements for Designated Contract Markets, and 11 registered Derivative Clearing Organizations that meet the requirements for clearing trades on the regulated exchanges. Examples include NYMEX, Chicago Board of Trade, and Chicago Mercantile Exchange. Additional commodity trades take place on 17 Exempt Commercial Markets that operate largely outside of CFTC oversight, but which may affect trading on the regulated exchanges. ICE is the most prominent example of an Exempt Commercial Market.

1. CFTC Organization

To accomplish its mission, CFTC has seven major operating divisions or offices. The Division of Market Oversight and the Division of Clearing and Intermediary Oversight provide market trading and clearing surveillance. The Division of Enforcement investigates and prosecutes violations of the CEA and CFTC regulations. The Office of Chief Economist provides economic analysis; the Office of the General Counsel provides legal advice; the Office of Proceedings handles customer complaints; and the Office of Executive Direction and Support develops and administers CFTC policies and regulations. Figure 60 shows the relative budget allocations among the CFTC operating units.

Three divisions play key roles in preventing fraud, manipulation, and excessive speculation in the commodities markets. They are the Division of Market Oversight, the Division of Clearing and Intermediary Oversight, and the Division of Enforcement.

The Division of Market Oversight is primarily responsible for conducting the CFTC's market surveillance program. Its analysts review trading data to detect suspect price movements and determine whether traders' positions are significant enough to affect commodity prices. This division also reviews actions taken by regulated exchanges to enforce trading rules, such as limits on speculative positions. The Division of Clearing and Intermediary Oversight reviews clearing

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[154] Source: CFTC website, at www.cftc.gov. For more information on the history of the CFTC, please see the Subcommittee's prior report, *U.S. Strategic Petroleum Reserve: Recent Policy Has Increased Costs to Consumers but Not Overall U.S. Energy Security*, U.S. Senate Permanent Subcommittee on Investigations, Washington, DC: March 5, 2003, pp.159-162.

practices, management of margin accounts, and the settling of accounts between trading parties.

Figure 60

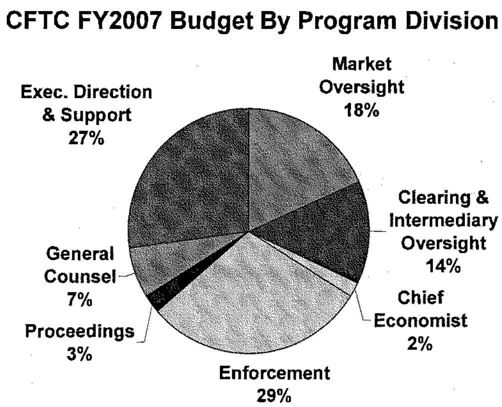

Fig. 60. Resource allocation among CFTC program divisions. Data source: FY2007 Budget and Performance Estimate.

Although investigations into potential misconduct may be initiated by the Market Oversight Division, CFTC's Enforcement Division is responsible for pursuing any such investigations and prosecuting any instances of fraud, manipulation, abusive trading practices, or other violations of the Commodities Exchange Act or CFTC regulations. If the Enforcement Division determines that a violation has occurred and the CFTC Commissioners concur, the CFTC can file civil or administrative injunctions, seek suspensions or revocations of trading registrations, and impose civil monetary penalties.[155]

The CFTC has devoted a sizeable portion, roughly 40 percent, of its Enforcement staff resources to its New York City office, where CFTC staff confer regularly with NYMEX staff. If NYMEX provides the CFTC with evidence of potential wrongdoing, the CFTC can either pursue the case on its own or return the case to NYMEX for further action.[156] In addition, pursuant to FERC's new responsibility under the Energy Policy Act of 2005 to conduct market oversight to prevent

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[155] For criminal cases, the Enforcement program works with the Department of Justice to file and prosecute cases. The CFTC has also filed actions against false or misleading advertising for illegal futures and options.
[156] NYMEX interview, January 23, 2007.

manipulation of energy prices, the CFTC and FERC have entered into information sharing agreements to discuss energy-related cases.[157]

2. CFTC Market Surveillance Program

CFTC's market surveillance program is designed to prevent misconduct in the U.S. commodity markets. The CFTC states on its website, "The primary mission of the market surveillance program is to identify situations that could pose a threat of manipulation and to initiate appropriate preventive actions."[158]

CFTC's primary tool for identifying suspect conduct is its "large trader reporting system."[159] Under this system, clearing members of regulated exchanges must submit to the CFTC daily reports with end-of-day positions, including buy or sell volumes and trading activity, for traders holding positions above a certain threshold.[160] These thresholds are set by the CFTC after considering the total open positions in that market, the size of positions held by traders in the market, and CFTC's surveillance history of the market.[161] The reporting threshold in the natural gas market, for example, is any trader that holds 200 or more natural gas contracts. CFTC calls the large trader reporting system the "backbone" of its market surveillance program, and estimates that large trader reports provide it with data on 70-90 percent of the total open interest in any given market.[162]

In addition to large trader reports, the CFTC requires each regulated exchange to provide it with a daily report containing overall trading information, including such data as the total gross open contracts, trading volumes, and prices (including the lowest and highest price of sales or bids) for each futures and option product by contract.[163] This exchange report must also include open long and short positions,

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[157] See CFTC Press Release No. 5127-05, "CFTC Chairman Jeffrey and FERC Chairman Kelliher sign MOU on Information Sharing, Confidentiality," October 12, 2005.
[158] Backgrounder: The CFTC Market Surveillance Program; July 2001.
[159] See CFTC Report: "Backgrounder: The CFTC's Large-Trader Reporting System," available at www.cftc.gov/opa/backgrounder/opa-ltrs.htm (hereinafter "CFTC Backgrounder: Large-Trader Reporting System"). Data from large trader reports are made available to the public in CFTC's "Commitment of Traders" reports. NYMEX told the Subcommittee that it also reviews the large trader reports filed with the CFTC. NYMEX interview, January 23, 2007.
[160] CFTC receives large trader reports from members of clearing organizations, futures commission merchants, and foreign brokers. As described earlier in this report, the buyers and sellers on an exchange do not actually transact with each other directly, but trade through members of the exchange's clearing organization. An individual trader may also use a clearing broker.
[161] For physical-delivery markets, the threshold would also depend upon the volume of deliverable supplies. See CFTC Backgrounder: Large-Trader Reporting System; Commission Reg. 15.03(b).
[162] Testimony of Reuben Jeffrey III, CFTC Chairman, before the U.S. Senate Committee on Banking, Housing, and Urban Affairs, July 25, 2006.
[163] See 17 CFR 16.01.

purchases and sales, exchanges of futures for cash, and futures delivery notices. This data enables the CFTC to compare overall exchange data with the large trader reports to identify any discrepancies.[164] It also enables the CFTC to review individual traders' activities across multiple exchanges. In addition, the data helps the CFTC monitor the enforcement of margin requirements and evaluate whether clearing members have sufficient capital on hand to cover their clients' trading positions.

Besides routine large trader and exchange reports, the Market Oversight Division has the authority to request trading data directly from traders or non-regulated exchanges through issuance of a "special call."[165] A special call may request additional information about a participant's trading and delivery activities, including related over-the-counter (OTC) transactions. The CFTC has used this authority in energy markets.[166]

In addition to collecting and analyzing trading data, the Oversight Market Division conducts market oversight by engaging in discussions with market participants to better understand their trading positions and strategies. In a process CFTC calls "jawboning," CFTC market surveillance staff meets with regulated exchanges like NYMEX and with individual companies and traders to clarify or discuss positions that could potentially disrupt the futures and options markets.[167] The Market Oversight staff presents any issues of concern to CFTC Commissioners on a weekly or more frequent basis.[168]

3. Limitations in CFTC Market Surveillance Program

The CFTC's market surveillance system has a number of limitations that prevent the agency from obtaining a comprehensive view of commodity markets and hinder its ability to detect and prevent fraud, manipulation, and excessive speculation.

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[164] According to CFTC, a comparison is made if "a) the sum of clearing members' large-trader positions exceeds the members' open cleared positions, or b) a clearing member has a cleared position many times the reporting level for a given market, but reports little or no large trader positions." CFTC Backgrounder: Large-Trader Reporting System.

[165] 7 U.S.C. § 6g(d).

[166] Starting in October 2006, for example, in response to a special call, ICE began supplying the CFTC with clearing member position data for contracts that are cash-settled, based upon NYMEX natural gas contract prices. The CFTC emphasizes, however, that "consistent with the regulatory framework governing ECMs set forth in the CEA, [the special call was not] issued in order to conduct regular market surveillance of the ICE contracts themselves." See CFTC letter to Senator Jeff Bingaman, February 22, 2007, pp. 3, 7.

[167] For a more detailed discussion of jawboning, see the Subcommittee's prior report, "*U.S. Strategic Petroleum Reserve: Recent Policy Has Increased Costs to Consumers but Not Overall U.S. Energy Security*," Washington, DC: March 5, 2003, p. 139.

[168] Testimony of James E. Newsome, CFTC Chairman, at Senate Hearing before the Committee on Energy and Natural Resources, "Enron Corporation's Collapse," Senate Hrg. 107-458; January 29, 2002, p. 27.

First, no market data is obtained on a routine basis from key commodity markets, such as ICE, which are exempt from CFTC authority. The absence of this data means that CFTC is unable to obtain a complete picture of these markets. Second, CFTC has limited capability to process and review daily transactional trading data. Third, CFTC has limited capability to integrate trading data across exchanges.

CFTC analyses have typically focused on reviewing end-of-day reports on large trader positions. However, reports on the trader's end-of-day net position - the difference between their open long contracts and open short contracts in any one commodity - do not contain any information about that trader's activity during the trading session. If a trader ends the day with no net position or change in position, that trader would not appear in an end-of-day report, even if the trader had made numerous intraday trades.

Recently, however, both ICE and NYMEX have voluntarily provided CFTC daily trading data about each transaction taking place on the exchange. Largely as a result of the lessons learned from Amaranth's trading practices, since early this year ICE has been providing daily transactional data to CFTC on a voluntary basis. Similarly, earlier this year NYMEX began providing to CFTC daily transactional reports, which include key data on all transactions, not just the large trader positions. These are much-needed improvements and efforts by both exchanges that will enhance CFTC's oversight capabilities.

CFTC has not yet developed the technological systems to be able to integrate this voluminous amount of incoming data to provide meaningful market analyses without significant effort. Unlike SEC, whose systems integrate trading data from multiple exchanges, a team of CFTC staffers must manually integrate this exchange data each day. [169] Without an automated, consolidated view of trades that can be frequently updated in real-time across exchanges, it will continue to be difficult for CFTC to respond to changing trading patterns and strategies in a timely manner.[170]

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[169] Since the 1970s, the securities markets have been consolidating all trades from all exchanges, including those conducted over-the-counter, onto an electronic tape, through a process supervised by the exchanges and monitored by SEC. The electronic tape allows SEC and the exchanges to review real-time prices and trading volume on all trades, which are reported by exchange members or broker dealers. SEC interview, April 12, 2007.

[170] SEC reviews small short-term significant changes in prices, and when surveillance staff suspect manipulation of prices or insider trading, they pull out the tape and make a issue an electronic "blue sheet" to the registered broker find out who the beneficial owner, or actual customer is. As SEC staff described it, the process can take place relatively quickly, allowing a smooth review of trading and highlighting any particular insider trading developments as they occur. SEC interview, April 12, 2007.

A fourth problem is that, unlike SEC's electronic information recall system,[171] CFTC is currently unable to readily match trades to the traders behind them for all exchanges.[172] In order for CFTC to assess how much volume and open interest a trader has in related products, it needs to be able to identify and calculate that trader's aggregate positions across exchanges and with respect to related products.[173] Since traders may use more than one clearing firm, trade on multiple exchanges, and use multiple related products, CFTC analysts currently have to compare multiple reports by hand, identify anomalies, and request trader identification information from each of the relevant clearing members or exchanges. This slow and cumbersome process stands in stark contrast to the technological capabilities of the SEC.

CFTC's current market surveillance systems were developed during an era when trading involved mostly physical commodities and occurred on an exchange floor. Its surveillance tools have not matched the subsequent growth in commodity trading, commodity traders, electronic trading, and speculative trading, especially for energy products. Its systems have become antiquated and are in dire need of upgrading if CFTC is to fulfill its mission of detecting and preventing fraud, manipulation, and excessive speculation.

B. Limited CFTC Resources

1. Limited Funds and Personnel

Since its inception in 1974, CFTC has operated with a modest budget and a relatively small staff, especially compared to the SEC and Federal Energy Regulatory Commission (FERC). In recent years, Congress has dramatically increased the resources of both SEC and FERC which have used their larger budgets to hire more staff and upgrade electronic surveillance of the markets they oversee. In contrast, Congress has failed to provide CFTC with the resources needed to monitor the explosion in commodities trading that has taken place over the past few years.

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[171] The SEC uses an electronic blue sheets system which allows its staff to quickly find out from the registered broker who the beneficial owners or customer is behind a particular trade. The SEC staff said the system allows a smooth review of trading and highlighting any particular insider trading developments as they occur. SEC interview, April 12, 2007.

[172] The ICE trading data clearly identifies each trade both by clearing firm and by customer. Traders on ICE, however, are not permitted to trade through brokers; this prohibition eliminates the difficulty of identifying the ultimate purchaser in brokered trades that other exchanges face when generating this data.

[173] For example, in natural gas, NYMEX staff told the Subcommittee that there are up to seven trading products which "net out" for a trader's complete natural gas position, such as options linked to futures prices. NYMEX interview, April 12, 2007.

Figure 61

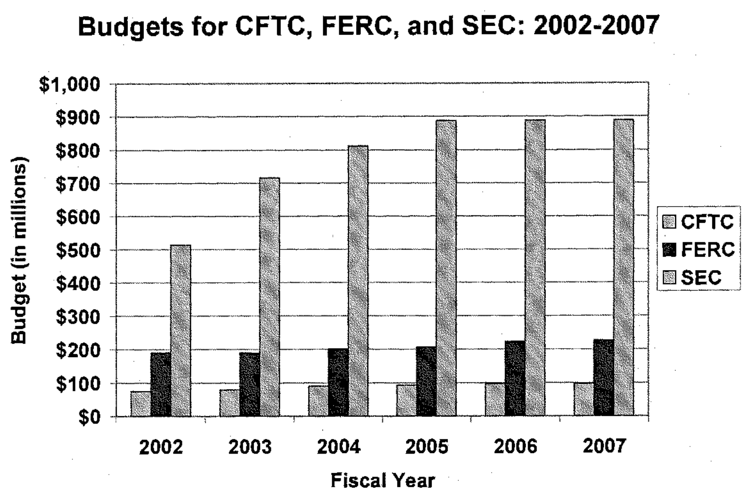

Fig. 61. CFTC operates with less than half the budget of FERC and about one-eighth of the budget of SEC. Data source: SEC, FERC, and CFTC Budget Estimates, 2002-2007.

Figure 62

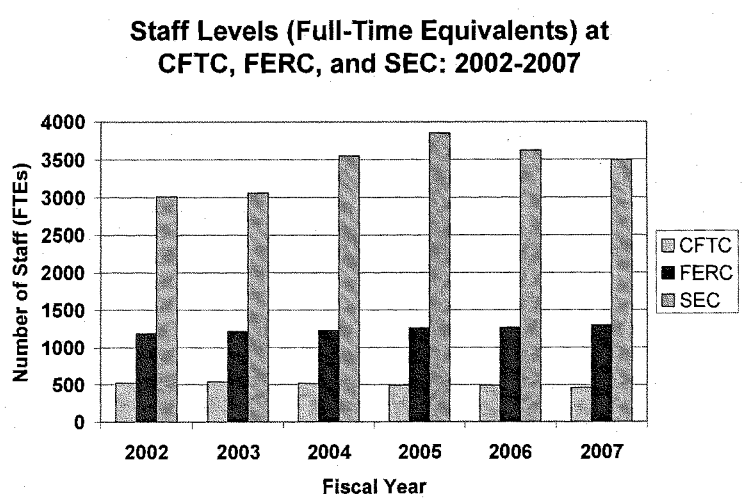

Fig. 62. Since 2002, staff levels at CFTC have decreased while staff levels at SEC and FERC have risen. Data source: SEC, FERC, and CFTC Budget Estimates, 2002-2007.

SEC Resources. In 2002, the General Accounting Office (GAO) reported that SEC staff resources were not commensurate with its workload.[174] At the time, the securities markets had undergone enormous change, with more participants and increased complexity in market transactions. GAO pointed out that SEC's limited resources did not allow SEC to "adequately deal with new and emerging issues" in securities trading, including technology-related changes. In an interview with Subcommittee staff, SEC said that accounting scandals such as those at Enron and Worldcom drew attention to its inability to keep up with increased activity in the securities market.[175]

In response, Congress more than doubled the SEC's funding, from $377 million in 2000 to $881.6 million in 2007. SEC staff told the Subcommittee that the additional funding has been used to increase staffing levels, increase staff pay (implementing pay parity), and upgrade and implement new technology systems. The total number of full time SEC staff increased from 2,936 in 2001, to 3,623 in 2007, with significant increases in staff for the enforcement and examinations programs. Additional funding for staff resources was devoted to pay parity, as employees had cited low pay as a primary reason for leaving SEC. SEC staff told Subcommittee staff that the high staff attrition rates of the mid to late 1990s have dropped to 6 percent today. Similarly, increases for information technology have improved existing technological systems, such as for filing reports electronically, and new systems used for increased surveillance. For example, SEC has streamlined its monitoring of securities markets so that it receives real-time data from all exchanges as well as OTC markets on a continuous feed. SEC has also made the process by which it identifies the owners of securities entirely electronic, moving from paper "blue sheets" to an electronic blue sheet system.

FERC Resources. FERC has also received recent funding increases to strengthen its oversight capabilities. In the Energy Policy Act of 2005, Congress increased FERC's budget authorization and expanded its authority to conduct market surveillance and oversight to prevent energy price manipulation.[176] FERC's budget for its market oversight and investigations office, for example, was increased from $12 million in 2003 to $18 million in 2007, with an addition of 40 full-time personnel. With additional funding, FERC has also transformed its electronic surveillance of the energy markets, obtaining real-time data from multiple markets. Among other innovations, FERC created automatic alerts based upon the raw data it collects on natural gas and

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[174] U.S. General Accounting Office: *SEC Operations: Increased Workload Creates Challenges* (GAO-02-302) Washington, DC: March 2, 2002.
[175] SEC interview, April 12, 2007.
[176] Energy Policy Act of 2005, P.L. 109-58.

electricity prices to draw analysts' attention to potential concentrations of market power as they develop.[177]

NASD Resources. The National Association of Securities Dealers (NASD) is a private self-regulatory body that, among other duties, monitors over-the-counter securities trading.[178] NASD spends over $100 million a year on its computer systems, a technology budget that is larger than the CFTC's entire FY2007 budget of $98 million.[179] NASD uses its surveillance systems to conduct market oversight. [180] Among other systems, NASD compiles and publicly disseminates corporate bond transactions in real time "in a ticker-like fashion" through its Trader Reporting and Compliance Engine (TRACE).[181] This system averages 22,000 transactions each day, representing more than $18 million in trading volume. In the OTC securities markets, NASD has worked through several generations of its Securities Observation News Analysis and Regulation (SONAR) program, which allows surveillance staff to electronically recreate the OTC market second by second, using news, market information and data mining to track down possible instances of fraud or insider trading. SONAR stores companies' financial and news information so that NASD surveillance staff can quickly review a firm's market share, volume concentrations, and other event scenarios. NASD's system is considered state-of-the-art in the market surveillance field.

CFTC Resources. In contrast to SEC, FERC and NASD, CFTC budgets have not seen dramatic increases commensurate with the increased complexity and volumes of commodity trading. CFTC budget levels have grown slowly, while staffing levels have actually declined over time. When the CFTC was first established in 1974, it began with about 450 full time staffers, gradually reached a peak of about 560 personnel in 1998, and fell back to about 450 staffers in 2007. Figure 63 depicts CFTC budget and staffing levels over the last decade.

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[177] See discussion of Market Monitoring Center, Federal Energy Regulatory Commission, *Congressional Performance Budget Request, FY2007,* February 2006, p. 67.
[178] NASD is recognized by SEC as a self-regulator for broker dealers that are not registered with a securities exchange, particularly those who trade in the over-the-counter (OTC) market.
[179] NASD interview; NASD 2005 Annual Financial Report, p. 32. NASD also spends $172 million a year in compensation and benefits for its 2,492 employees, as of December 31, 2005.
[180] In its 2005 annual report, NASD cites its oversight statistics: it oversaw more than 655,000 individual brokers and 5,100 brokerage firms, conducted 6,200 reviews based on its surveillance of market activity covering more than 3,300 issues listed on NASDAQ, 8,200 OTC securities, resulting in 1,400 enforcement actions filed by its 115 enforcement attorneys. The NASD report states: "Since we don't live in a perfect world, there has to be an NASD to keep the rest of the financial marketplace honest." *Id.*, p. 16.
[181] NASD 2005 Year in Review, p. 8.

Figure 63

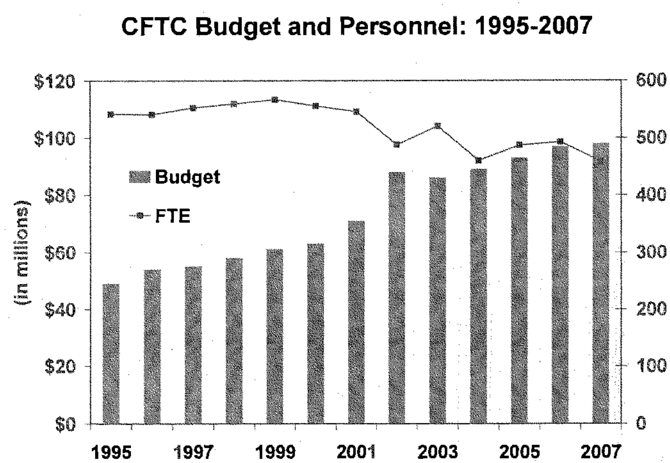

Fig. 63. CFTC staffing levels have declined since reaching their peak in 1998. Data source: President's Budget Requests, 1995-2008.

CFTC officials told the Subcommittee that its current budget level severely constrains its ability to attract and retain key staff, upgrade existing computer systems, and modernize its electronic market surveillance and enforcement tools to adapt to changes in commodities trading.[182]

Staffing Constraints. CFTC officials told the Subcommittee that it has had difficulty hiring and retaining staff in part because of limited funding for staff salaries. Although CFTC received the authority to compensate its employees to a similar extent as other federal financial regulators under "pay parity" rules enacted in 2002, CFTC officials told Subcommittee staff that the Commission has not received enough funding to fully implement the pay parity authorization, and CFTC employees currently earn 20 percent less than other federal financial regulators.[183] CFTC told the Subcommittee that it lost 58 experienced hires in FY2006, and their budget document states that over 30 percent of their senior managers may retire in the next three years. In addition, CFTC staff told the Subcommittee that the agency instituted a hiring freeze in October 2005, further hindering efforts to improve staffing.

[182] CFTC staff interview, March 26, 2007.
[183] Under the Farm Security and Rural Investment Act of 2002, § 10702, the CFTC was authorized to pay its staff "pay parity" with the banking regulators and SEC.

Information Technology. In addition to a staffing crisis, CFTC recognizes its current market surveillance systems are "woefully out of date."[184] Currently, CFTC has two major information systems to monitor transactions on commodities. Data from clearing members and the exchanges are entered into the Integrated Surveillance System (ISS) and used in the Large Trader Reporting System.[185] CFTC staff told the Subcommittee that because they do not have a standard means of compiling data from clearing members and brokers, a team of 12 staff has to assemble position and financial information into one platform each day for analysis.

CFTC's second information system is the Exchange Database System (EDBS), which handles clearing member data from CFTC regulated exchanges, to monitor trading abuses such as trading ahead of customers. It was designed for analyzing data traded on the floor, or "pit," when cards were flung across the trading floor. However, today's commodities markets have shifted away from pit trading to electronic trading. According to the CFTC, trading volume on NYMEX, Chicago Board of Trade, and Chicago Mercantile exchanges is now about 70-75 percent screen-based and 25-30 percent floor-based,[186] with electronic trading at NYMEX having increased over 200 percent in 2006 alone.[187]

CFTC's strategic plan calls for a new system called the Trade Surveillance System (TSS), which would allow CFTC staff to integrate data from across exchanges, including floor and electronic trading, to determine inter-exchange violations or price manipulations, all of which the current systems currently cannot process.[188] As a CFTC official described it, to go from EDBS to TSS would be "like going from the faucet tap to a fire hose" of data.[189] CFTC's strategic plan for 2004-2009 estimates that TSS would cost $3.5 to $4.5 million and take two-and-one-half years to fully implement. CFTC staff told the Subcommittee that its FY2008 budget request includes no funding to start work on the TSS system.

CFTC staff also explained that, in recent years, the agency has had to divert funding from information technology needs to personnel costs. CFTC staff noted that its 2008 request for a budget increase for information technology is simply to bring its existing systems into compliance with general federal government information technology

[184] CFTC, FY2004-2009 Strategic Plan, p. 12. In its strategic plan, CFTC lists several priorities related to the development of new trade surveillance systems that will remain "effective and robust" as trading becomes increasingly screen based.
[185] CFTC interview, March 26, 2007.
[186] CFTC's FY2008 OMB Budget & Performance Estimate, at p. 21; CFTC interview, 3/26/07.
[187] NYMEX website. *NYMEX Holdings, Inc. Reports Record Fourth Quarter and Full Year 2006 Results*, 1/31/07, at http://www.nymex.com/press_releas.aspx?id=pr20070131a.
[188] CFTC, FY2004-2009 Strategic Plan, p. 12.
[189] CFTC interview, March 26, 2007.

requirements, and not to upgrade or introduce new CFTC-specific surveillance or enforcement systems.[190] CFTC estimates that its investment in technology development as a percentage of its annual appropriations has dropped from about 10 percent to less than 7 percent over the past five years.[191] Furthermore, given its limited budgetary resources, CFTC has not yet begun to allocate funds towards re-engineering its systems.

Enforcement. More staff and greater budgetary resources would also help improve CFTC's enforcement efforts, which are currently strained. According to testimony and budget documents, in the past three years, CFTC's enforcement program has filed more actions than in any other time in the program's history. CFTC enforcement division reports typically list over 100 investigations open at any one time.[192] Many of the recent enforcement actions have been against traders in the natural gas markets. From 2002-2006, CFTC filed 34 cases and charged 54 persons for violations related to energy markets.[193]

CFTC states that the increase in litigated cases without a subsequent increase in funding has diverted CFTC staff from opening and pursuing new cases. The division has lost 11 percent of its staff in the past two years and due to the hiring freeze has not been able to hire additional personnel.[194] Technology also poses challenges for enforcement staff. CFTC's fiscal year 2008 budget request cites: "the dramatic increase in electronic trading poses additional challenges to the Enforcement program in terms of potential novel violations (or adaptations of traditional trade practice violations) and potential audit trail gaps. These challenges will require additional resources not only for investigation and persecution but also for Enforcement staff training."[195]

CFTC has found that investigating alleged abuses in the energy markets requires its staff to analyze volumes of trading data, hire experts, and review activities across multiple energy markets. Without additional resources, as CFTC's budget request states, "there is a substantial risk that abusive trading in energy futures markets will go undetected, potentially costing American consumers hundreds of millions of dollars in additional energy costs."[196]

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[190] *Id.*
[191] Reuben Jeffery III, CFTC Chairman, testimony before the U.S. Senate Subcommittee on Financial Services and General Government Committee on Appropriations, March 9, 2007; p. 8.
[192] CFTC FY2008 OMB Budget and Performance Estimate, p. 13.
[193] *Id.*, p. 5.
[194] CFTC, FY2006 Performance and Accountability Report, November 2006, p. 19.
[195] CFTC, FY2008 OMB Budget & Performance Estimate, p. 59.
[196] *Id.*, p. 49. See also "Algo trading raises stakes for market regulators," Reuters, June 5, 2007 (describing regulatory review issues related to electronically placed trade orders by "hyper-fast computer programs").

2. Increased Funding Through User Fees

Under the current funding system, the CFTC is funded through general appropriations and must compete against all other government functions to secure resources. A more effective approach, already used to fund all other federal financial regulators, including the SEC, FERC, Federal Reserve, Office of the Comptroller of the Currency, and the Federal Deposit Insurance Corporation, would allow the CFTC to obtain funding through user fees imposed on the markets it regulates. A 2007 Congressional Research Service report notes that "every President since Ronald Reagan" has asked Congress to authorize such fees, including the Bush Administration.[197] The President's 2008 budget states that the "CFTC is the only federal financial regulator that does not derive its funding from the specialized entities it regulates."[198]

User fees would ensure that the persons who benefit from well regulated commodity markets contribute to the cost of policing such markets. While it is often suggested that the fee apply only to commodities traded on regulated exchanges, a better approach would be to apply the fee to both regulated and exempt exchanges, since a more broad-based fee would reduce the costs per trade and would ensure that regulated exchanges are not placed at a competitive disadvantage compared to exempt exchanges. In other words, any CFTC user fee should apply to trades not only on NYMEX, but also on ICE, since both markets play key roles in energy pricing and both markets require policing to detect, prevent, and punish misconduct. In addition, while the President's budget proposes fees to cover CFTC's current funding levels, the better approach would be to collect sufficient funds to enable the CFTC to modernize its antiquated technological systems, meet its staffing needs, and strengthen its oversight and enforcement functions.

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[197] See Congressional Research Service report, "Proposed Transaction Fee on Futures Contracts," Report No. RS22415, p. 1. CFTC's FY2008 budget includes a proposal to collect a "new transaction fee on commodity futures and option contracts traded on approved exchanges."
[198] The Budget for Fiscal Year 2008, Appendix, p. 1041.

VIII. ADDITIONAL MINORITY STAFF VIEWS ON THE REPORT

This Report represents the culmination of the Subcommittee's extensive investigation into the impact of speculative trading on U.S. energy markets. This inquiry stems from the Subcommittee's bipartisan staff report entitled, *The Role of Market Speculation in Rising Oil and Gas Prices: A Need to Put the Cop Back on the Beat*, which was issued in June 2006. This investigation has been a bipartisan effort from its inception and we applaud the Majority's tireless dedication throughout this process. The recommendations in this Report comport with those of the Subcommittee's June 2006 report and, to that extent, we join with the Majority on a bipartisan basis to make these recommendations.

While we join with the Majority in making these recommendations, we are unable to reach some of the same factual findings with the same degree of certitude. For instance, although a number of facts presented in the Report support the conclusion that Amaranth's trading activity was the primary cause of the large differences between winter and summer futures prices that prevailed throughout 2006, other facts seem to indicate the opposite – that market fundamentals and price changes influenced Amaranth's positions. These facts suggest that, at least at times, Amaranth was responding to the market, rather than driving it. For example, although the price of natural gas declined substantially after Amaranth's demise, this alone does not prove Amaranth's ability to elevate prices above supply and demand fundamentals; rather, the market may have simply reevaluated those fundamentals in light of the hurricane season ending without a major event and the prediction of a warm winter. It is clear that different conclusions can be drawn from the same set of facts.

To be sure, the factual findings presented by the Majority regarding Amaranth's impact on natural gas prices are compelling and raise valid concerns that demonstrate the need for greater transparency in our energy markets. Moreover, factual findings regarding the degree to which Amaranth affected prices are not necessary to justify the recommendations articulated in this Report. We make these recommendations because they will better preserve the integrity of U.S. energy markets. As an increasing amount of U.S. energy trades occurs on unregulated, over-the-counter electronic exchanges, the CFTC's large trading reporting system becomes less accurate, trading data becomes less useful, and market surveillance becomes less comprehensive. The structure, pricing, and trading of energy futures contracts and standardized, cleared energy swaps traded on electronic, over-the-counter exchanges are functionally equivalent, and the primary markets on which the two instruments are traded should receive equivalent regulatory treatment.

Any implementation of these recommendations must be clearly defined and targeted to preserve the integrity of our energy markets. As a threshold matter, regulators need to develop a clear definition of "excessive speculation." Without a clear, unequivocal definition of that term, the CFTC and regulated exchanges will continue to have difficulty monitoring and preventing price distortions. More important, we must ensure that any proposed cure is not worse than the disease. If we extend CFTC oversight and regulation to electronic, over-the-counter exchanges, we must avoid unintended consequences – namely, creating incentives for traders to shift their business to the far less transparent and unregulated bilateral, voice-brokered markets.

# # #

APPENDIX

APPENDICES

APPENDIX I

Appendix I displays Amaranth's open interest in relation to the total NYMEX open interest for futures contracts from February 2006 through December 2010.

APPENDIX II

Appendix II displays the daily volume of trading in NYMEX natural gas futures contracts (NG), ICE Henry Hub natural gas swaps traded on the ICE electronic exchange, bilateral over-the-counter (OTC) transactions cleared on ICE ("block" trades), and bilateral OTC transactions cleared on NYMEX Clearport (NN), for contract months in which there was a significant amount of trading volume in 2006.

APPENDIX III

Appendix III displays Amaranth's open interest in each contract month in which it had a minimal level of open interest during 2006. Amaranth's open interest is displayed in each of the following categories: NYMEX natural gas futures contracts (NG); NYMEX natural gas options (LN and ON); ICE natural gas swaps traded on the ICE electronic exchange; and OTC transactions cleared on ICE (ICE block transactions), and over-the-counter transactions cleared on NYMEX NYMEX Clearport (NN).

APPENDIX IV

Appendix IV displays Amaranth's total position in each contract month from February 2, 2006 through September 15, 2006. The total Amaranth position was calculated by the Subcommittee staff by aggregating Amaranth positions in the following contracts: NYMEX natural gas futures contracts (NG); NYMEX natural gas options on futures (LN and ON); ICE natural gas swaps traded on the ICE electronic exchange; OTC bilateral transactions cleared on ICE (ICE block transactions); and OTC bilateral transactions cleared on NYMEX Clearport (NN and NP). These charts do not display Amaranth's positions in contracts beyond May 2009. Futures-equivalent positions for NYMEX natural gas options were computed using the daily option delta factors provided to the Subcommittee by NYMEX.

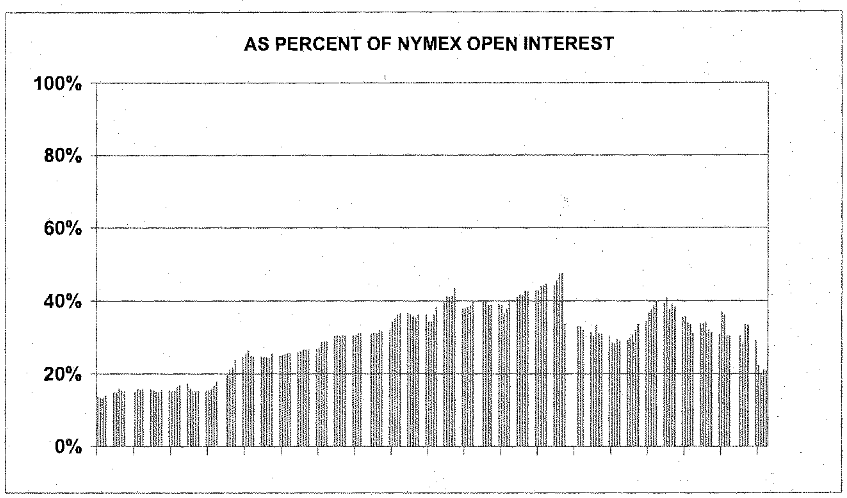
APPENDIX V

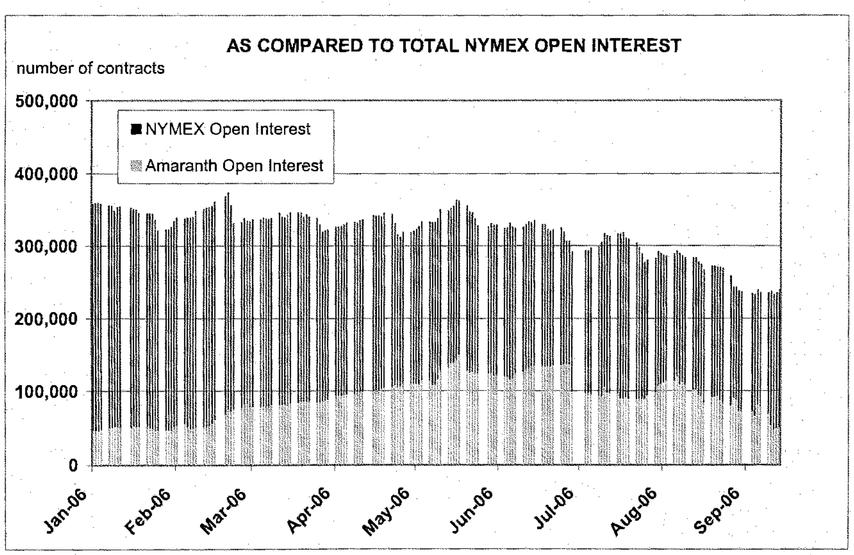
Appendix V displays the same data as Appendix IV for the dates between July 12 and August 31, but each position is displayed according to its NYMEX and ICE components.

Data sources: NYMEX, ICE, and Amaranth.
All data analyses in this Report, including all charts in these Appendices, were prepared by the Majority Staff, Permanent Subcommittee on Investigations.

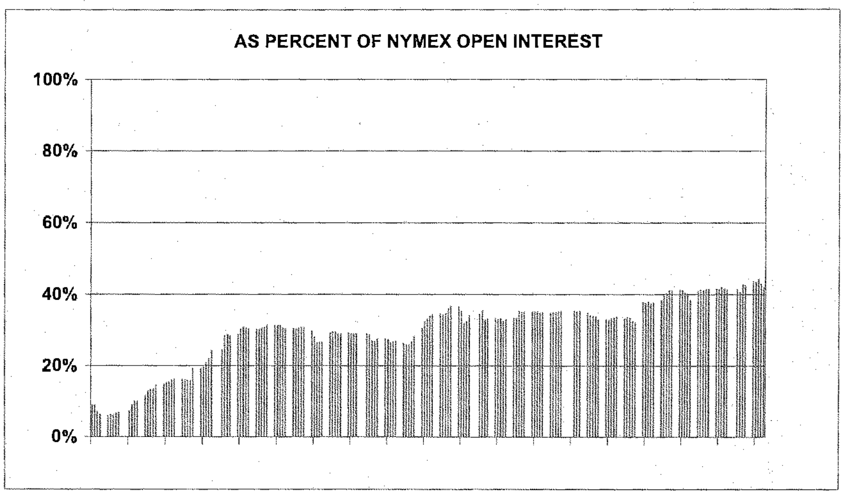
APPENDIX I

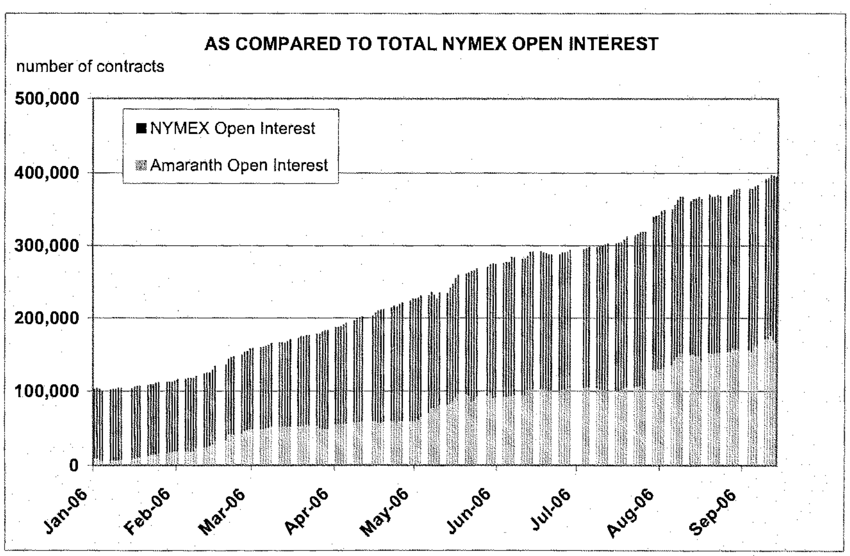
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR 2006





AMARANTH OPEN INTEREST ON NYMEX NATURAL GAS FUTURES CONTRACT FOR 2007





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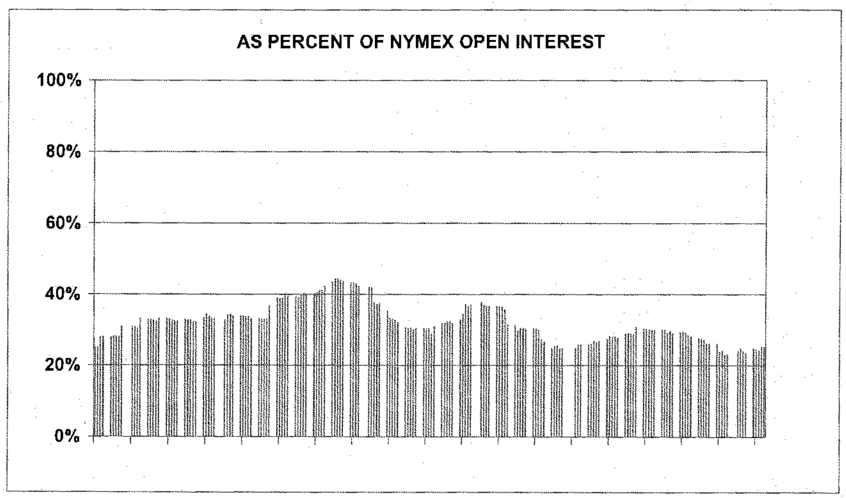

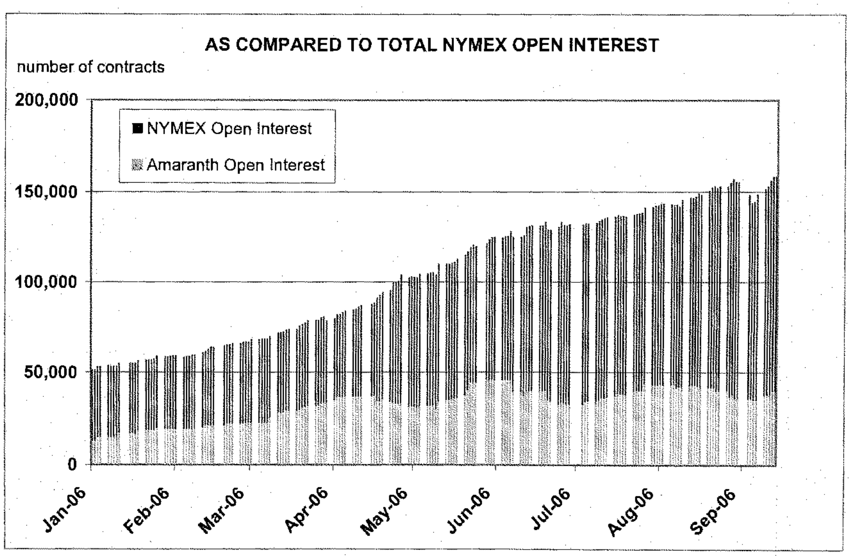

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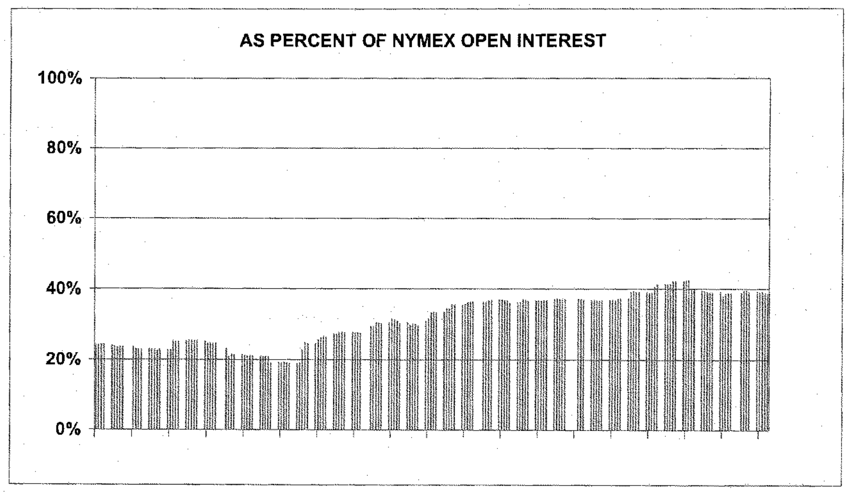
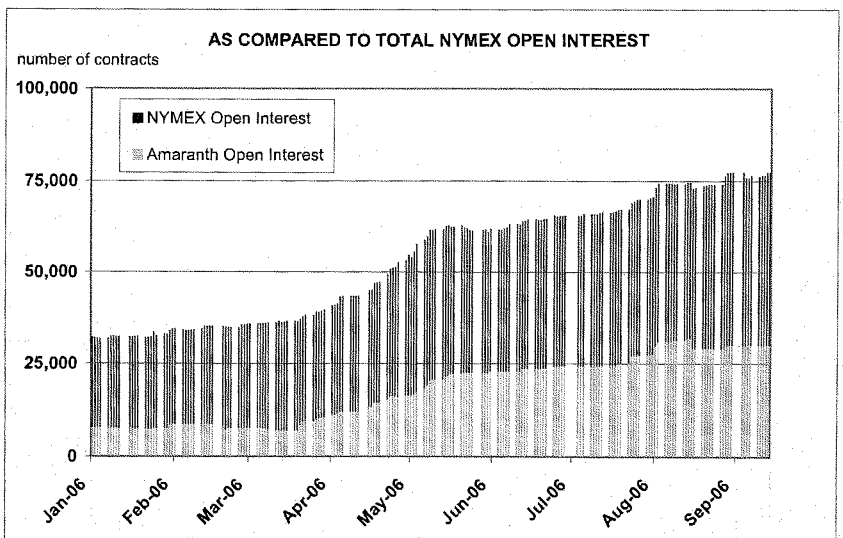
NATURAL GAS FUTURES CONTRACT FOR 2009





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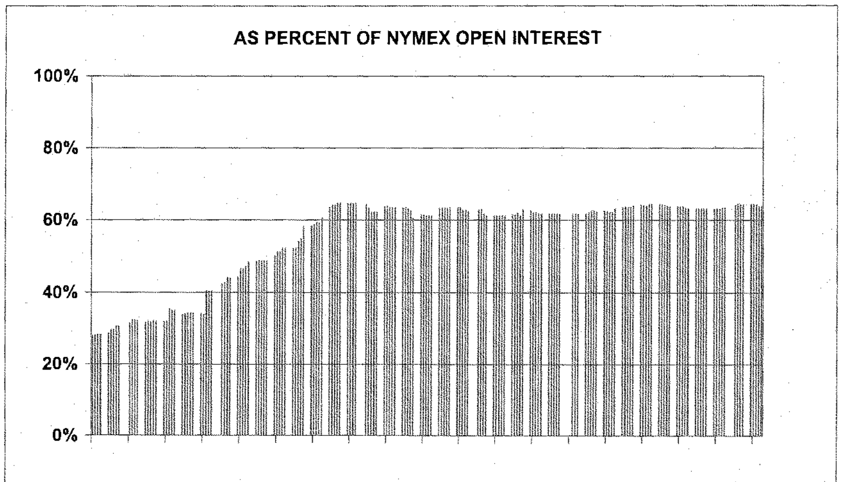
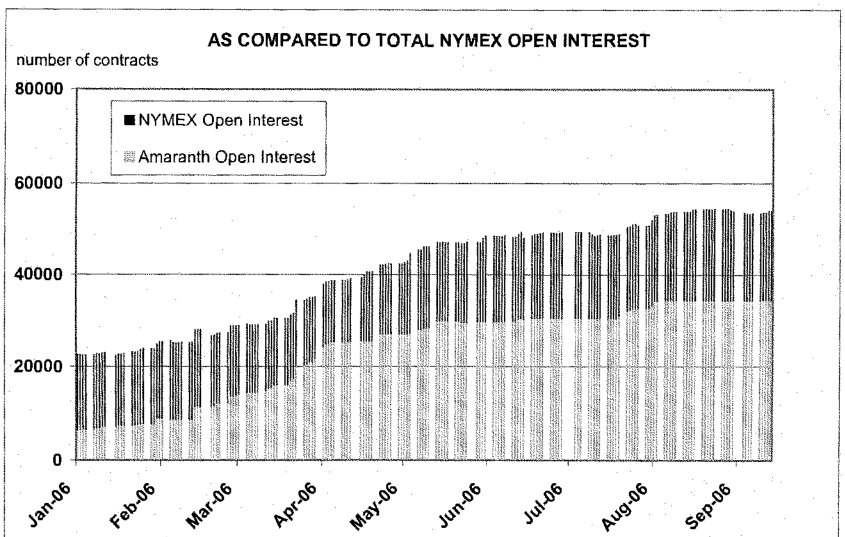
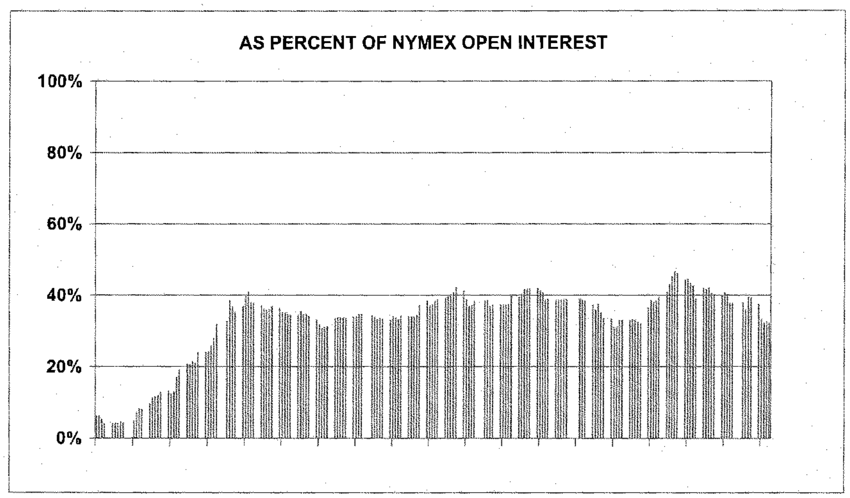
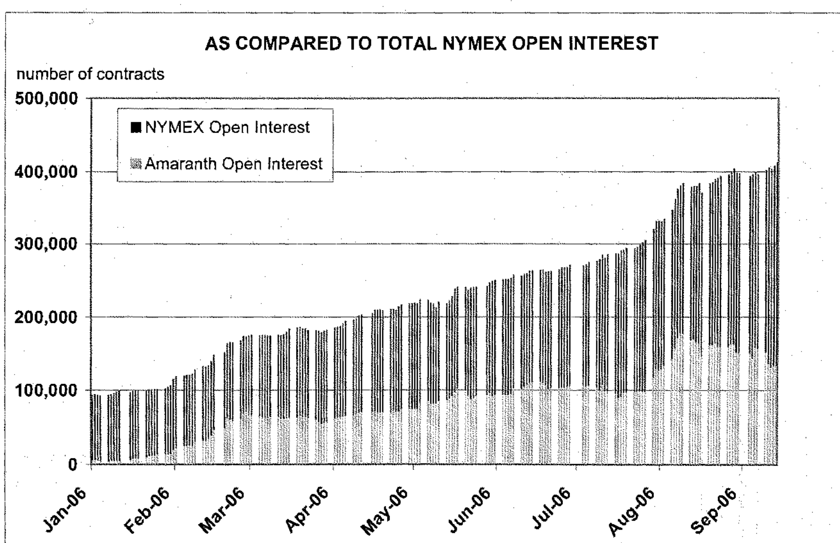
NATURAL GAS FUTURES CONTRACT FOR 2010



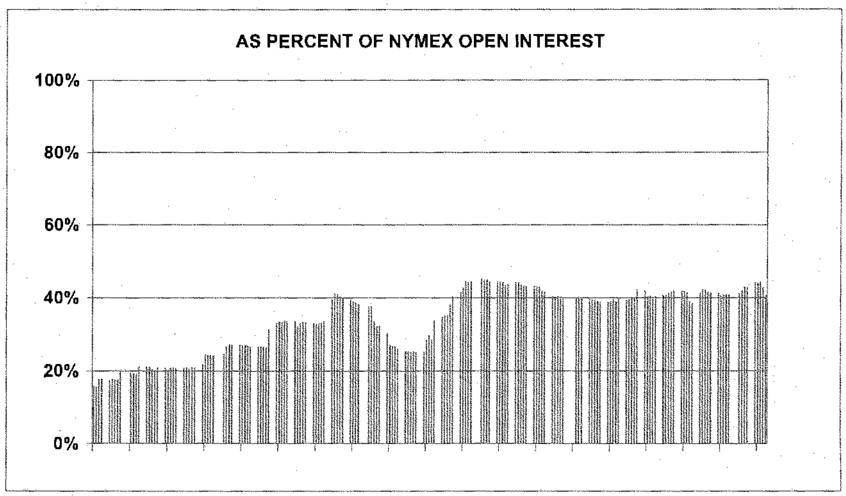


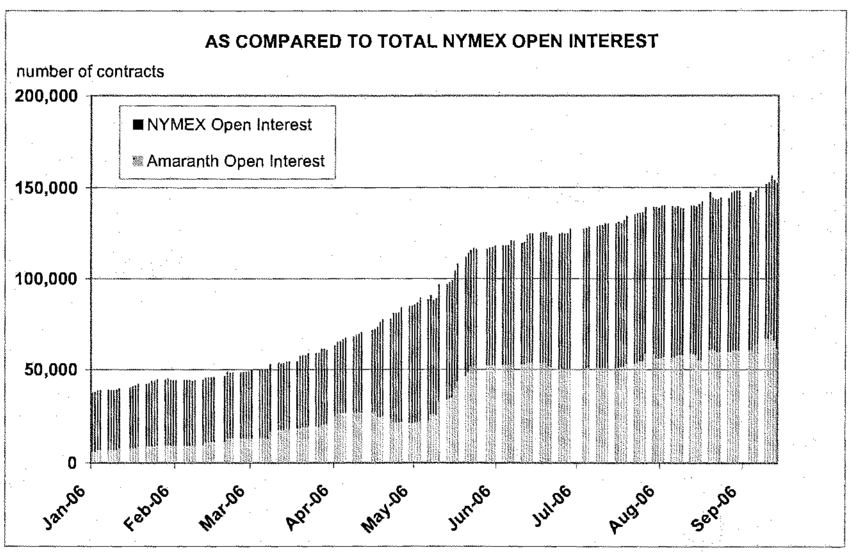
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR WINTER 2006-07



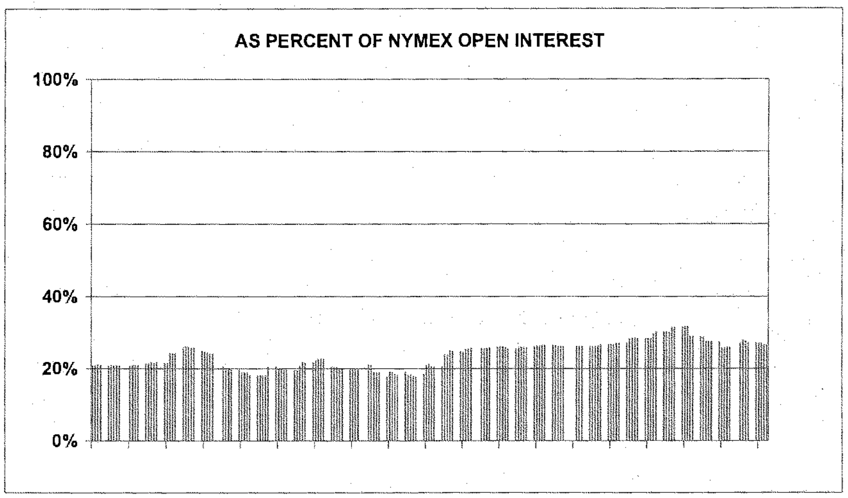


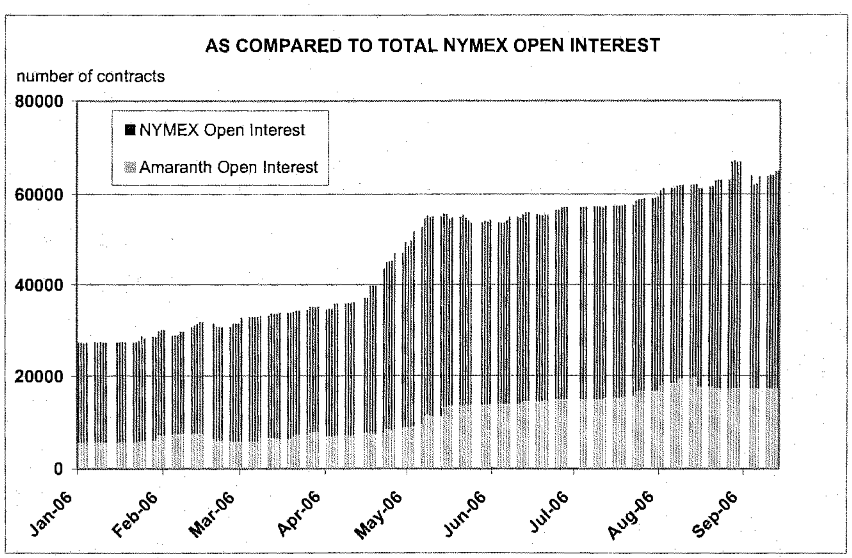
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR WINTER 2007-08



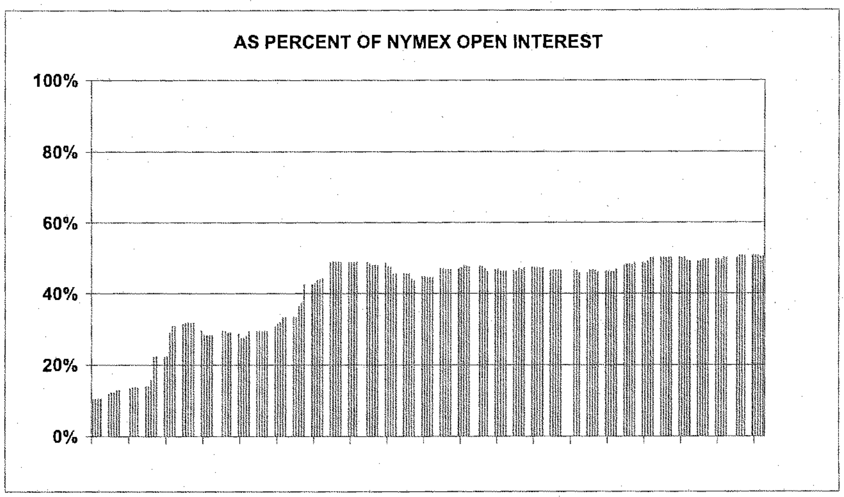


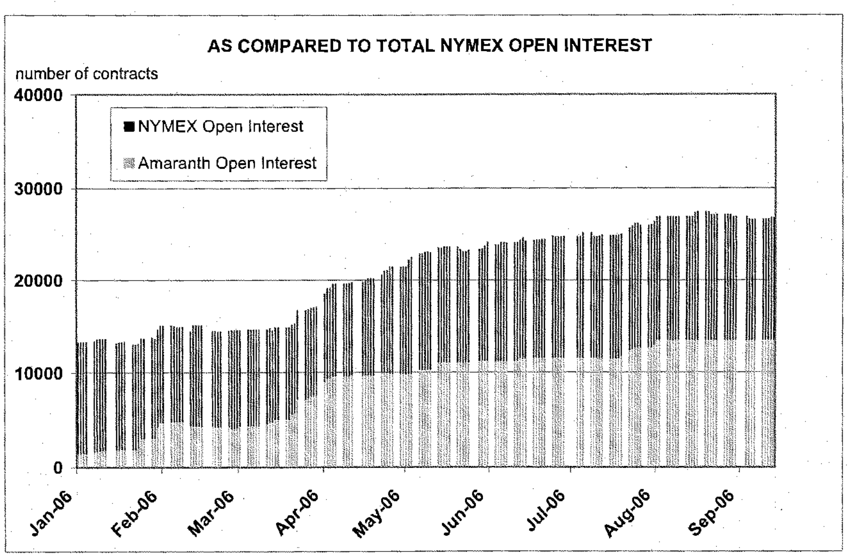
**AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR WINTER 2008-09**



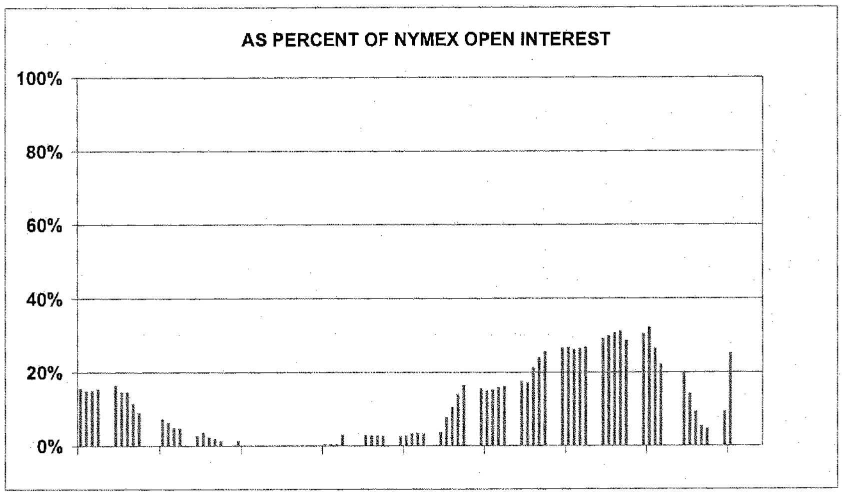


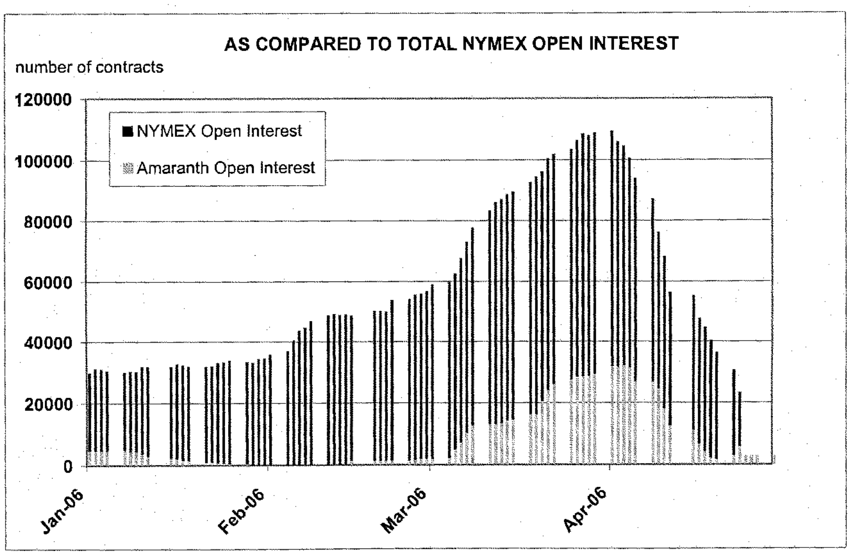
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR WINTER 2009-10



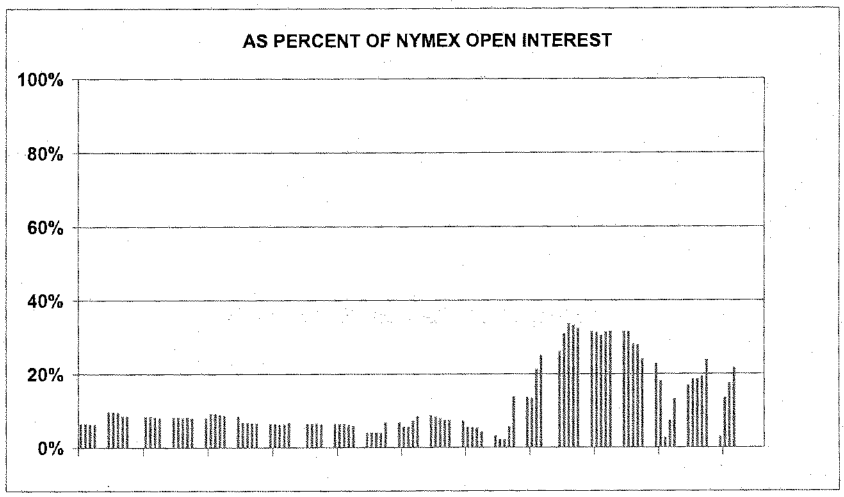


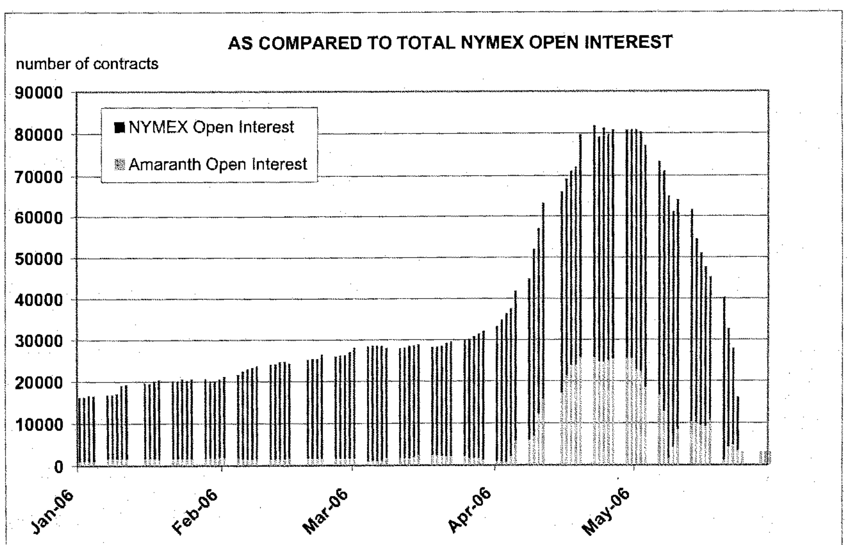
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR MAY 2006



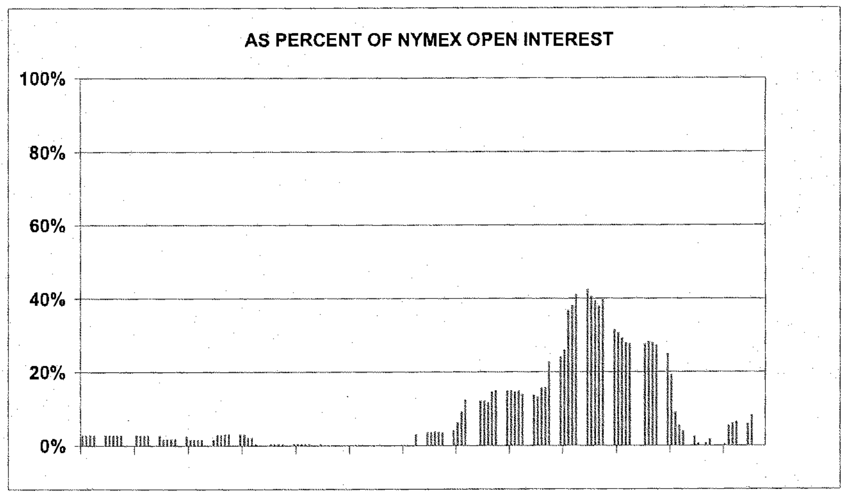


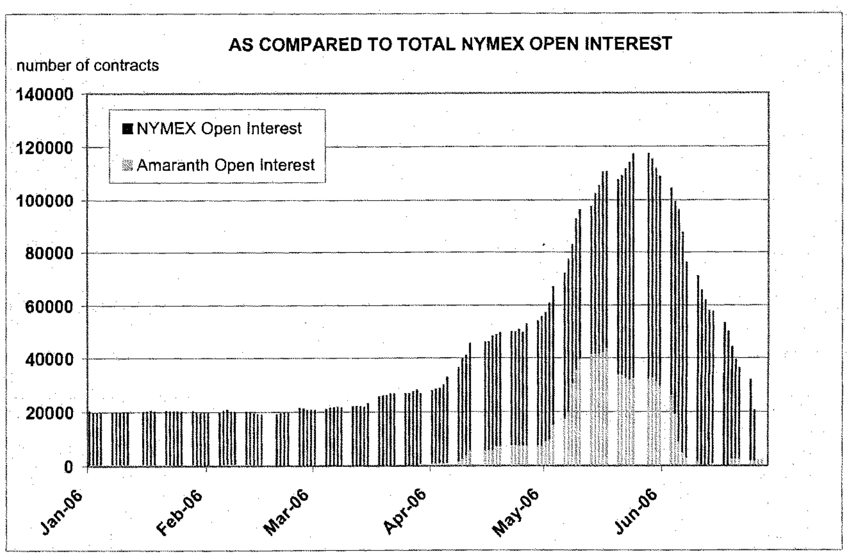
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR JUNE 2006



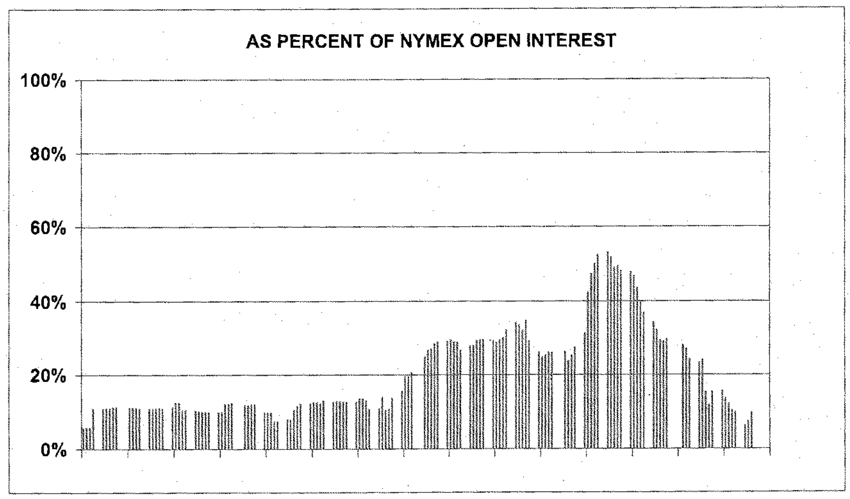


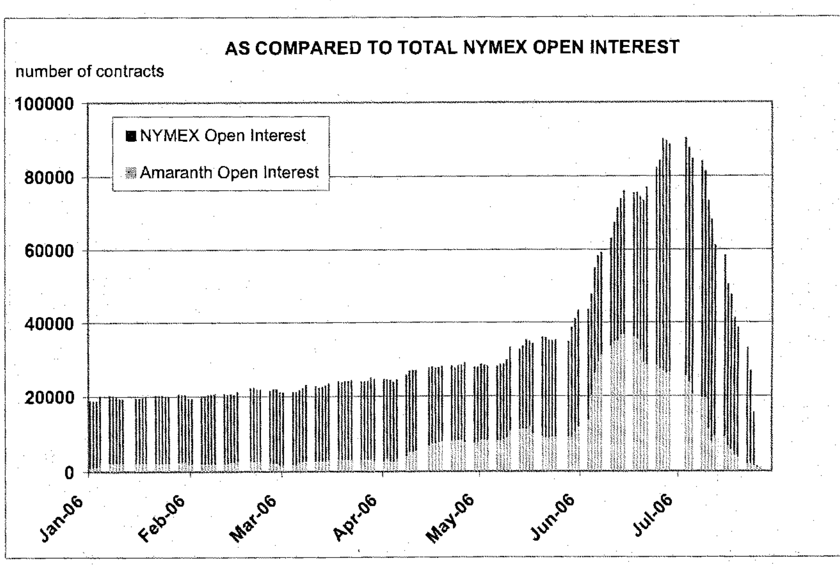
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR JULY 2006



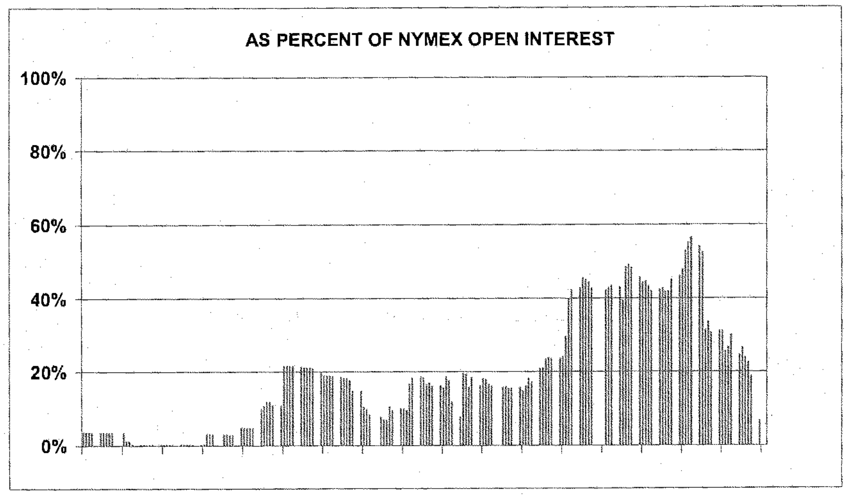


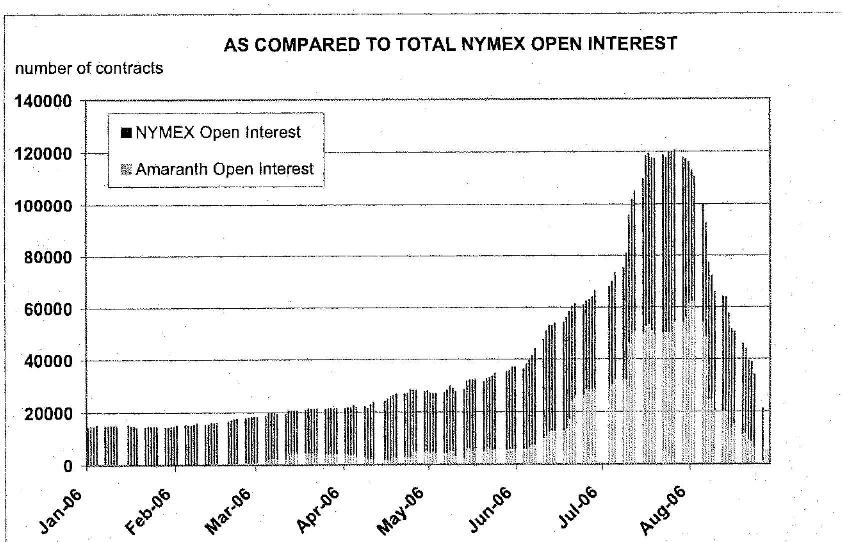
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR AUGUST 2006



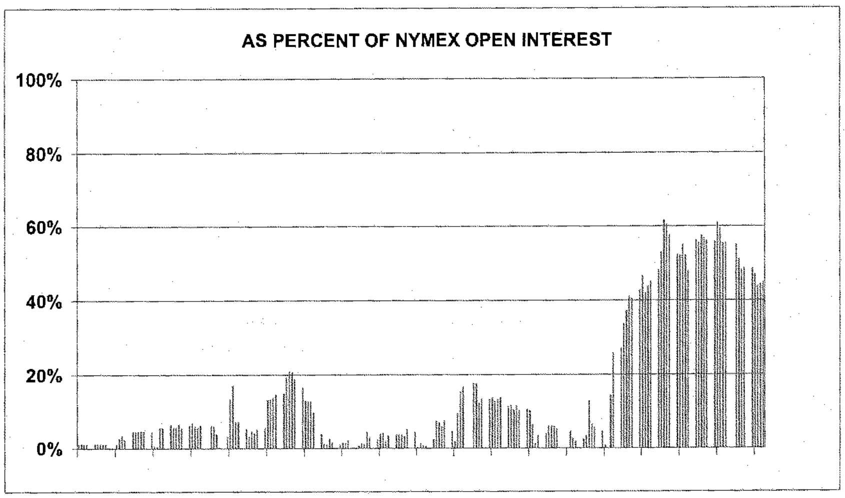


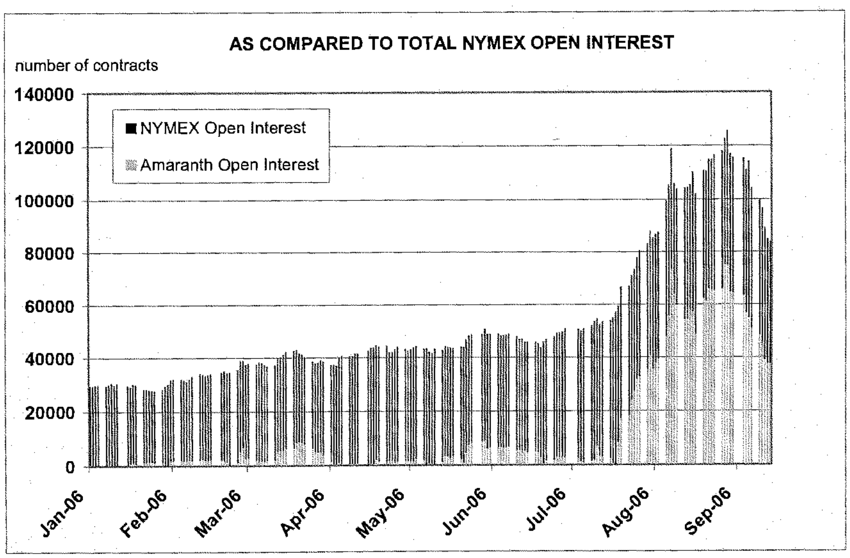
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR SEPTEMBER 2006



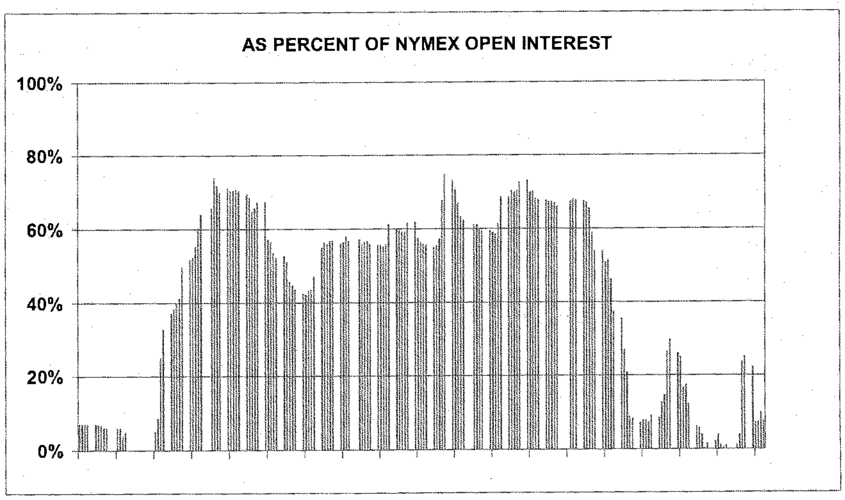


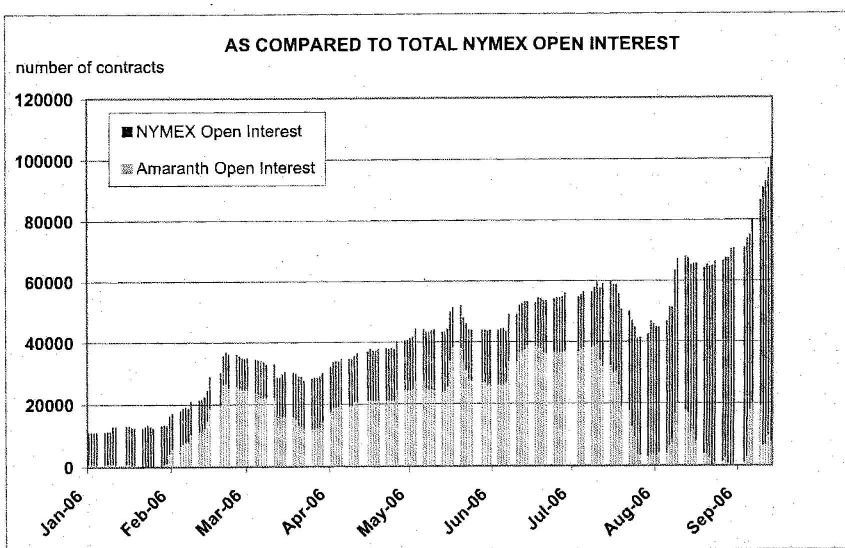
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR OCTOBER 2006





AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR NOVEMBER 2006





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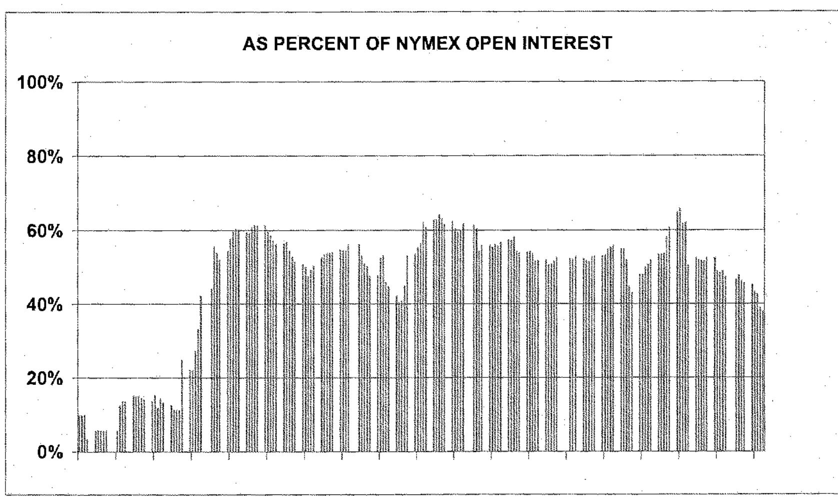
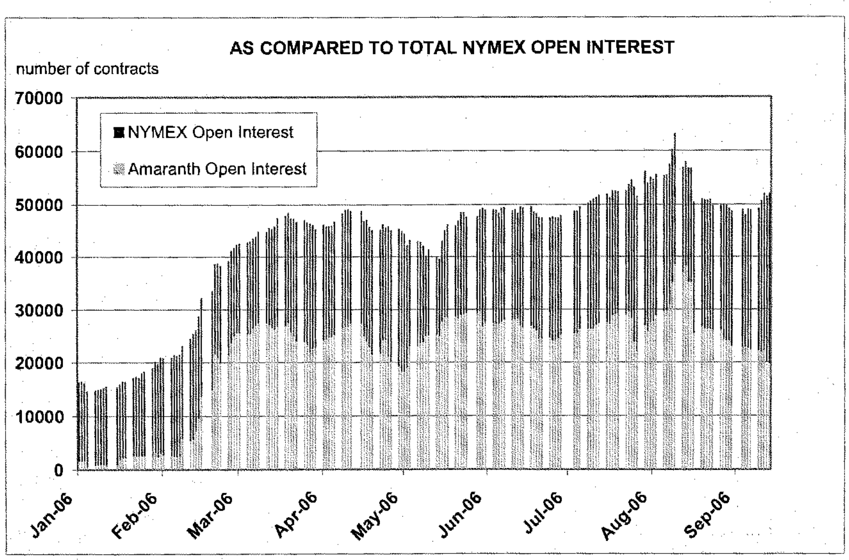
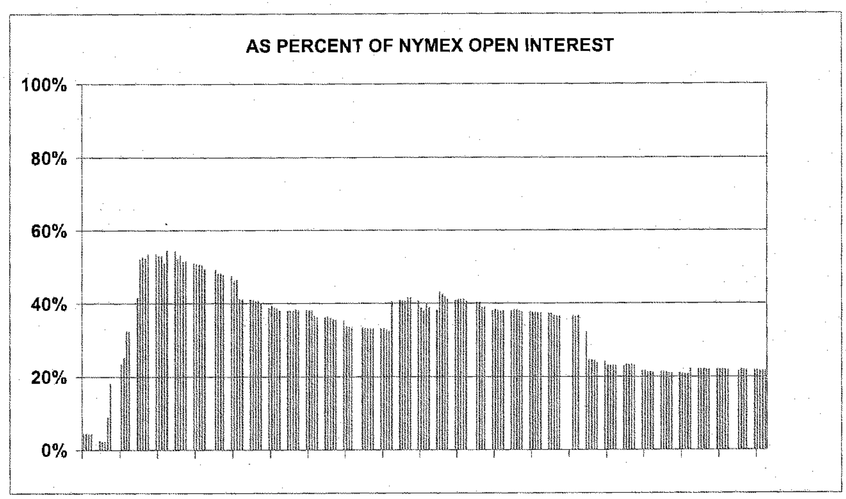
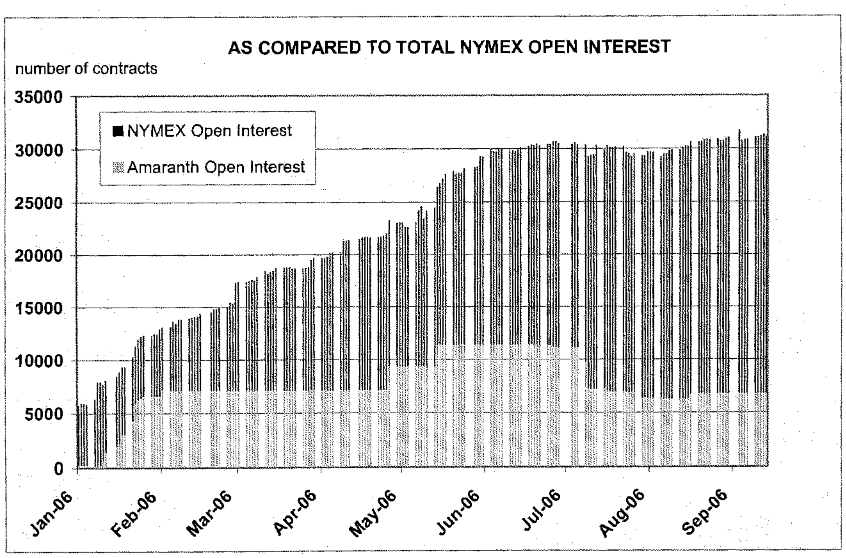
NATURAL GAS FUTURES CONTRACT FOR JANUARY 2007



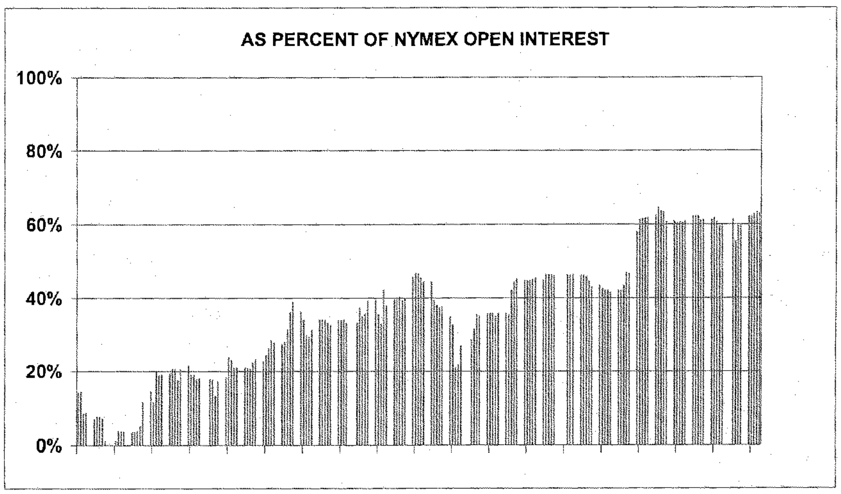


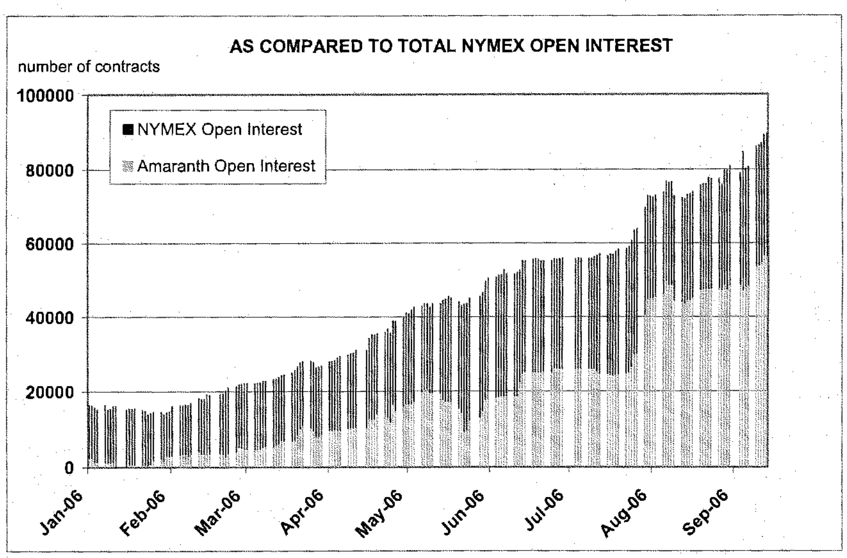
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR FEBRUARY 2007



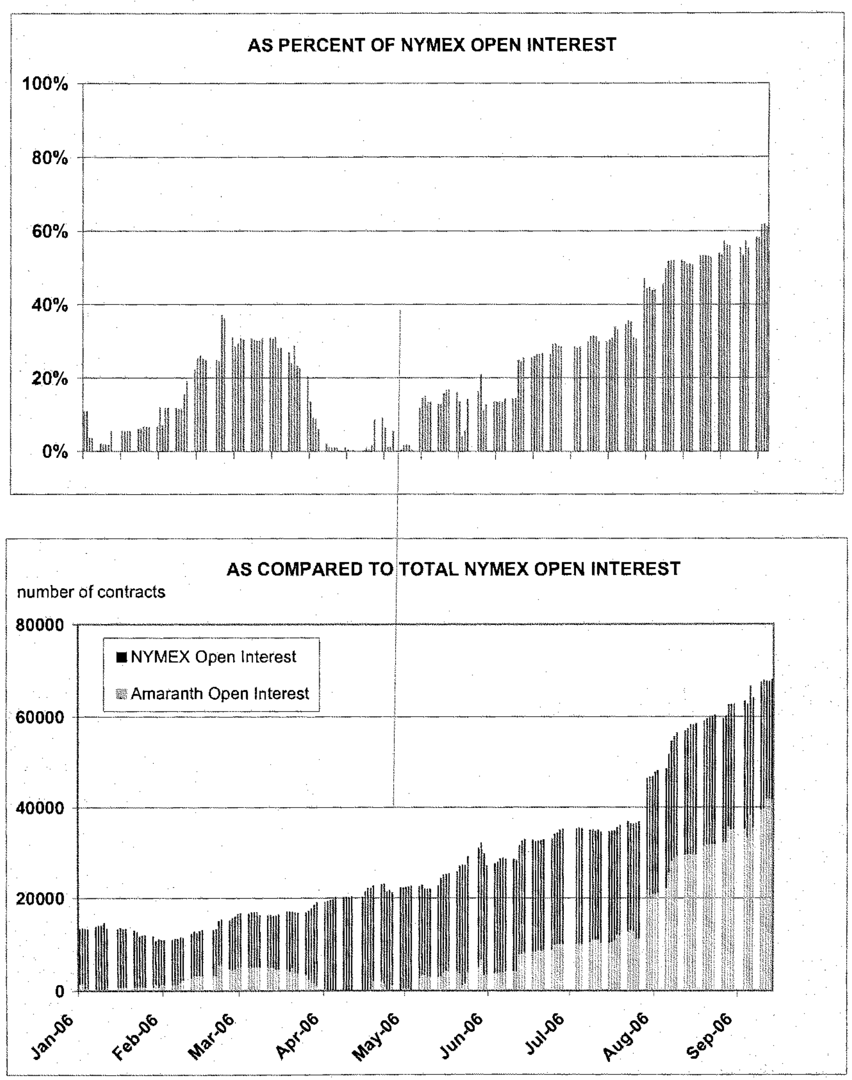


AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR MARCH 2007

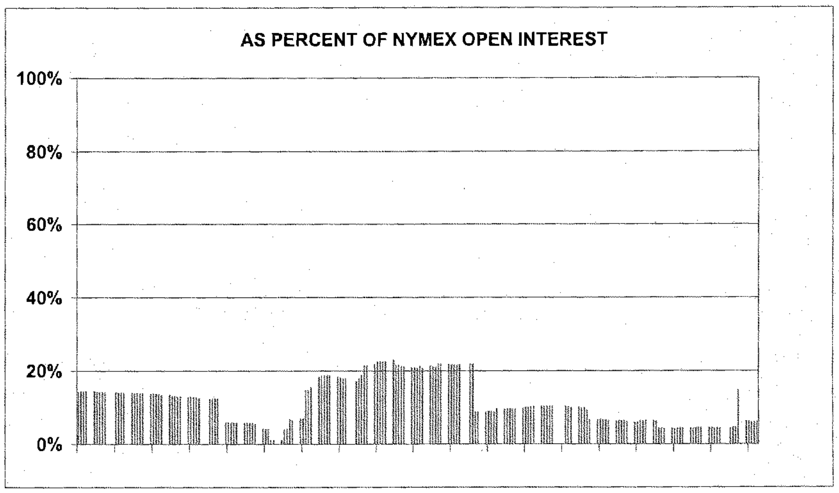


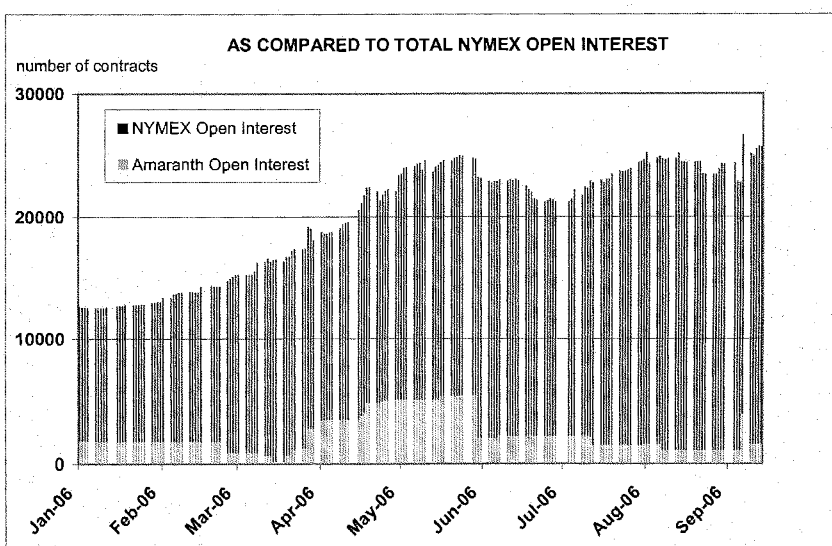


**AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR APRIL 2007**



AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR MAY 2007





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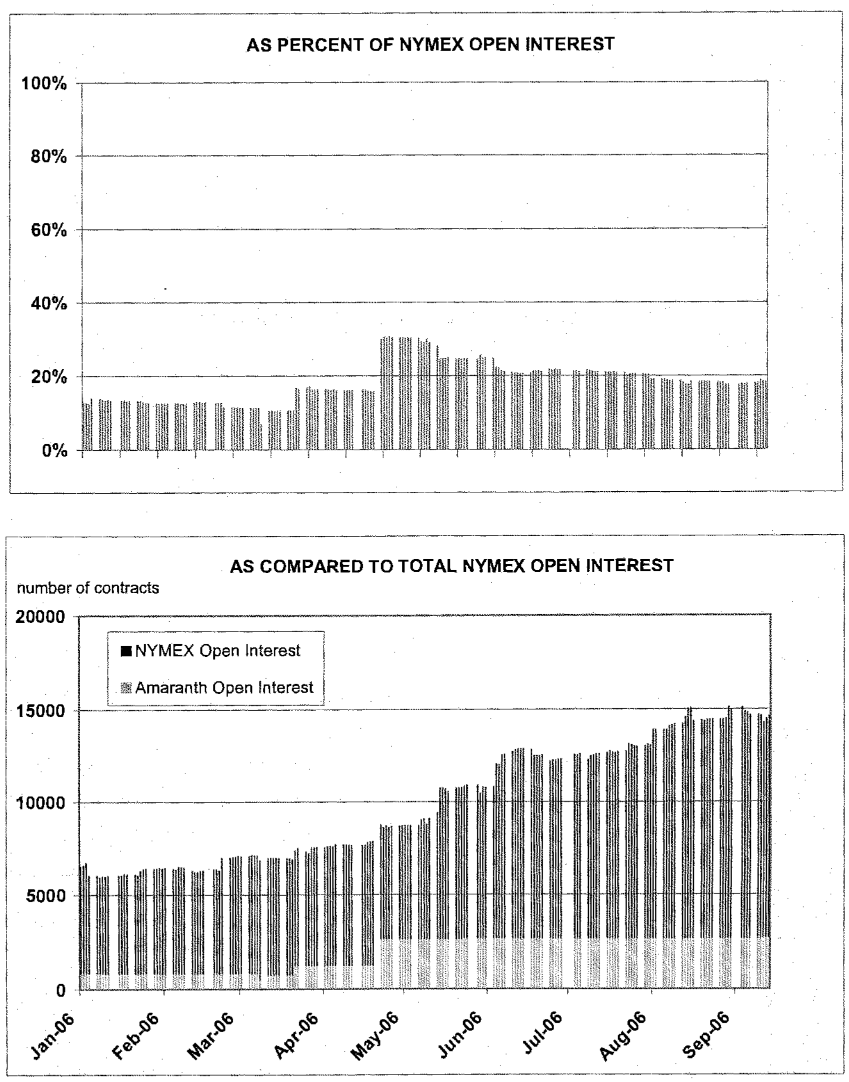
NATURAL GAS FUTURES CONTRACT FOR JUNE 2007



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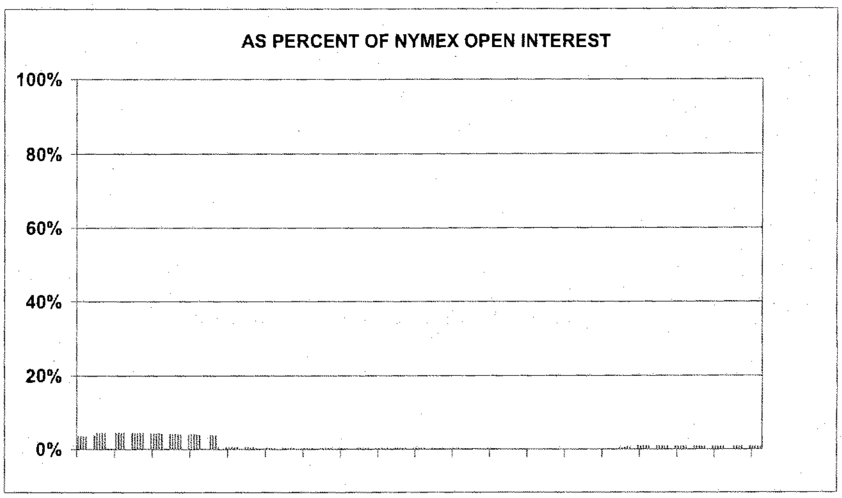
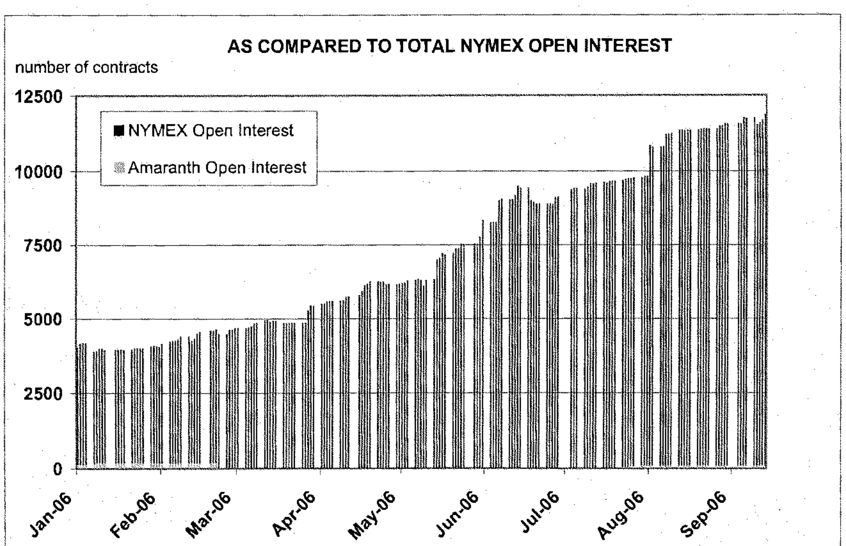
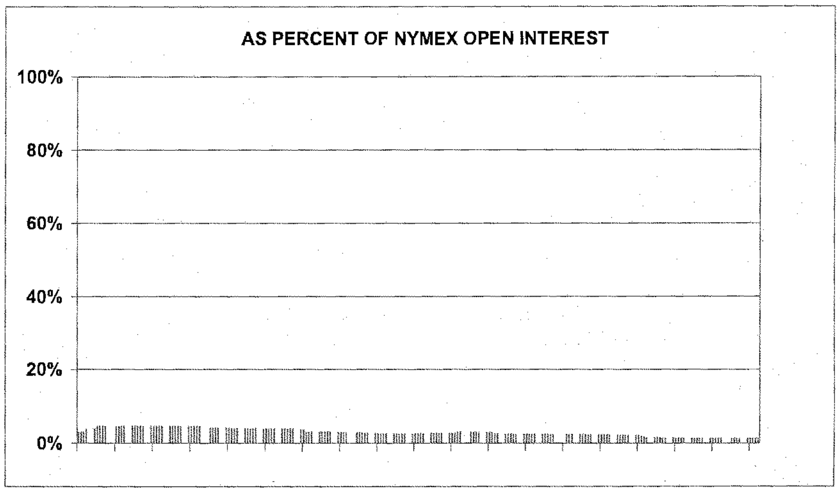
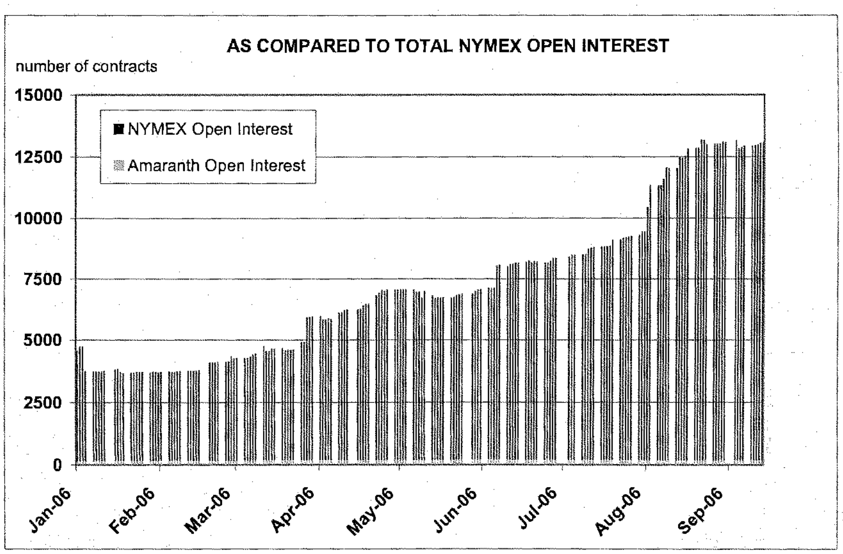
NATURAL GAS FUTURES CONTRACT FOR JULY 2007



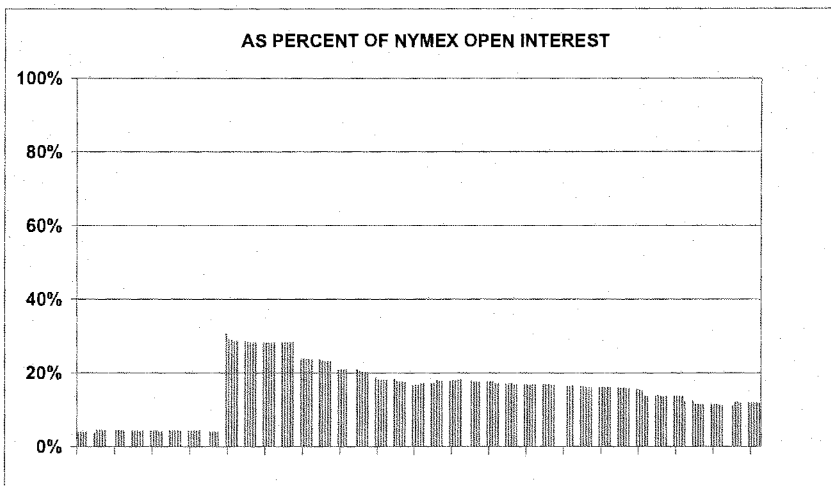


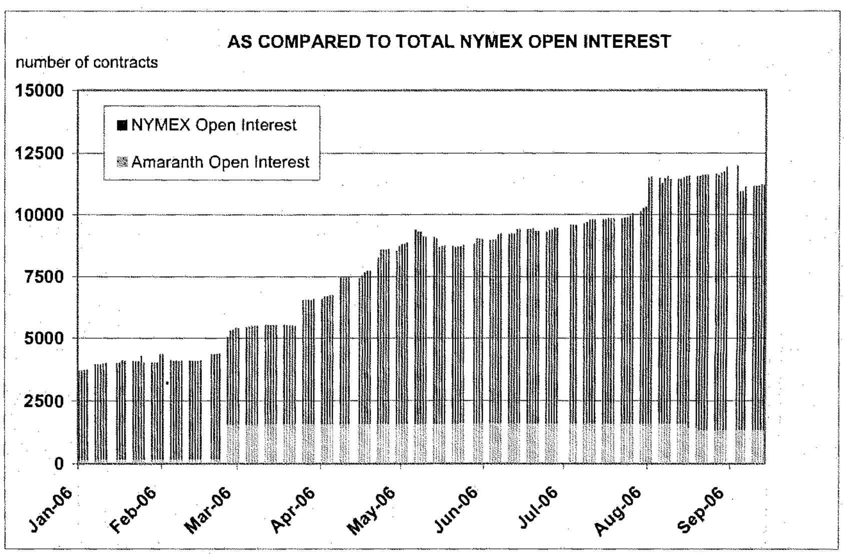
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR AUGUST 2007



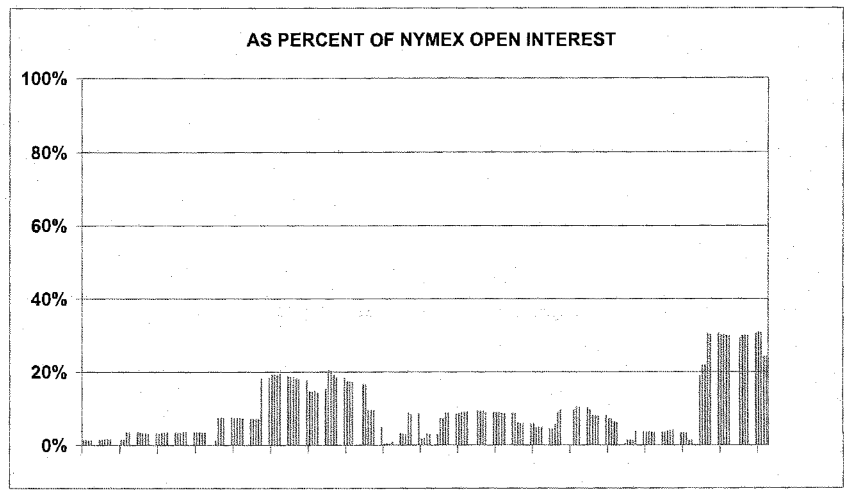


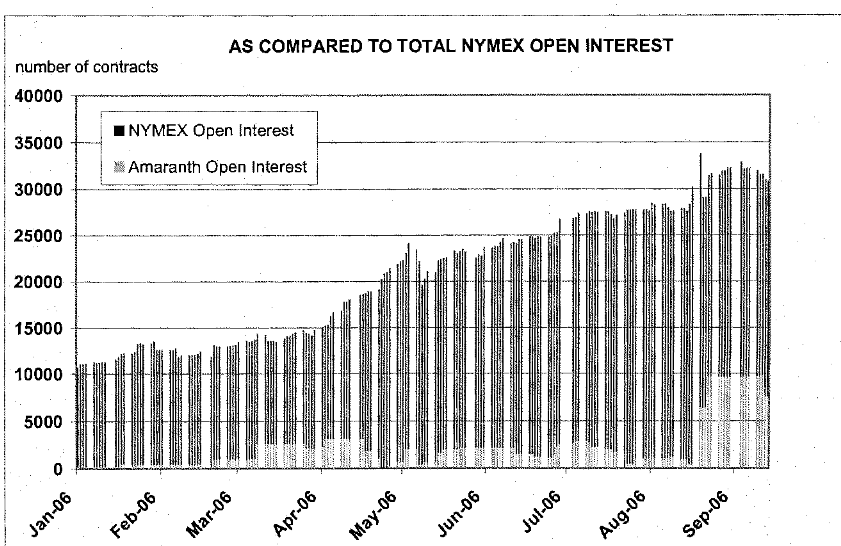
**AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR SEPTEMBER 2007**



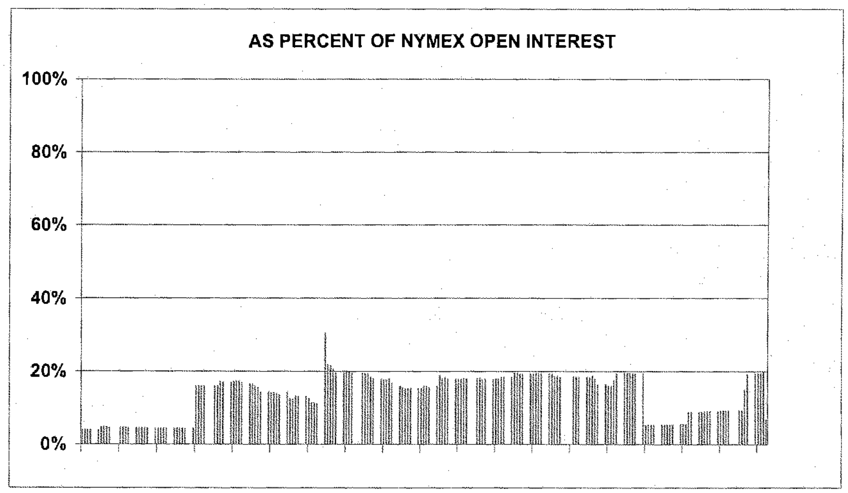


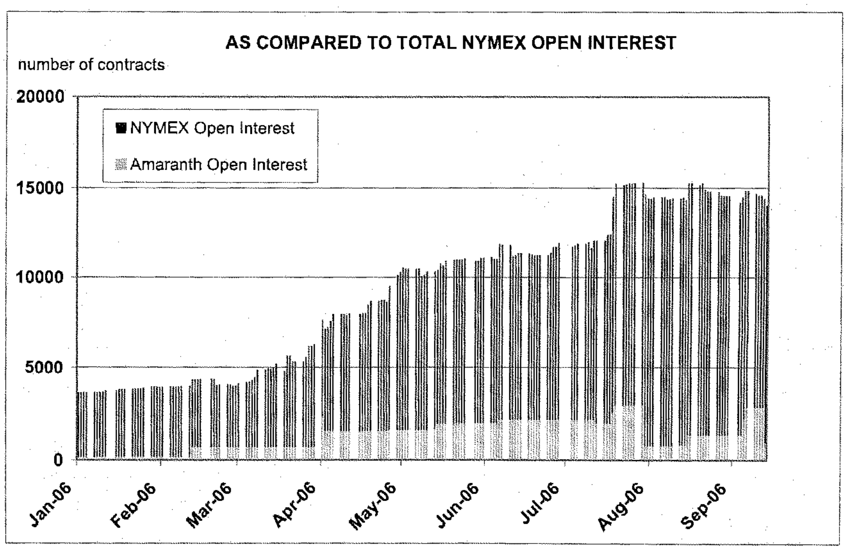
**AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR OCTOBER 2007**



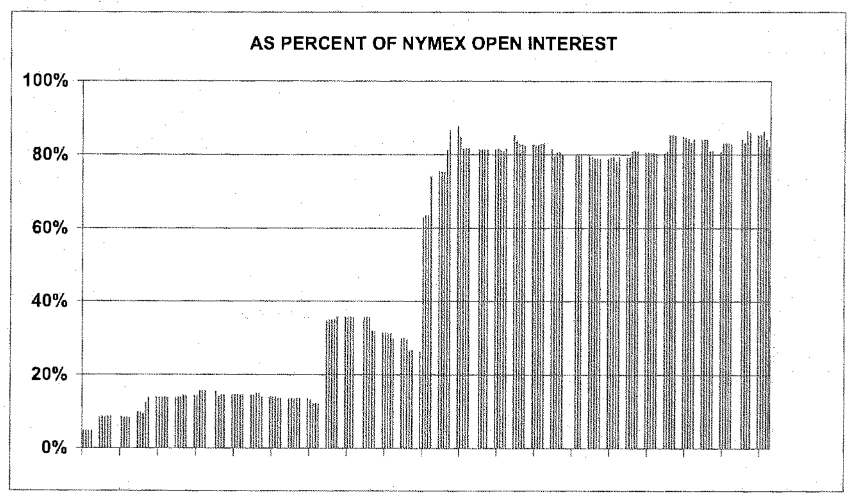


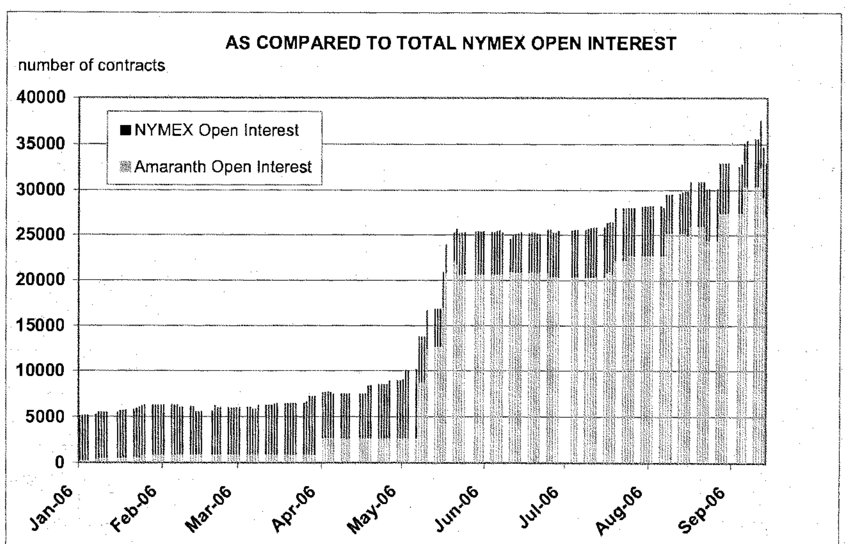
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR NOVEMBER 2007



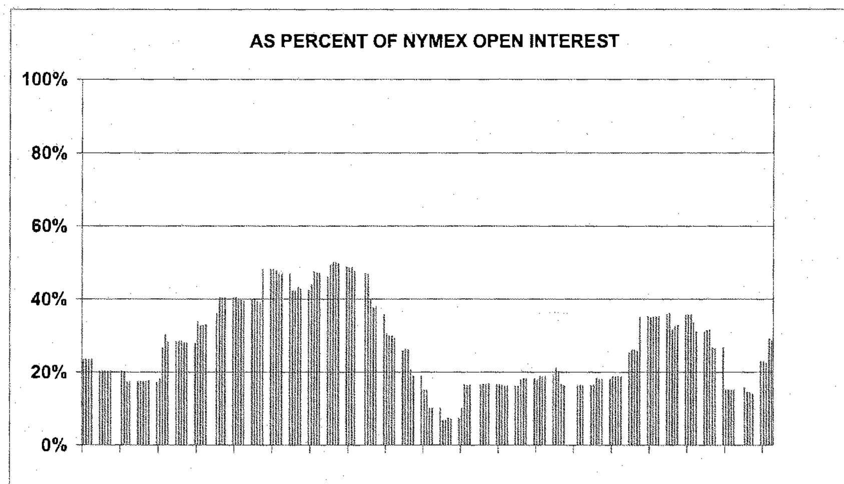


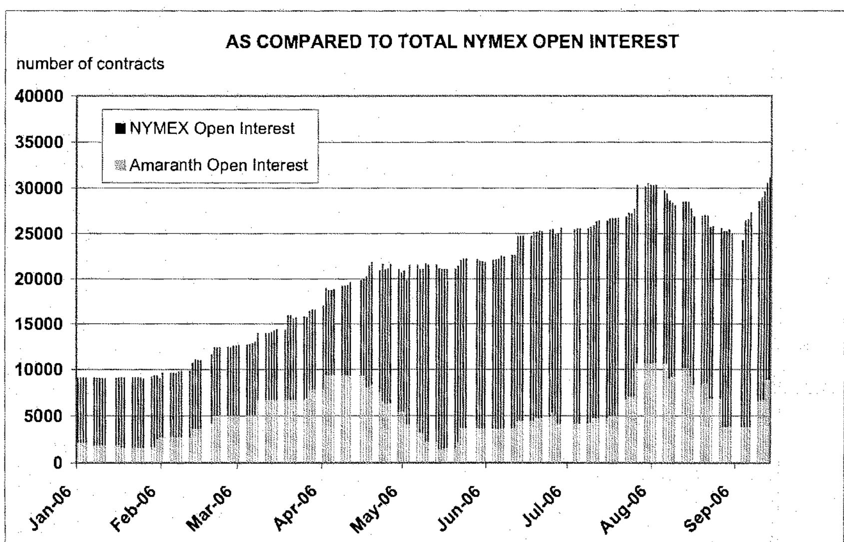
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR DECEMBER 2007



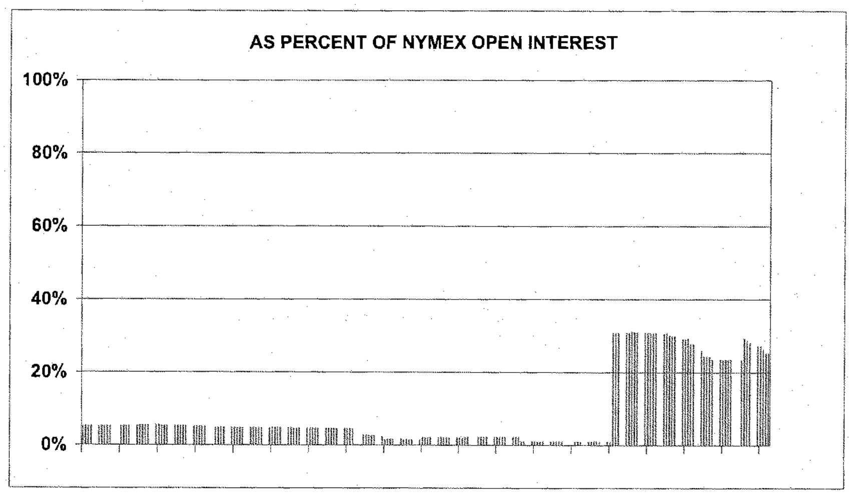


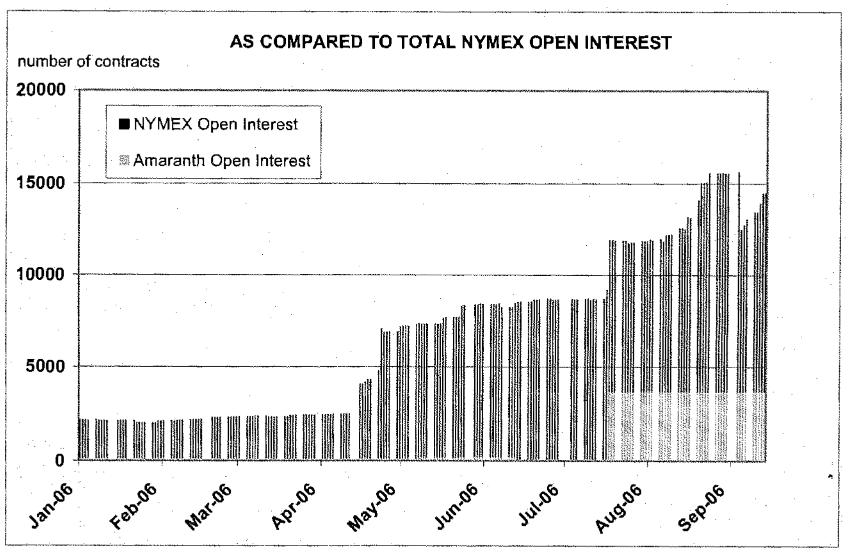
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR JANUARY 2008



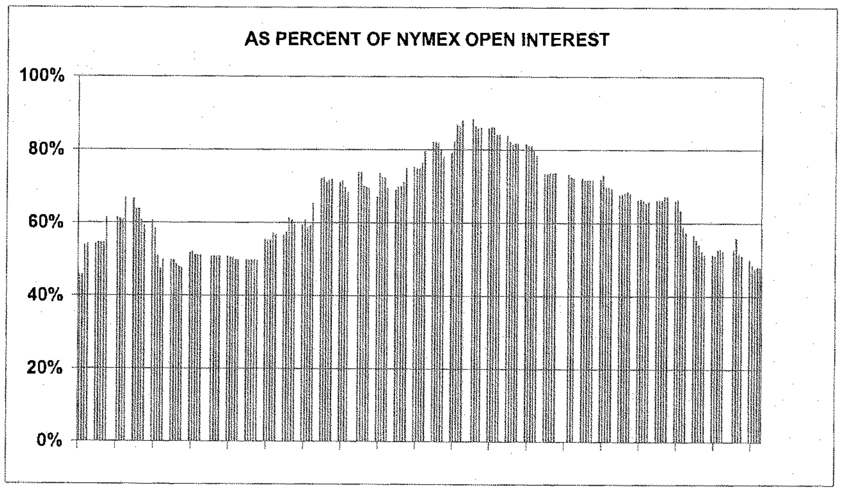


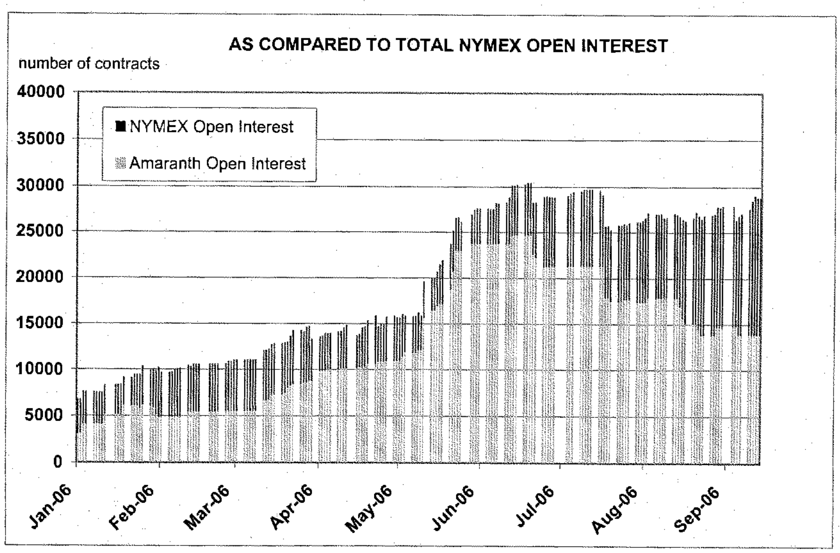
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR FEBRUARY 2008



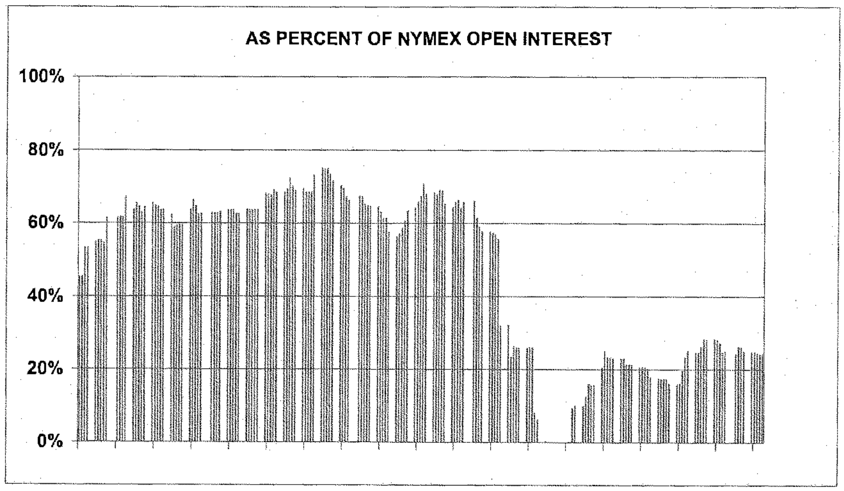


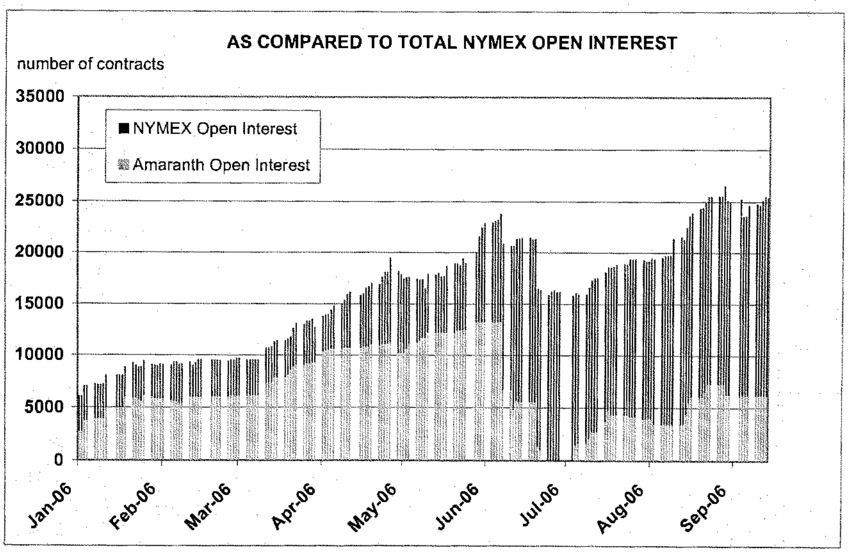
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR MARCH 2008



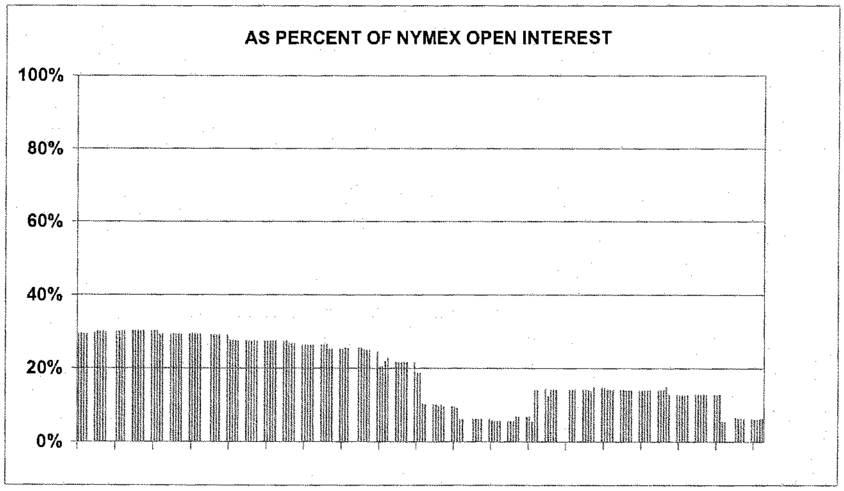


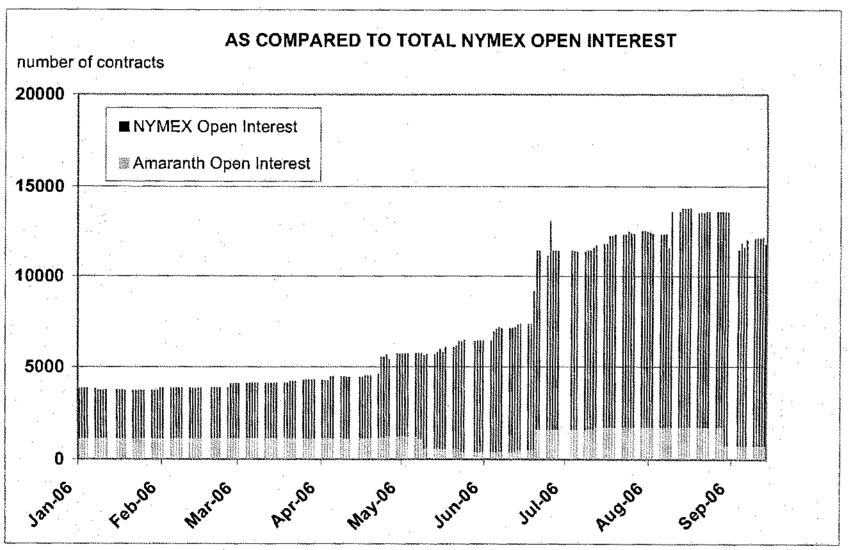
**AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR APRIL 2008**



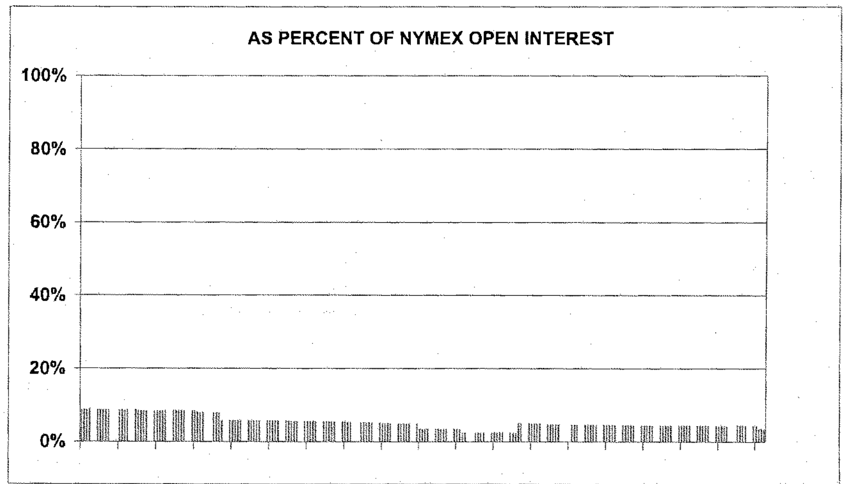


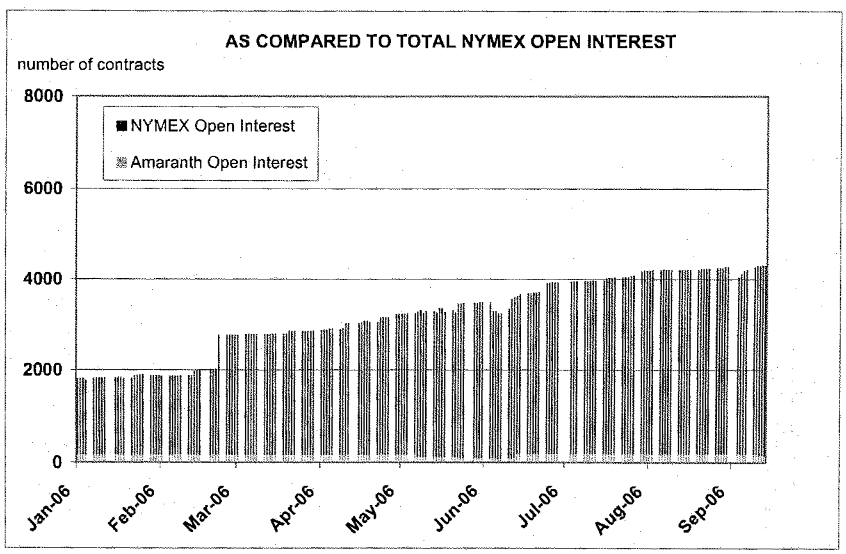
**AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR MAY 2008**





AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR JUNE 2008





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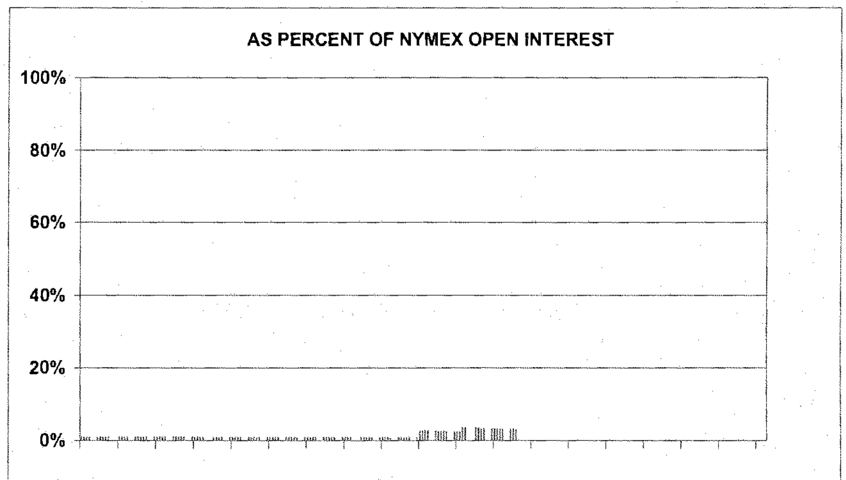
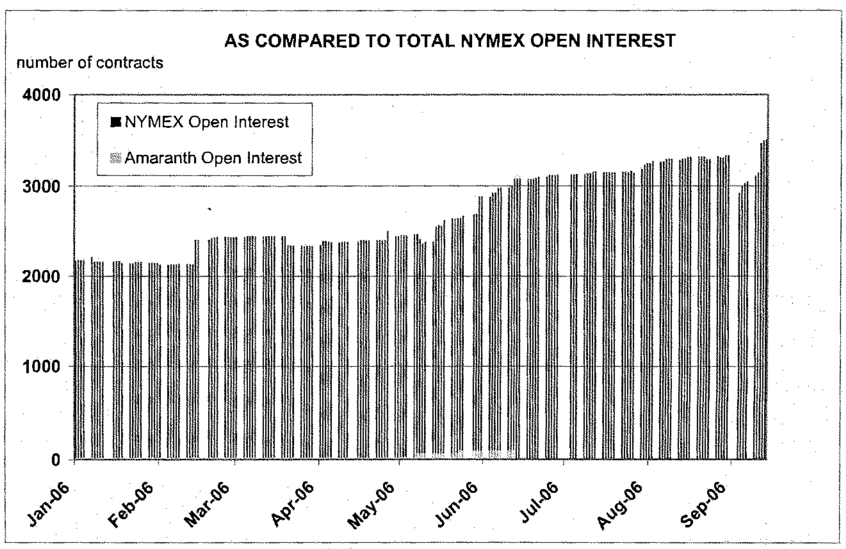
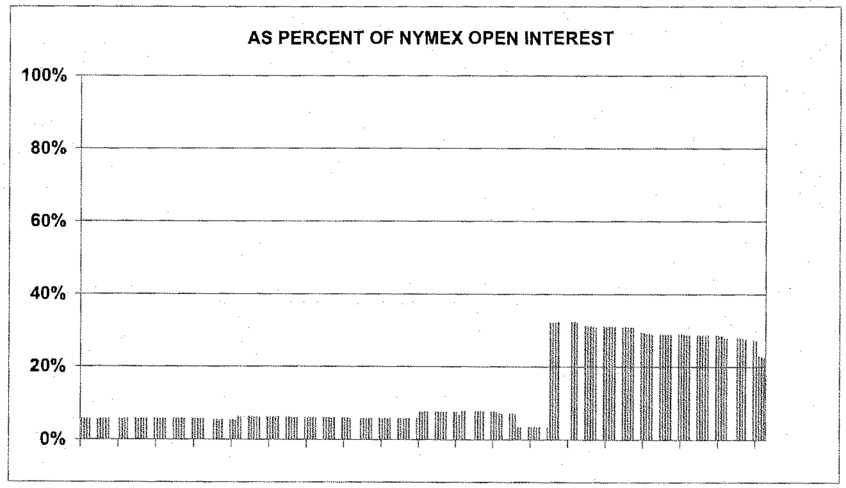
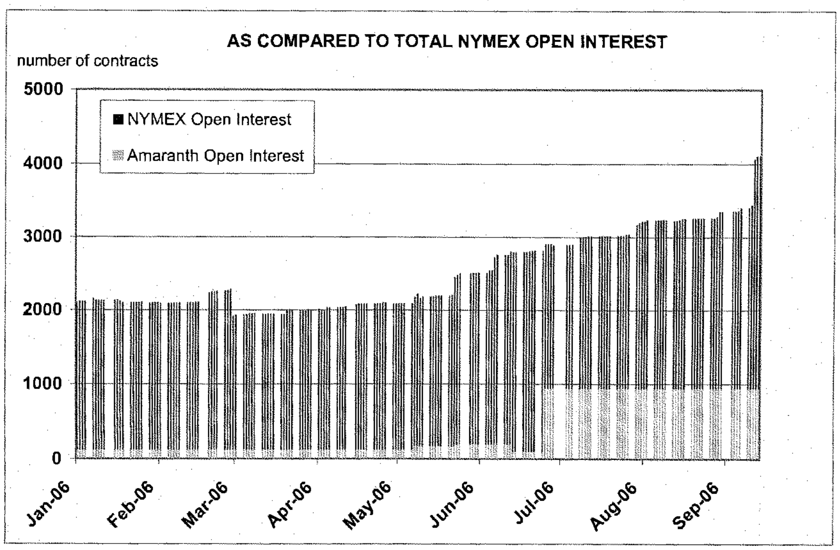
NATURAL GAS FUTURES CONTRACT FOR JULY 2008



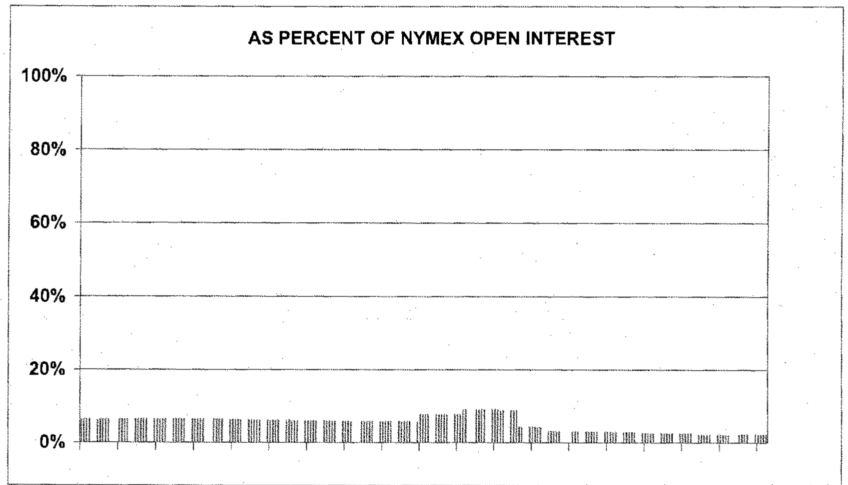


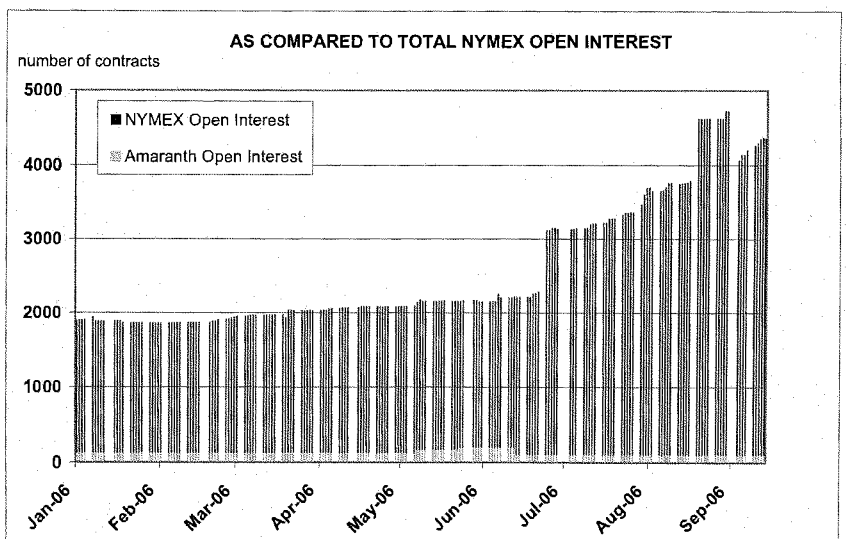
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR AUGUST 2008



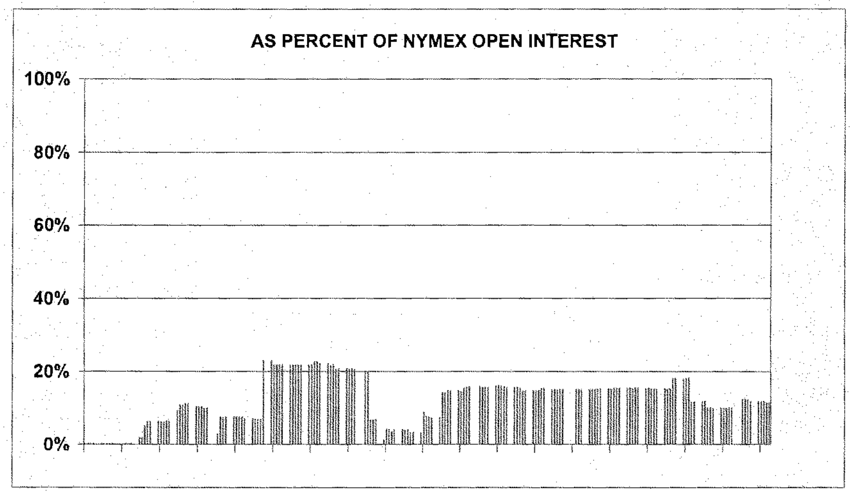


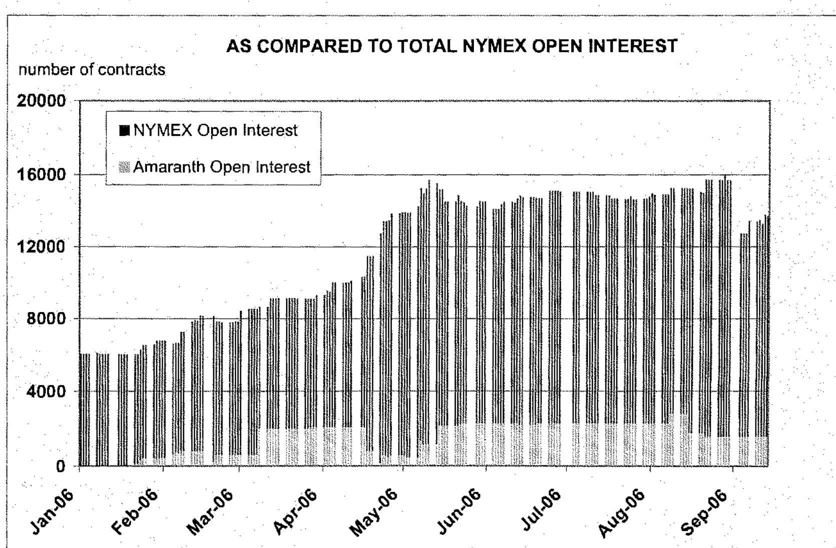
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR SEPTEMBER 2008



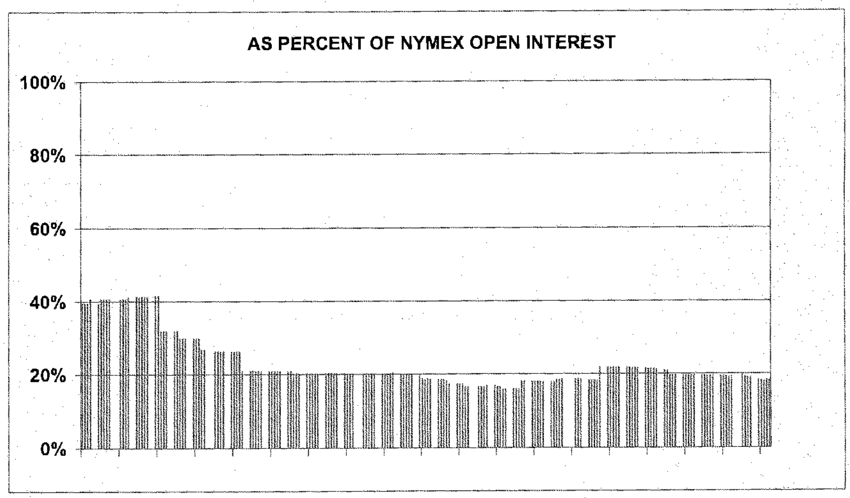


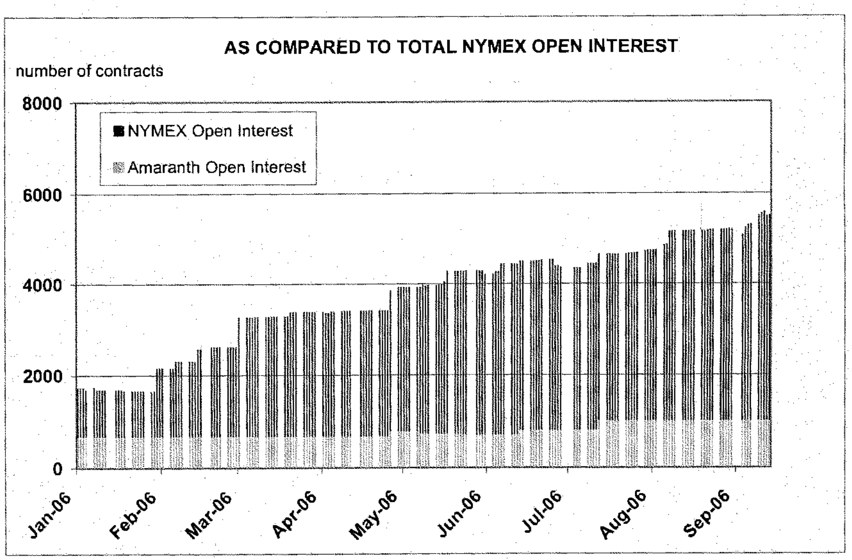
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR OCTOBER 2008



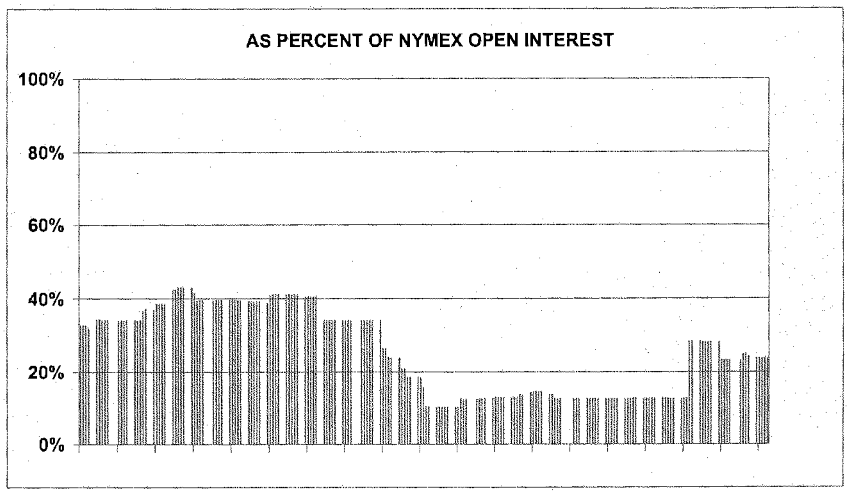


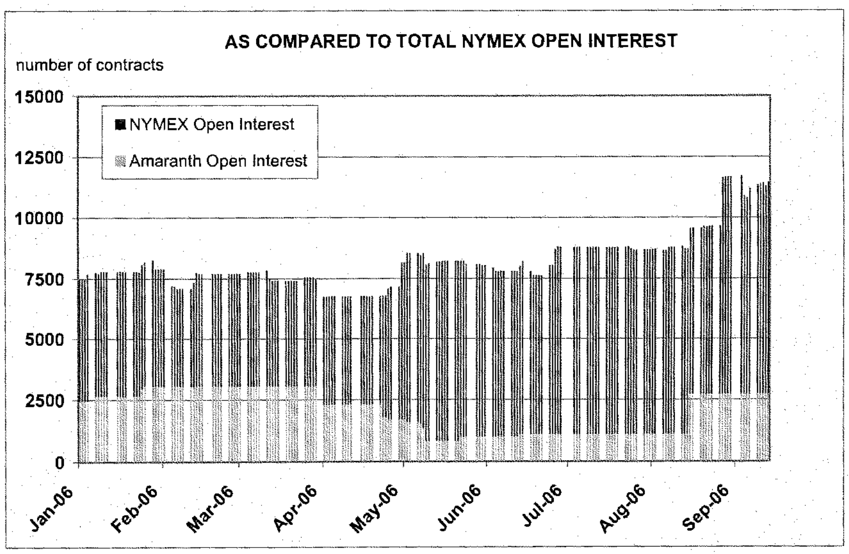
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR NOVEMBER 2008





AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR DECEMBER 2008





AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR JANUARY 2009

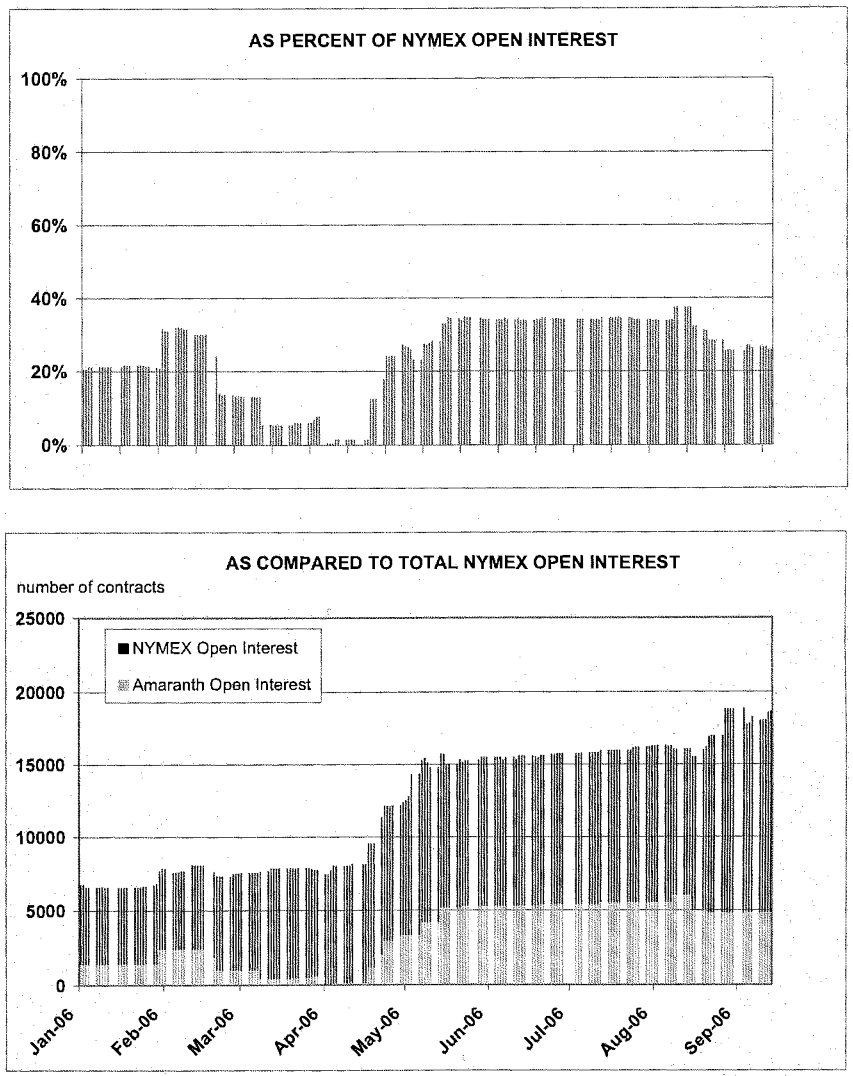
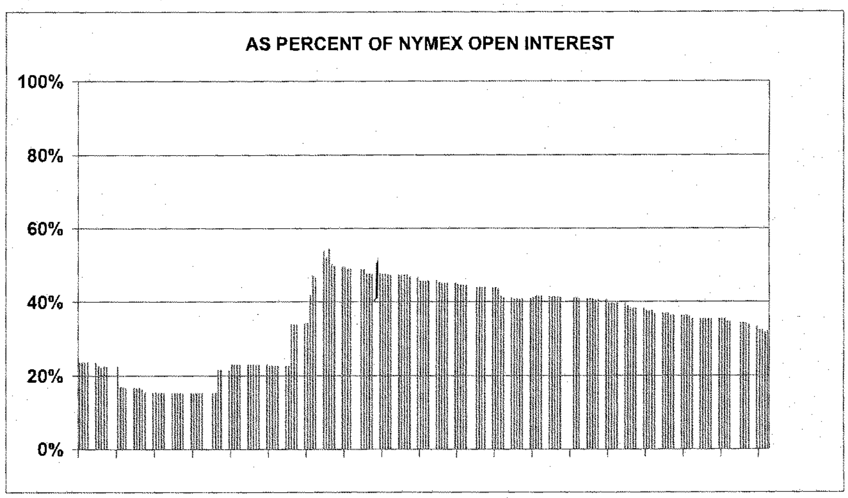


Figure 23

AMARANTH OPEN INTEREST ON NYMEX NATURAL GAS FUTURES CONTRACT FOR FEBRUARY 2009



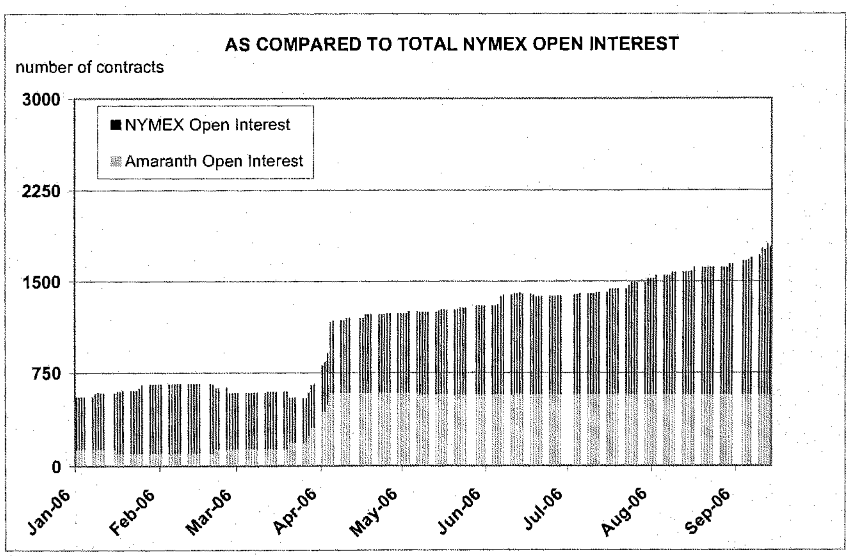
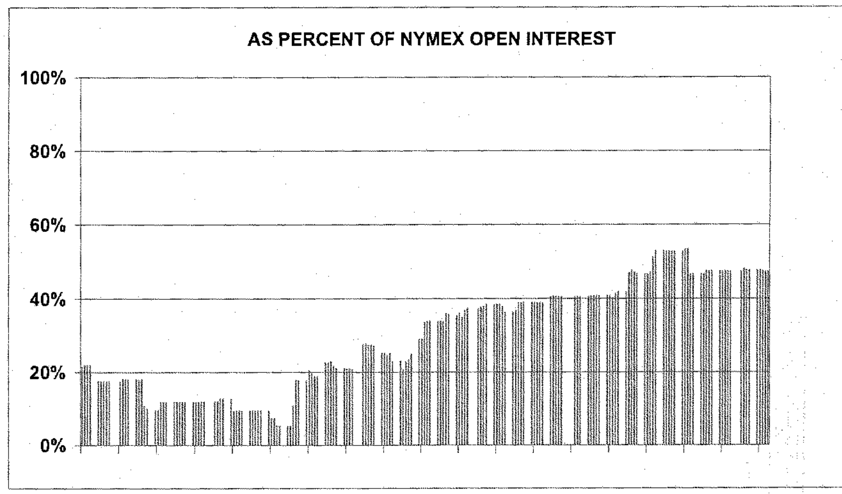


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR MARCH 2009



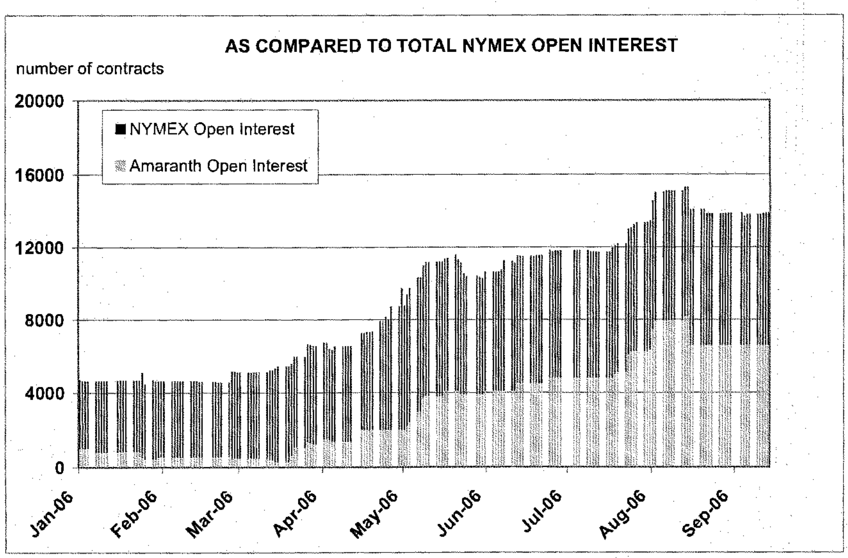
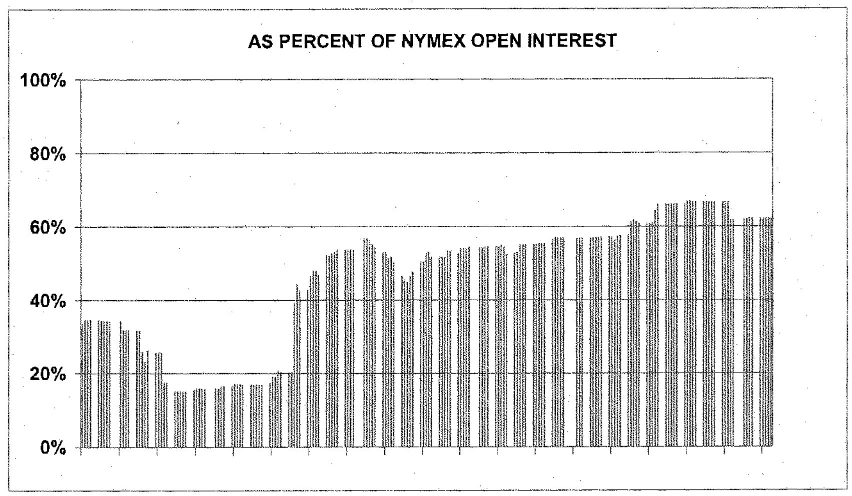


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR APRIL 2009



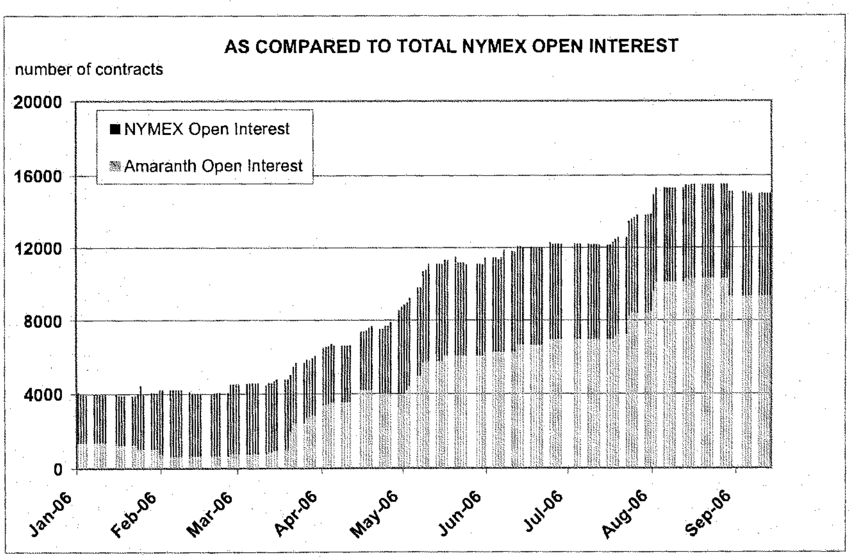
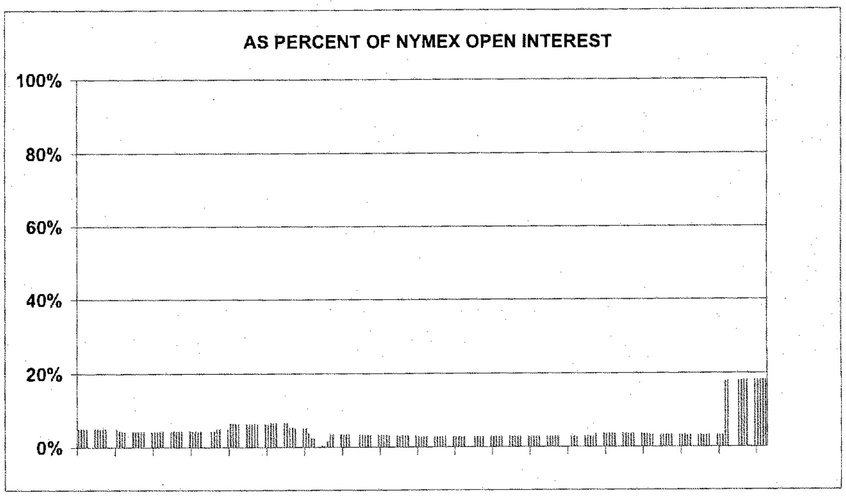


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR MAY 2009



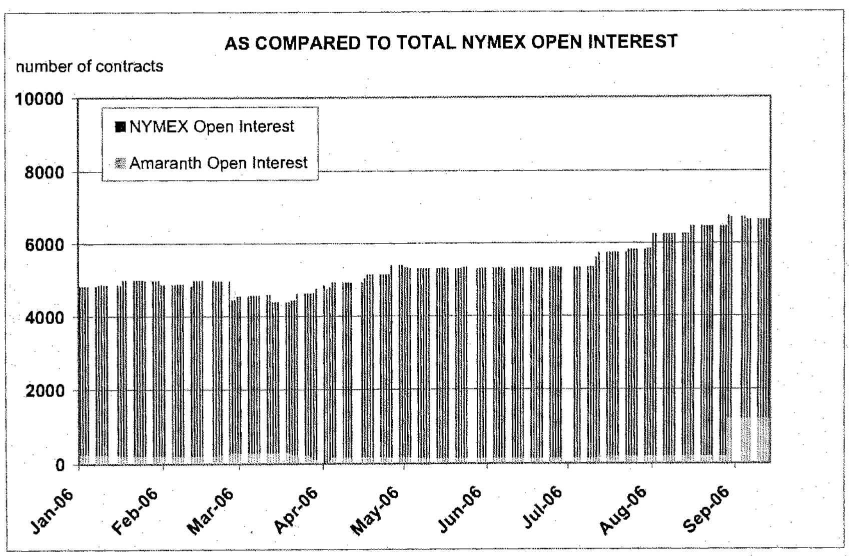


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR JUNE 2009

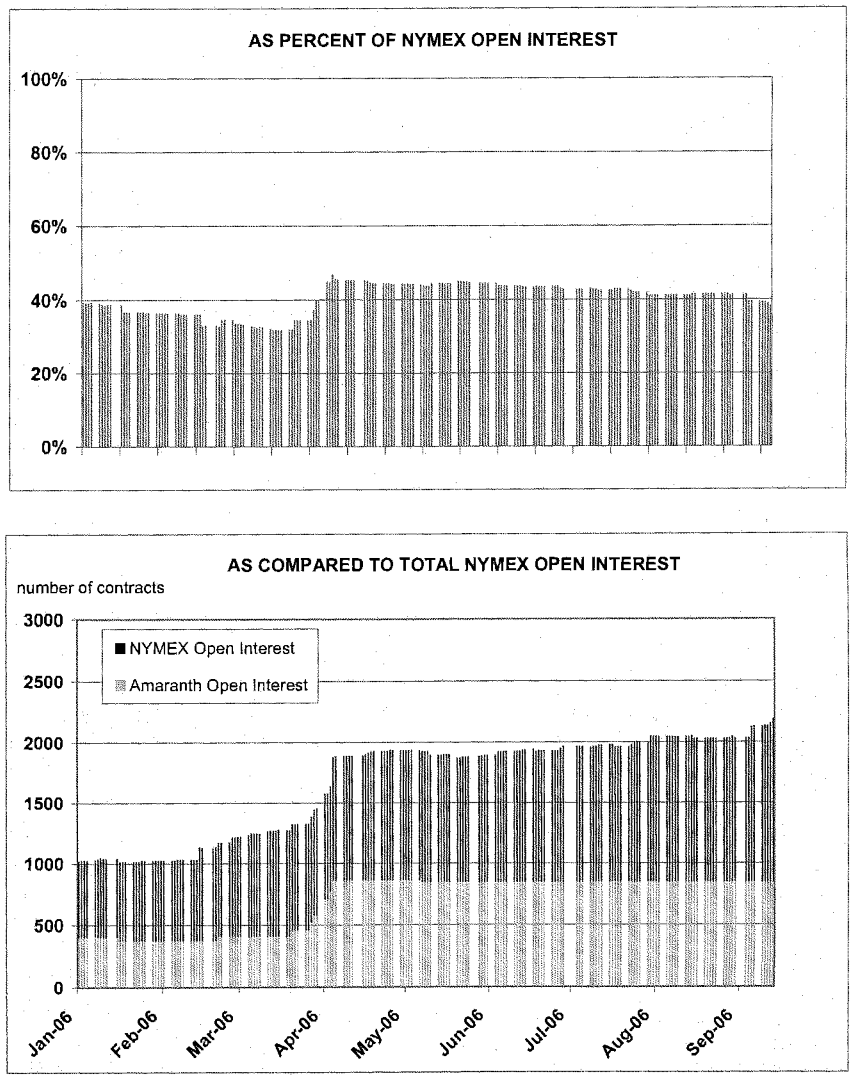


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR JULY 2009

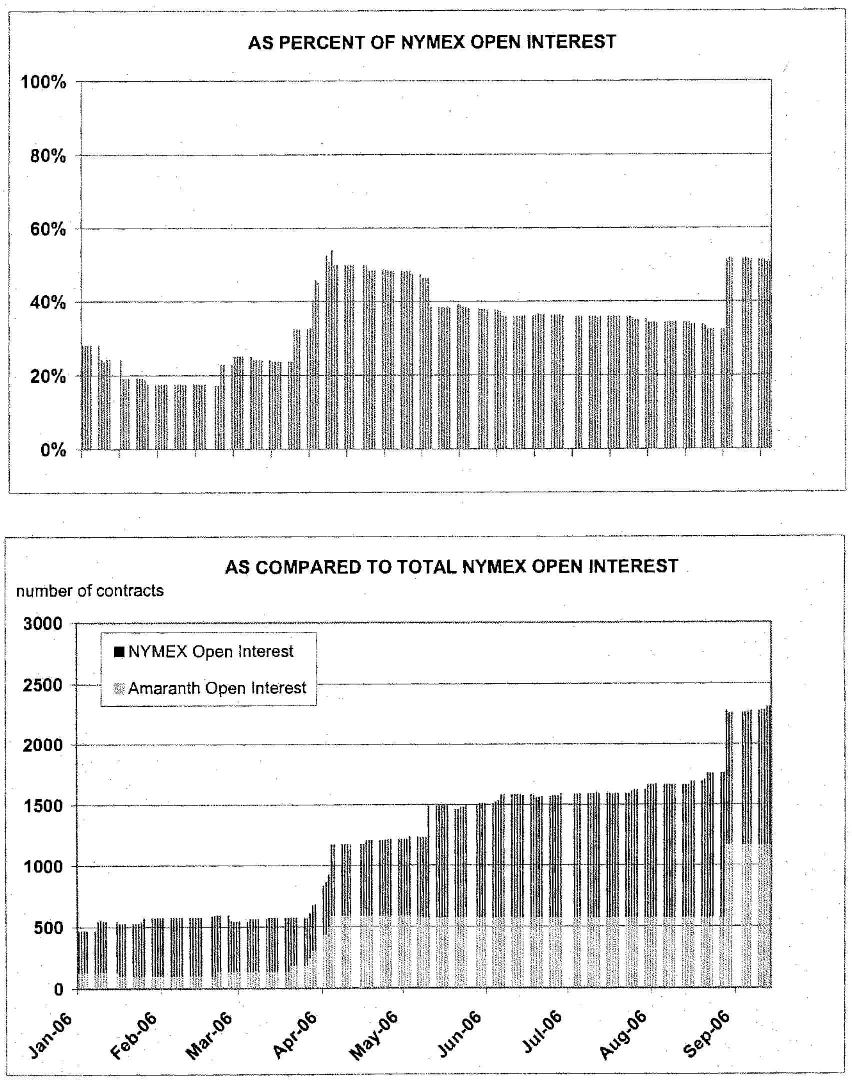
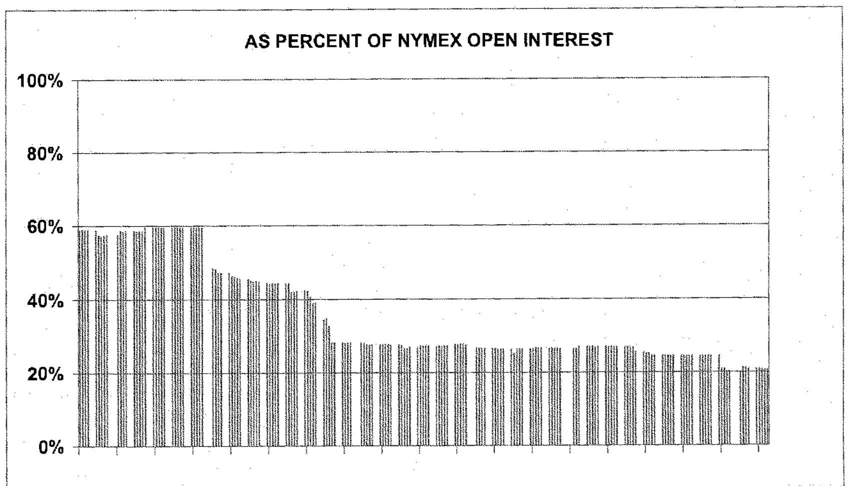


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR AUGUST 2009



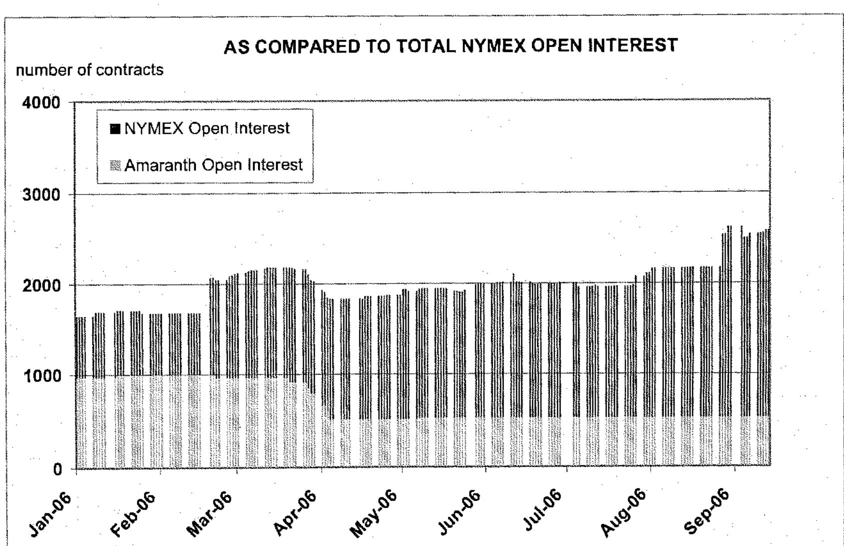
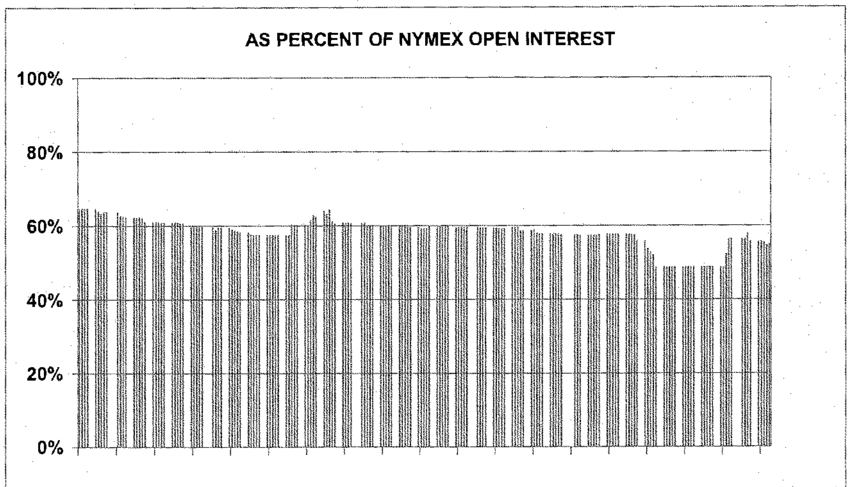


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR SEPTEMBER 2009



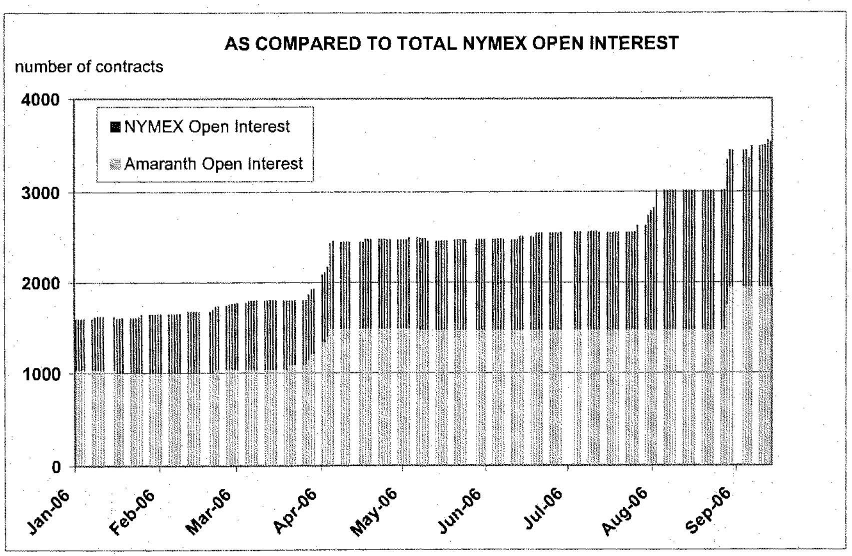
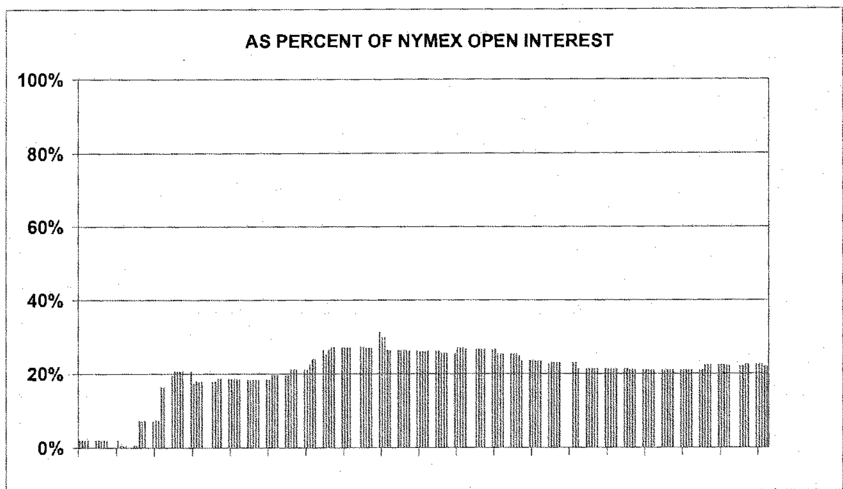


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR OCTOBER 2009



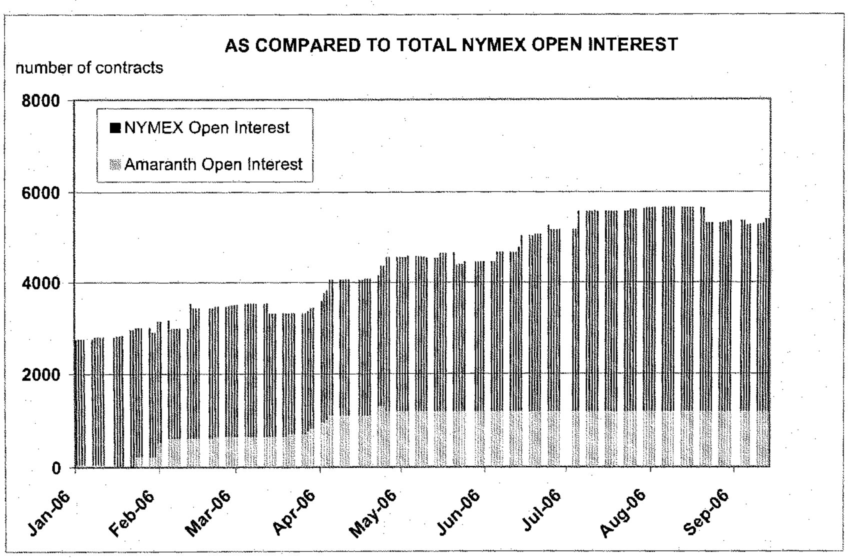


Figure 23

**AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR NOVEMBER 2009**

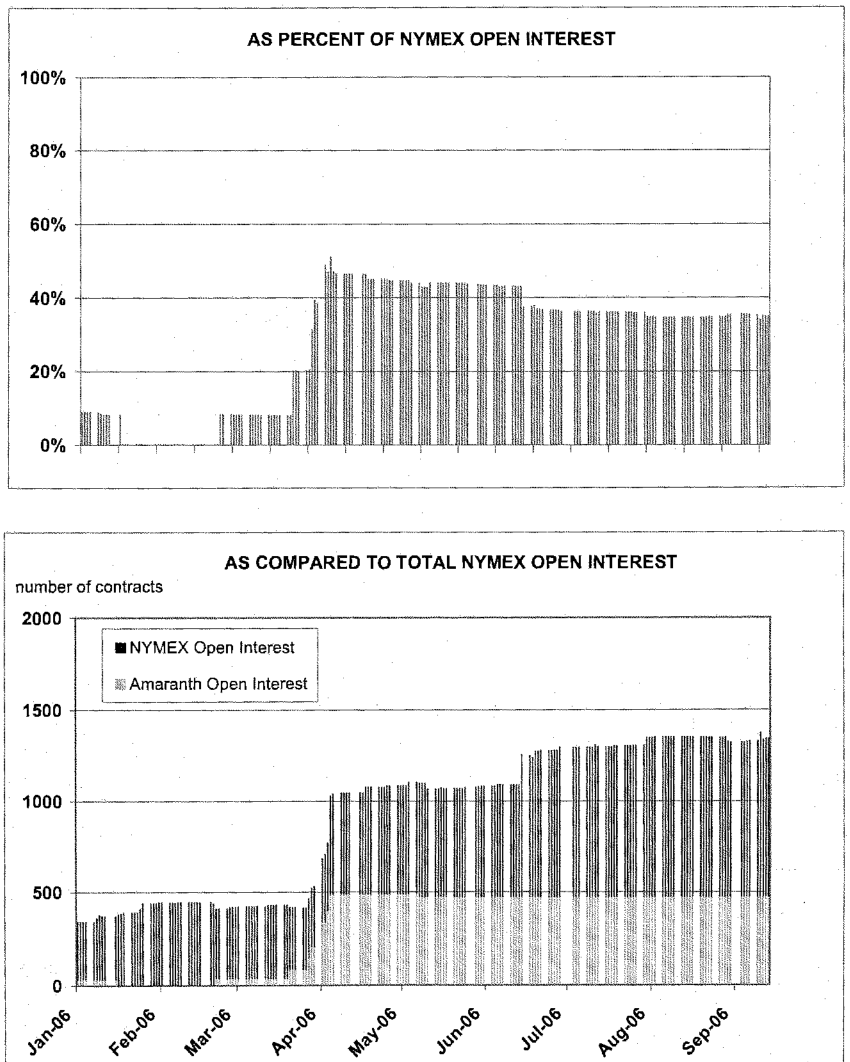


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR DECEMBER 2009

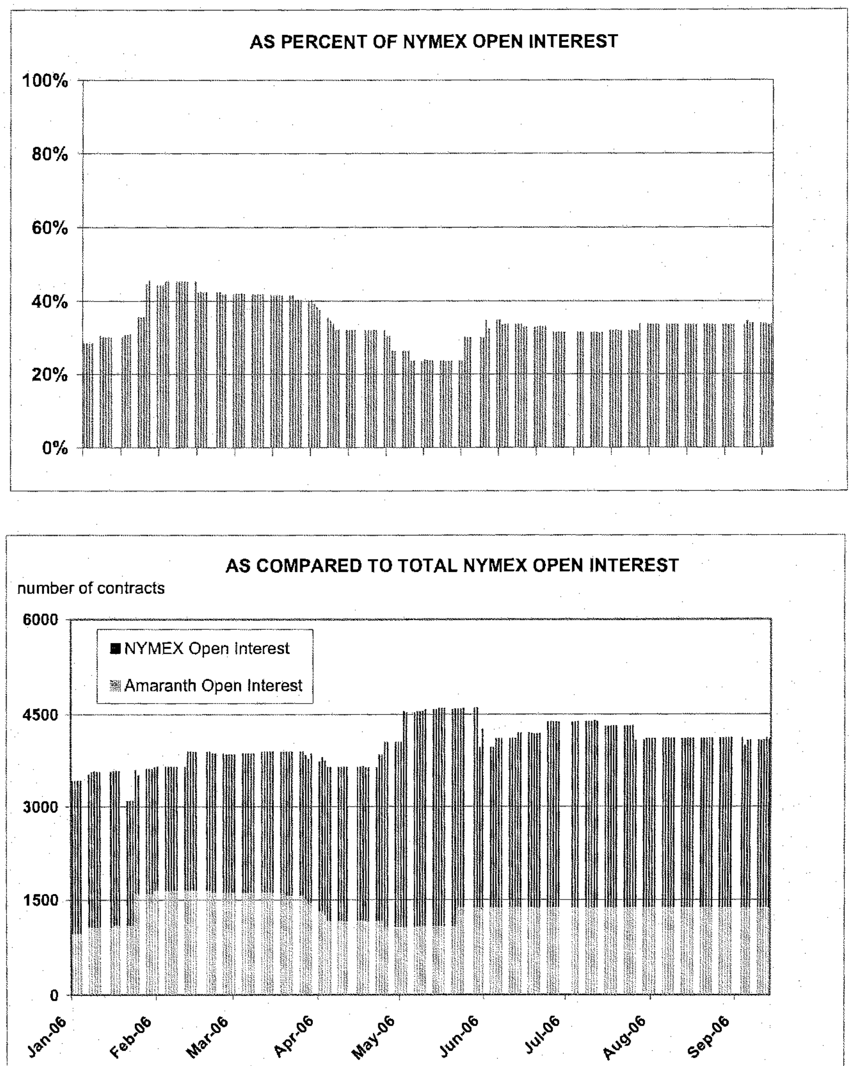


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR JANUARY 2010

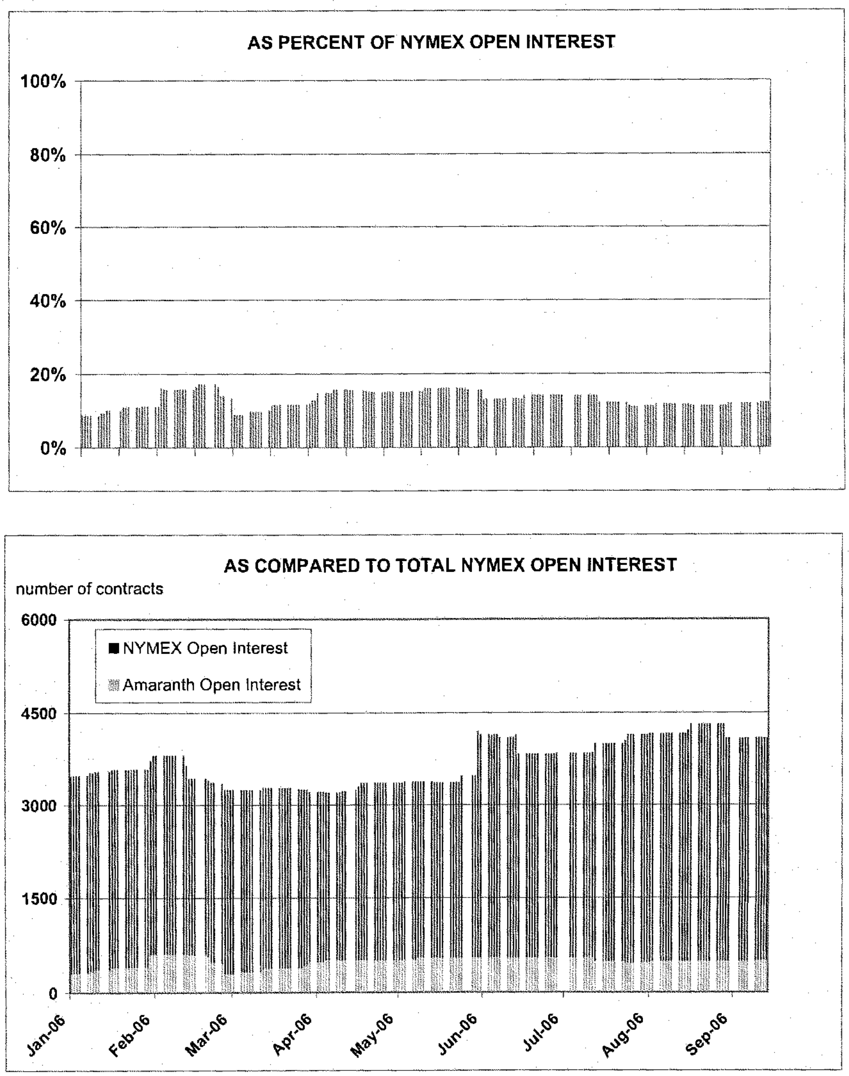


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR FEBRUARY 2010

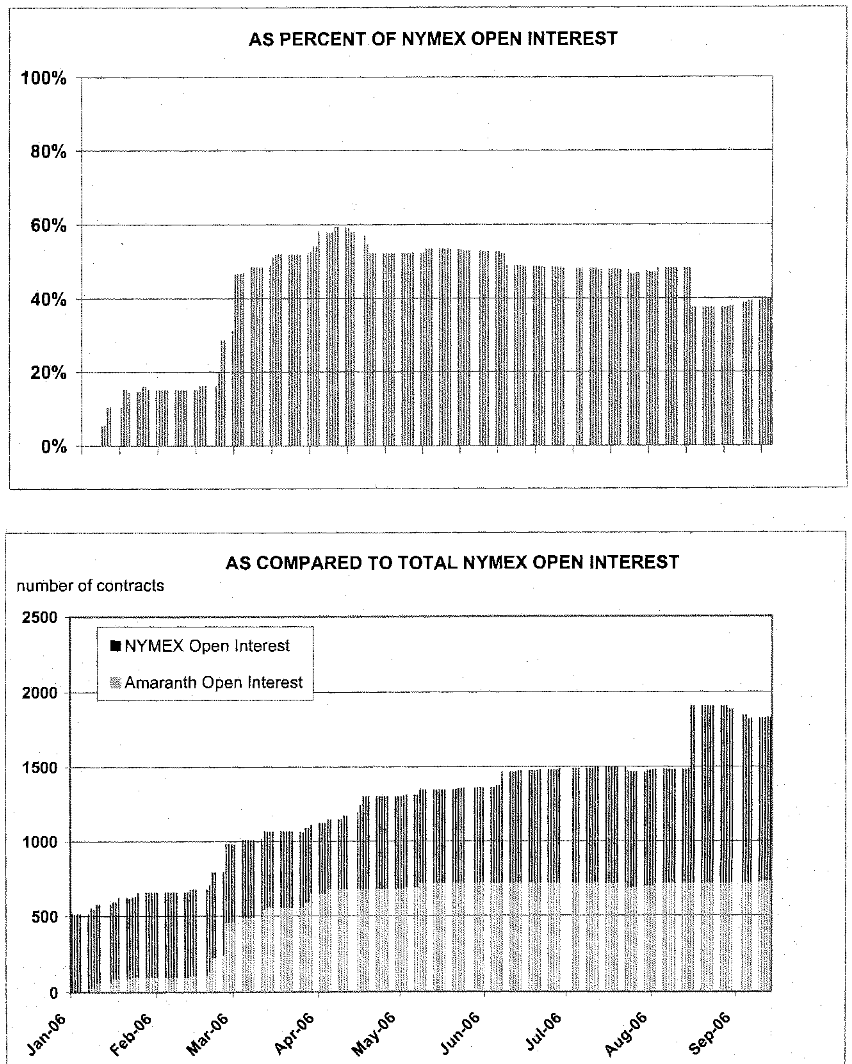


Figure 23

AMARANTH OPEN INTEREST ON NYMEX NATURAL GAS FUTURES CONTRACT FOR MARCH 2010

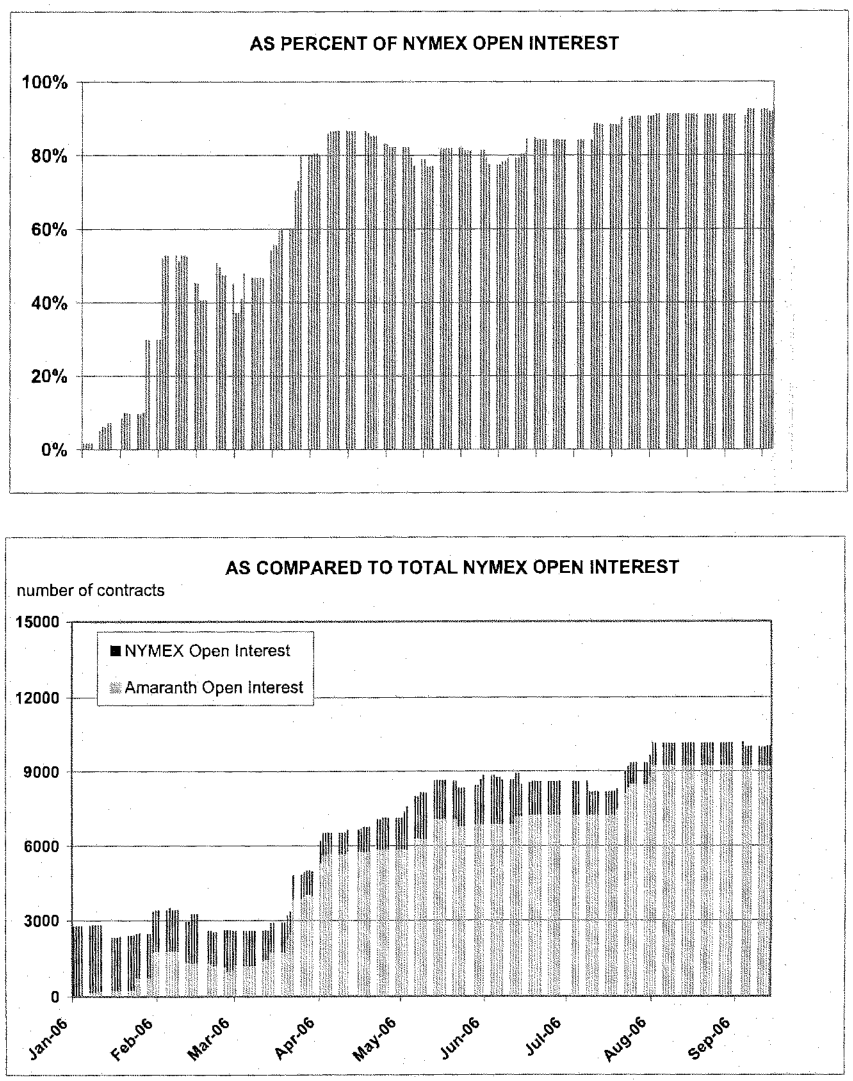
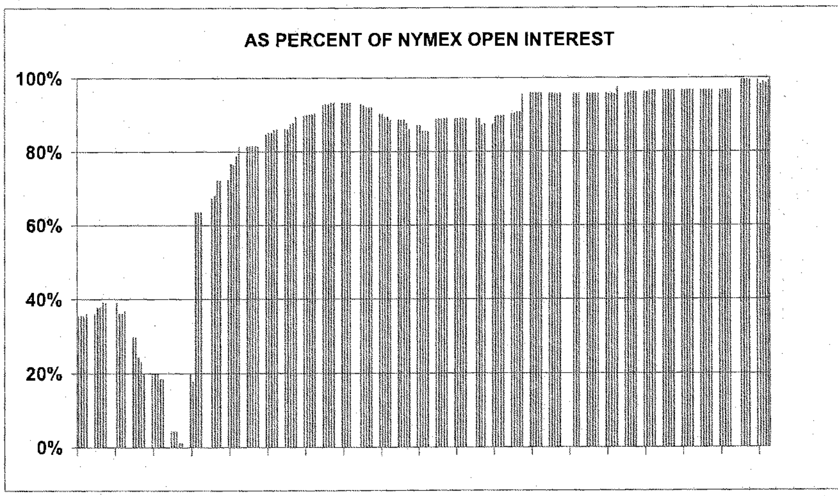


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR APRIL 2010



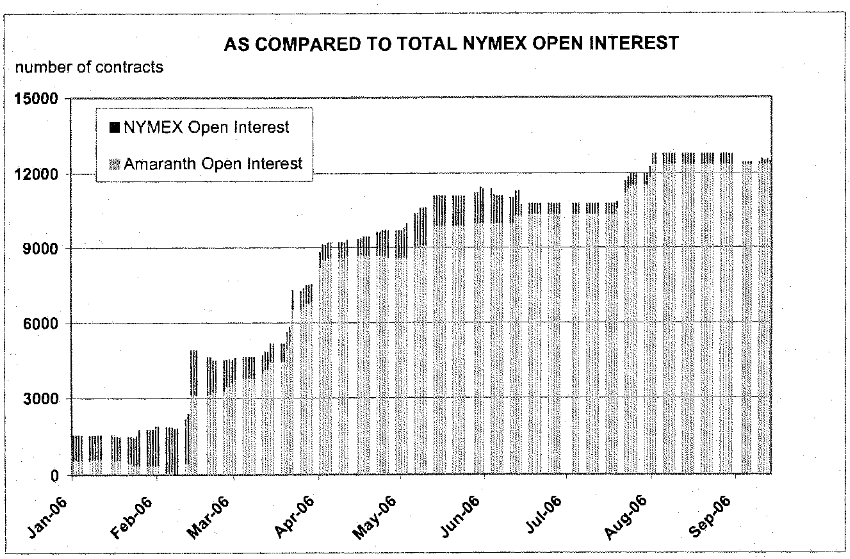


Figure 23

**AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR MAY 2010**

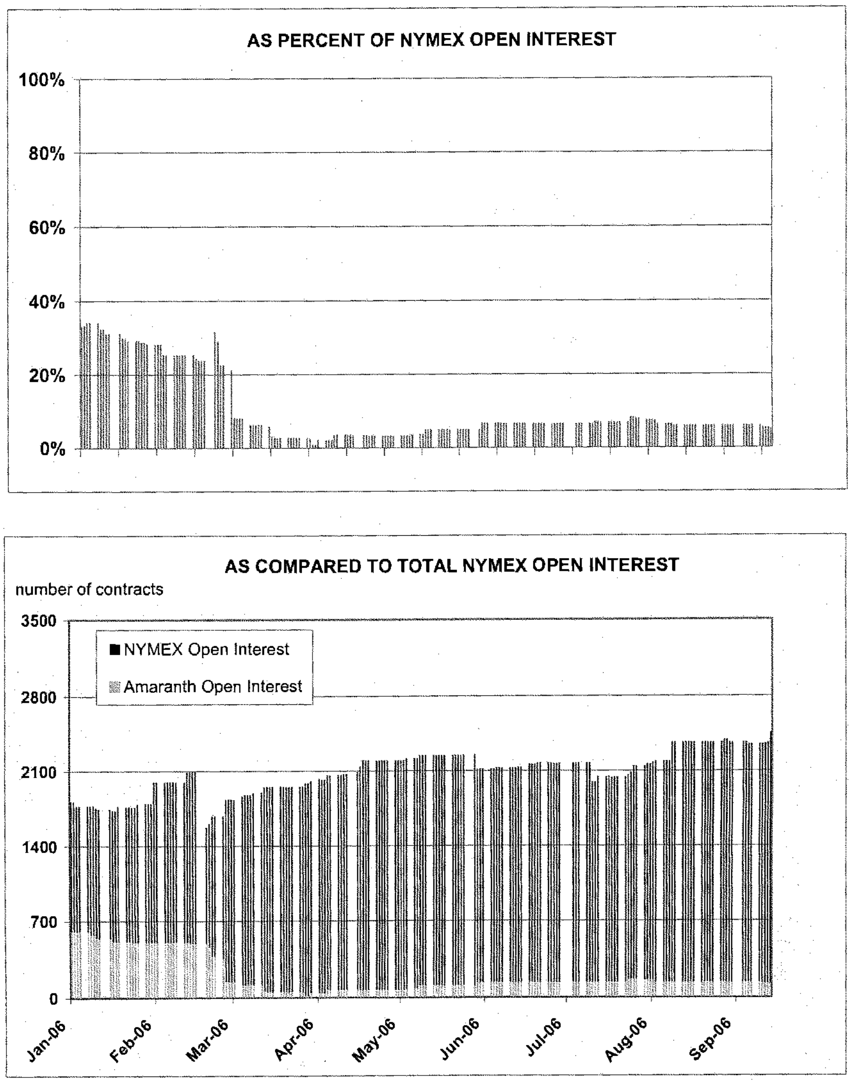
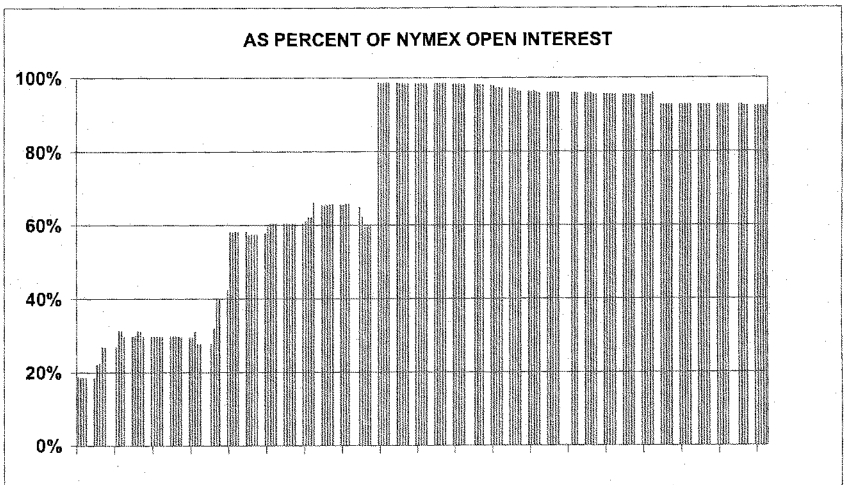


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR JUNE 2010



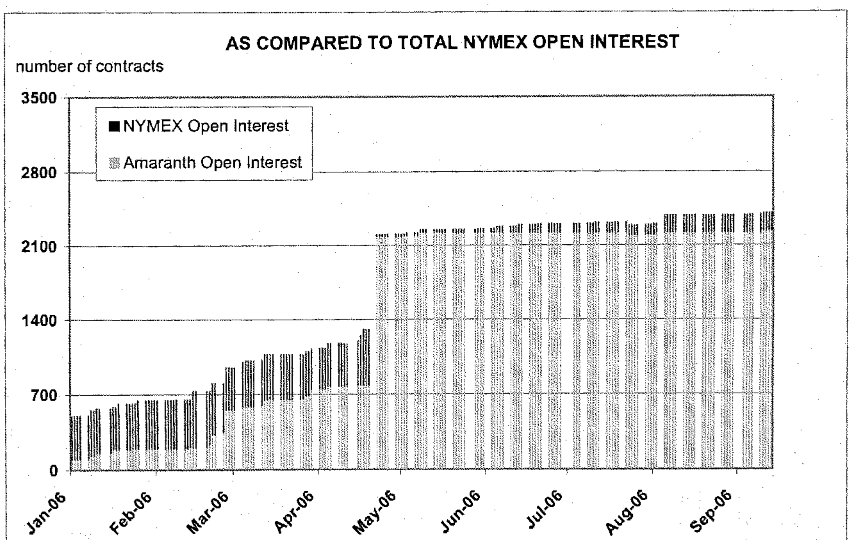


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR JULY 2010

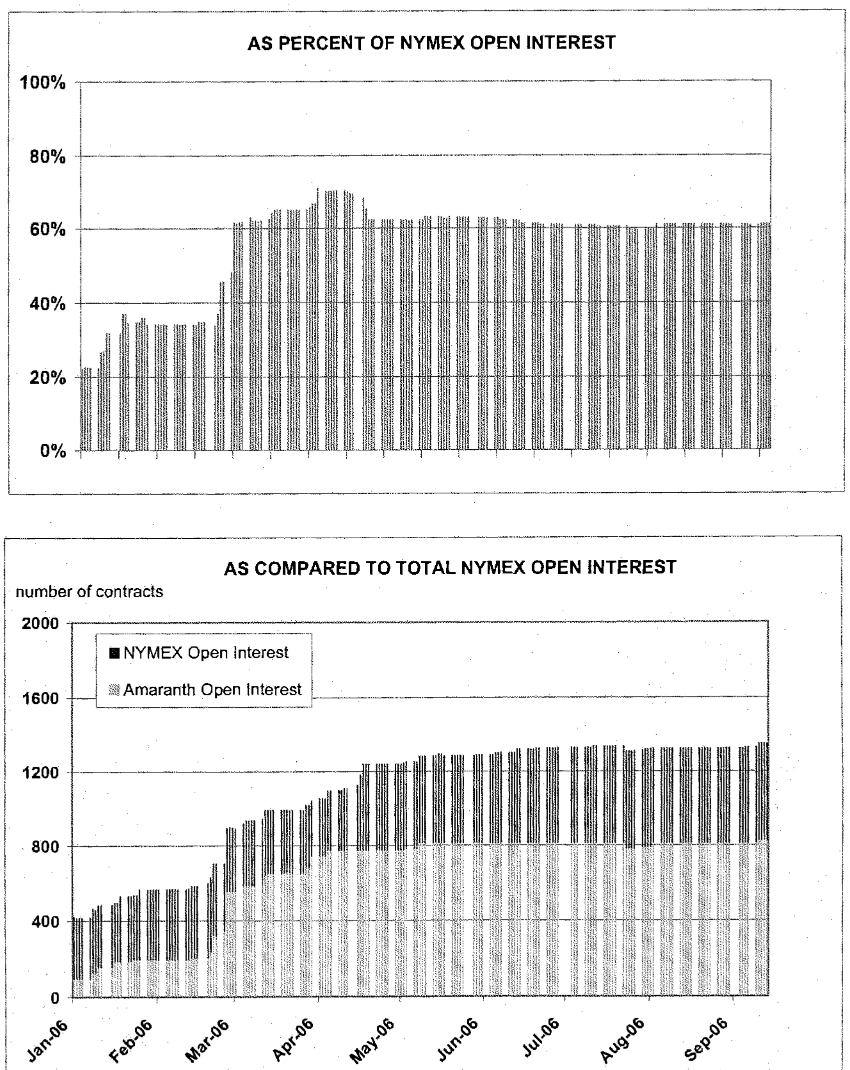
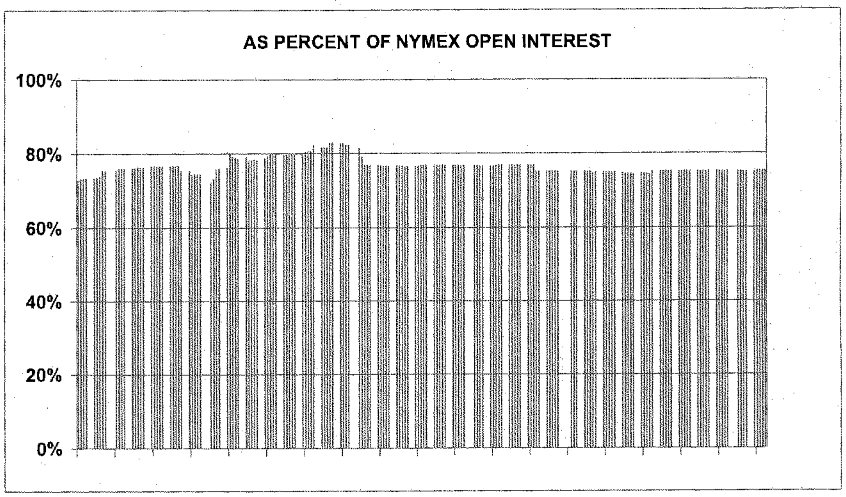


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR AUGUST 2010



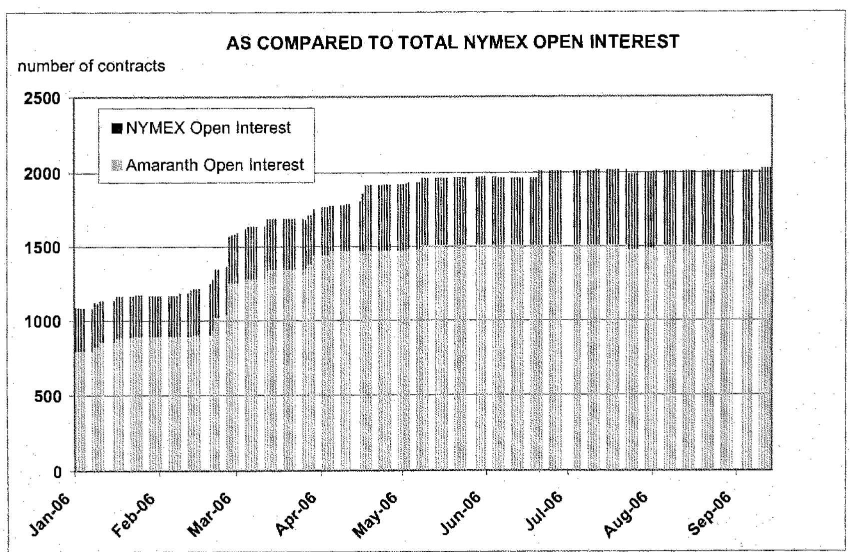


Figure 23

**AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR SEPTEMBER 2010**

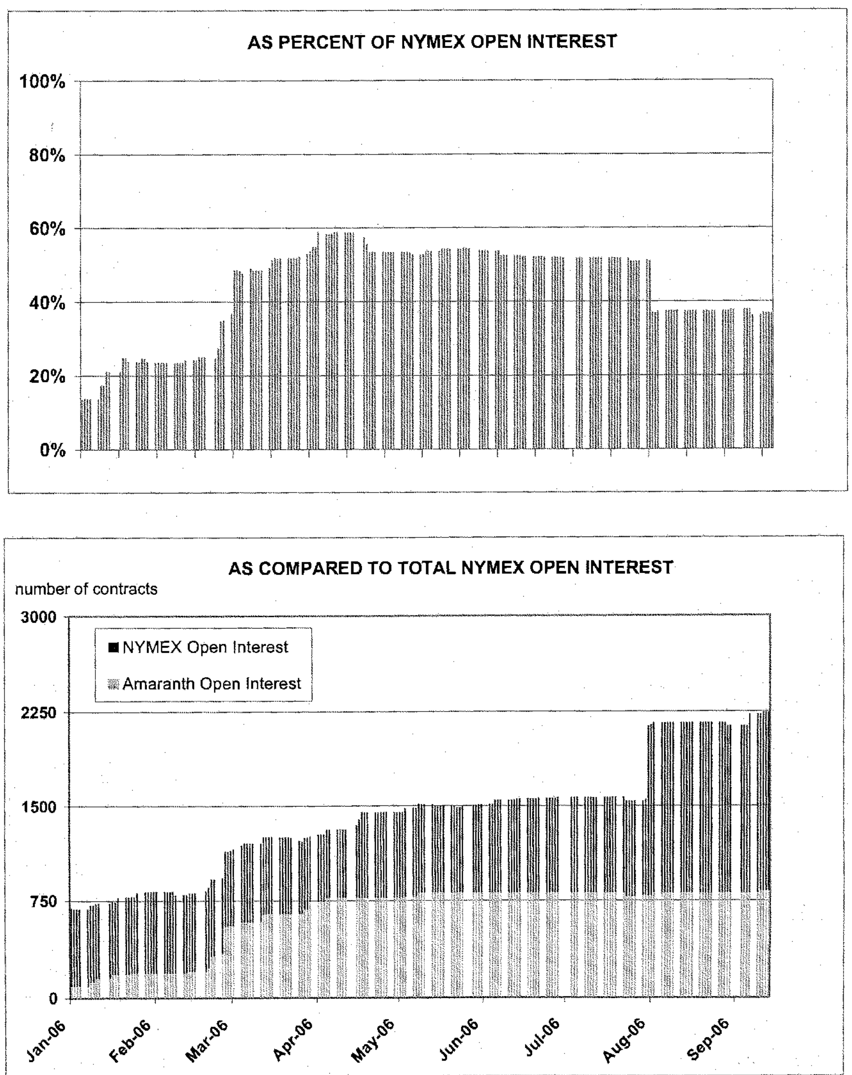


Figure 23

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR OCTOBER 2010

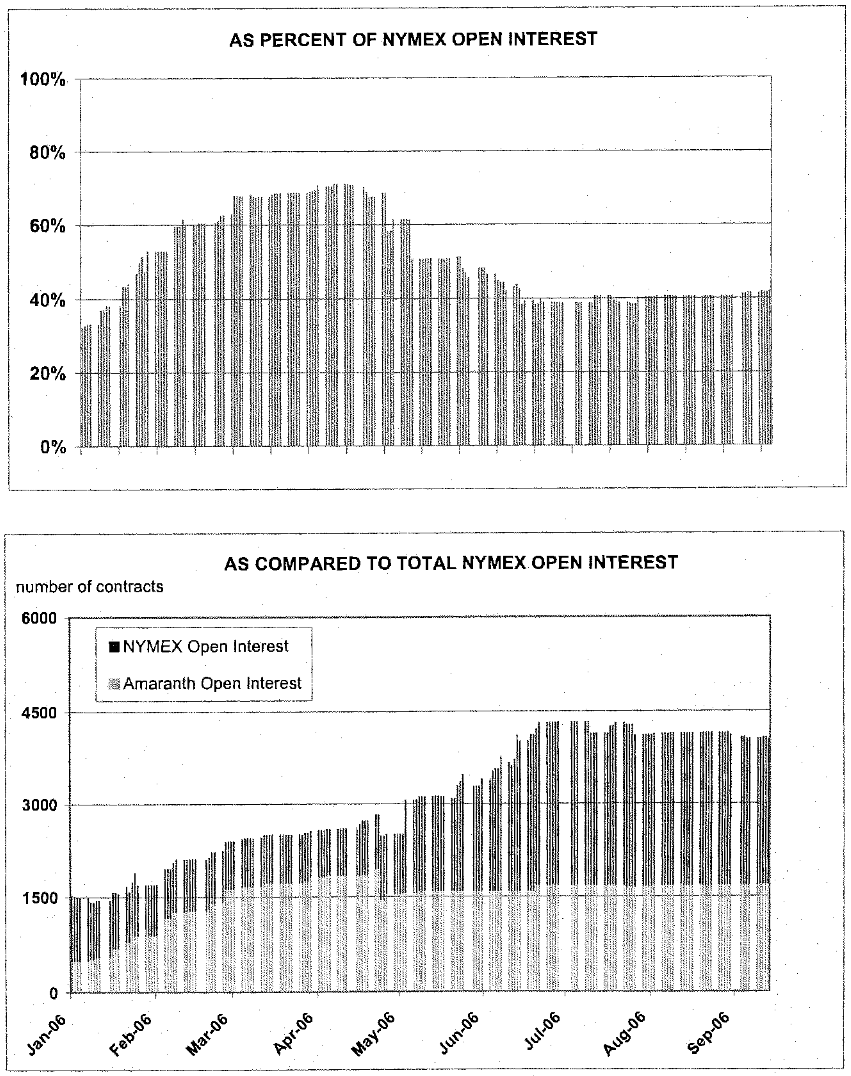
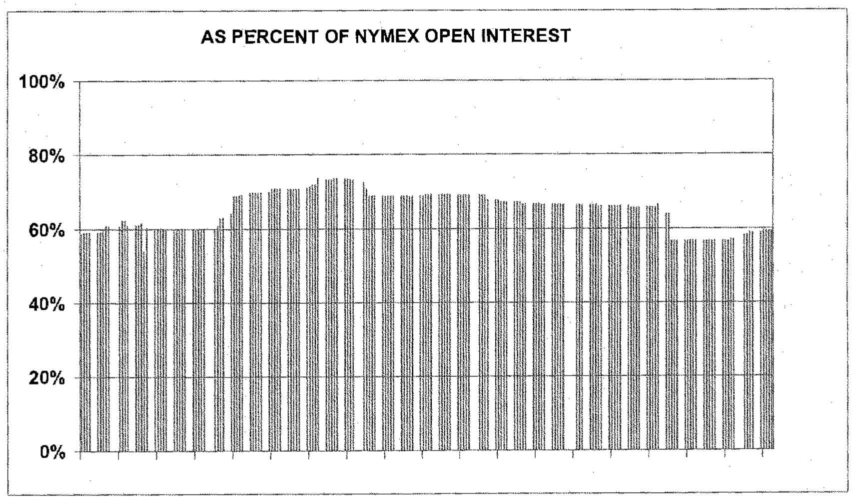


Figure 23

**AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR NOVEMBER 2010**



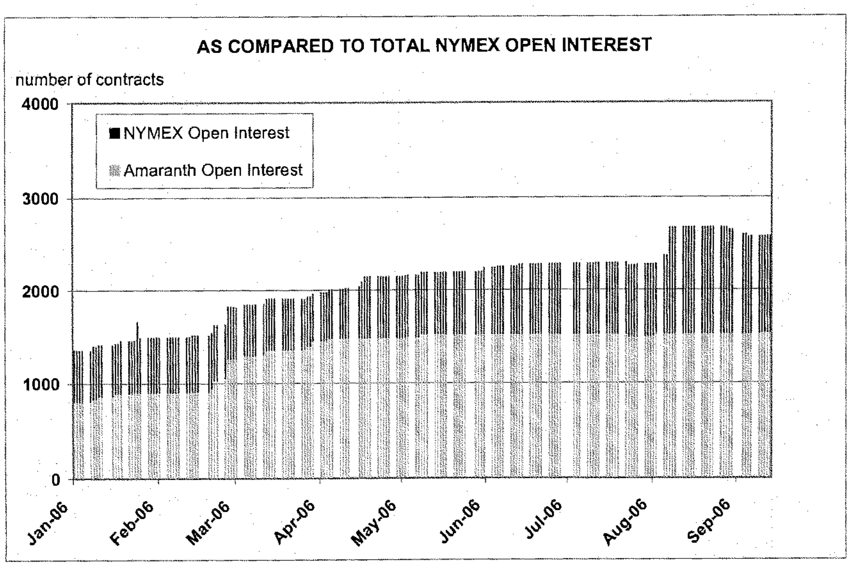
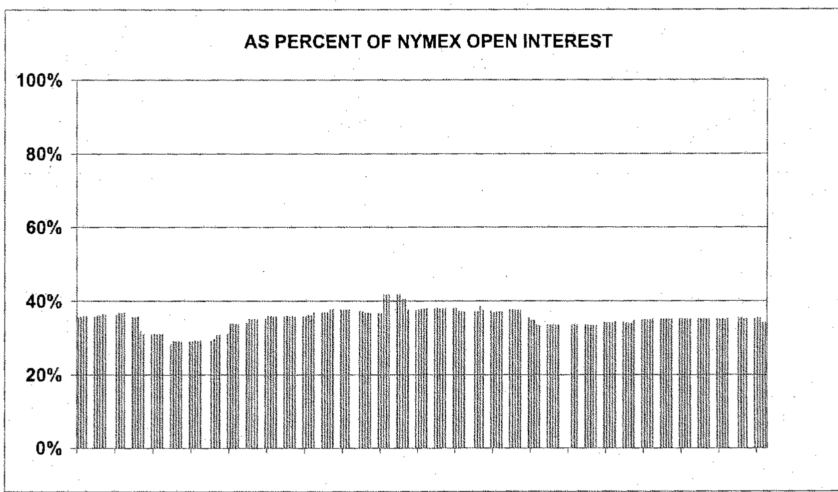
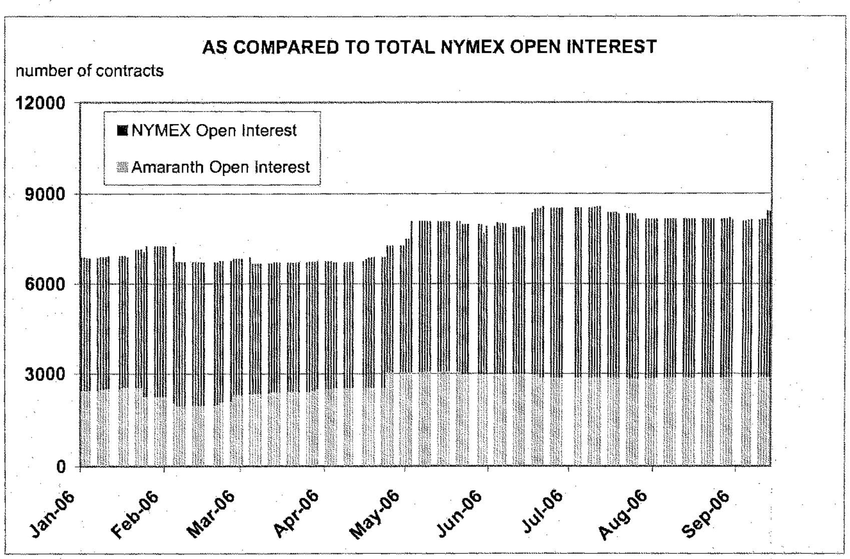


Figure 23

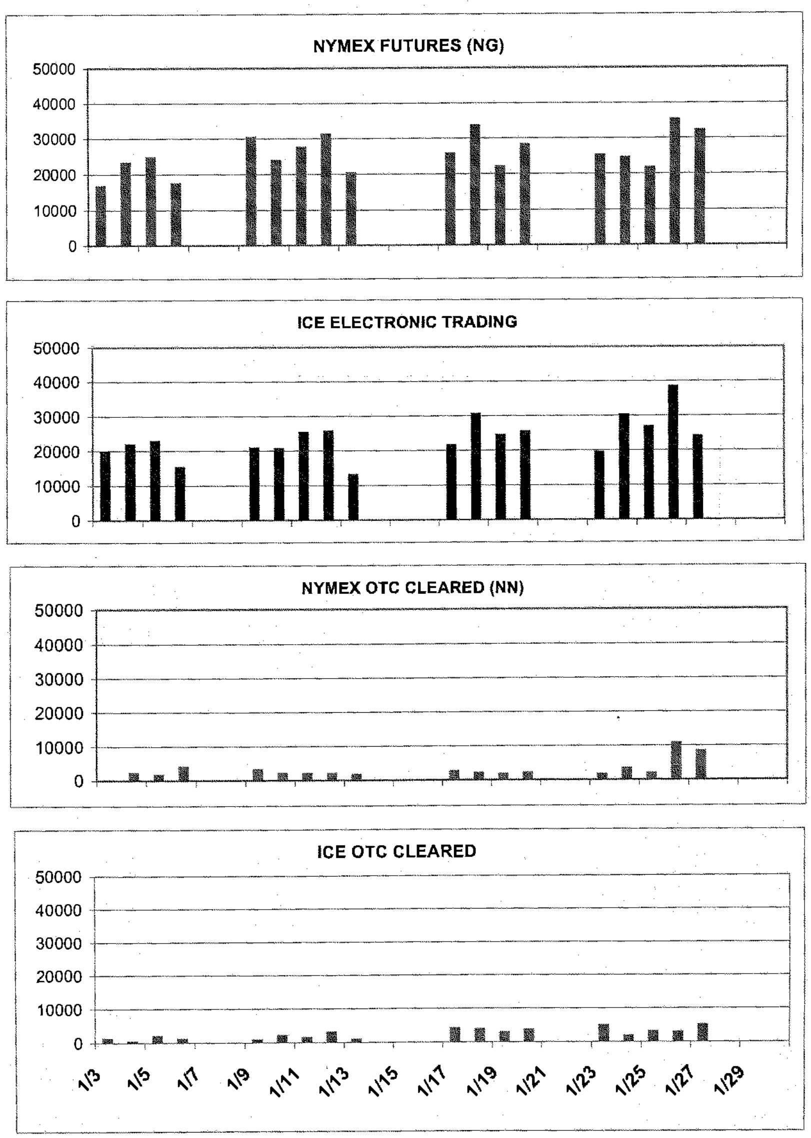
AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR DECEMBER 2010



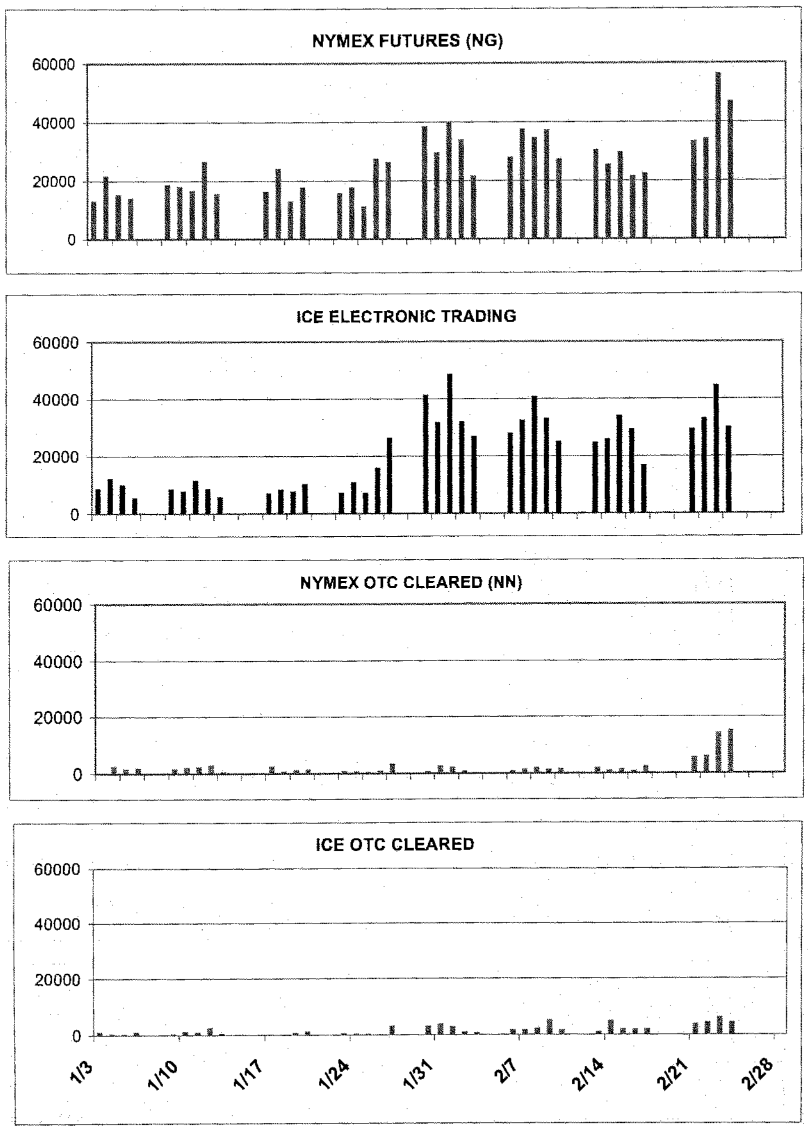


APPENDIX II

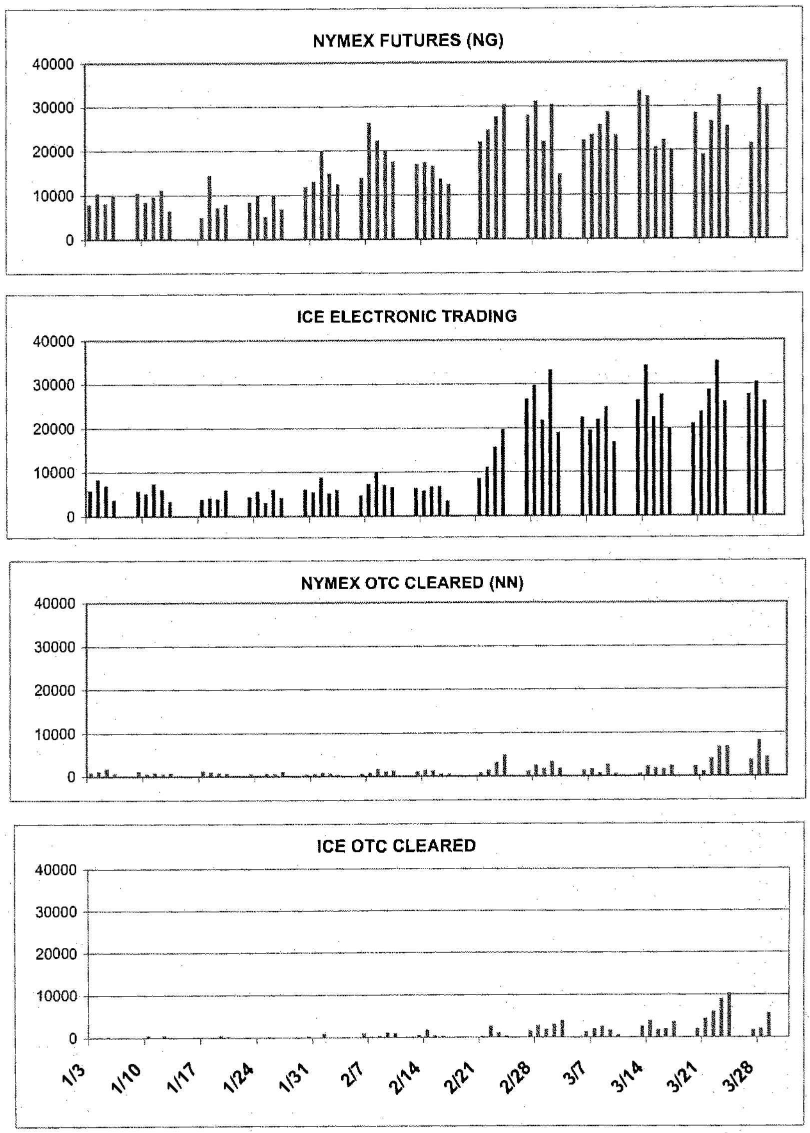
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR FEBRUARY 2006



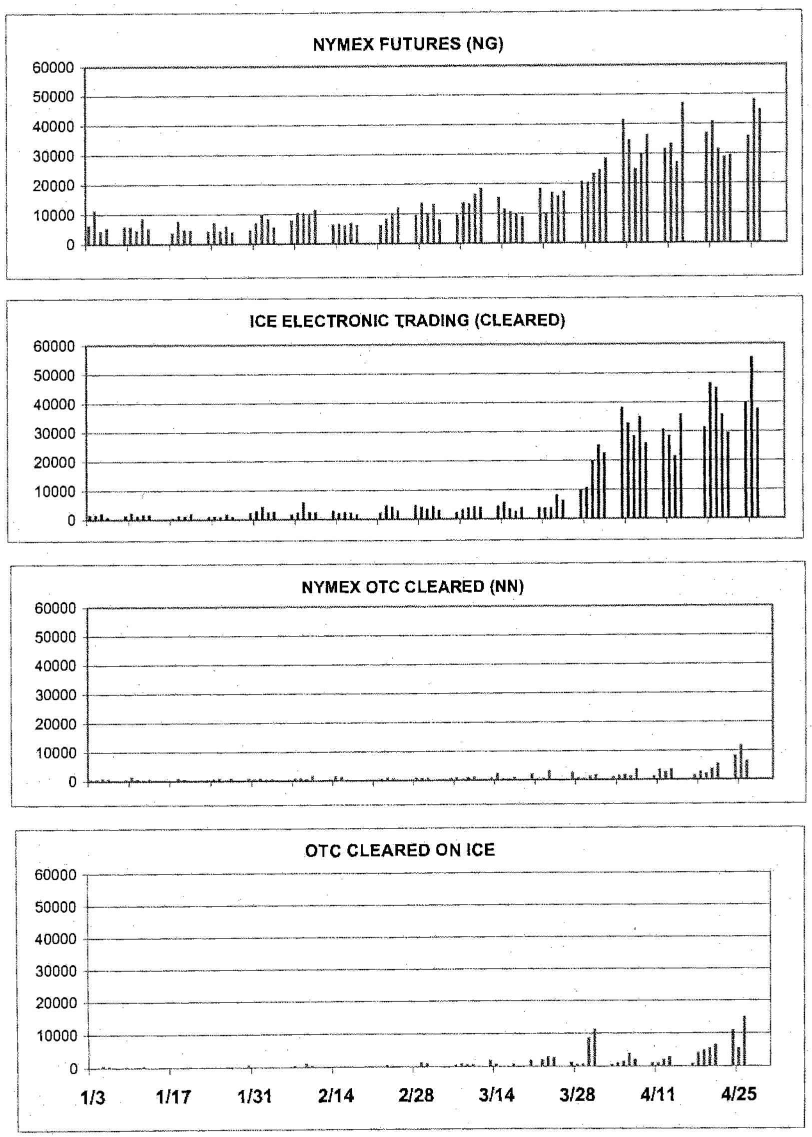
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR MARCH 2006



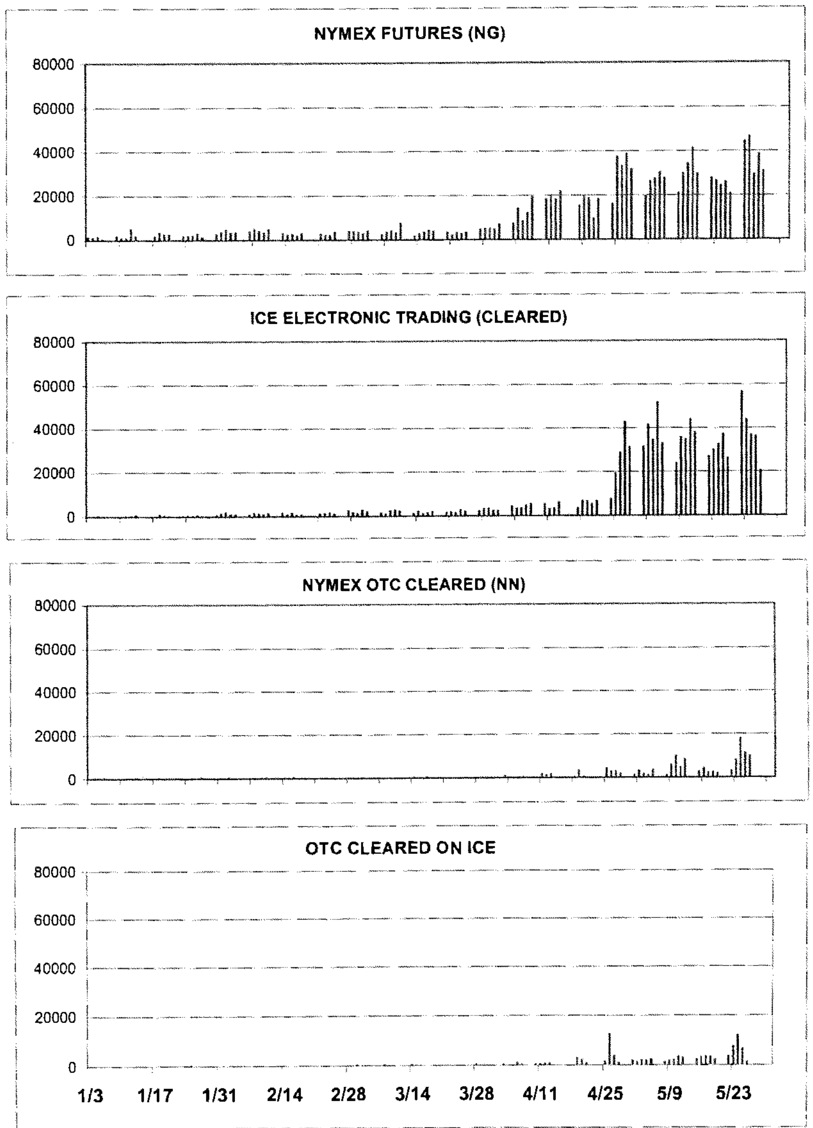
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR APRIL 2006



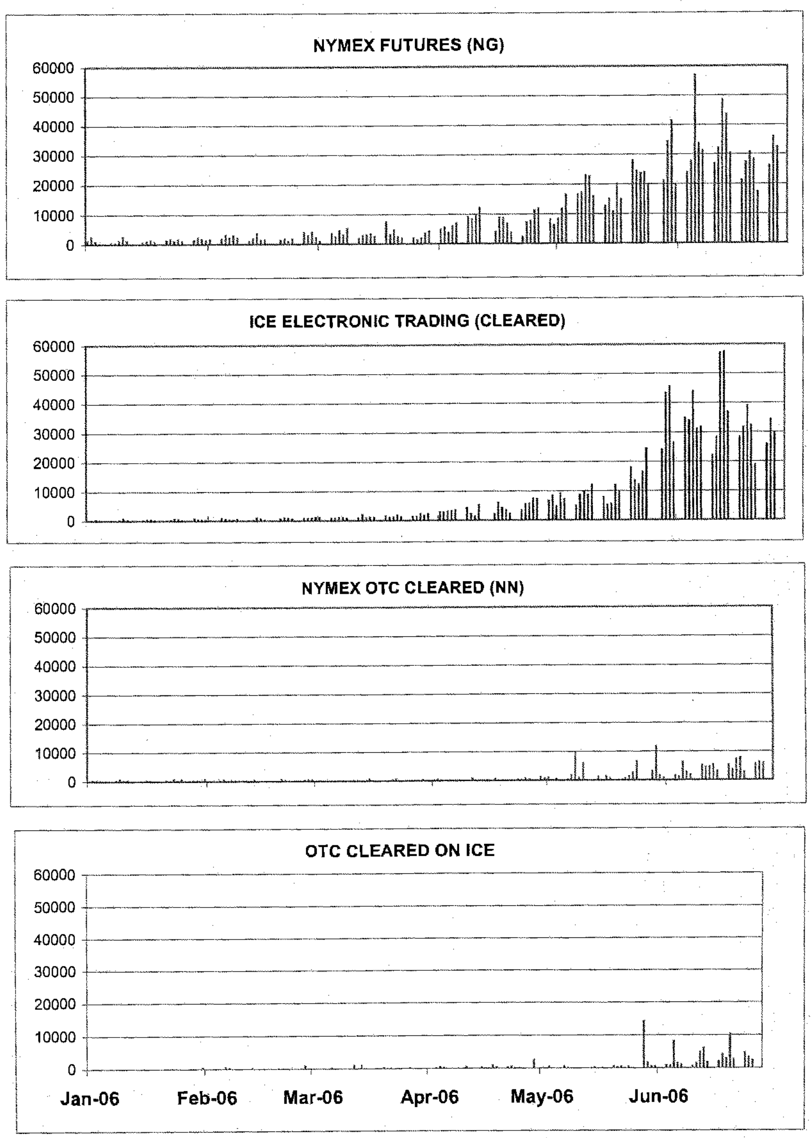
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR MAY 2006



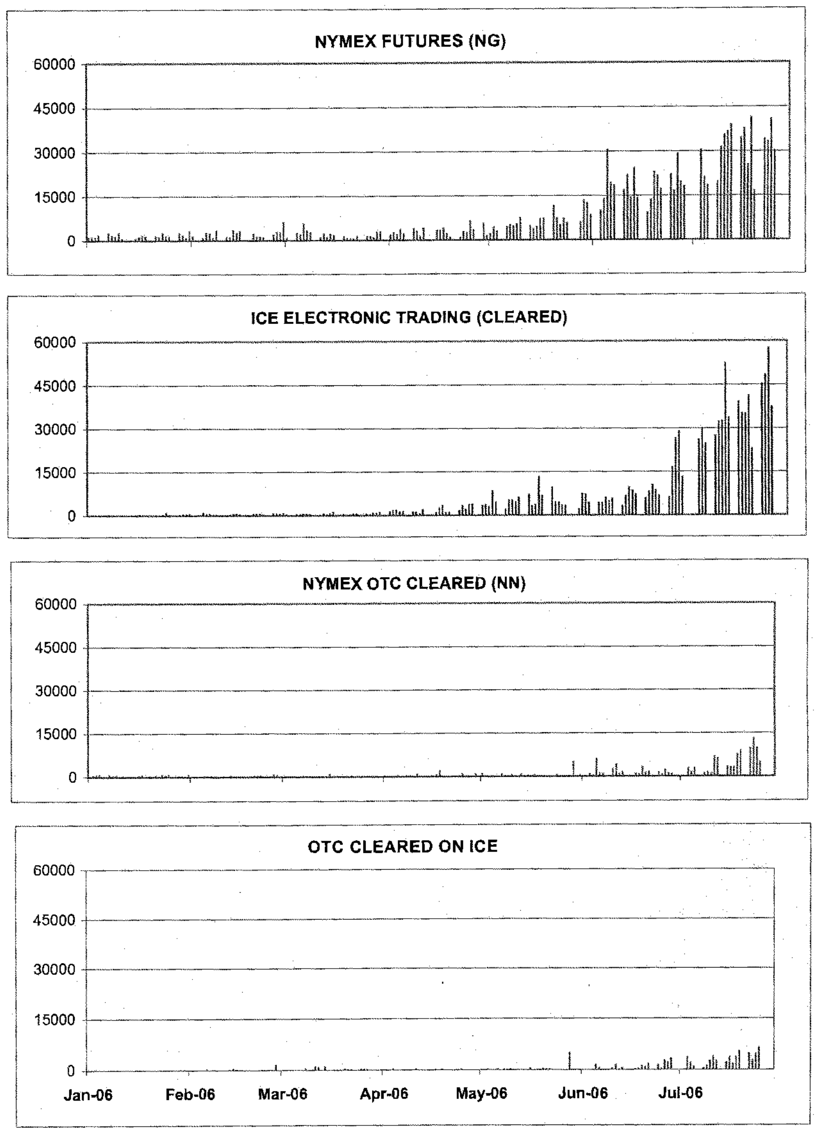
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR JUNE 2006



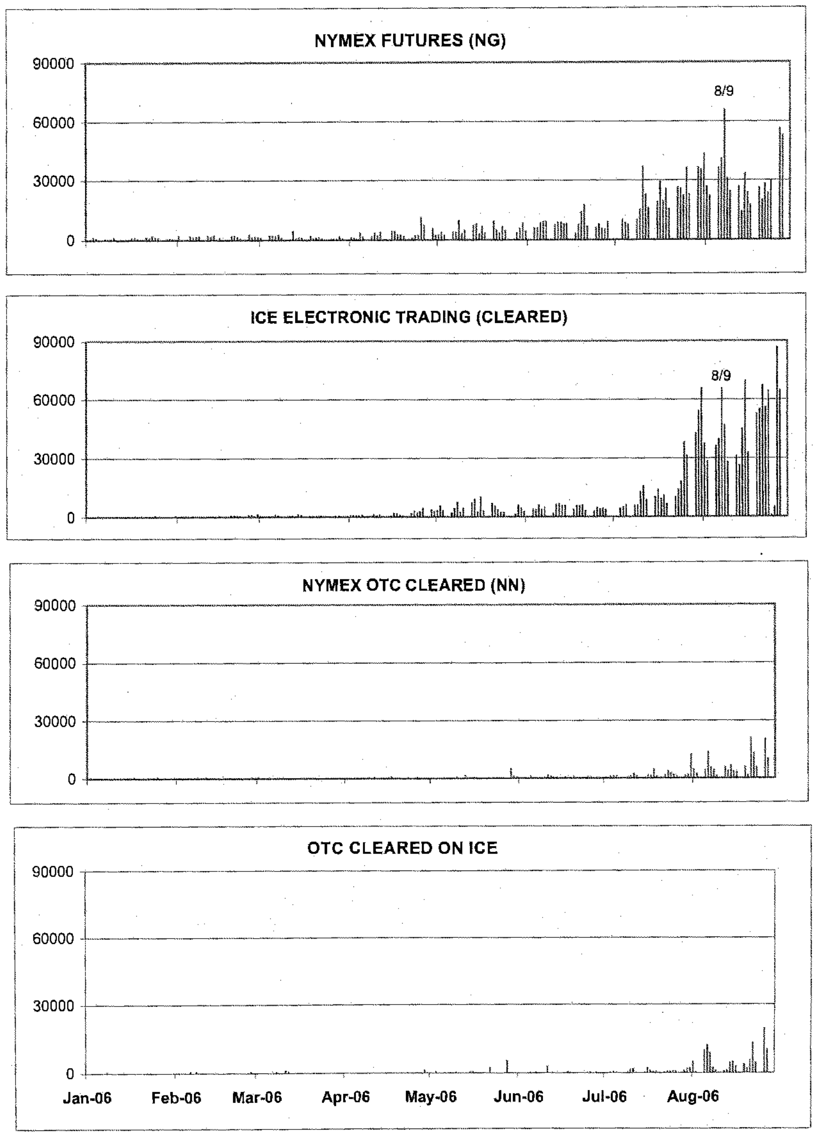
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR JULY 2006



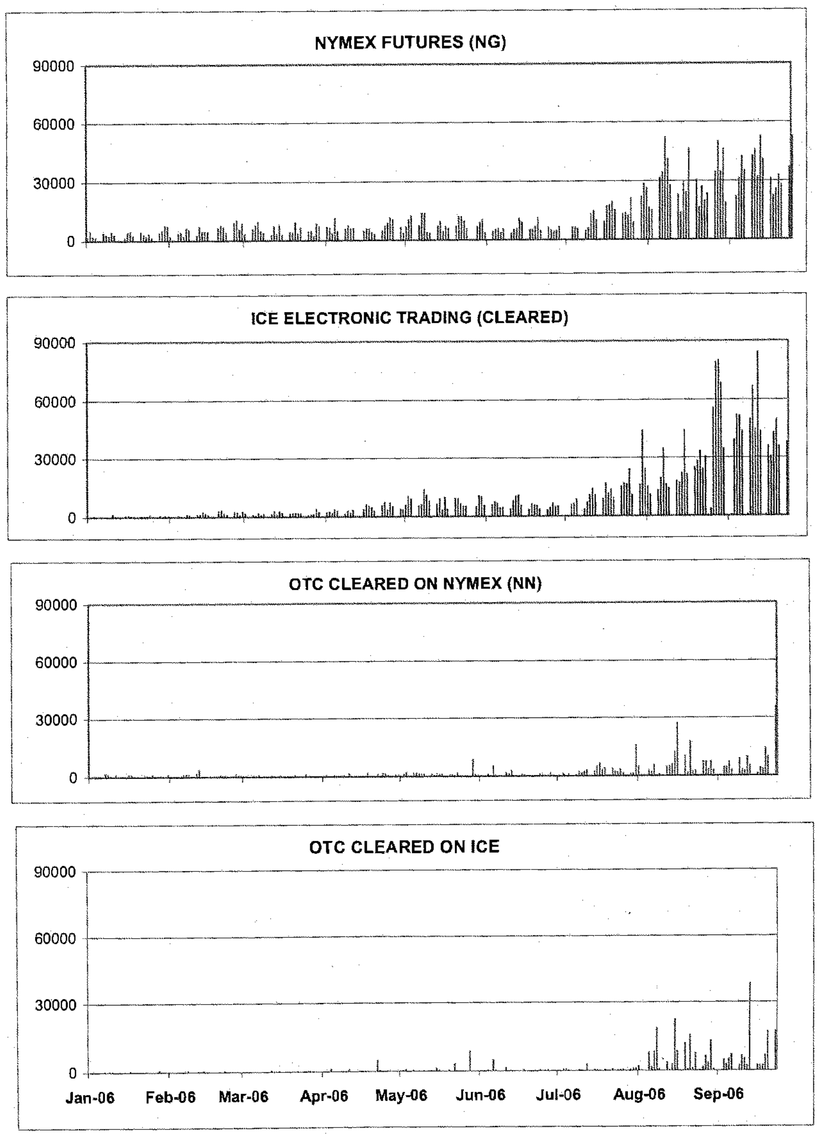
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR AUGUST 2006



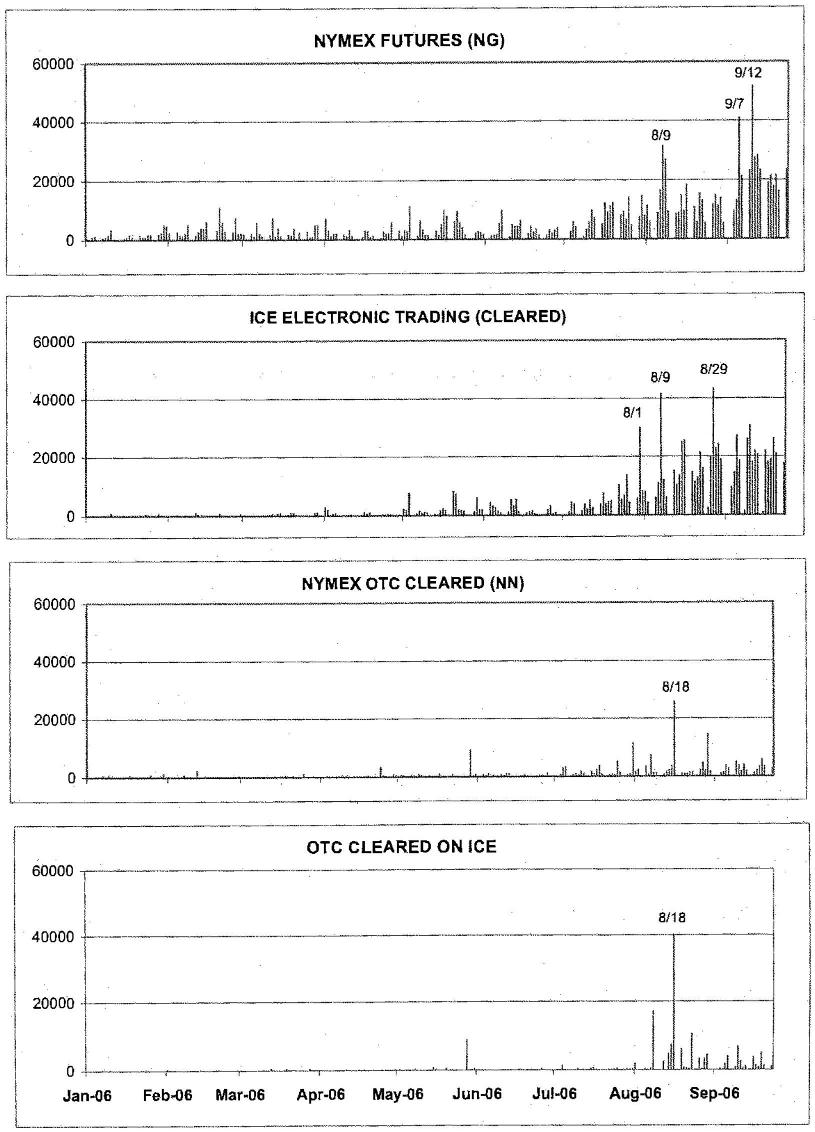
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR SEPTEMBER 2006



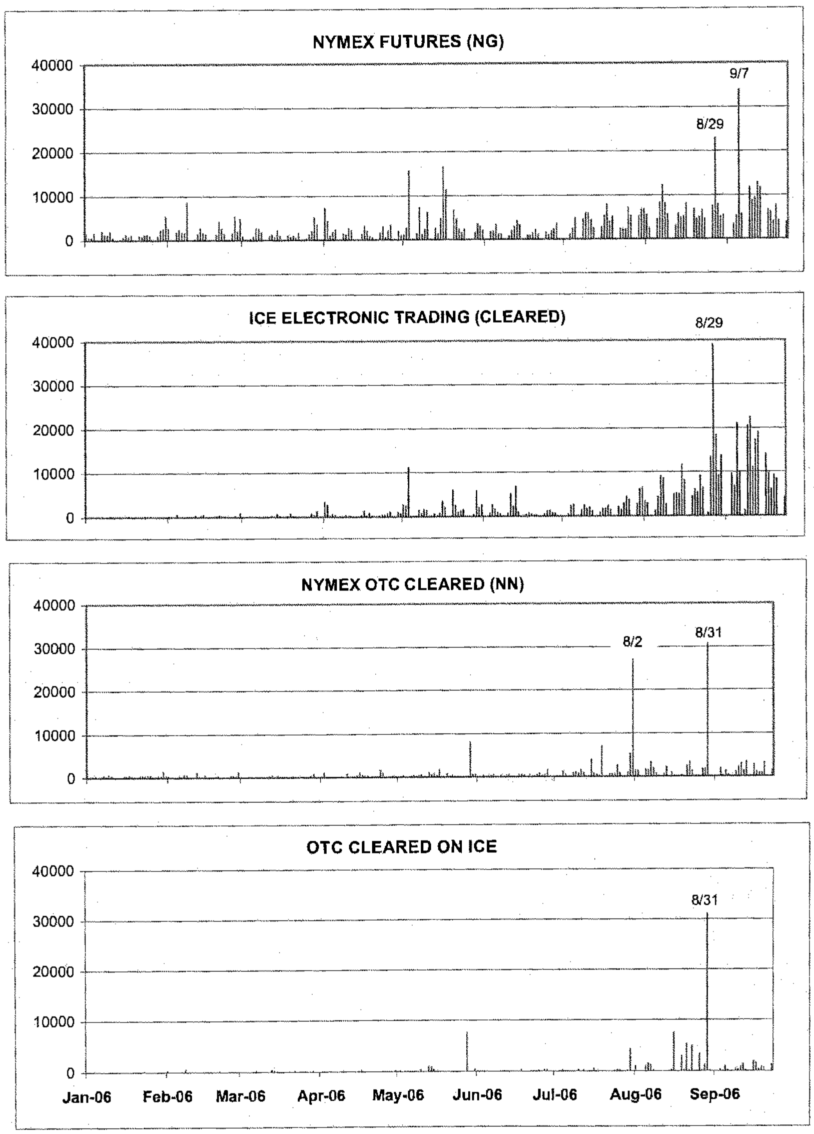
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR OCTOBER 2006



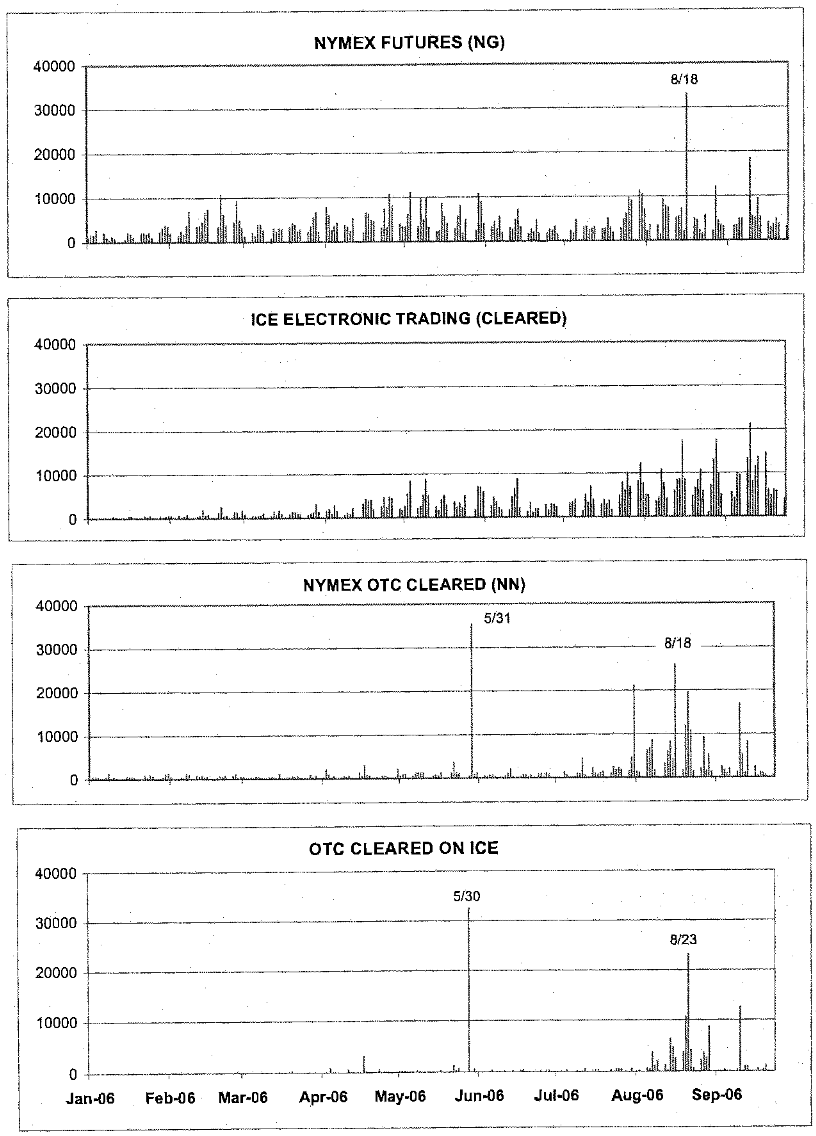
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR NOVEMBER 2006



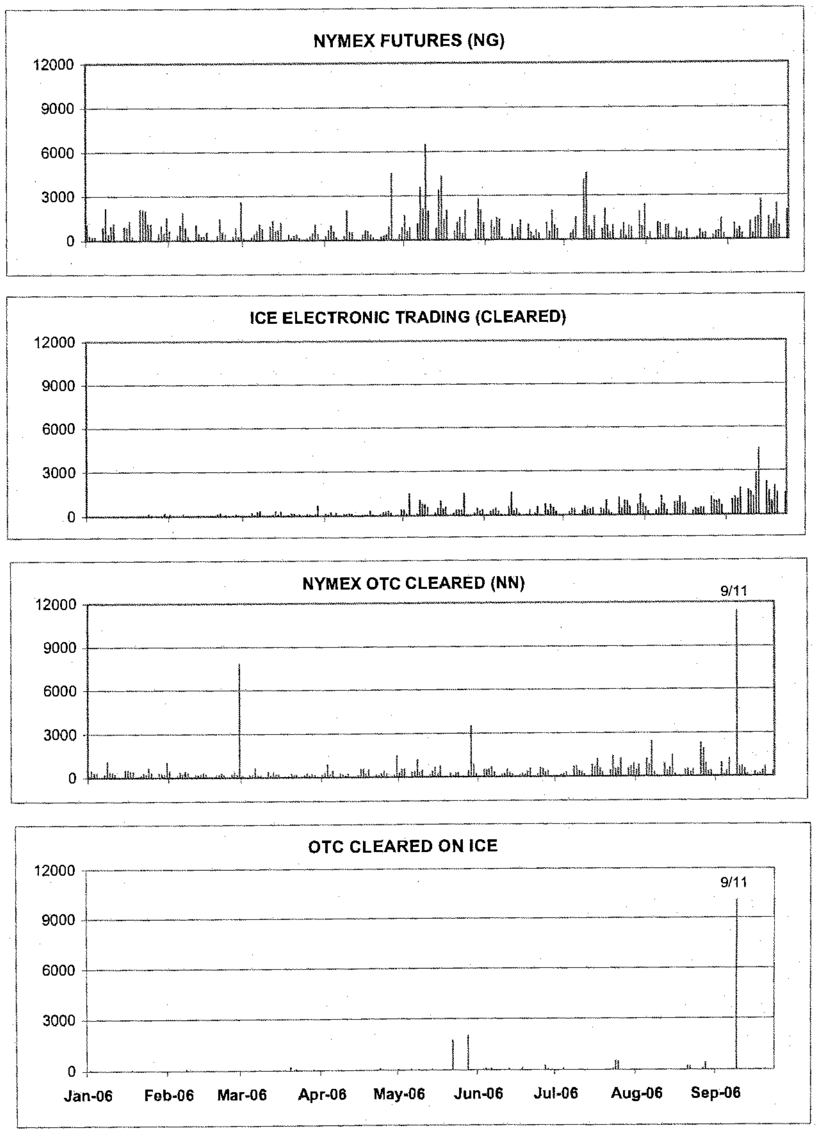
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR DECEMBER 2006



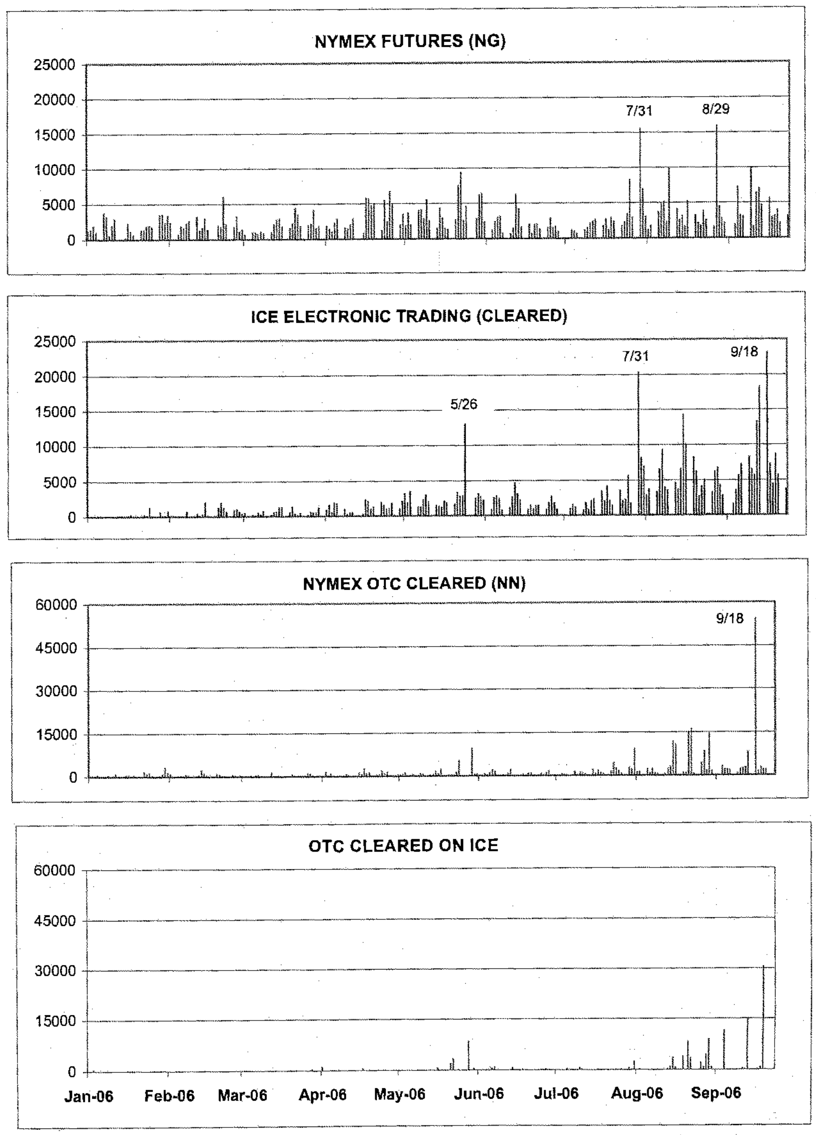
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR JANUARY 2007



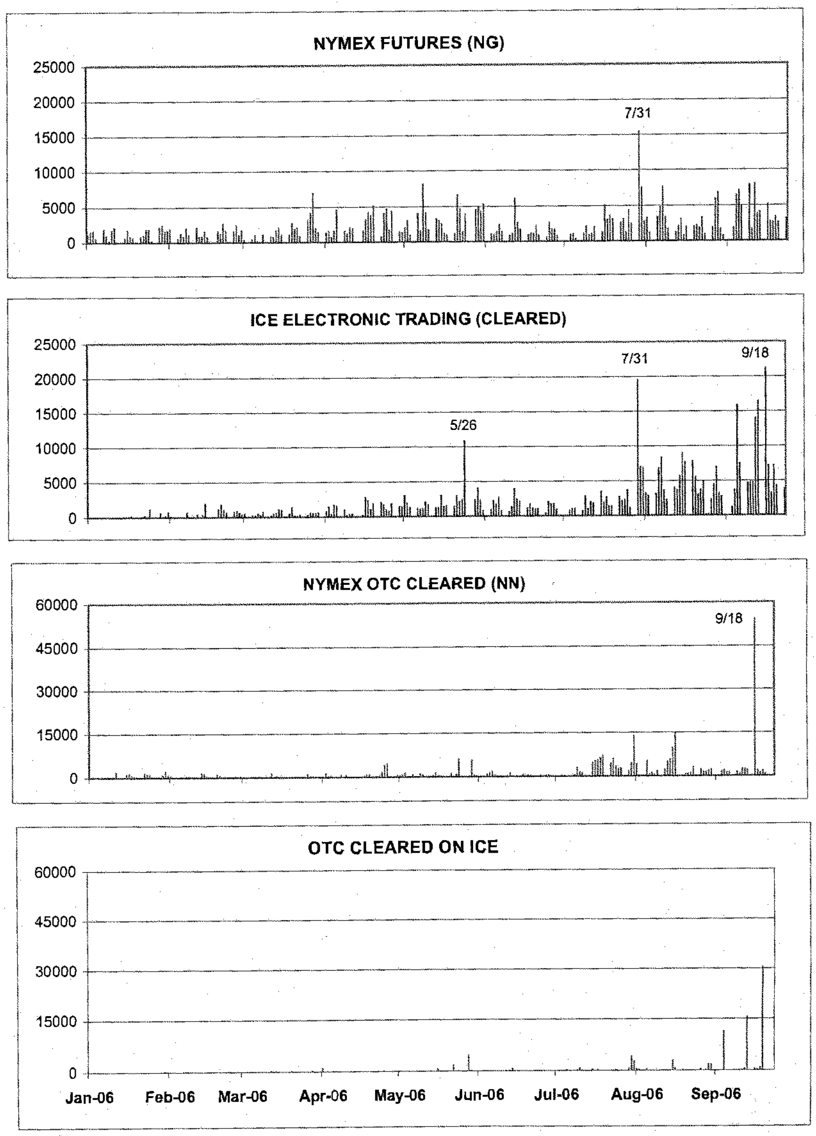
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR FEBRUARY 2007



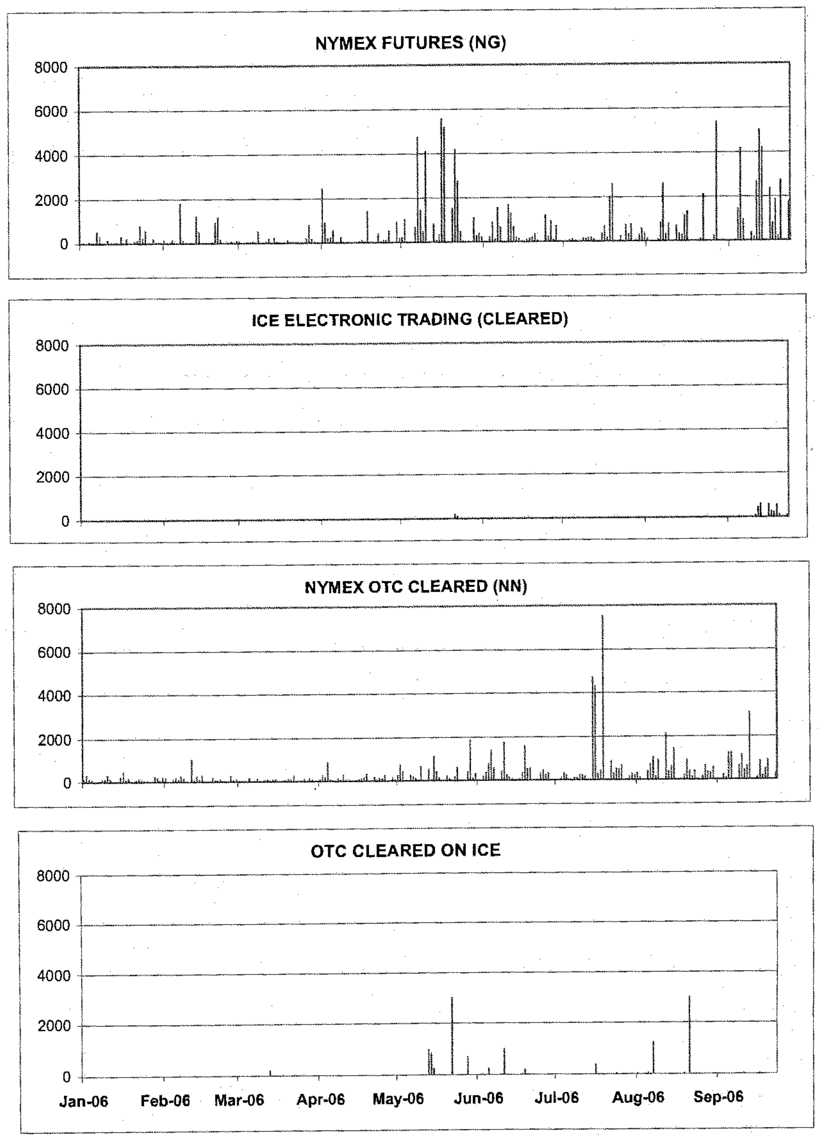
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR MARCH 2007



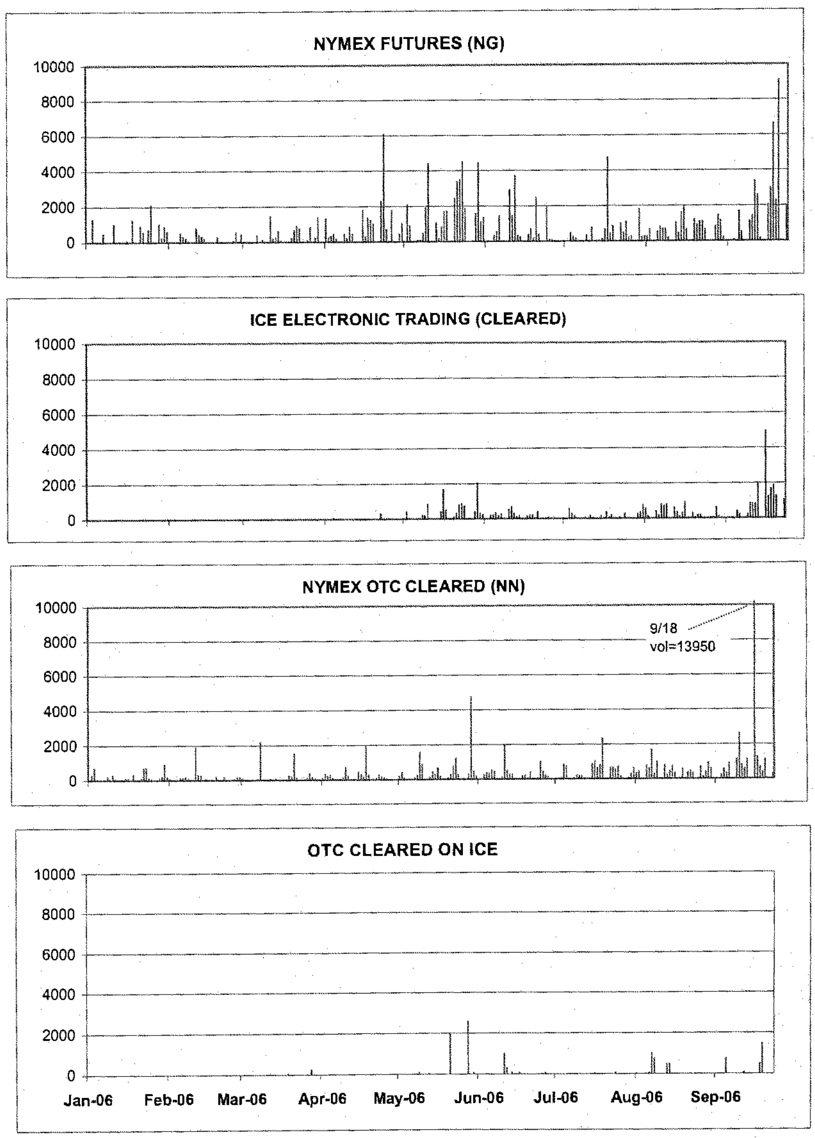
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR APRIL 2007



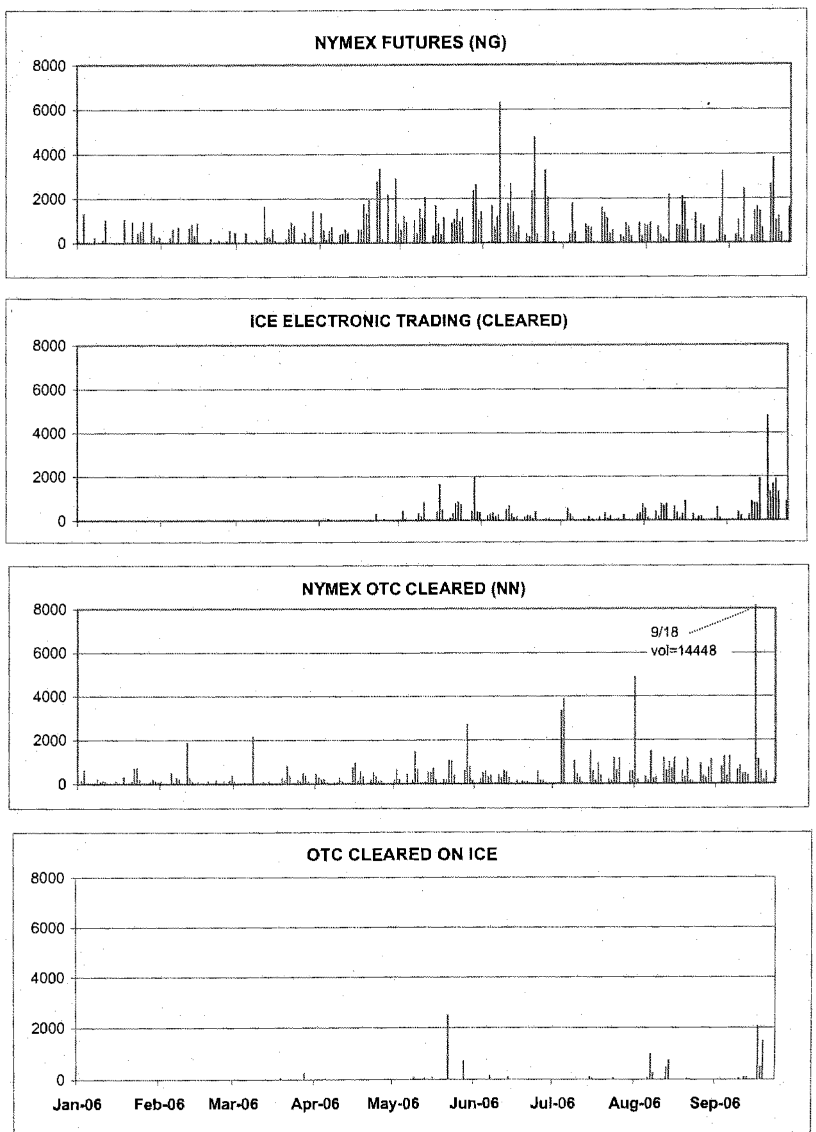
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR DECEMBER 2007



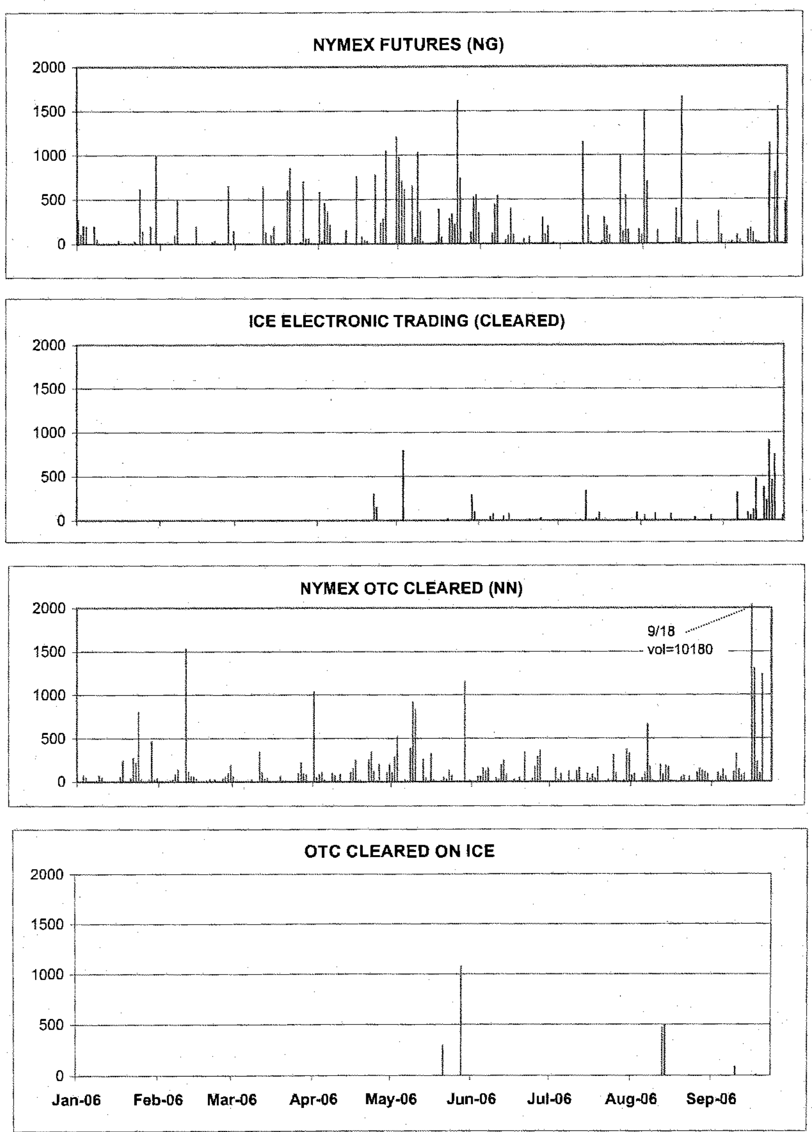
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR MARCH 2008



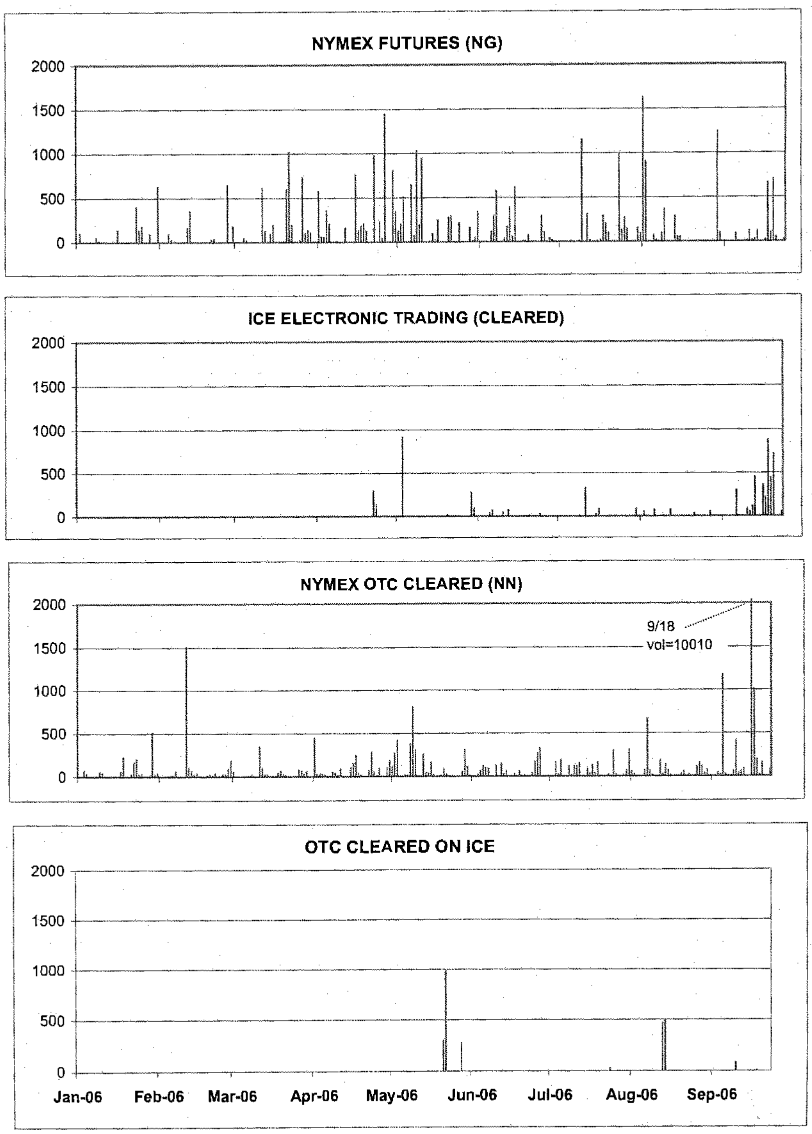
NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR APRIL 2008



NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR MARCH 2009

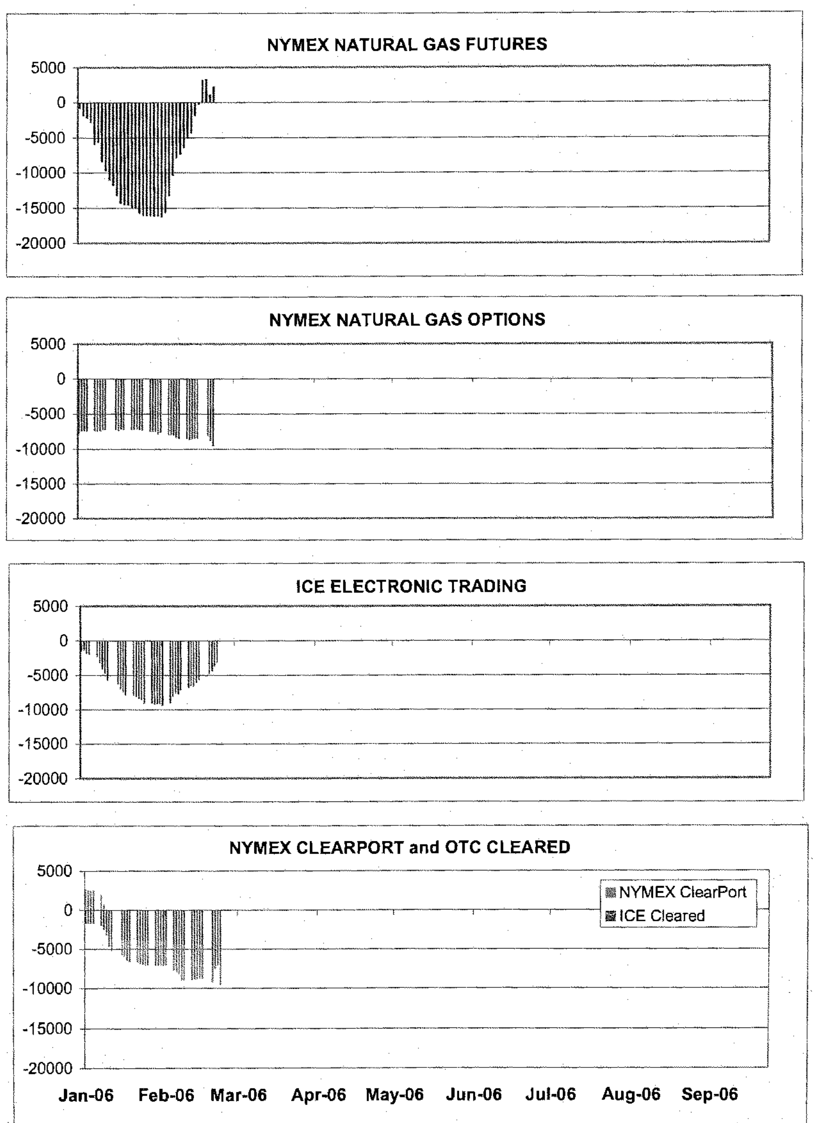


NYMEX AND ICE TRADING VOLUMES
NATURAL GAS CONTRACTS FOR APRIL 2009

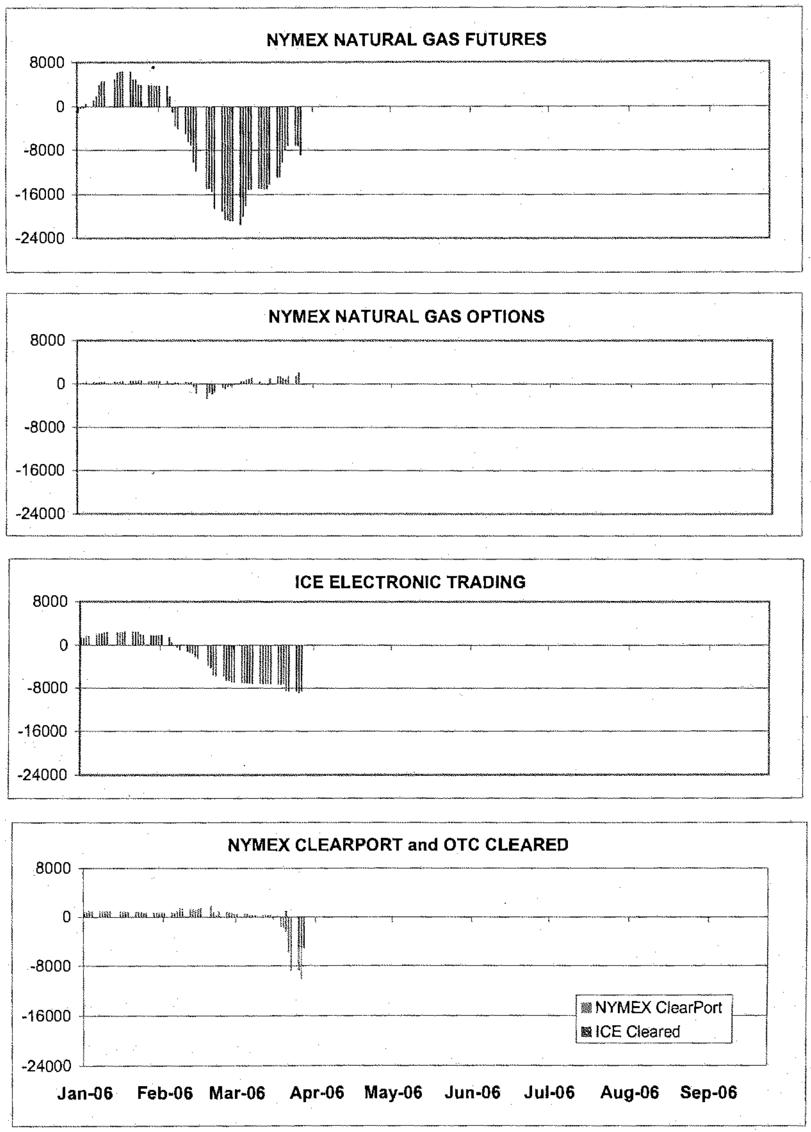


APPENDIX III

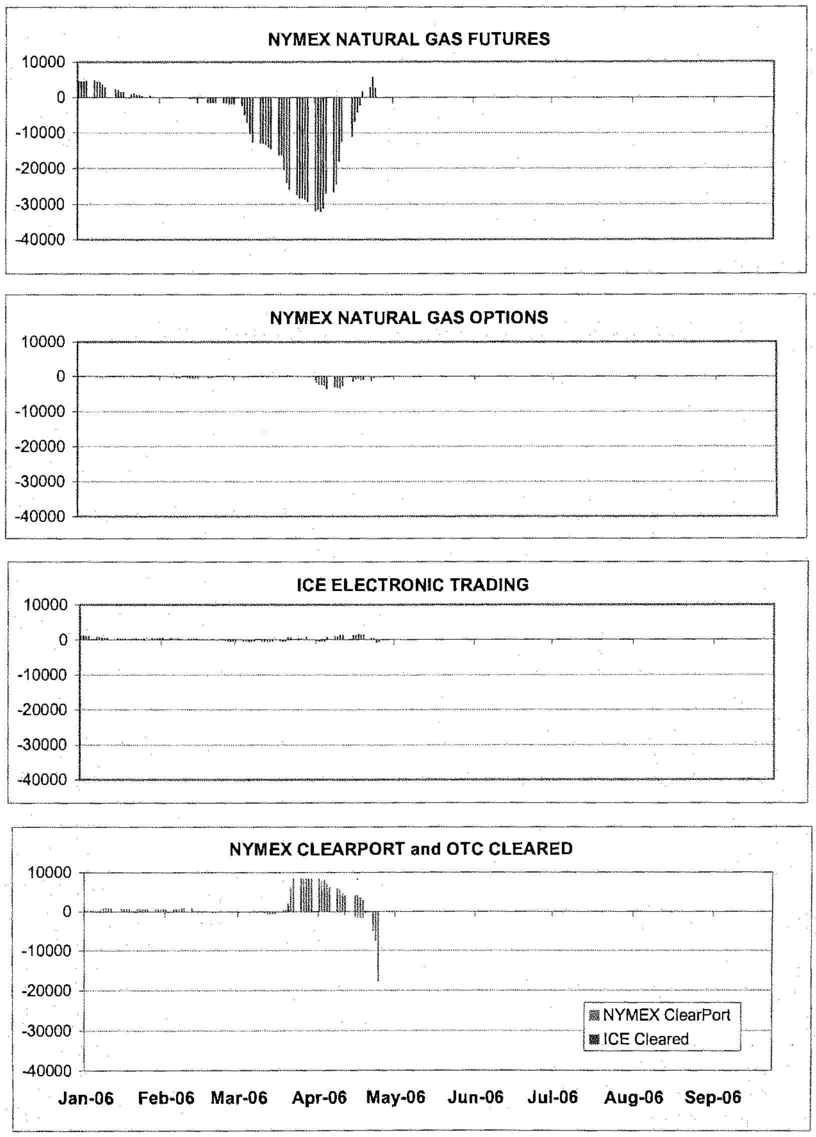
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR MARCH 06



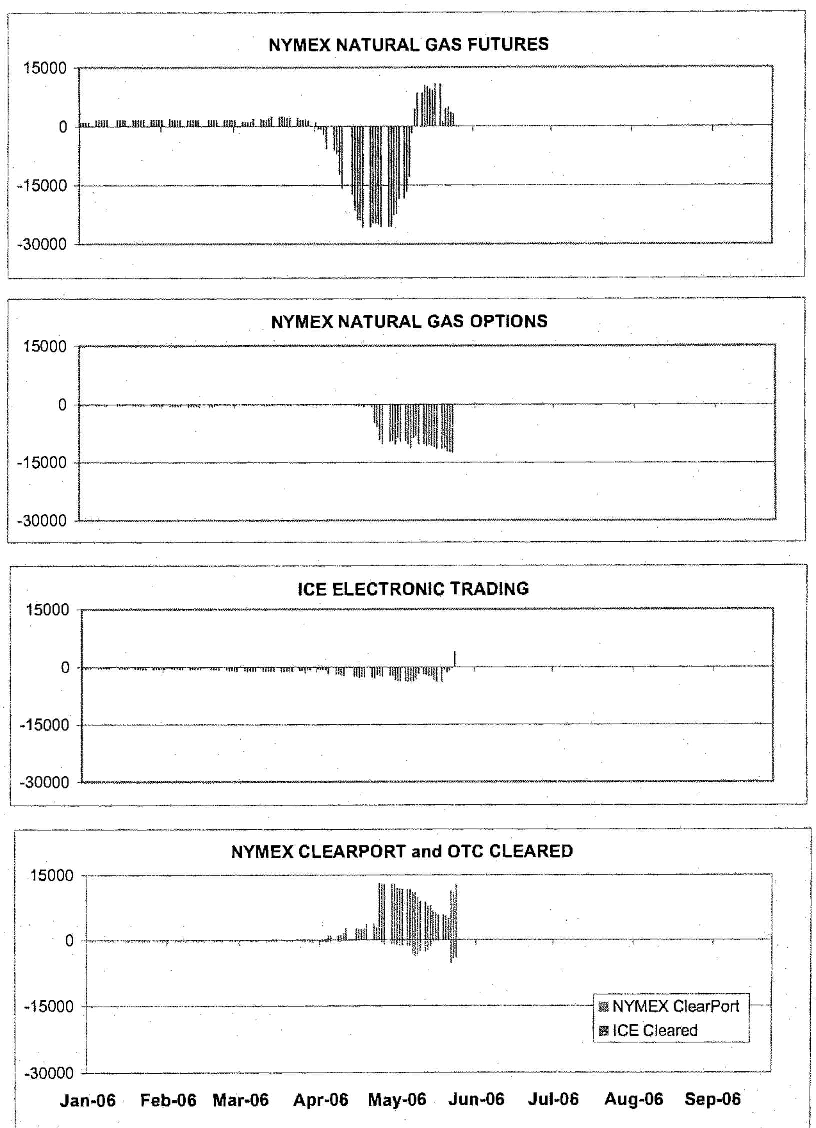
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR APRIL 06



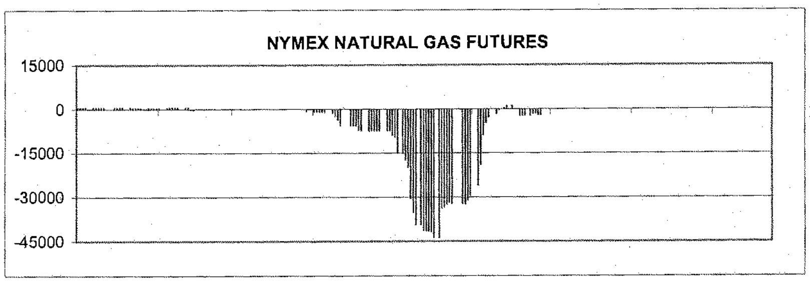
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR MAY 06

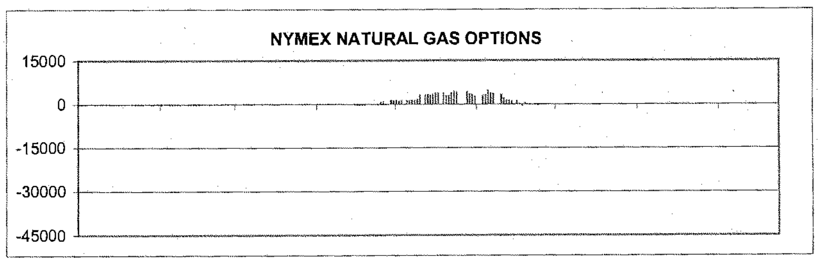


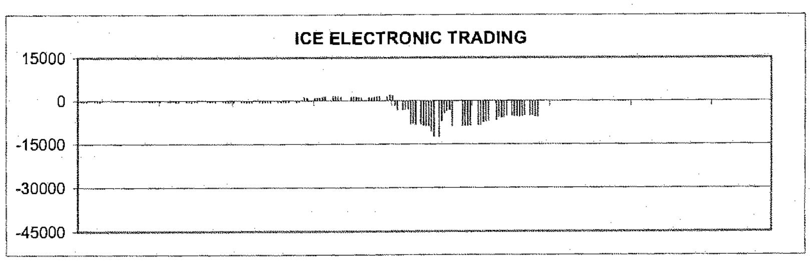
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR JUNE 06

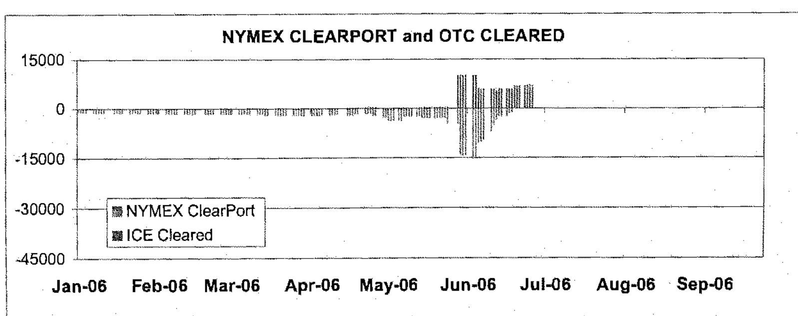


AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR JULY 06

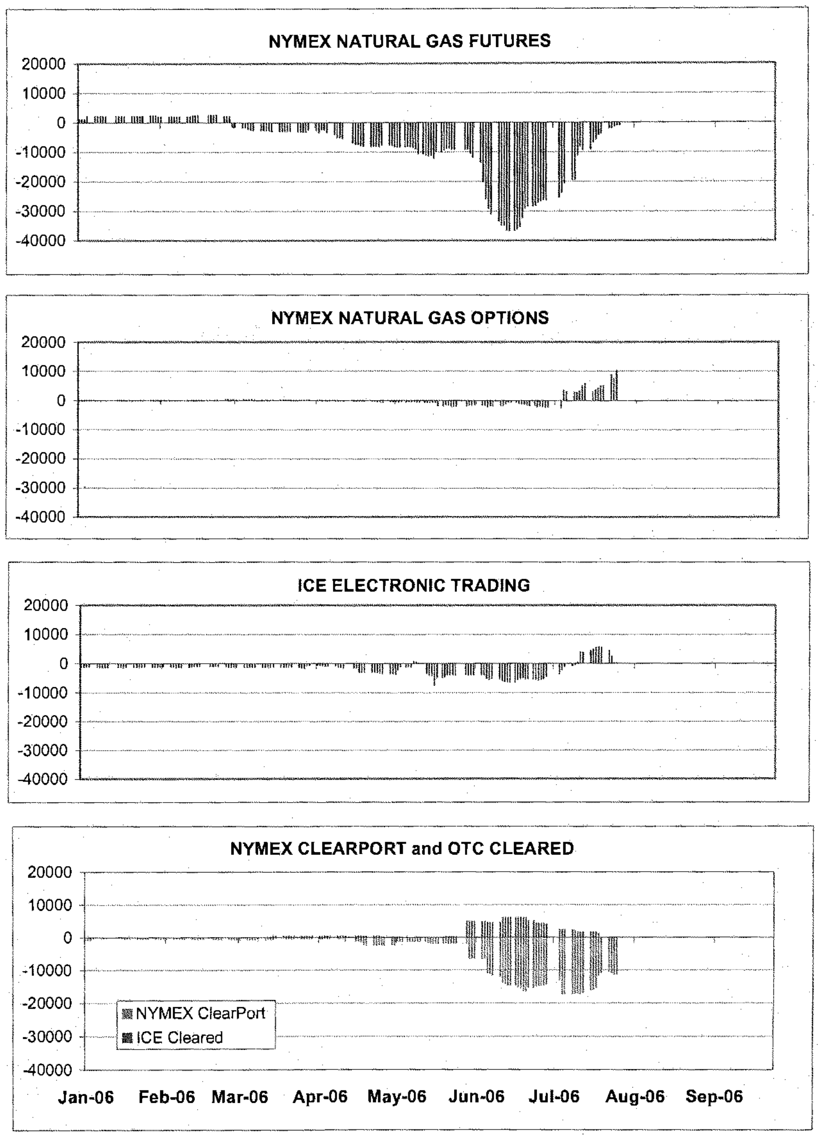




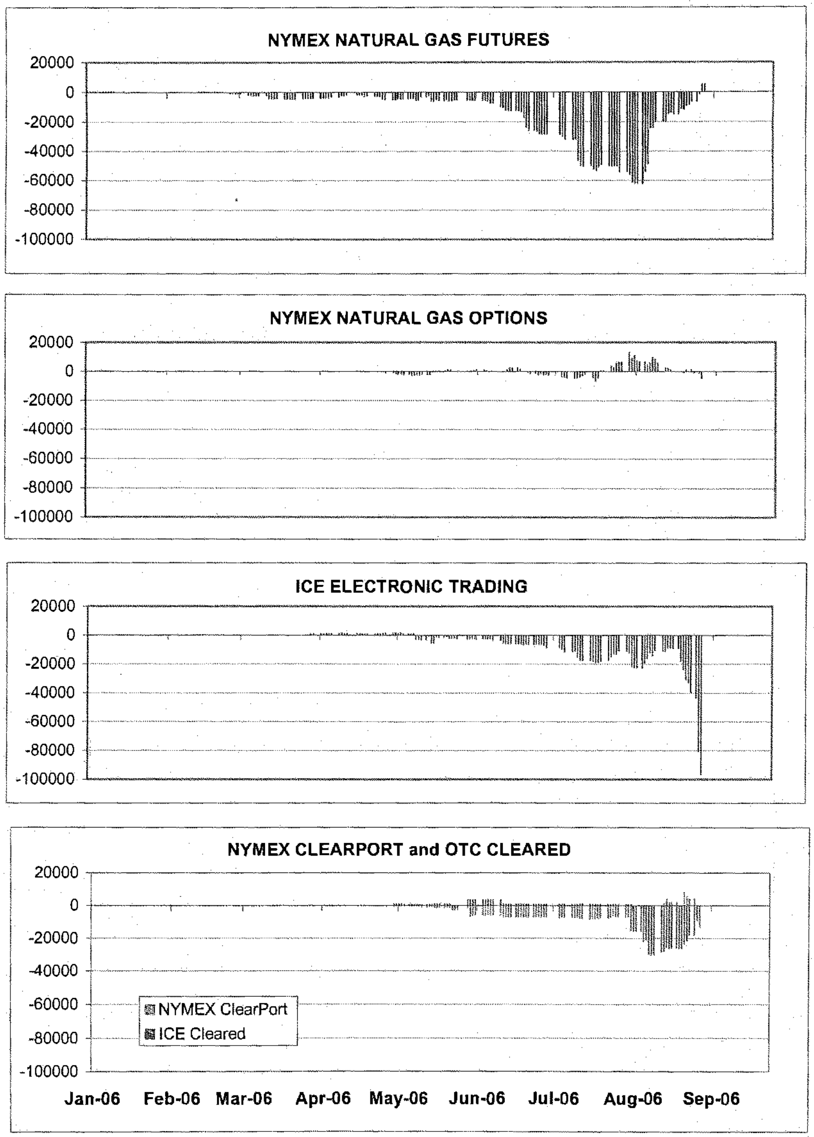




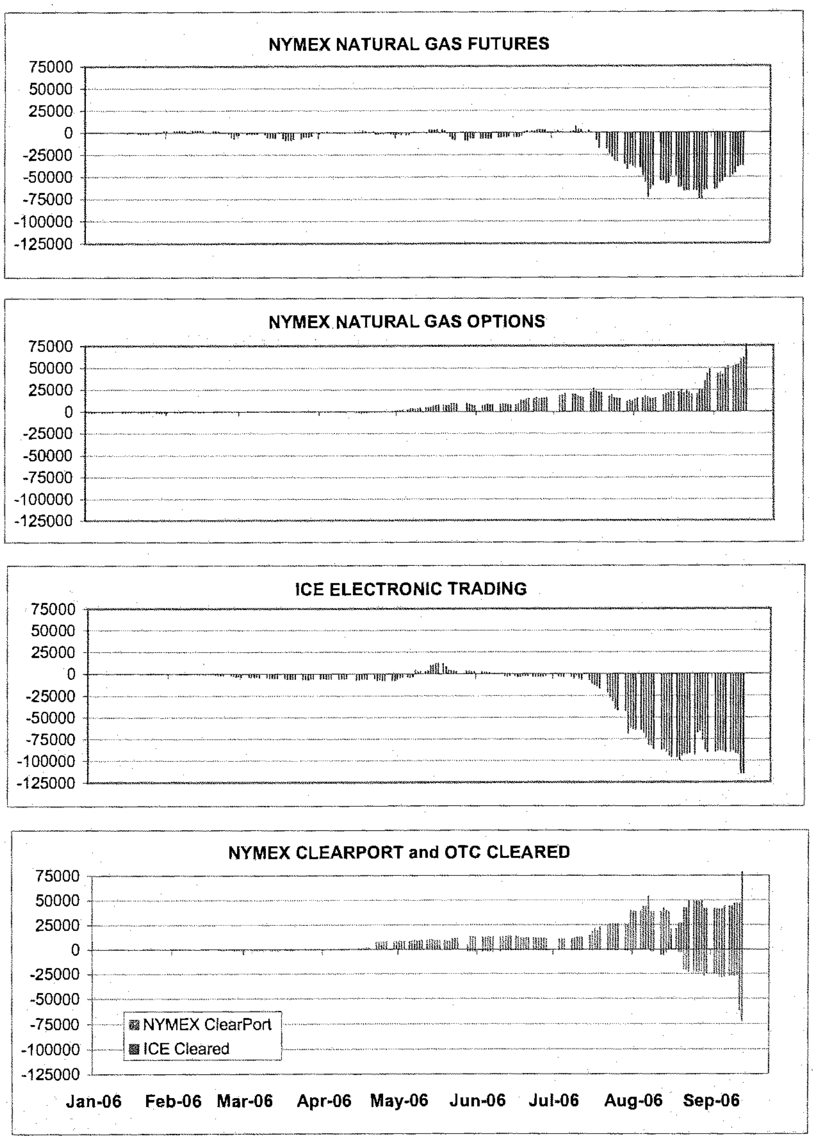
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR AUGUST 06



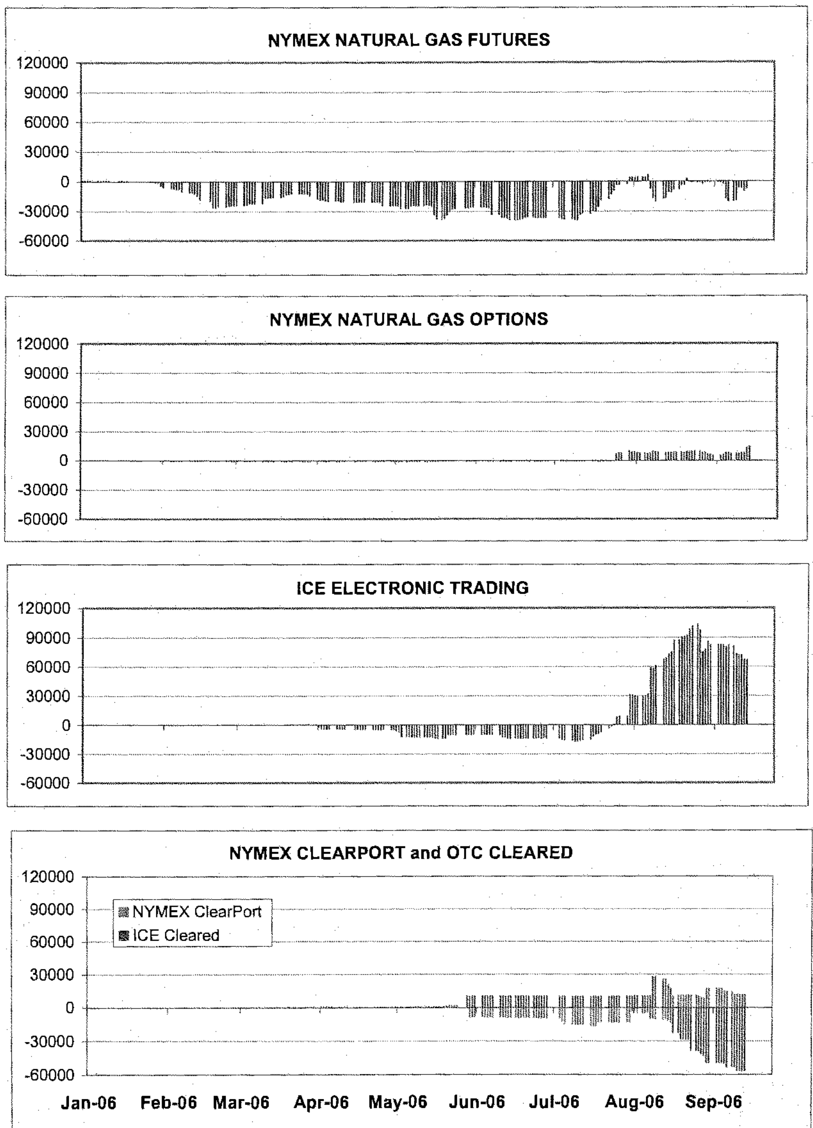
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR SEPTEMBER 06



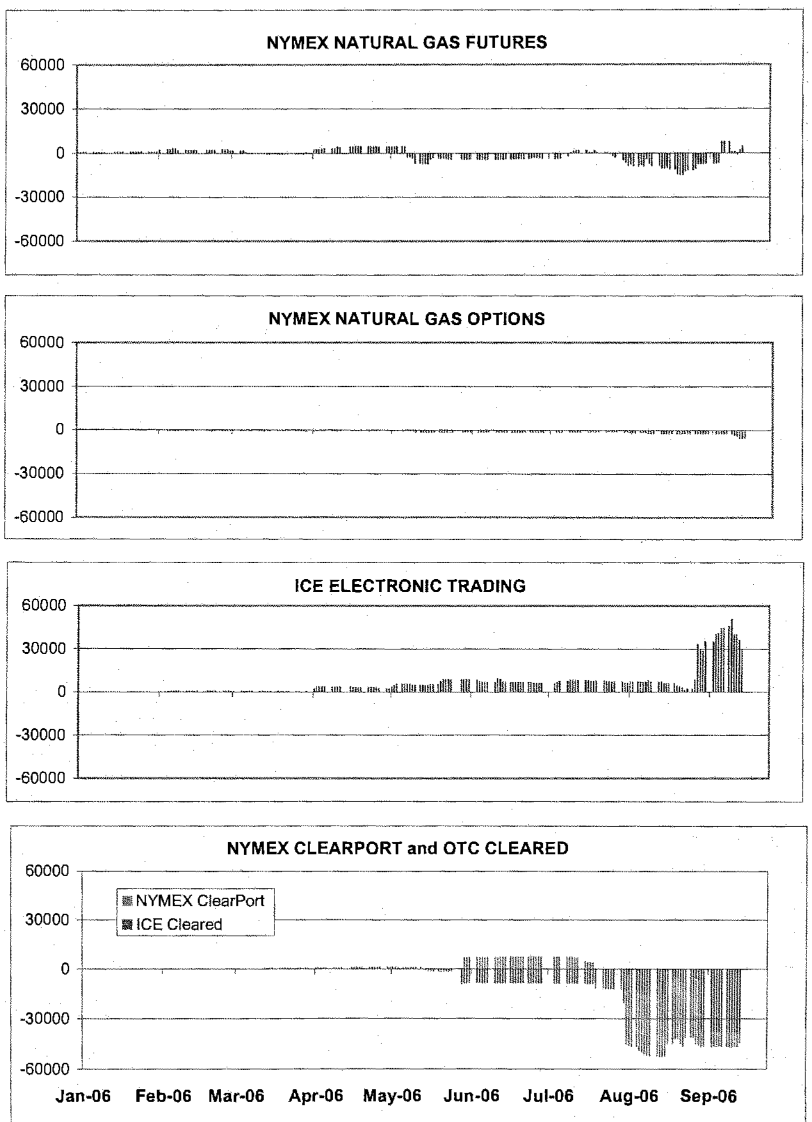
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR OCTOBER 06



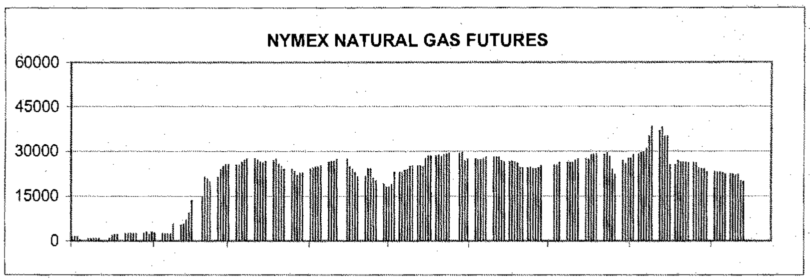
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR NOVEMBER 06

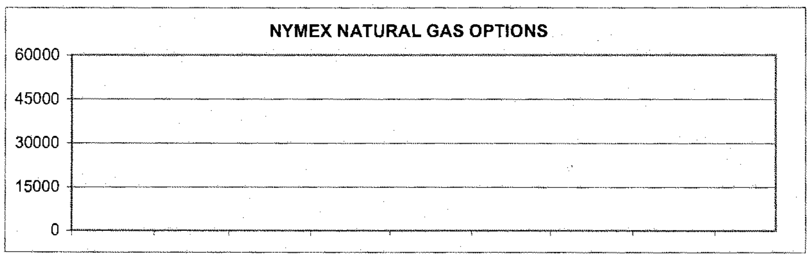


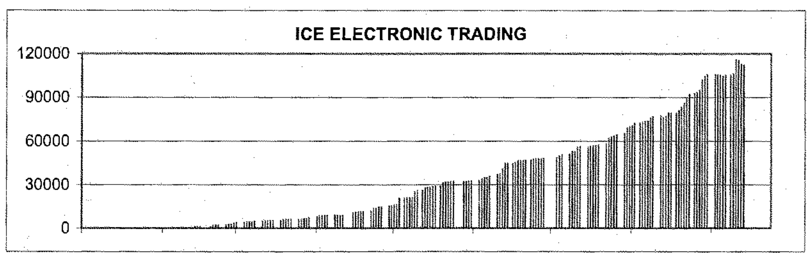
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR DECEMBER 06

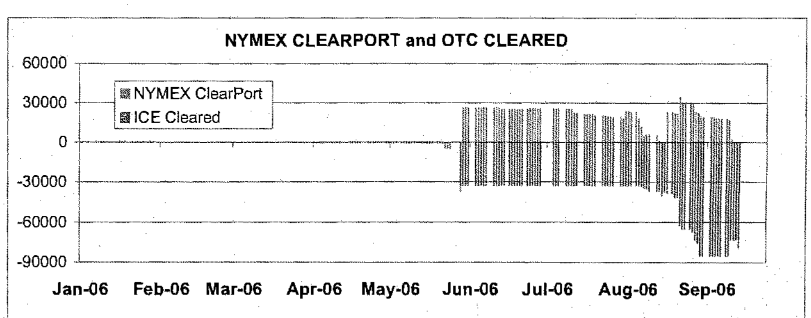


AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR JANUARY 07

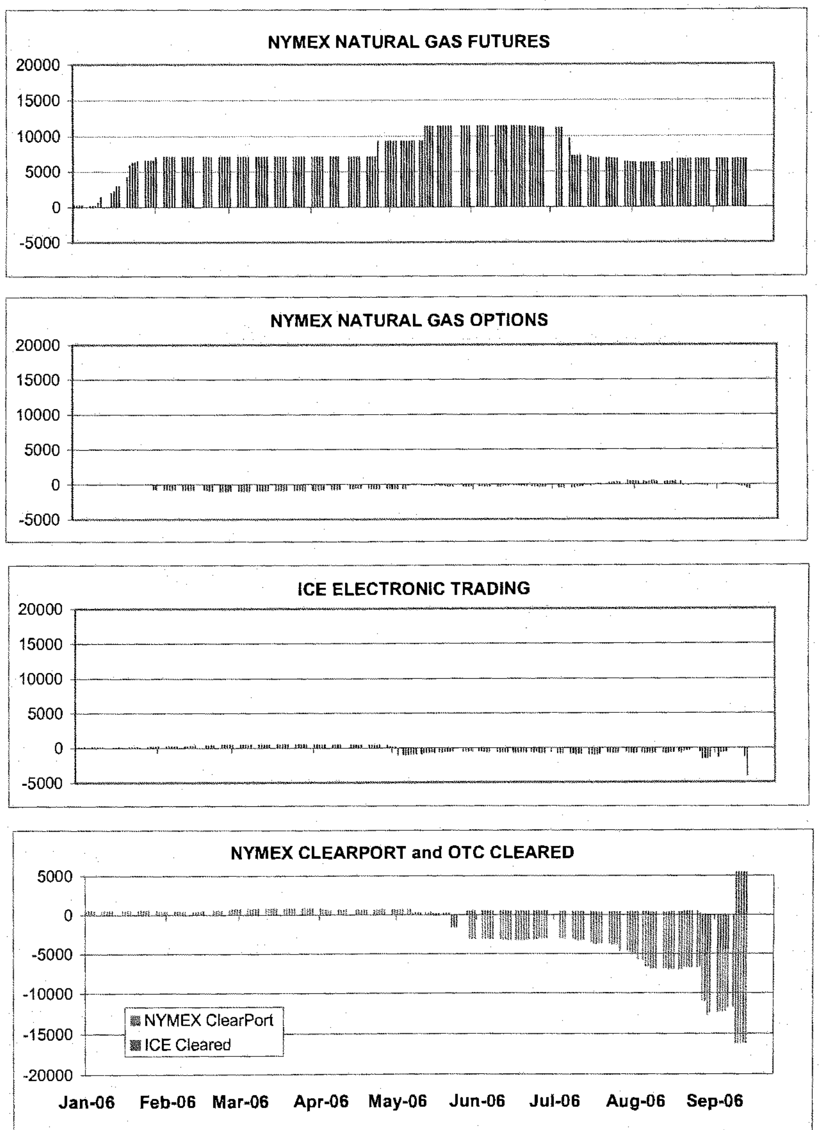




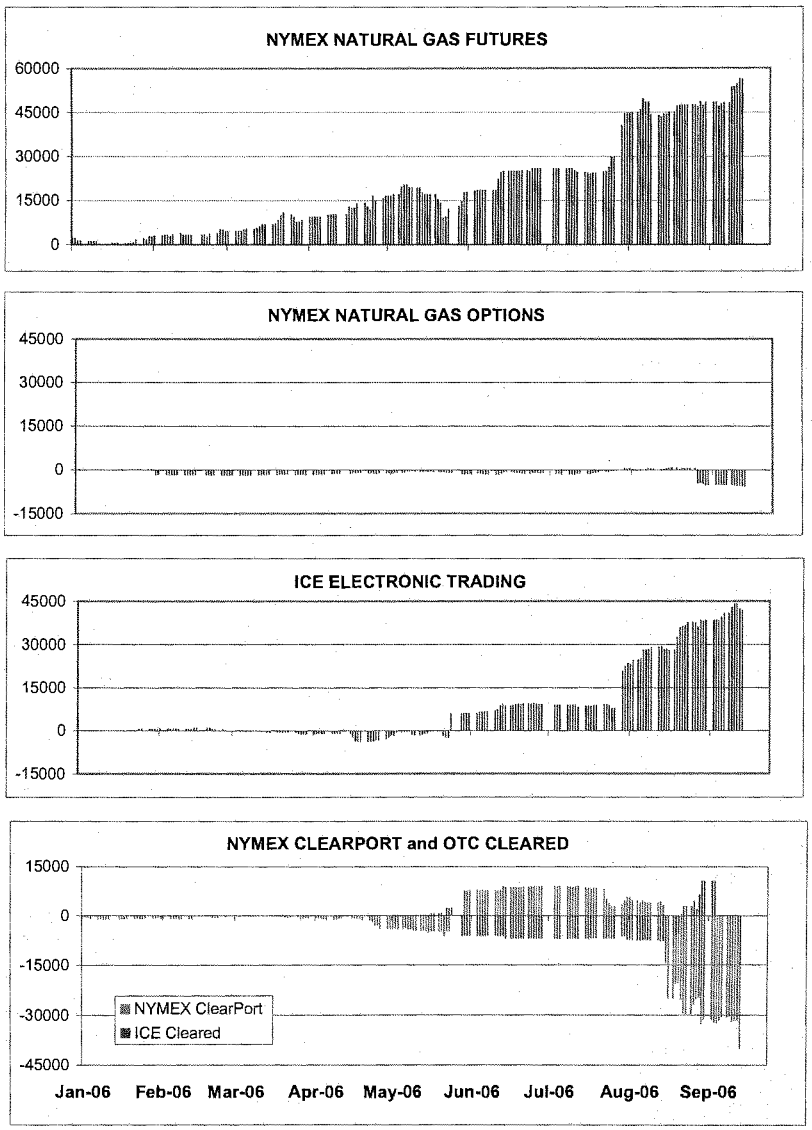




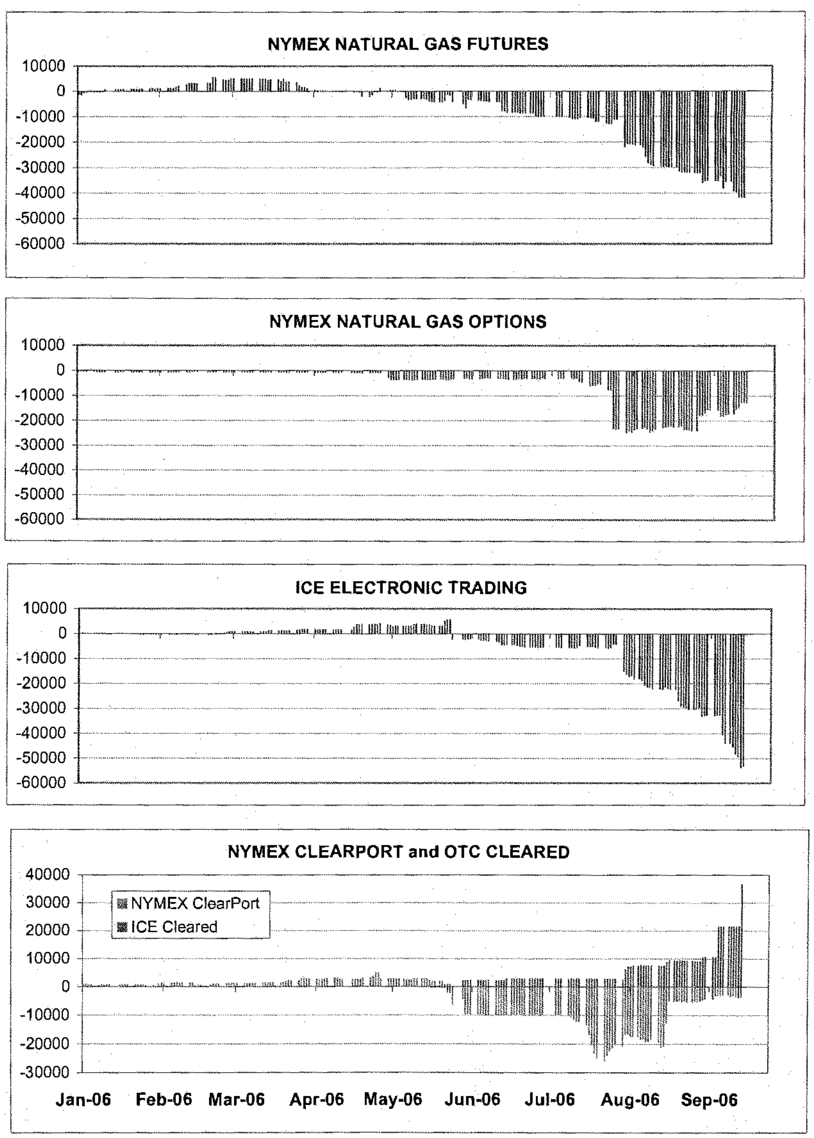
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR FEBRUARY 07



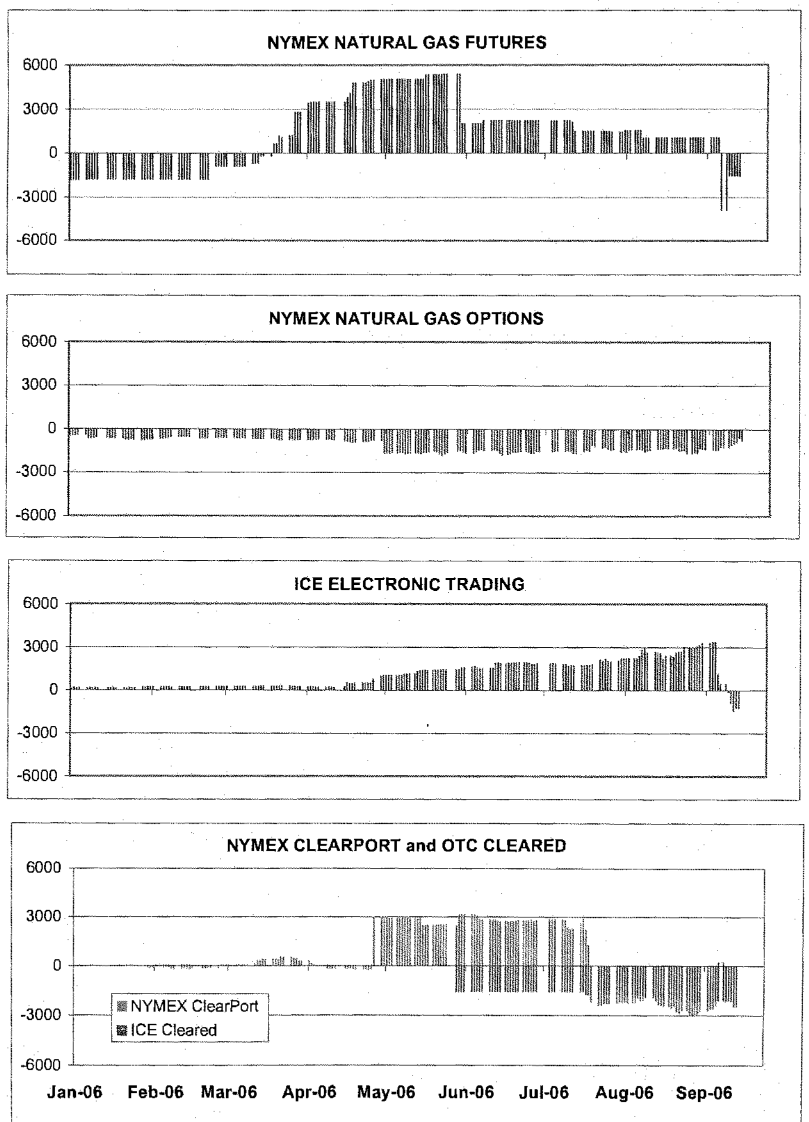
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR MARCH 07



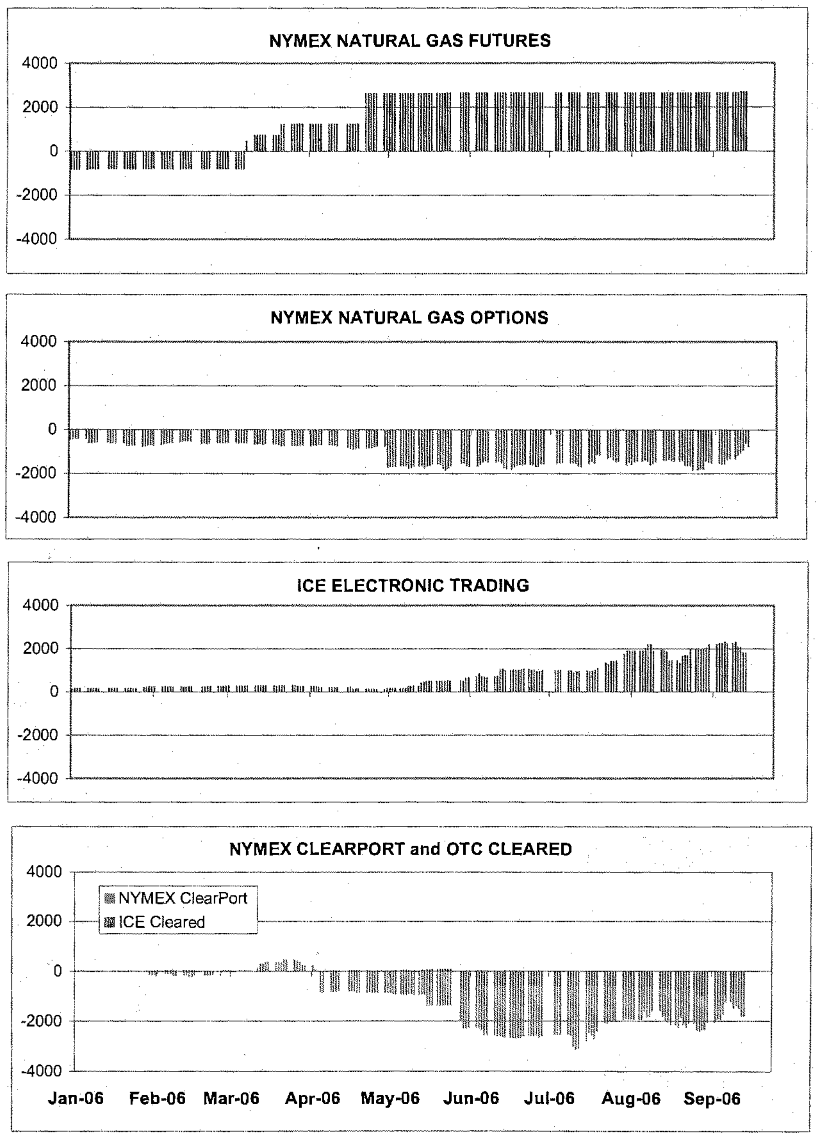
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR APRIL 07



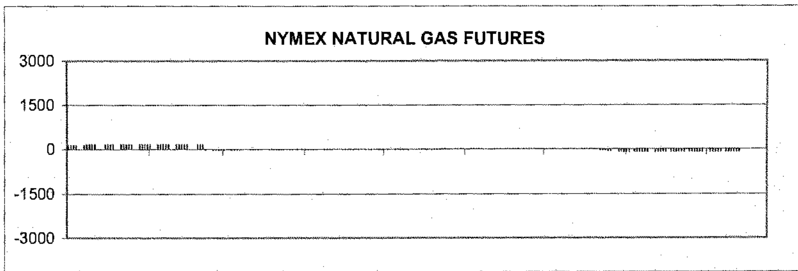
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR MAY 07

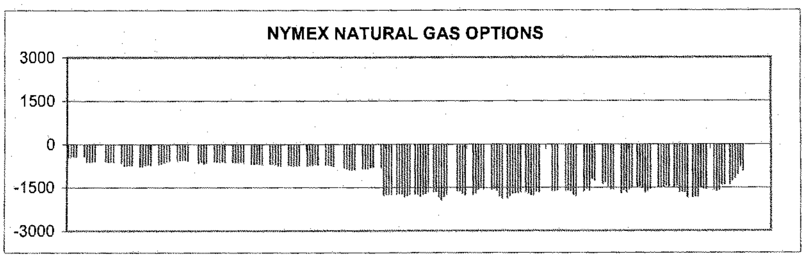


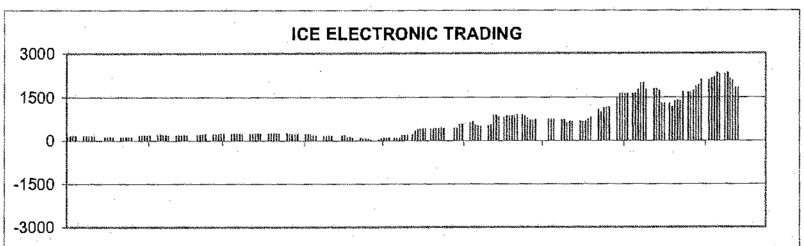
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR JUNE 07

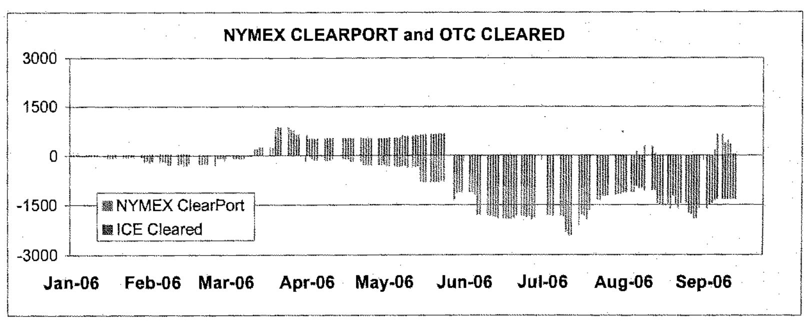


AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR JULY 07

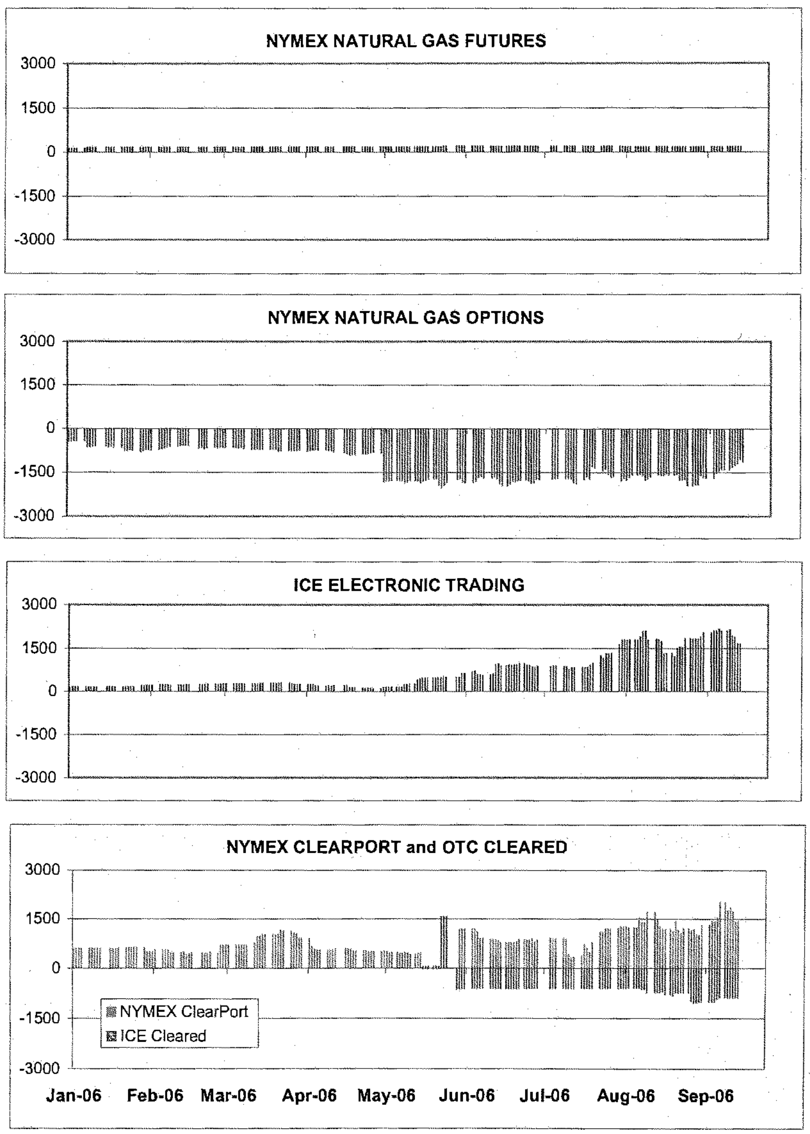




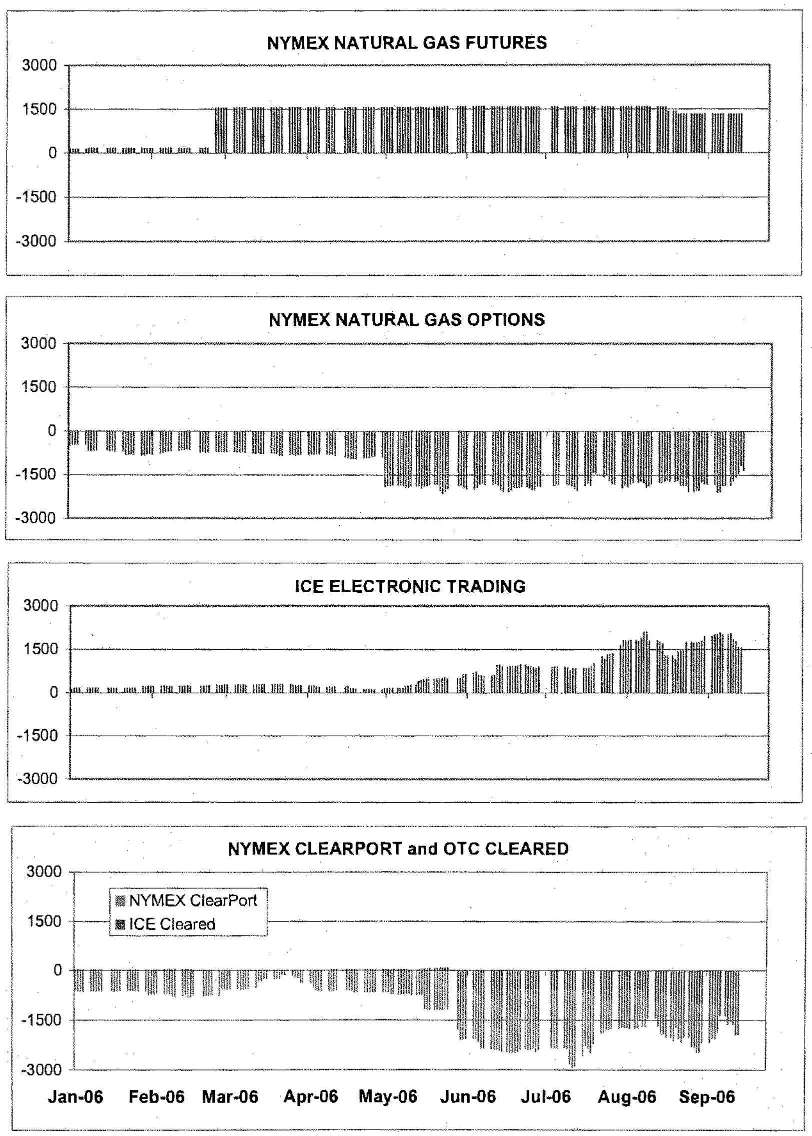




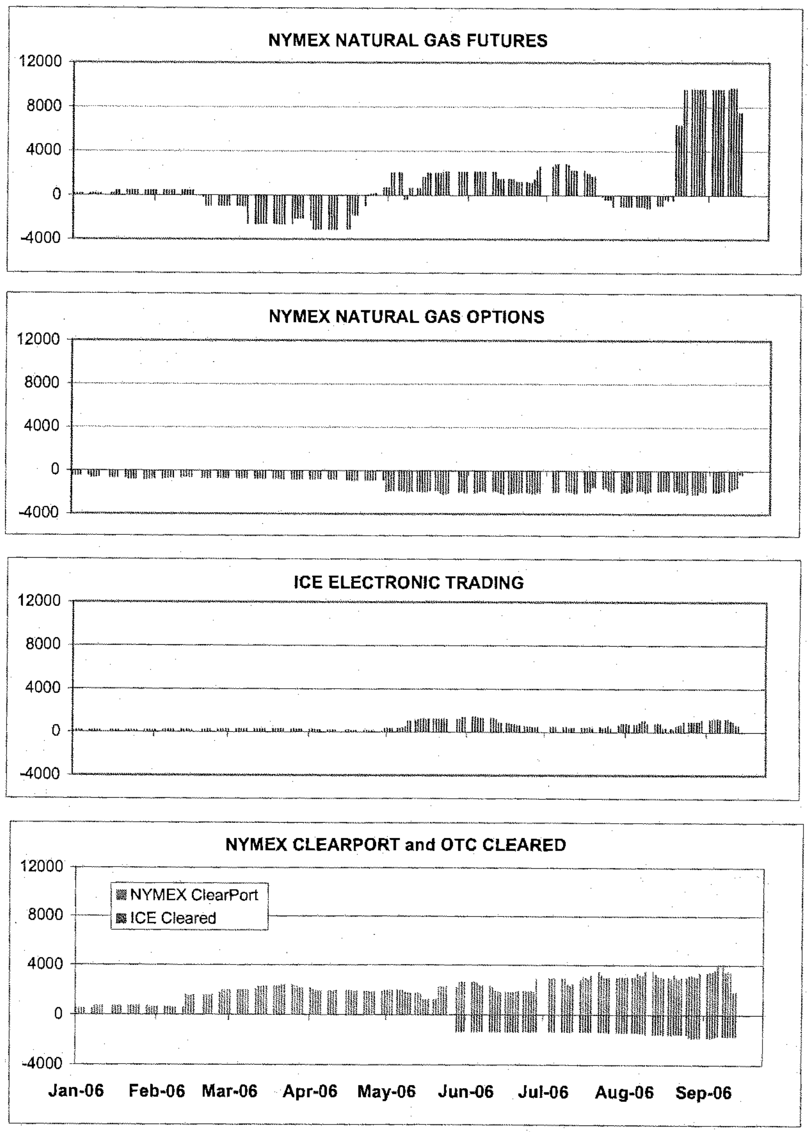
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR AUGUST 07



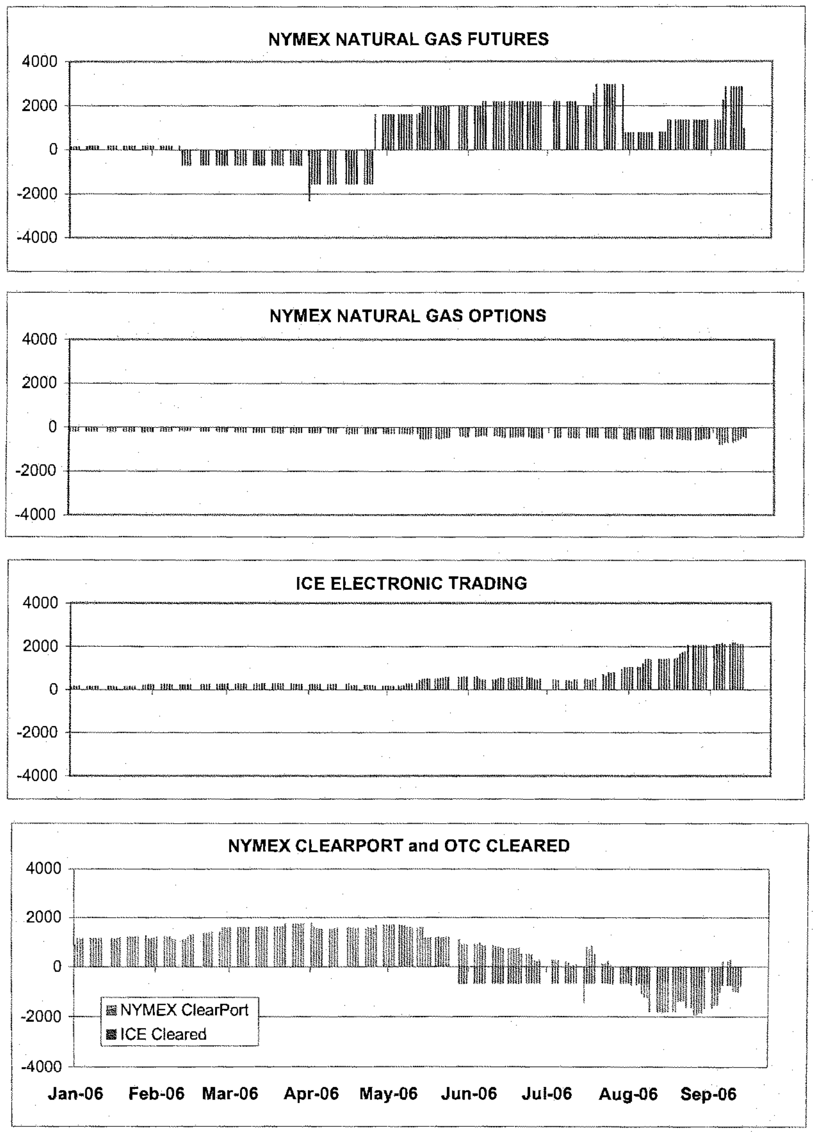
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR SEPTEMBER 07



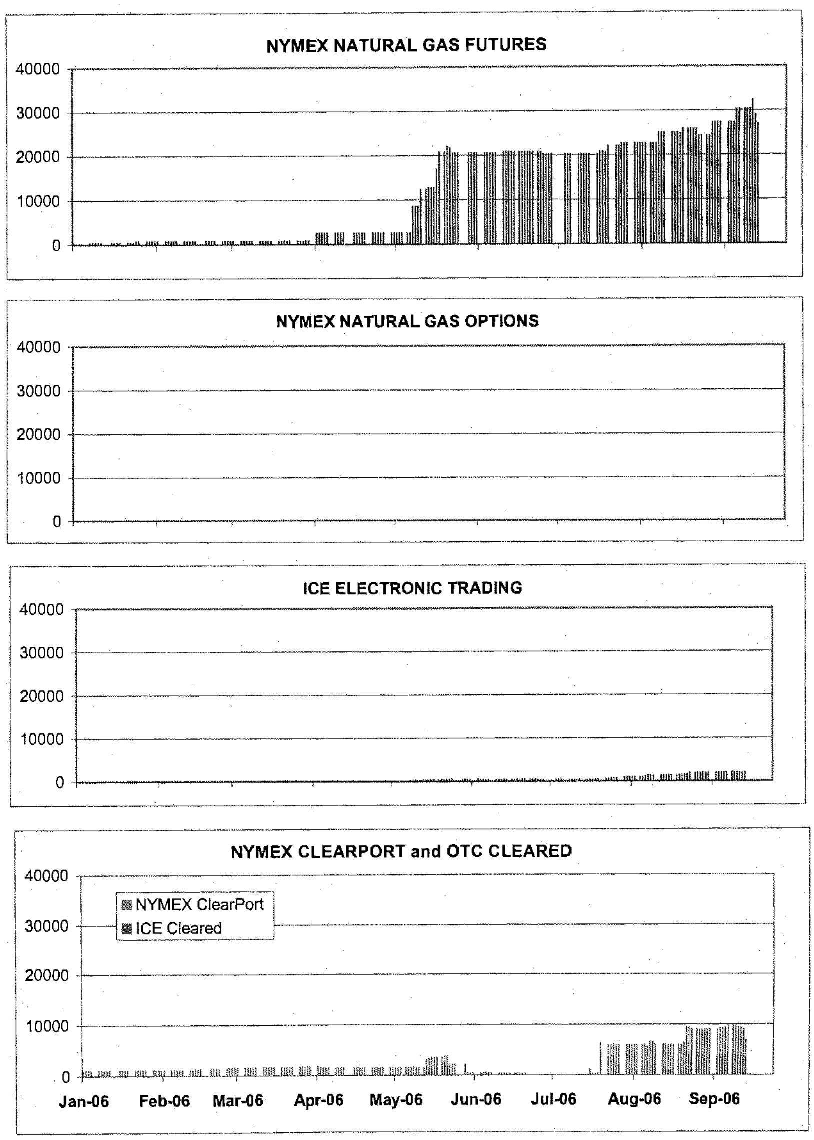
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR OCTOBER 07



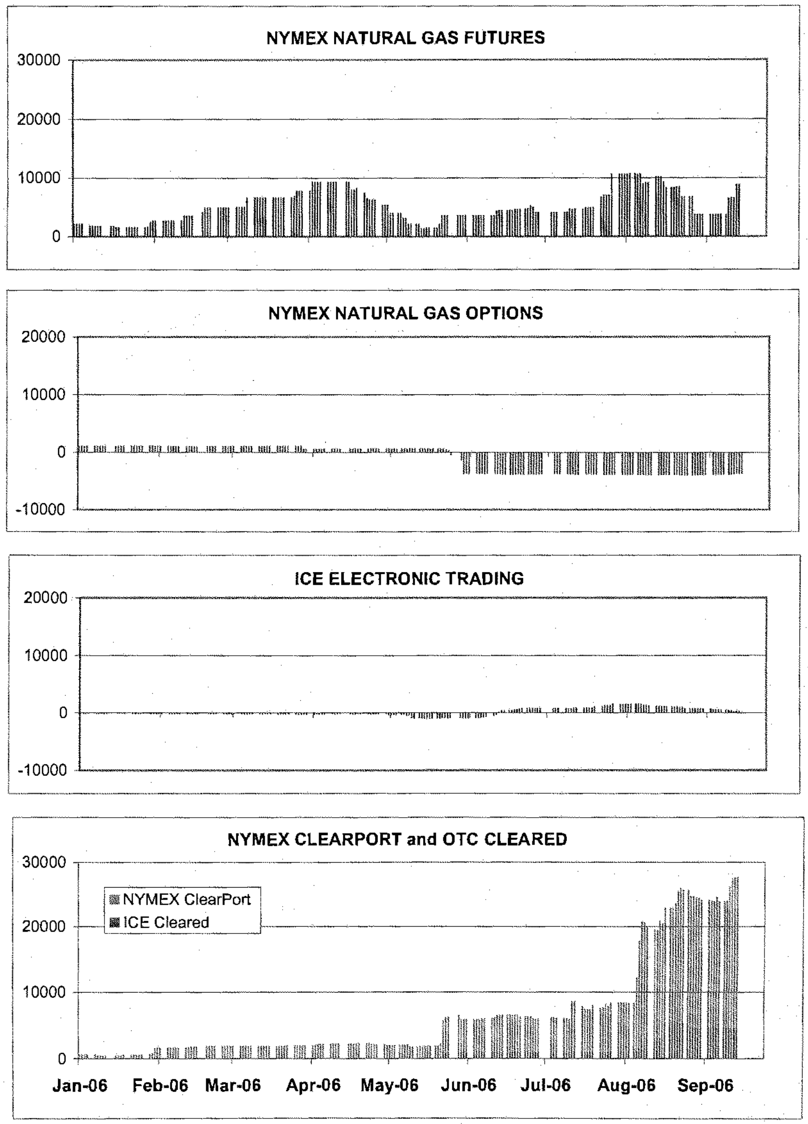
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR NOVEMBER 07



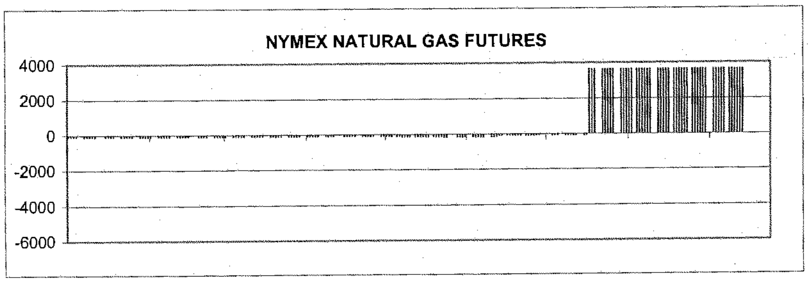
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR DECEMBER 07

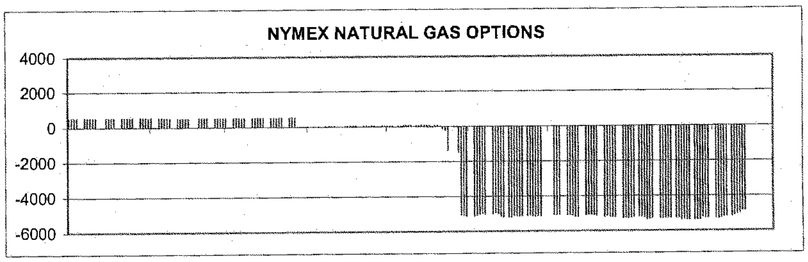


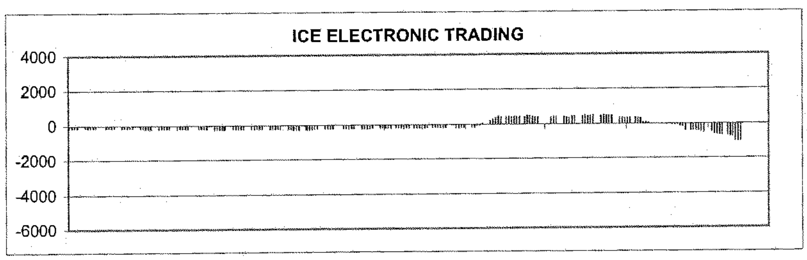
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR JANUARY 08

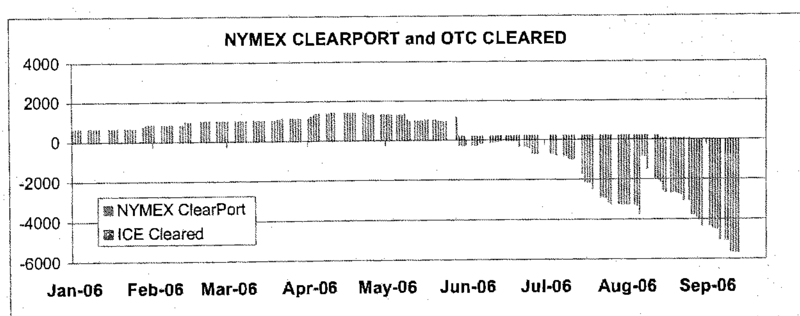


AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR FEBRUARY 08

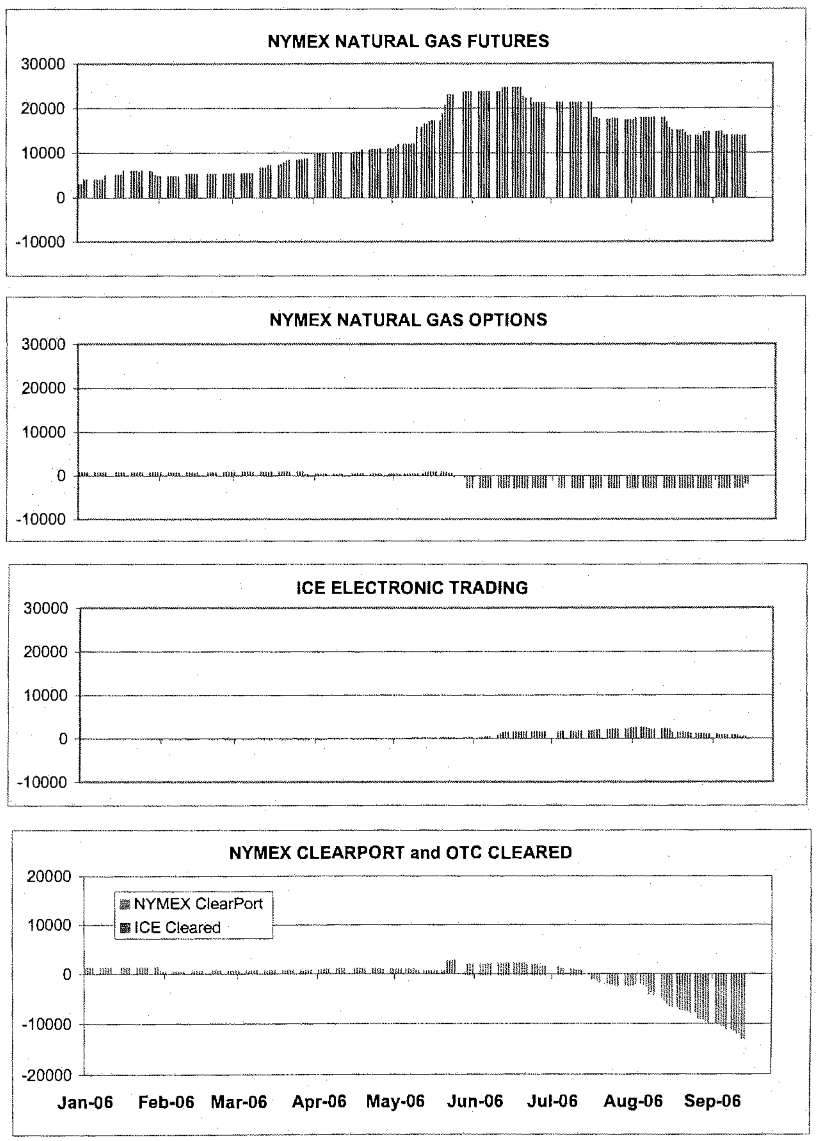




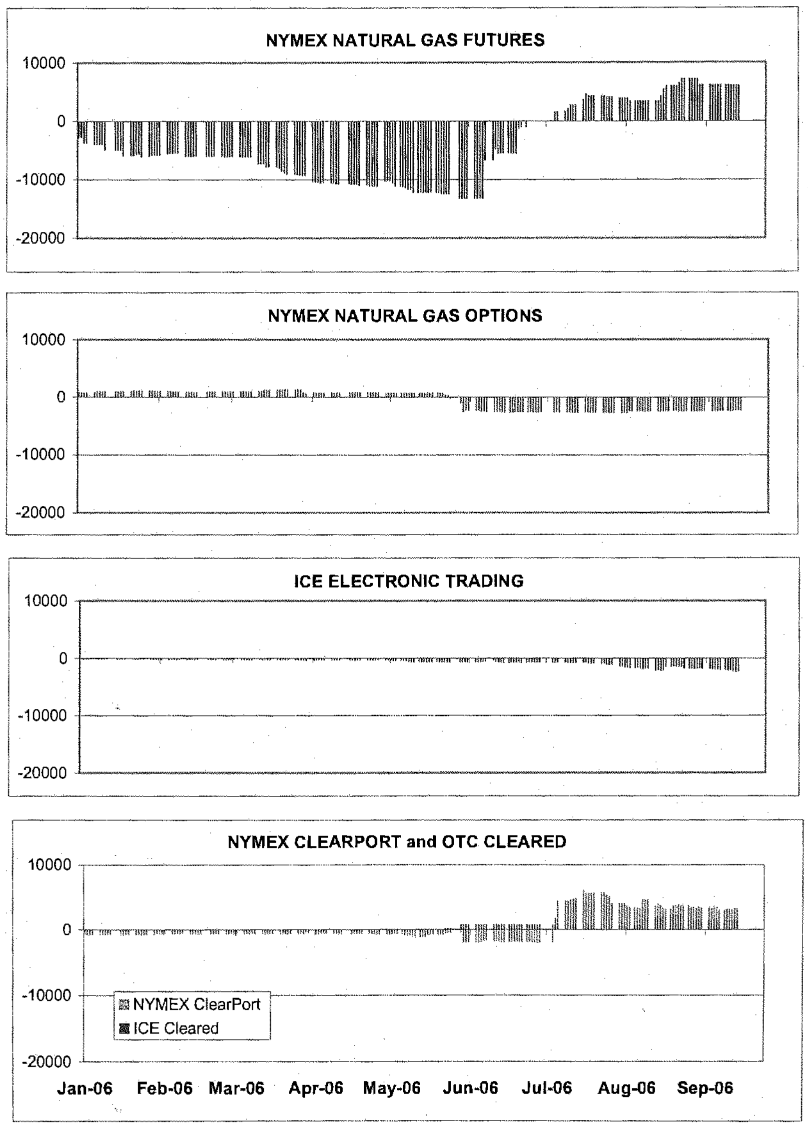




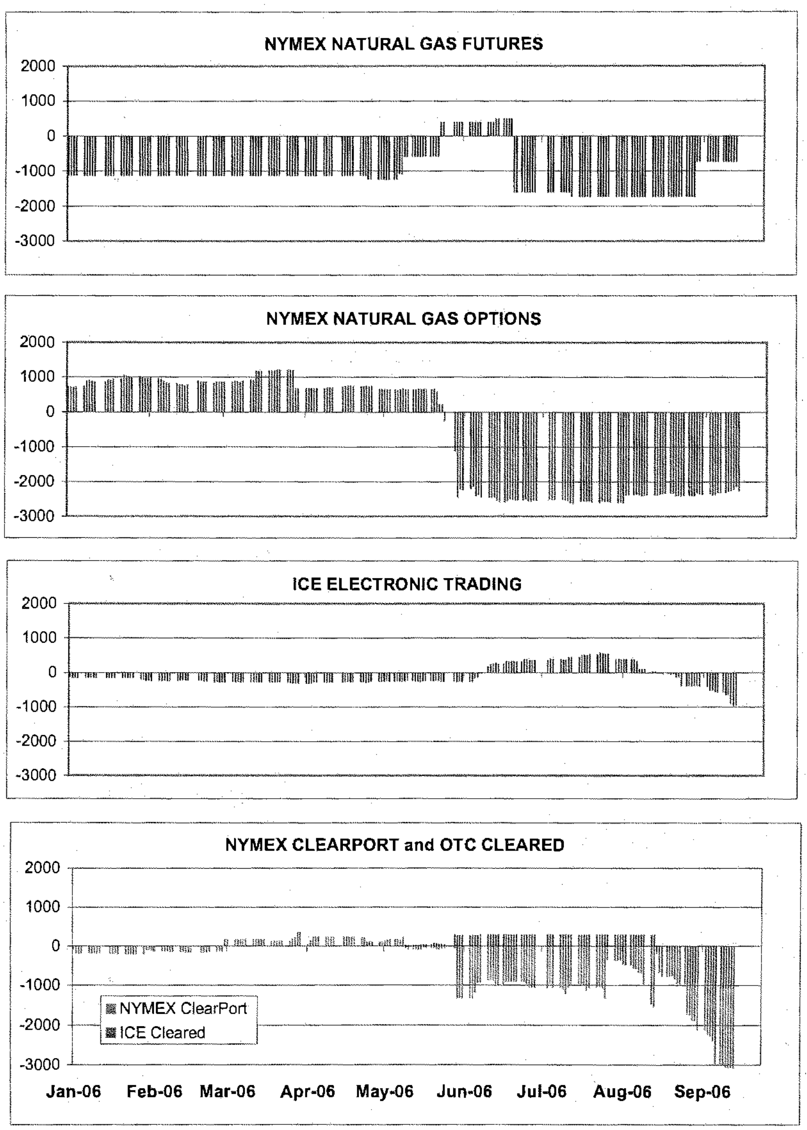
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR MARCH 08



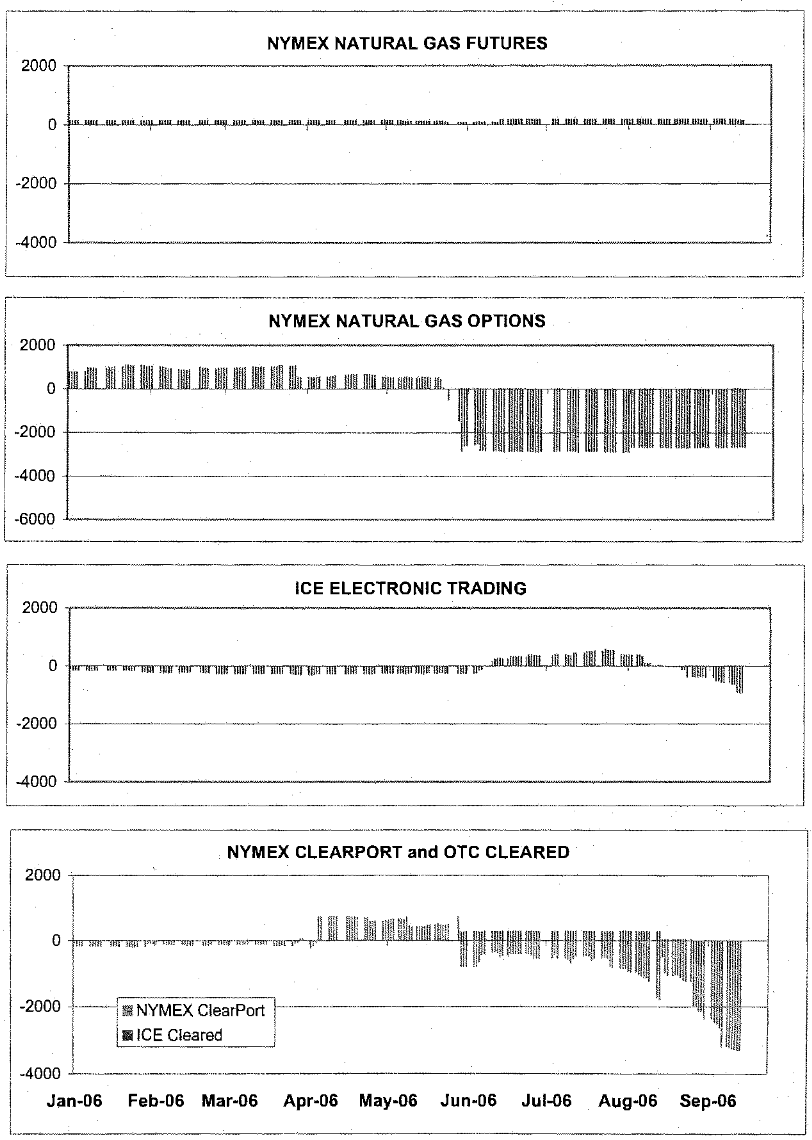
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR APRIL 08



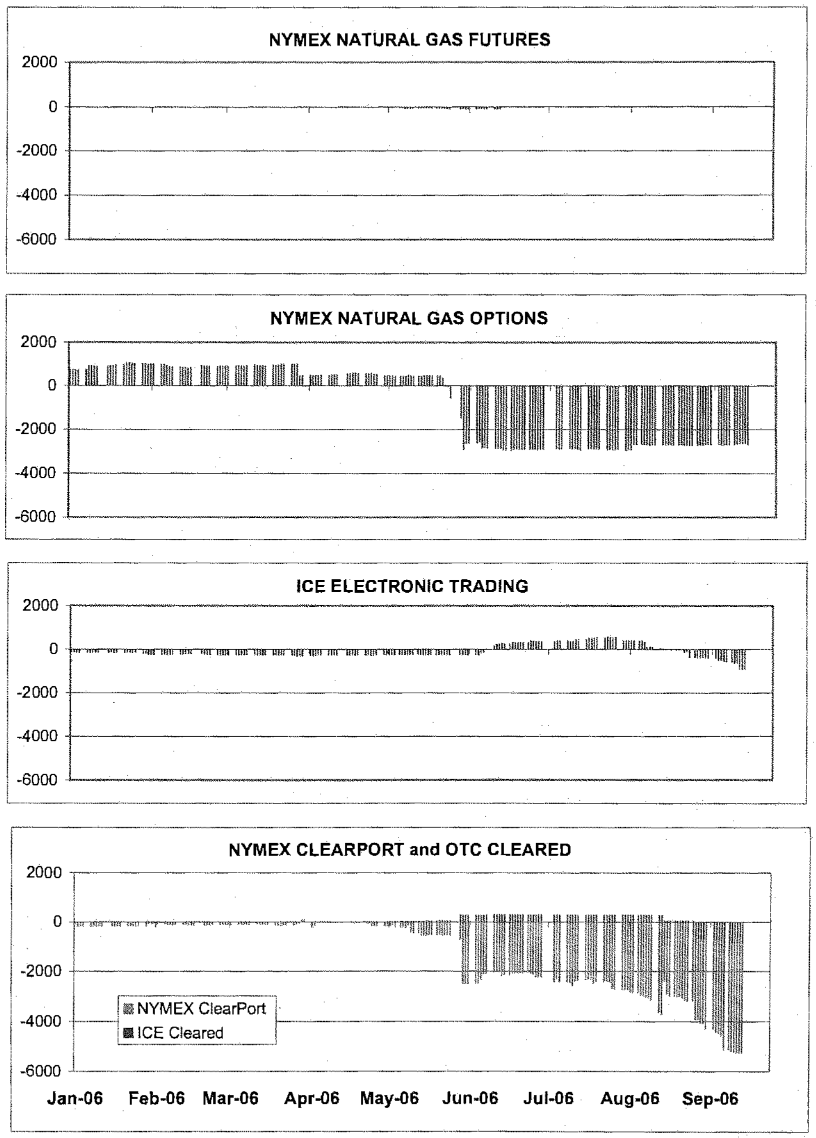
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR MAY 08



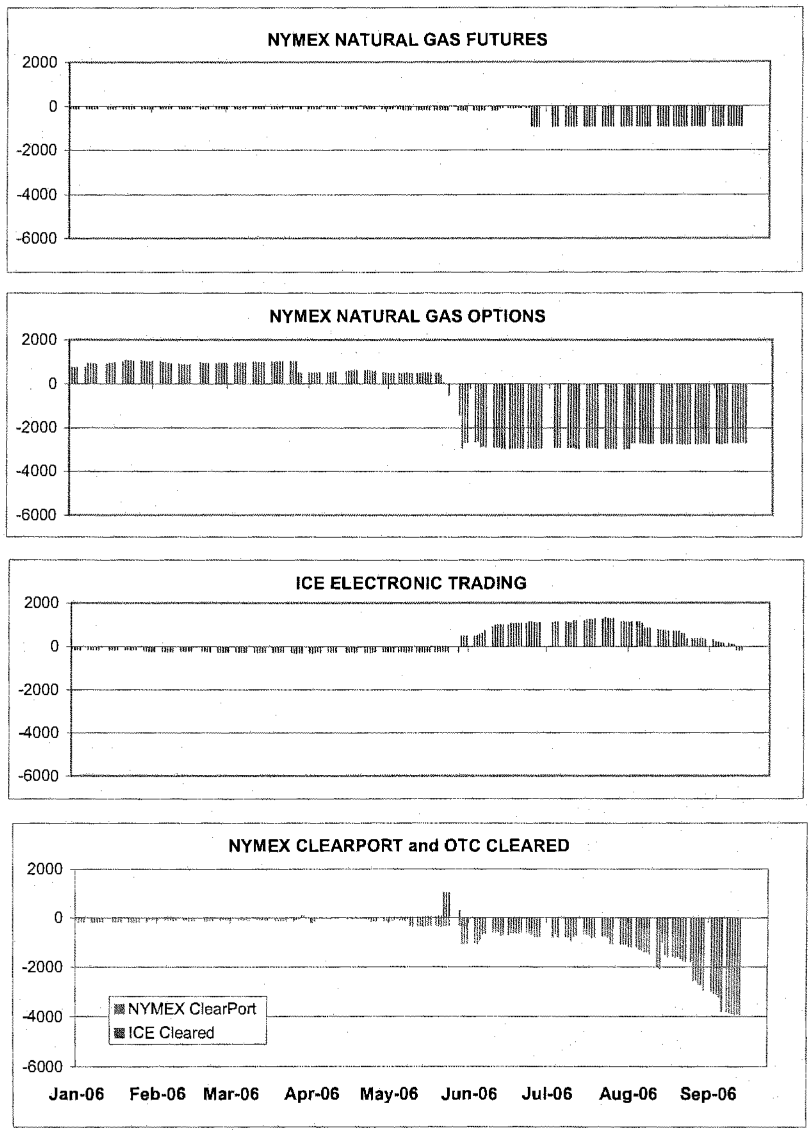
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR JUNE 08



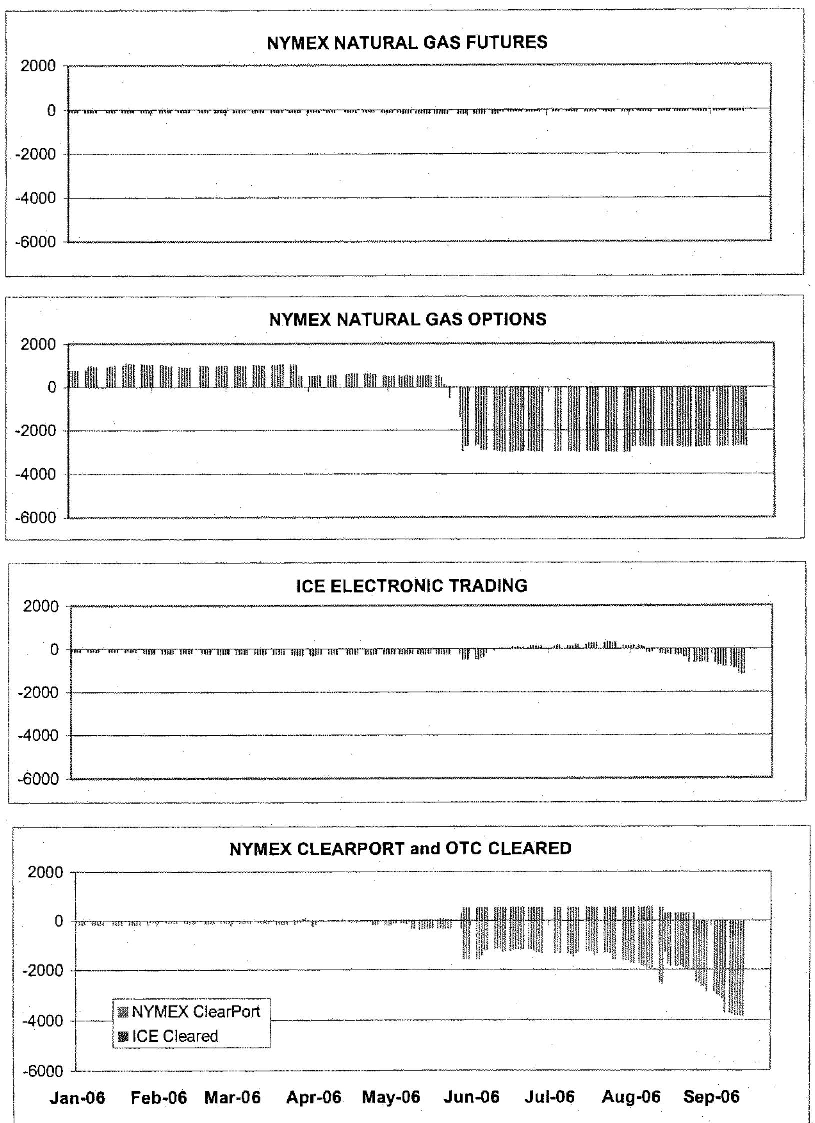
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR JULY 08



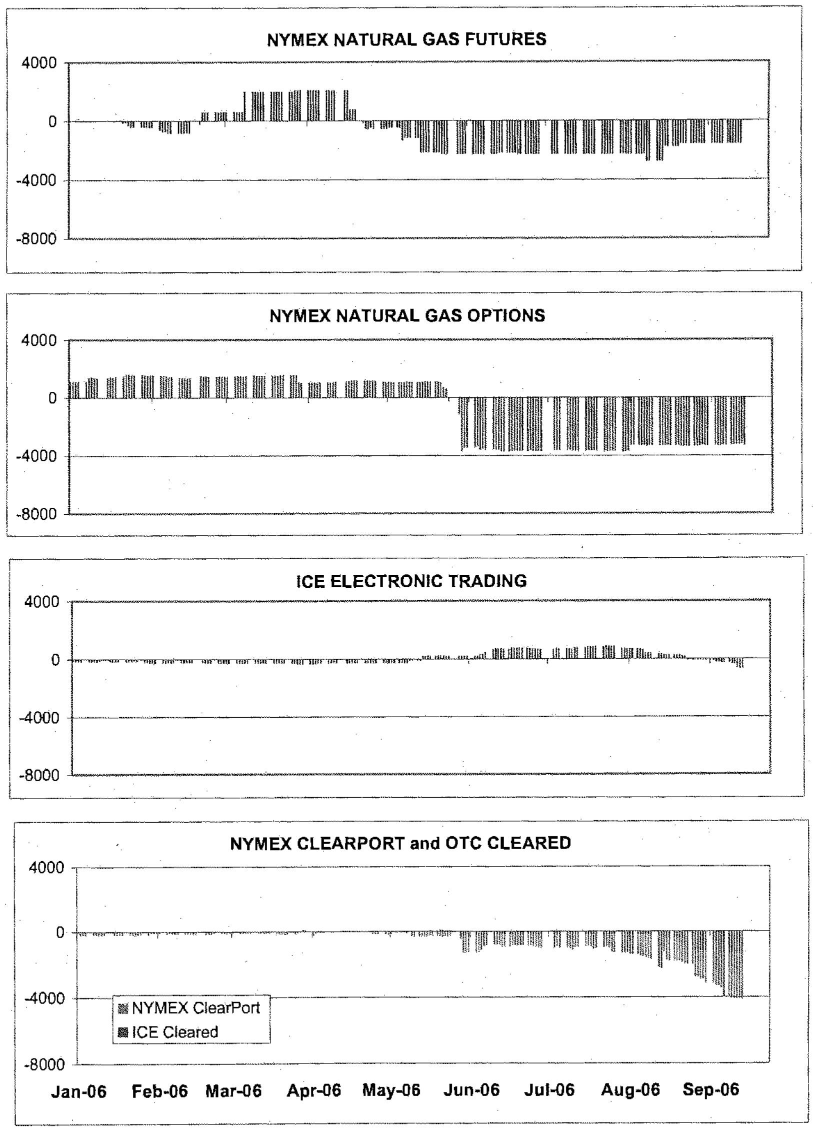
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR AUGUST 08



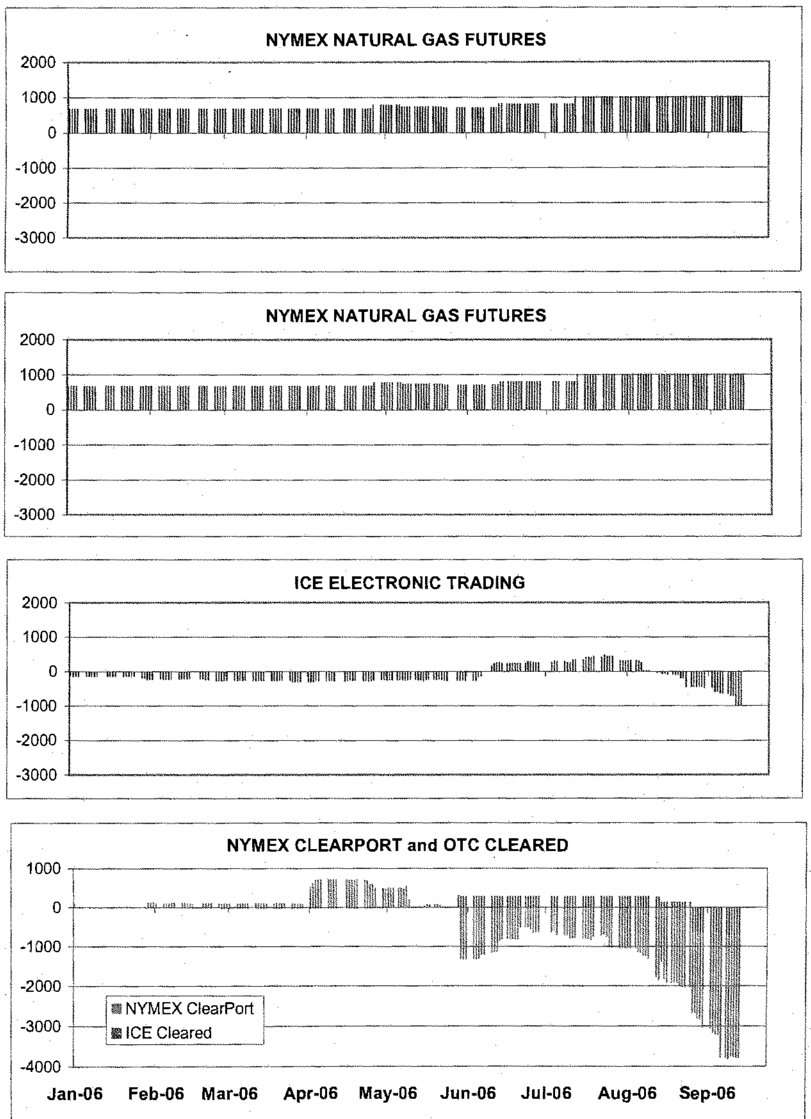
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR SEPTEMBER 08



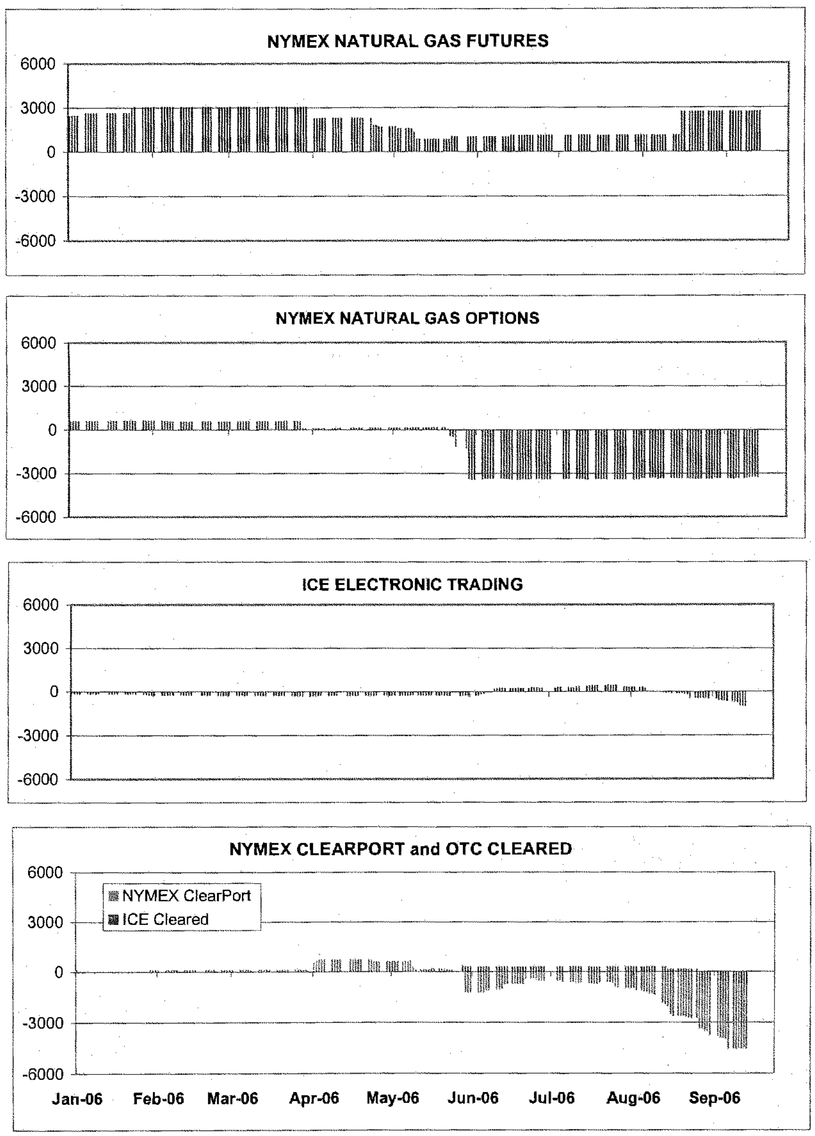
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR OCTOBER 08



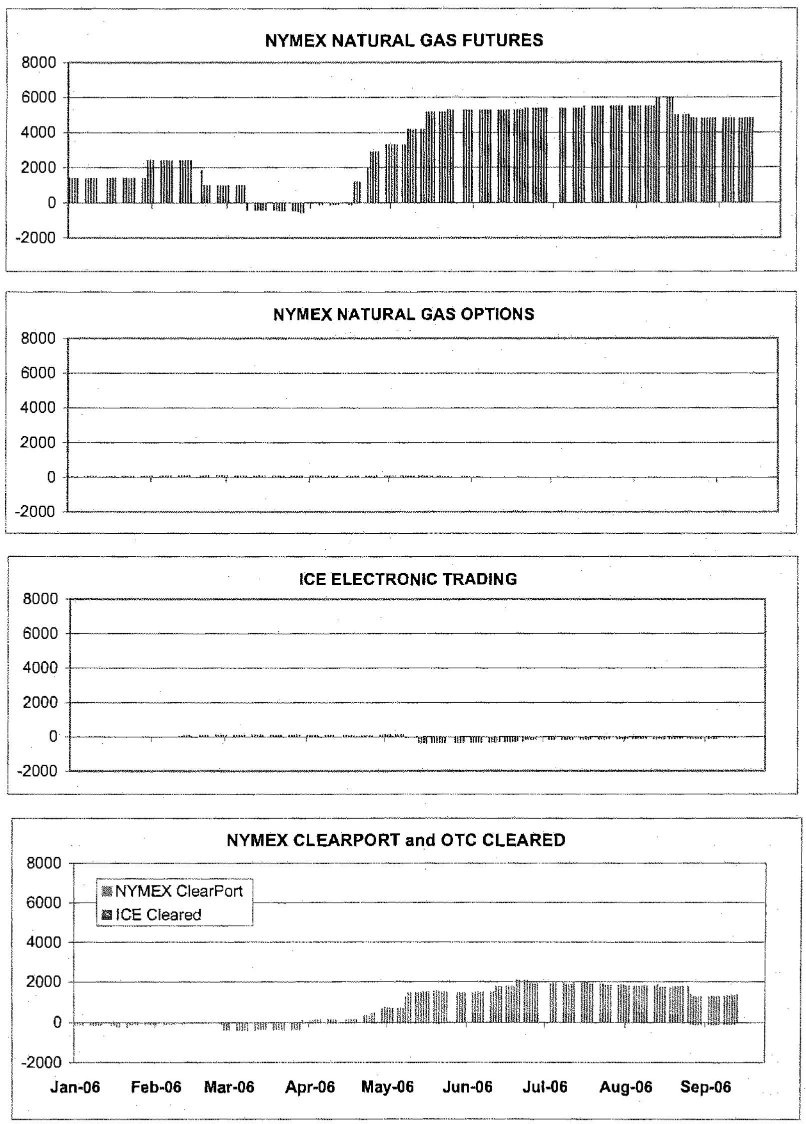
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR NOVEMBER 08



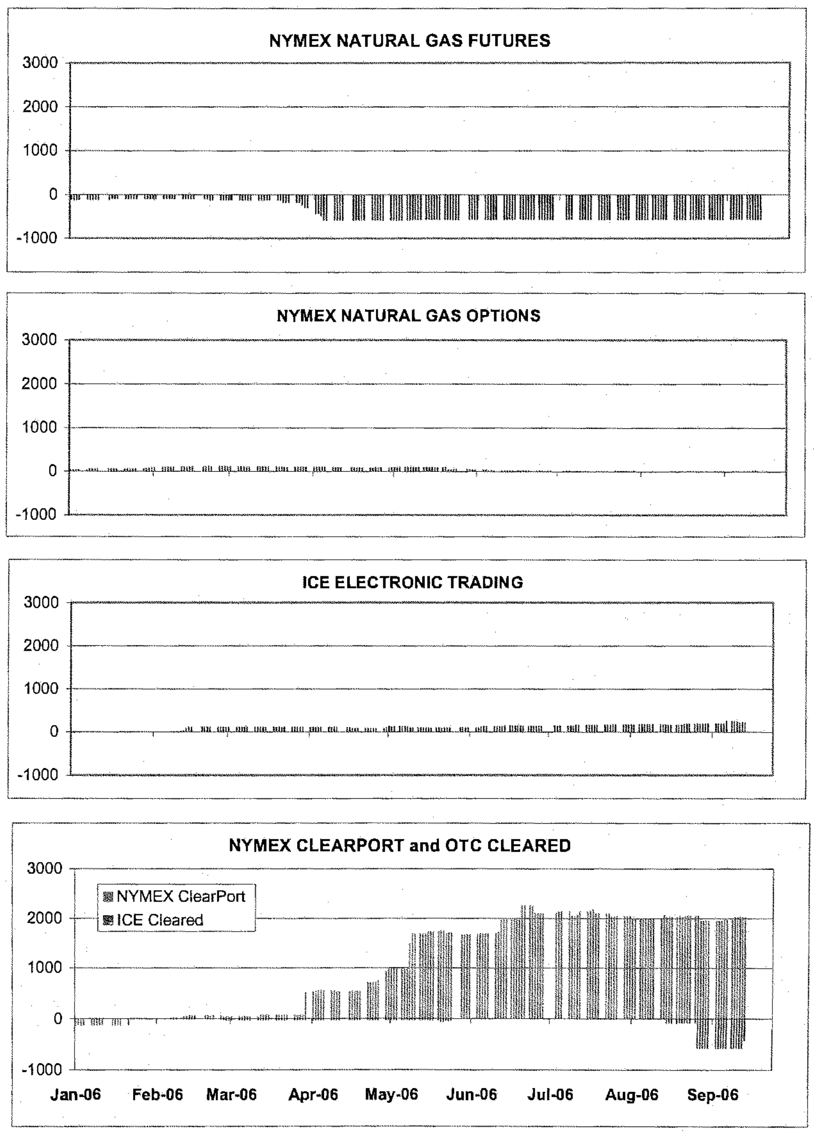
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR DECEMBER 08



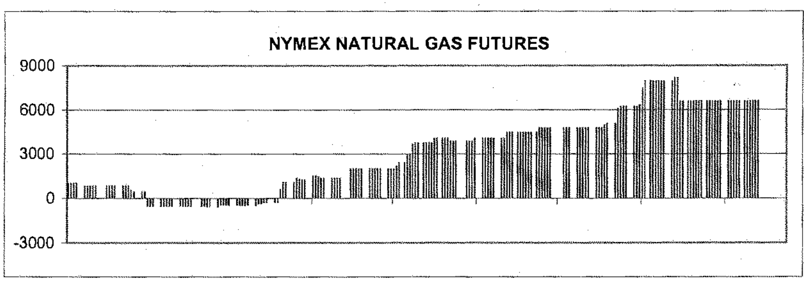
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR JANUARY 09

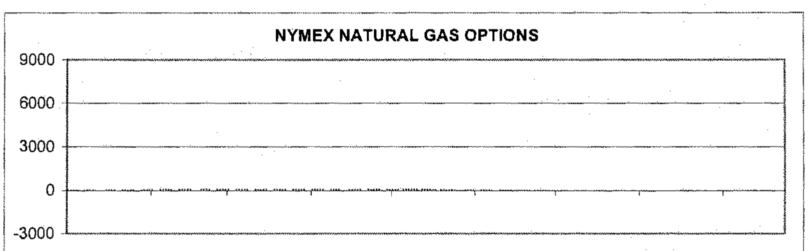


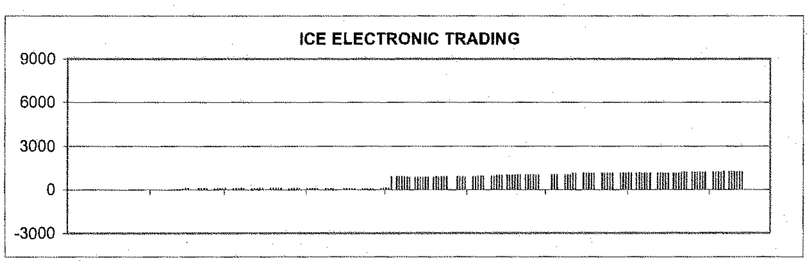
**AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR FEBRUARY 09**

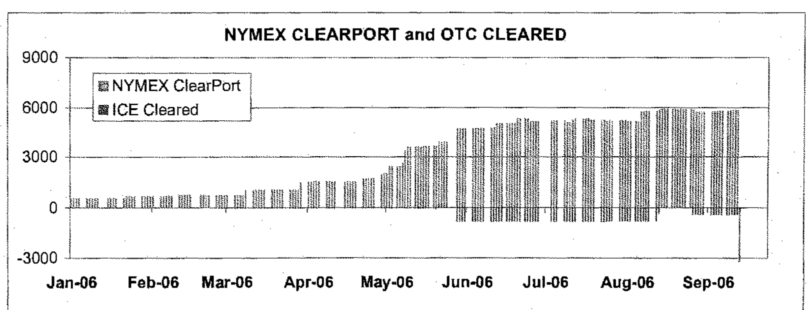


AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR MARCH 09

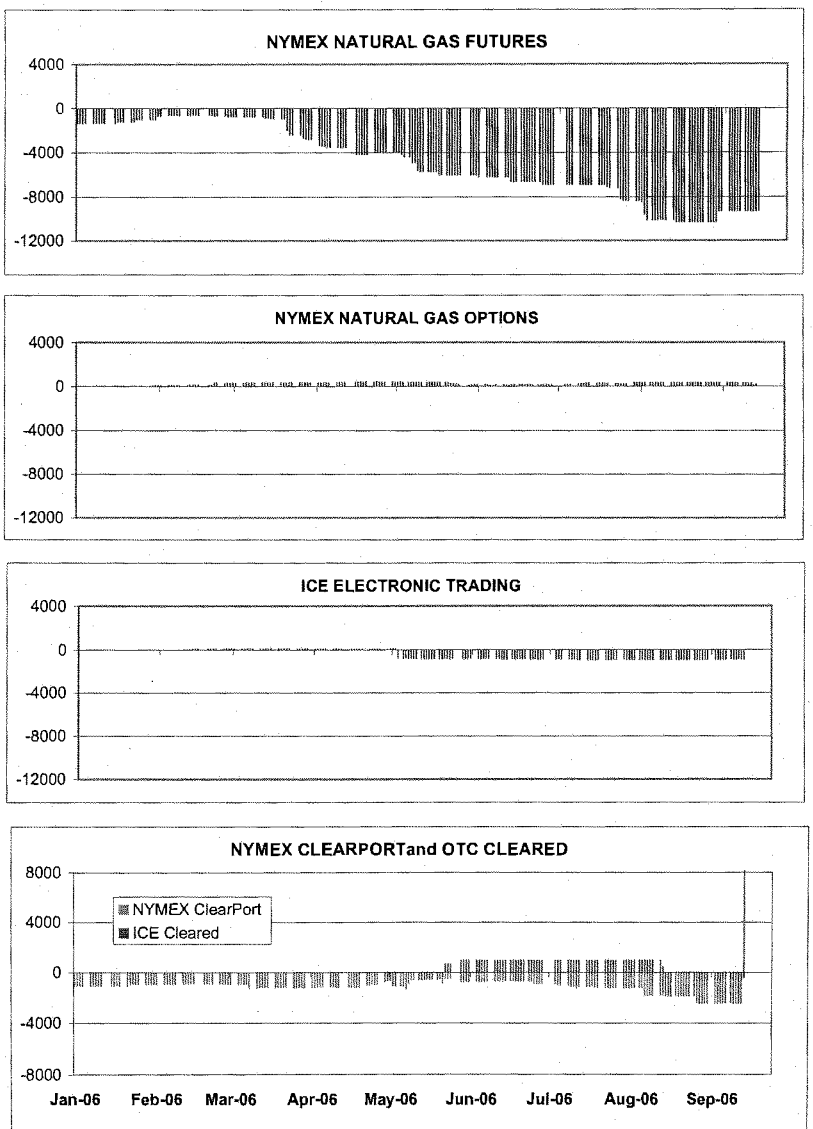




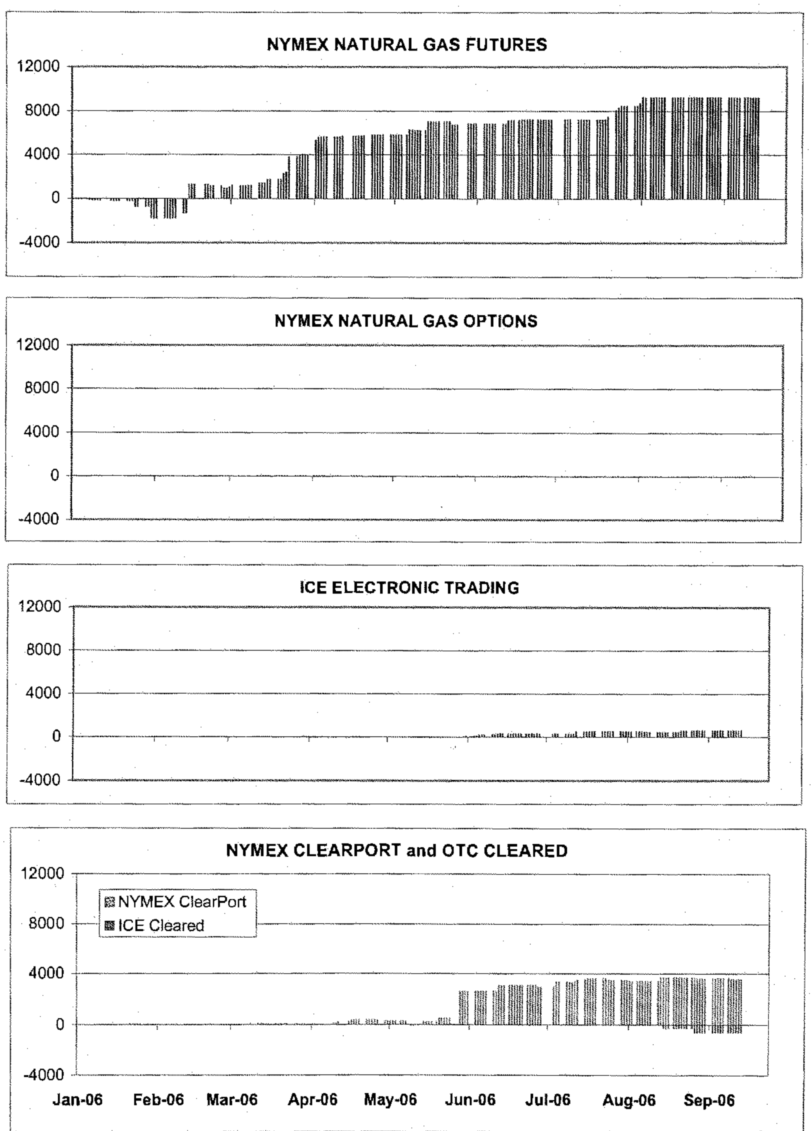




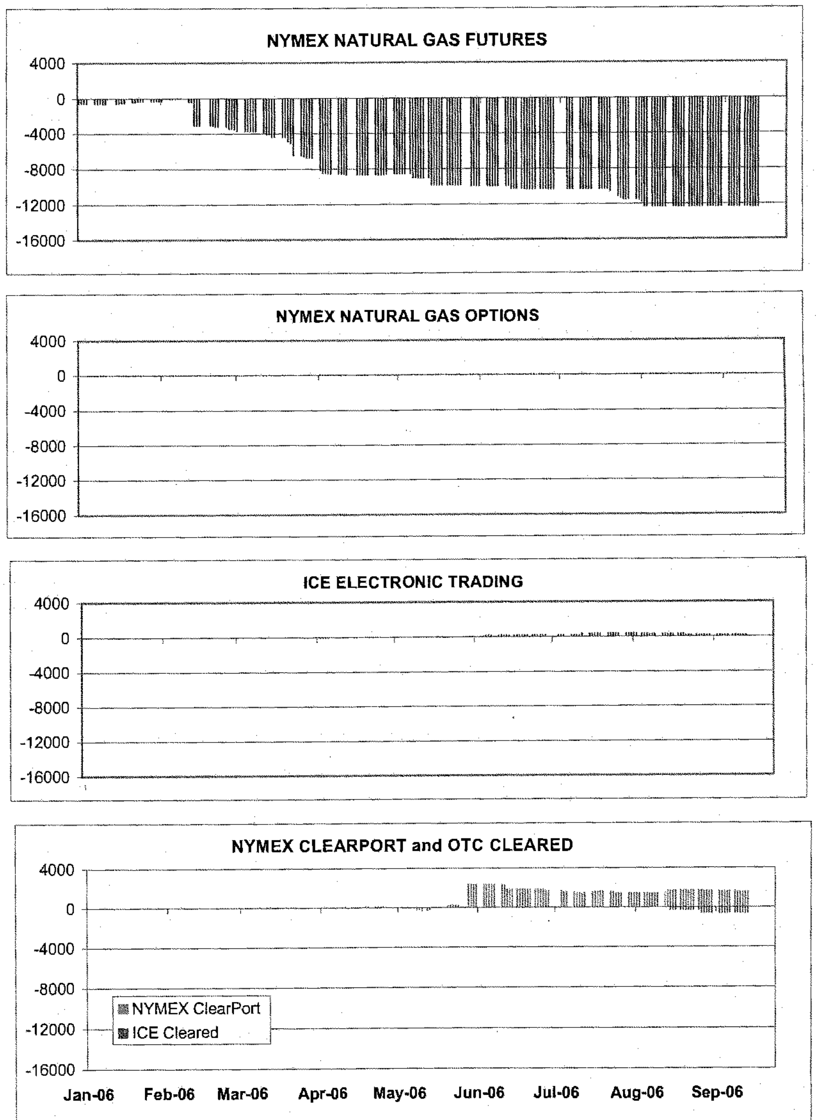
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR APRIL 09



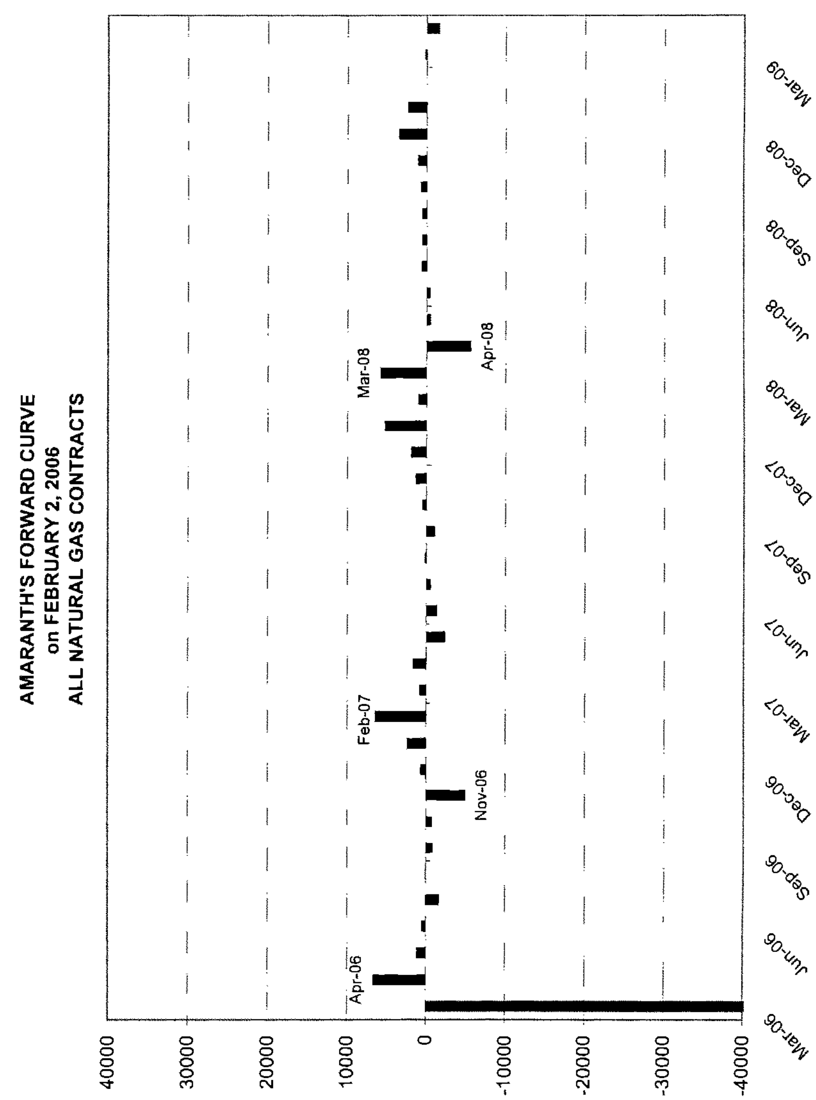
AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR MARCH 2010



AMARANTH NATURAL GAS TRADES: OPEN INTEREST
NYMEX and ICE
NATURAL GAS CONTRACTS FOR APRIL 2010

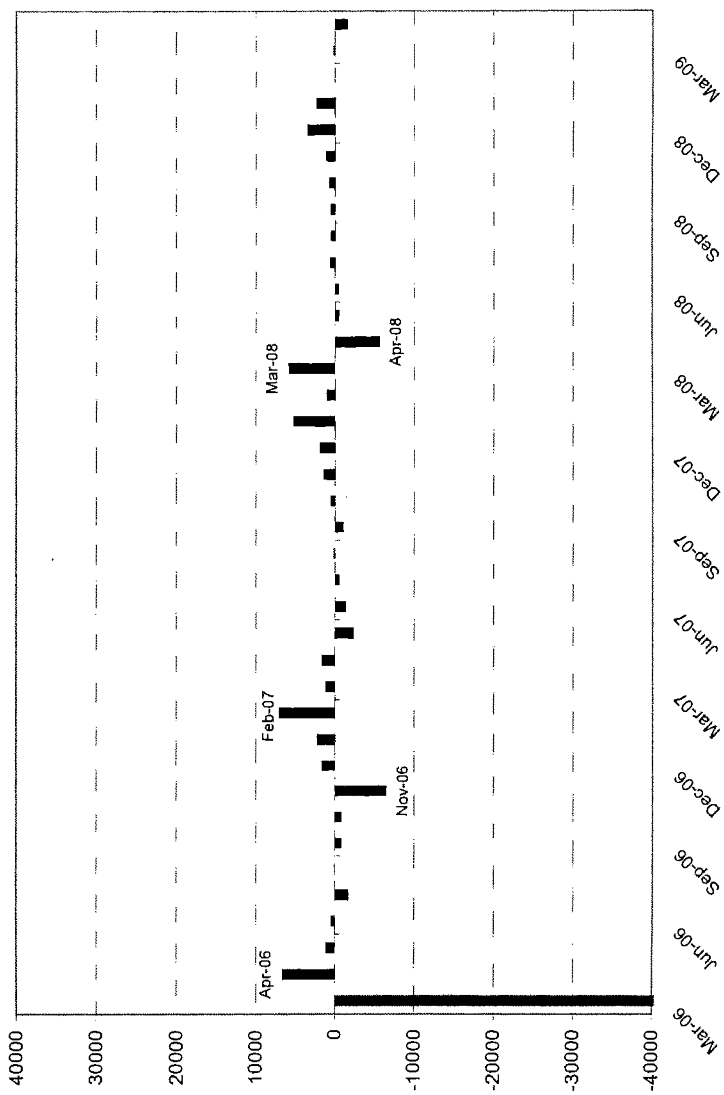


APPENDIX IV

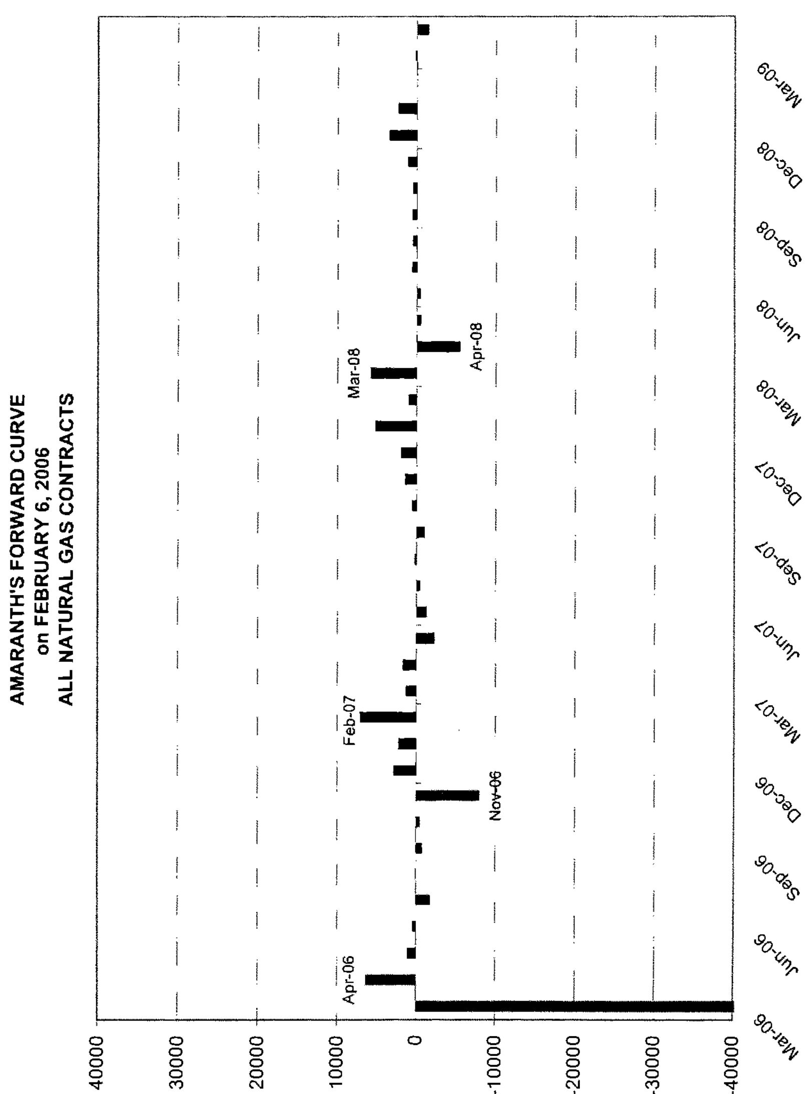

AMARANTH'S FORWARD CURVE
on FEBRUARY 2, 2006
ALL NATURAL GAS CONTRACTS
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
Apr-06
Nov-06
Feb-07
Mar-08
Apr-08
Mar-06
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
Dec-07
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09

IV-1

AMARANTH'S FORWARD CURVE
on FEBRUARY 3, 2006
ALL NATURAL GAS CONTRACTS

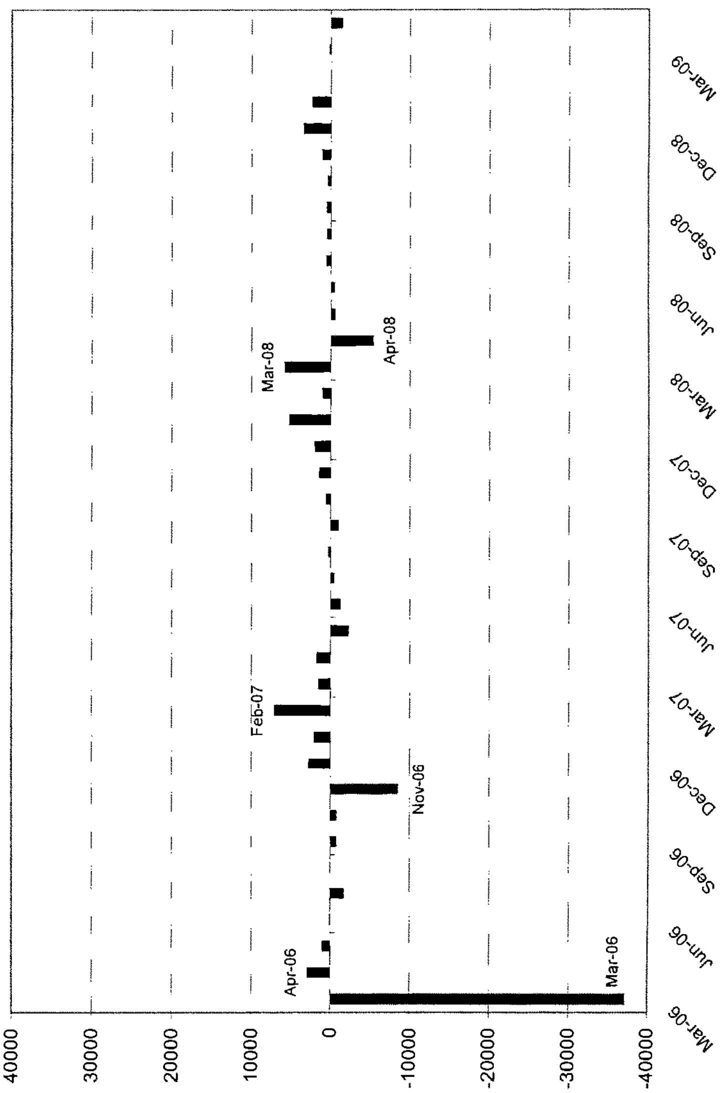


IV-2

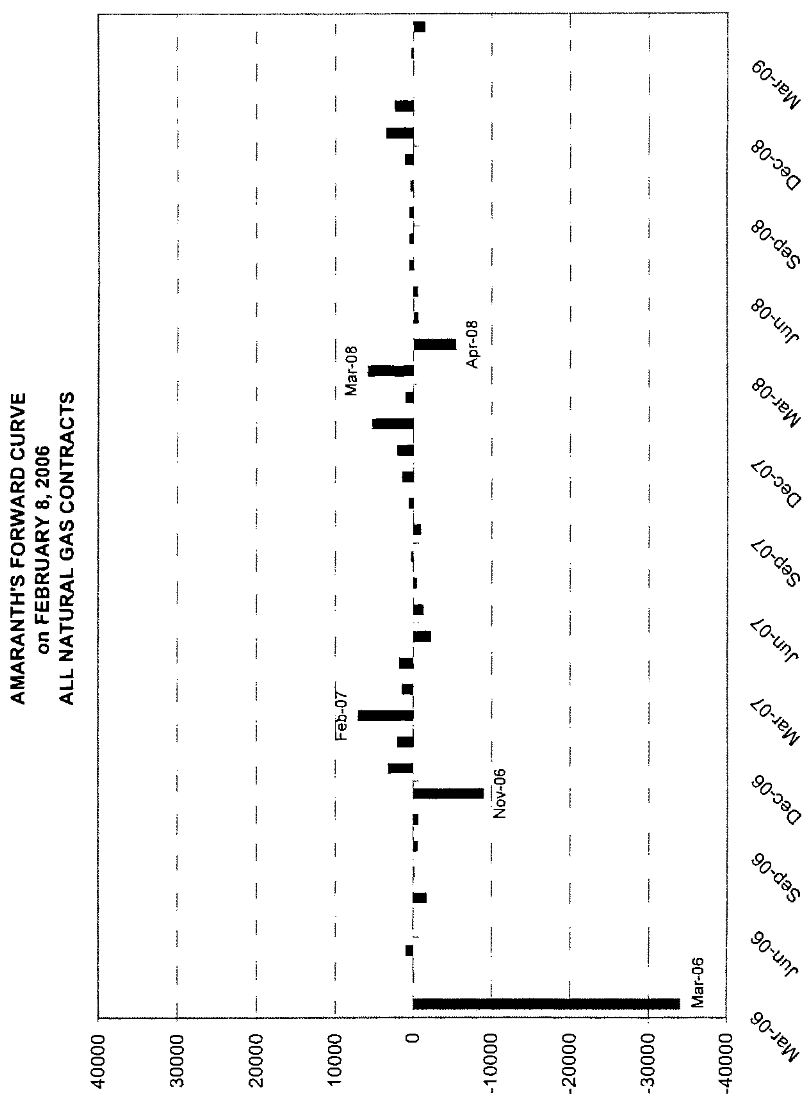

AMARANTH'S FORWARD CURVE
on FEBRUARY 6, 2006
ALL NATURAL GAS CONTRACTS
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
Apr-06
Nov-06
Feb-07
Mar-08
Apr-08
Mar-06
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
Dec-07
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09

IV-3

AMARANTH'S FORWARD CURVE
on FEBRUARY 7, 2006
ALL NATURAL GAS CONTRACTS



IV-4


AMARANTH'S FORWARD CURVE
on FEBRUARY 8, 2006
ALL NATURAL GAS CONTRACTS
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
Mar-06
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
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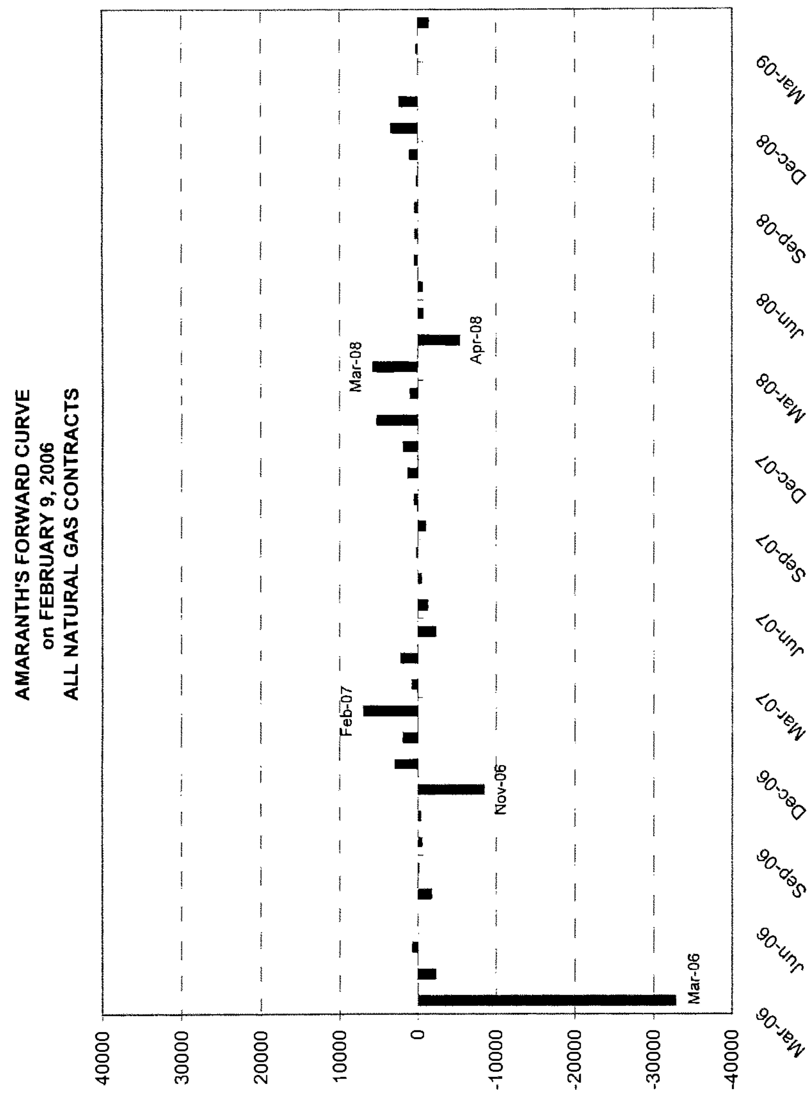
Apr-08

IV-5


AMARANTH'S FORWARD CURVE
on FEBRUARY 9, 2006
ALL NATURAL GAS CONTRACTS
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-30000
-40000
Mar-06
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
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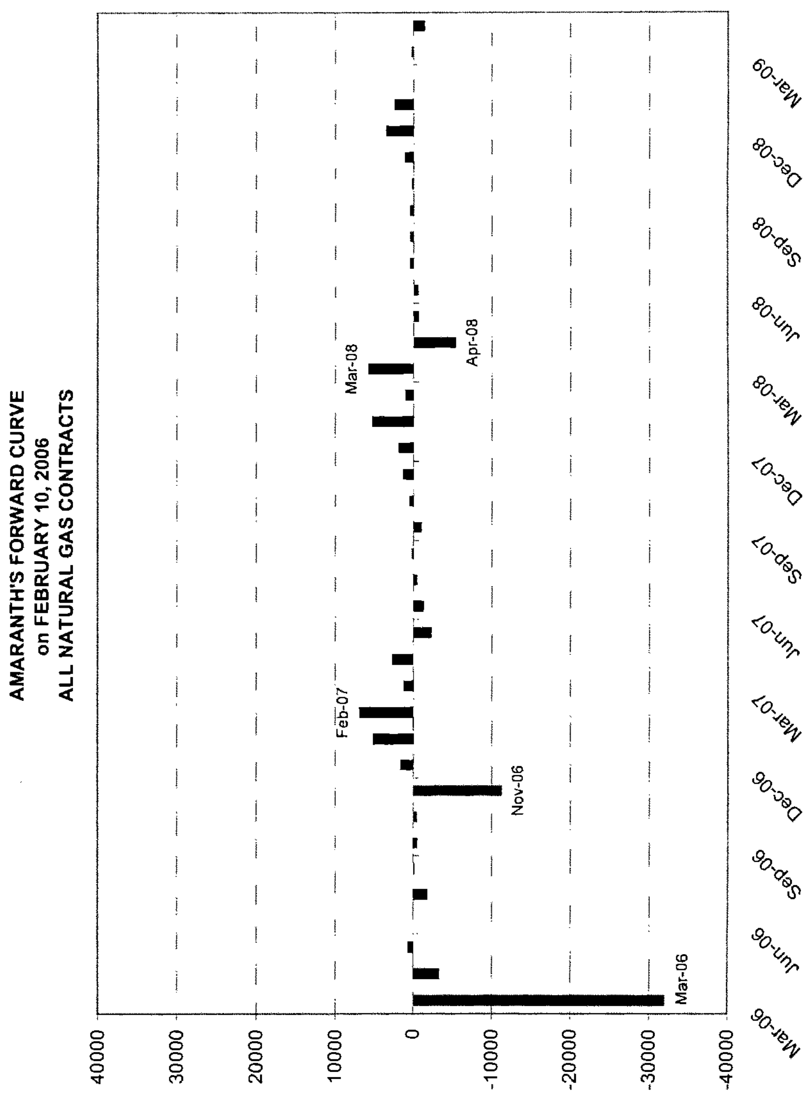
Dec-08
Mar-09
Nov-06
Feb-07
Mar-08
Apr-08

IV-6


AMARANTH'S FORWARD CURVE
on FEBRUARY 10, 2006
ALL NATURAL GAS CONTRACTS
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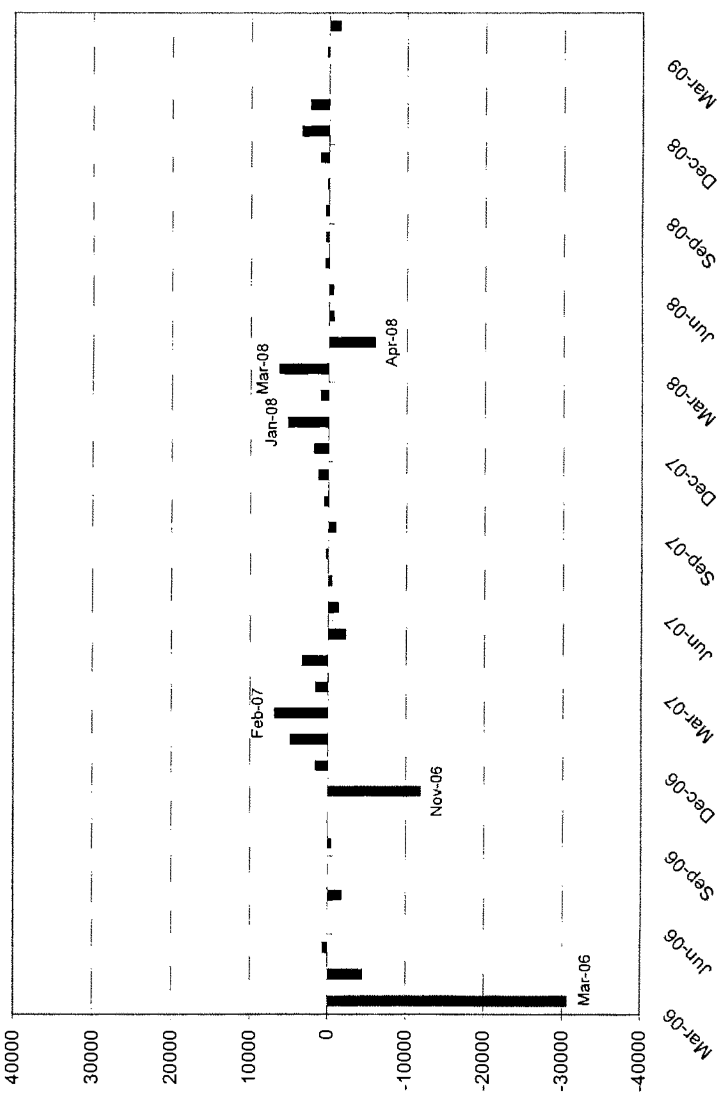
Jun-08
Sep-08
Dec-08
Mar-09
Mar-06
Nov-06
Feb-07
Mar-08
Apr-08

IV-7

AMARANTH'S FORWARD CURVE
on FEBRUARY 13, 2006
ALL NATURAL GAS CONTRACTS



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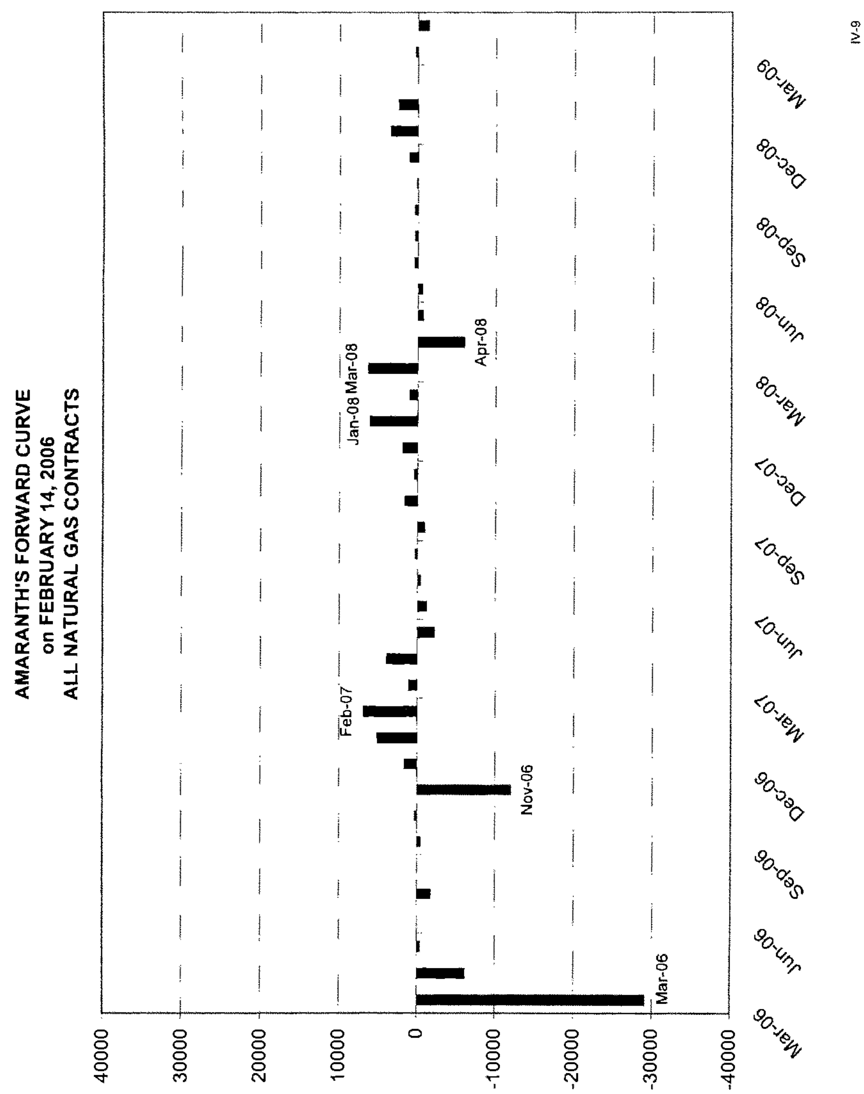
AMARANTH'S FORWARD CURVE
on FEBRUARY 14, 2006
ALL NATURAL GAS CONTRACTS
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Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
Mar-06
Nov-06
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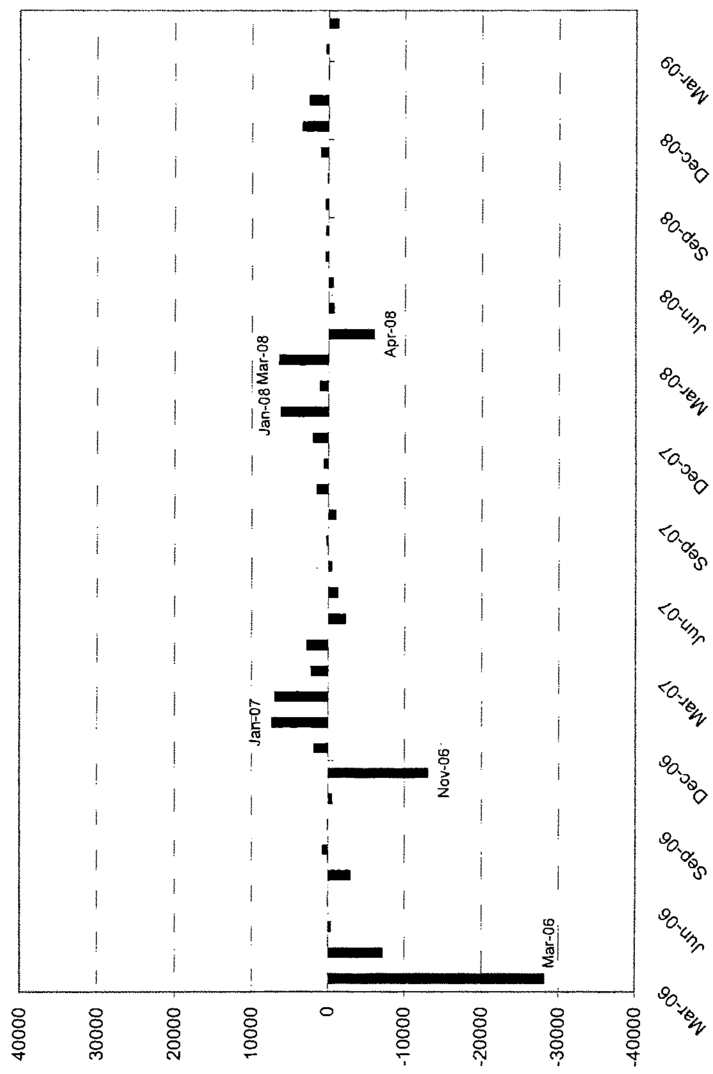
Mar-08
Apr-08
IV-9

AMARANTH'S FORWARD CURVE
on FEBRUARY 15, 2006
ALL NATURAL GAS CONTRACTS



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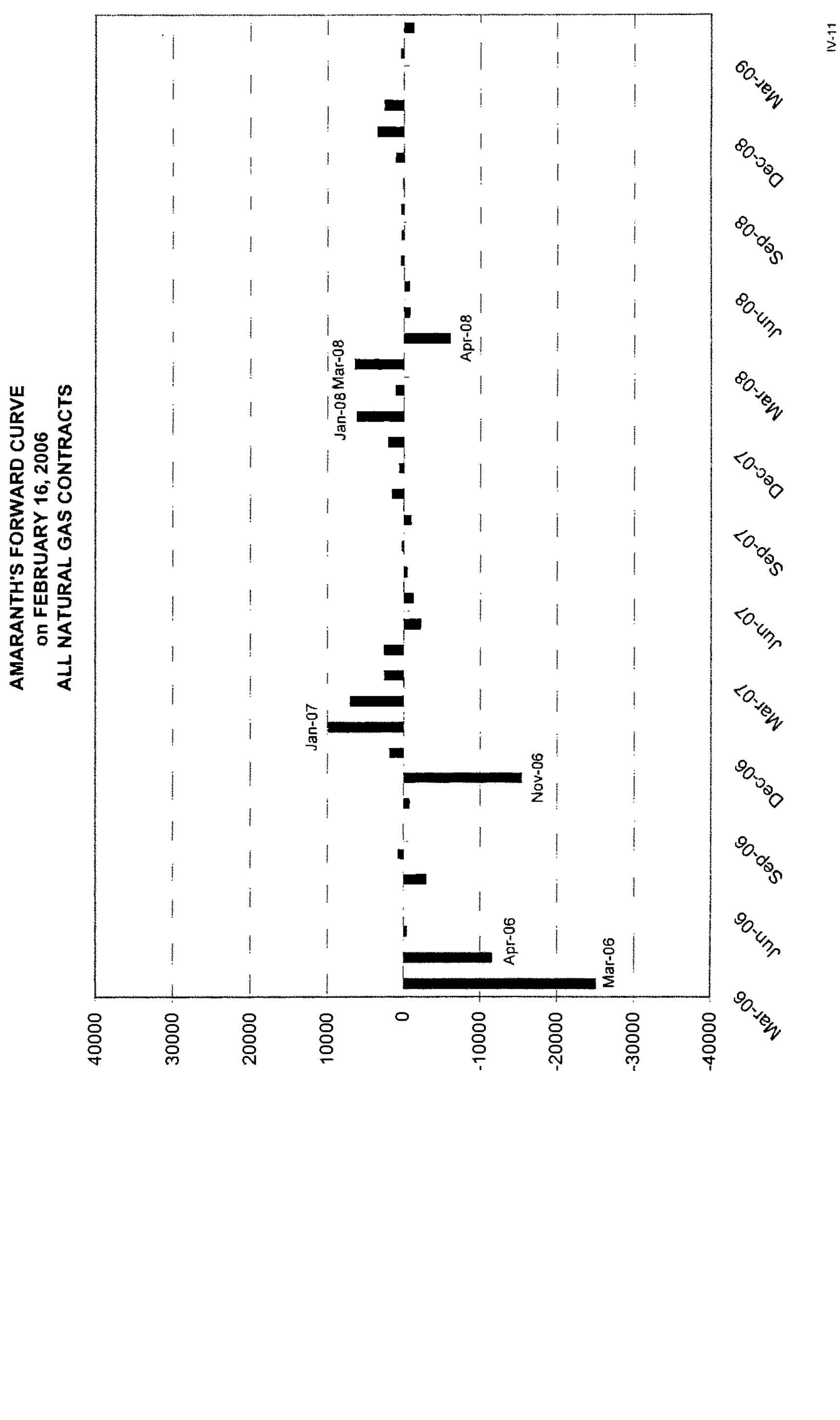
AMARANTH'S FORWARD CURVE
on FEBRUARY 16, 2006
ALL NATURAL GAS CONTRACTS
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Sep-08
Dec-08
Mar-09
Mar-06
Apr-06
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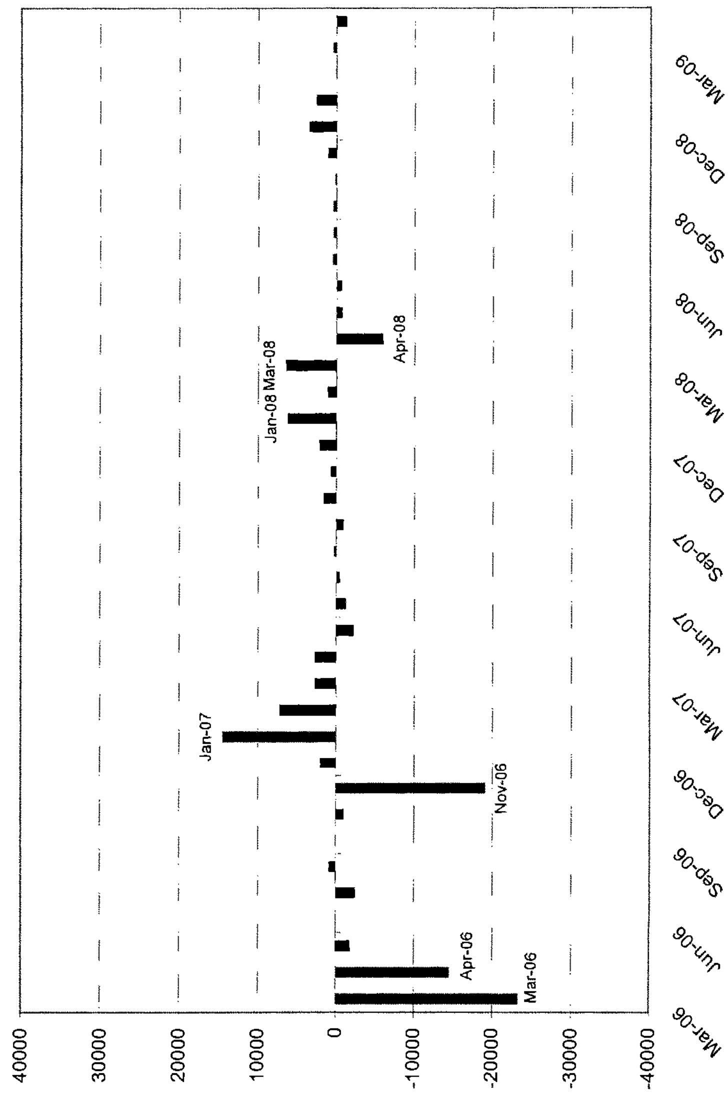
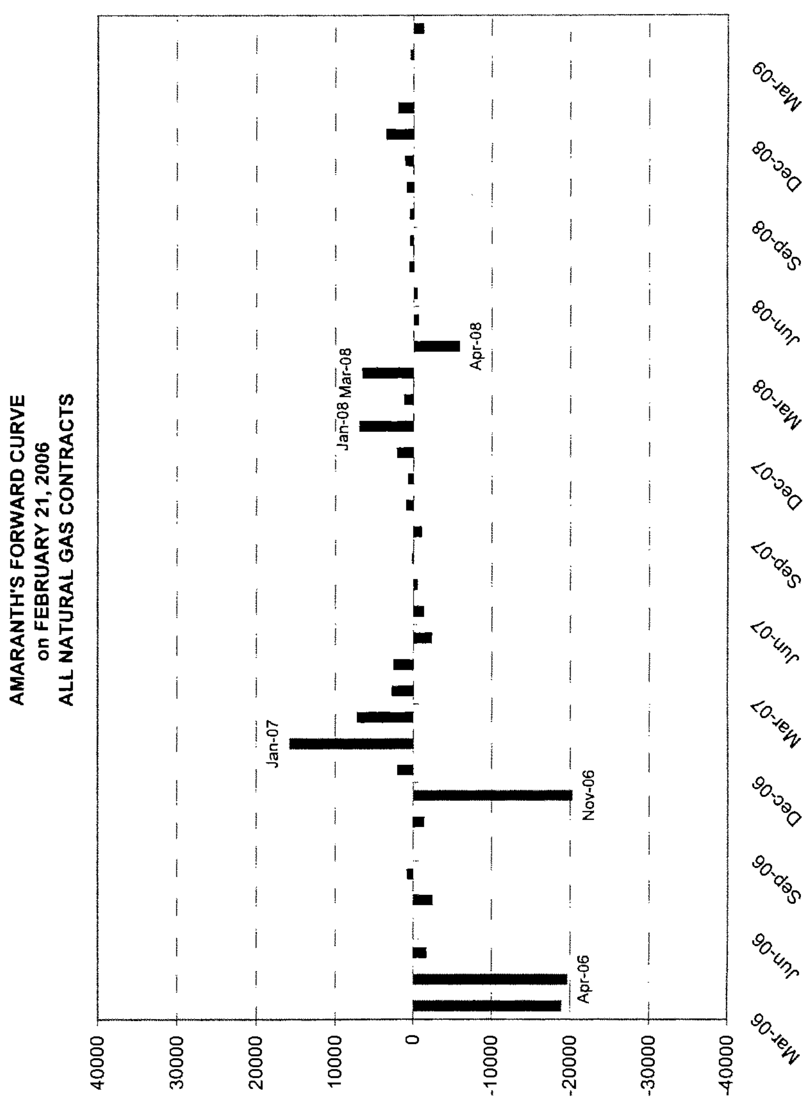
Jan-08 Mar-08
Apr-08
IV-11

AMARANTH'S FORWARD CURVE
on FEBRUARY 17, 2006
ALL NATURAL GAS CONTRACTS



IV-12


AMARANTH'S FORWARD CURVE
on FEBRUARY 21, 2006
ALL NATURAL GAS CONTRACTS
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-20000
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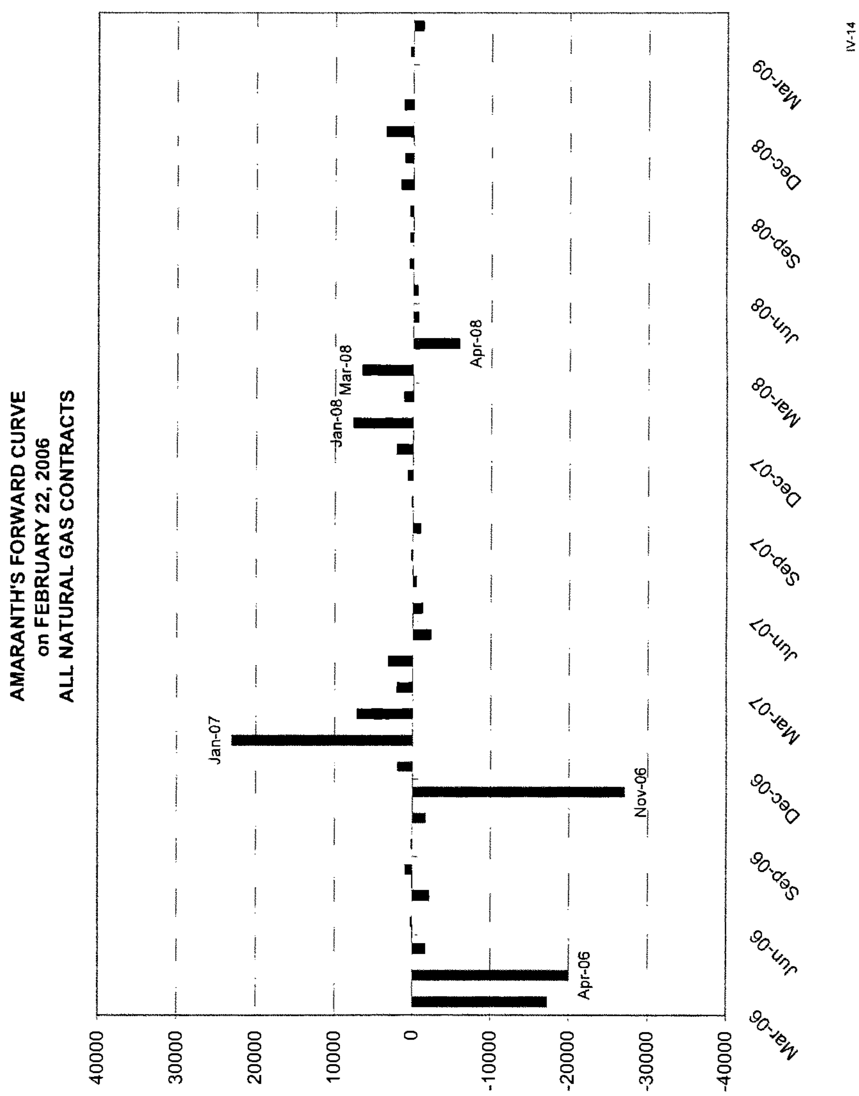
Apr-08


AMARANTH'S FORWARD CURVE
on FEBRUARY 22, 2006
ALL NATURAL GAS CONTRACTS
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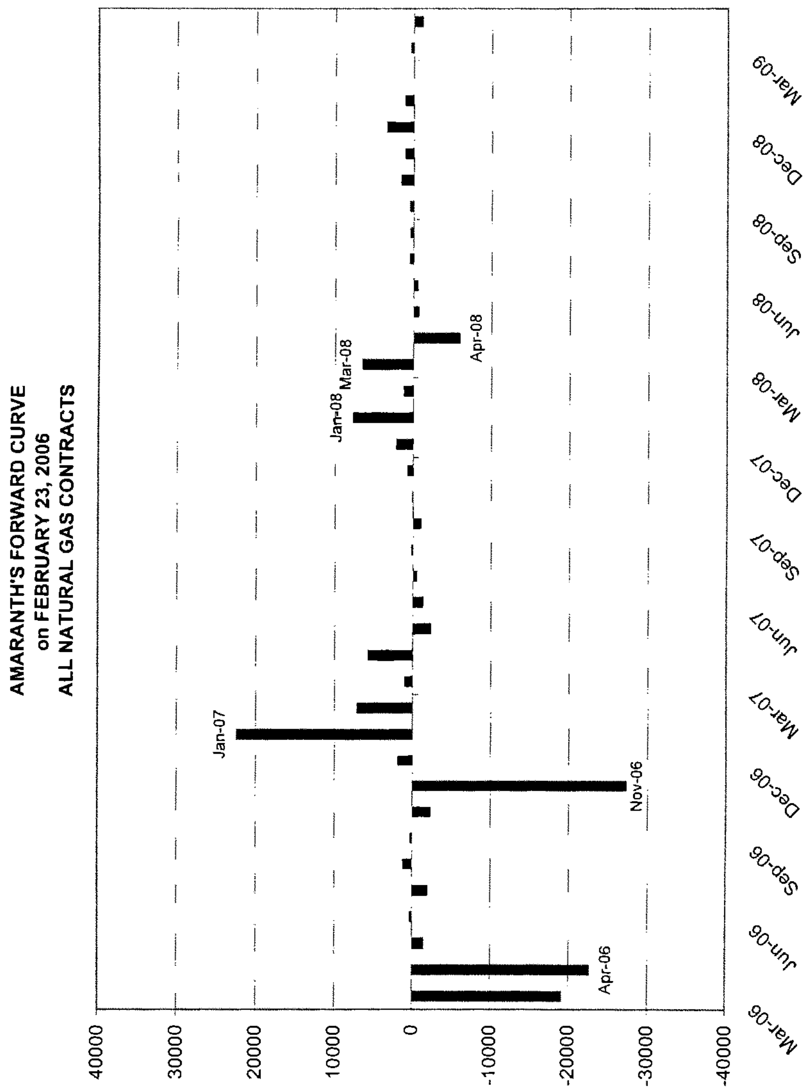
Mar-08
Apr-08
IV-14


AMARANTH'S FORWARD CURVE
on FEBRUARY 23, 2006
ALL NATURAL GAS CONTRACTS
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Jun-08
Sep-08
Dec-08
Mar-09
Apr-06
Nov-06
Jan-07
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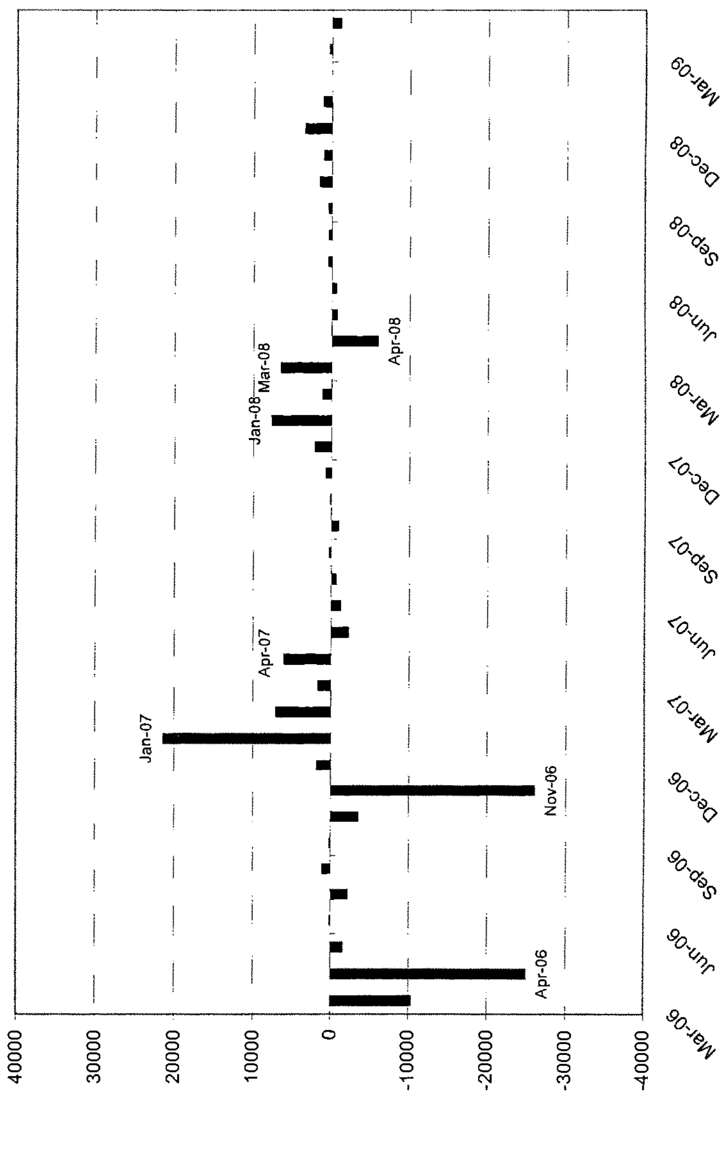
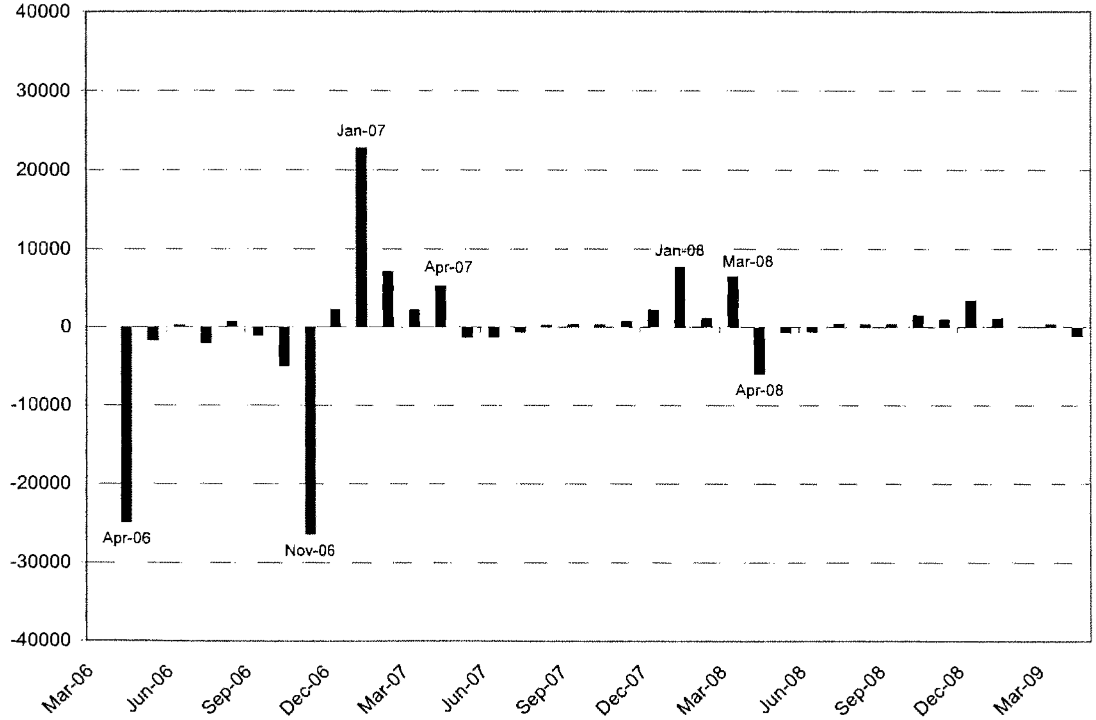
Mar-08
Apr-08

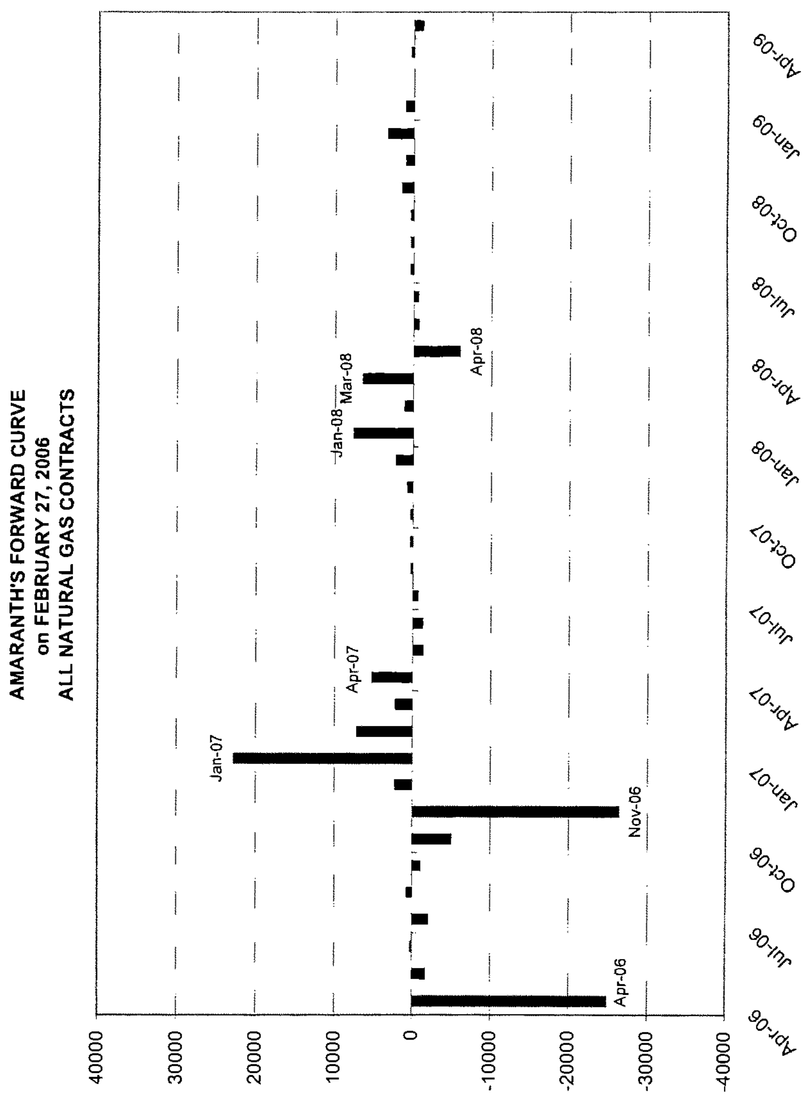
IV-15

AMARANTH'S FORWARD CURVE
on FEBRUARY 24, 2006
ALL NATURAL GAS CONTRACTS



AMARANTH'S FORWARD CURVE
on FEBRUARY 27, 2006
ALL NATURAL GAS CONTRACTS




AMARANTH'S FORWARD CURVE
on FEBRUARY 27, 2006
ALL NATURAL GAS CONTRACTS
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-10000
-20000
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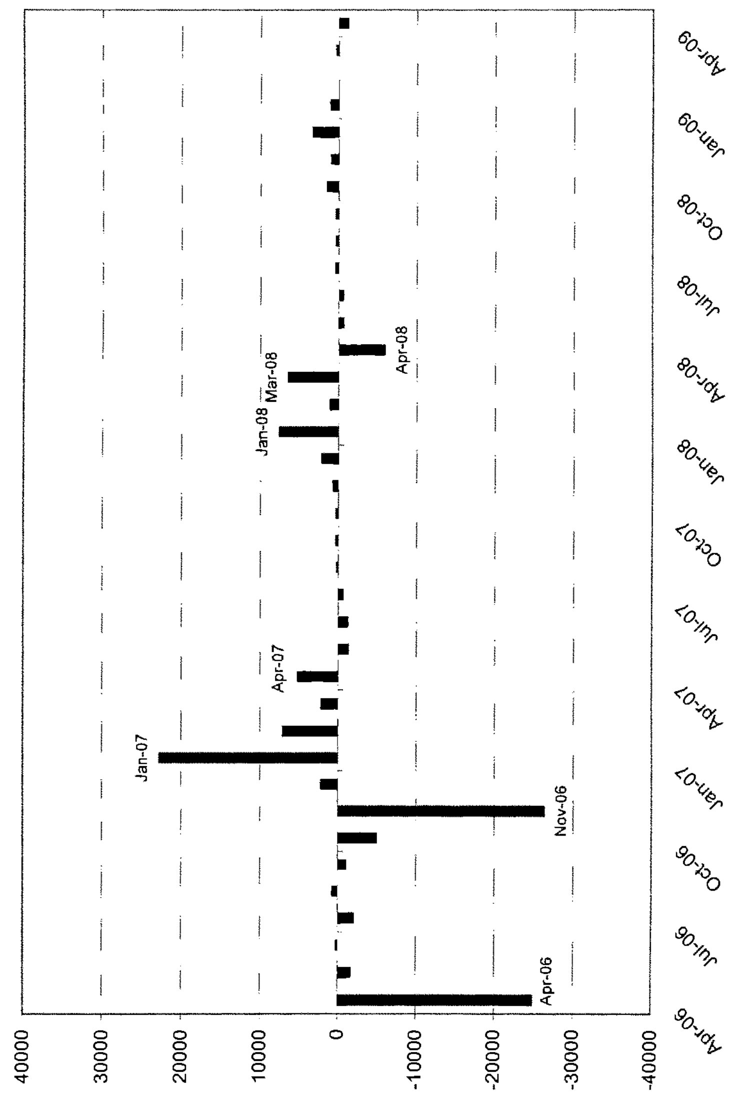
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Nov-06
Mar-08

IV-18

AMARANTH'S FORWARD CURVE
on FEBRUARY 27, 2006
ALL NATURAL GAS CONTRACTS



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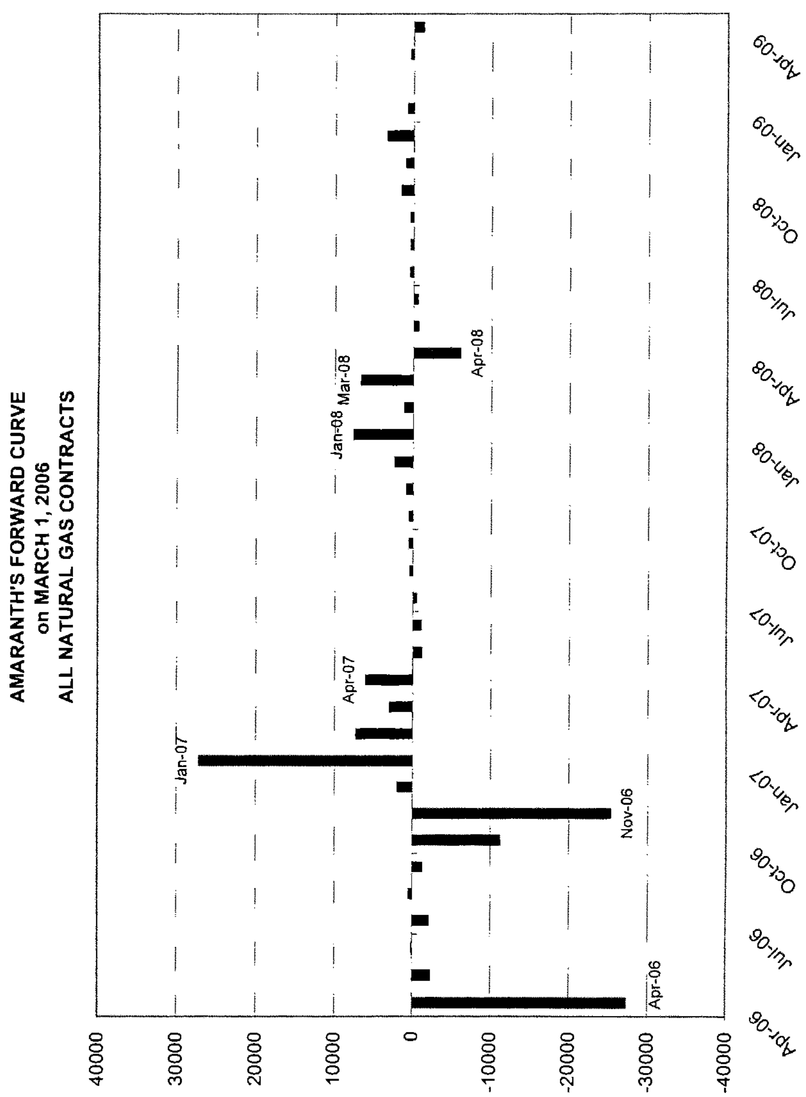
AMARANTH'S FORWARD CURVE
on MARCH 1, 2006
ALL NATURAL GAS CONTRACTS
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Jul-06
Oct-06
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Apr-07
Jul-07
Oct-07
Jan-08
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Jul-08
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Apr-09
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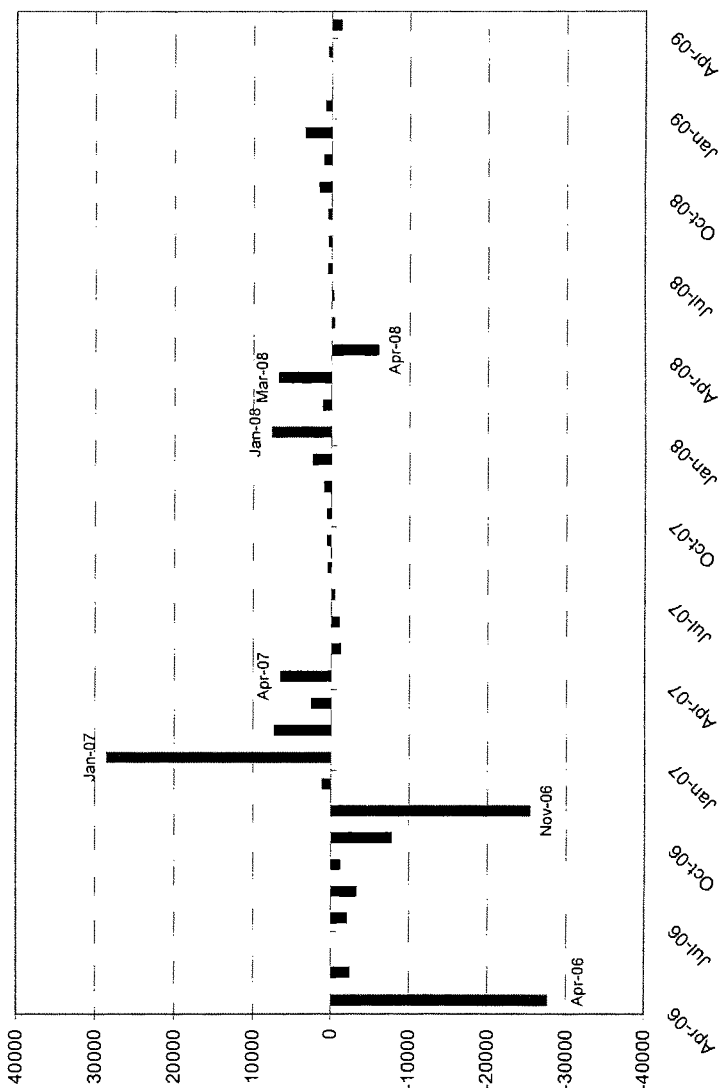
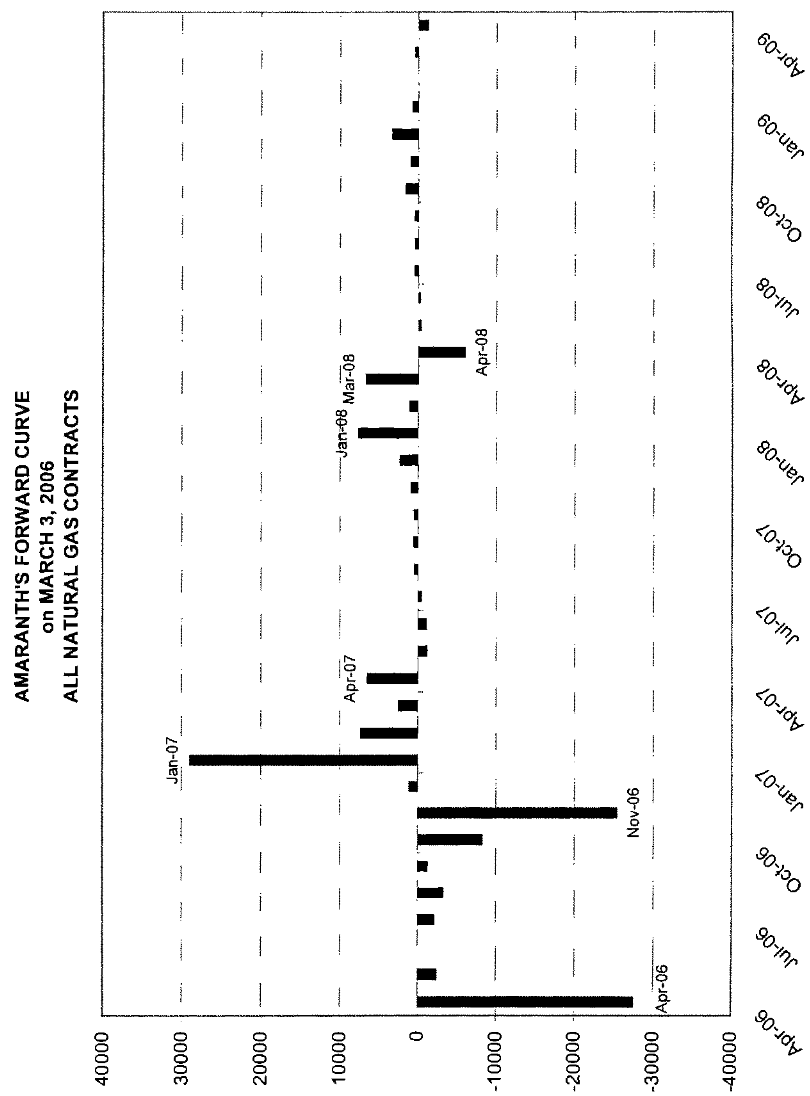
Mar-08
Apr-08

AMARANTH'S FORWARD CURVE
on MARCH 2, 2006
ALL NATURAL GAS CONTRACTS



IV-21


AMARANTH'S FORWARD CURVE
on MARCH 3, 2006
ALL NATURAL GAS CONTRACTS
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Jan-09
Apr-09
Jan-07
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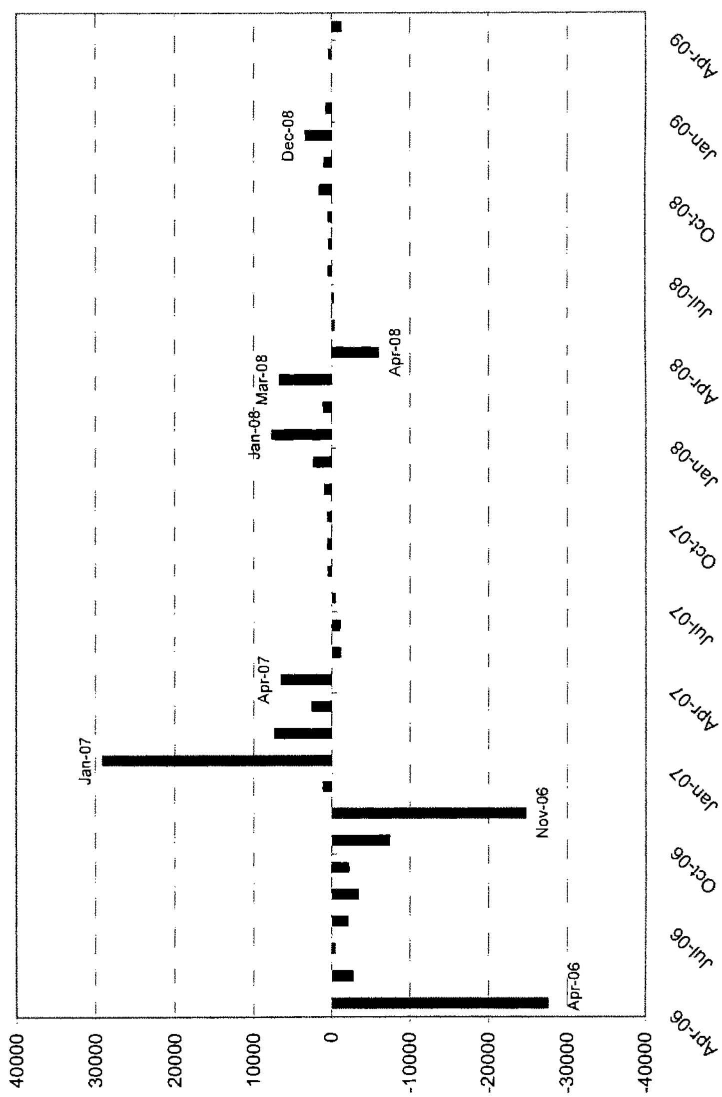
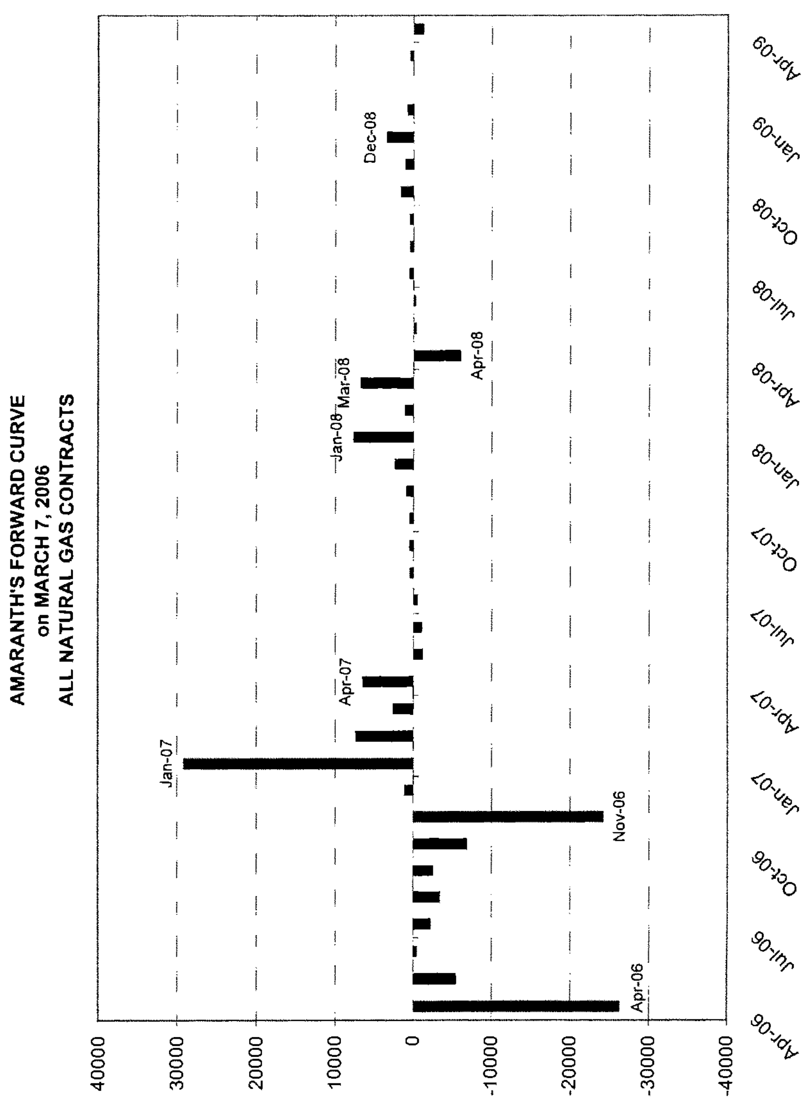
Apr-08
Nov-06
Apr-06

IV-22

AMARANTH'S FORWARD CURVE
on MARCH 6, 2006
ALL NATURAL GAS CONTRACTS



IV-23


AMARANTH'S FORWARD CURVE
on MARCH 7, 2006
ALL NATURAL GAS CONTRACTS
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Jan-08
Apr-08
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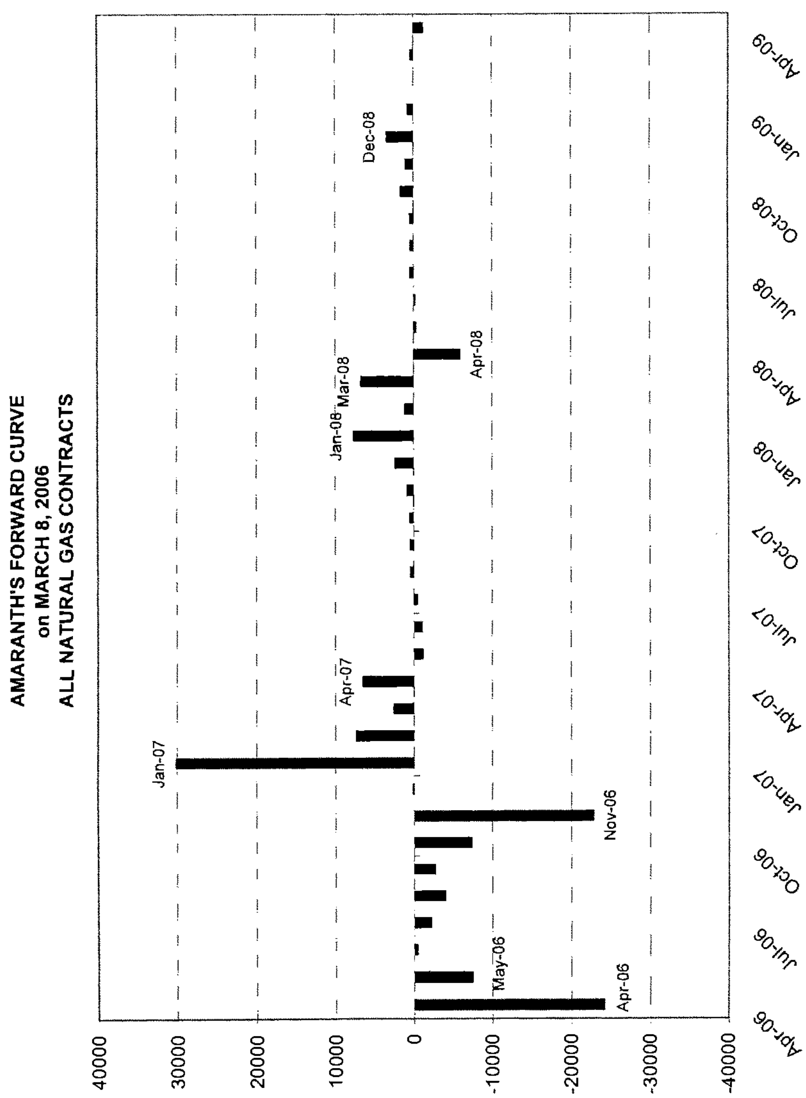
Dec-08
Apr-06
Nov-06
Apr-08

IV-24


AMARANTH'S FORWARD CURVE
on MARCH 8, 2006
ALL NATURAL GAS CONTRACTS
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Apr-08
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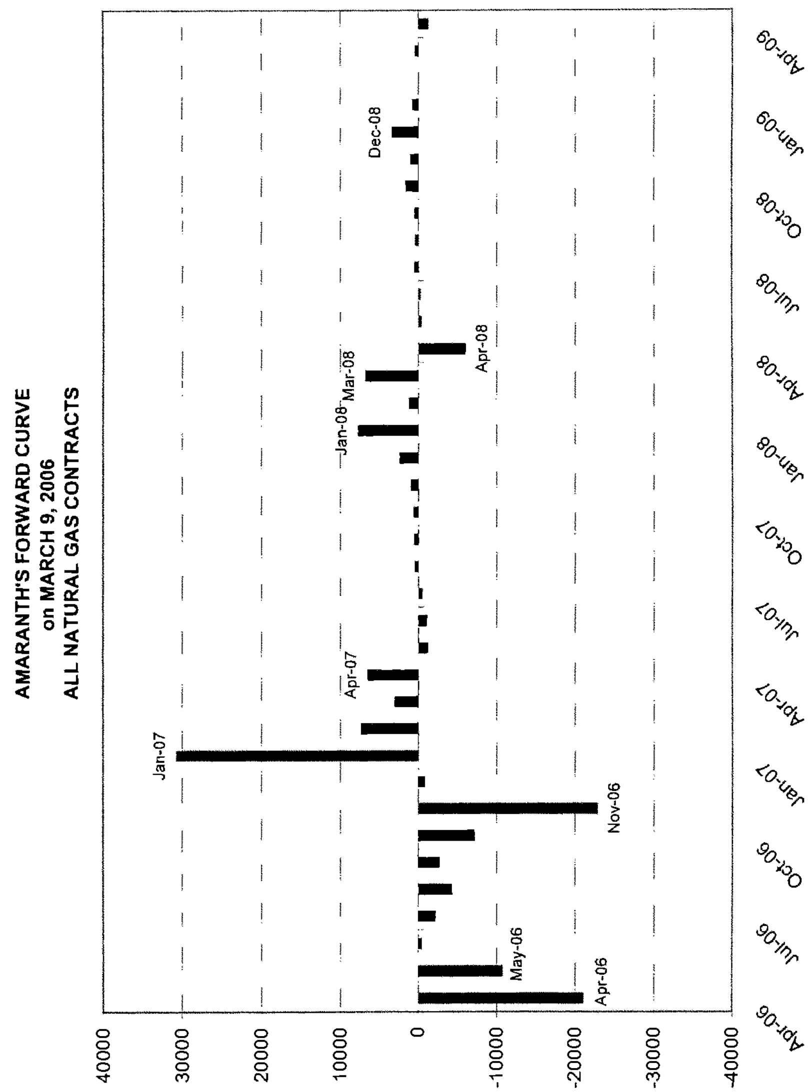
Jan-09
Apr-09

IV-25


AMARANTH'S FORWARD CURVE
on MARCH 9, 2006
ALL NATURAL GAS CONTRACTS
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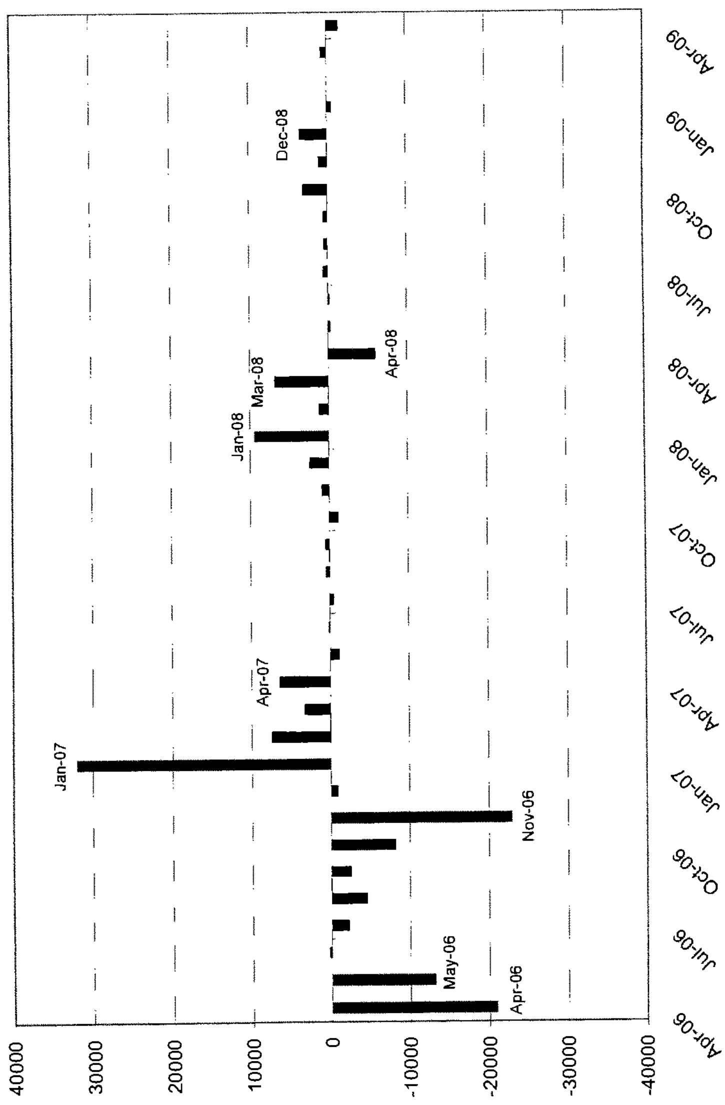
Apr-08
Dec-08

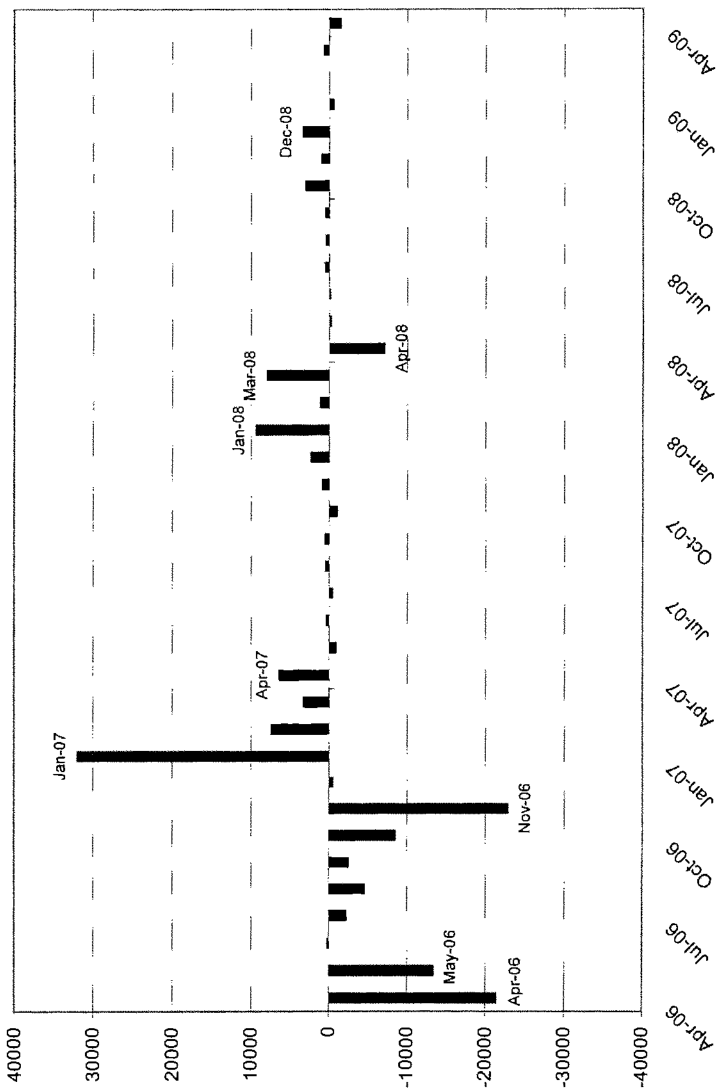
IV-26

AMARANTH'S FORWARD CURVE
on MARCH 10, 2006
ALL NATURAL GAS CONTRACTS

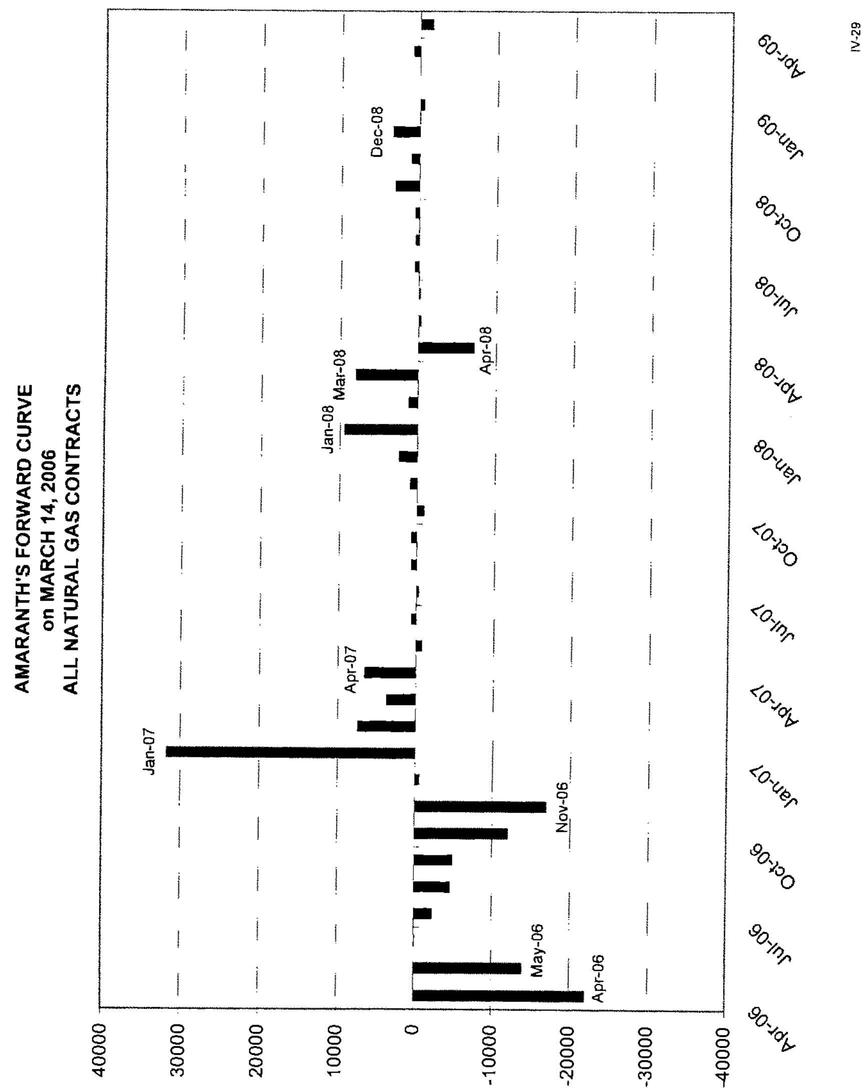


IV-27

AMARANTH'S FORWARD CURVE
on MARCH 13, 2006
ALL NATURAL GAS CONTRACTS



IV-28


AMARANTH'S FORWARD CURVE
on MARCH 14, 2006
ALL NATURAL GAS CONTRACTS
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20000
10000
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-10000
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Oct-08
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Apr-06
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Nov-06
Jan-07
Apr-07
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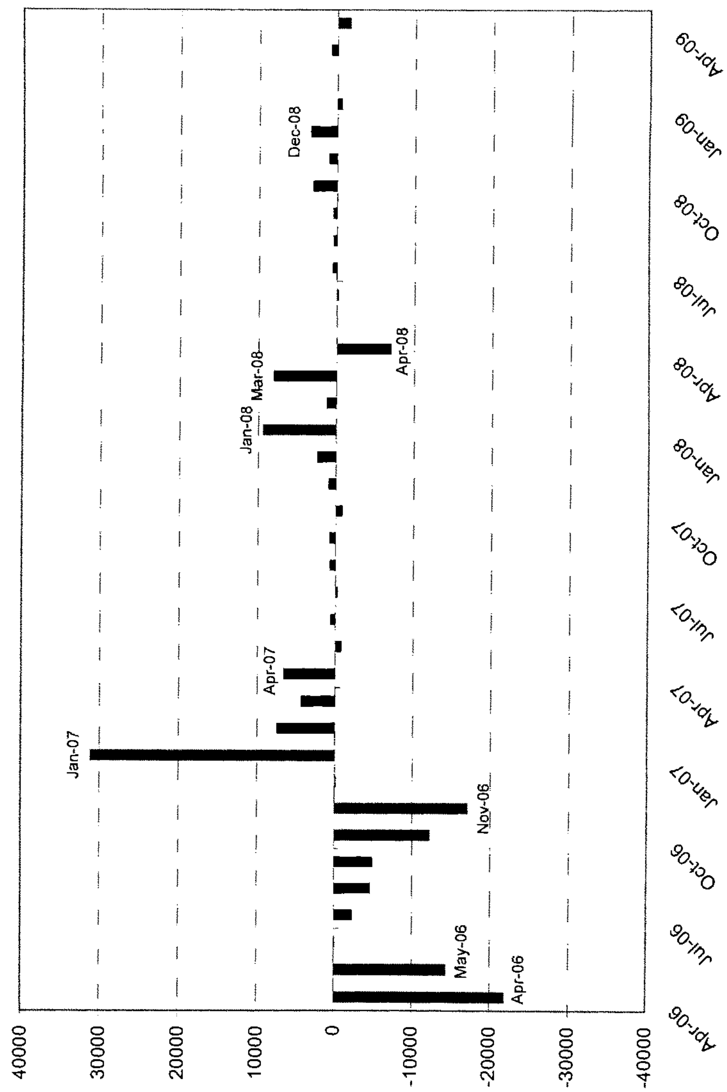
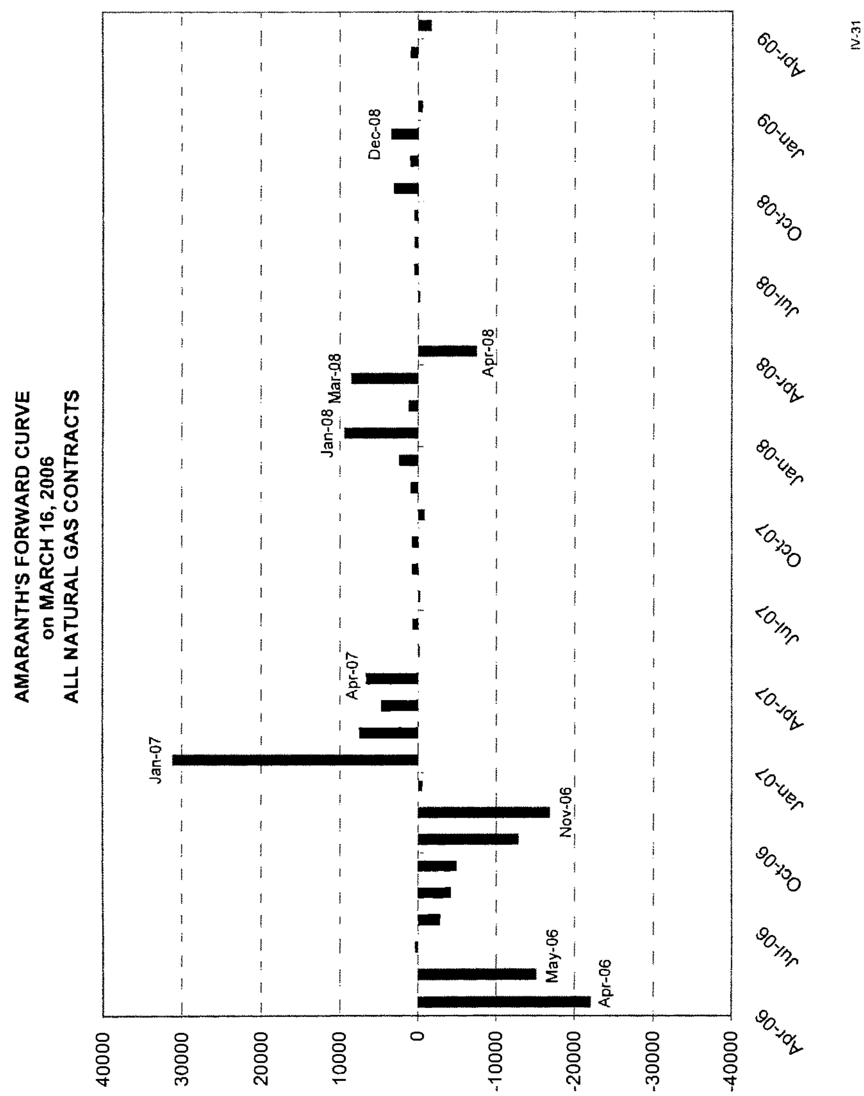
Mar-08
Apr-08
Dec-08
IV-29

AMARANTH'S FORWARD CURVE
on MARCH 15, 2006
ALL NATURAL GAS CONTRACTS



IV-30


AMARANTH'S FORWARD CURVE
on MARCH 16, 2006
ALL NATURAL GAS CONTRACTS
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20000
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Oct-08
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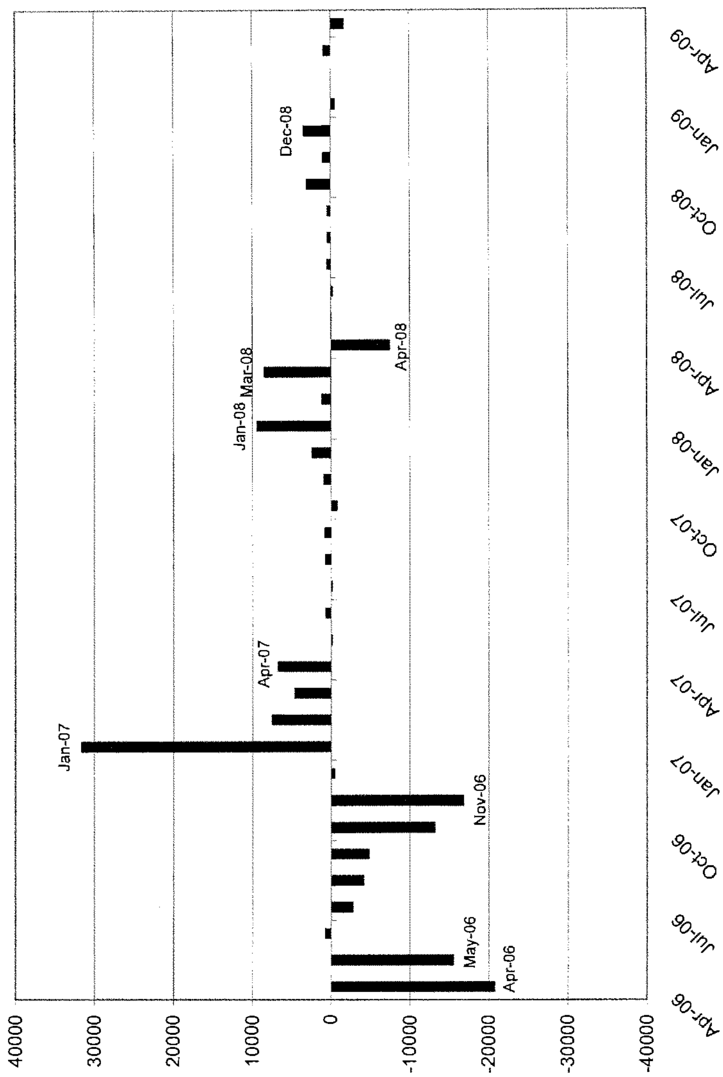
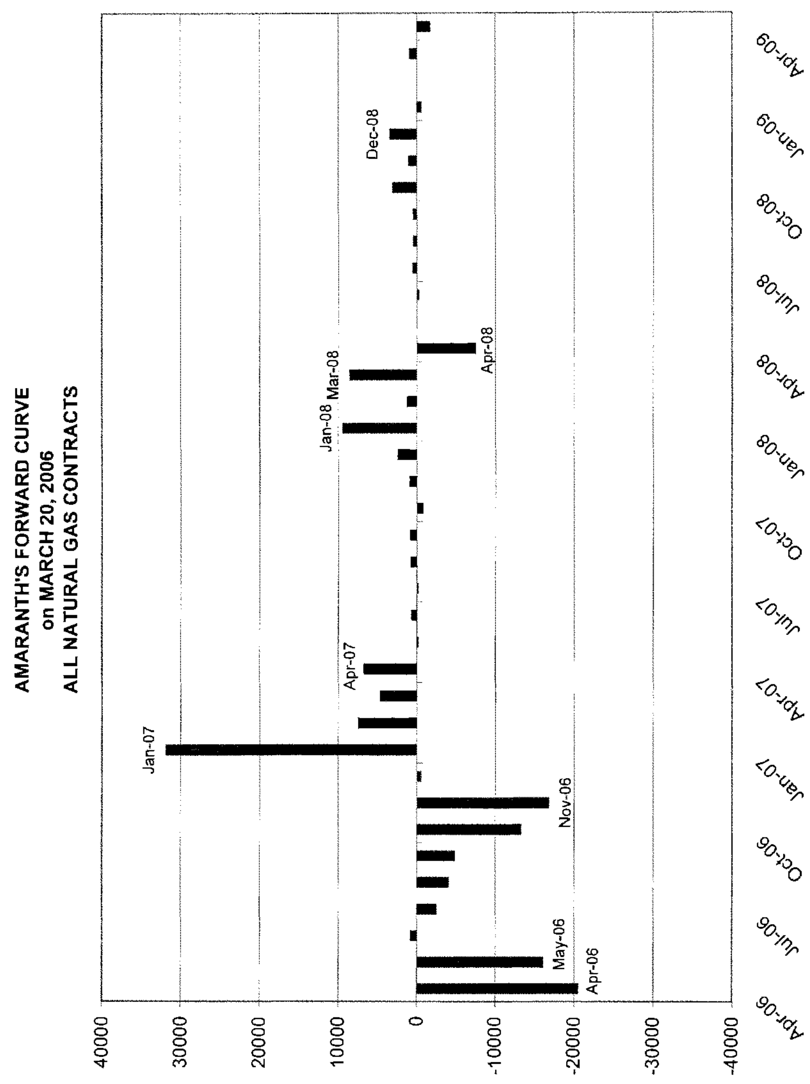
Mar-08
Apr-08
Dec-08
IV-31

AMARANTH'S FORWARD CURVE
on MARCH 17, 2006
ALL NATURAL GAS CONTRACTS




AMARANTH'S FORWARD CURVE
on MARCH 20, 2006
ALL NATURAL GAS CONTRACTS
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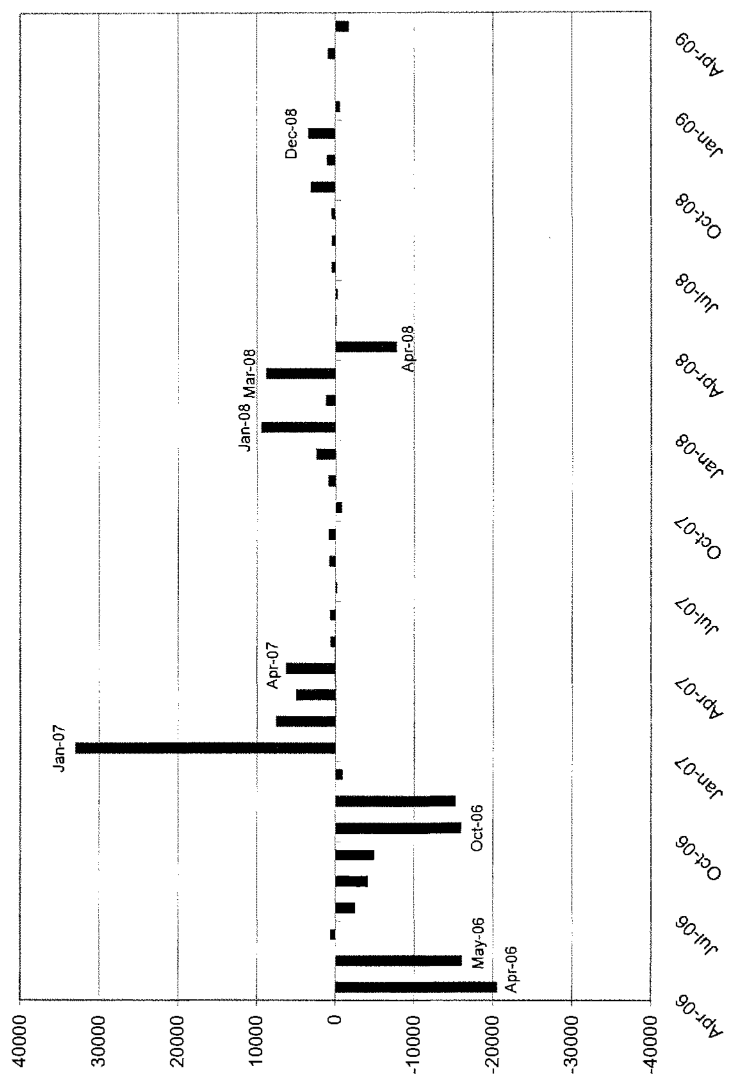
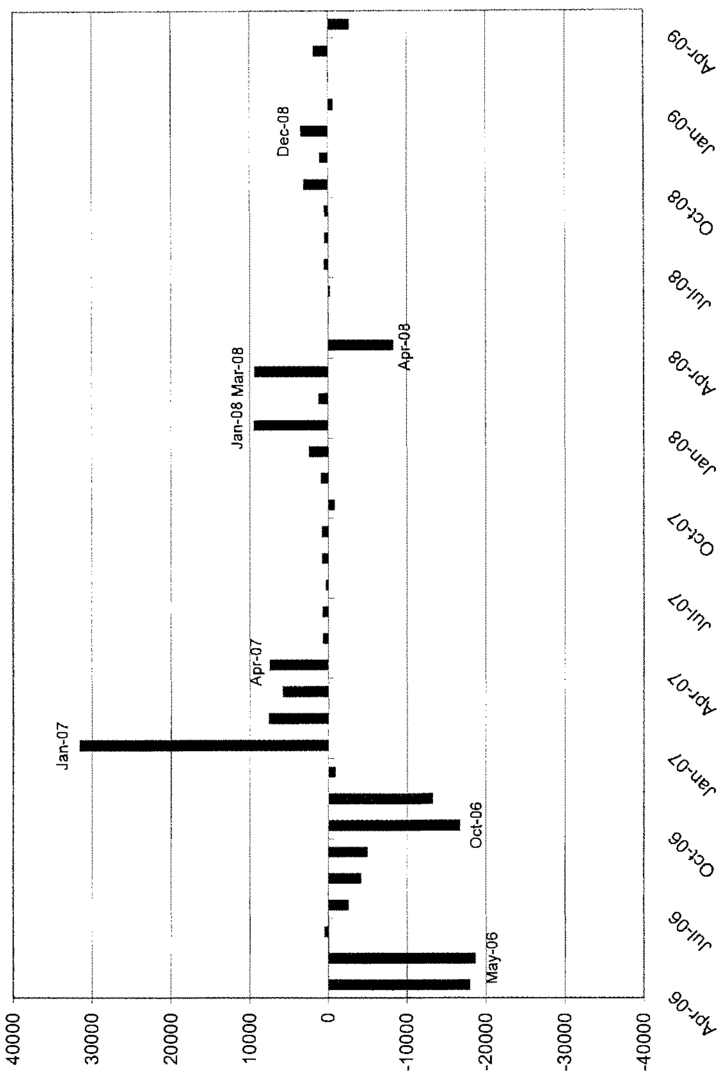
AMARANTH'S FORWARD CURVE
on MARCH 21, 2006
ALL NATURAL GAS CONTRACTS

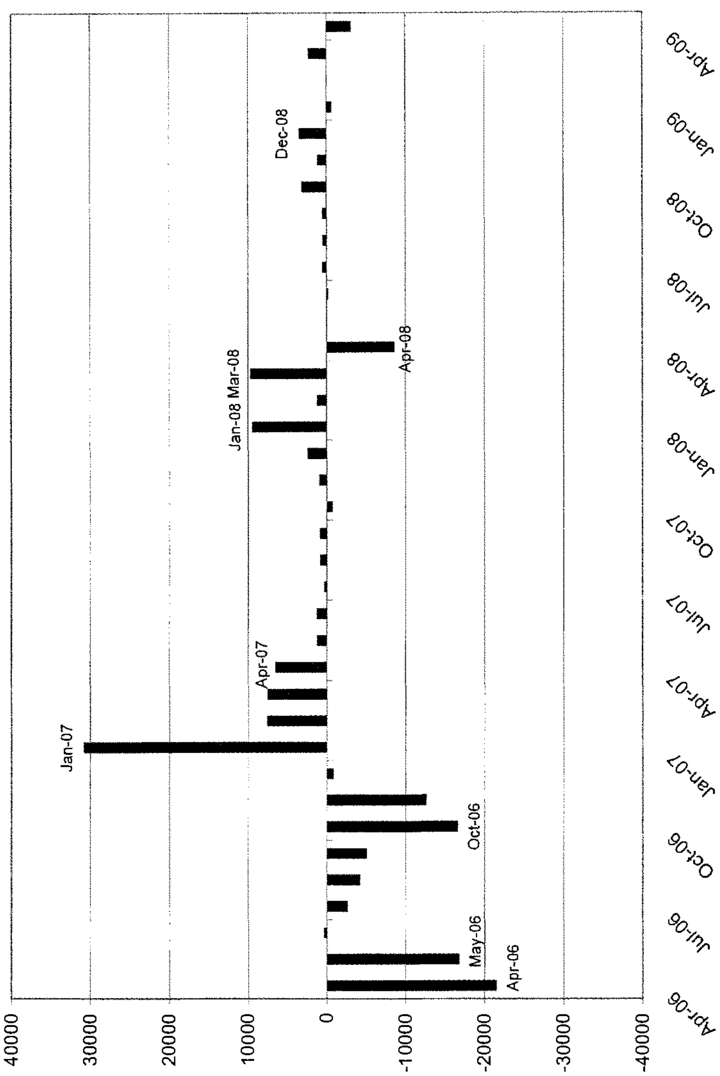


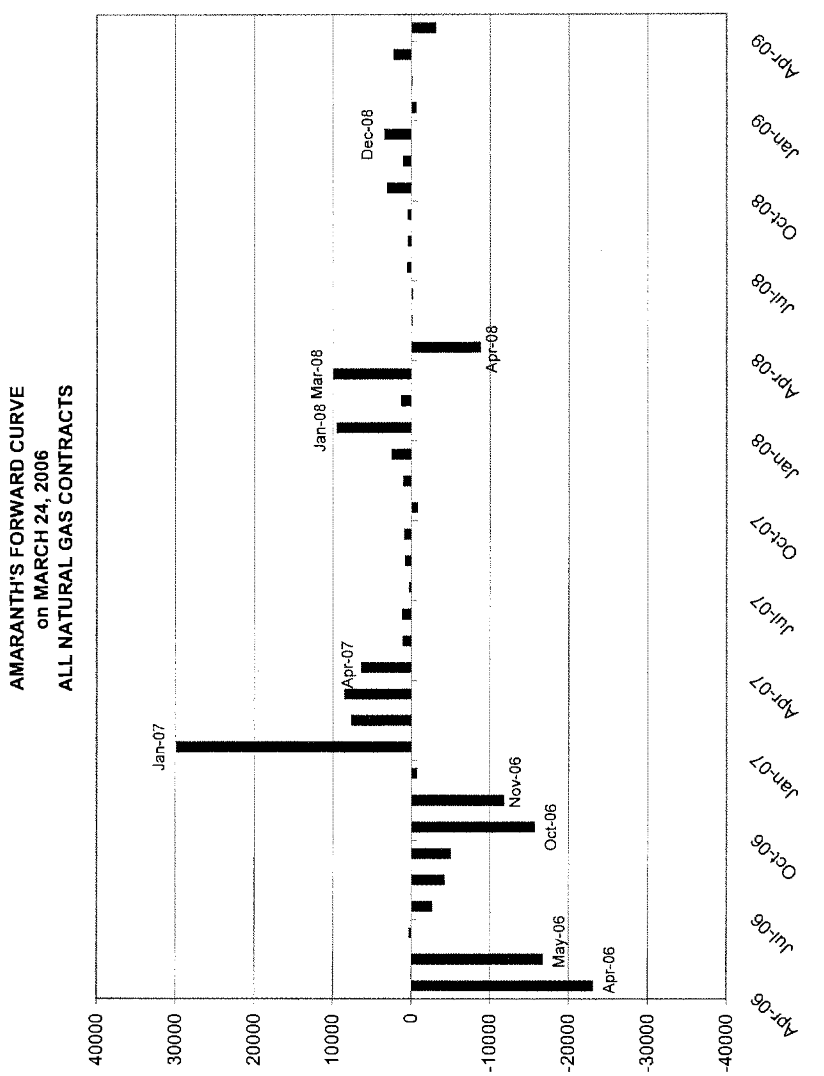
AMARANTH'S FORWARD CURVE
on MARCH 22, 2006
ALL NATURAL GAS CONTRACTS



IV-35

AMARANTH'S FORWARD CURVE
on MARCH 23, 2006
ALL NATURAL GAS CONTRACTS




AMARANTH'S FORWARD CURVE
on MARCH 24, 2006
ALL NATURAL GAS CONTRACTS
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Apr-07
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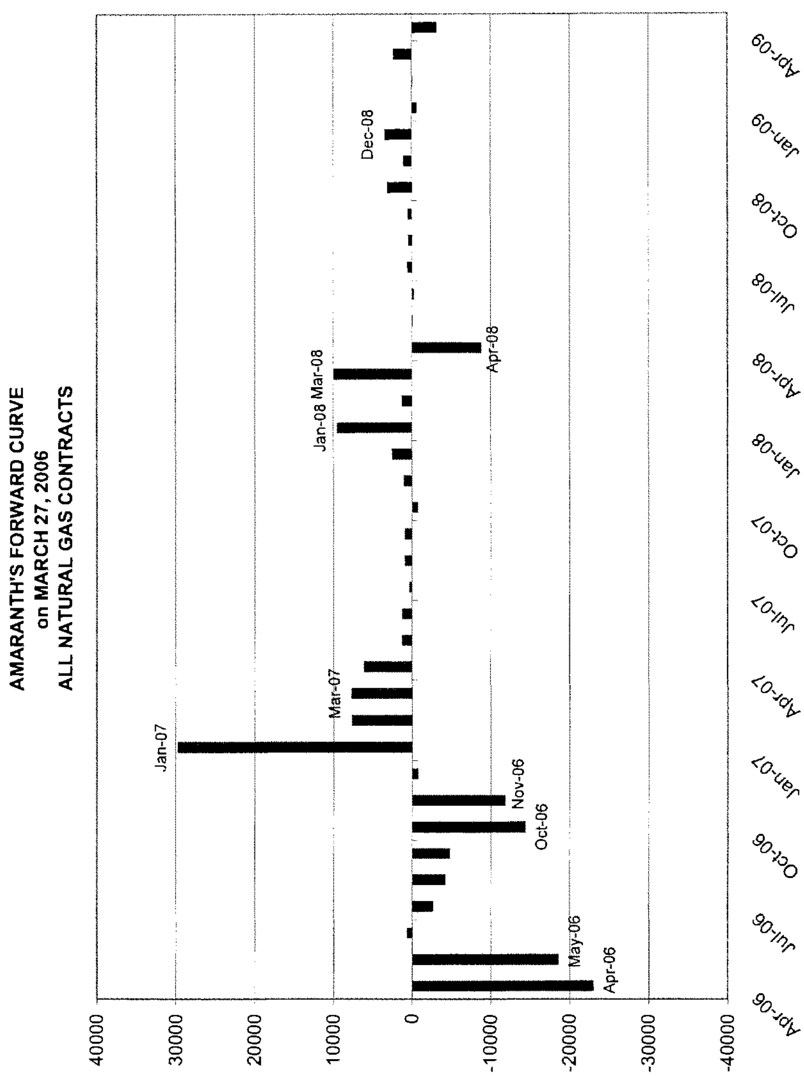
Jan-08 Mar-08
Dec-08

IV-37


AMARANTH'S FORWARD CURVE
on MARCH 27, 2006
ALL NATURAL GAS CONTRACTS
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10000
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Apr-06
Jul-06
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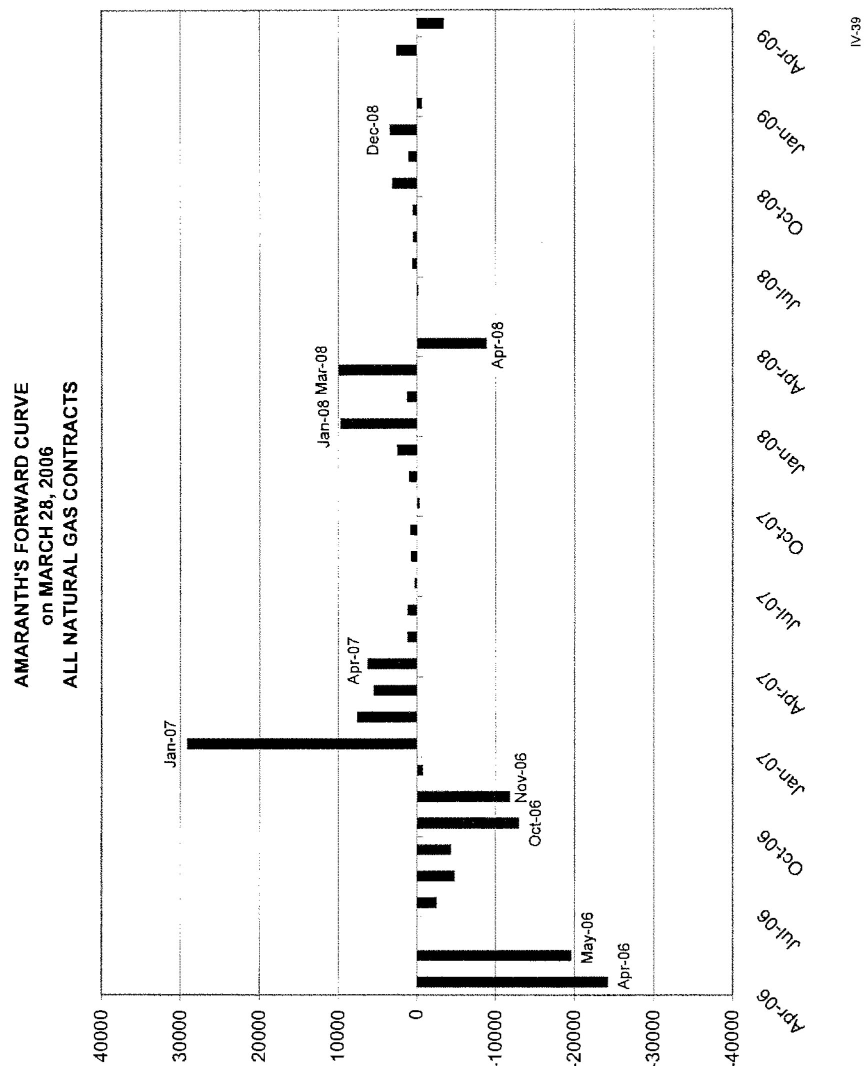
Apr-08
Dec-08

IV-38


AMARANTH'S FORWARD CURVE
on MARCH 28, 2006
ALL NATURAL GAS CONTRACTS
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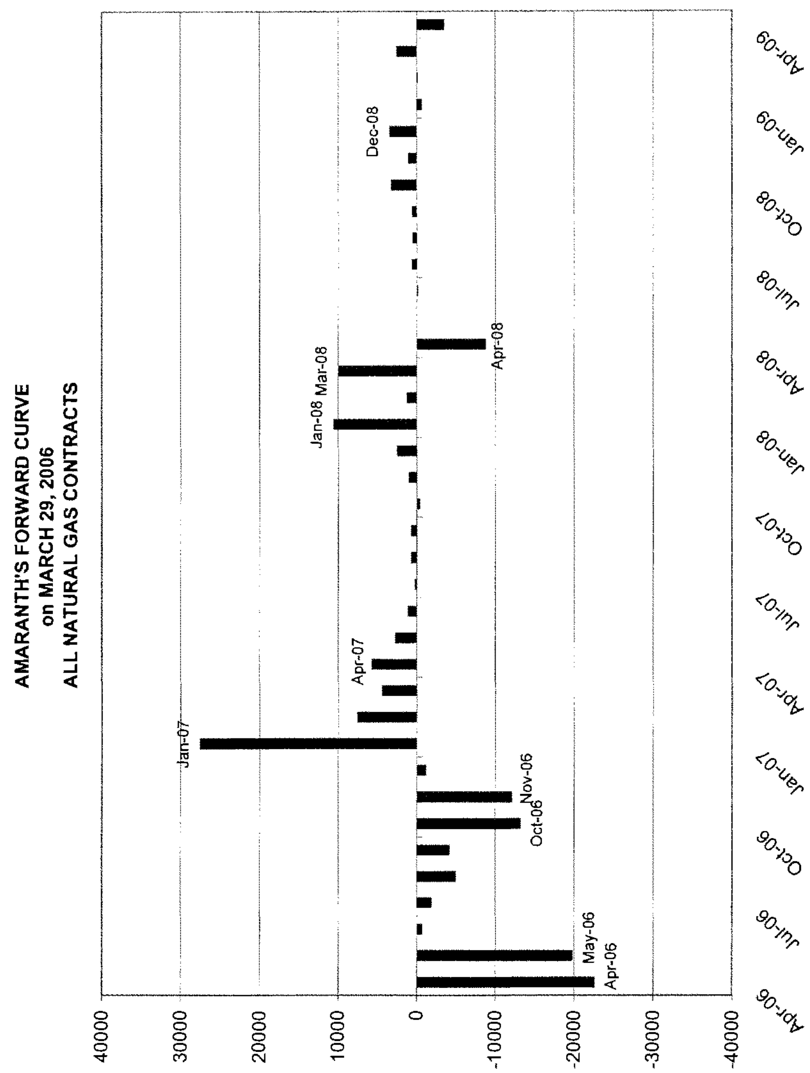
Apr-08
Dec-08

IV-39


AMARANTH'S FORWARD CURVE
on MARCH 29, 2006
ALL NATURAL GAS CONTRACTS
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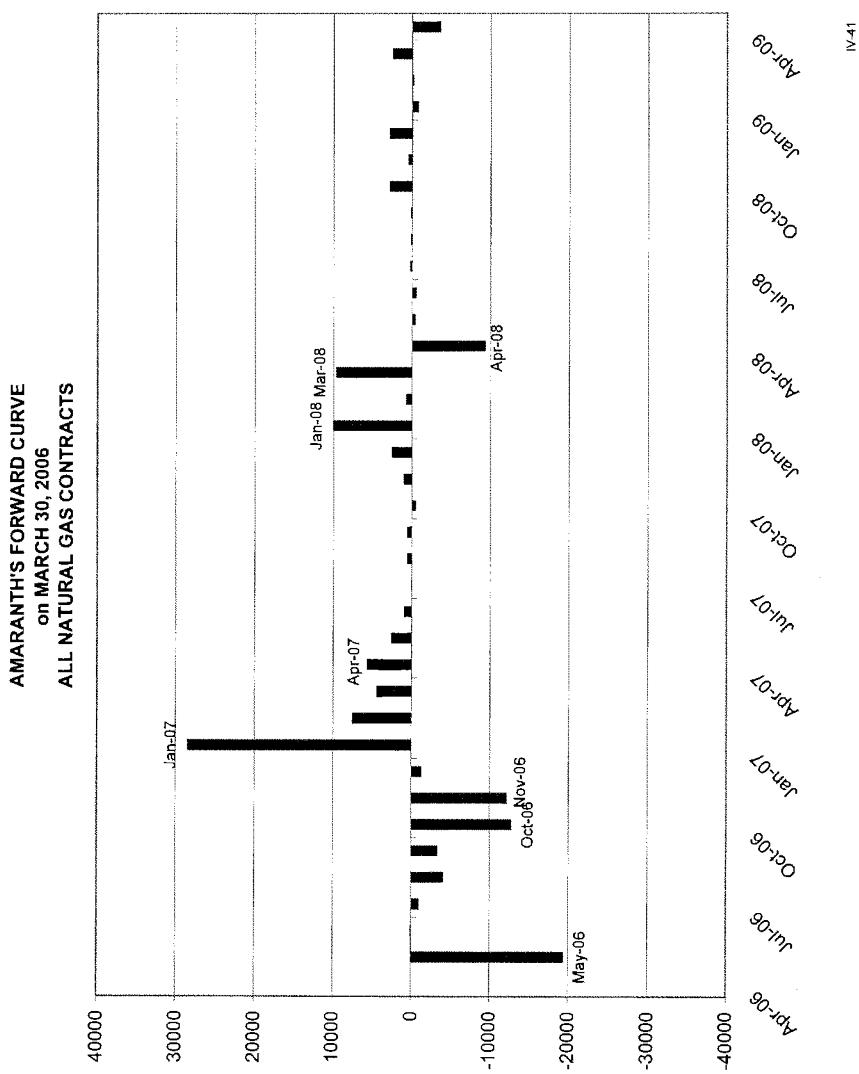
Apr-08
Dec-08

IV-40


AMARANTH'S FORWARD CURVE
on MARCH 30, 2006
ALL NATURAL GAS CONTRACTS
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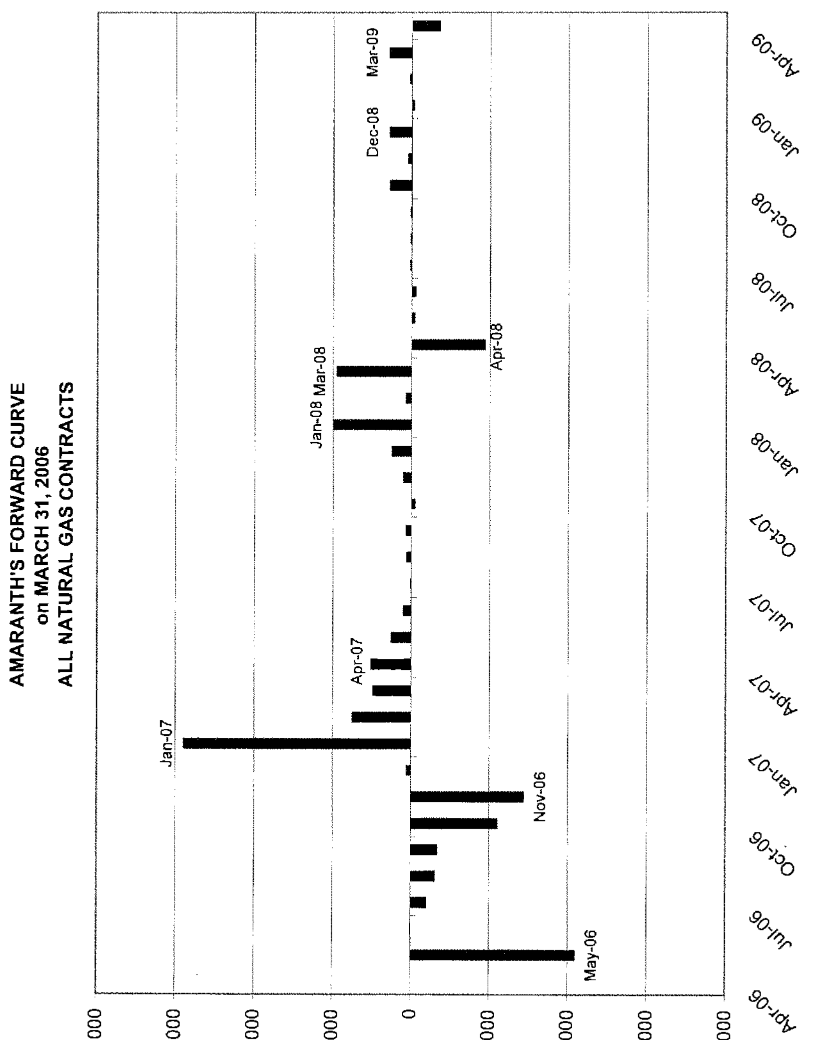
IV-41


AMARANTH'S FORWARD CURVE
on MARCH 31, 2006
ALL NATURAL GAS CONTRACTS
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Apr-06
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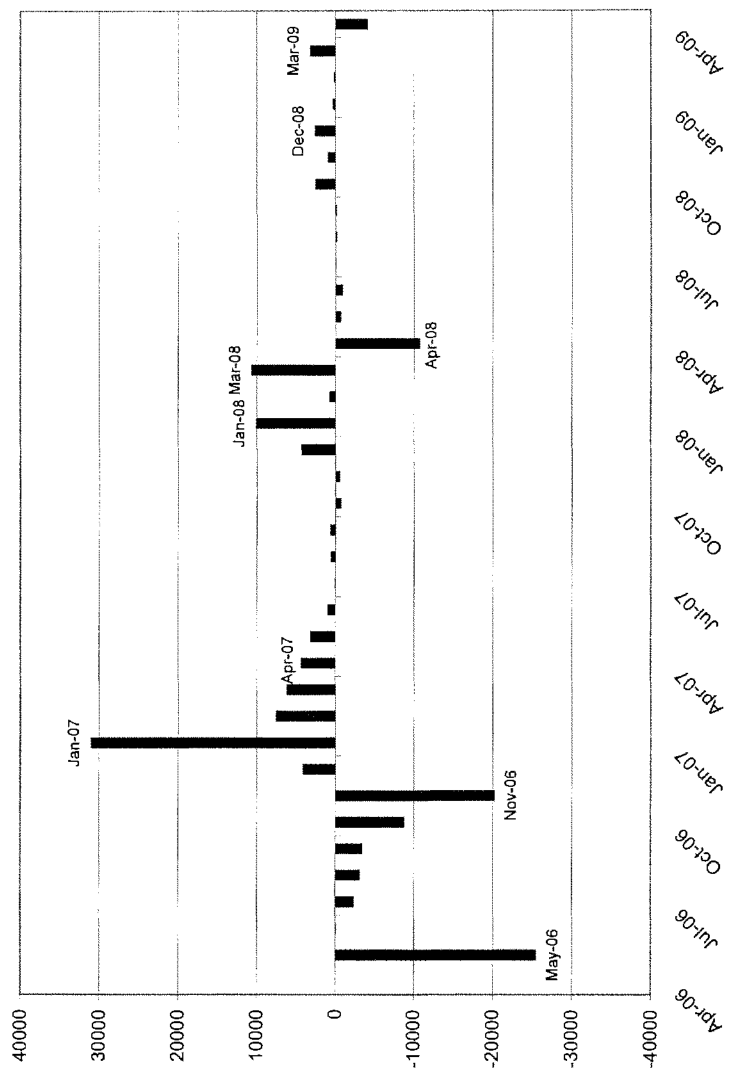
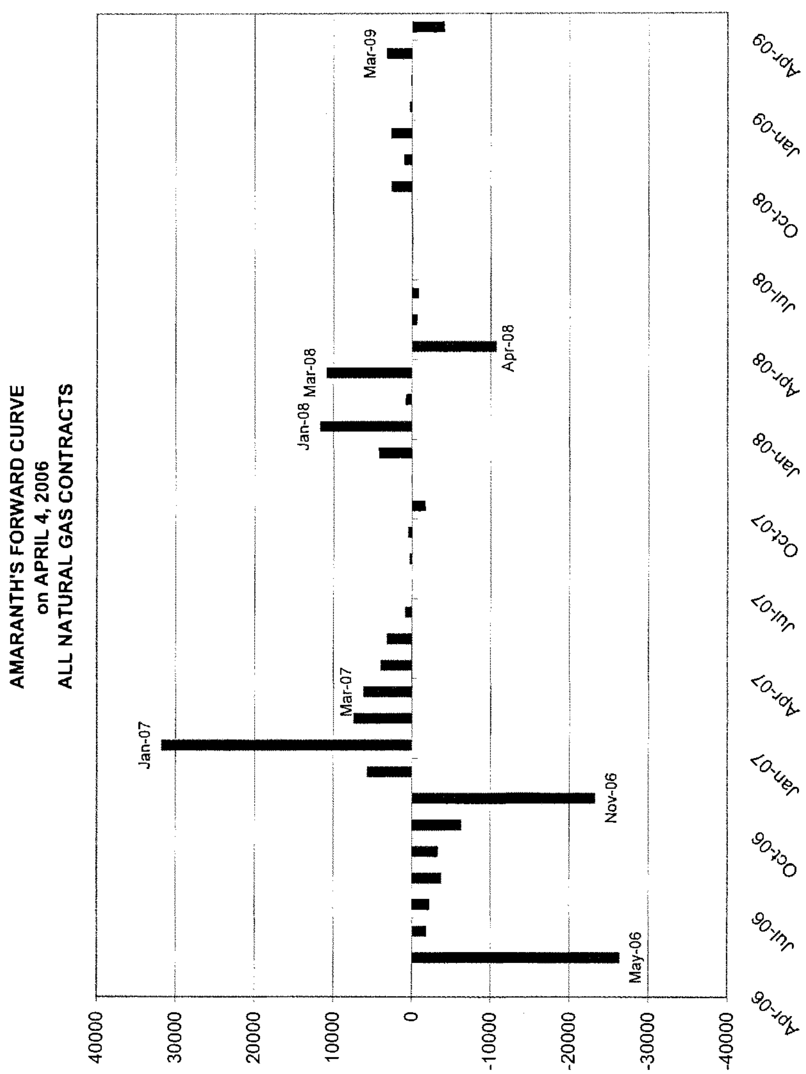
Apr-08
Dec-08
Mar-09

IV-42

AMARANTH'S FORWARD CURVE
on APRIL 3, 2006
ALL NATURAL GAS CONTRACTS



IV-43


AMARANTH'S FORWARD CURVE
on APRIL 4, 2006
ALL NATURAL GAS CONTRACTS
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20000
10000
0
-10000
-20000
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-40000
Apr-06
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
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Apr-09
May-06
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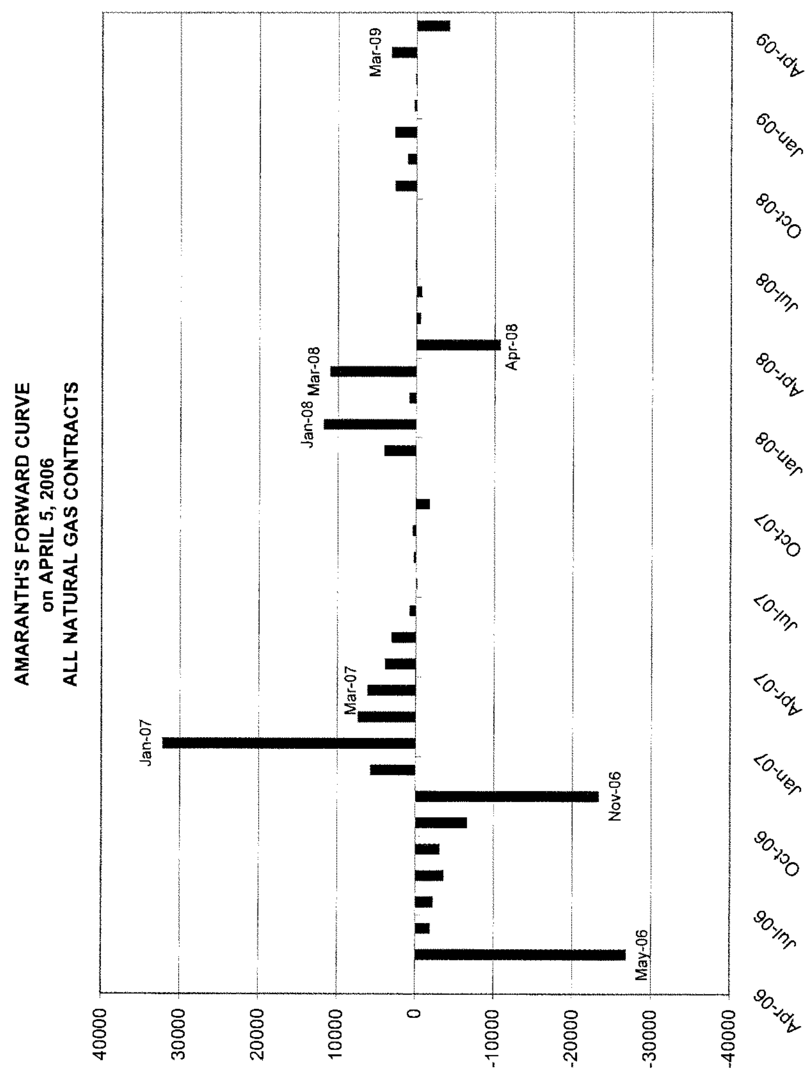
Jan-07
Mar-07
Jan-08
Mar-08
Apr-08
Mar-09

IV-44


AMARANTH'S FORWARD CURVE
on APRIL 5, 2006
ALL NATURAL GAS CONTRACTS
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20000
10000
0
-10000
-20000
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-40000
Apr-06
Jul-06
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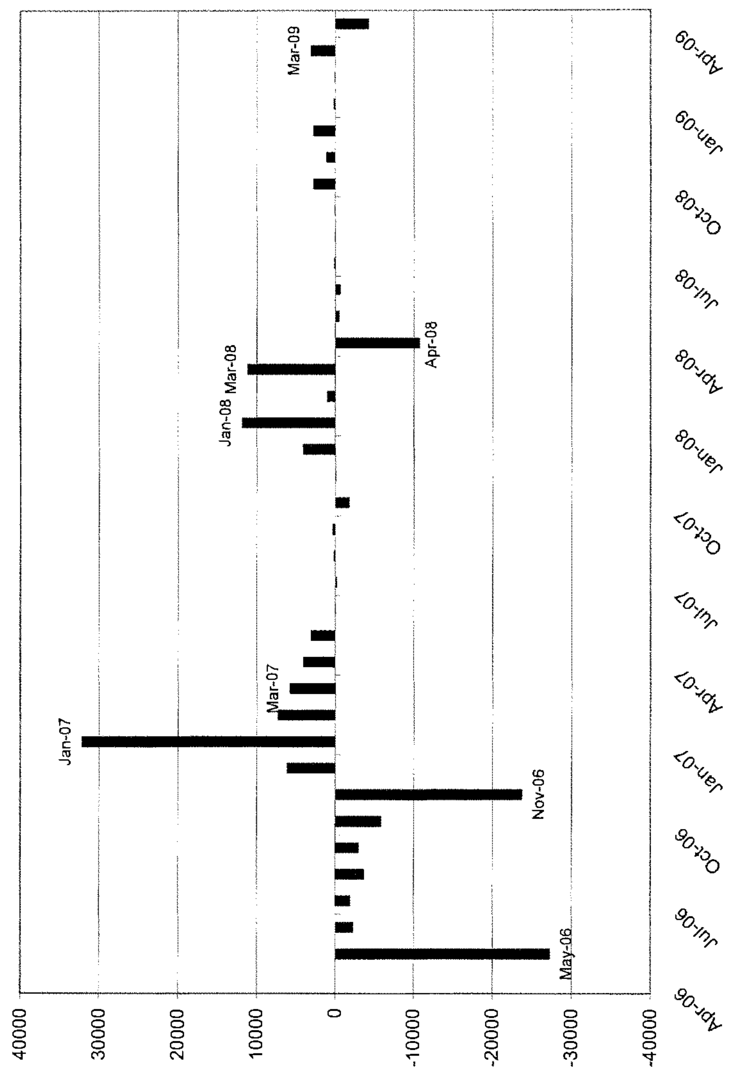
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
May-06
Nov-06
Jan-07
Mar-07
Jan-08
Mar-08
Apr-08
Mar-09

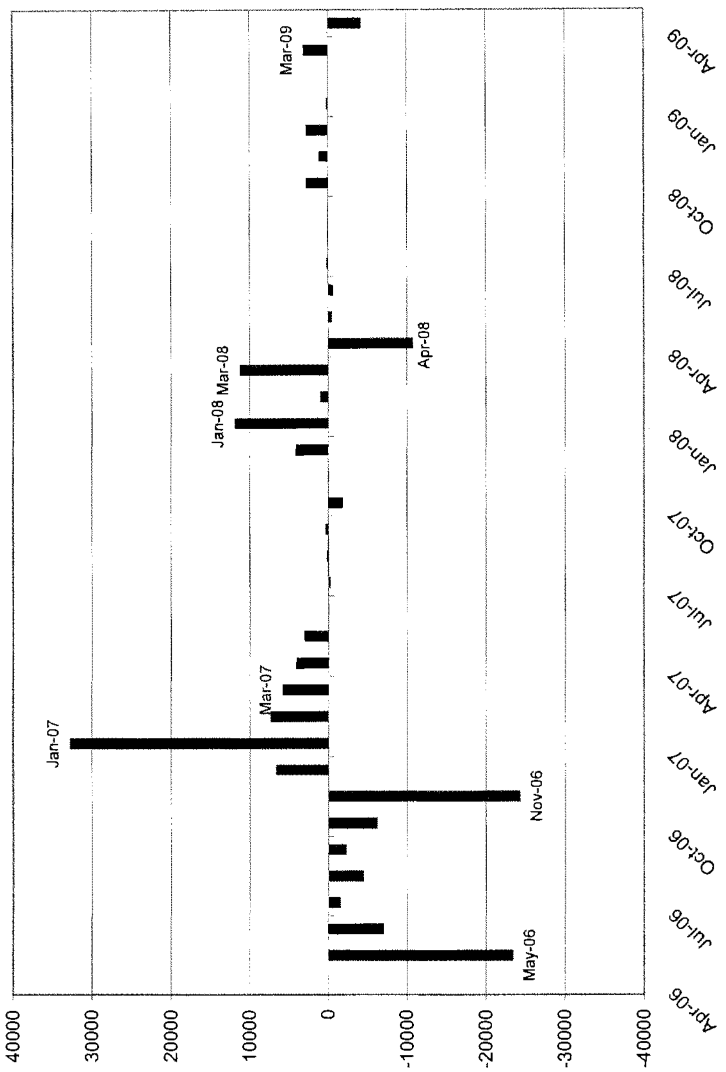
IV-45

AMARANTH'S FORWARD CURVE
on APRIL 6, 2006
ALL NATURAL GAS CONTRACTS



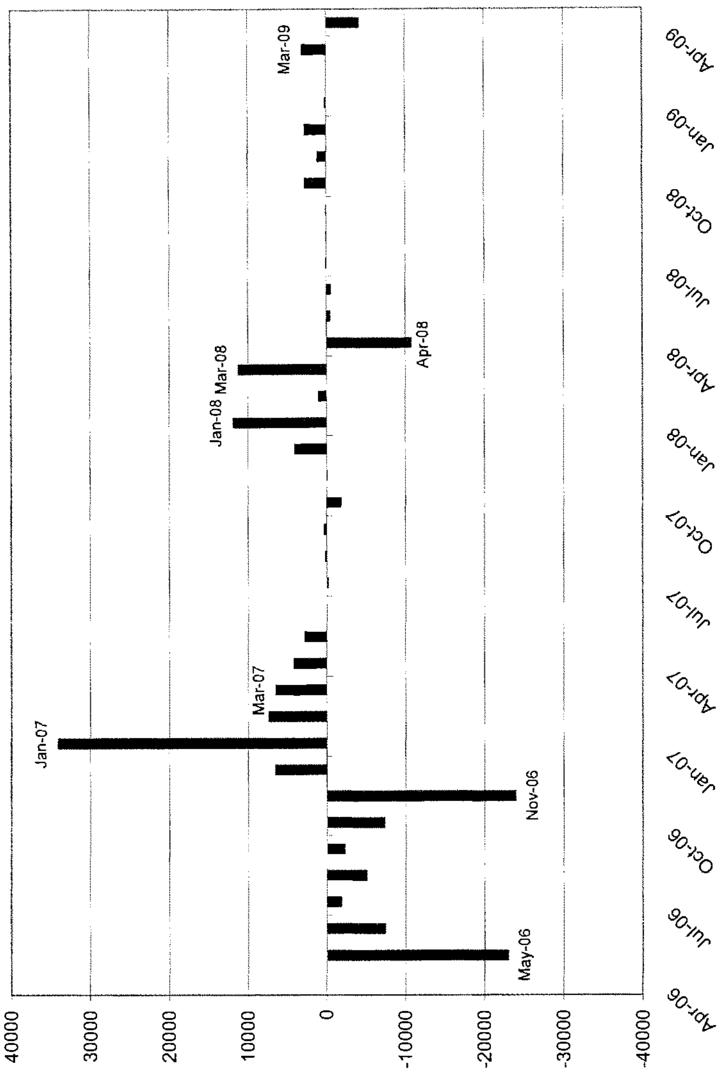
IV-46

AMARANTH'S FORWARD CURVE
on APRIL 7, 2006
ALL NATURAL GAS CONTRACTS

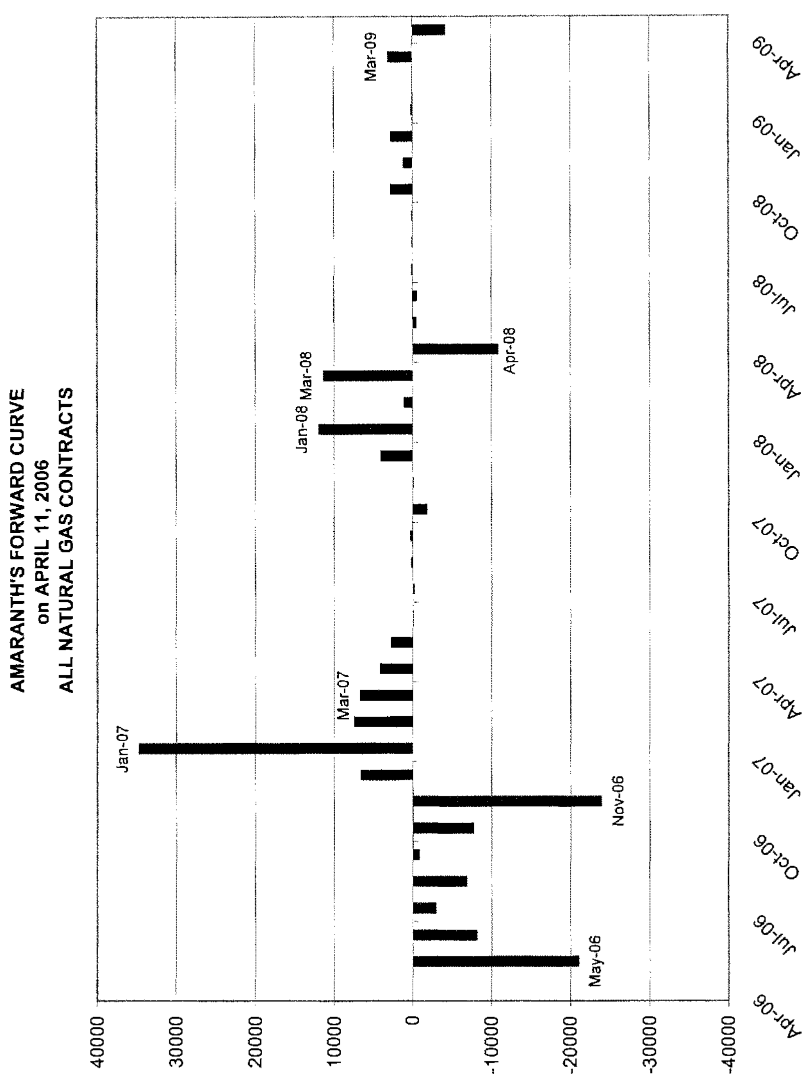


IV-47

AMARANTH'S FORWARD CURVE
on APRIL 10, 2006
ALL NATURAL GAS CONTRACTS



IV-48


AMARANTH'S FORWARD CURVE
on APRIL 11, 2006
ALL NATURAL GAS CONTRACTS
40000
30000
20000
10000
0
-10000
-20000
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-40000
Apr-06
Jul-06
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Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
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Jan-07
Mar-07
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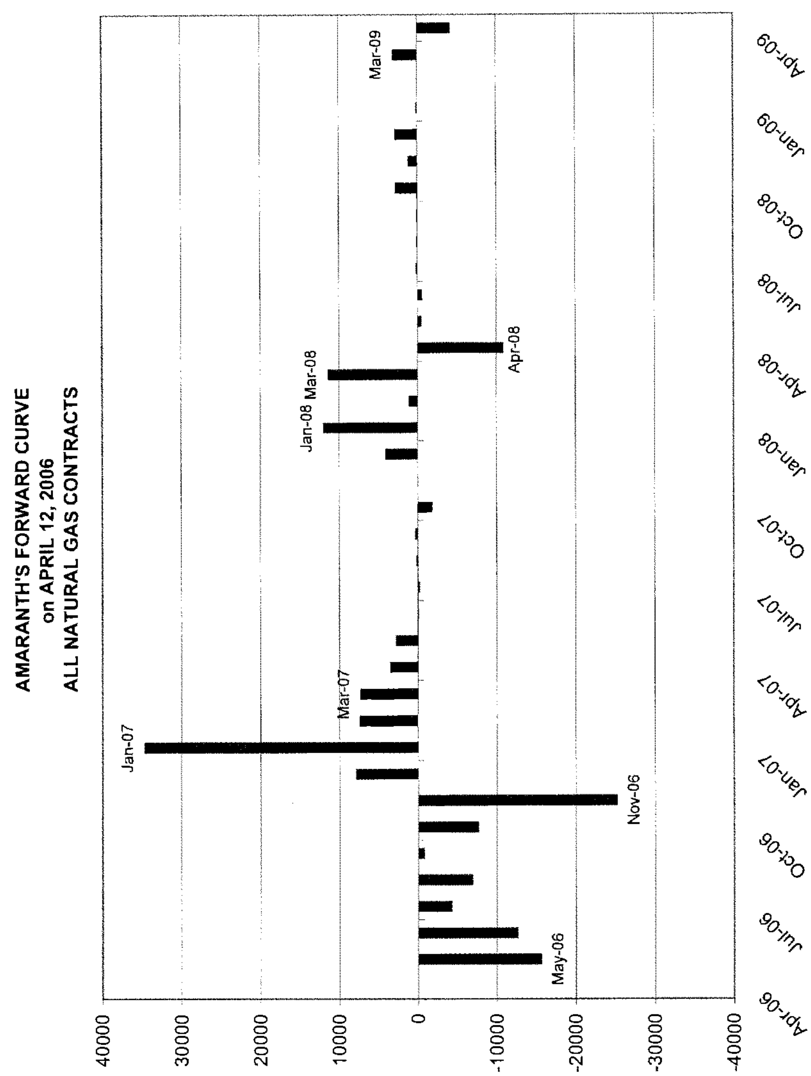
Mar-08
Apr-08
Mar-09


AMARANTH'S FORWARD CURVE
on APRIL 12, 2006
ALL NATURAL GAS CONTRACTS
40000
30000
20000
10000
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-20000
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-40000
Apr-06
Jul-06
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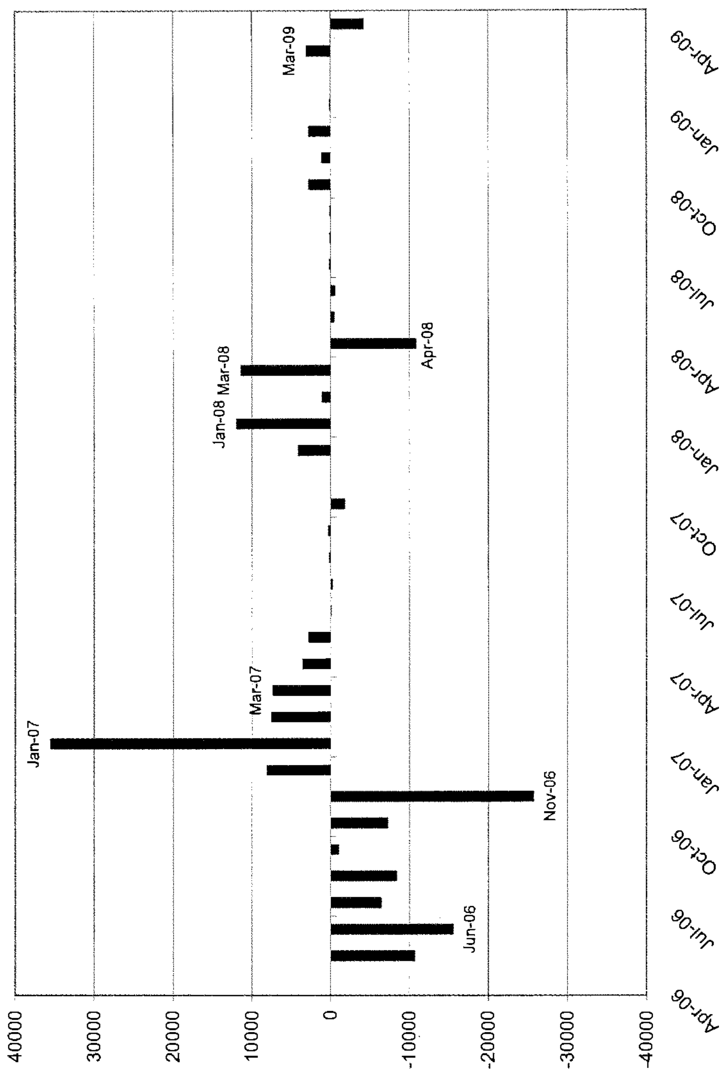
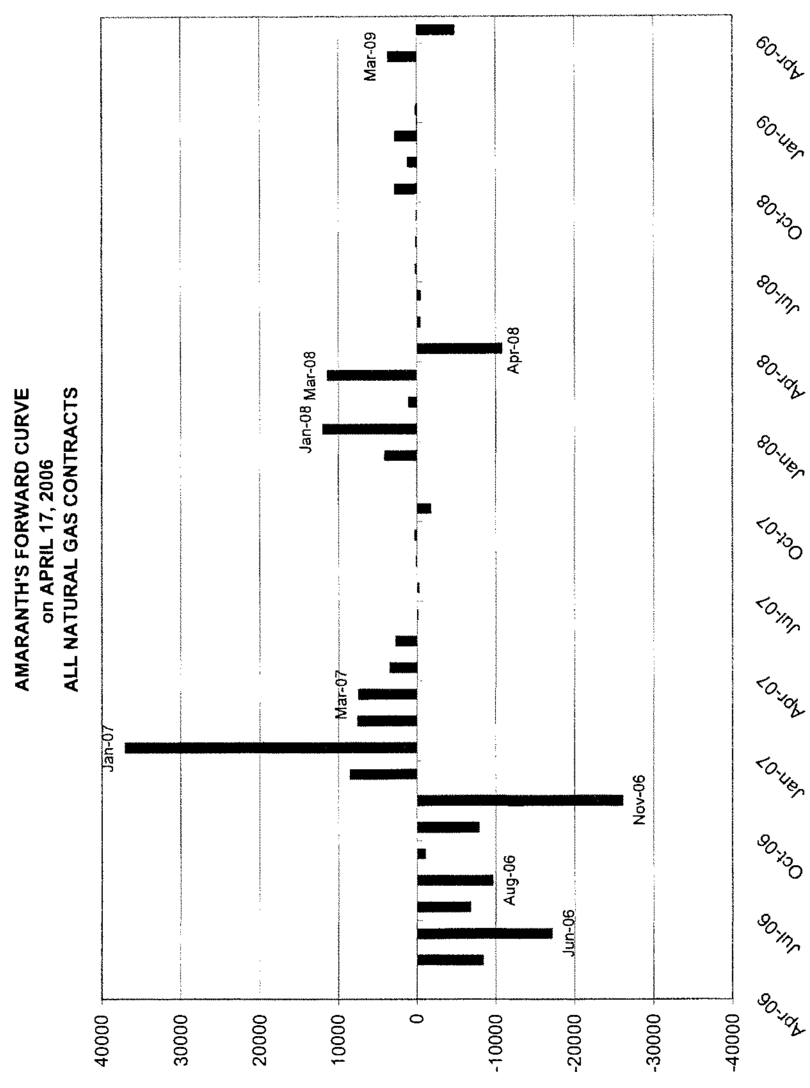
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
May-06
Nov-06
Jan-07
Mar-07
Jan-08
Mar-08
Apr-08
Mar-09

IV-50

AMARANTH'S FORWARD CURVE
on APRIL 13, 2006
ALL NATURAL GAS CONTRACTS



IV-51


AMARANTH'S FORWARD CURVE
on APRIL 17, 2006
ALL NATURAL GAS CONTRACTS
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20000
10000
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-10000
-20000
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-40000
Apr-06
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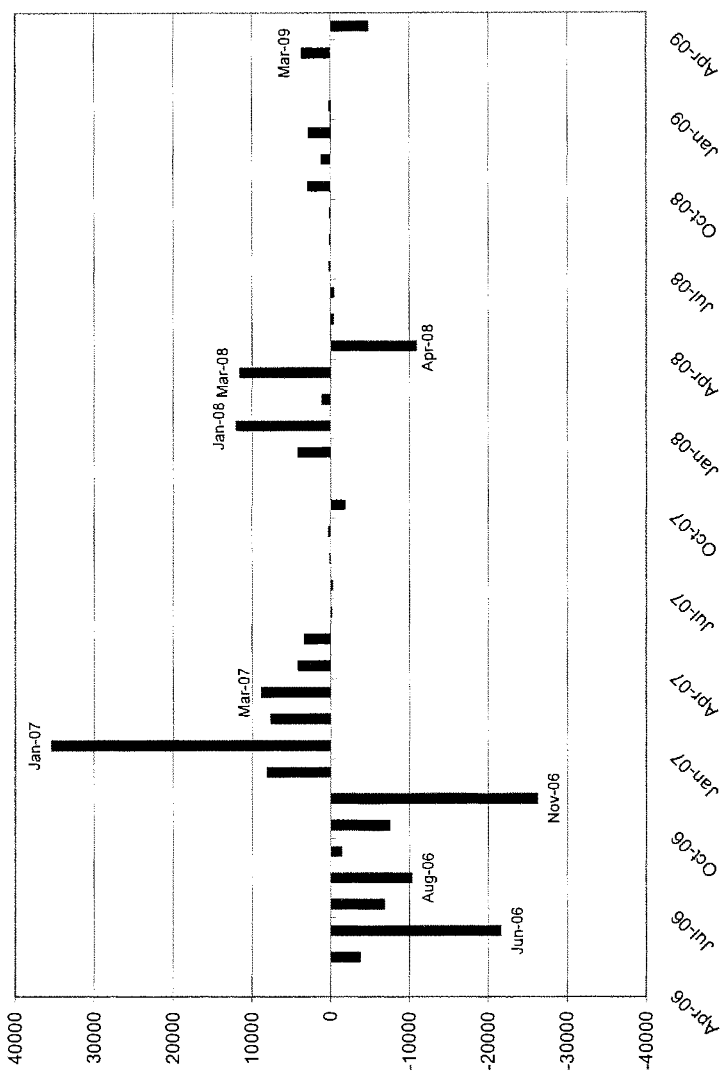
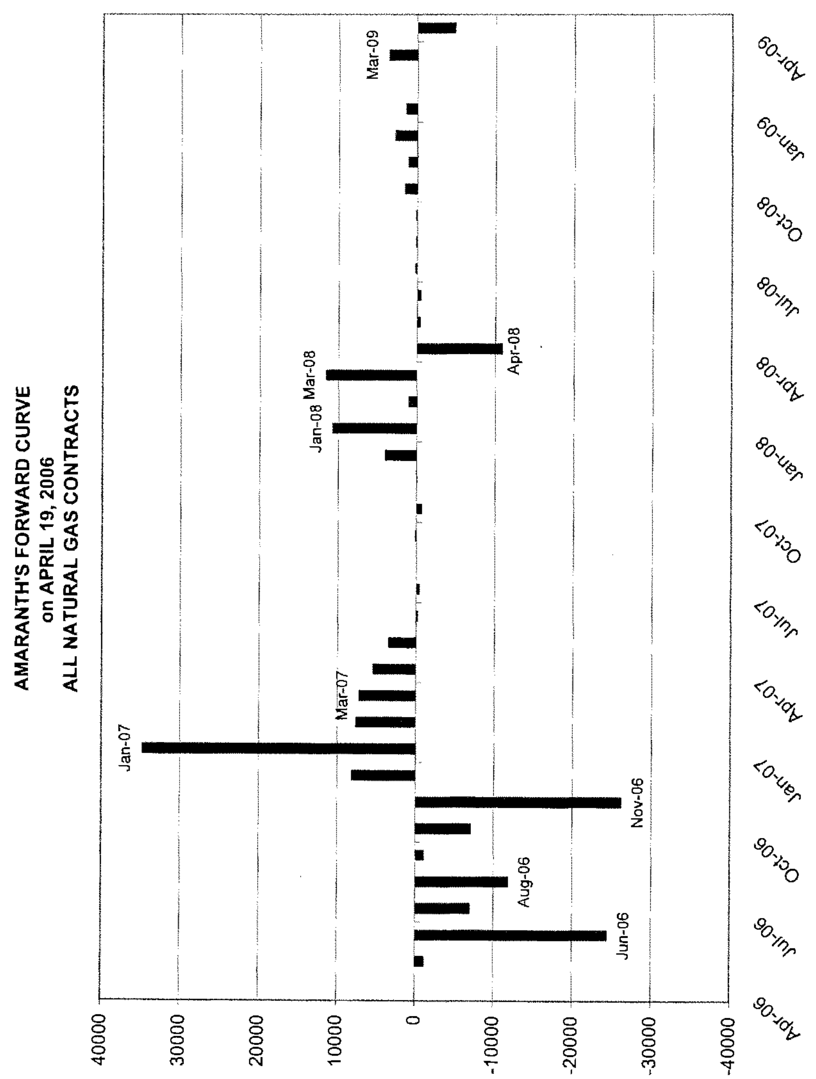
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Jun-06
Aug-06
Nov-06
Jan-07
Mar-07
Jan-08
Mar-08
Apr-08
Mar-09

IV-52

AMARANTH'S FORWARD CURVE on APRIL 18, 2006 ALL NATURAL GAS CONTRACTS




AMARANTH'S FORWARD CURVE
on APRIL 19, 2006
ALL NATURAL GAS CONTRACTS
40000
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20000
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-10000
-20000
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-40000
Apr-06
Jul-06
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Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
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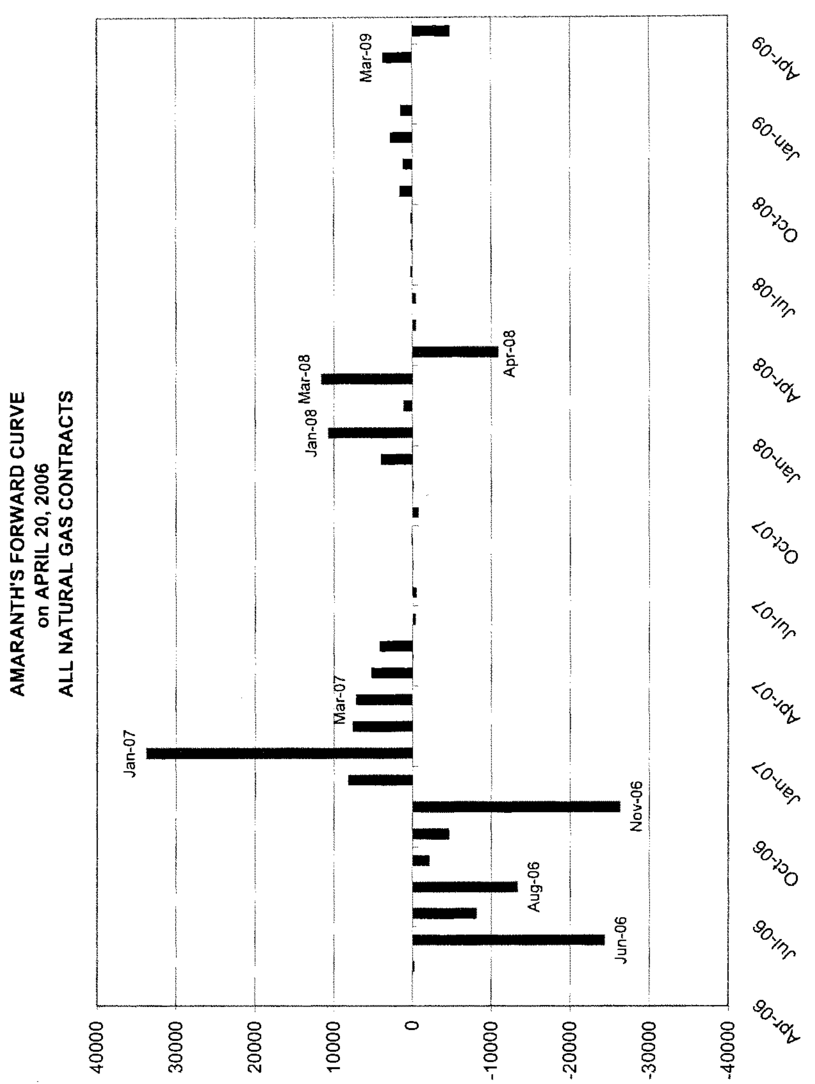
Aug-06
Nov-06
Jan-07
Mar-07
Jan-08
Mar-08
Apr-08
Mar-09

IV-54


AMARANTH'S FORWARD CURVE
on APRIL 20, 2006
ALL NATURAL GAS CONTRACTS
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10000
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-10000
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Apr-08
Jul-08
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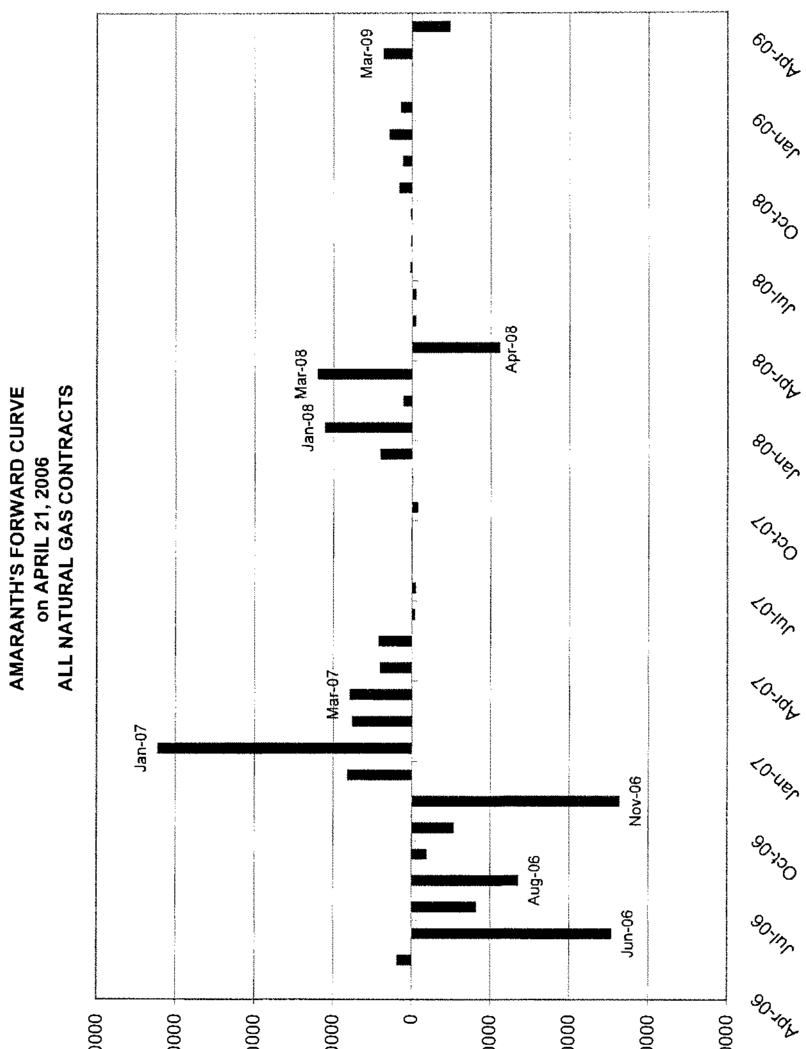
Mar-08
Apr-08
Mar-09


AMARANTH'S FORWARD CURVE
on APRIL 21, 2006
ALL NATURAL GAS CONTRACTS
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-10000
-20000
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-40000
Apr-06
Jul-06
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Jul-07
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Jan-08
Apr-08
Jul-08
Oct-08
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Jan-08
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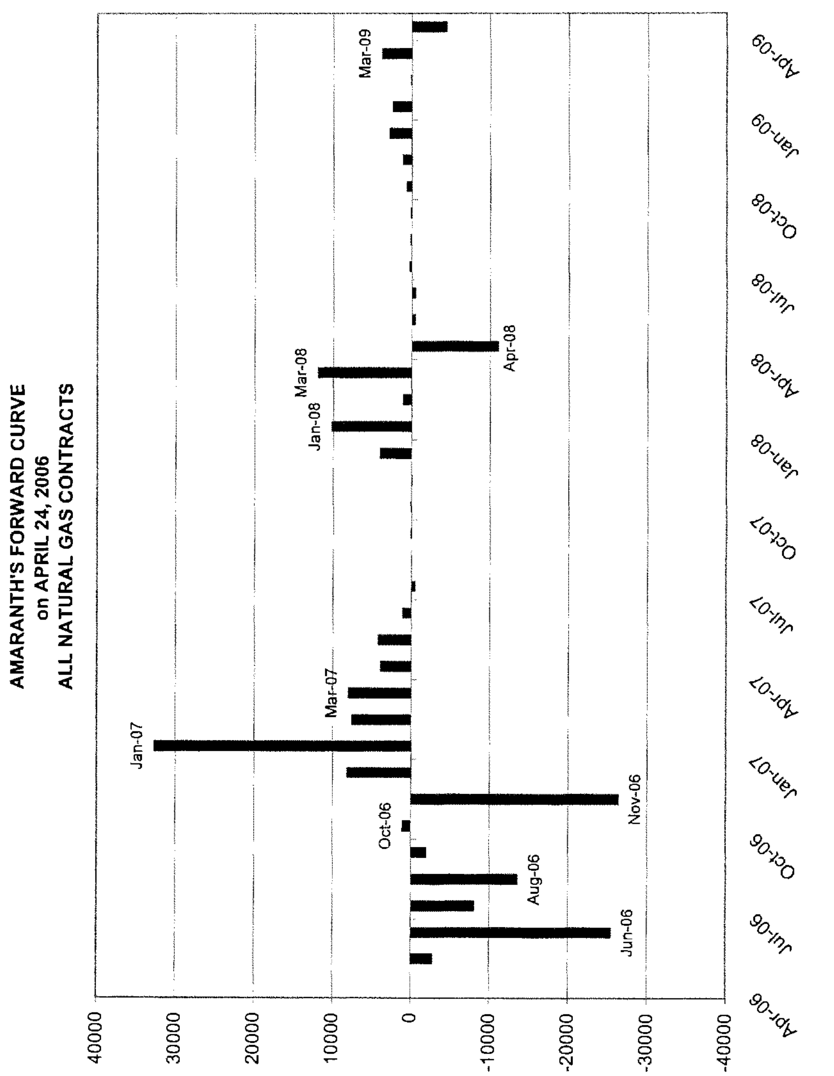
Apr-08
Mar-09

IV-56


AMARANTH'S FORWARD CURVE
on APRIL 24, 2006
ALL NATURAL GAS CONTRACTS
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Apr-06
Jul-06
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Apr-07
Jul-07
Oct-07
Jan-08
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Jul-08
Oct-08
Jan-09
Apr-09
Jun-06
Aug-06
Oct-06
Nov-06
Jan-07
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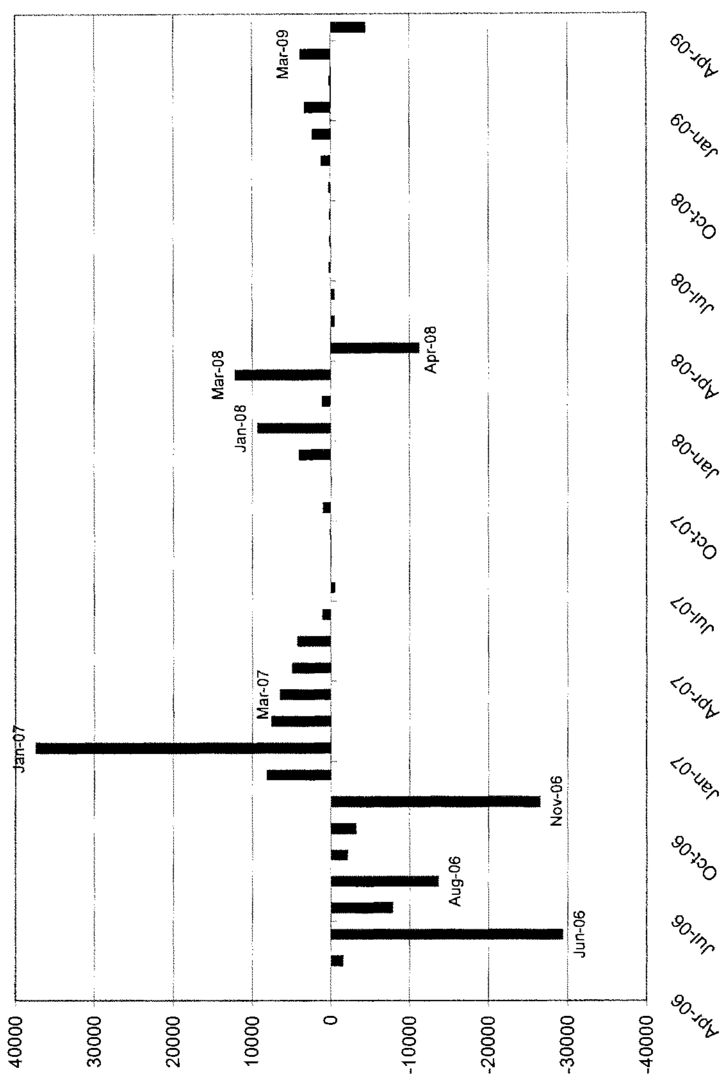
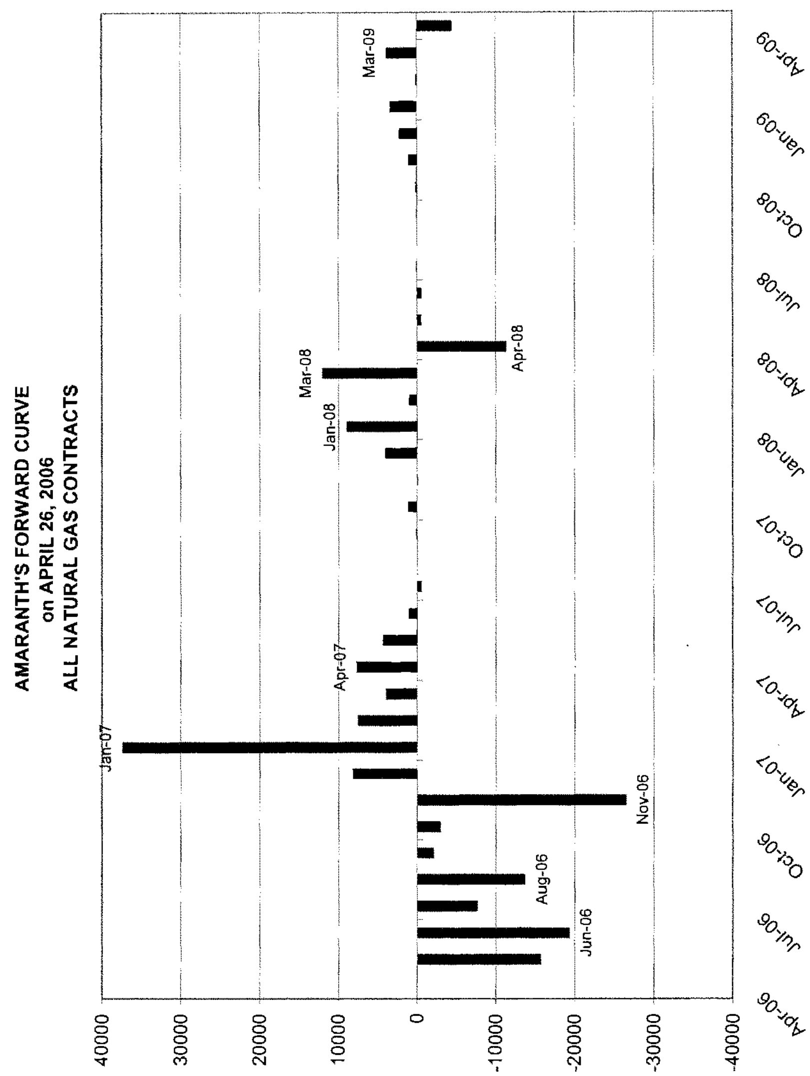
Jan-08
Mar-08
Apr-08
Mar-09

IV-57

AMARANTH'S FORWARD CURVE
on APRIL 25, 2006
ALL NATURAL GAS CONTRACTS




AMARANTH'S FORWARD CURVE
on APRIL 26, 2006
ALL NATURAL GAS CONTRACTS
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-10000
-20000
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-40000
Apr-06
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Jul-07
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Apr-08
Jul-08
Oct-08
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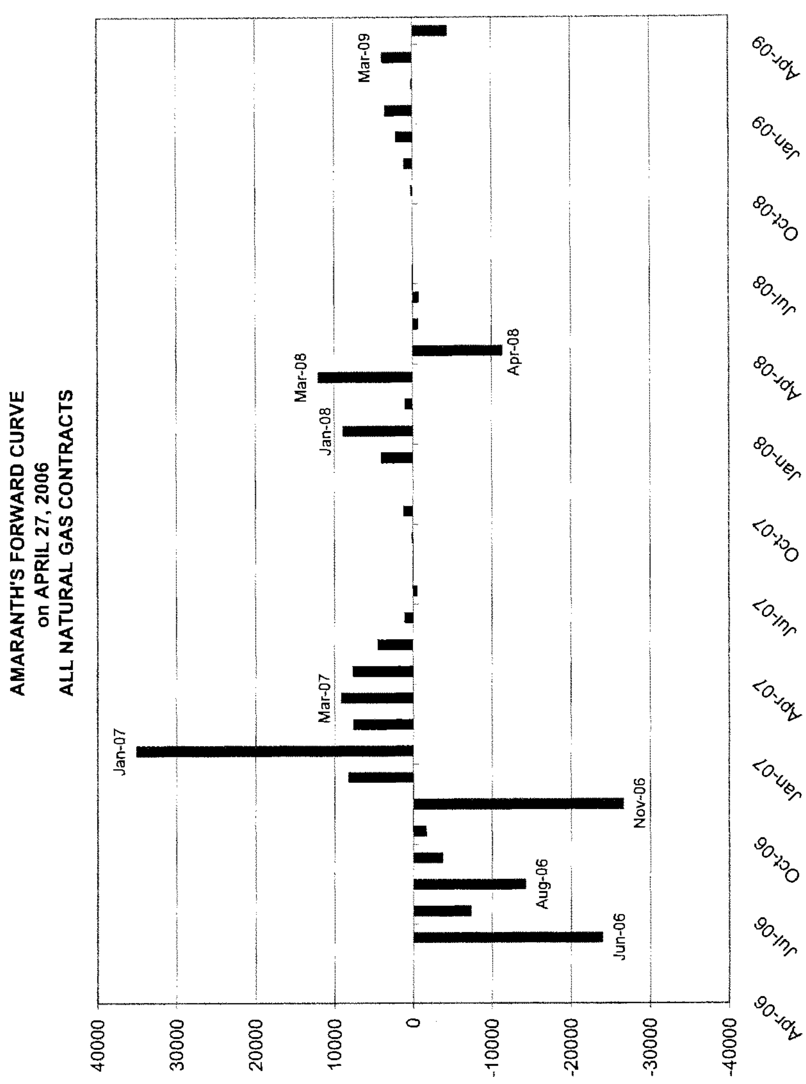
Nov-06
Jan-07
Apr-07
Jan-08
Mar-08
Apr-08
Mar-09

IV-59


AMARANTH'S FORWARD CURVE
on APRIL 27, 2006
ALL NATURAL GAS CONTRACTS
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20000
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-10000
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-30000
-40000
Apr-06
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
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Apr-08
Jul-08
Oct-08
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Jun-06
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Mar-07
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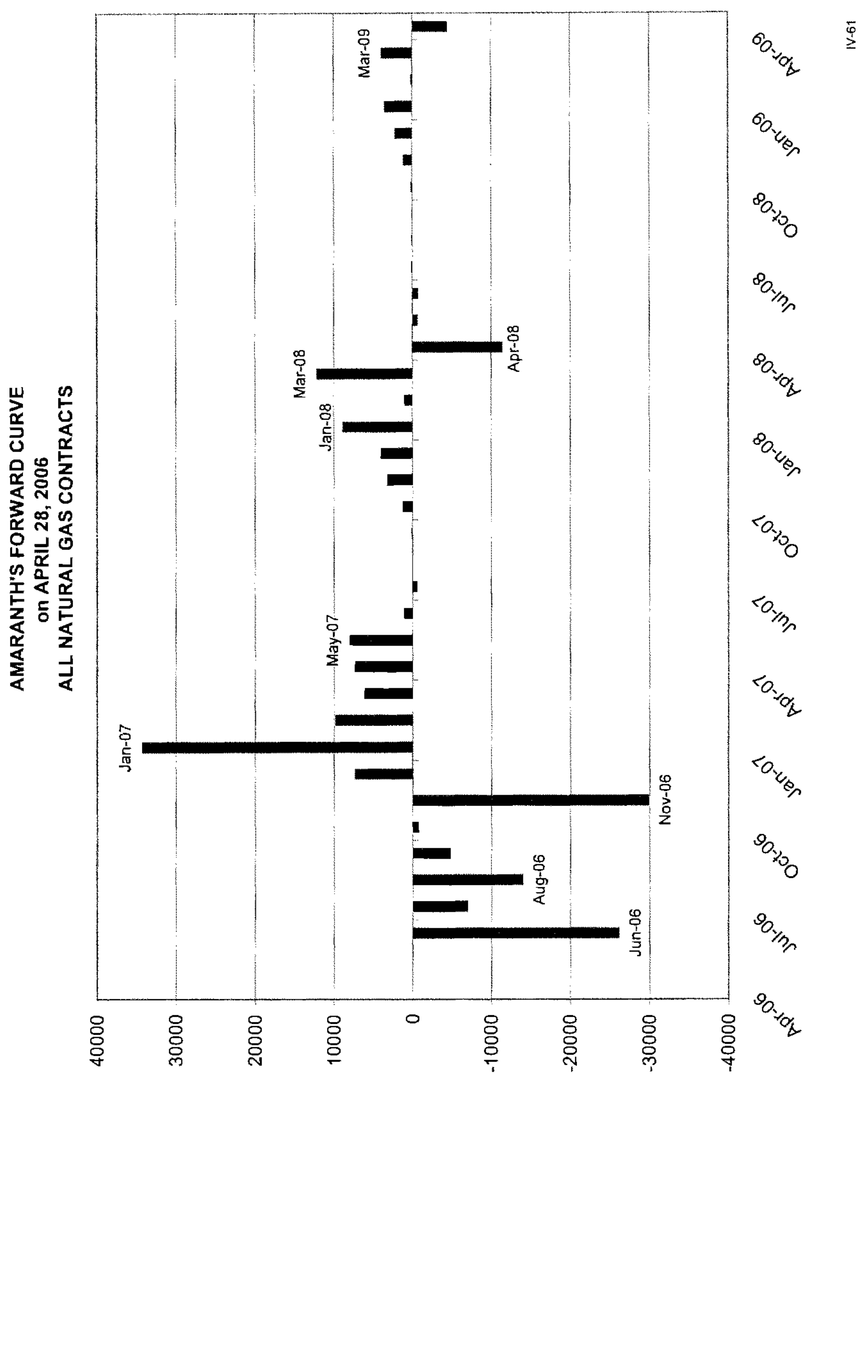
Apr-08
Mar-09

IV-60


AMARANTH'S FORWARD CURVE
on APRIL 28, 2006
ALL NATURAL GAS CONTRACTS
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Apr-06
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Apr-08
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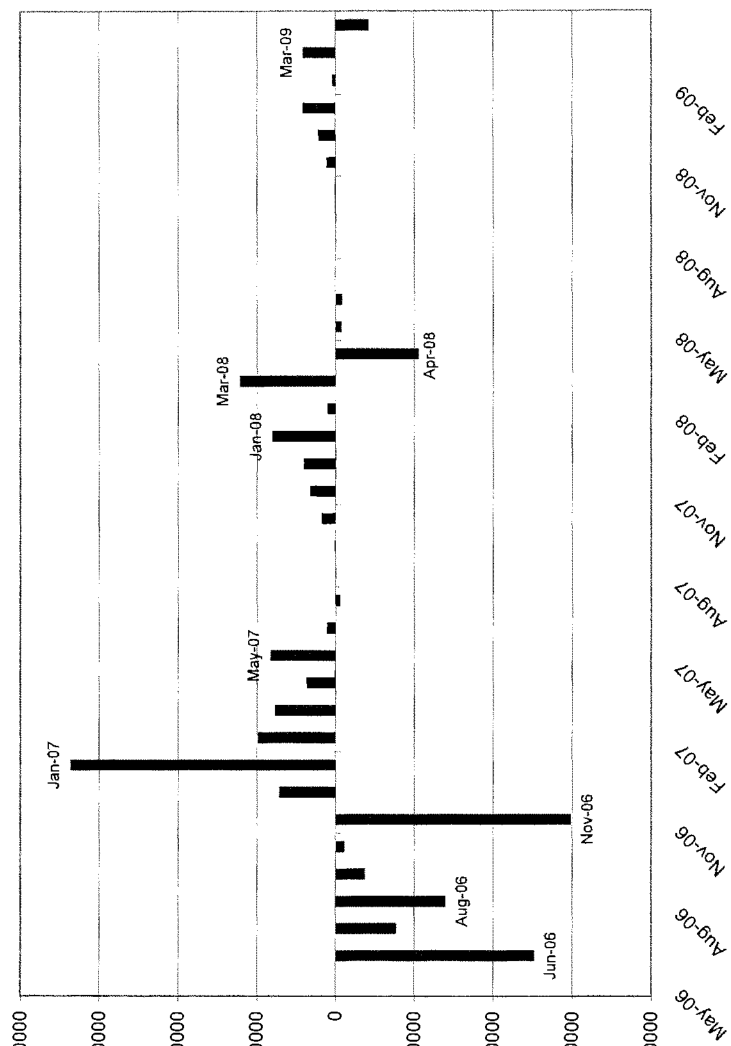
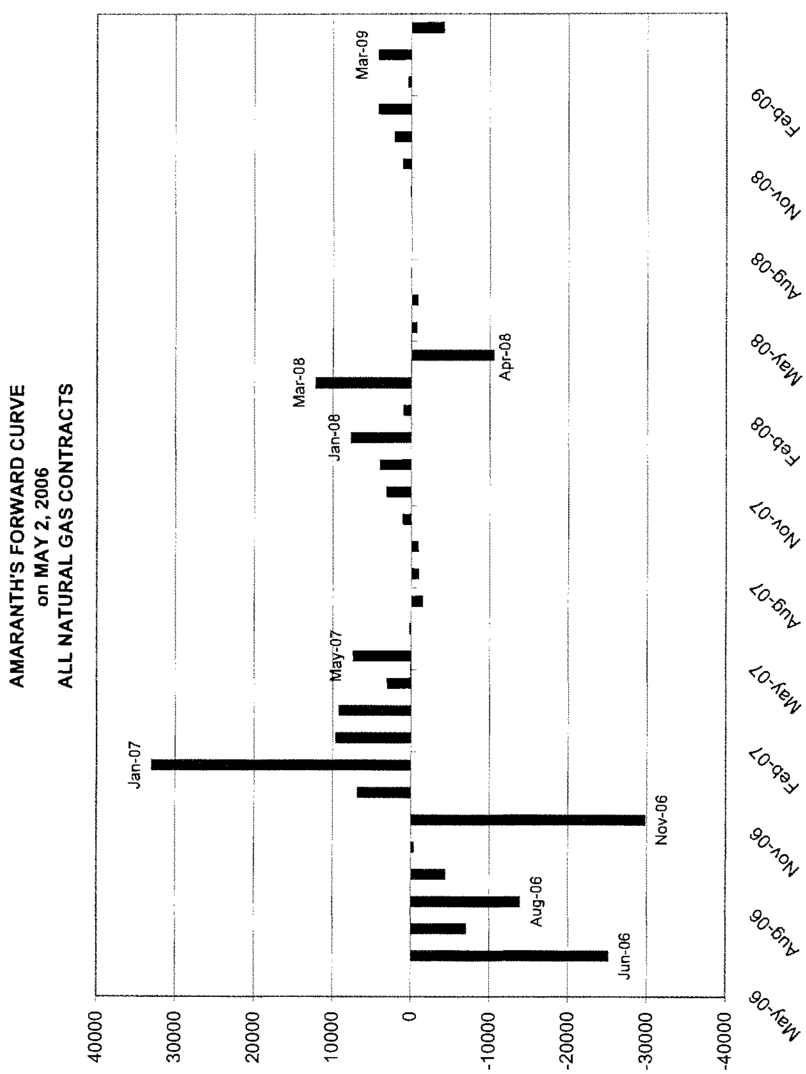
Oct-08
Jan-09
Apr-09
Jun-06
Aug-06
Nov-06
Jan-07
May-07
Jan-08
Mar-08
Apr-08
Mar-09
IV-61

AMARANTH'S FORWARD CURVE
on MAY 1, 2006
ALL NATURAL GAS CONTRACTS



IV-62


AMARANTH'S FORWARD CURVE
on MAY 2, 2006
ALL NATURAL GAS CONTRACTS
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20000
10000
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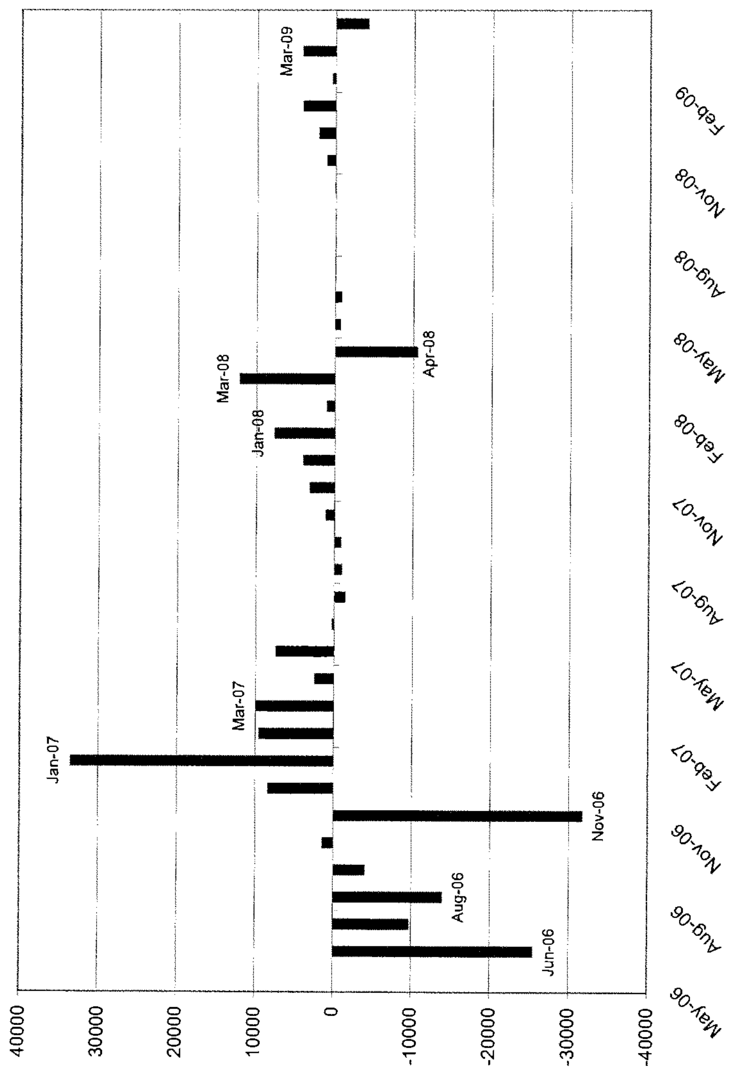
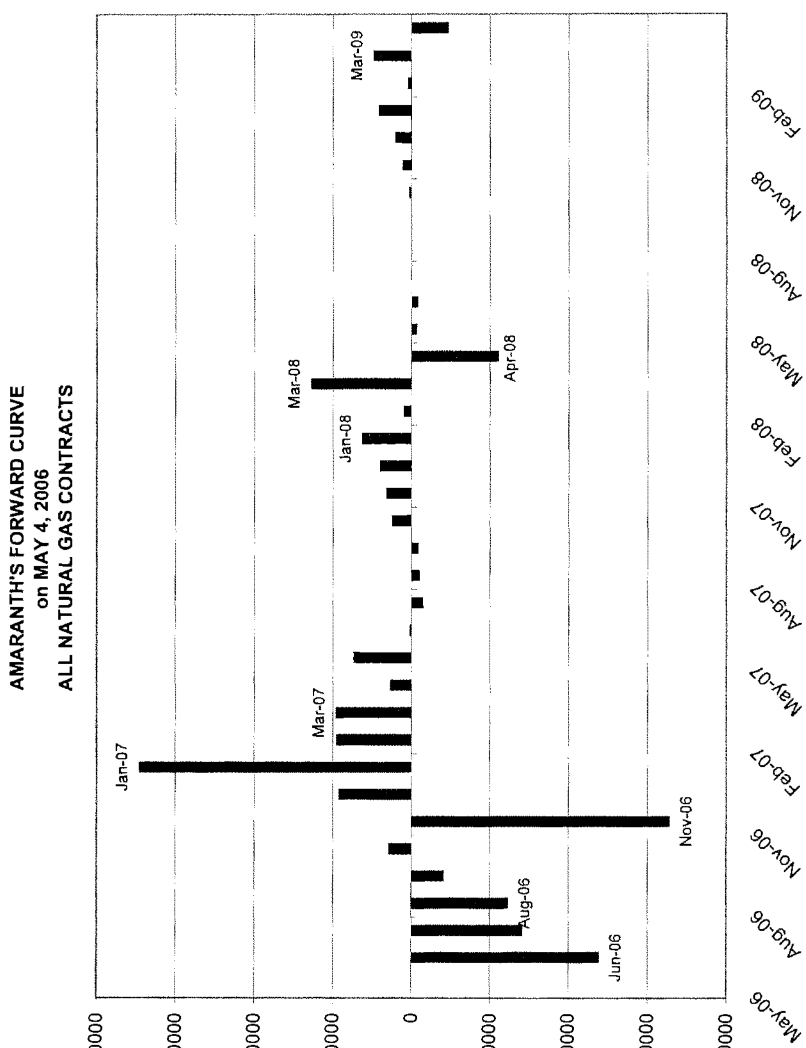
-20000
-30000
-40000
May-06
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
Jun-06
Aug-06
Nov-06
Jan-07
May-07
Jan-08
Mar-08
Apr-08
Mar-09

IV-63

AMARANTH'S FORWARD CURVE
on MAY 3, 2006
ALL NATURAL GAS CONTRACTS



IV-64


AMARANTH'S FORWARD CURVE
on MAY 4, 2006
ALL NATURAL GAS CONTRACTS
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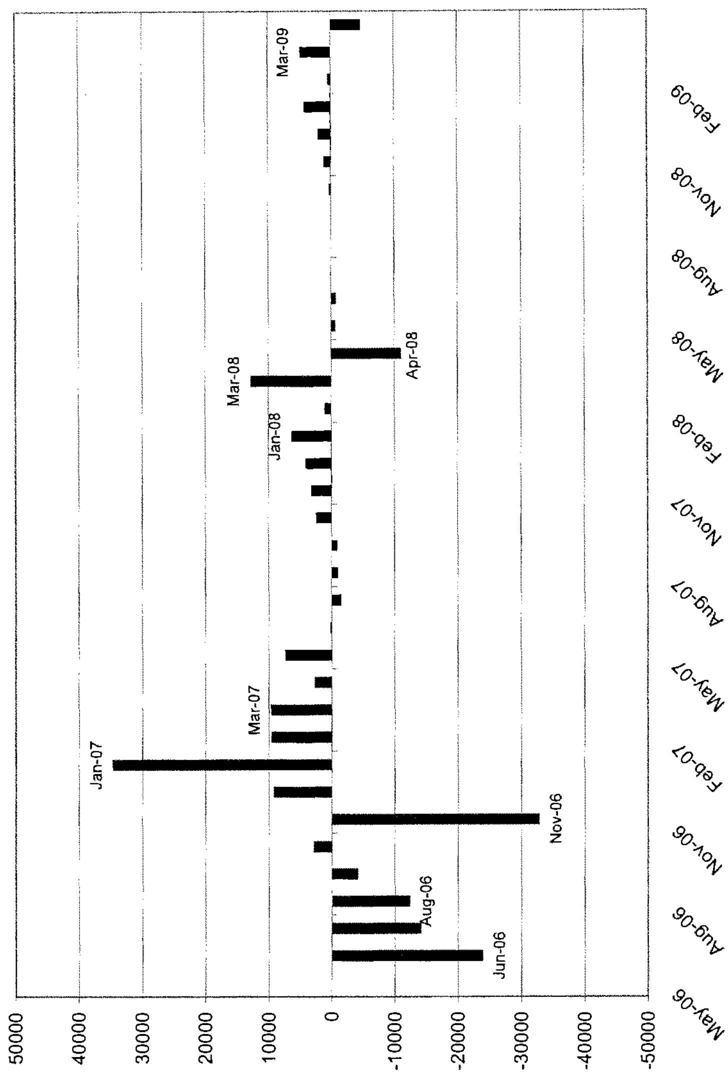
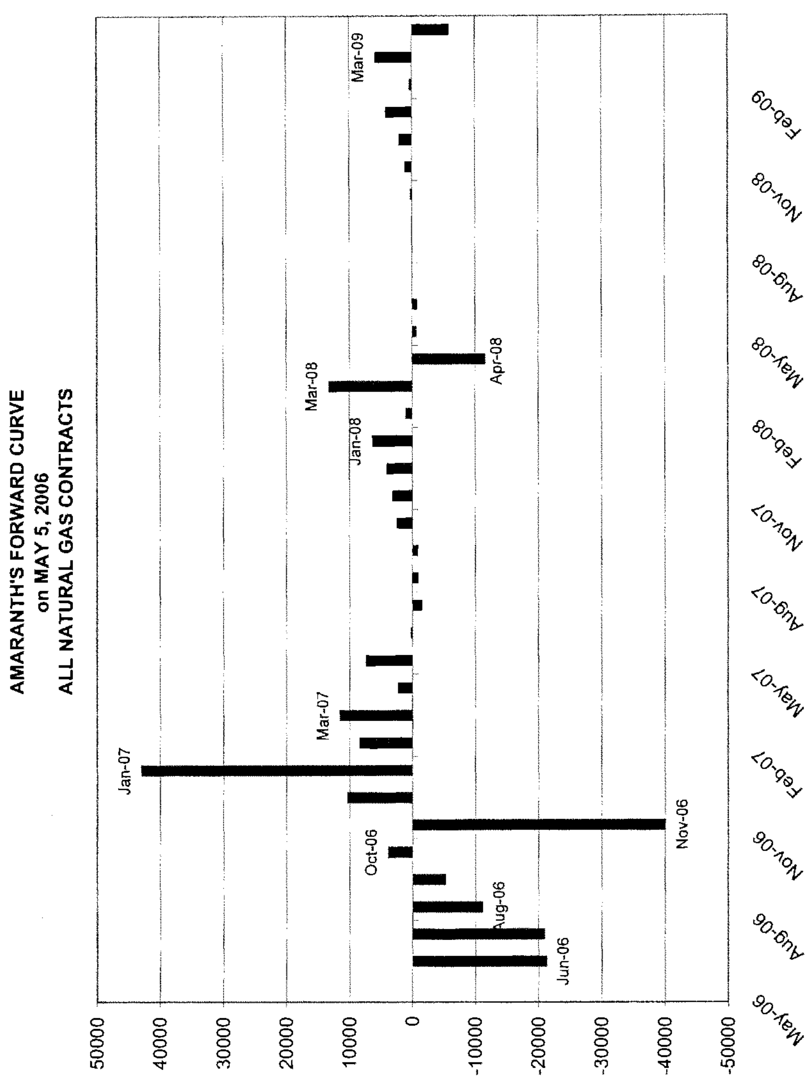
20000
10000
0
-10000
-20000
-30000
-40000
May-06
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
Jun-06
Aug-06
Nov-06
Jan-07
Mar-07
Jan-08
Mar-08
Apr-08
Mar-09

IV-65

AMARANTH'S FORWARD CURVE
on MAY 4, 2006
ALL NATURAL GAS CONTRACTS



IV-66


AMARANTH'S FORWARD CURVE
on MAY 5, 2006
ALL NATURAL GAS CONTRACTS
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30000
20000
10000
0
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-20000
-30000
-40000
-50000
May-06
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
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Jan-07
Mar-07
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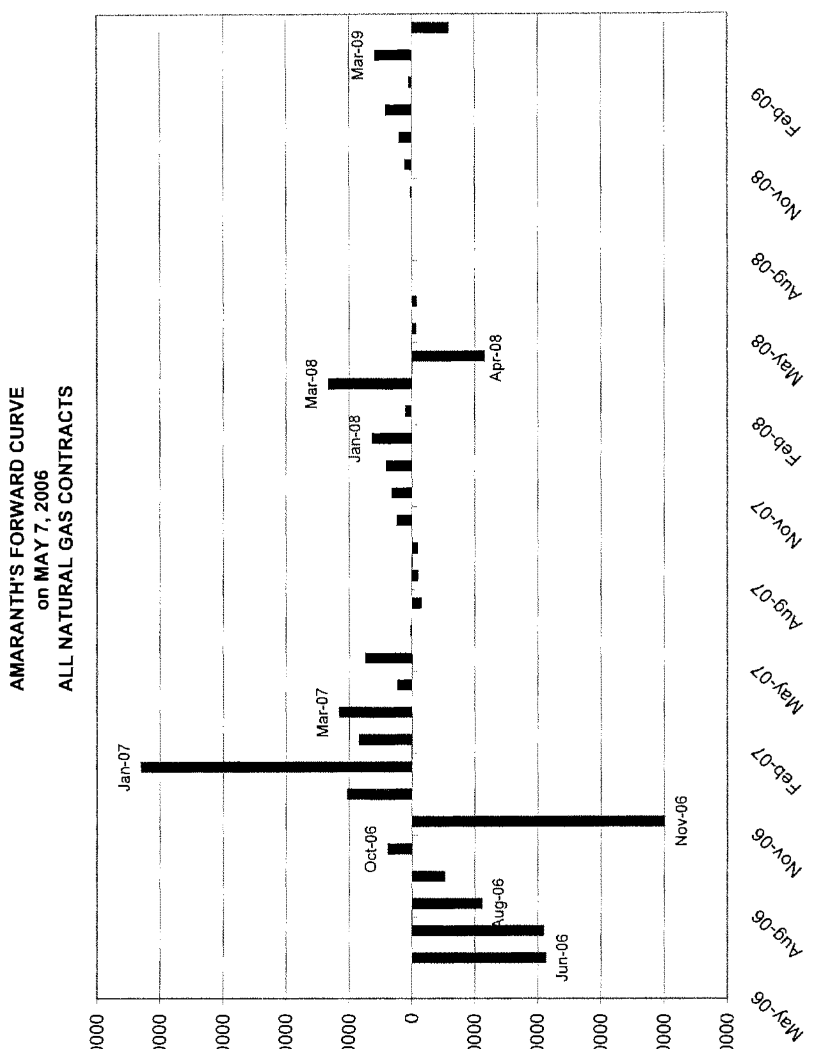
Apr-08
Mar-09


AMARANTH'S FORWARD CURVE
on MAY 7, 2006
ALL NATURAL GAS CONTRACTS
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20000
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-50000
May-06
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
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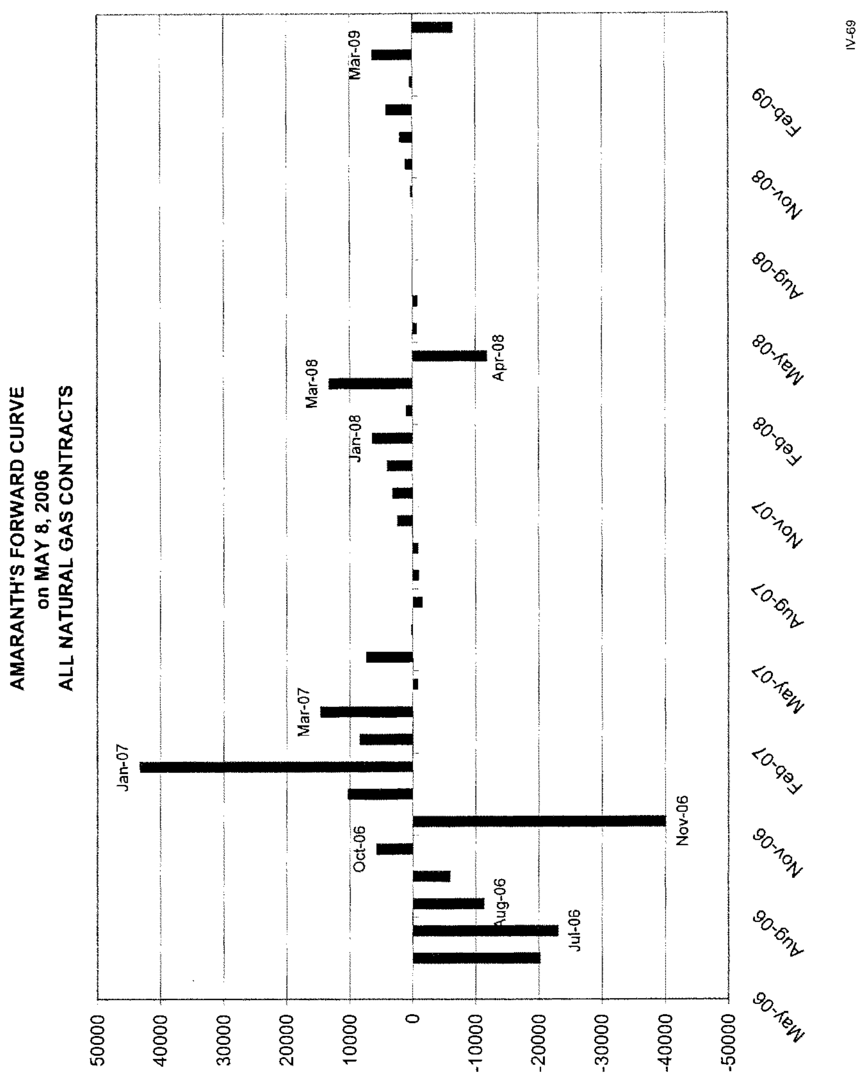
Apr-08
Mar-09

IV-68


AMARANTH'S FORWARD CURVE
on MAY 8, 2006
ALL NATURAL GAS CONTRACTS
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May-06
Aug-06
Nov-06
Feb-07
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Aug-07
Nov-07
Feb-08
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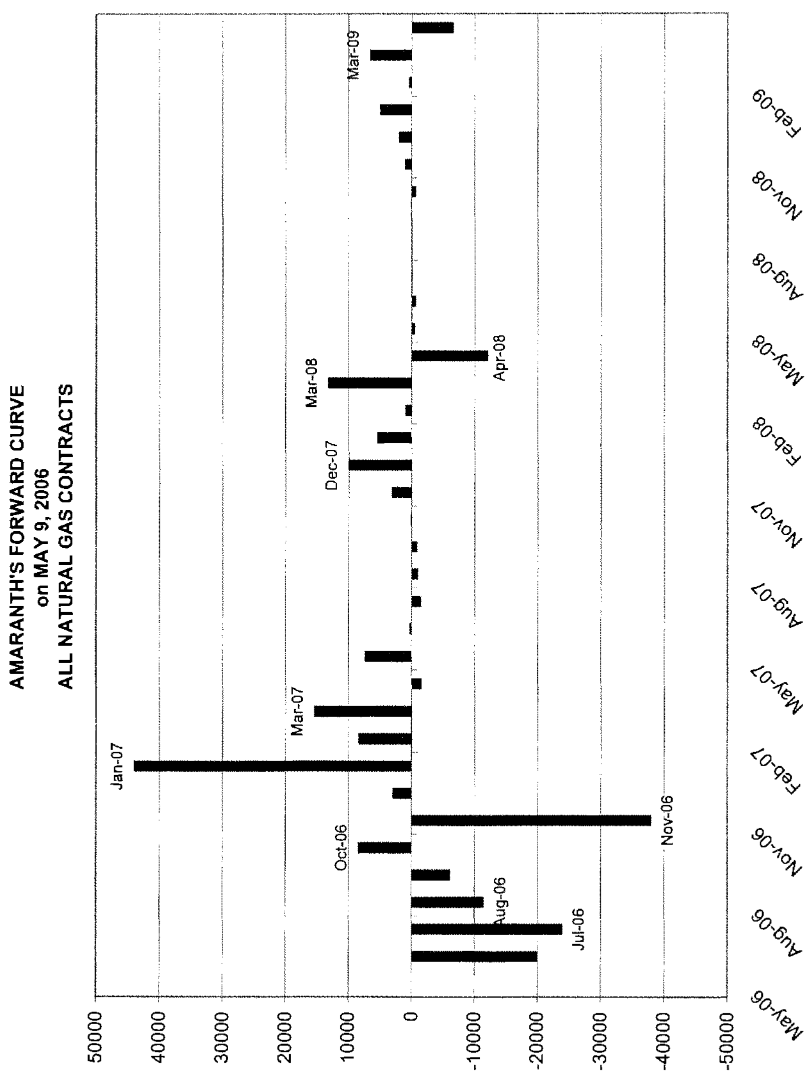
Apr-08
Mar-09
IV-69


AMARANTH'S FORWARD CURVE
on MAY 9, 2006
ALL NATURAL GAS CONTRACTS
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30000
20000
10000
0
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-30000
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-50000
May-06
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
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Jul-06
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Oct-06
Nov-06
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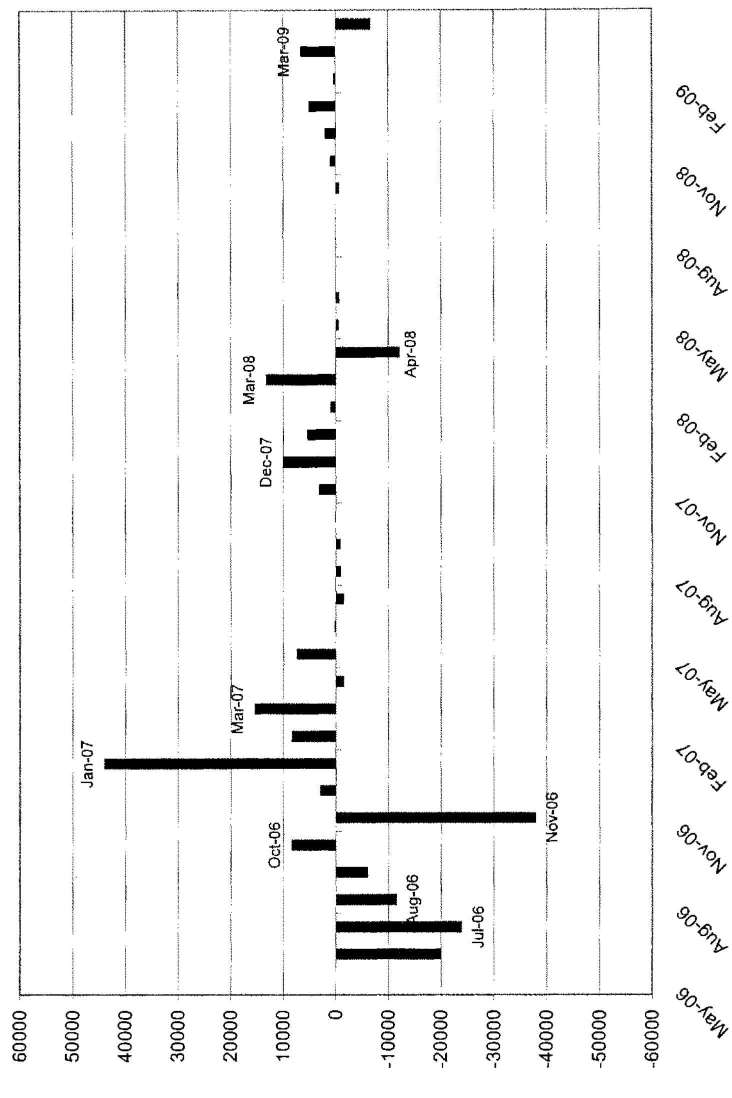
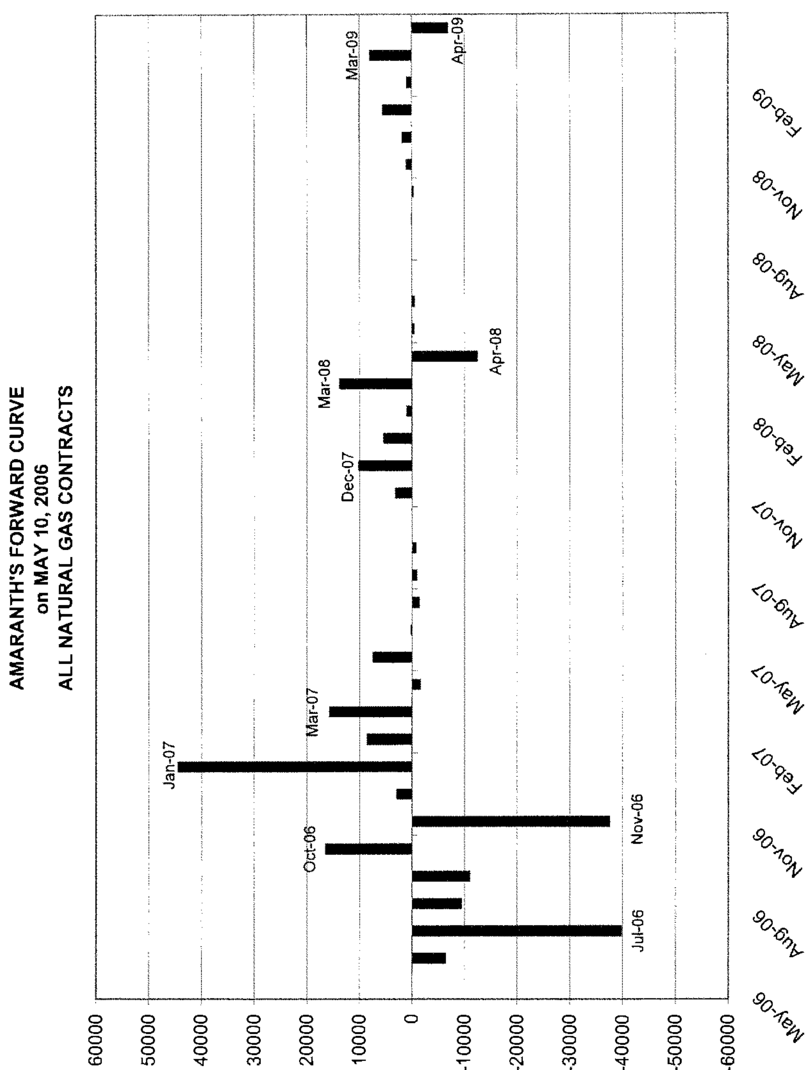
Mar-08
Apr-08
Mar-09

IV-70

AMARANTH'S FORWARD CURVE
on MAY 9, 2006
ALL NATURAL GAS CONTRACTS




AMARANTH'S FORWARD CURVE
on MAY 10, 2006
ALL NATURAL GAS CONTRACTS
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Aug-06
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May-08
Aug-08
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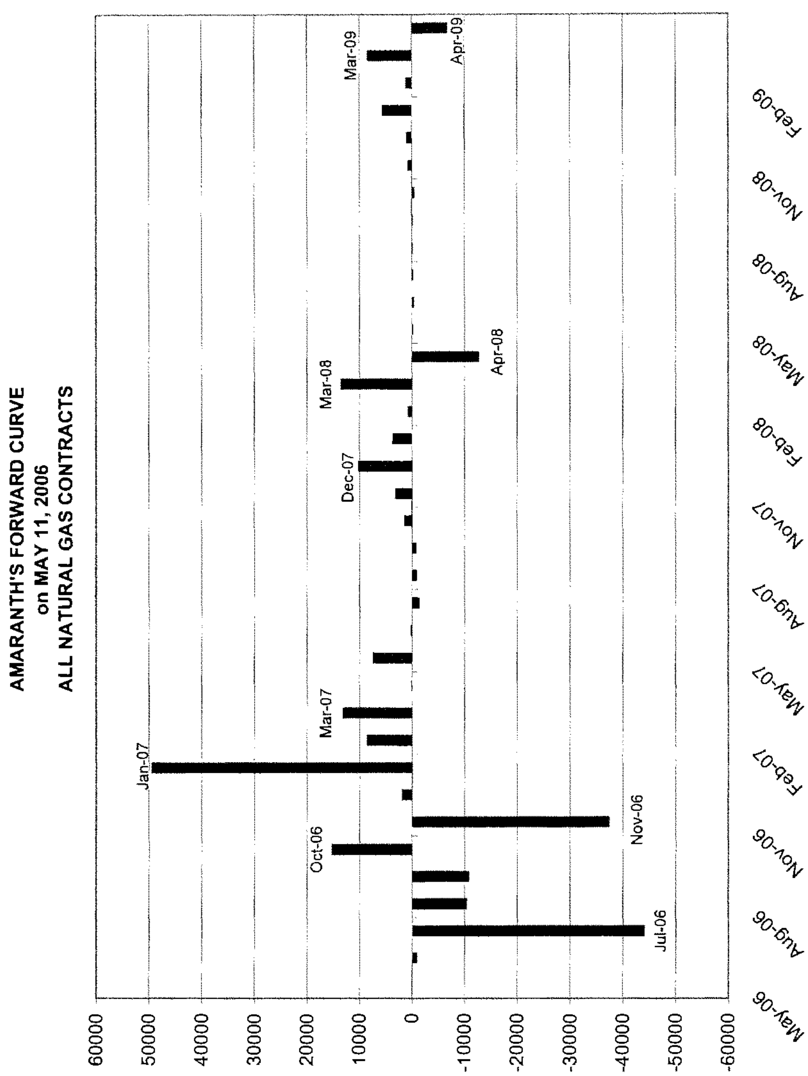
Mar-09
Apr-09


AMARANTH'S FORWARD CURVE
on MAY 11, 2006
ALL NATURAL GAS CONTRACTS
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30000
20000
10000
0
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May-06
Aug-06
Nov-06
Feb-07
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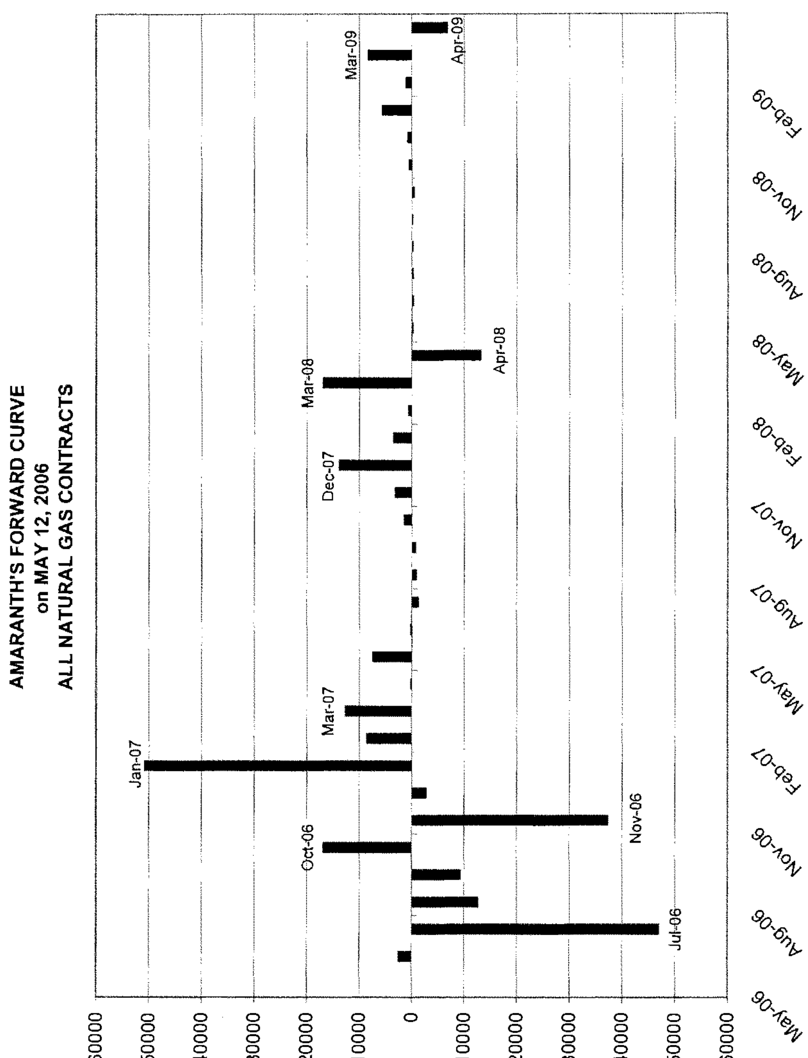
Mar-09
Apr-09

IV-73


AMARANTH'S FORWARD CURVE
on MAY 12, 2006
ALL NATURAL GAS CONTRACTS
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20000
10000
0
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-40000
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May-06
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
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May-08
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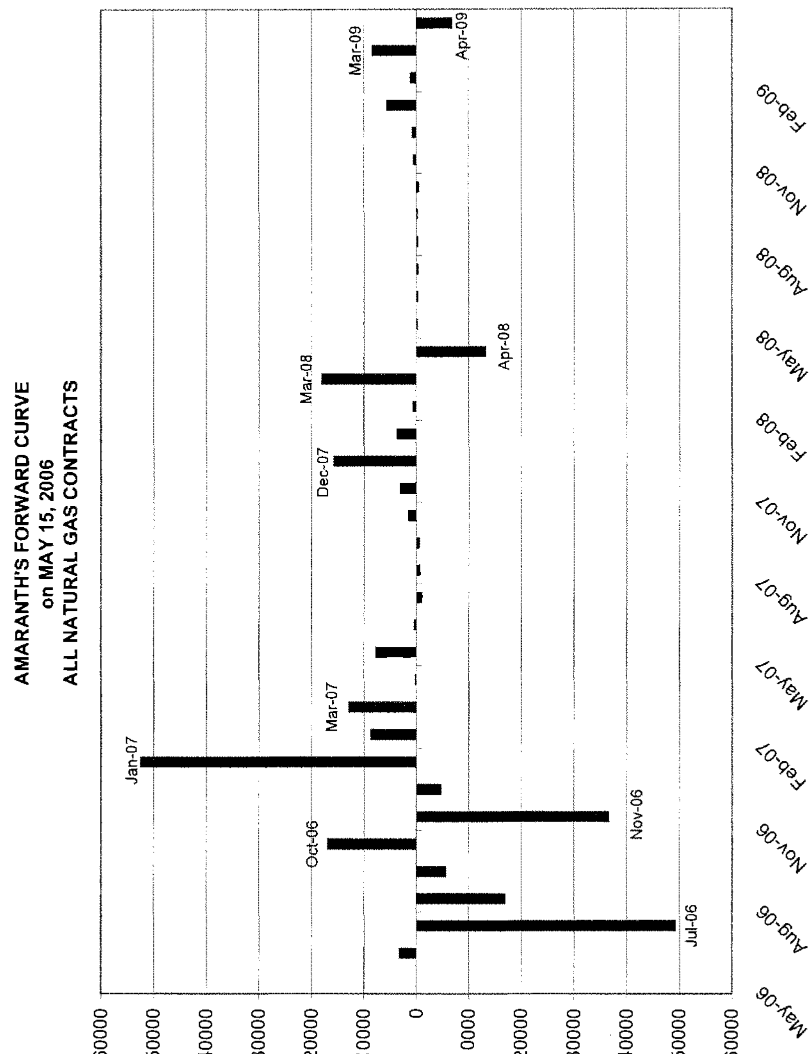
Mar-09
Apr-09

IV-74


AMARANTH'S FORWARD CURVE
on MAY 15, 2006
ALL NATURAL GAS CONTRACTS
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May-06
Aug-06
Nov-06
Feb-07
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Nov-07
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May-08
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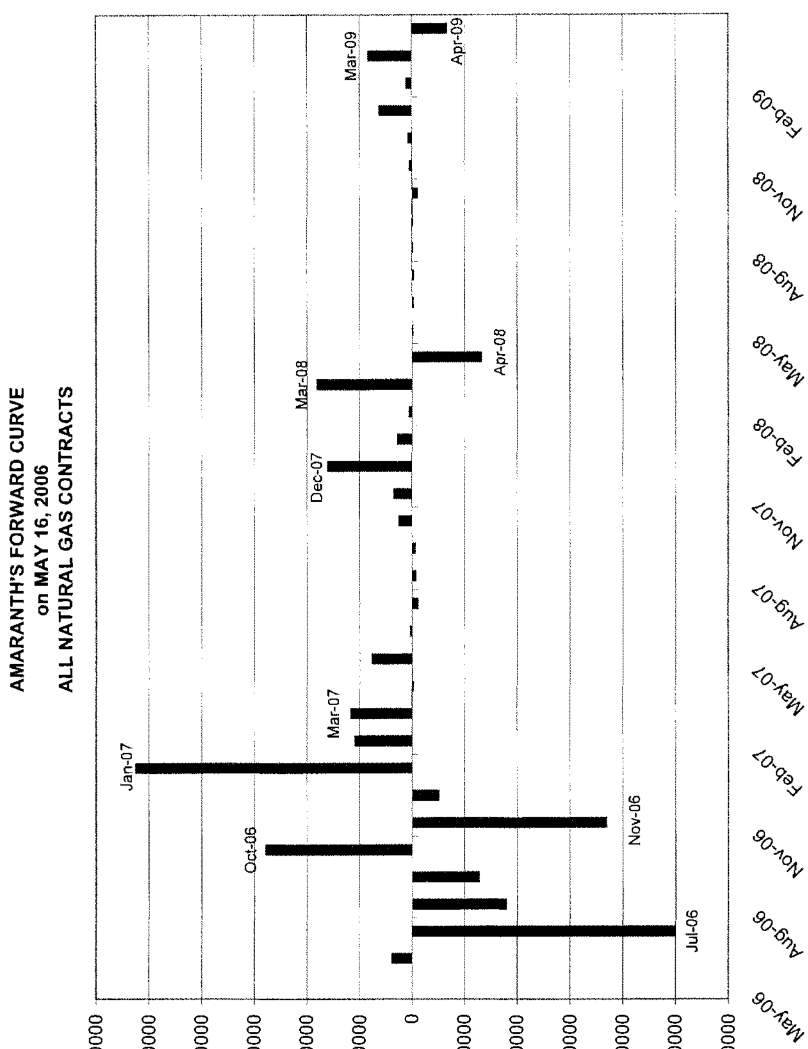
Apr-09

IV-75


AMARANTH'S FORWARD CURVE
on MAY 16, 2006
ALL NATURAL GAS CONTRACTS
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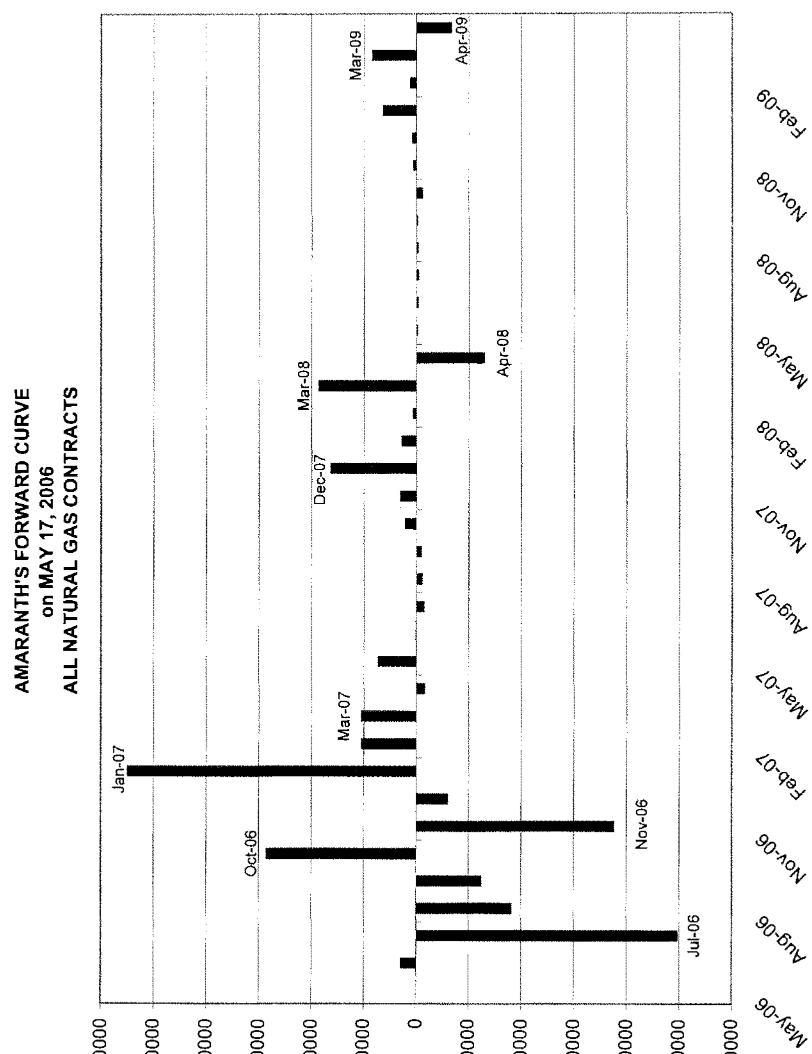
Mar-09
Apr-09

IV-76


AMARANTH'S FORWARD CURVE
on MAY 17, 2006
ALL NATURAL GAS CONTRACTS
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40000
30000
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10000
0
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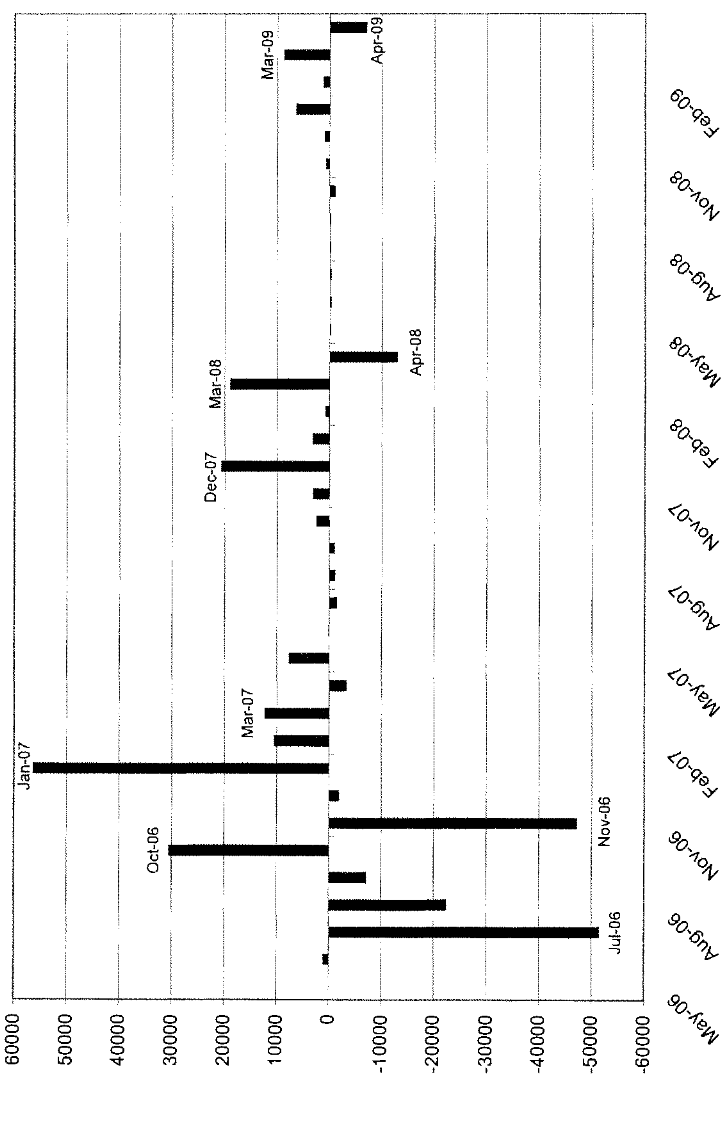
-20000
-30000
-40000
-50000
-60000
May-06
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
Jul-06
Oct-06
Nov-06
Jan-07
Mar-07
Dec-07
Mar-08
Apr-08
Mar-09
Apr-09

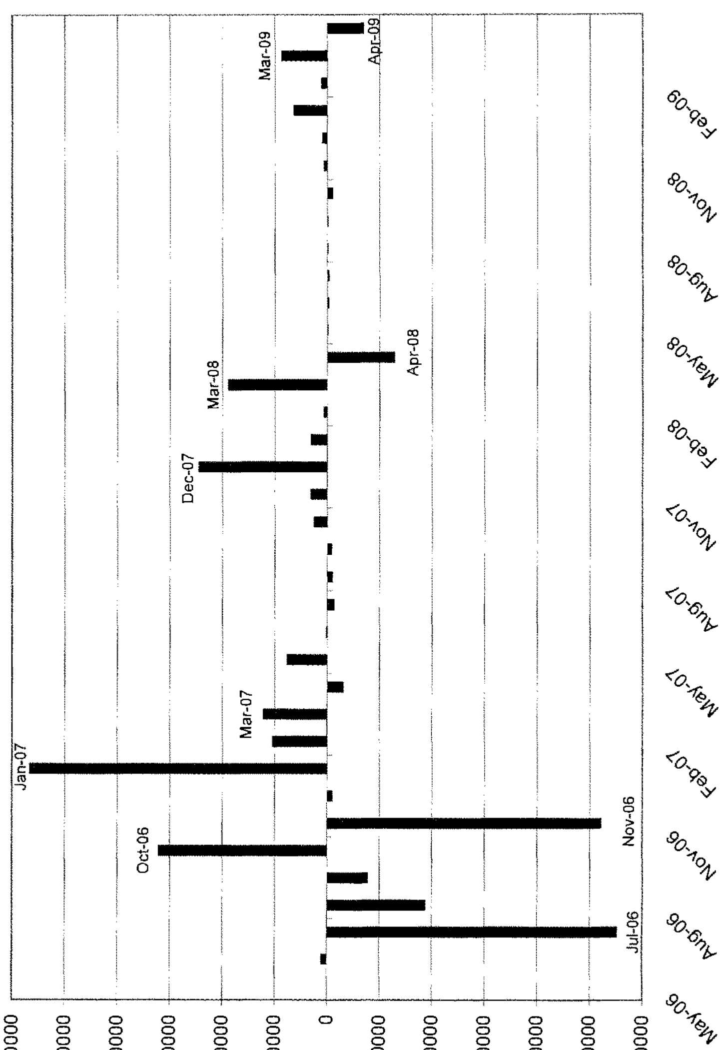
IV-77

AMARANTH'S FORWARD CURVE
on MAY 18, 2006
ALL NATURAL GAS CONTRACTS



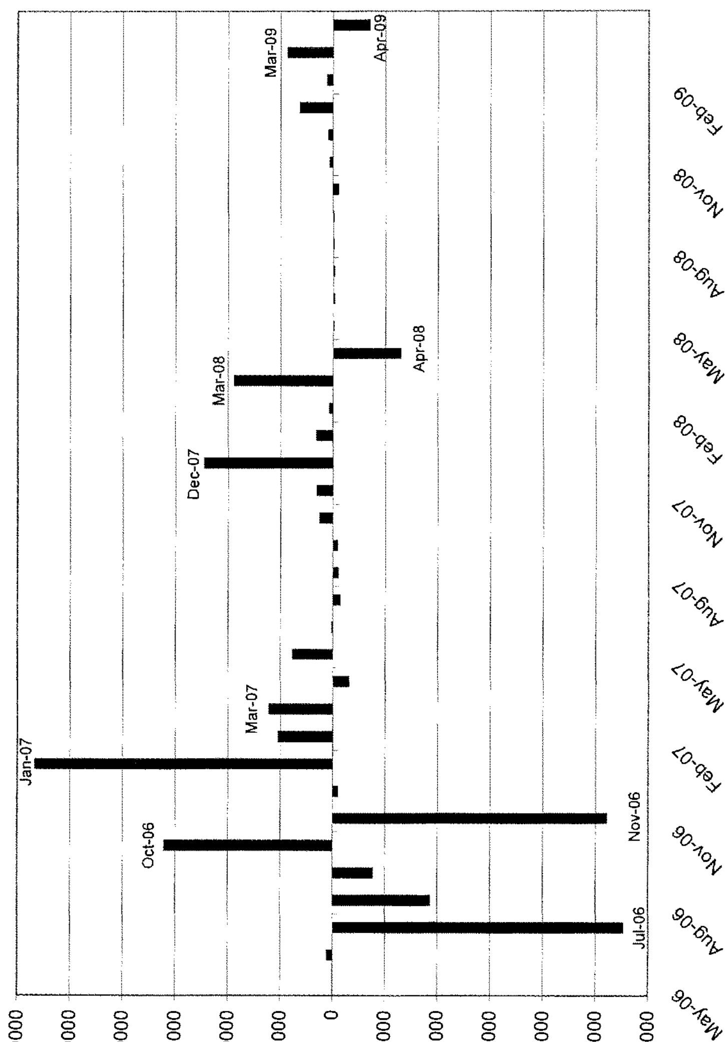
IV-78

AMARANTH'S FORWARD CURVE
on MAY 19, 2006
ALL NATURAL GAS CONTRACTS



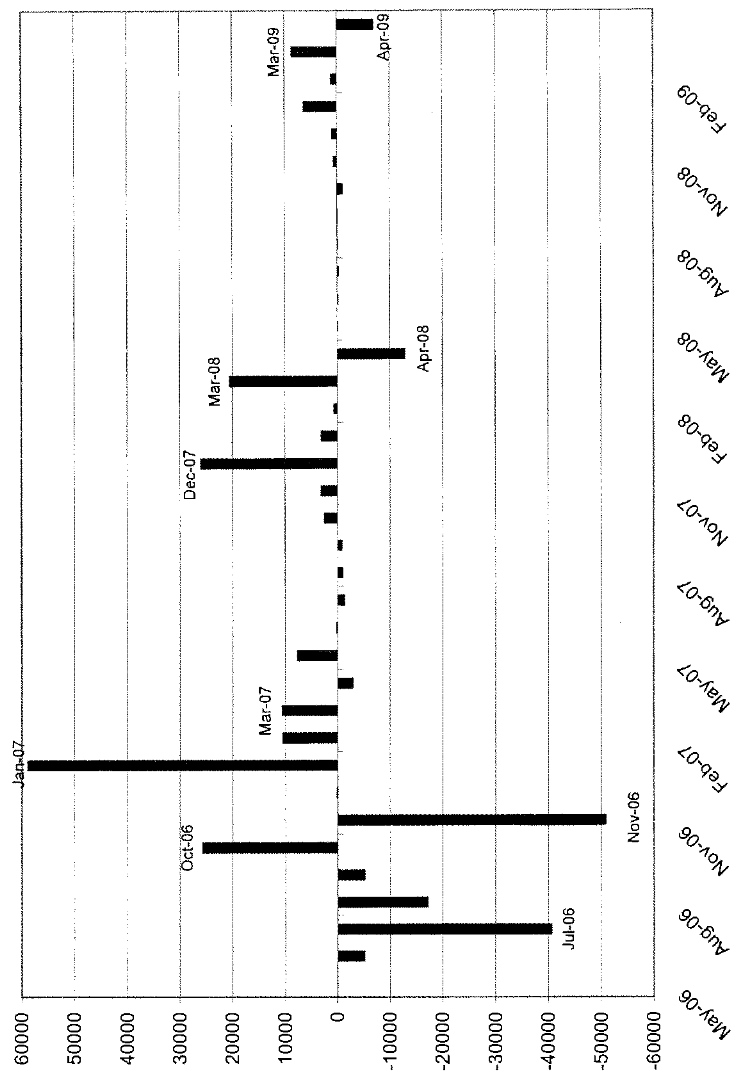
IV-79

AMARANTH'S FORWARD CURVE
on MAY 21, 2006
ALL NATURAL GAS CONTRACTS



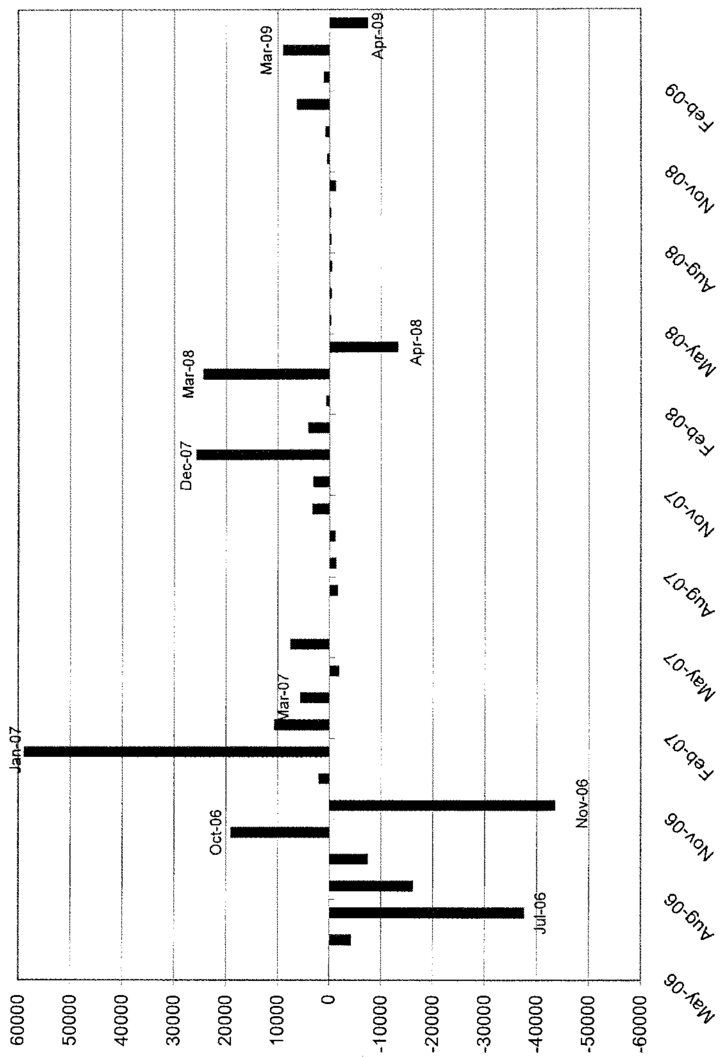
IV-80

AMARANTH'S FORWARD CURVE
on MAY 22, 2006
ALL NATURAL GAS CONTRACTS

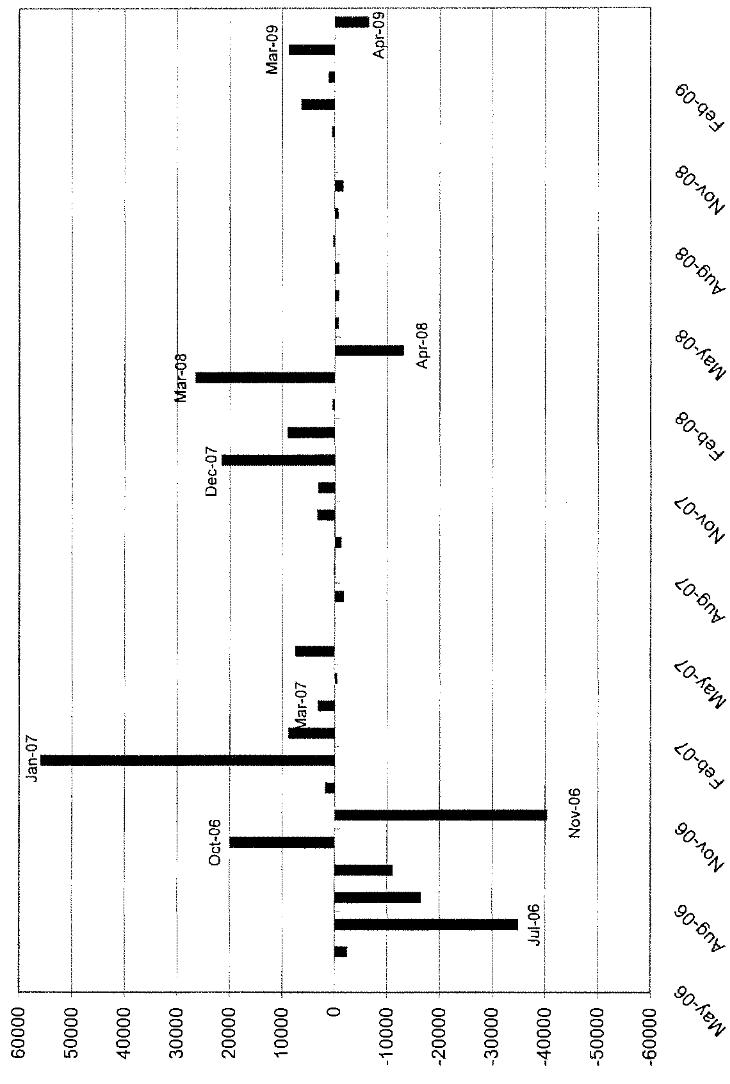


IV-81

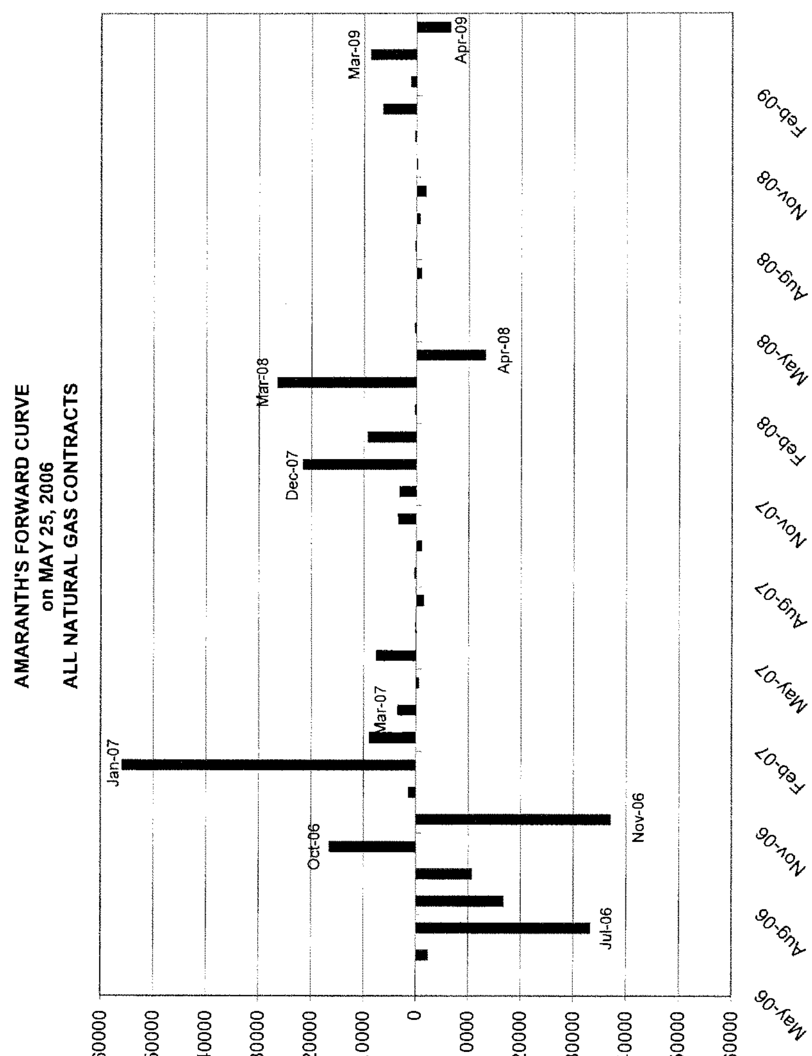
AMARANTH'S FORWARD CURVE
on MAY 23, 2006
ALL NATURAL GAS CONTRACTS



AMARANTH'S FORWARD CURVE
on MAY 24, 2006
ALL NATURAL GAS CONTRACTS



IV-83


AMARANTH'S FORWARD CURVE
on MAY 25, 2006
ALL NATURAL GAS CONTRACTS
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40000
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20000
10000
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-20000
-30000
-40000
-50000
-60000
May-06
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
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May-08
Aug-08
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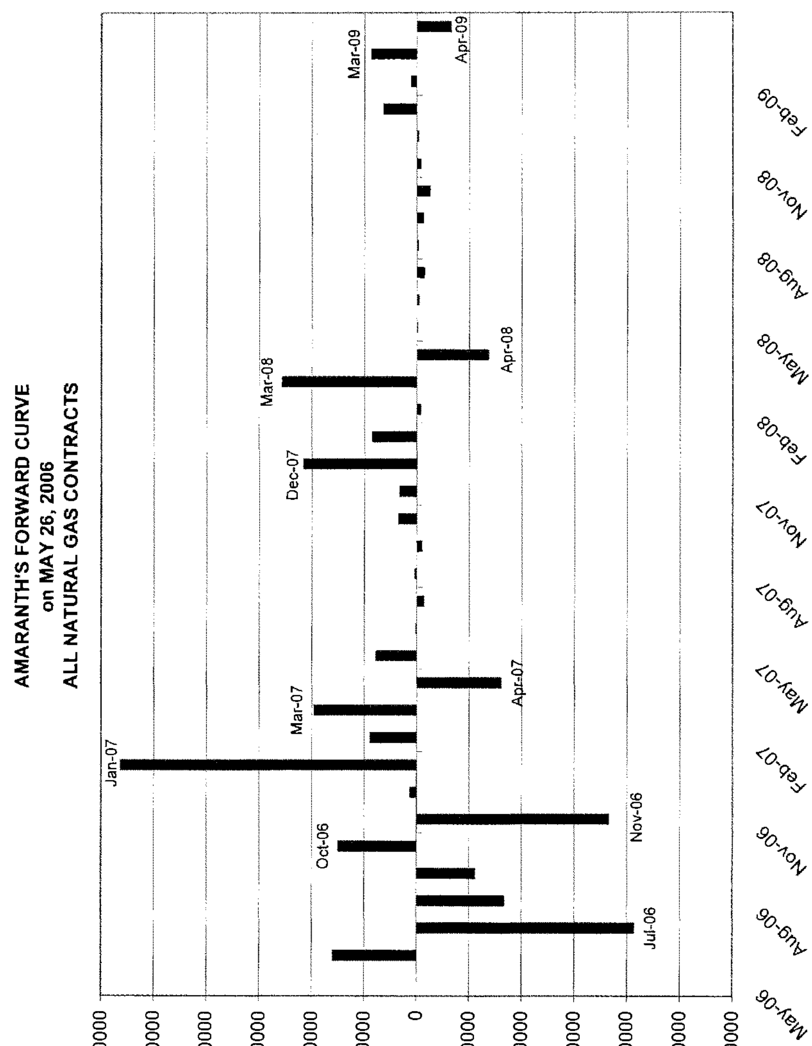
Mar-09
Apr-09

IV-84


AMARANTH'S FORWARD CURVE
on MAY 26, 2006
ALL NATURAL GAS CONTRACTS
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-30000
-40000
-50000
-60000
May-06
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
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Aug-08
Nov-08
Feb-09
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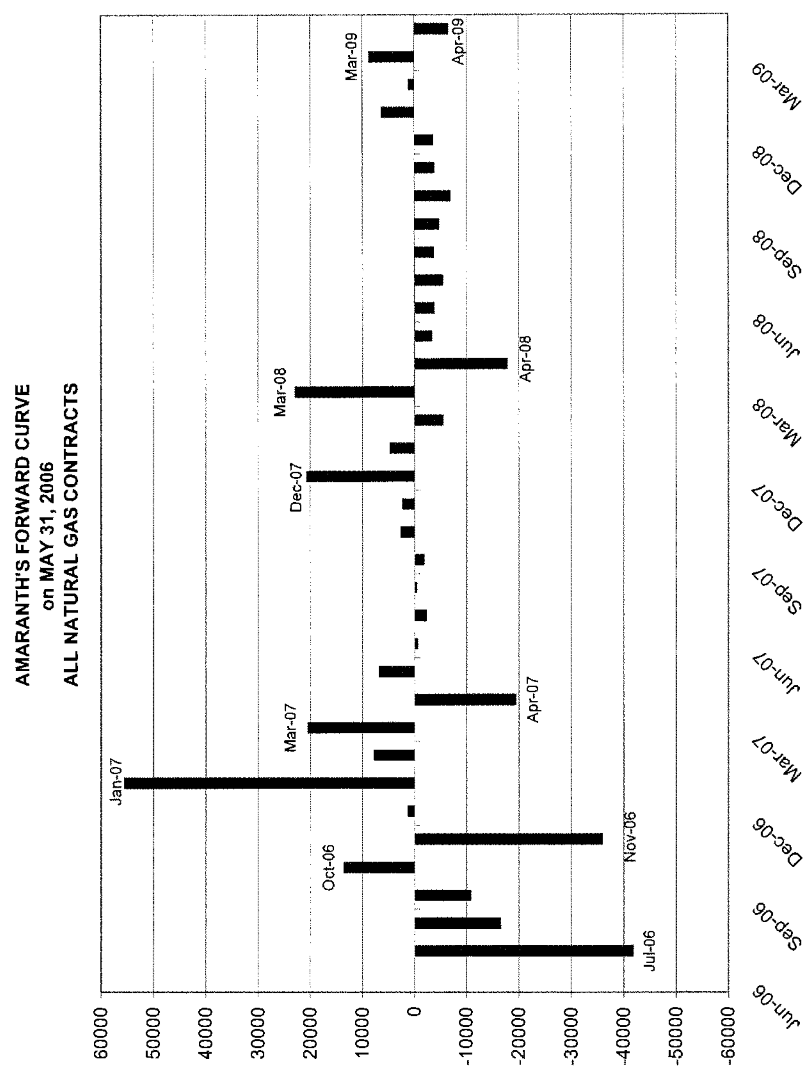
Mar-08
Apr-08
Mar-09
Apr-09

IV-85


AMARANTH'S FORWARD CURVE
on MAY 31, 2006
ALL NATURAL GAS CONTRACTS
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Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
Dec-07
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Sep-08
Dec-08
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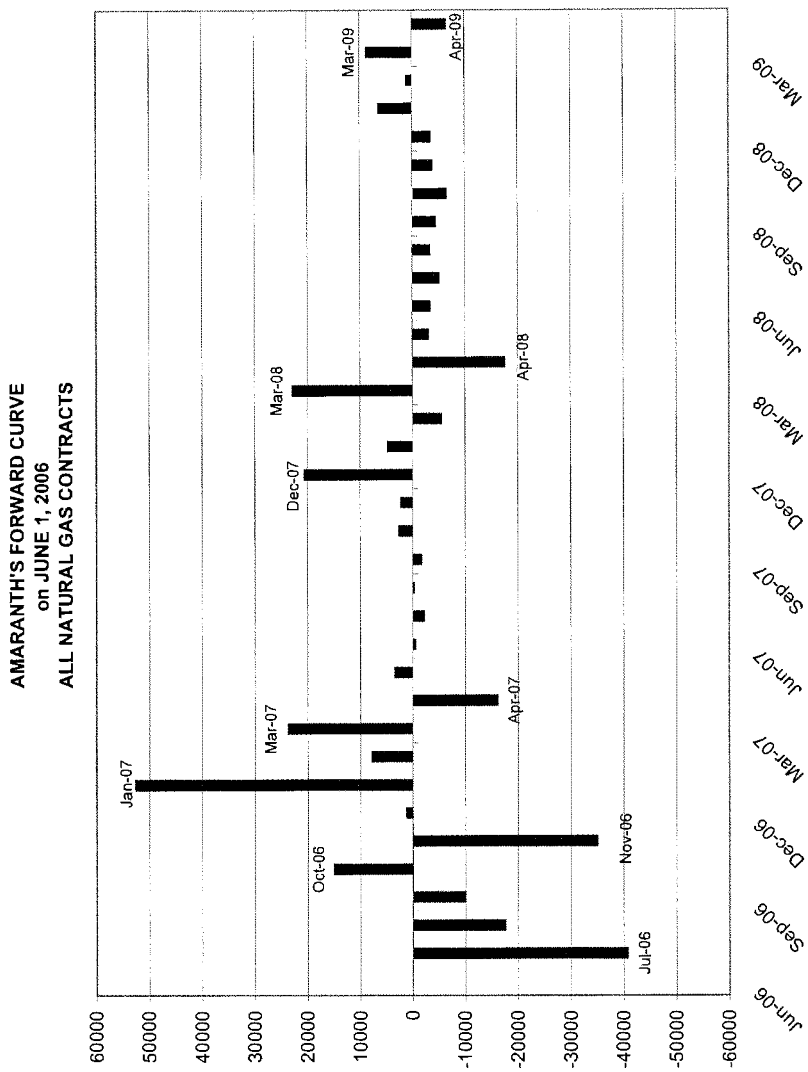
Apr-09

IV-86


AMARANTH'S FORWARD CURVE
on JUNE 1, 2006
ALL NATURAL GAS CONTRACTS
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-30000
-40000
-50000
-60000
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
Dec-07
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
Jul-06
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
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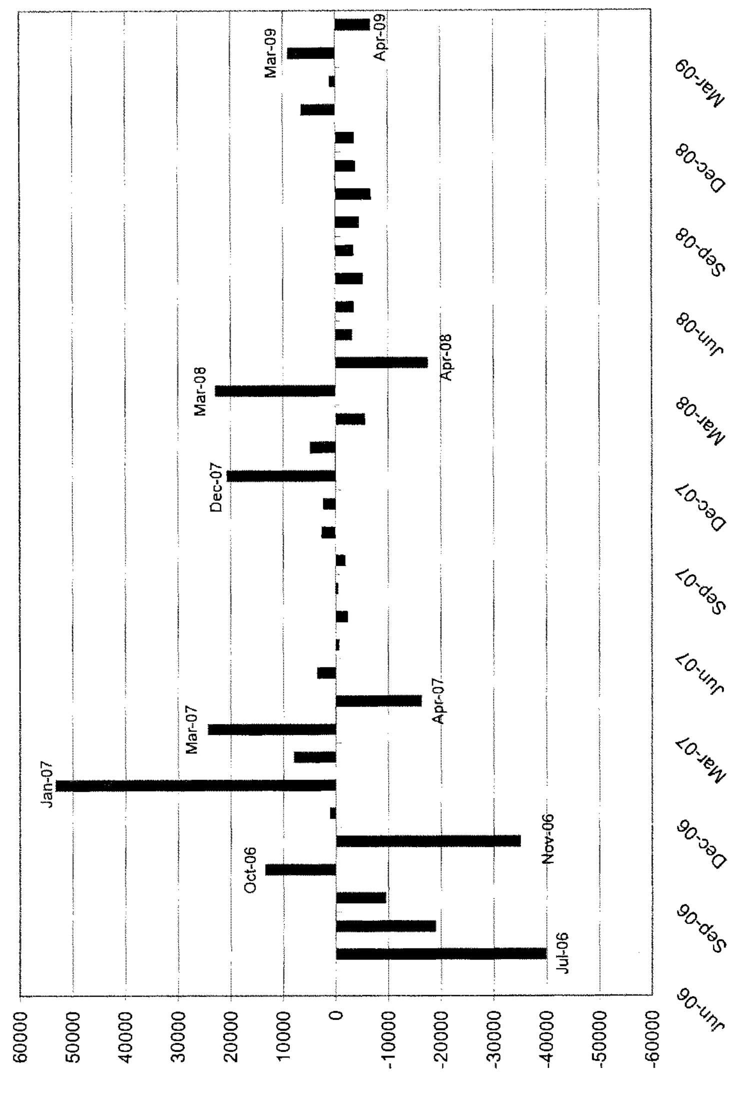
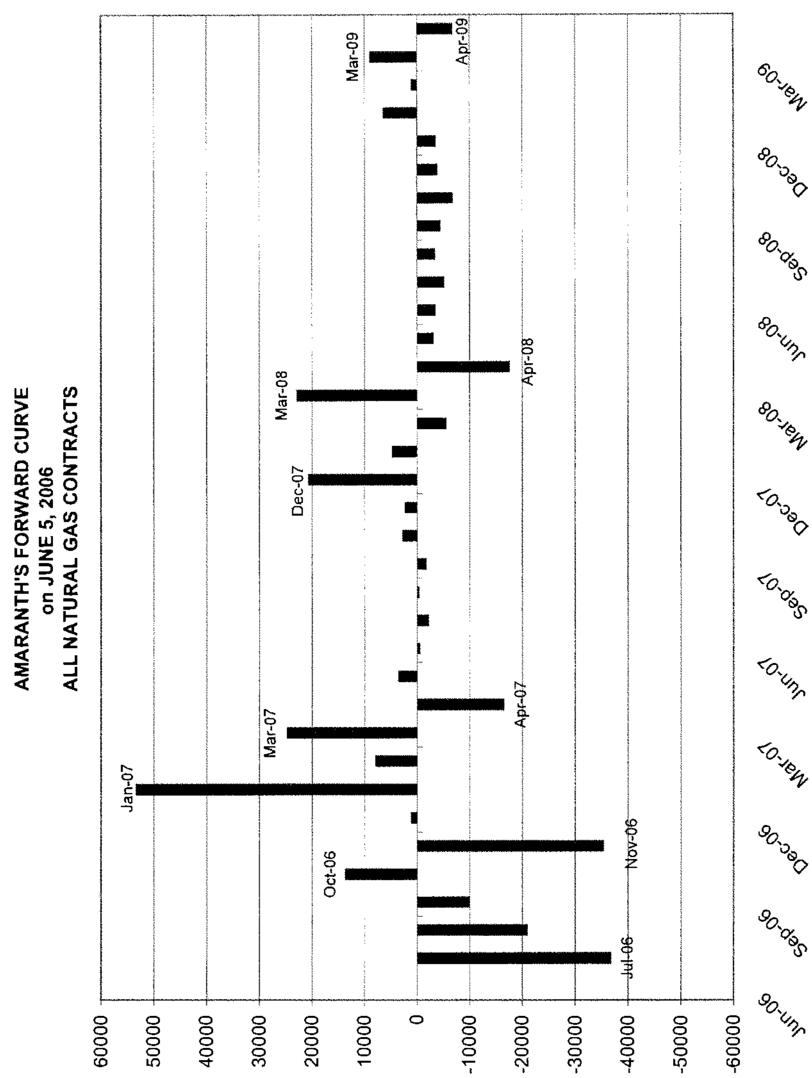
Apr-08
Mar-09
Apr-09

IV-87

AMARANTH'S FORWARD CURVE
on JUNE 2, 2006
ALL NATURAL GAS CONTRACTS



IV-88


AMARANTH'S FORWARD CURVE
on JUNE 5, 2006
ALL NATURAL GAS CONTRACTS
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10000
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-20000
-30000
-40000
-50000
-60000
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
Dec-07
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Sep-08
Dec-08
Mar-09
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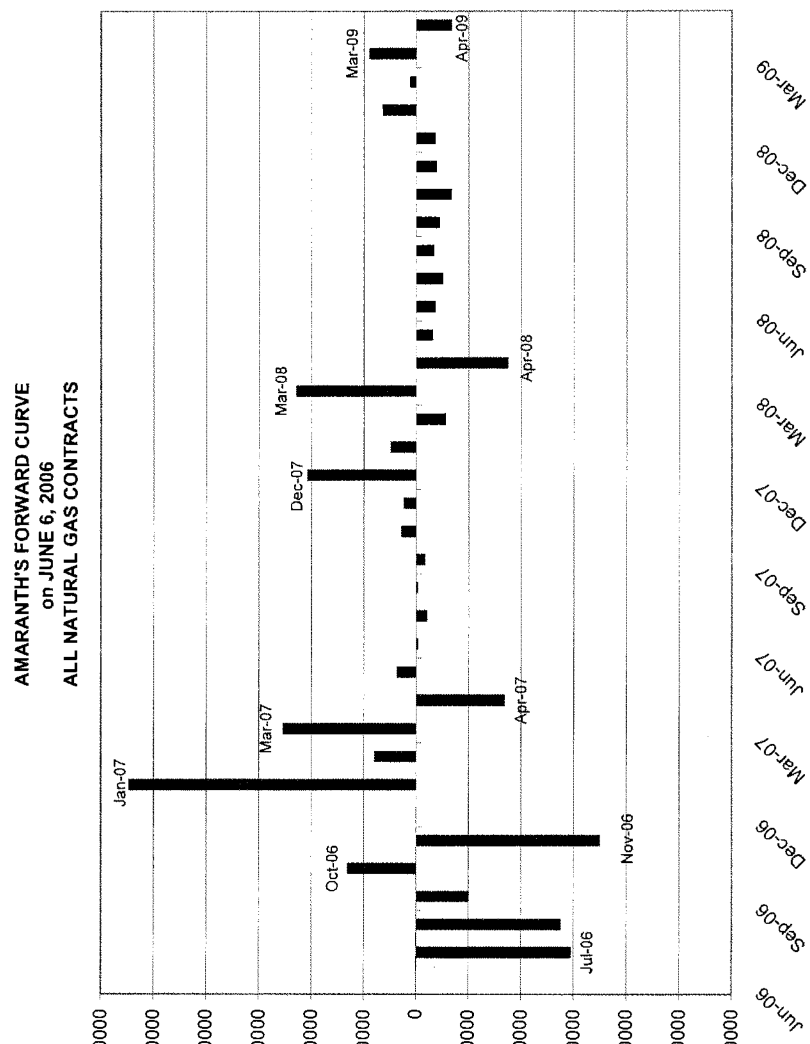
IV-89


AMARANTH'S FORWARD CURVE
on JUNE 6, 2006
ALL NATURAL GAS CONTRACTS
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-30000
-40000
-50000
-60000
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
Dec-07
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Dec-08
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Jul-06
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
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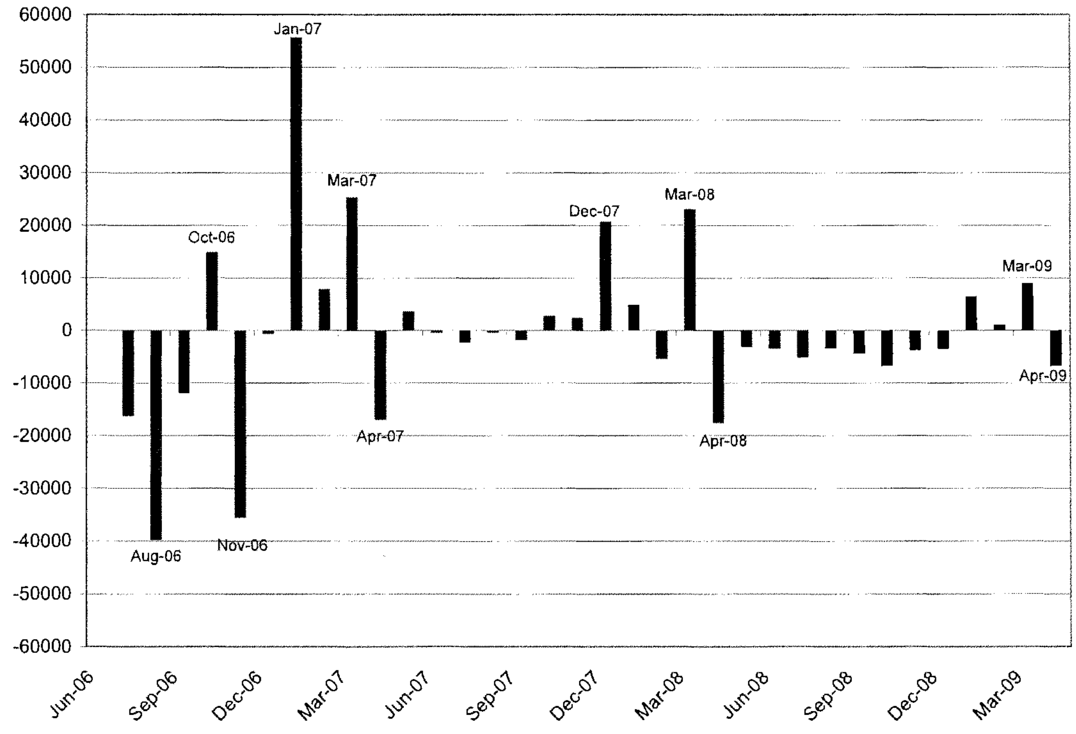
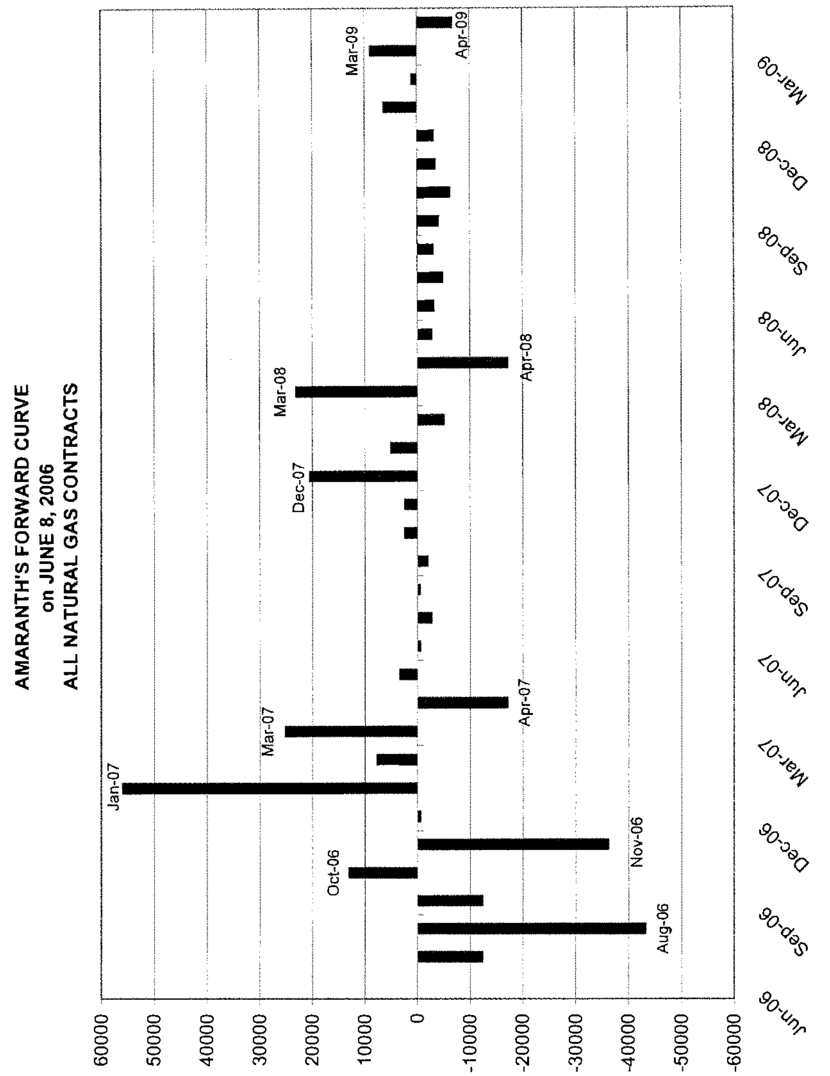
Mar-09
Apr-09

IV-90

AMARANTH'S FORWARD CURVE
on JUNE 7, 2006
ALL NATURAL GAS CONTRACTS




AMARANTH'S FORWARD CURVE
on JUNE 8, 2006
ALL NATURAL GAS CONTRACTS
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Jun-06
Sep-06
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Mar-07
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Dec-07
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Jun-08
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Dec-08
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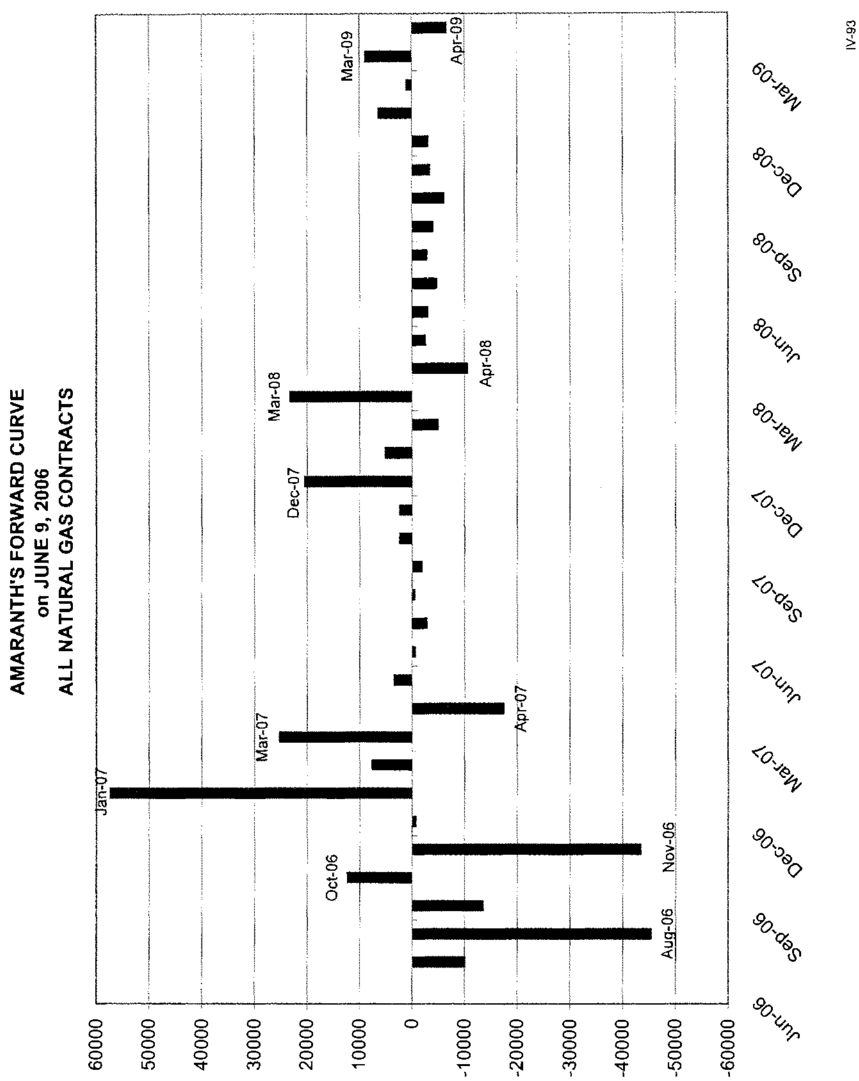
Apr-08
Mar-09
Apr-09

IV-92


AMARANTH'S FORWARD CURVE
on JUNE 9, 2006
ALL NATURAL GAS CONTRACTS
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Dec-07
Mar-08
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Dec-08
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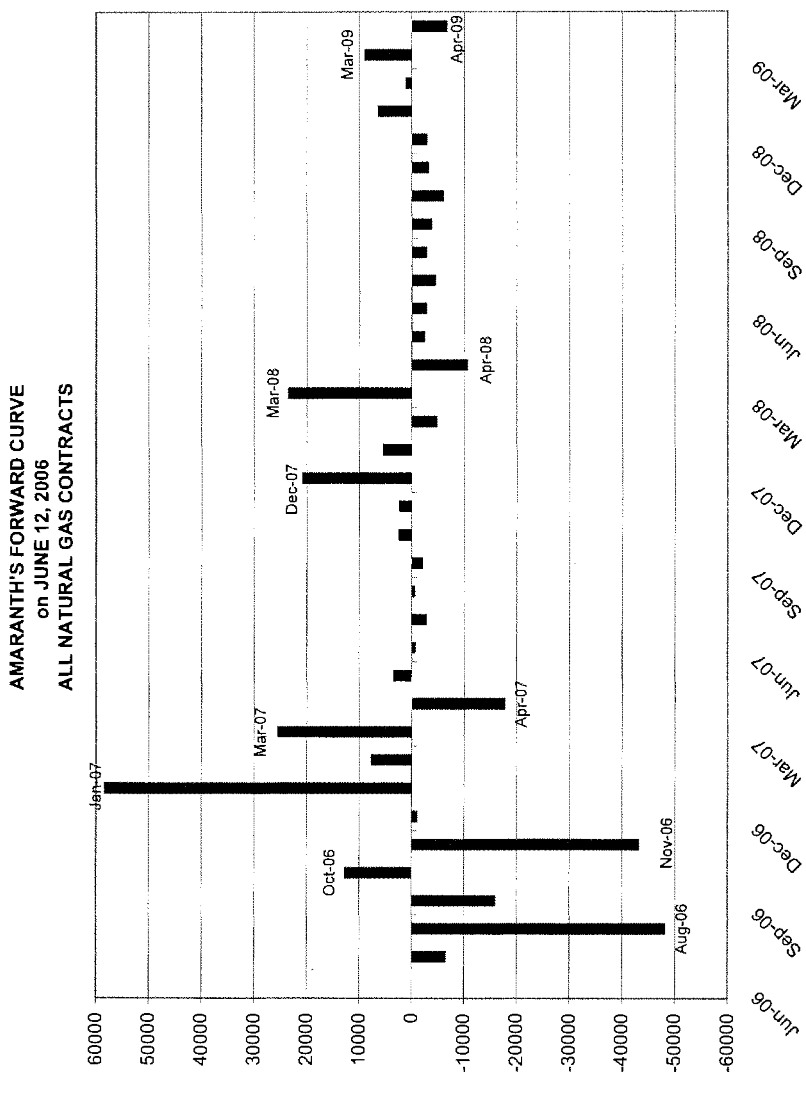
Mar-09
Apr-09
IV-93


AMARANTH'S FORWARD CURVE
on JUNE 12, 2006
ALL NATURAL GAS CONTRACTS
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Jun-06
Sep-06
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Mar-07
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Dec-07
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Nov-06
Jan-07
Mar-07
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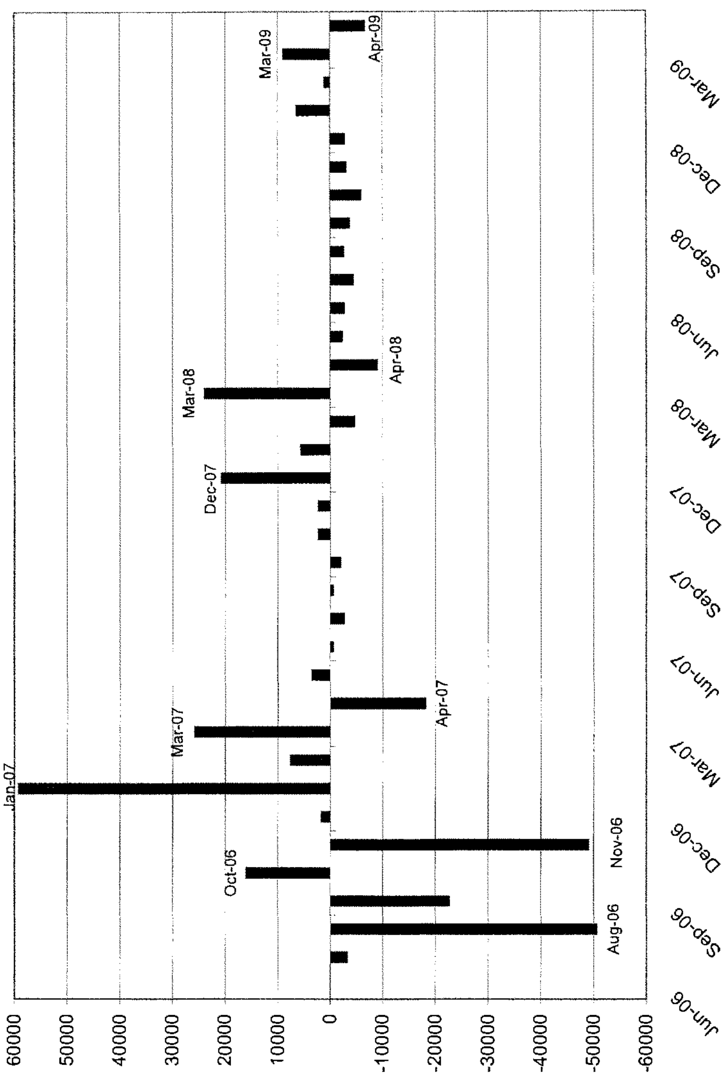
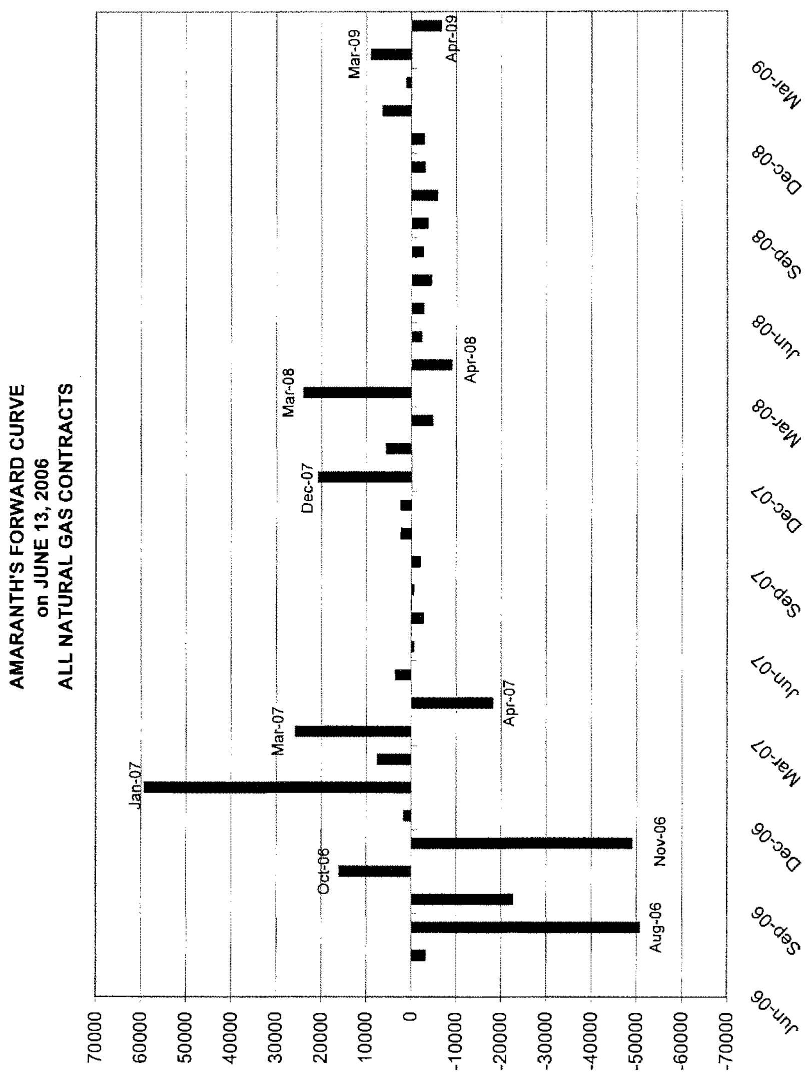
Apr-09

AMARANTH'S FORWARD CURVE
on JUNE 13, 2006
ALL NATURAL GAS CONTRACTS



IV-95



AMARANTH'S FORWARD CURVE
on JUNE 13, 2006
ALL NATURAL GAS CONTRACTS
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Sep-08
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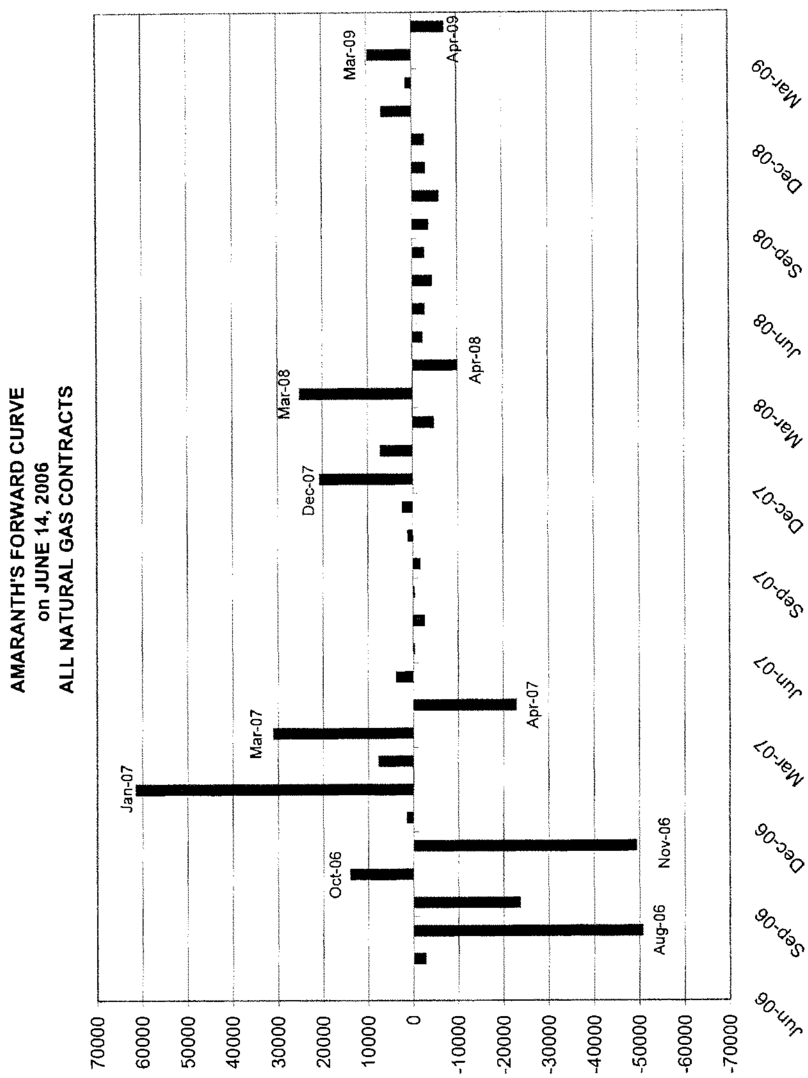
Apr-09

IV-96



AMARANTH'S FORWARD CURVE
on JUNE 14, 2006
ALL NATURAL GAS CONTRACTS
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Sep-06
Dec-06
Mar-07
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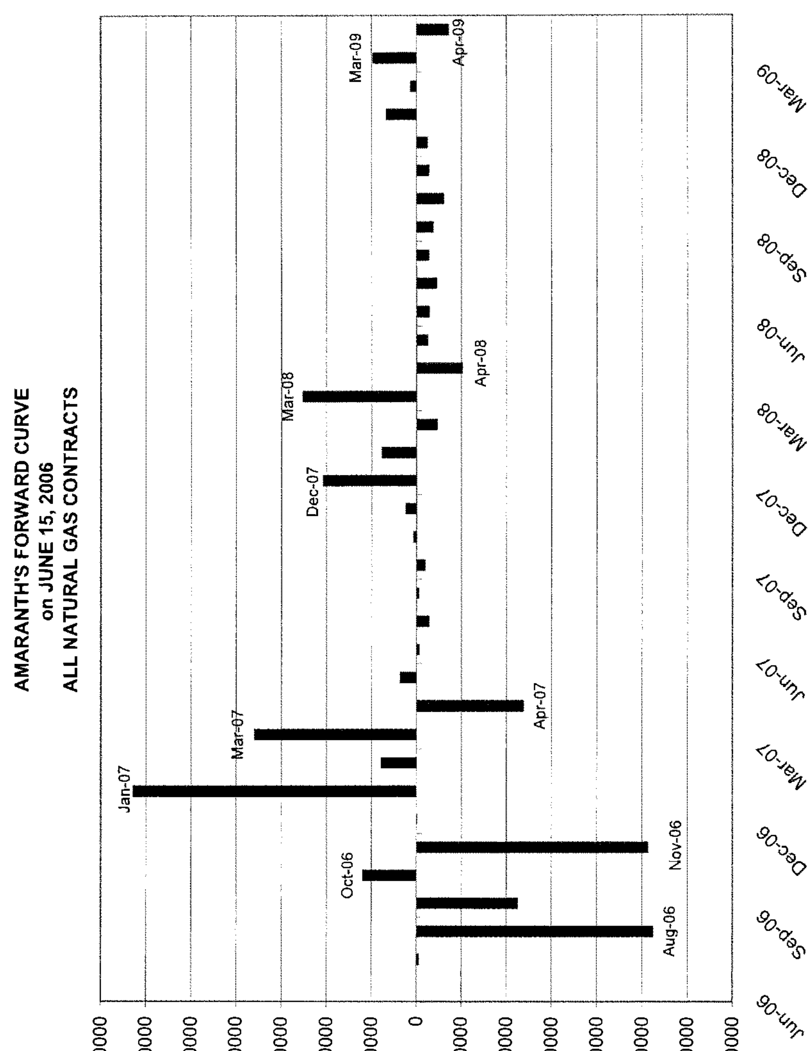
Apr-09

IV-97


AMARANTH'S FORWARD CURVE
on JUNE 15, 2006
ALL NATURAL GAS CONTRACTS
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Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
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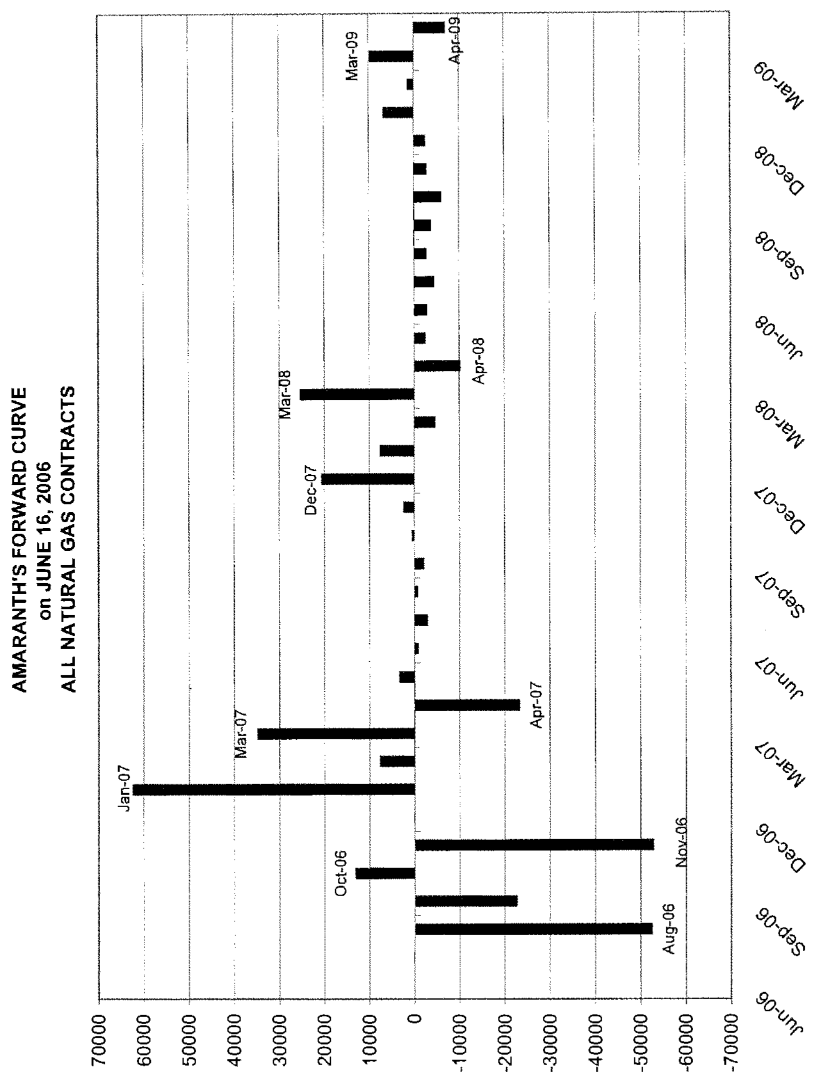
Apr-09

IV-98


AMARANTH'S FORWARD CURVE
on JUNE 16, 2006
ALL NATURAL GAS CONTRACTS
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-60000
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Sep-06
Dec-06
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Jun-07
Sep-07
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Sep-08
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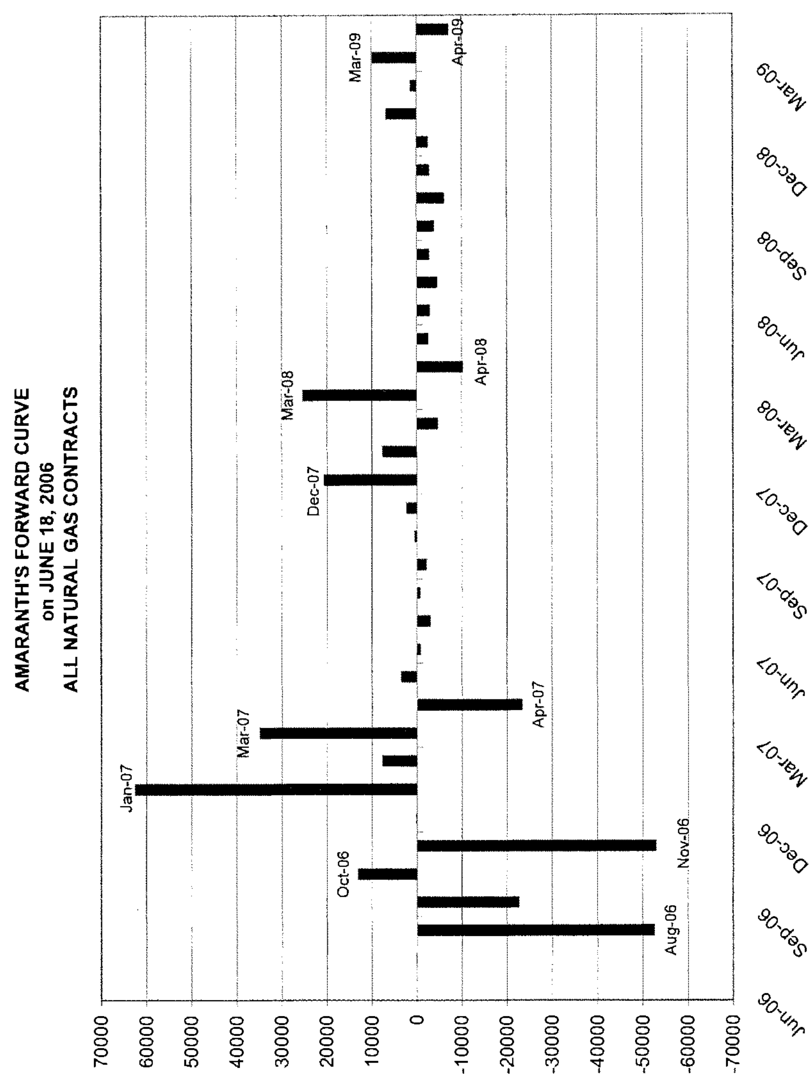
Mar-09
Apr-09

IV-99


AMARANTH'S FORWARD CURVE
on JUNE 18, 2006
ALL NATURAL GAS CONTRACTS
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-70000
Jun-06
Sep-06
Dec-06
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Sep-07
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Dec-08
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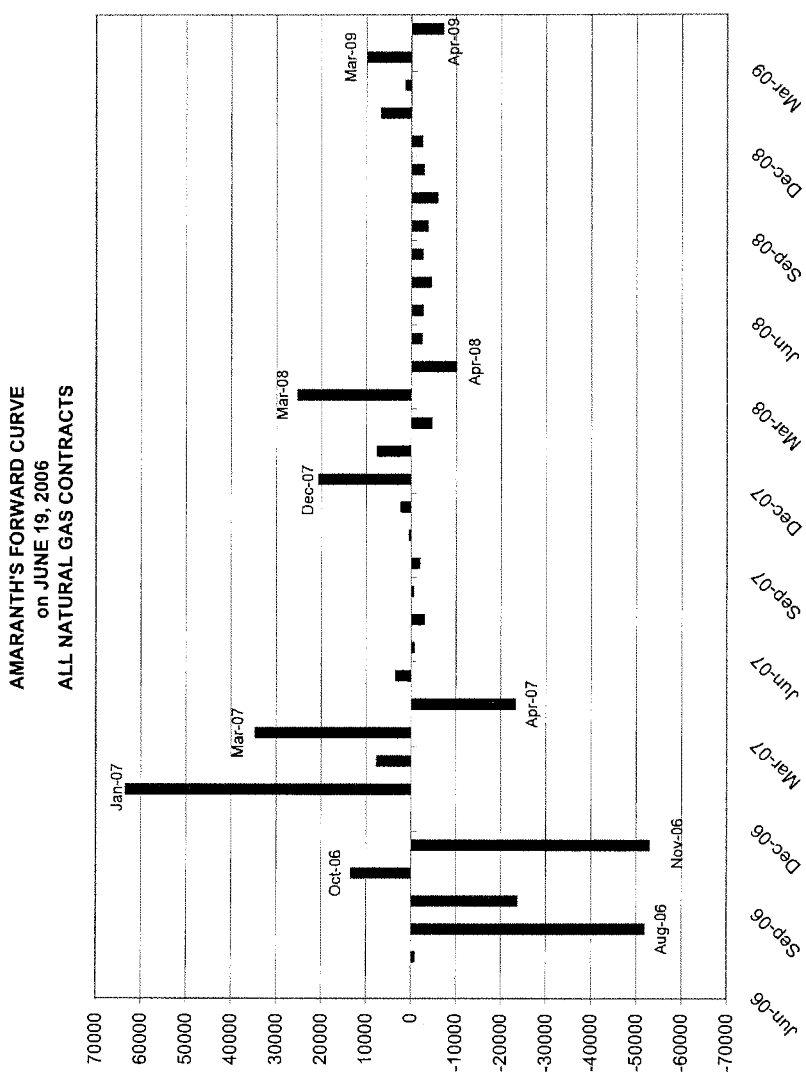
IV-100


AMARANTH'S FORWARD CURVE
on JUNE 19, 2006
ALL NATURAL GAS CONTRACTS
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10000
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-60000
-70000
Jun-06
Sep-06
Dec-06
Mar-07
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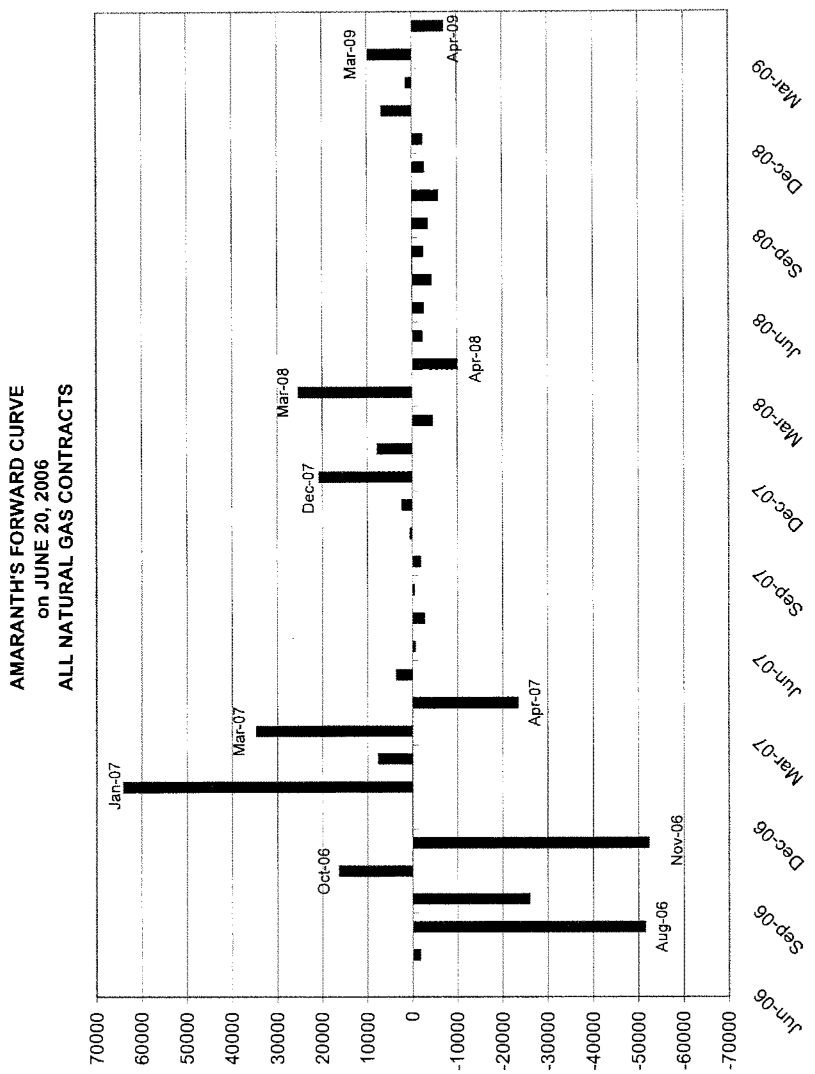
IV-101


AMARANTH'S FORWARD CURVE
on JUNE 20, 2006
ALL NATURAL GAS CONTRACTS
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Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
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Sep-08
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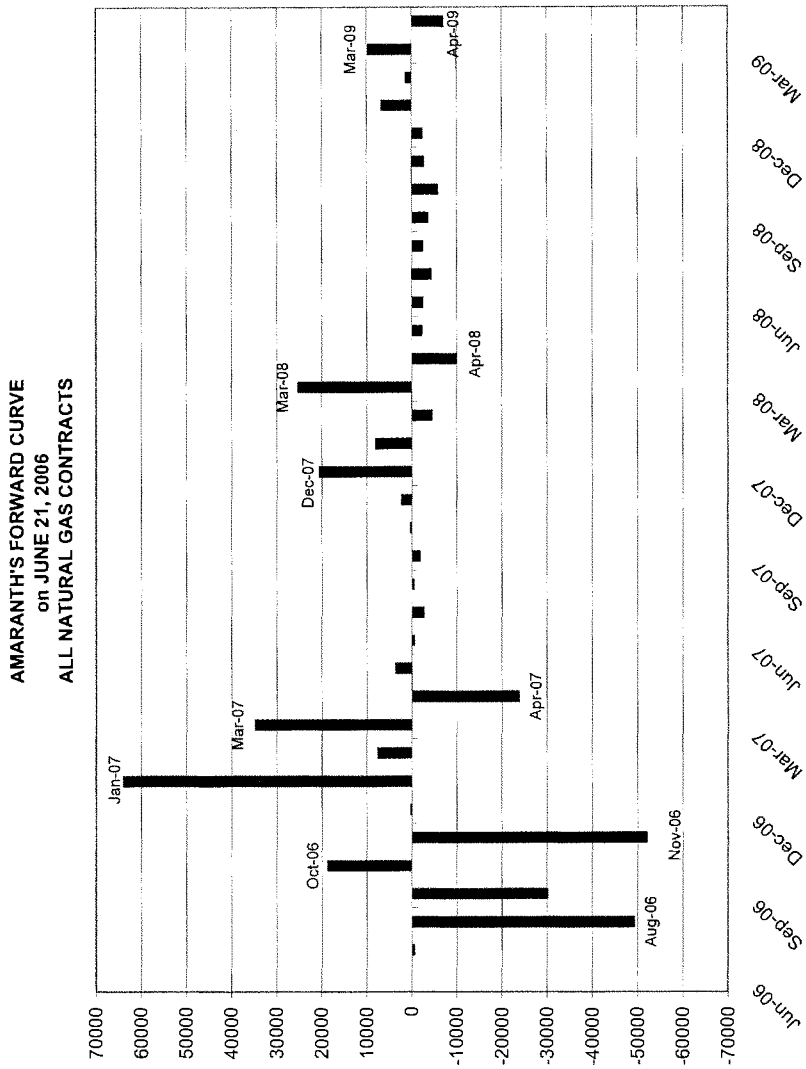
IV-102


AMARANTH'S FORWARD CURVE
on JUNE 21, 2006
ALL NATURAL GAS CONTRACTS
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Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
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Jun-08
Sep-08
Dec-08
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Nov-06
Jan-07
Mar-07
Apr-07
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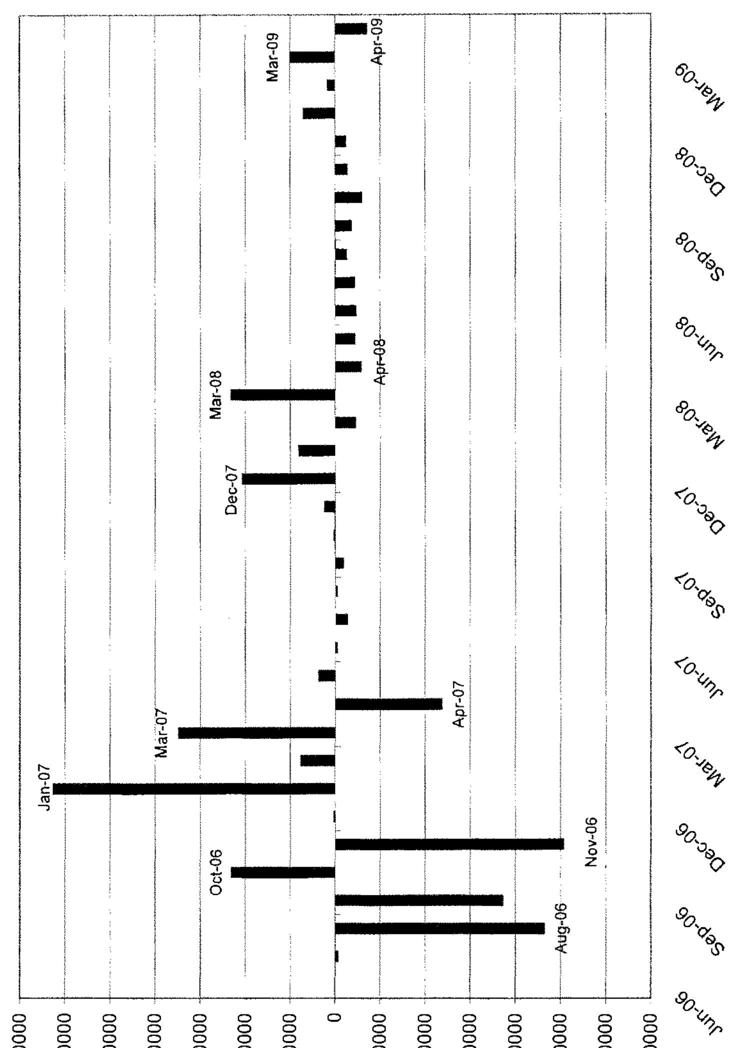
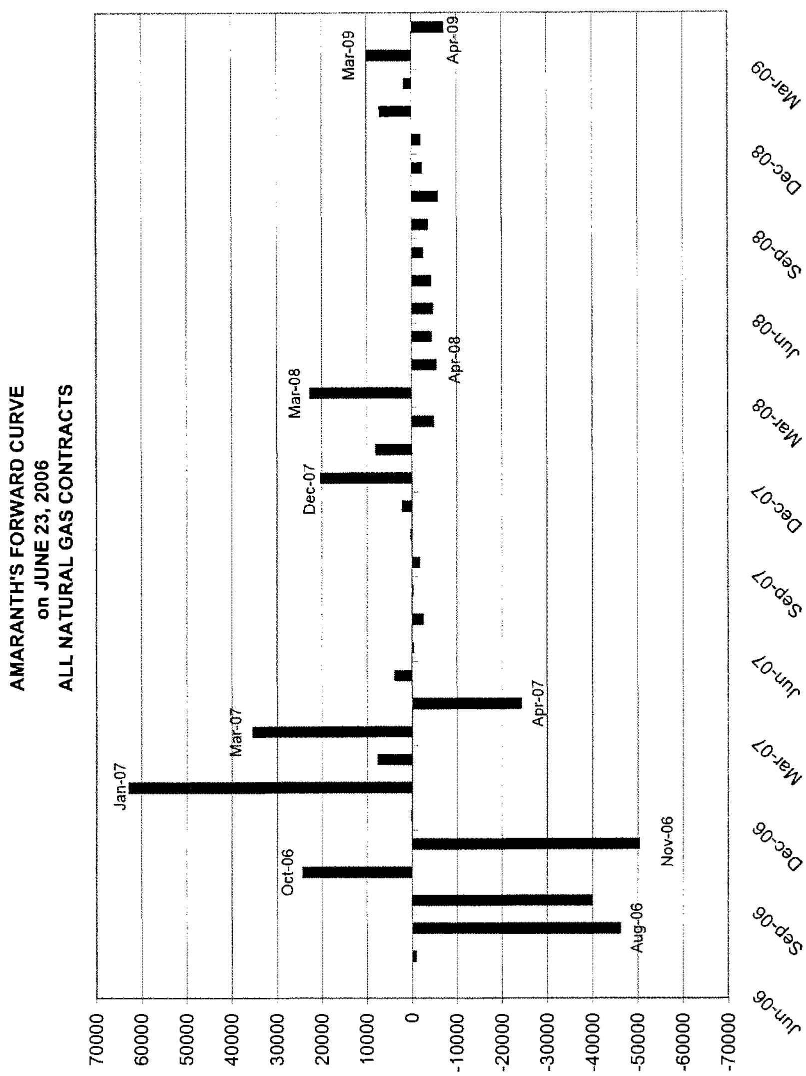
Mar-09
Apr-09

IV-103

AMARANTH'S FORWARD CURVE
on JUNE 22, 2006
ALL NATURAL GAS CONTRACTS



IV-104


AMARANTH'S FORWARD CURVE
on JUNE 23, 2006
ALL NATURAL GAS CONTRACTS
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10000
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Dec-08
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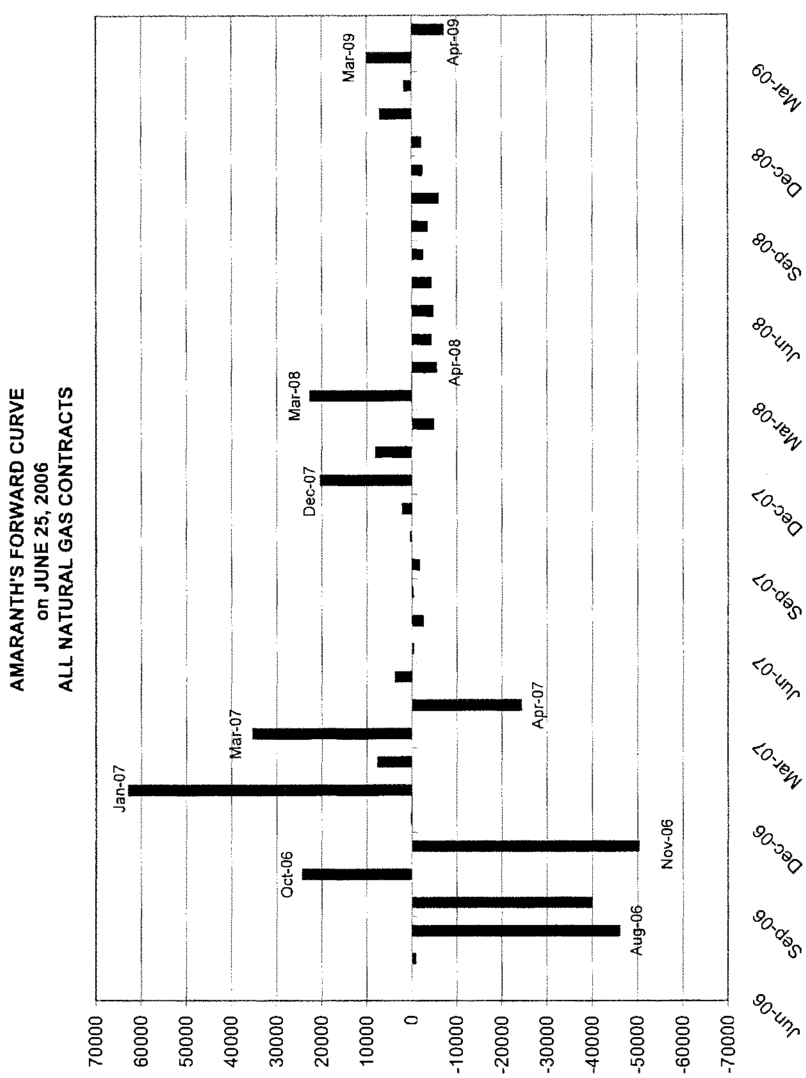
Mar-09
Apr-09

IV-105


AMARANTH'S FORWARD CURVE
on JUNE 25, 2006
ALL NATURAL GAS CONTRACTS
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-60000
-70000
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Dec-06
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Jun-07
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Dec-08
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Aug-06
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
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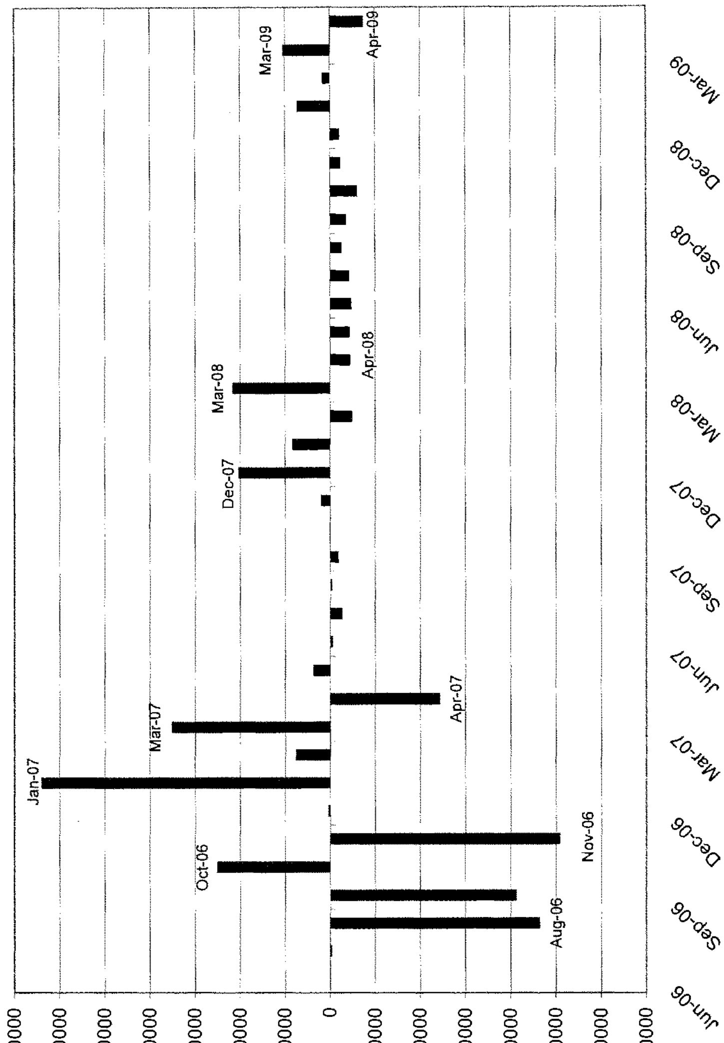
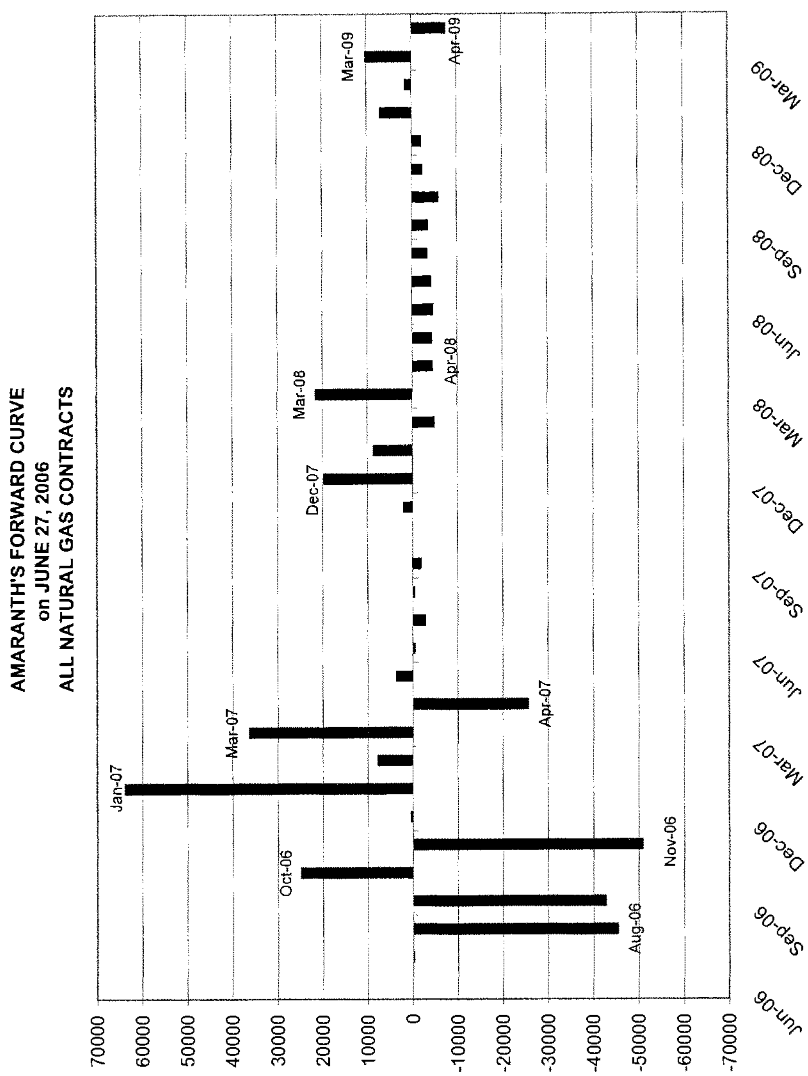
Apr-08
Mar-09
Apr-09

IV-106

**AMARANTH'S FORWARD CURVE
on JUNE 26, 2006
ALL NATURAL GAS CONTRACTS**



IV-107


AMARANTH'S FORWARD CURVE
on JUNE 27, 2006
ALL NATURAL GAS CONTRACTS
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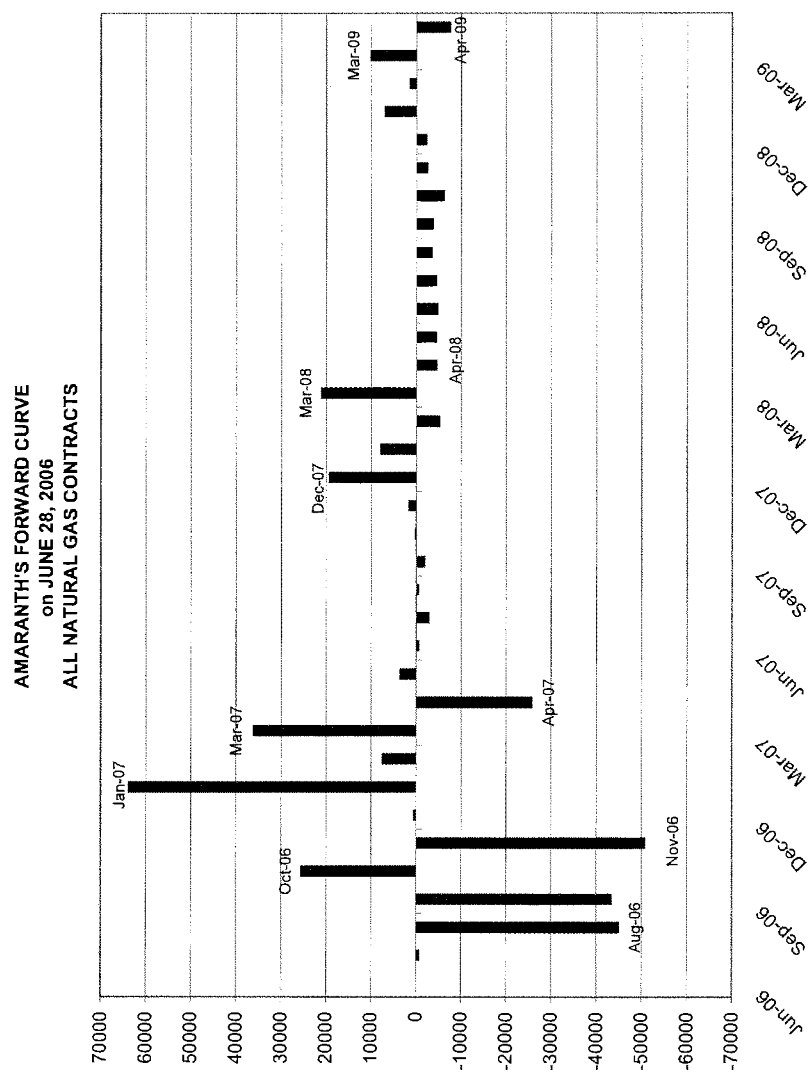
IV-108


AMARANTH'S FORWARD CURVE
on JUNE 28, 2006
ALL NATURAL GAS CONTRACTS
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
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Mar-08
Jun-08
Sep-08
Dec-08
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Apr-07
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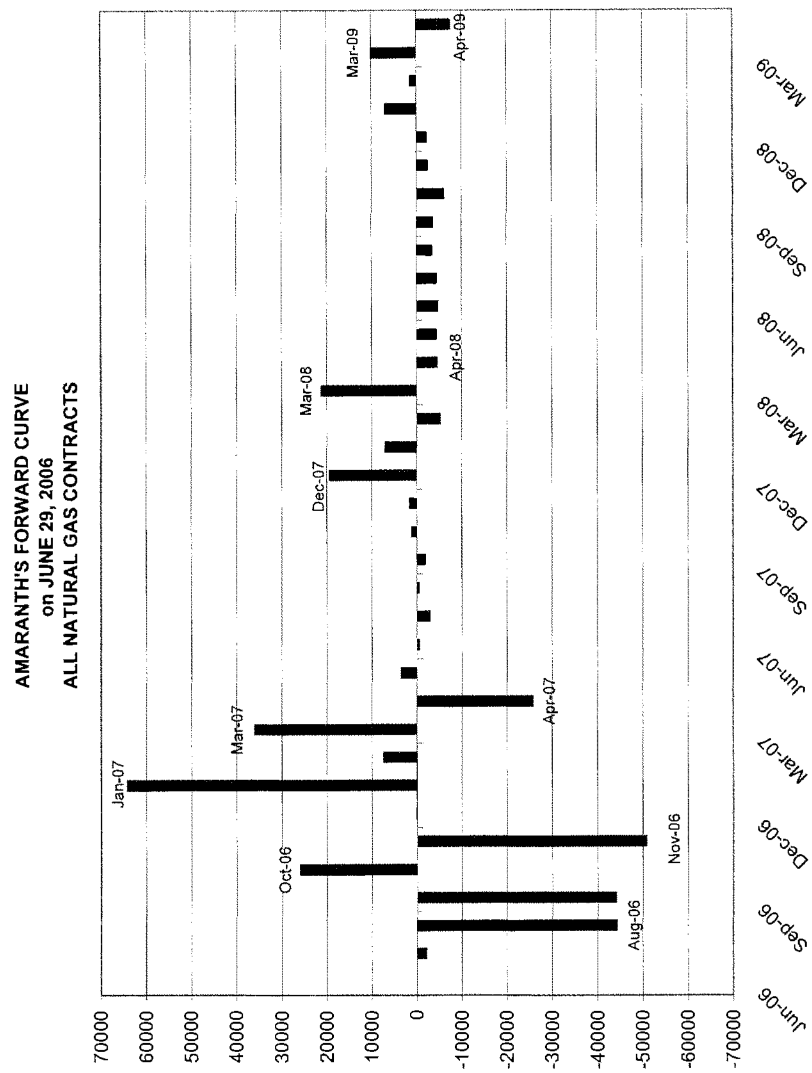
Mar-08
Apr-08
Mar-09
Apr-09

IV-109


AMARANTH'S FORWARD CURVE
on JUNE 29, 2006
ALL NATURAL GAS CONTRACTS
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60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
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Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
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Dec-07
Mar-08
Apr-08
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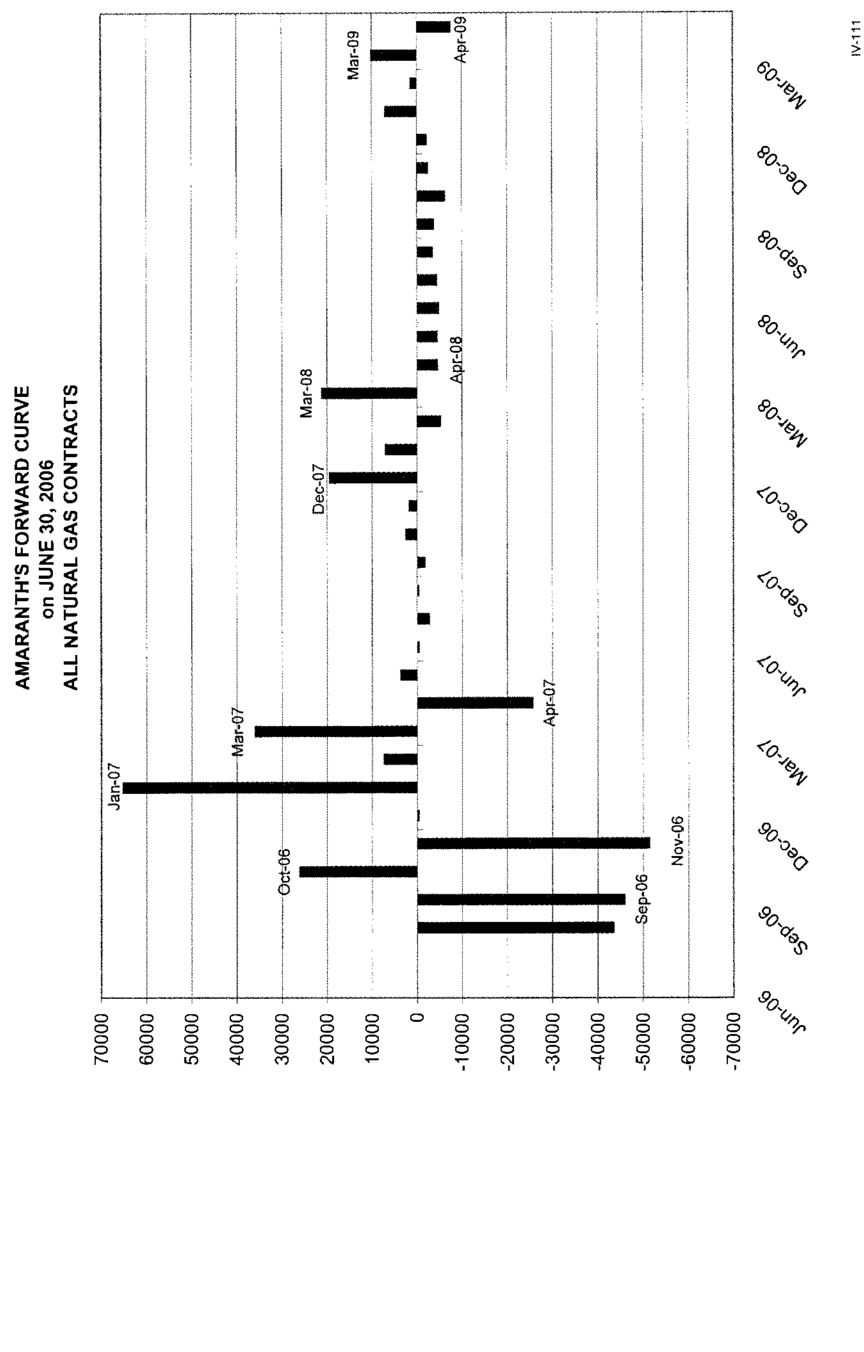
Apr-09

IV-110



AMARANTH'S FORWARD CURVE
on JUNE 30, 2006
ALL NATURAL GAS CONTRACTS
70000
60000
50000
40000
30000
20000
10000
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-10000
-20000
-30000
-40000
-50000
-60000
-70000
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
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Dec-08
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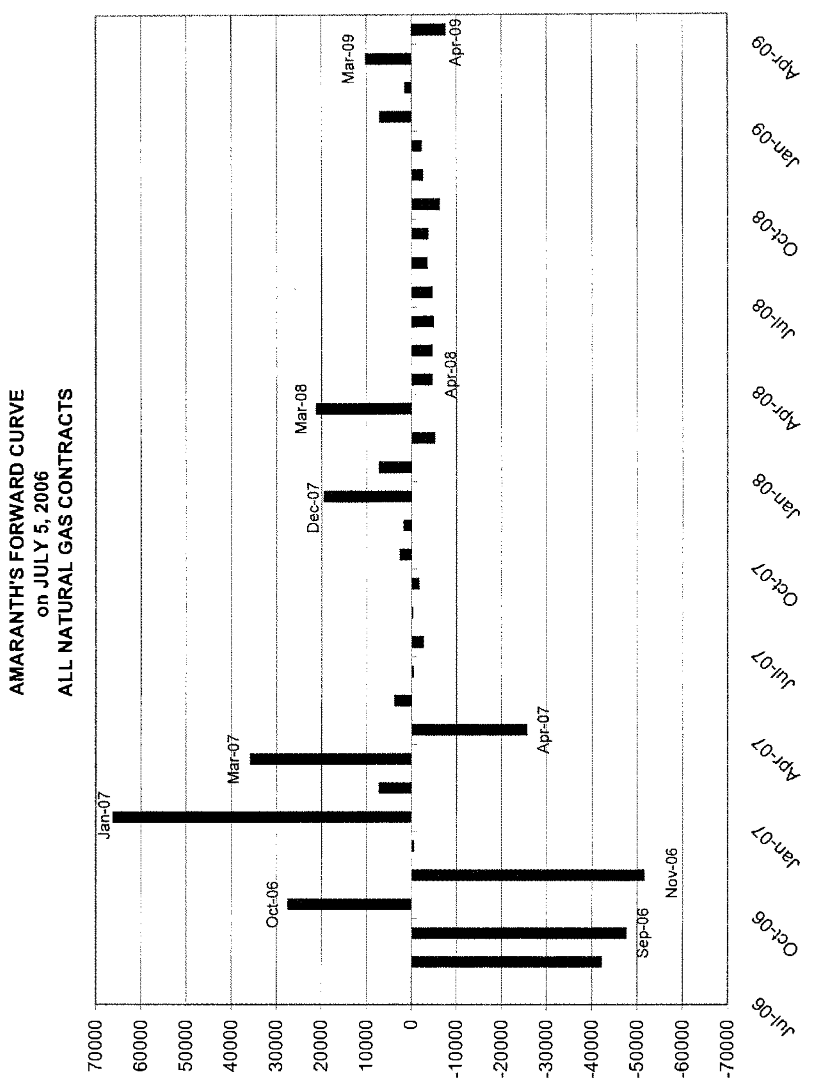
Mar-09
Apr-09
IV-111


AMARANTH'S FORWARD CURVE
on JULY 5, 2006
ALL NATURAL GAS CONTRACTS
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40000
30000
20000
10000
0
-10000
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-30000
-40000
-50000
-60000
-70000
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
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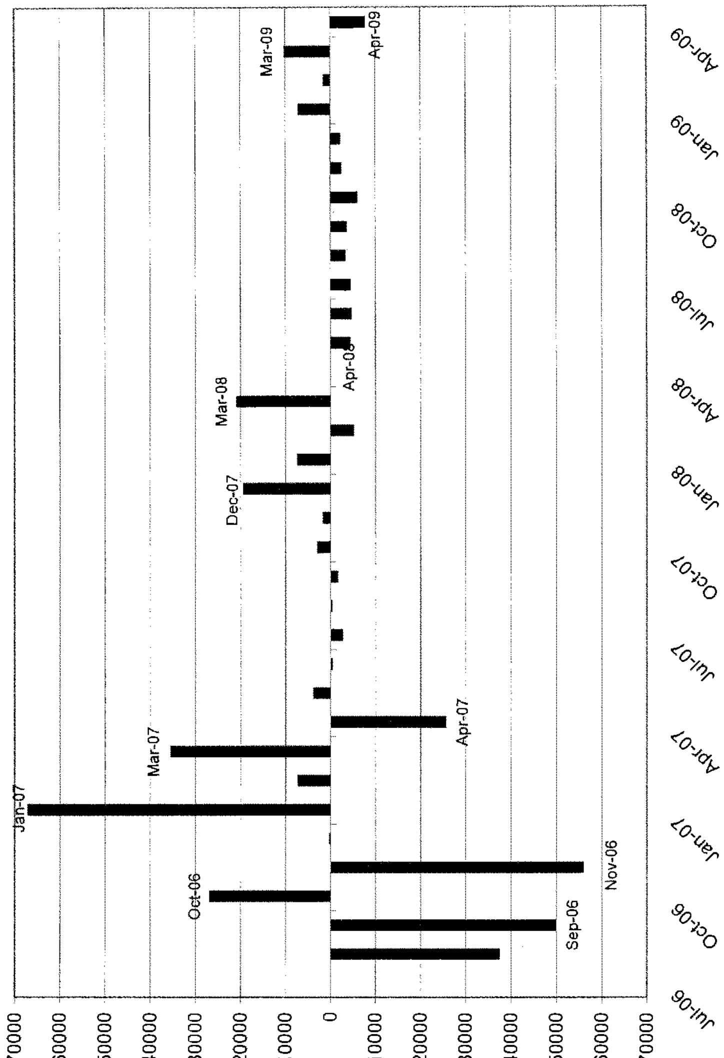
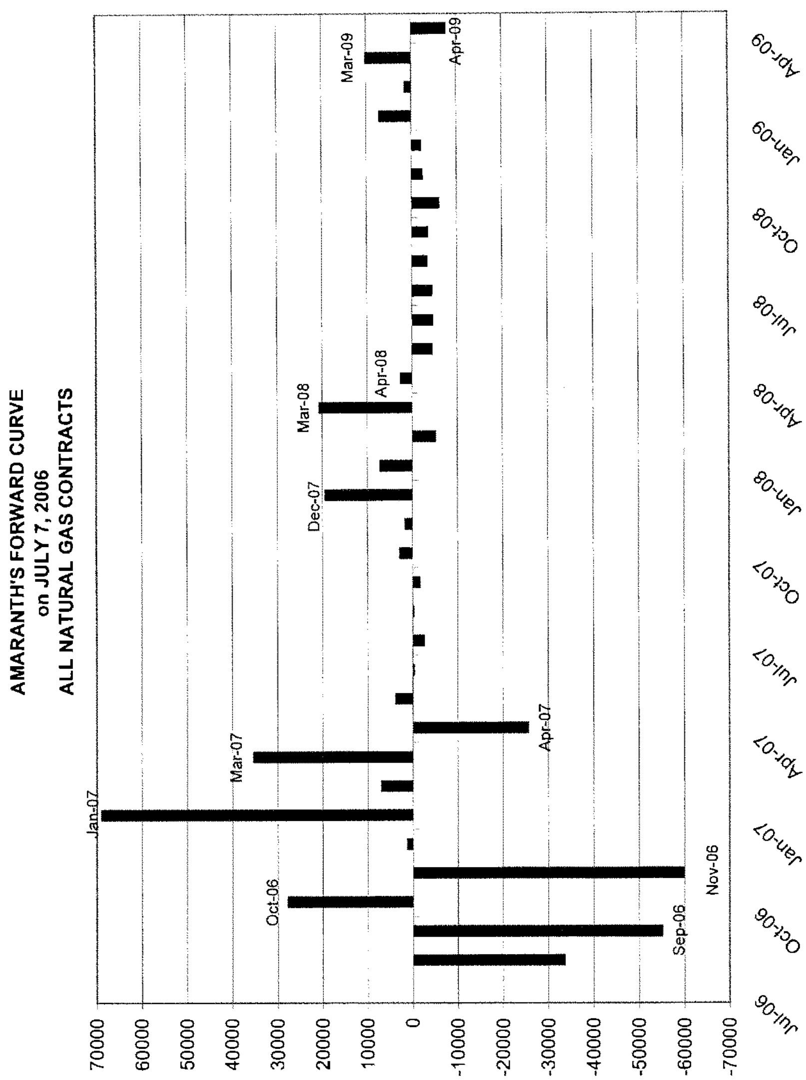
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Sep-06
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Apr-08
Mar-09
Apr-09

IV-112

AMARANTH'S FORWARD CURVE
on JULY 6, 2006
ALL NATURAL GAS CONTRACTS



IV-113


AMARANTH'S FORWARD CURVE
on JULY 7, 2006
ALL NATURAL GAS CONTRACTS
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60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
Jun-06
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
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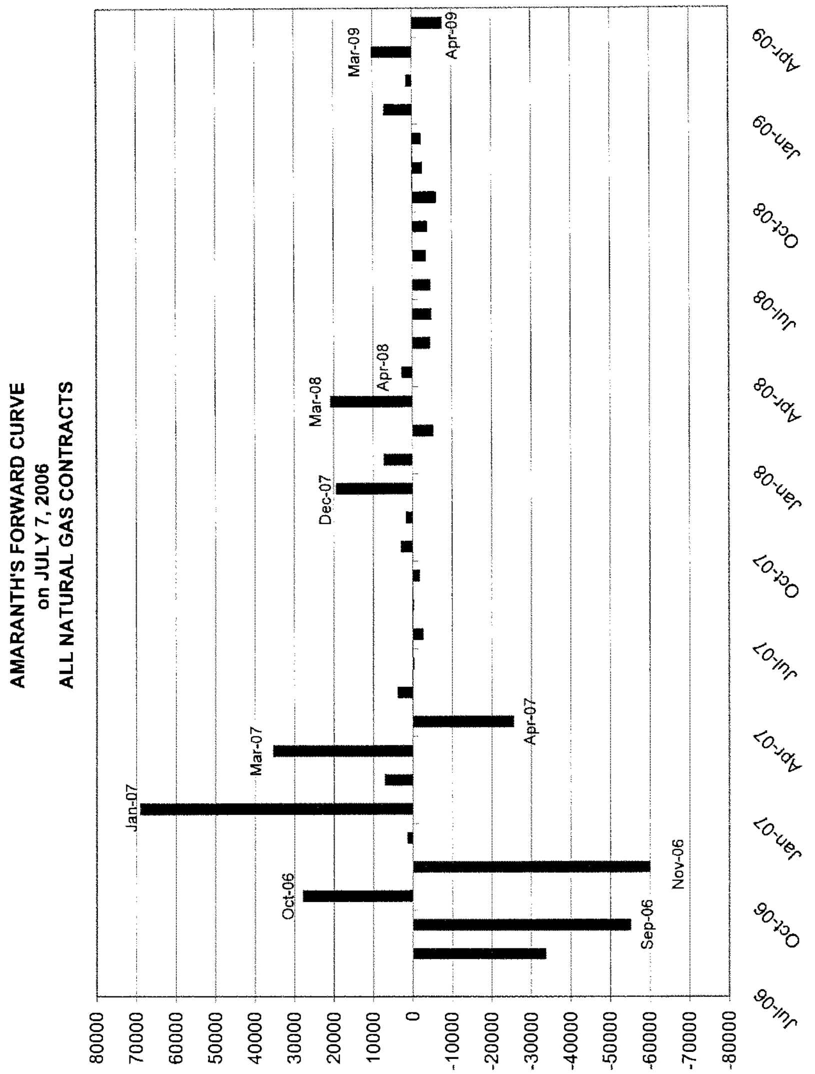
Dec-07
Mar-08
Apr-08
Mar-09
Apr-09

IV-114


AMARANTH'S FORWARD CURVE
on JULY 7, 2006
ALL NATURAL GAS CONTRACTS
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
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Apr-08
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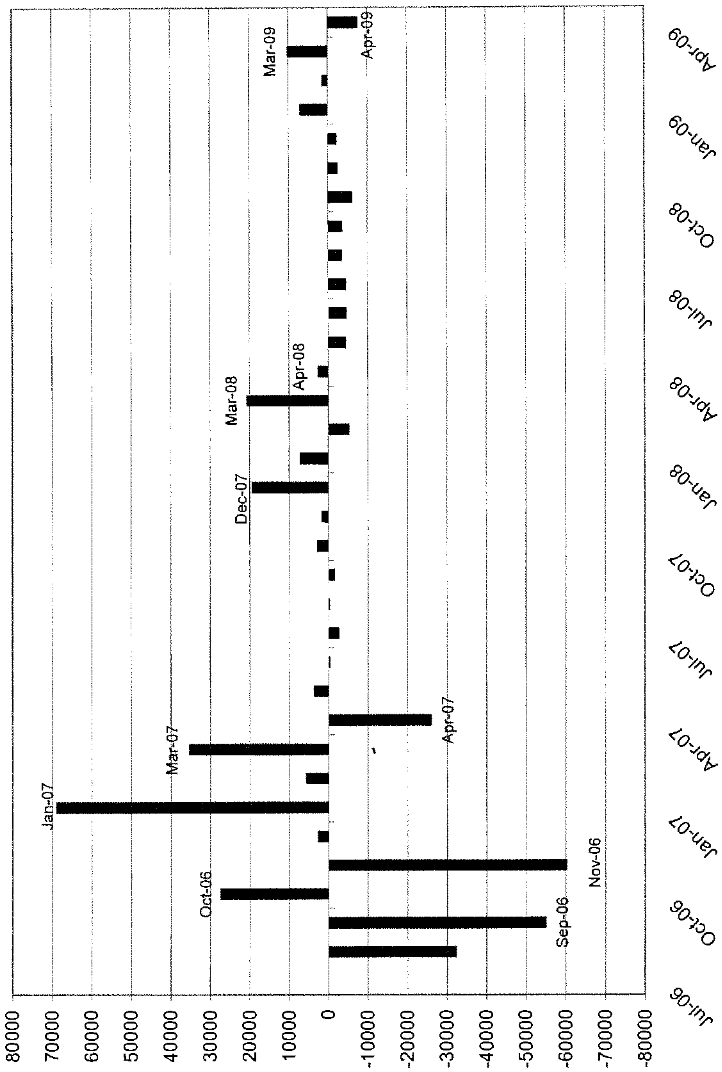
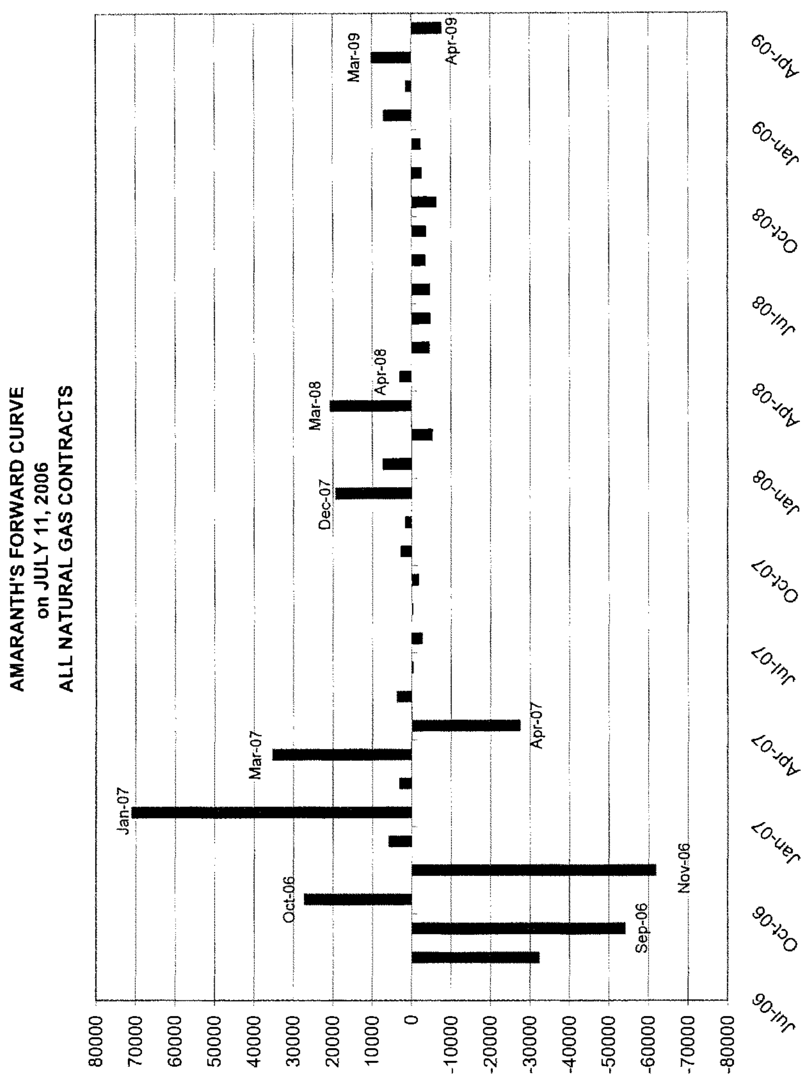
Oct-08
Jan-09
Apr-09
Sep-06
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Apr-08
Mar-09
Apr-09

IV-115

AMARANTH'S FORWARD CURVE on JULY 10, 2006 ALL NATURAL GAS CONTRACTS



IV-116


AMARANTH'S FORWARD CURVE
on JULY 11, 2006
ALL NATURAL GAS CONTRACTS
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
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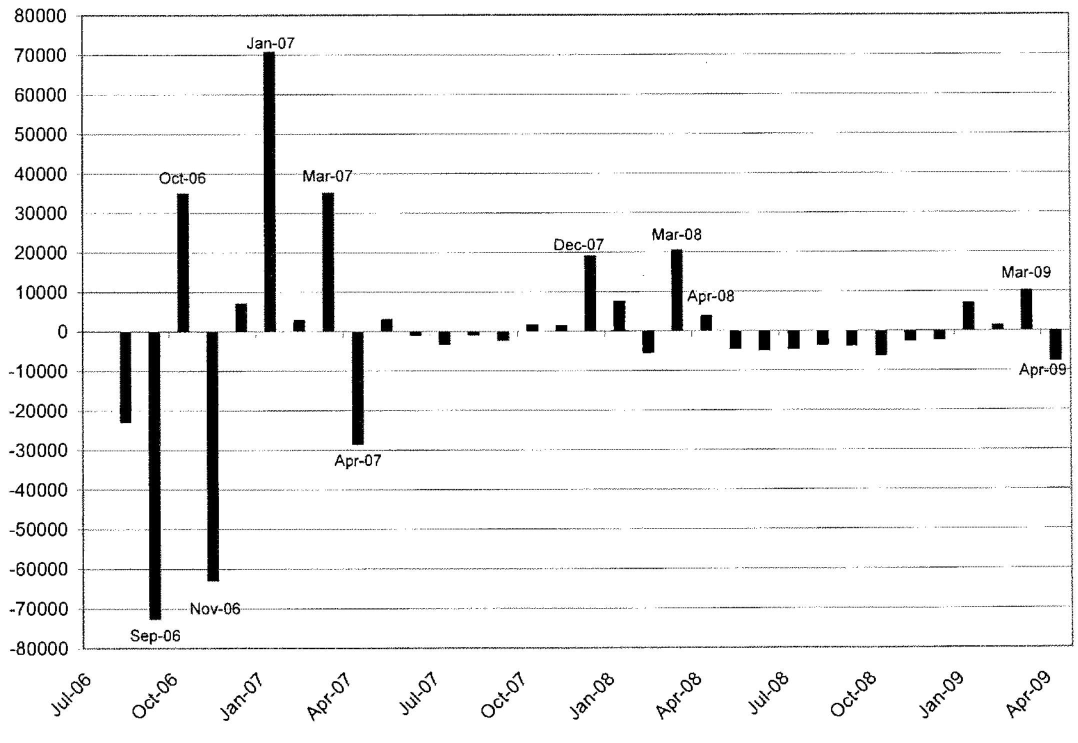
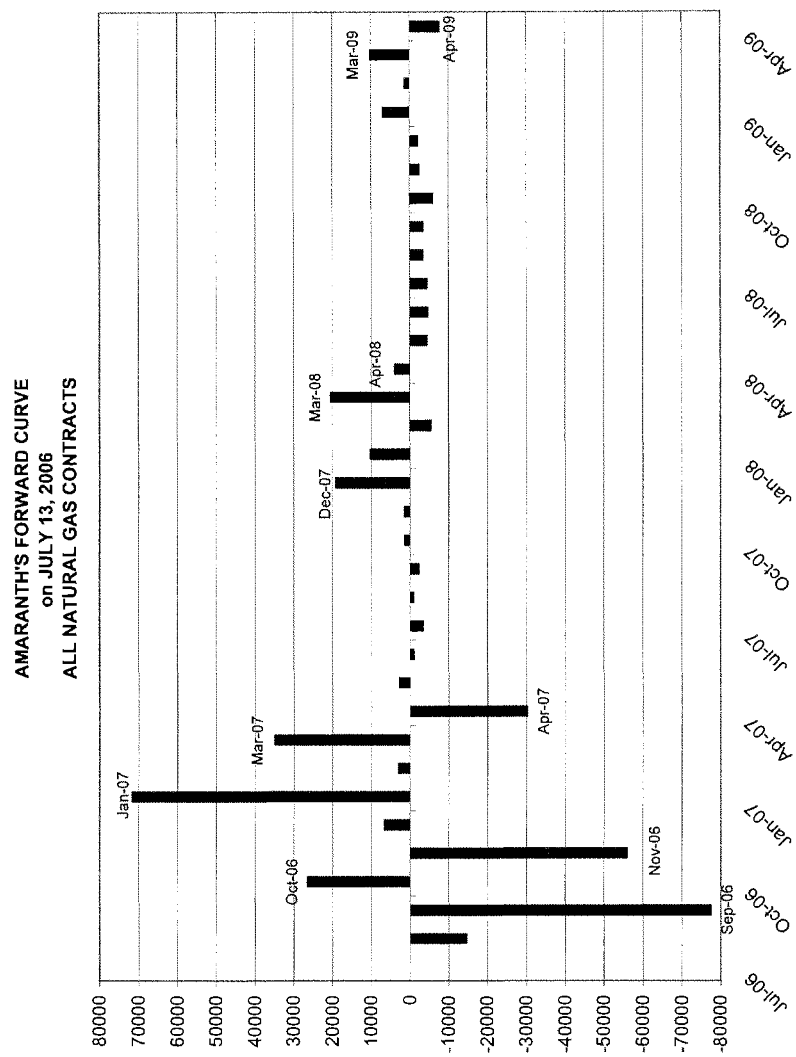
Sep-06
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Apr-08
Mar-09
Apr-09

IV-117

AMARANTH'S FORWARD CURVE
on JULY 12, 2006
ALL NATURAL GAS CONTRACTS



IV-118


AMARANTH'S FORWARD CURVE
on JULY 13, 2006
ALL NATURAL GAS CONTRACTS
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70000
60000
50000
40000
30000
20000
10000
0
-10000
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-30000
-40000
-50000
-60000
-70000
-80000
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
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Jan-08
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Oct-08
Jan-09
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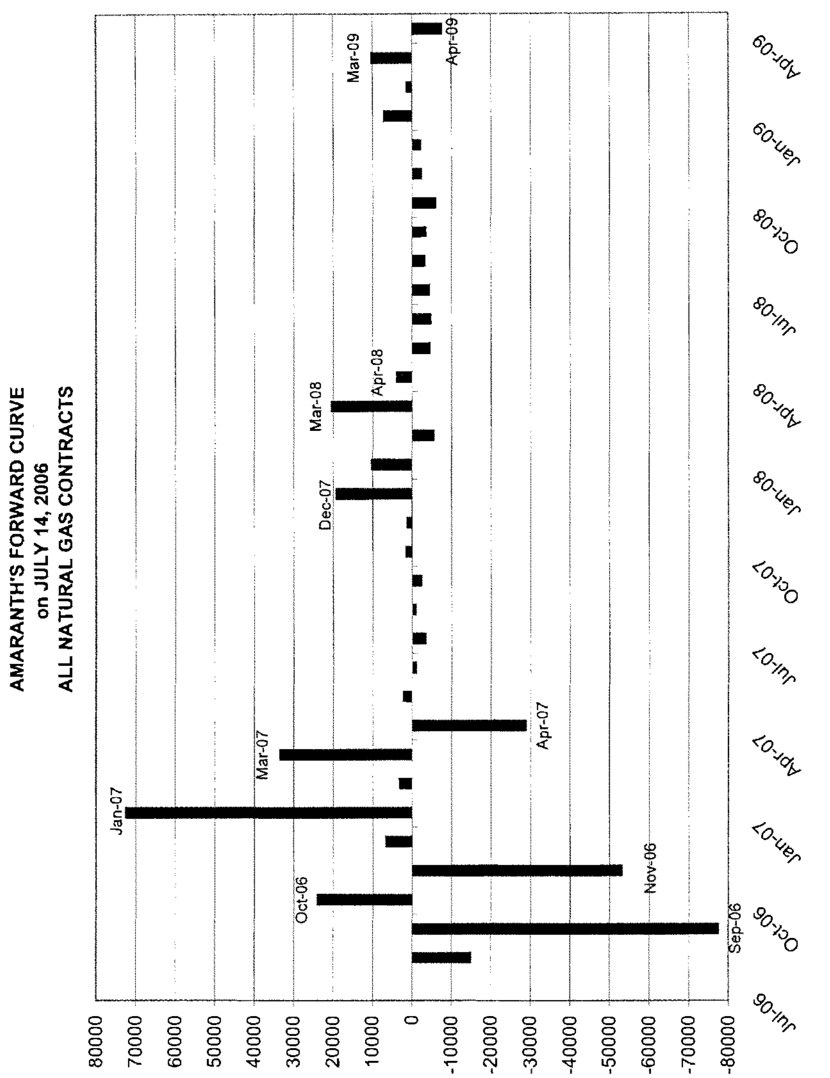
IV-119


AMARANTH'S FORWARD CURVE
on JULY 14, 2006
ALL NATURAL GAS CONTRACTS
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60000
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40000
30000
20000
10000
0
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-30000
-40000
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-80000
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
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Mar-09
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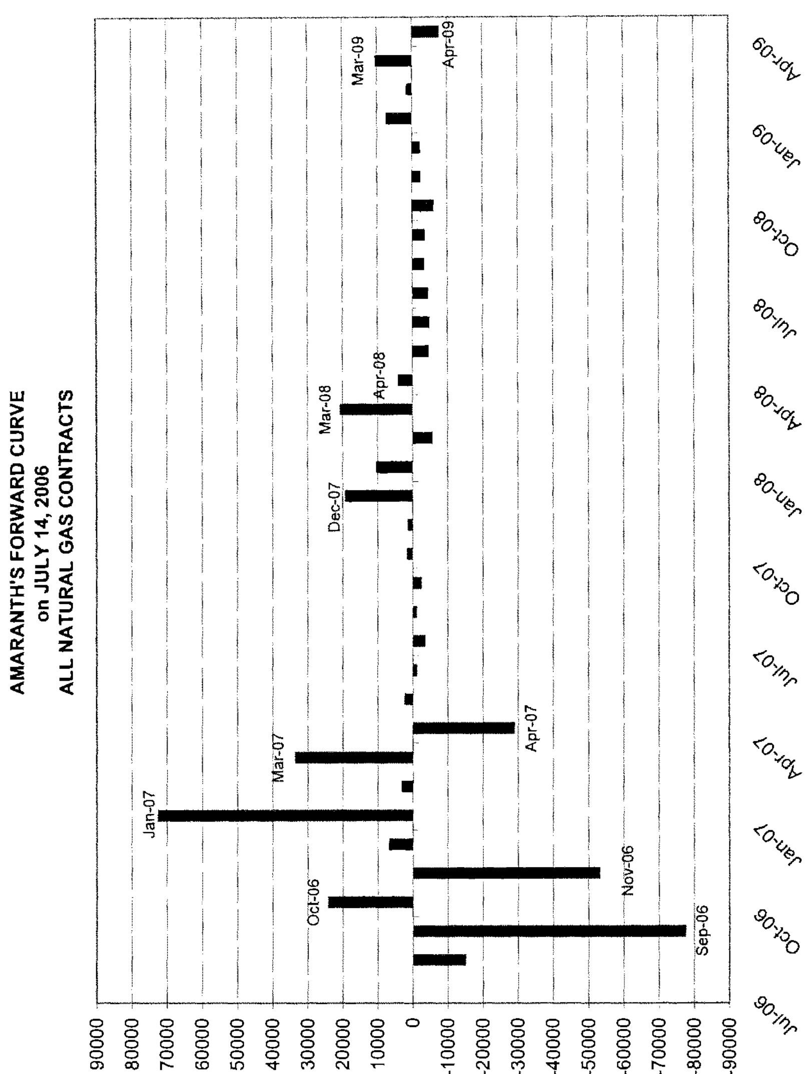
IV-120


AMARANTH'S FORWARD CURVE
on JULY 14, 2006
ALL NATURAL GAS CONTRACTS
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80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
Jul-06
Oct-06
Jan-07
Apr-07
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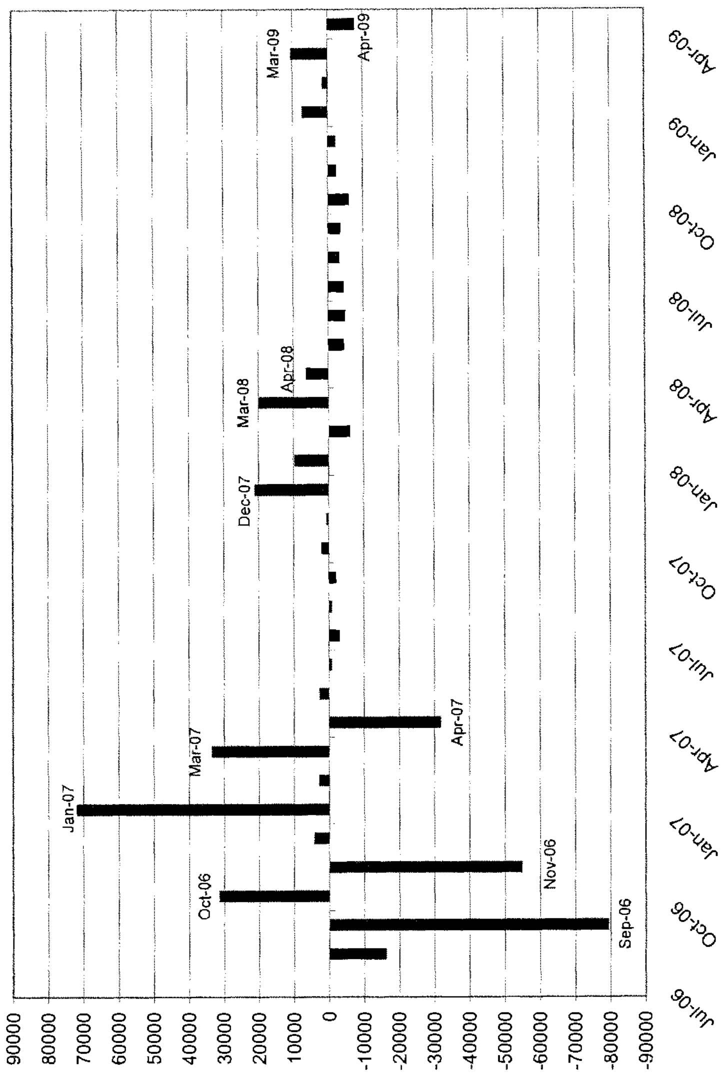
Sep-06
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Apr-08
Mar-09
Apr-09

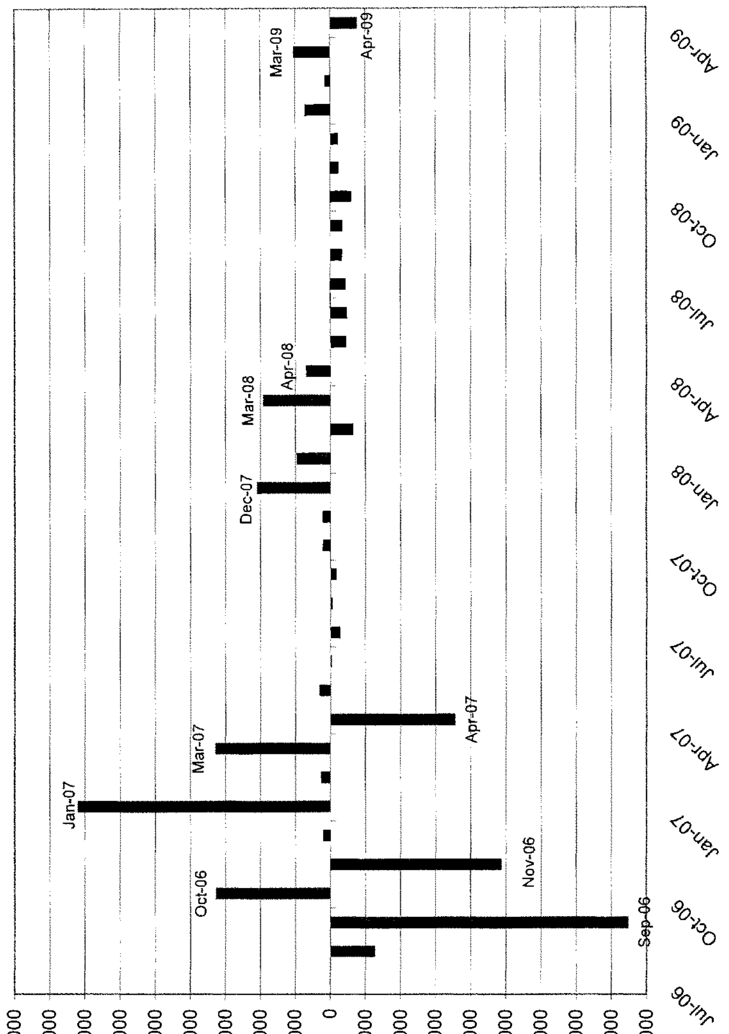
IV-121

AMARANTH'S FORWARD CURVE
on JULY 17, 2006
ALL NATURAL GAS CONTRACTS

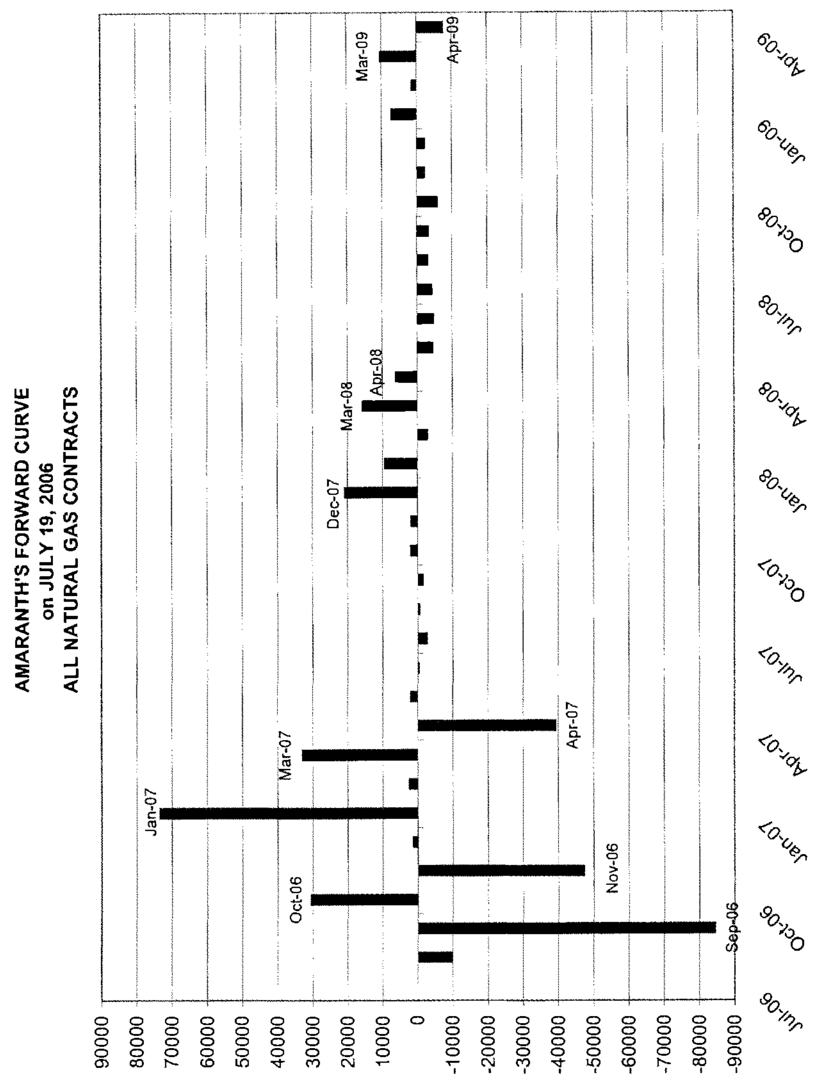


IV-122

AMARANTH'S FORWARD CURVE on JULY 18, 2006 ALL NATURAL GAS CONTRACTS



IV-123


AMARANTH'S FORWARD CURVE
on JULY 19, 2006
ALL NATURAL GAS CONTRACTS
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50000
40000
30000
20000
10000
0
-10000
-20000
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-50000
-60000
-70000
-80000
-90000
Jul-06
Oct-06
Jan-07
Apr-07
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Oct-07
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Jan-09
Apr-09
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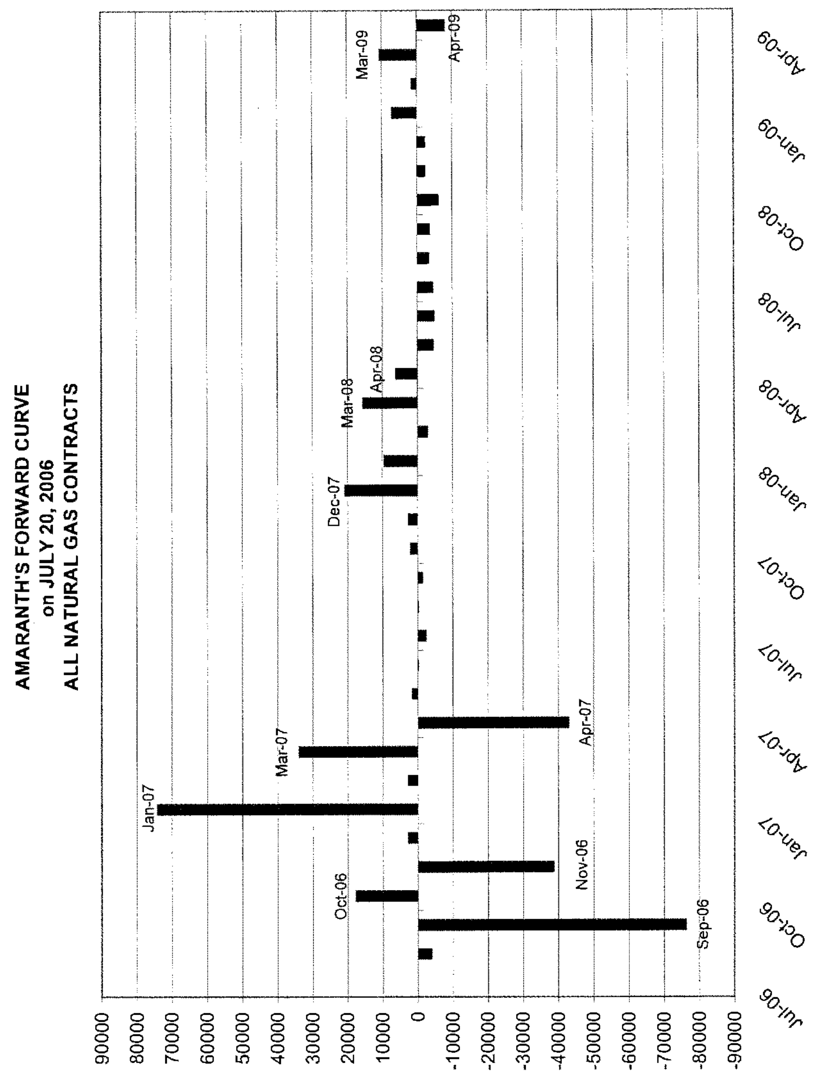
Apr-08
Mar-09
Apr-09

IV-124


AMARANTH'S FORWARD CURVE
on JULY 20, 2006
ALL NATURAL GAS CONTRACTS
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10000
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-50000
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Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
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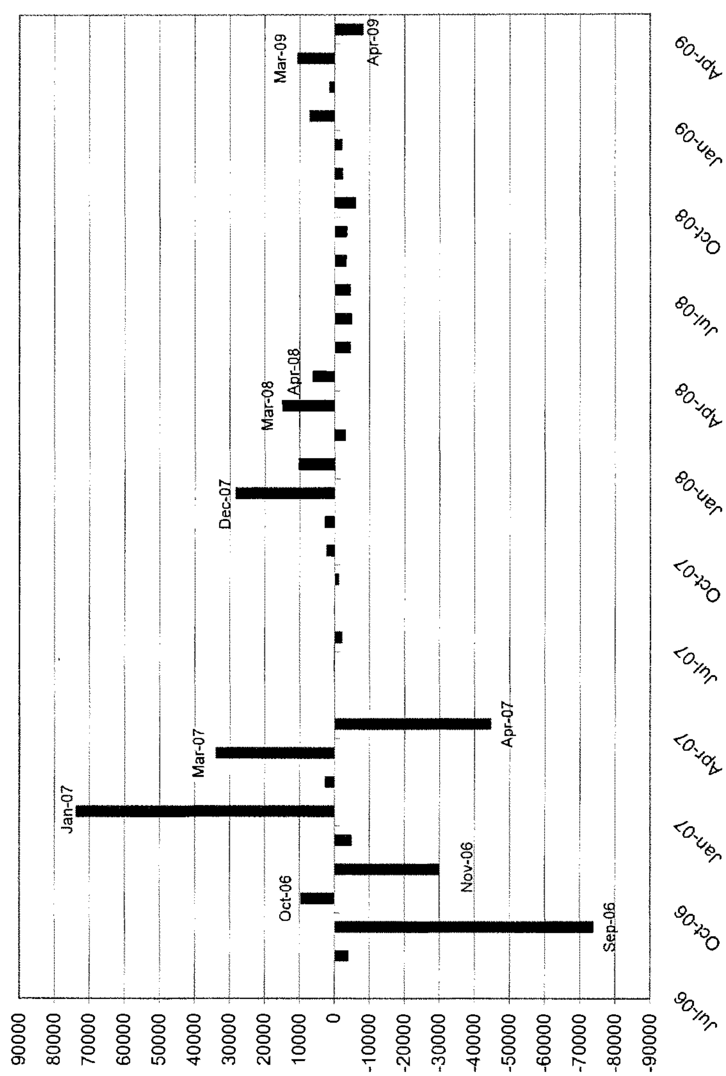
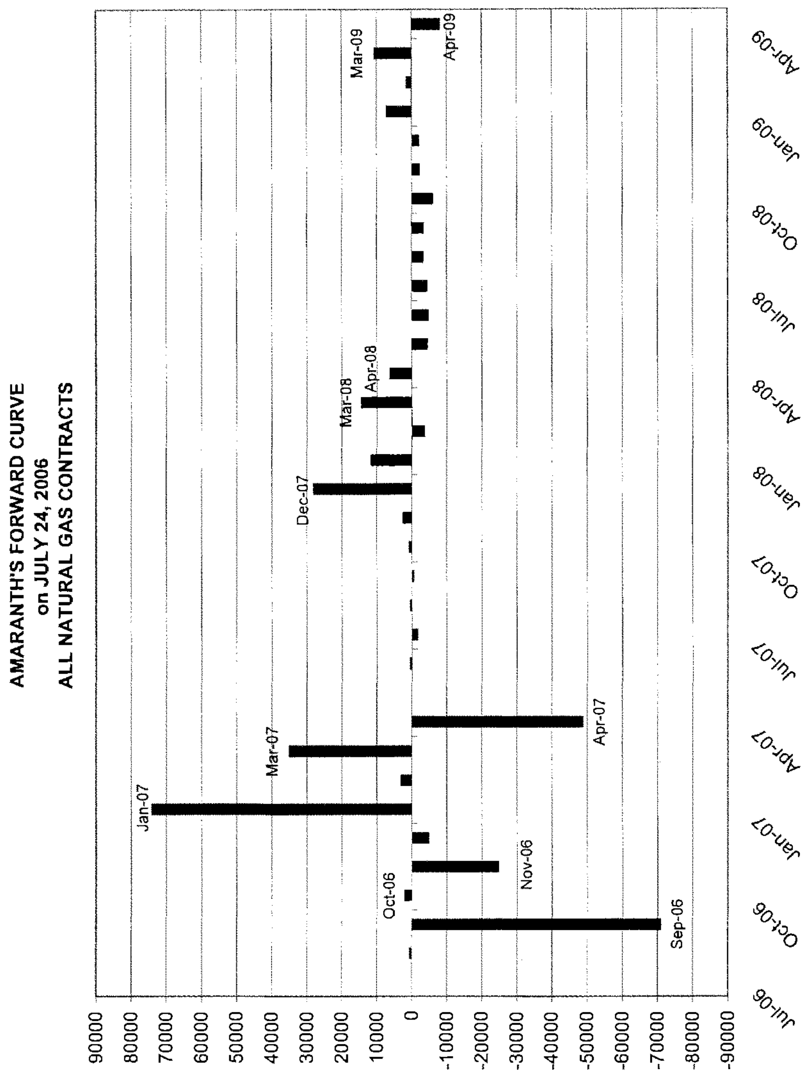
Sep-06
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Apr-08
Mar-09
Apr-09

IV-125

AMARANTH'S FORWARD CURVE
on JULY 21, 2006
ALL NATURAL GAS CONTRACTS



IV-126


AMARANTH'S FORWARD CURVE
on JULY 24, 2006
ALL NATURAL GAS CONTRACTS
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40000
30000
20000
10000
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-50000
-60000
-70000
-80000
-90000
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
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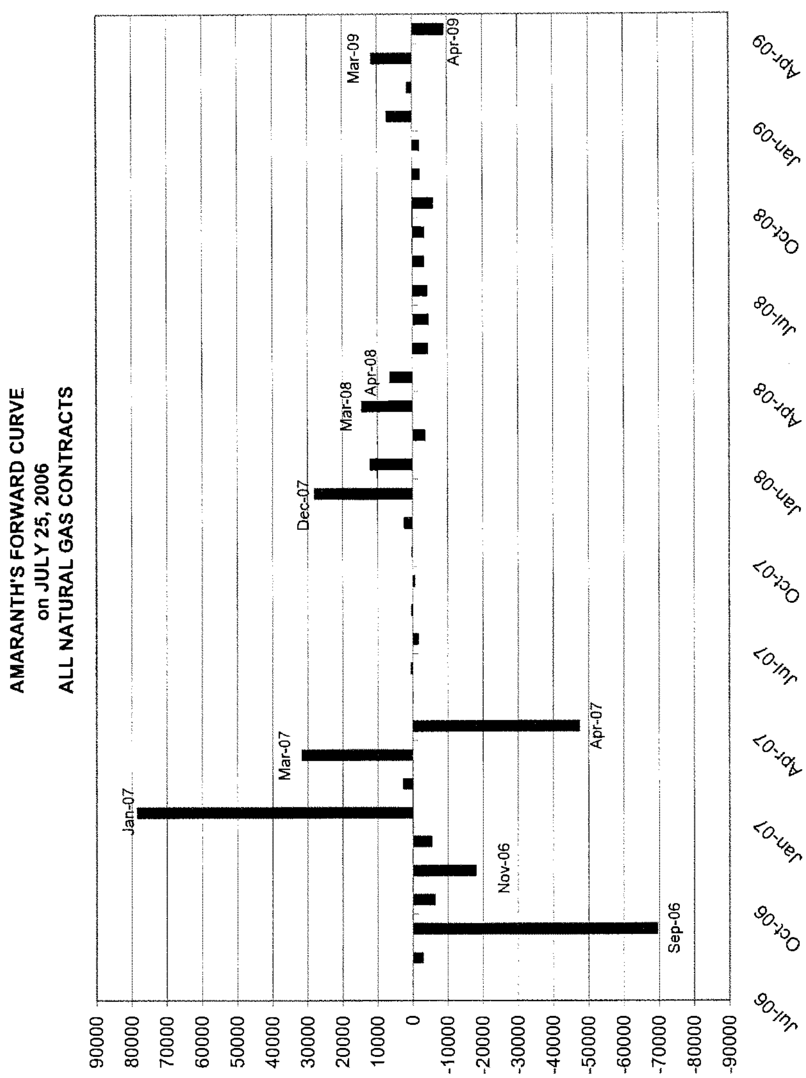
Mar-08
Apr-08
Mar-09
Apr-09

IV-127


AMARANTH'S FORWARD CURVE
on JULY 25, 2006
ALL NATURAL GAS CONTRACTS
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50000
40000
30000
20000
10000
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-40000
-50000
-60000
-70000
-80000
-90000
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
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Mar-08
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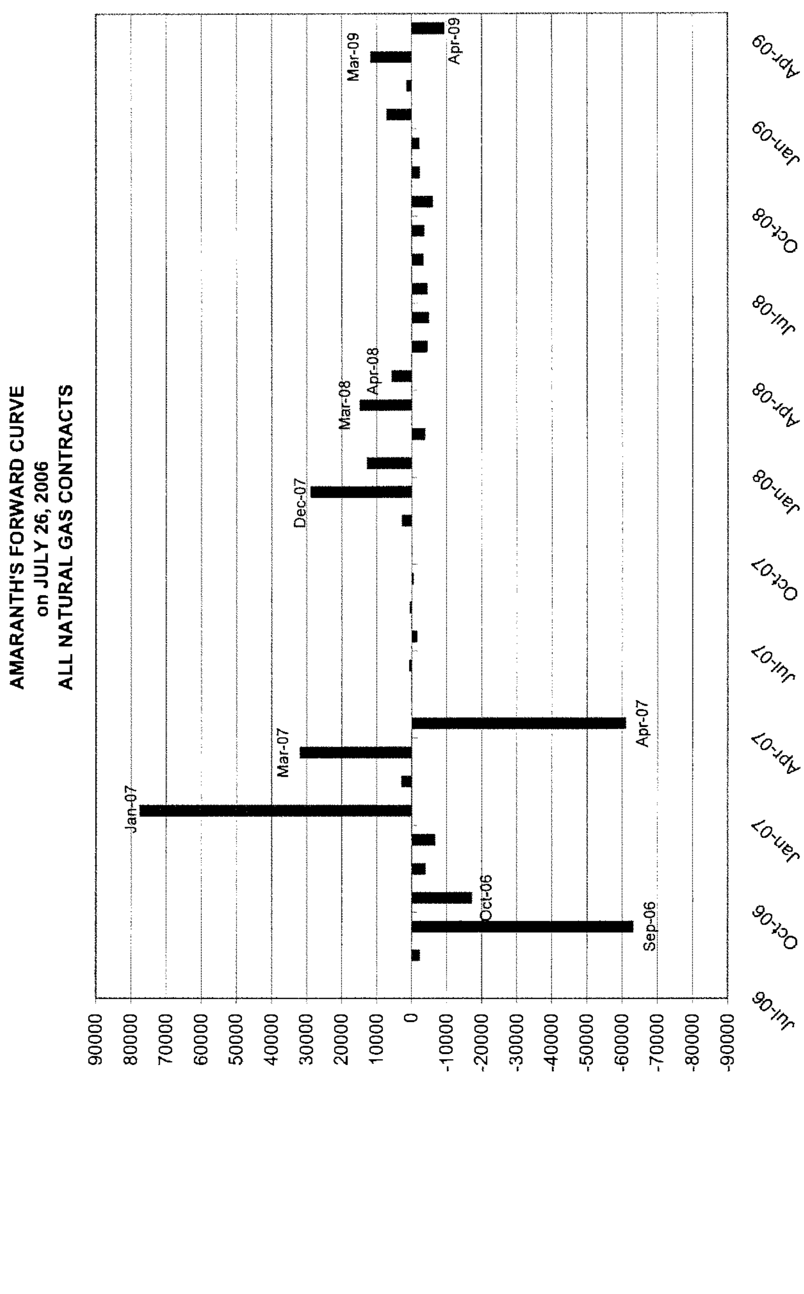
Mar-09
Apr-09

IV-128


AMARANTH'S FORWARD CURVE
on JULY 26, 2006
ALL NATURAL GAS CONTRACTS
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30000
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10000
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-90000
Jul-06
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Jan-07
Apr-07
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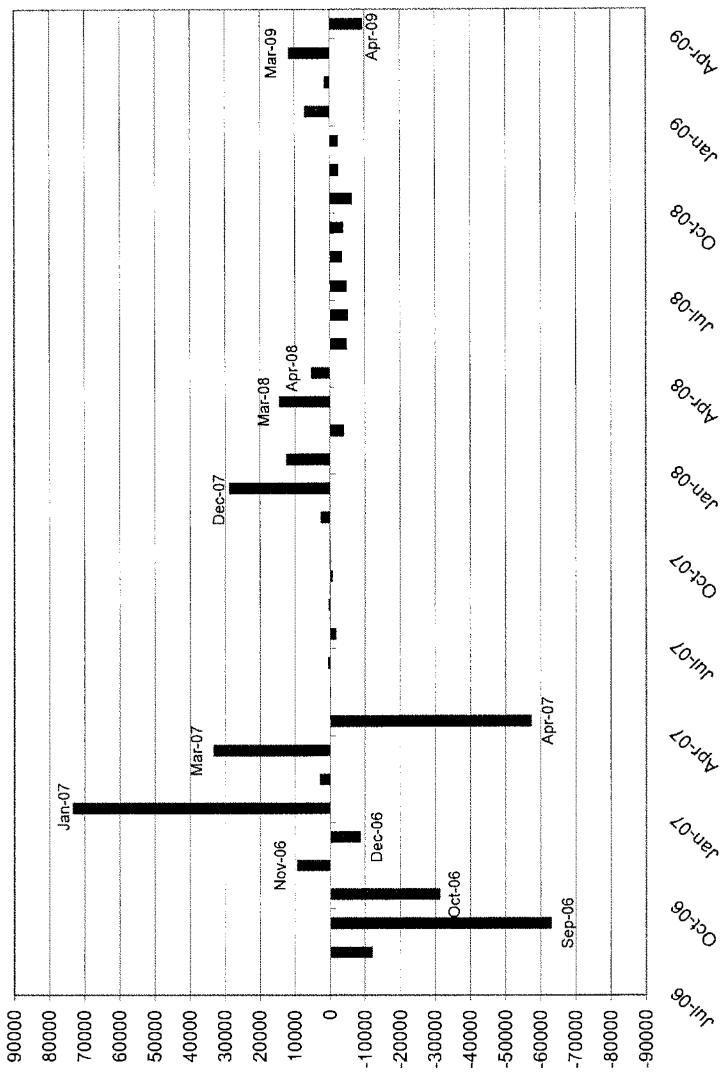
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Sep-06
Oct-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Apr-08
Mar-09
Apr-09

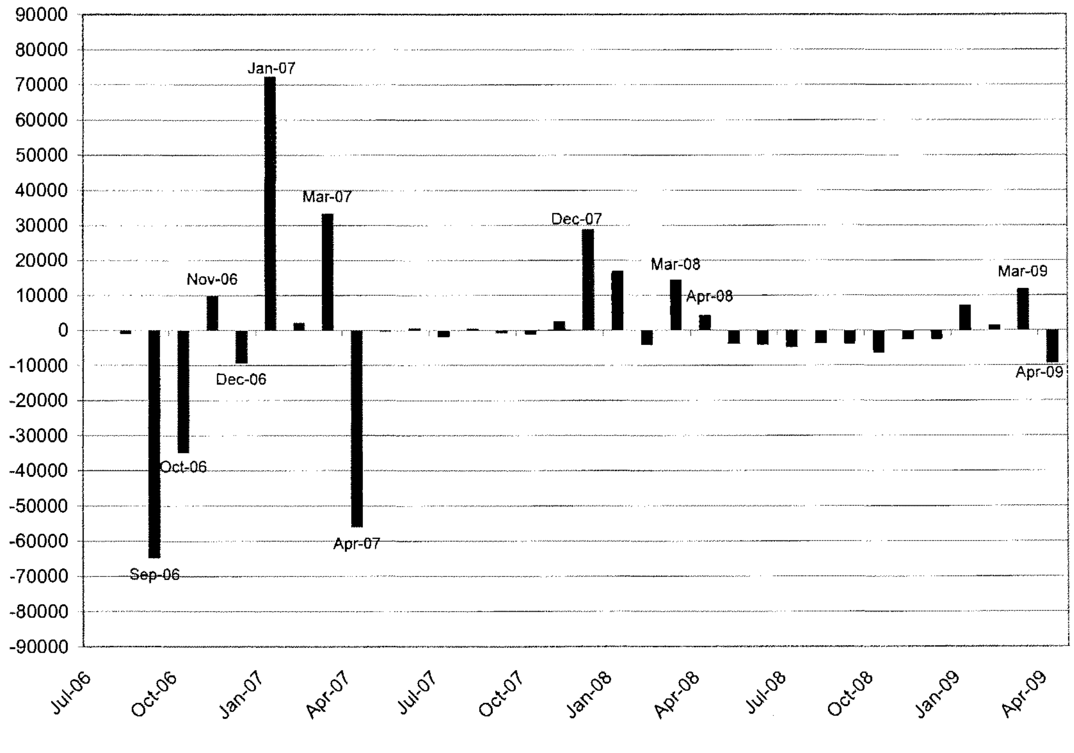
IV-129

AMARANTH'S FORWARD CURVE
on JULY 27, 2006
ALL NATURAL GAS CONTRACTS

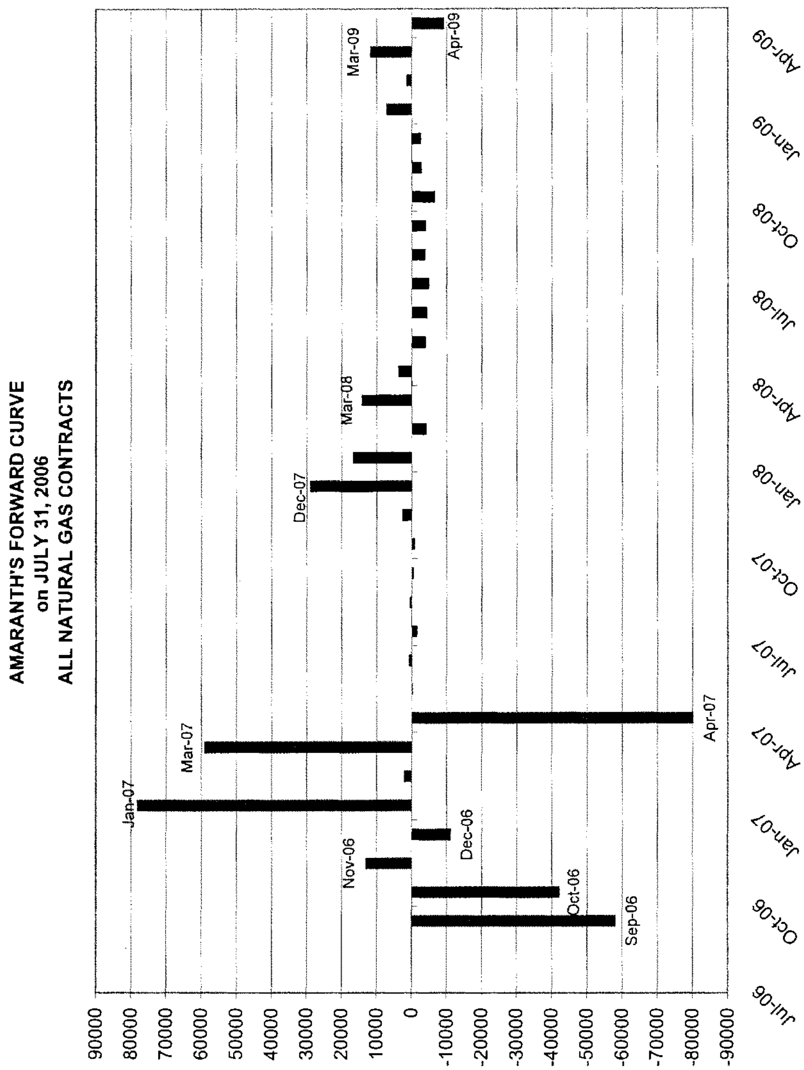


IV-130

AMARANTH'S FORWARD CURVE
on JULY 28, 2006
ALL NATURAL GAS CONTRACTS



IV-131


AMARANTH'S FORWARD CURVE
on JULY 31, 2006
ALL NATURAL GAS CONTRACTS
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70000
60000
50000
40000
30000
20000
10000
0
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-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
Jul-06
Oct-06
Jan-07
Apr-07
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Oct-07
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Apr-08
Jul-08
Oct-08
Jan-09
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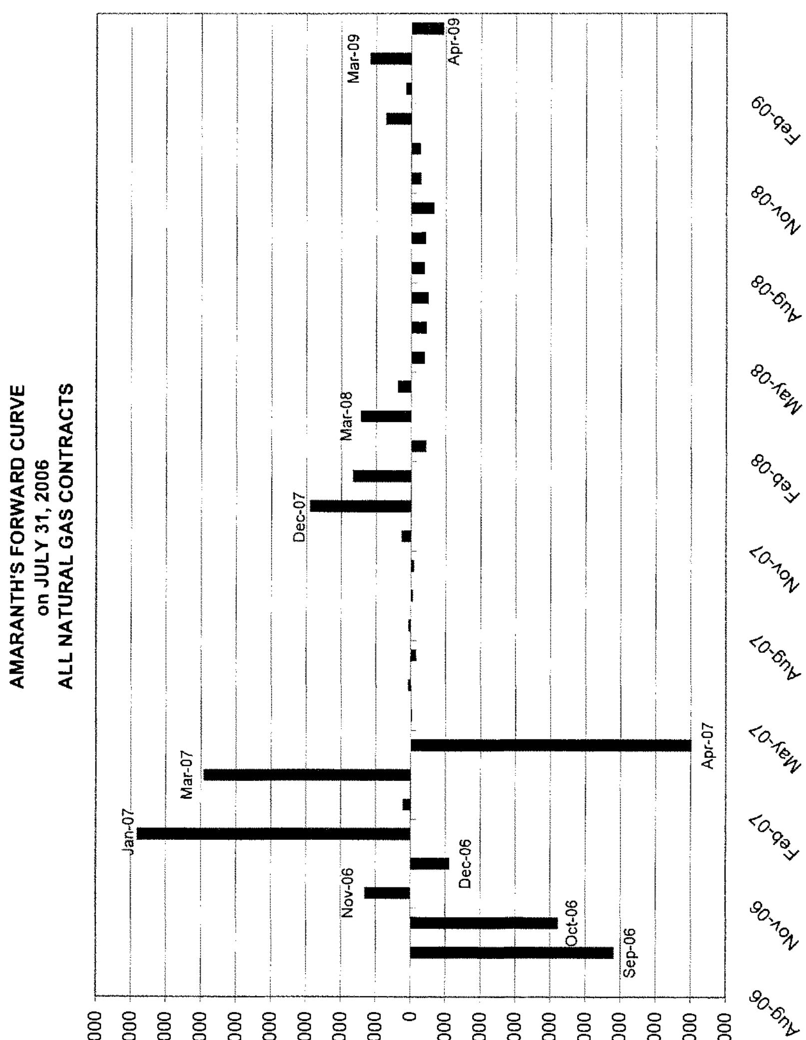
Apr-09

IV-132


AMARANTH'S FORWARD CURVE
on JULY 31, 2006
ALL NATURAL GAS CONTRACTS
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50000
40000
30000
20000
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Feb-07
May-07
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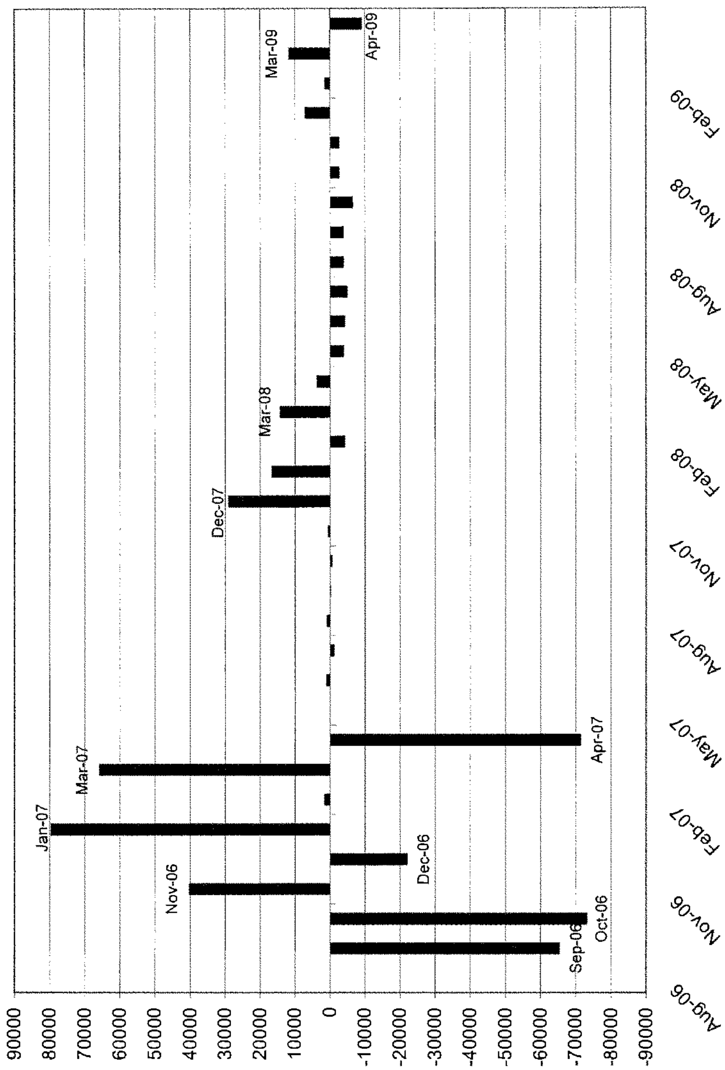
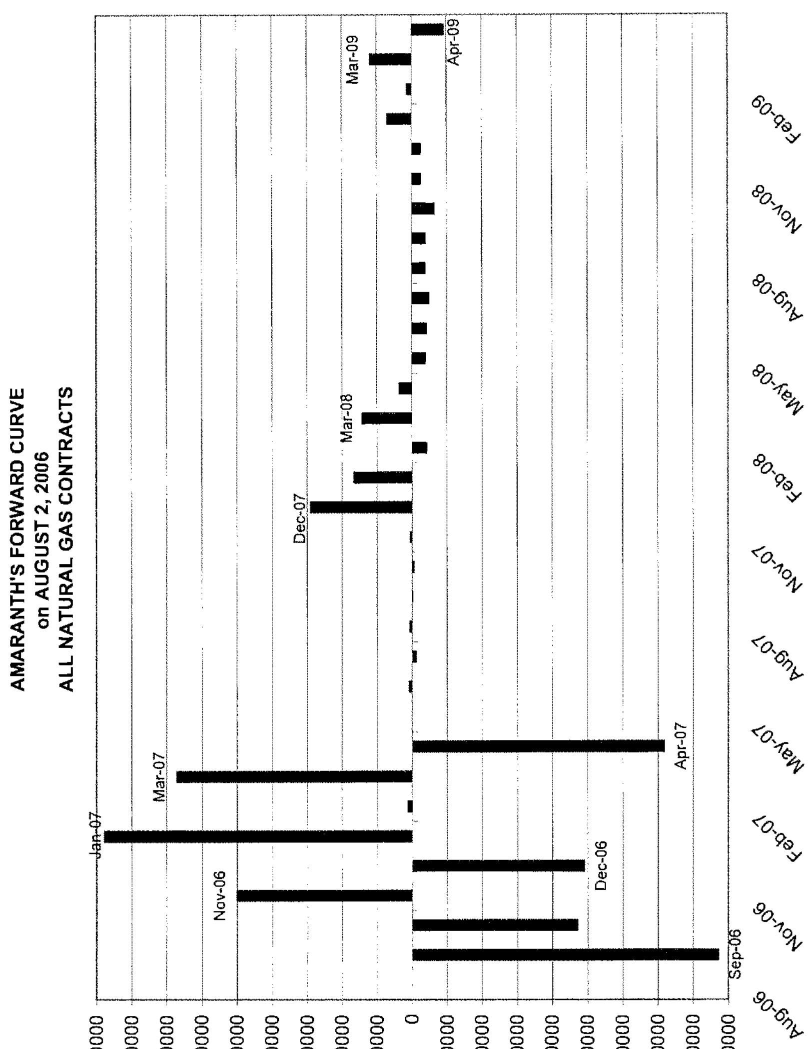
Feb-09
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Mar-09
Apr-09

IV-133

AMARANTH'S FORWARD CURVE
on AUGUST 1, 2006
ALL NATURAL GAS CONTRACTS



IV-134


AMARANTH'S FORWARD CURVE
on AUGUST 2, 2006
ALL NATURAL GAS CONTRACTS
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60000
50000
40000
30000
20000
10000
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-20000
-30000
-40000
-50000
-60000
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Aug-06
Nov-06
Feb-07
May-07
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Nov-07
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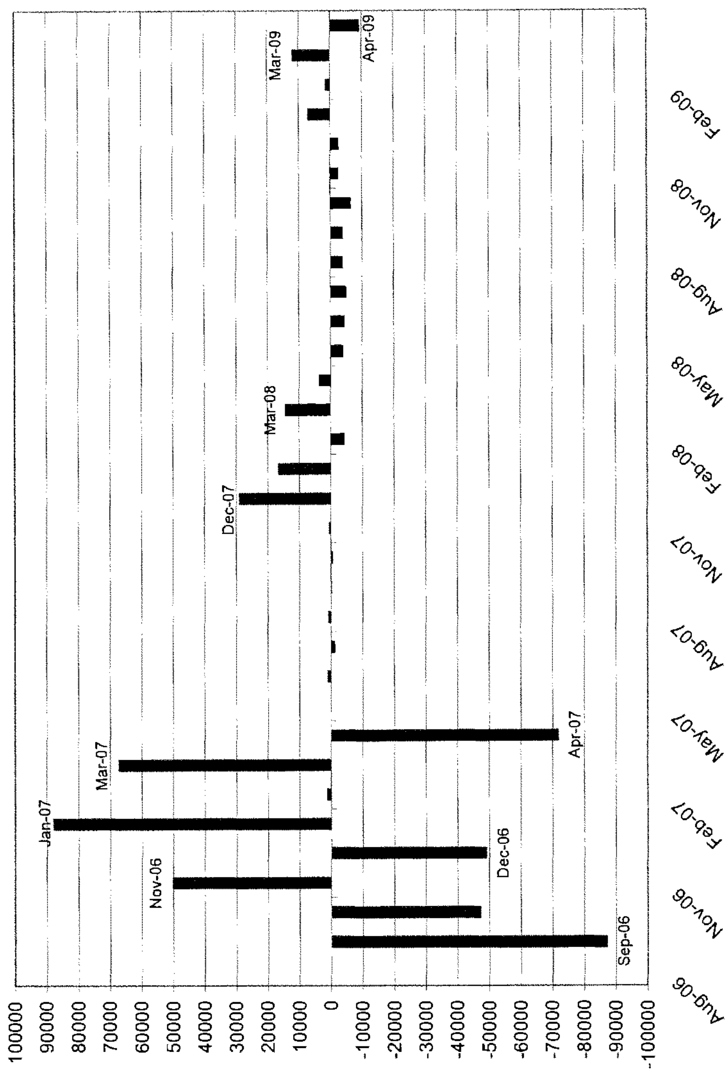
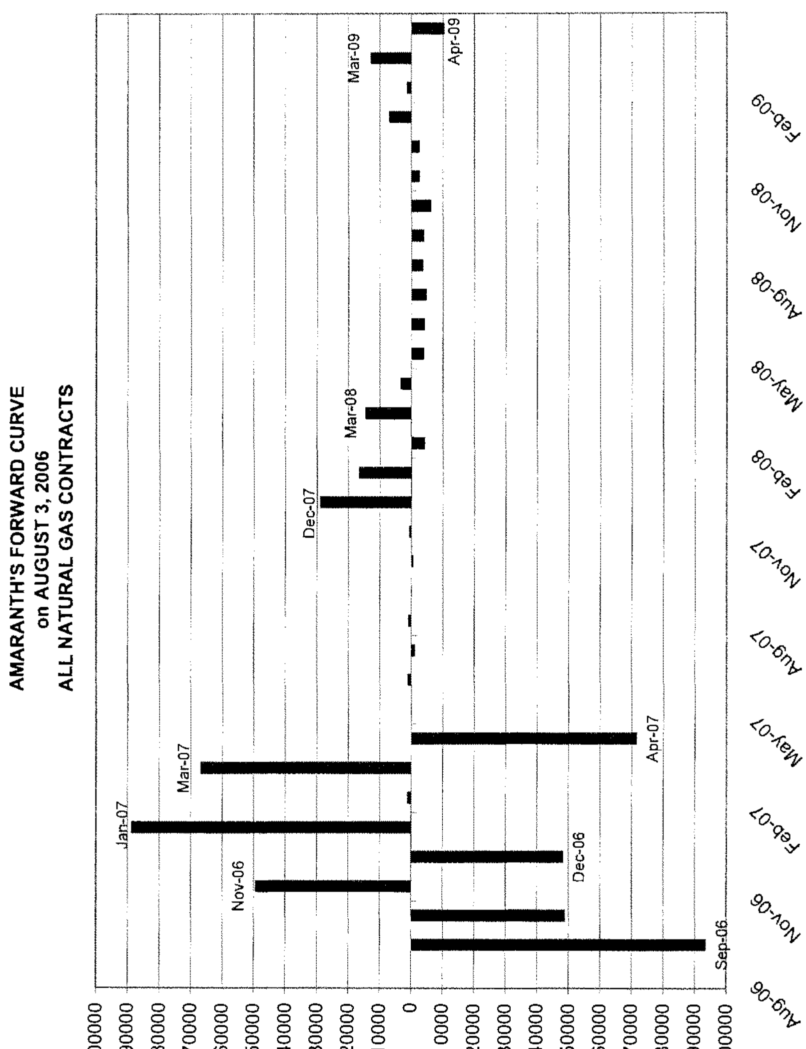
May-08
Aug-08
Nov-08
Feb-09
Sep-06
Nov-06
Dec-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Mar-09
Apr-09

IV-135

AMARANTH'S FORWARD CURVE
on AUGUST 2, 2006
ALL NATURAL GAS CONTRACTS



IV-136


AMARANTH'S FORWARD CURVE
on AUGUST 3, 2006
ALL NATURAL GAS CONTRACTS
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
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-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
-100000
Aug-06
Nov-06
Feb-07
May-07
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Nov-07
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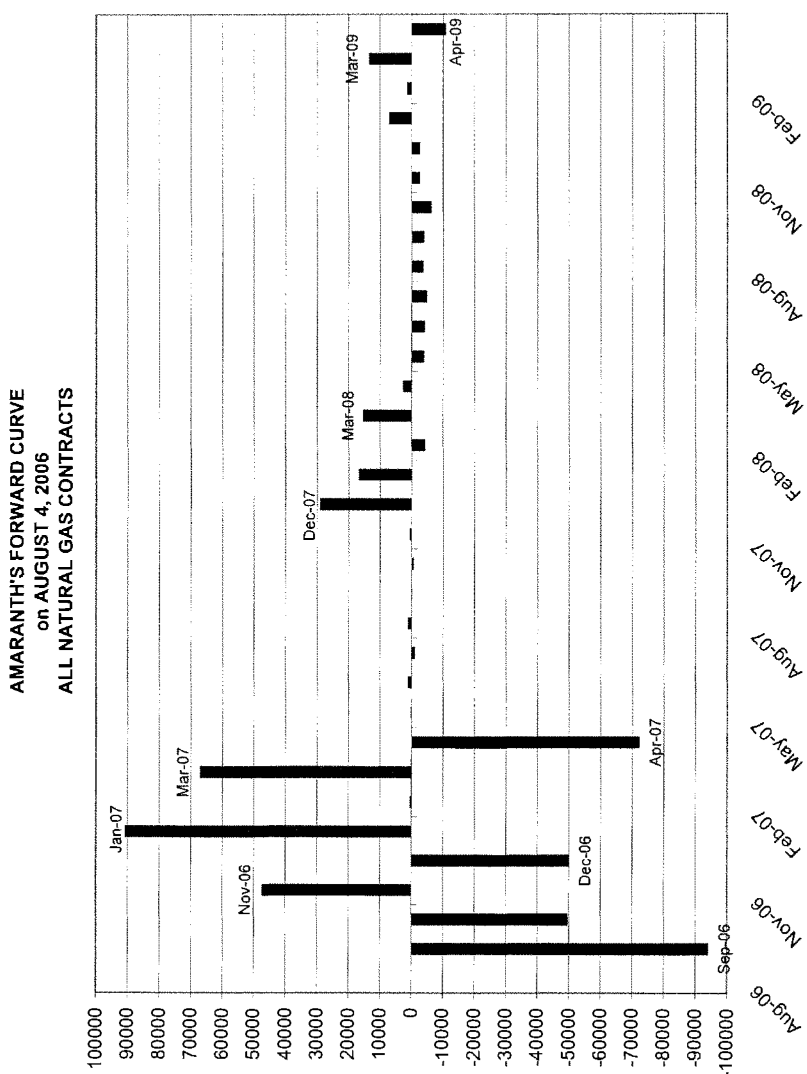
IV-137


AMARANTH'S FORWARD CURVE
on AUGUST 4, 2006
ALL NATURAL GAS CONTRACTS
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60000
50000
40000
30000
20000
10000
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-50000
-60000
-70000
-80000
-90000
-100000
Aug-06
Nov-06
Feb-07
May-07
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Nov-07
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May-08
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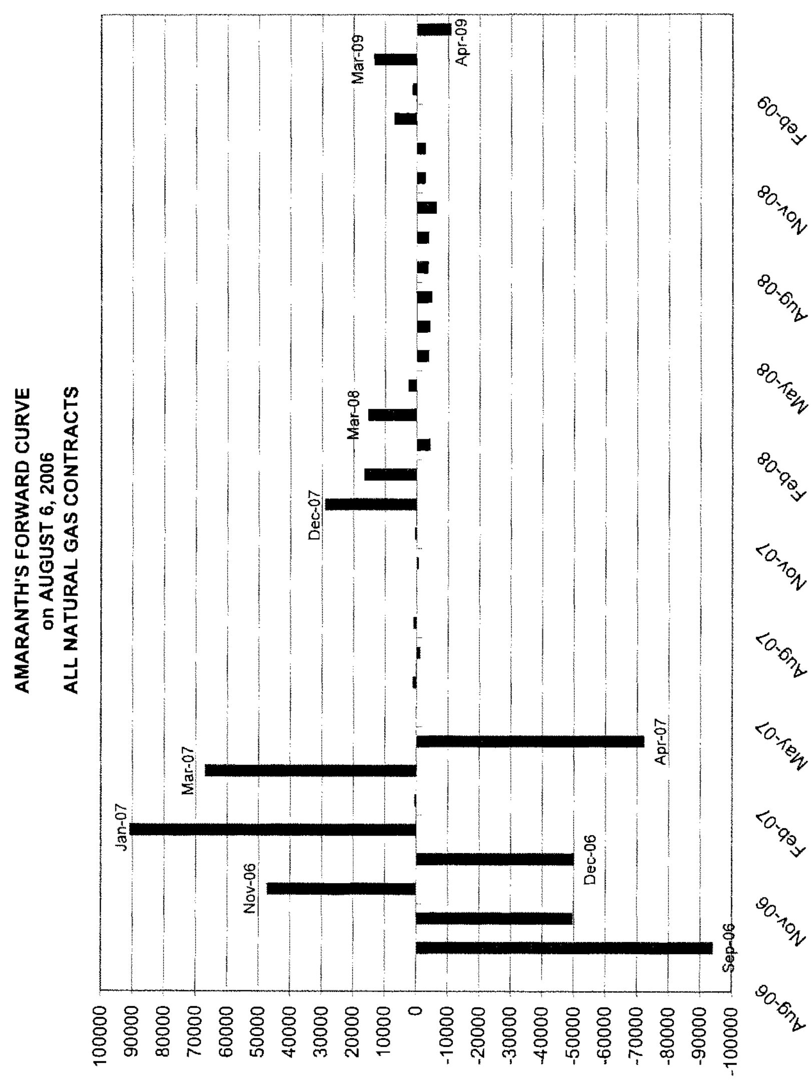
Apr-09

IV-138


AMARANTH'S FORWARD CURVE
on AUGUST 6, 2006
ALL NATURAL GAS CONTRACTS
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60000
50000
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20000
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-90000
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Aug-06
Nov-06
Feb-07
May-07
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Nov-07
Feb-08
May-08
Aug-08
Nov-08
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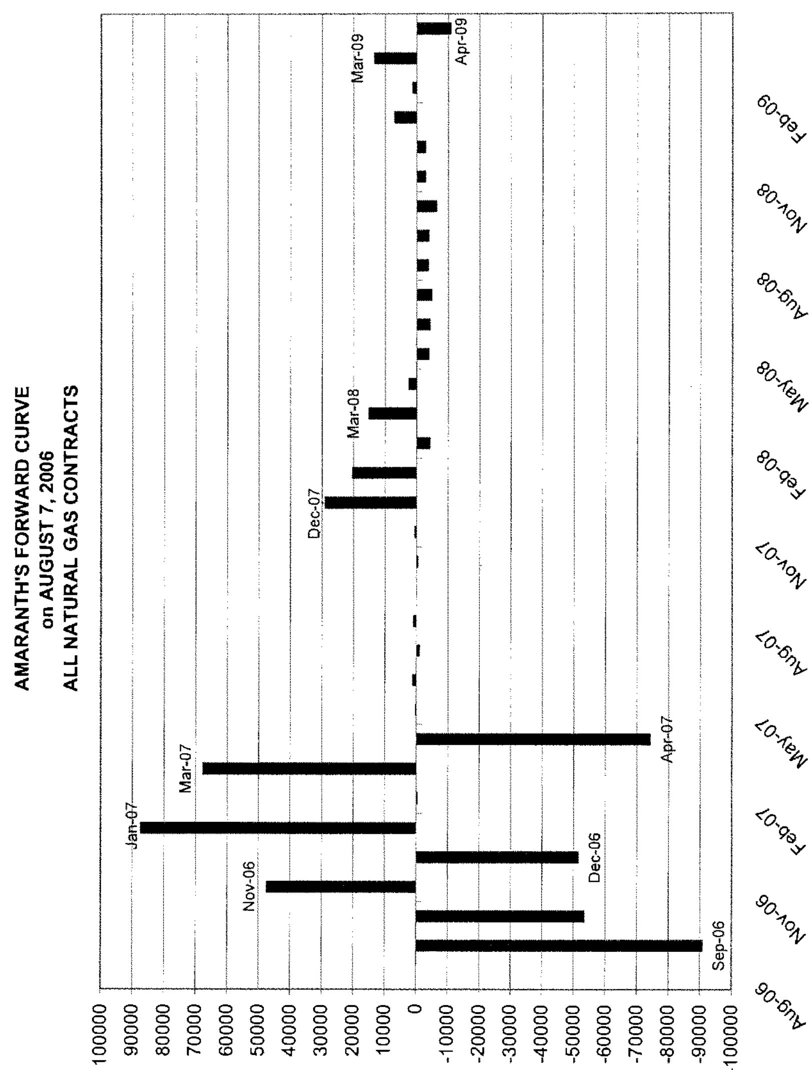
IV-139


AMARANTH'S FORWARD CURVE
on AUGUST 7, 2006
ALL NATURAL GAS CONTRACTS
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20000
10000
0
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-30000
-40000
-50000
-60000
-70000
-80000
-90000
-100000
Aug-06
Nov-06
Feb-07
May-07
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Nov-07
Feb-08
May-08
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Sep-06
Nov-06
Dec-06
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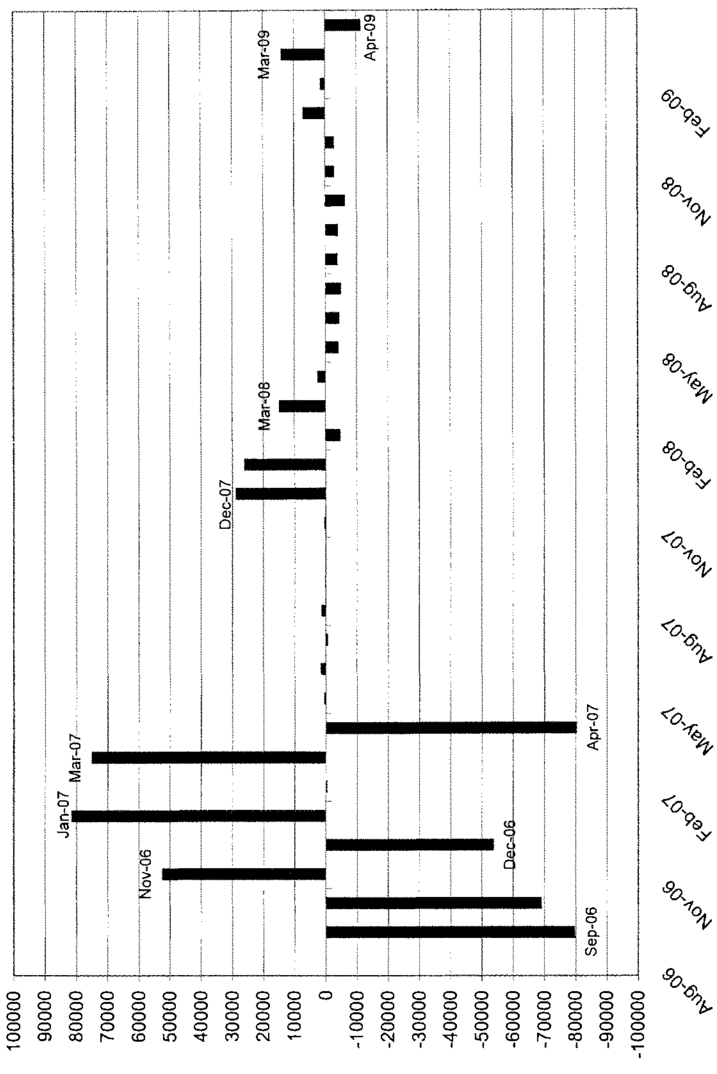
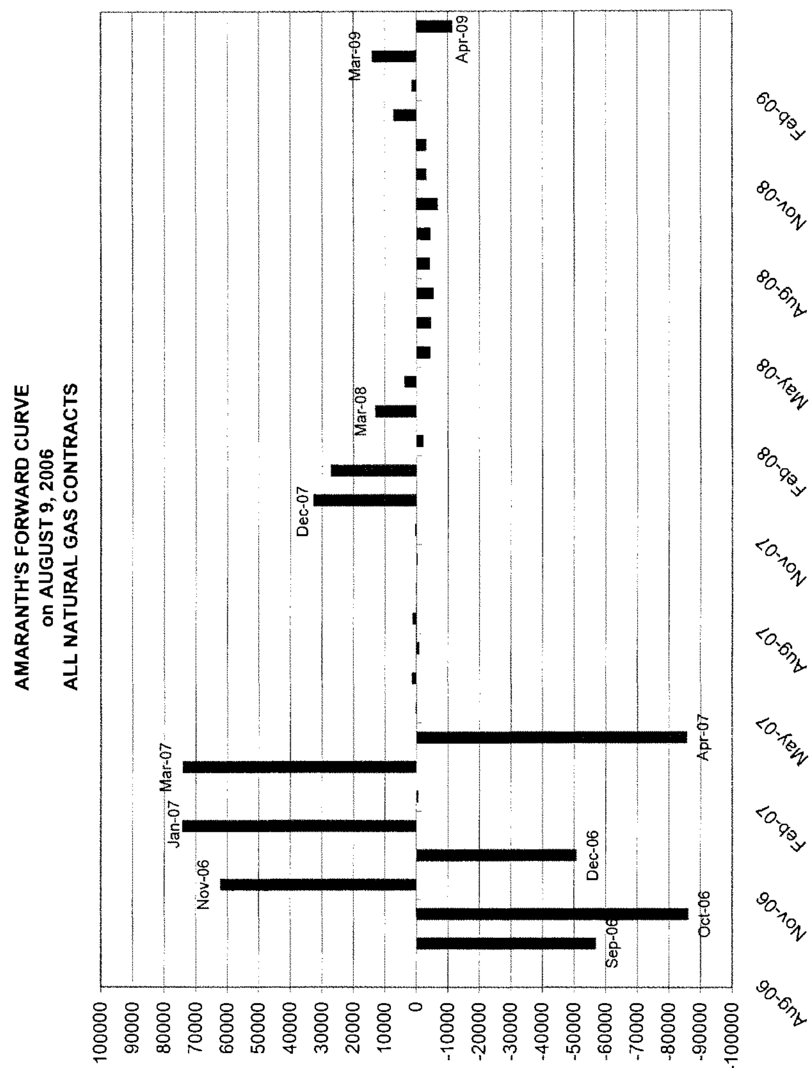
Apr-09

IV-140

AMARANTH'S FORWARD CURVE
on AUGUST 8, 2006
ALL NATURAL GAS CONTRACTS



IV-141


AMARANTH'S FORWARD CURVE
on AUGUST 9, 2006
ALL NATURAL GAS CONTRACTS
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40000
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20000
10000
0
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-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
-100000
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Nov-06
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May-07
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Nov-07
Feb-08
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Jan-07
Mar-07
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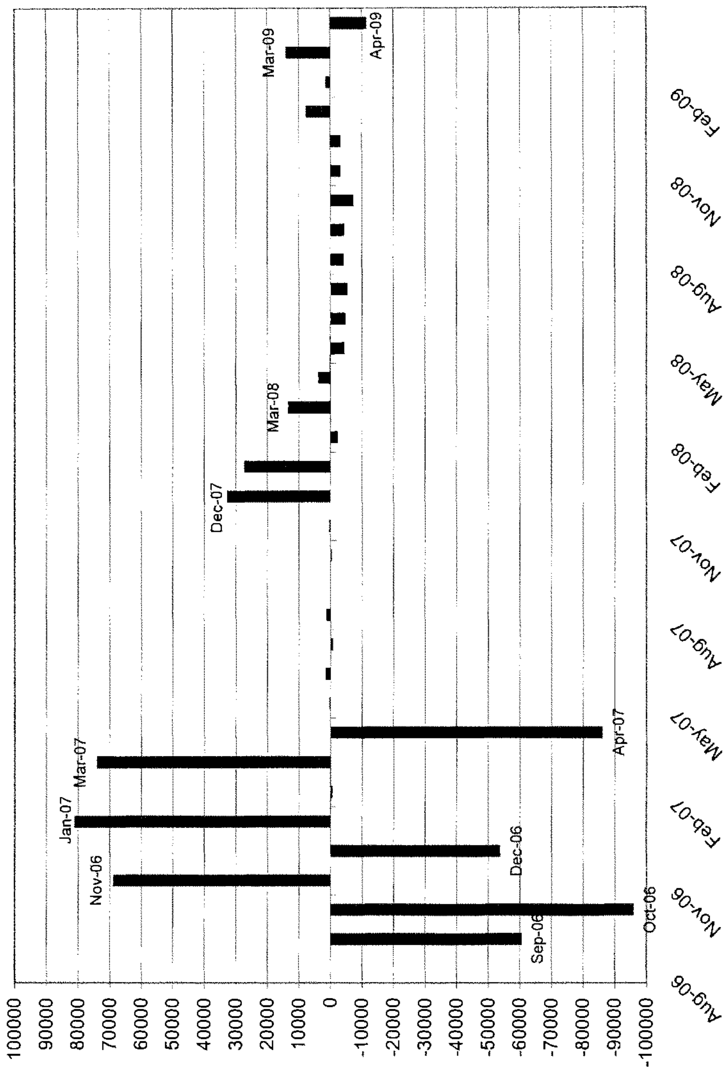
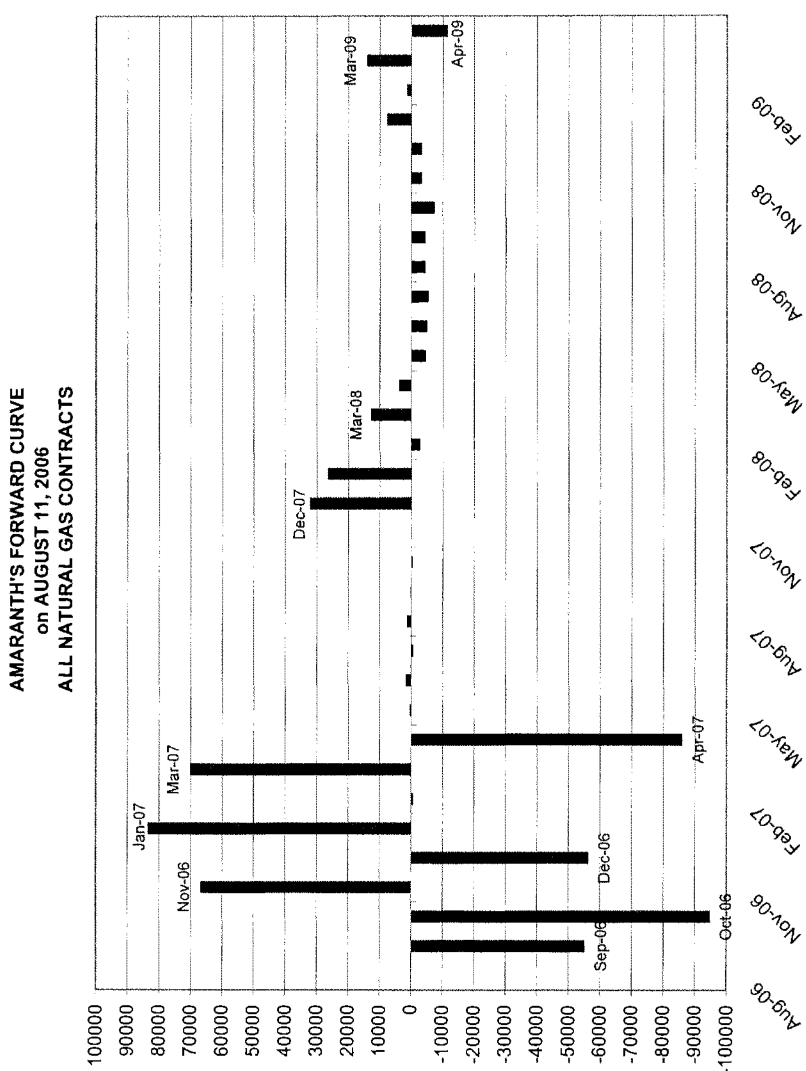
Apr-09

IV-142

AMARANTH'S FORWARD CURVE
on AUGUST 10, 2006
ALL NATURAL GAS CONTRACTS



IV-143


AMARANTH'S FORWARD CURVE
on AUGUST 11, 2006
ALL NATURAL GAS CONTRACTS
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10000
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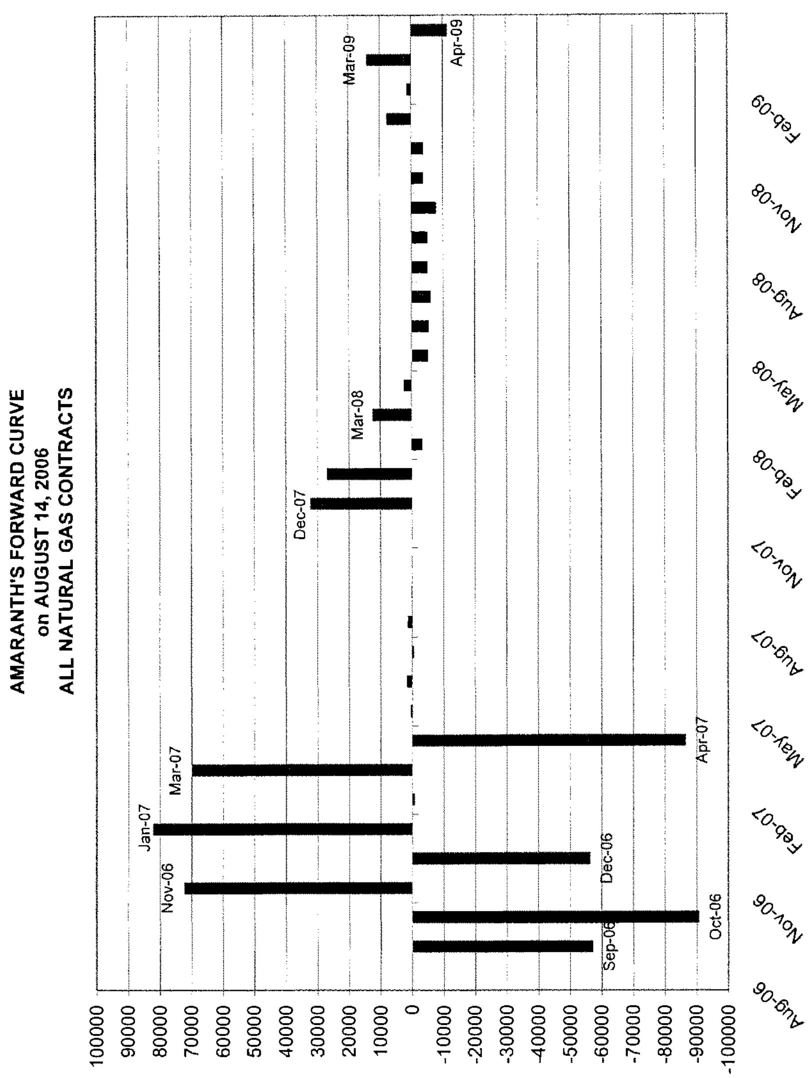
IV-144


AMARANTH'S FORWARD CURVE
on AUGUST 14, 2006
ALL NATURAL GAS CONTRACTS
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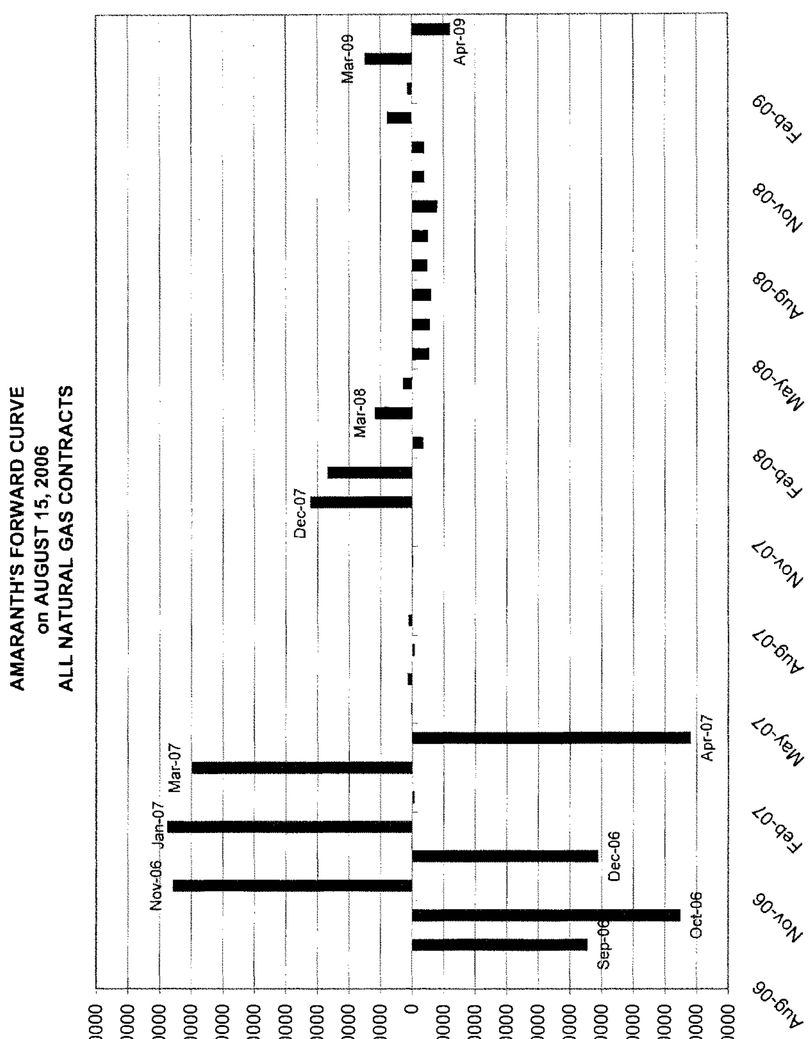
IV-145


AMARANTH'S FORWARD CURVE
on AUGUST 15, 2006
ALL NATURAL GAS CONTRACTS
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20000
10000
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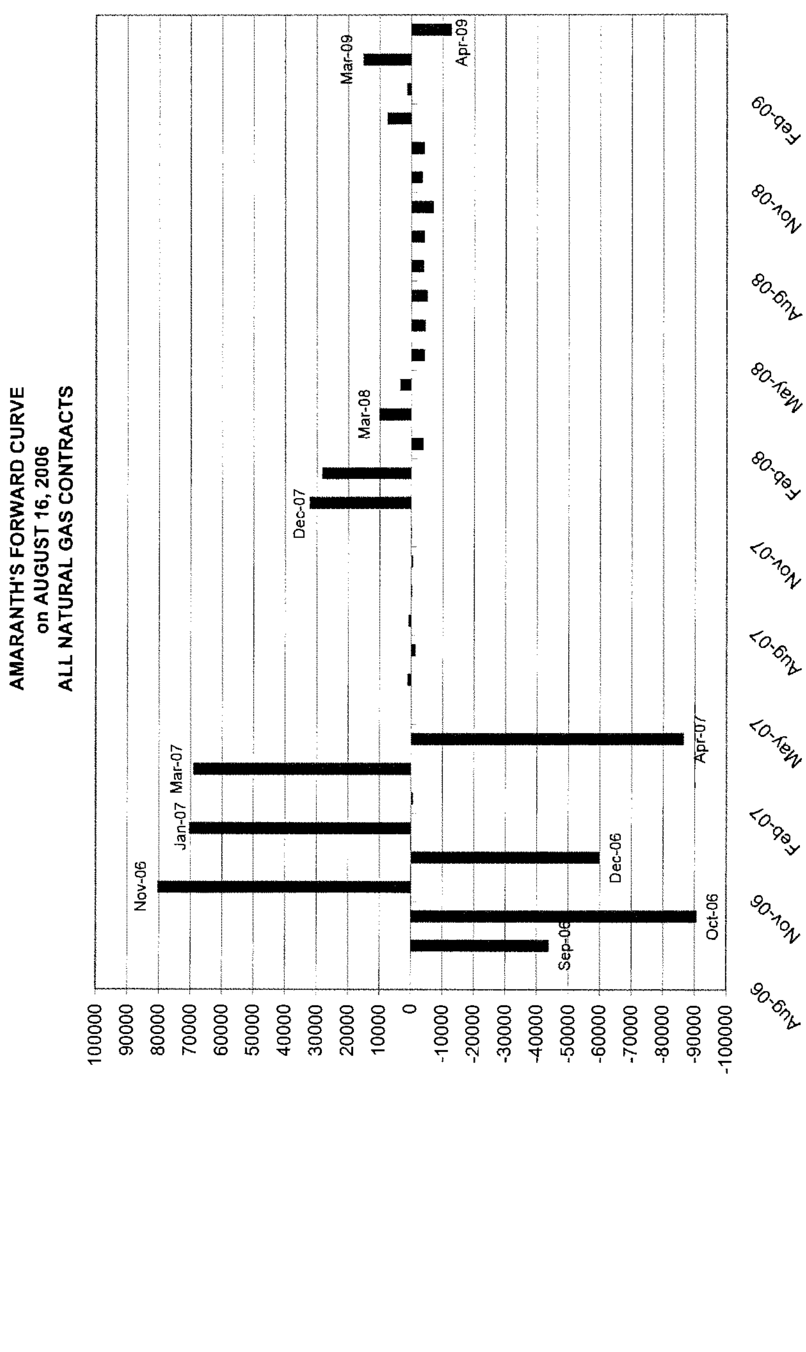
IV-146


AMARANTH'S FORWARD CURVE
on AUGUST 16, 2006
ALL NATURAL GAS CONTRACTS
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20000
10000
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-50000
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-70000
-80000
-90000
-100000
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May-07
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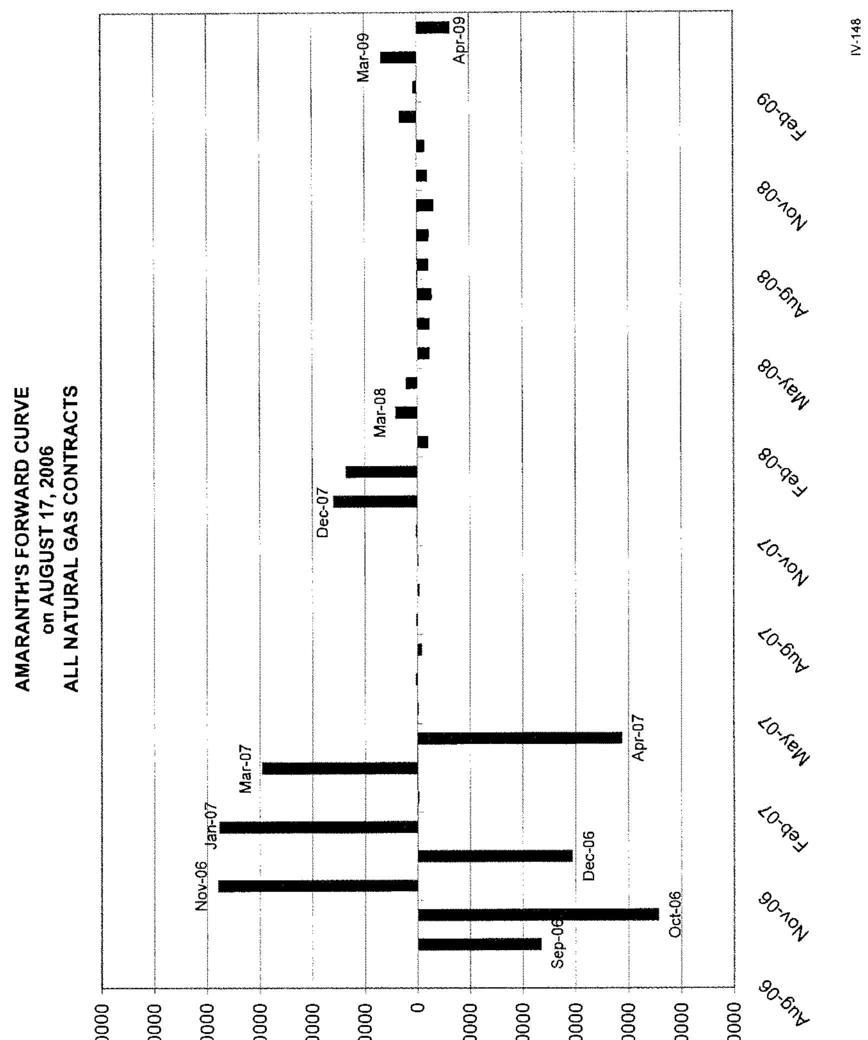
IV-147


AMARANTH'S FORWARD CURVE
on AUGUST 17, 2006
ALL NATURAL GAS CONTRACTS
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Nov-08
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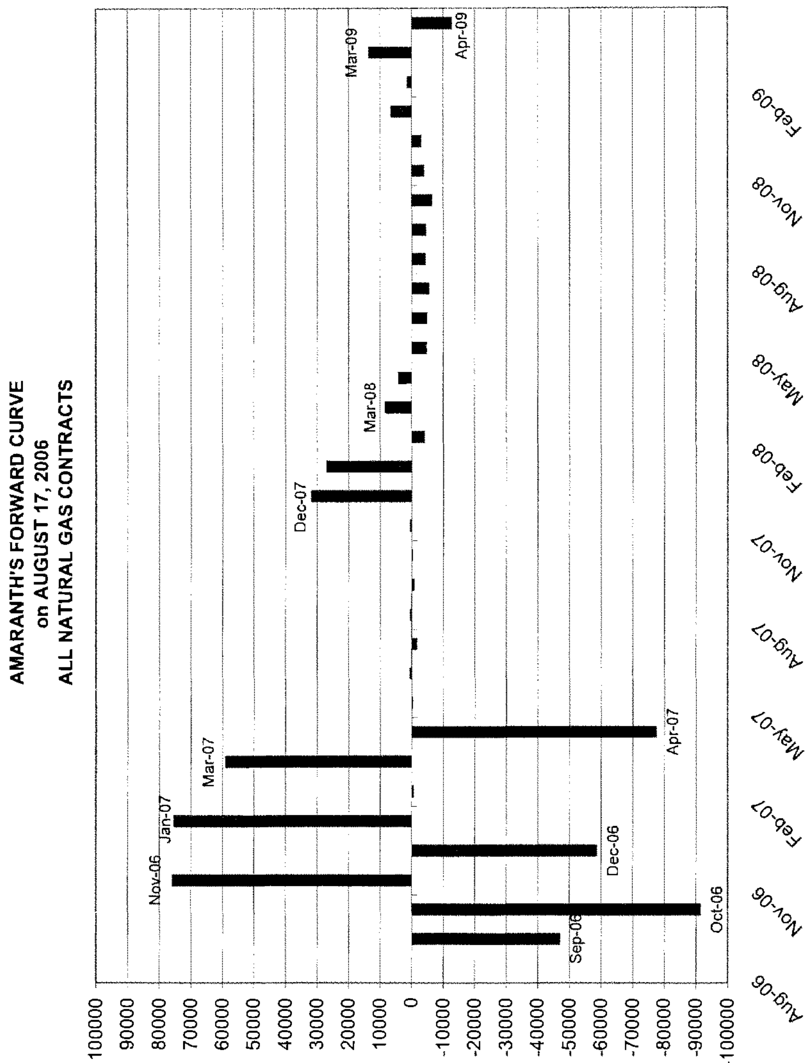
IV-148


AMARANTH'S FORWARD CURVE
on AUGUST 17, 2006
ALL NATURAL GAS CONTRACTS
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50000
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20000
10000
0
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-50000
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-70000
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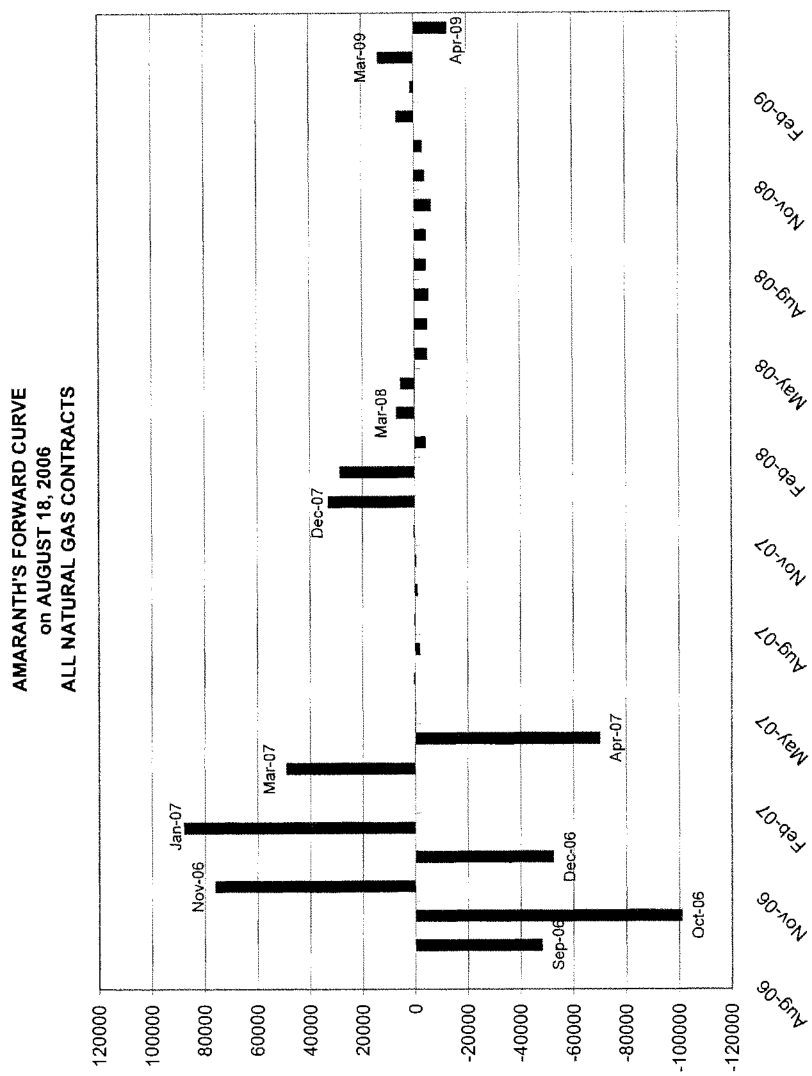
IV-149


AMARANTH'S FORWARD CURVE
on AUGUST 18, 2006
ALL NATURAL GAS CONTRACTS
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60000
40000
20000
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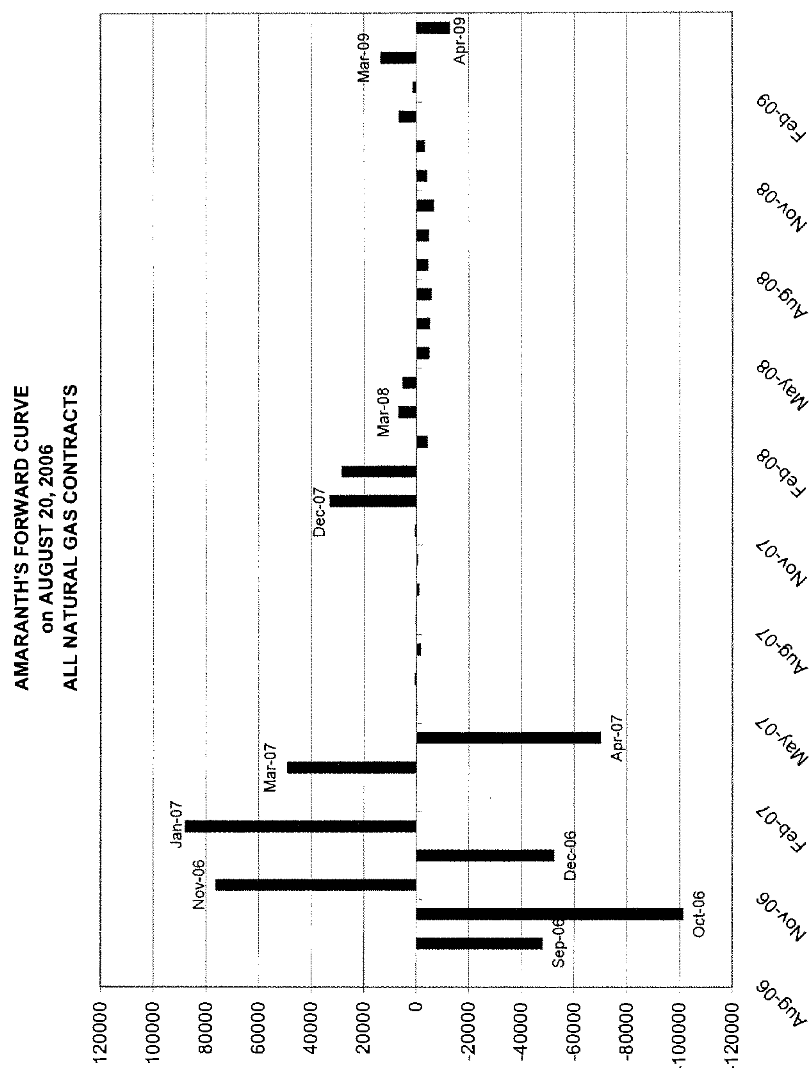
IV-150


AMARANTH'S FORWARD CURVE
on AUGUST 20, 2006
ALL NATURAL GAS CONTRACTS
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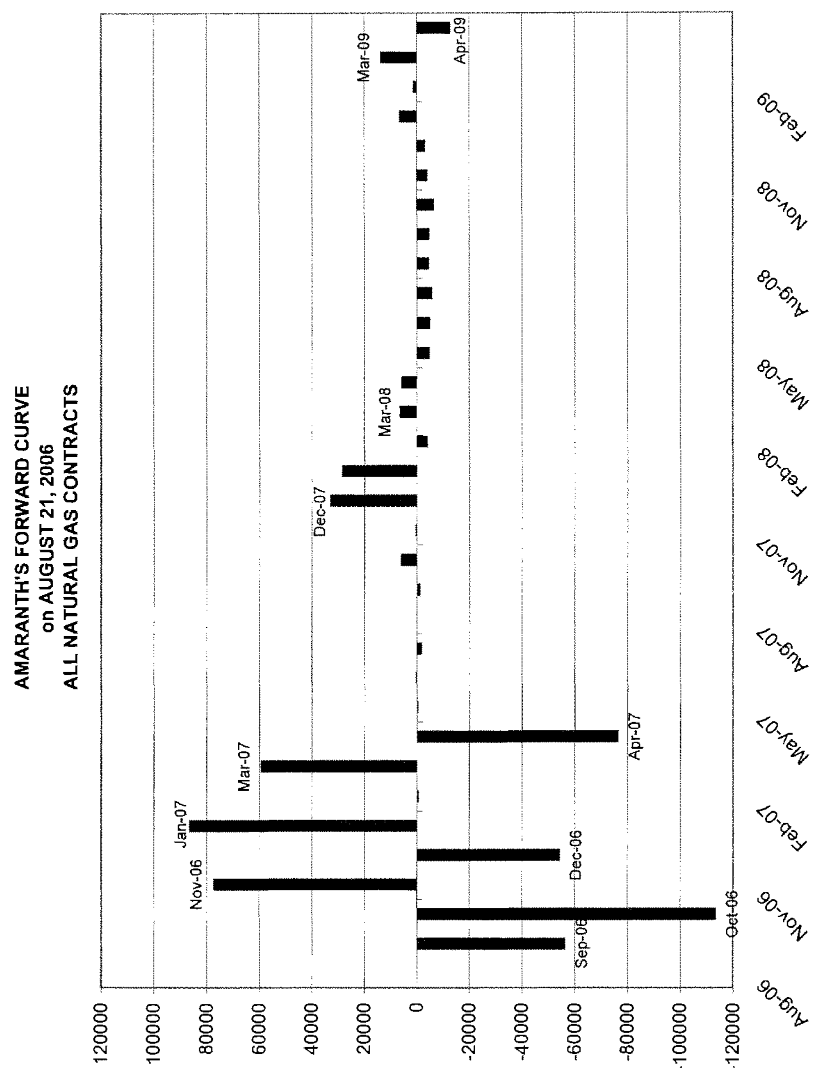
IV-151


AMARANTH'S FORWARD CURVE
on AUGUST 21, 2006
ALL NATURAL GAS CONTRACTS
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40000
20000
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May-08
Aug-08
Nov-08
Feb-09
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Mar-09
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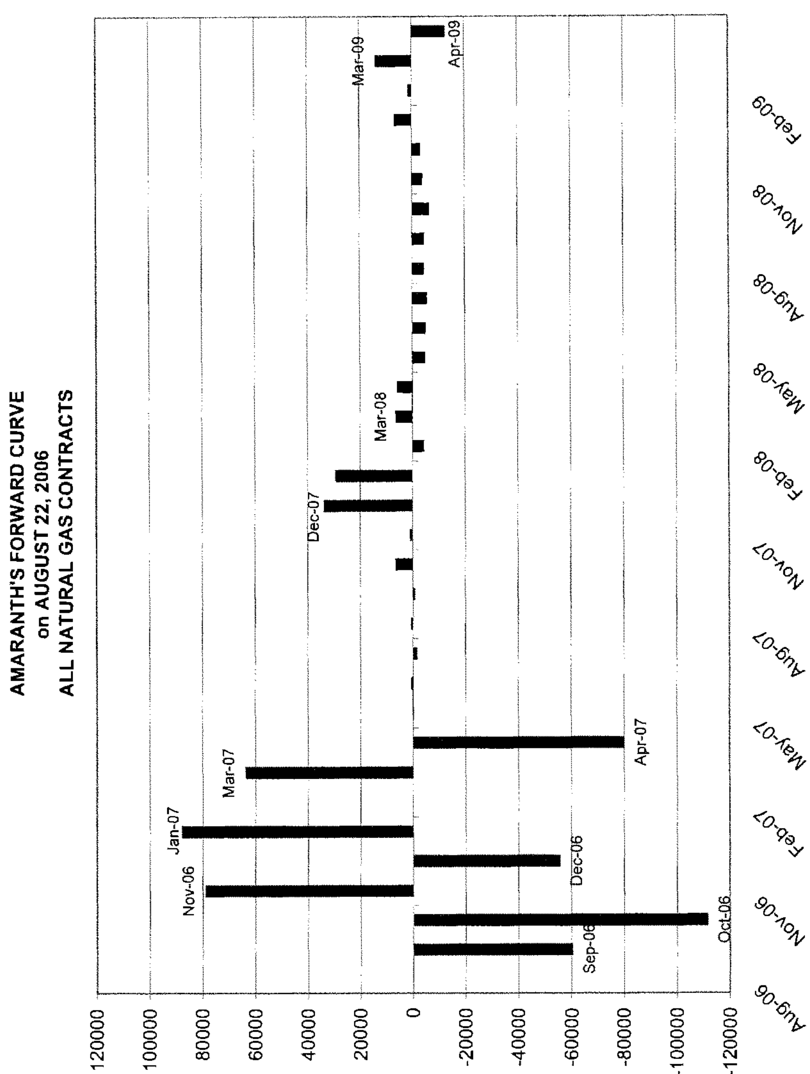
IV-152


AMARANTH'S FORWARD CURVE
on AUGUST 22, 2006
ALL NATURAL GAS CONTRACTS
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60000
40000
20000
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-40000
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Feb-07
May-07
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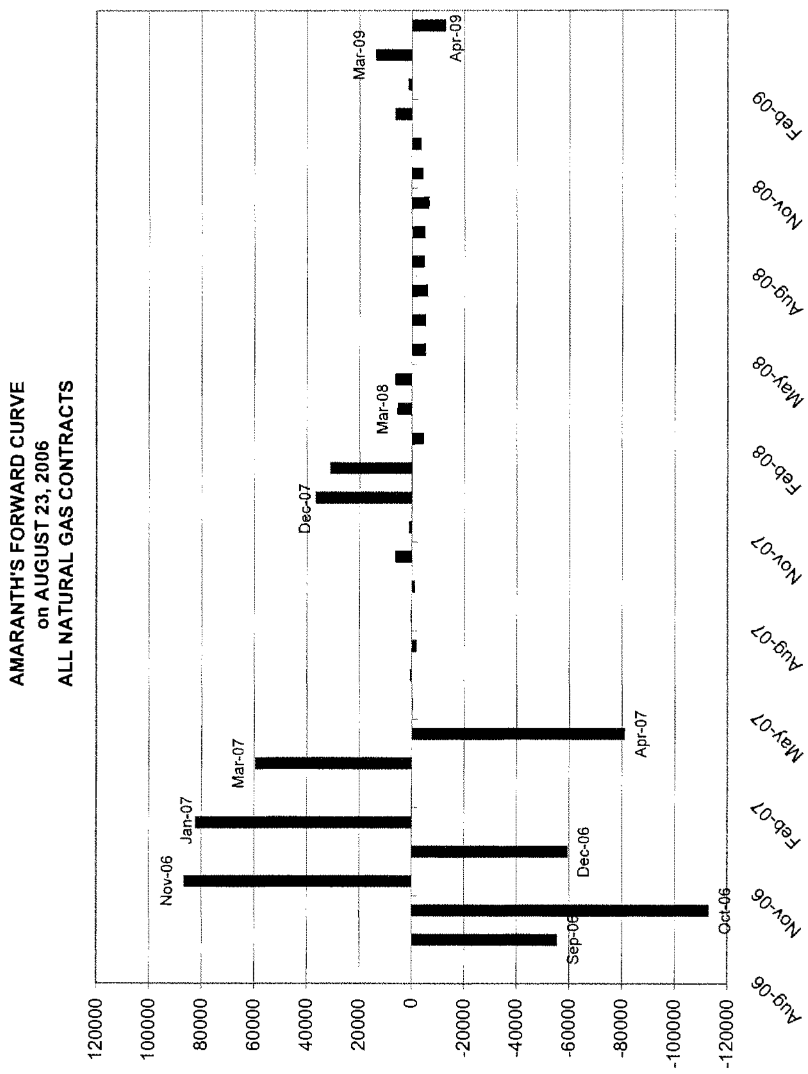
Apr-09

IV-153


AMARANTH'S FORWARD CURVE
on AUGUST 23, 2006
ALL NATURAL GAS CONTRACTS
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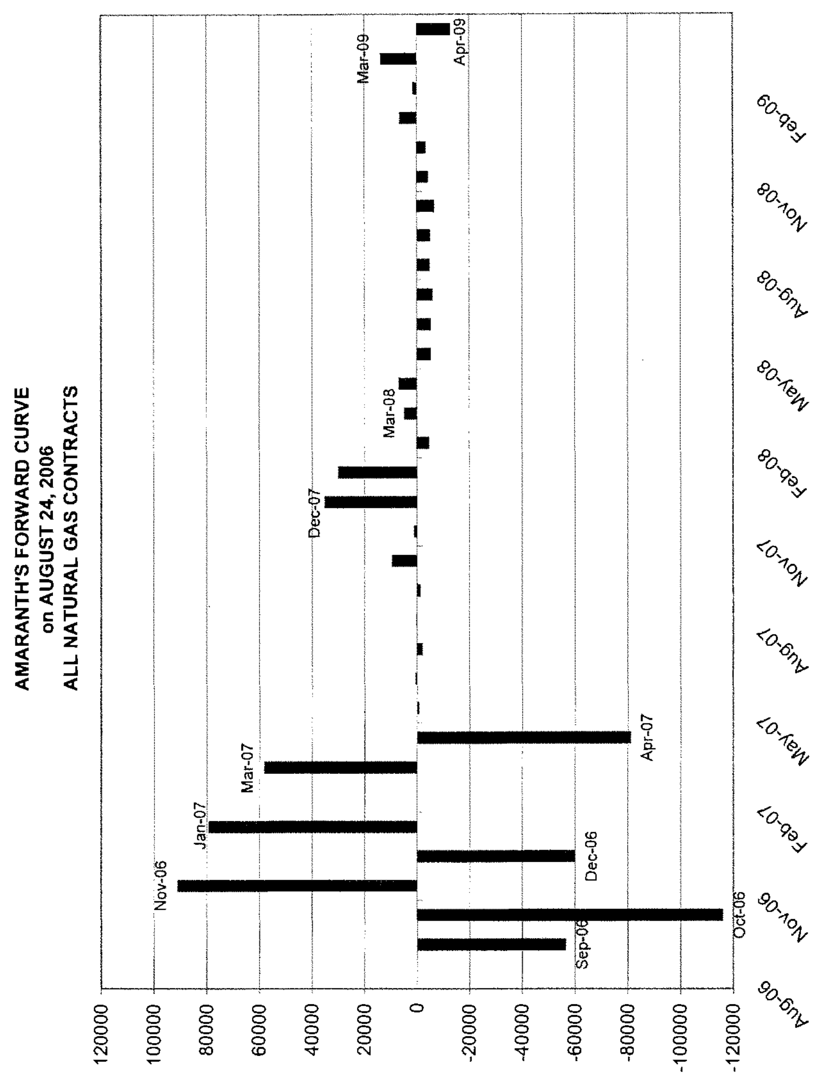
Apr-09

IV-154


AMARANTH'S FORWARD CURVE
on AUGUST 24, 2006
ALL NATURAL GAS CONTRACTS
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Nov-06
Feb-07
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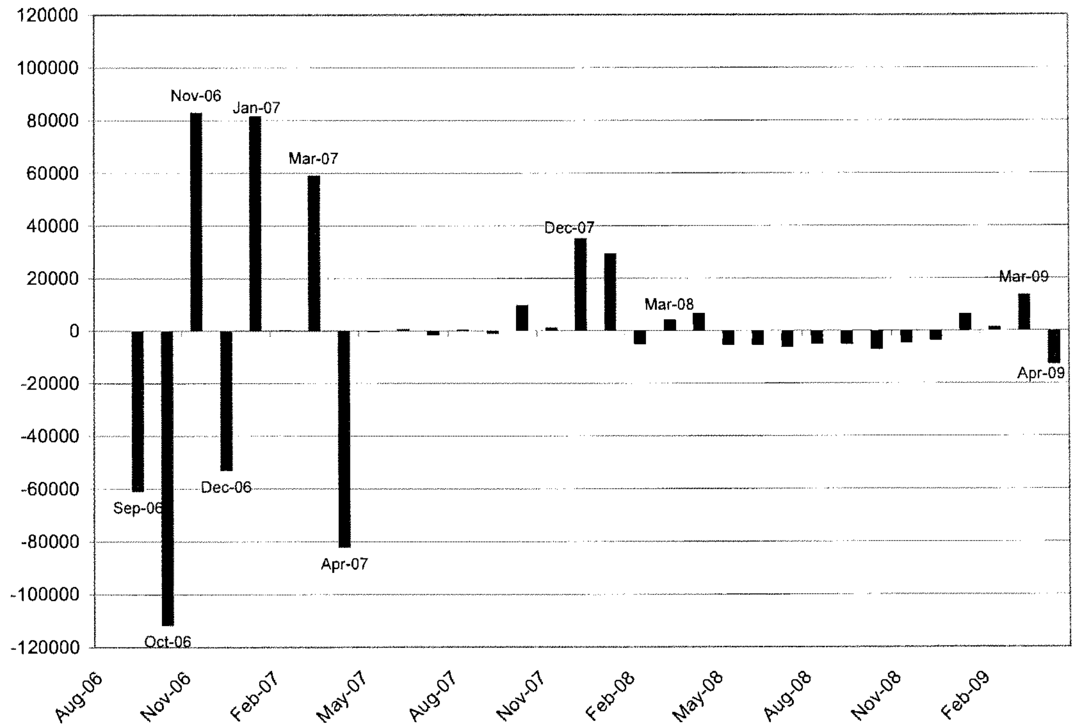
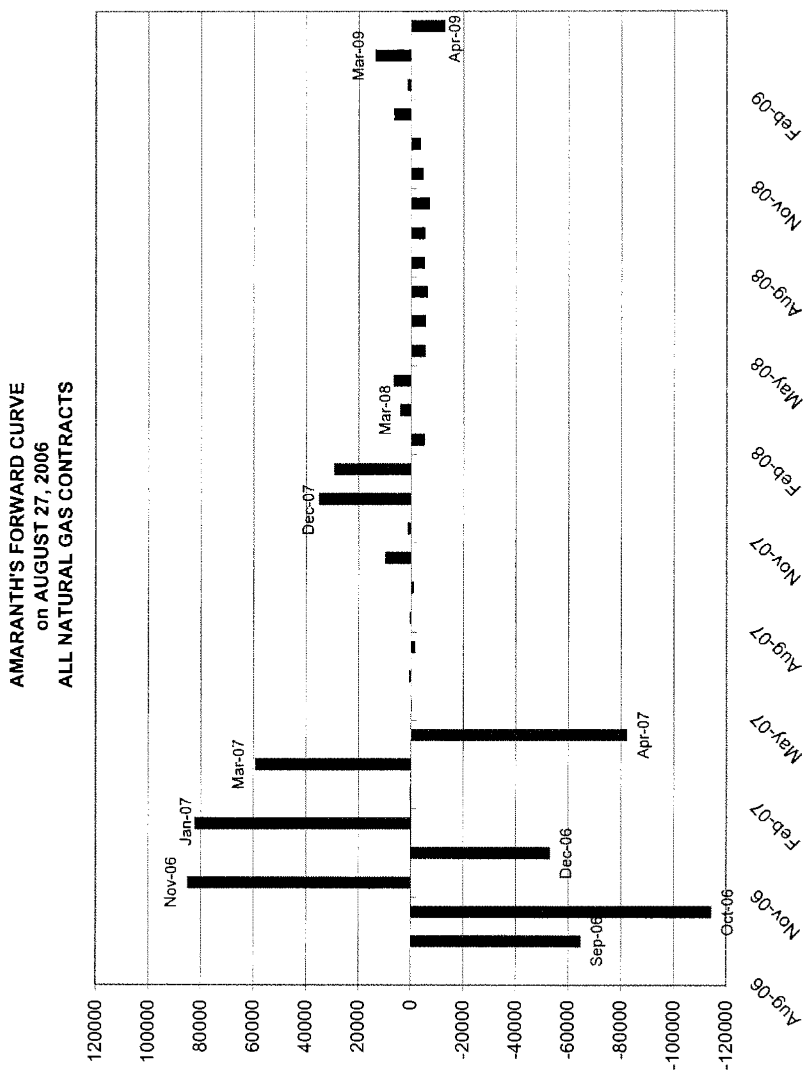
Mar-09
Apr-09

IV-155

AMARANTH'S FORWARD CURVE
on AUGUST 25, 2006
ALL NATURAL GAS CONTRACTS



IV-156


AMARANTH'S FORWARD CURVE
on AUGUST 27, 2006
ALL NATURAL GAS CONTRACTS
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20000
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-40000
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Nov-06
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May-07
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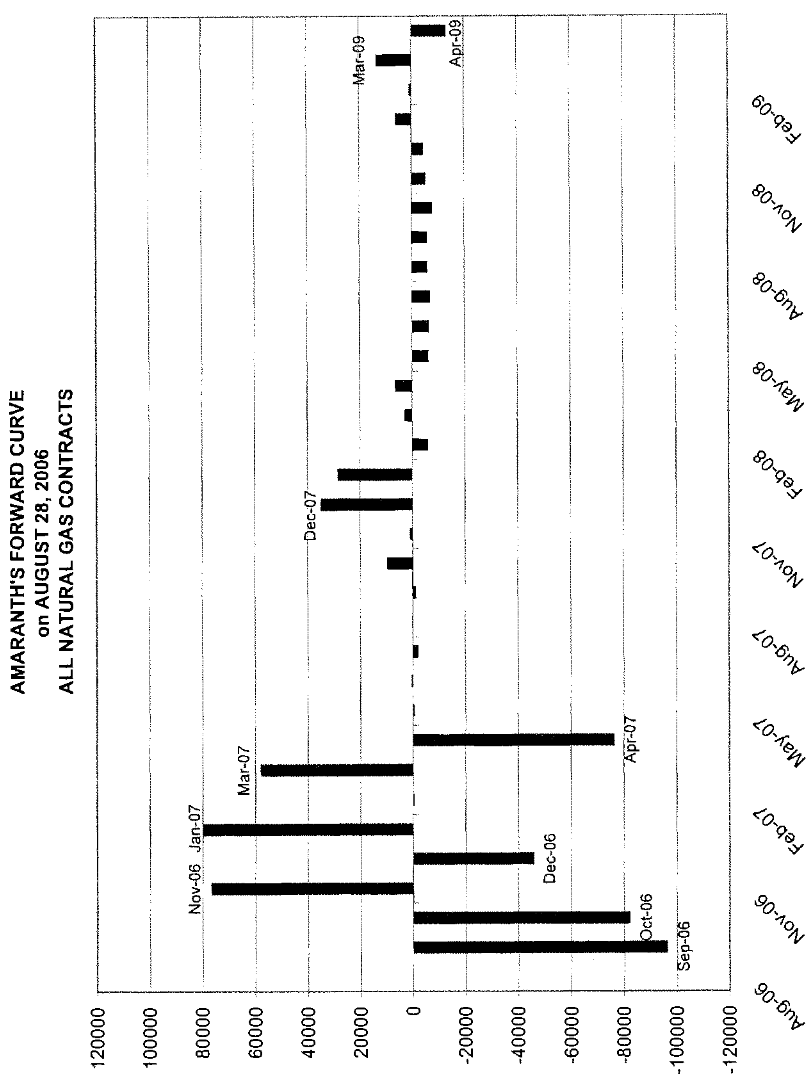
Apr-09

IV-157


AMARANTH'S FORWARD CURVE
on AUGUST 28, 2006
ALL NATURAL GAS CONTRACTS
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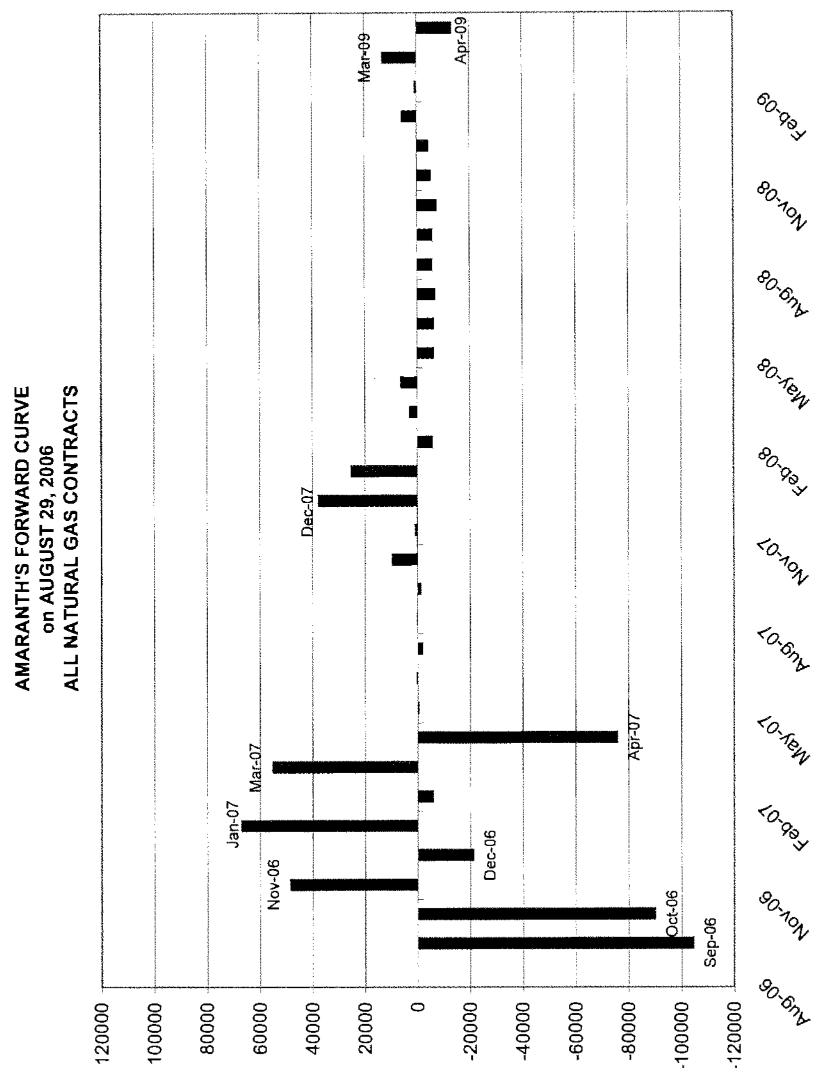
IV-156


AMARANTH'S FORWARD CURVE
on AUGUST 29, 2006
ALL NATURAL GAS CONTRACTS
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40000
20000
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Nov-06
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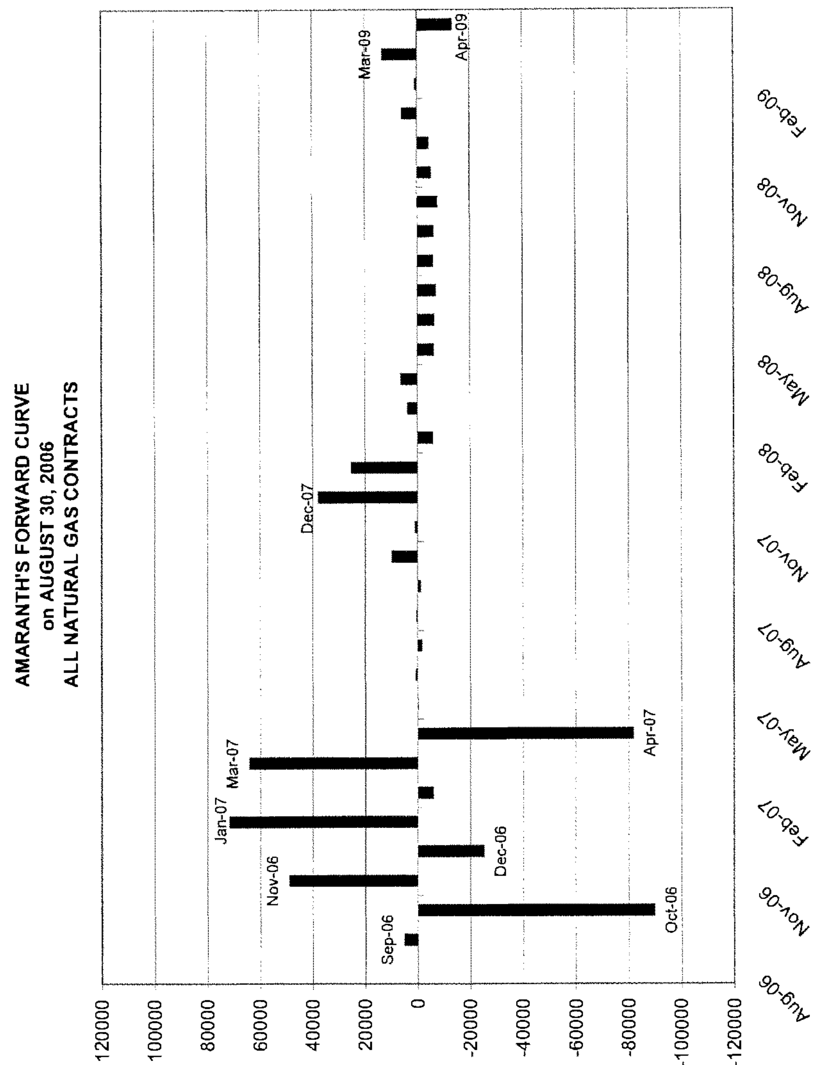
Apr-09

IV-159


AMARANTH'S FORWARD CURVE
on AUGUST 30, 2006
ALL NATURAL GAS CONTRACTS
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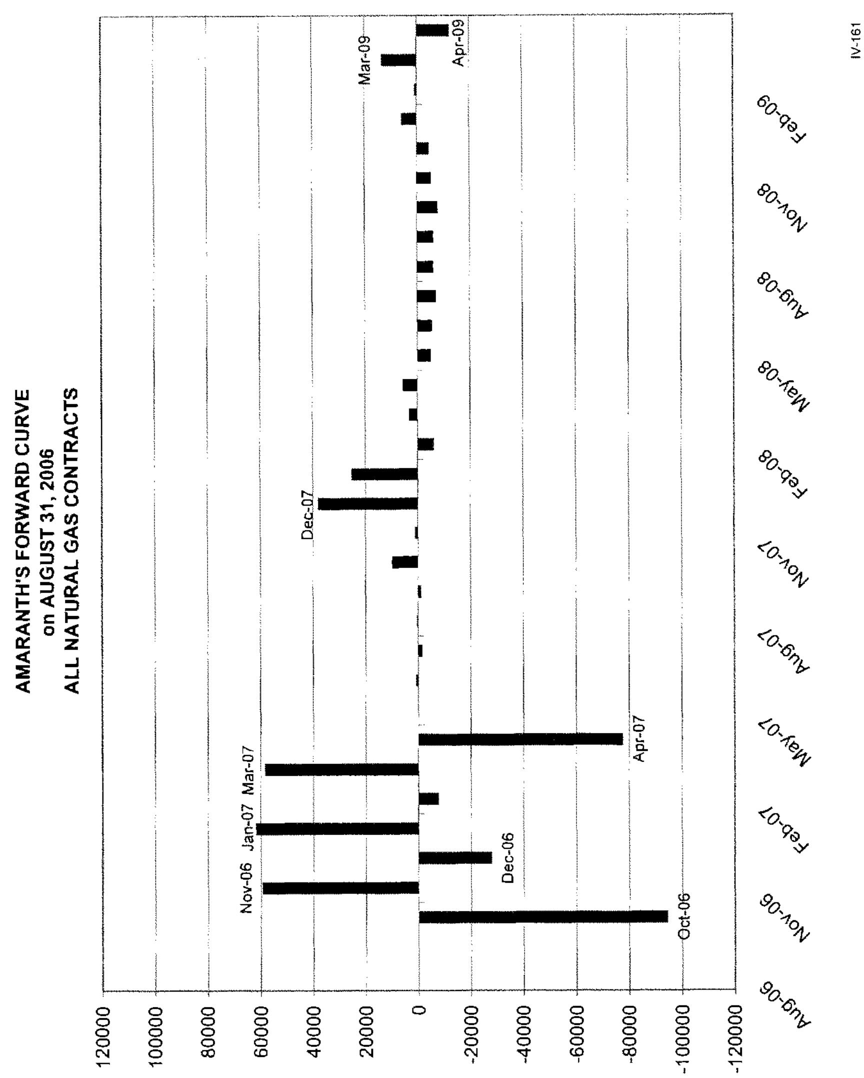
IV-160


AMARANTH'S FORWARD CURVE
on AUGUST 31, 2006
ALL NATURAL GAS CONTRACTS
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20000
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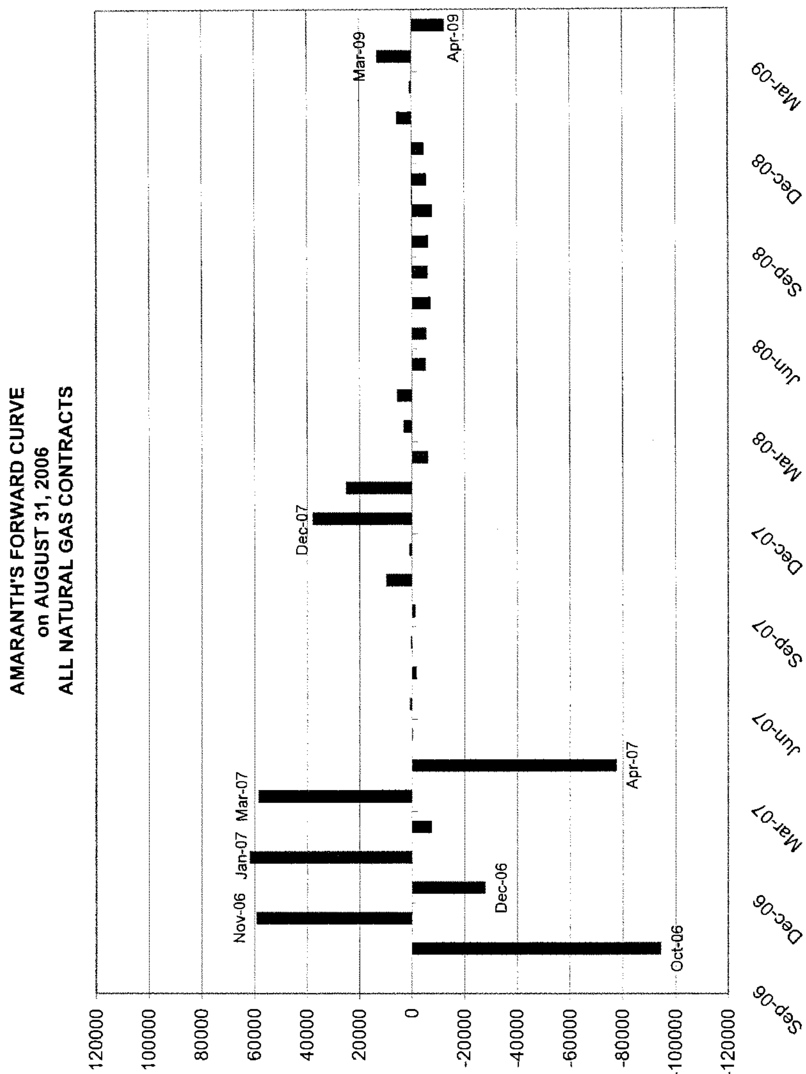
IV-161


AMARANTH'S FORWARD CURVE
on AUGUST 31, 2006
ALL NATURAL GAS CONTRACTS
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Dec-07
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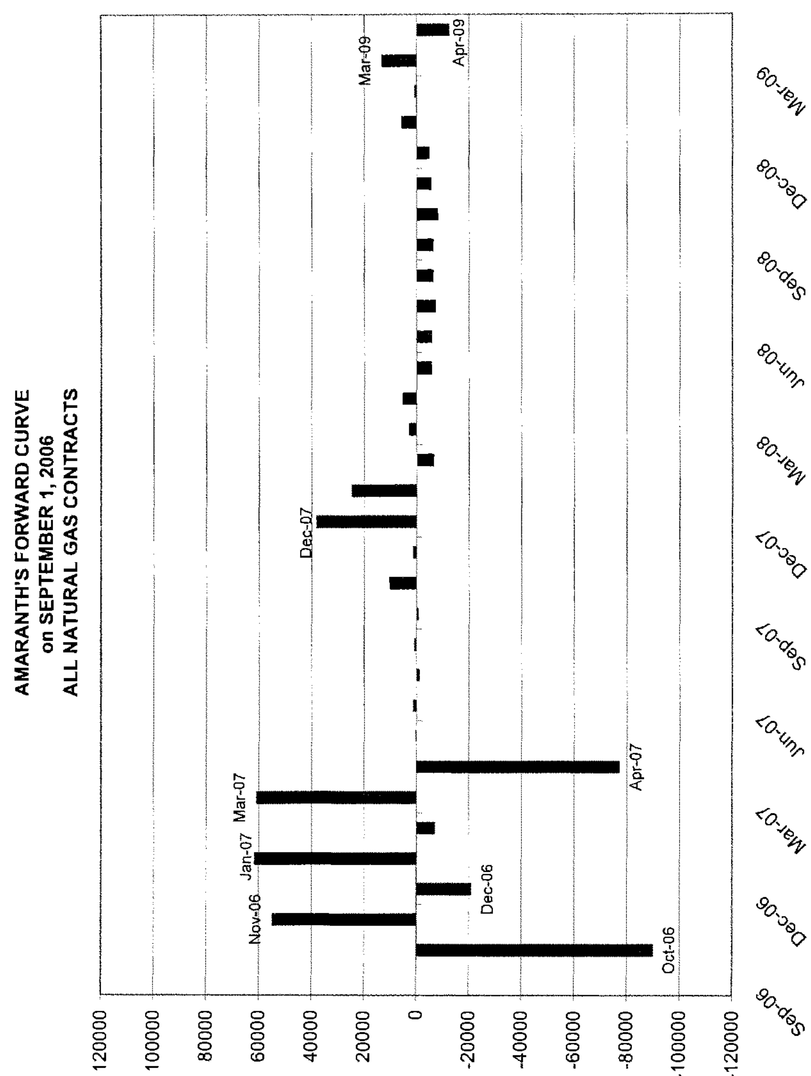
IV-162


AMARANTH'S FORWARD CURVE
on SEPTEMBER 1, 2006
ALL NATURAL GAS CONTRACTS
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Dec-06
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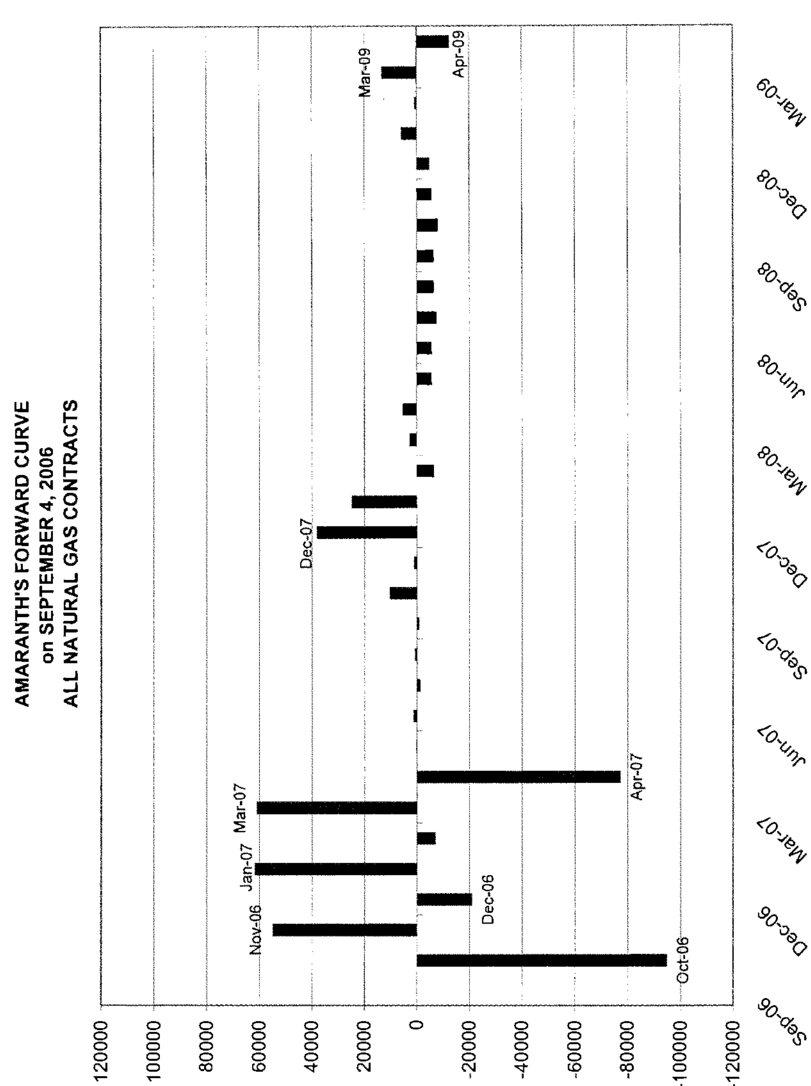
Apr-09

IV-163


AMARANTH'S FORWARD CURVE
on SEPTEMBER 4, 2006
ALL NATURAL GAS CONTRACTS
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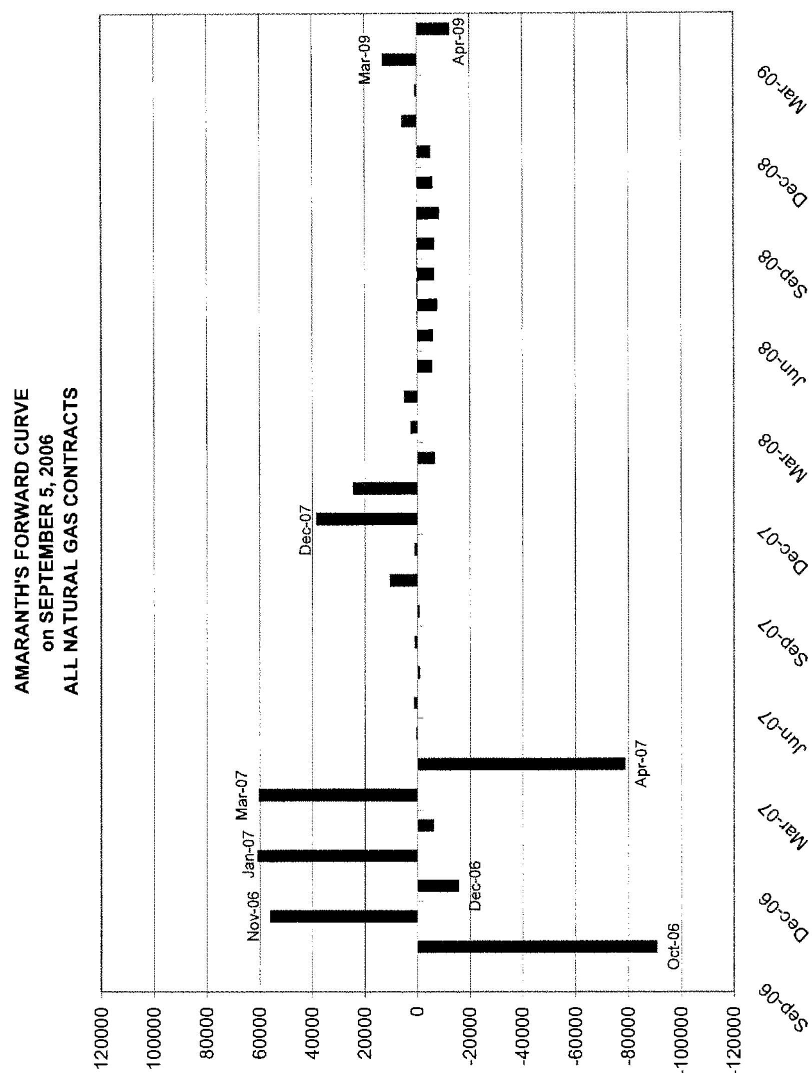
Apr-09

IV-164


AMARANTH'S FORWARD CURVE
on SEPTEMBER 5, 2006
ALL NATURAL GAS CONTRACTS
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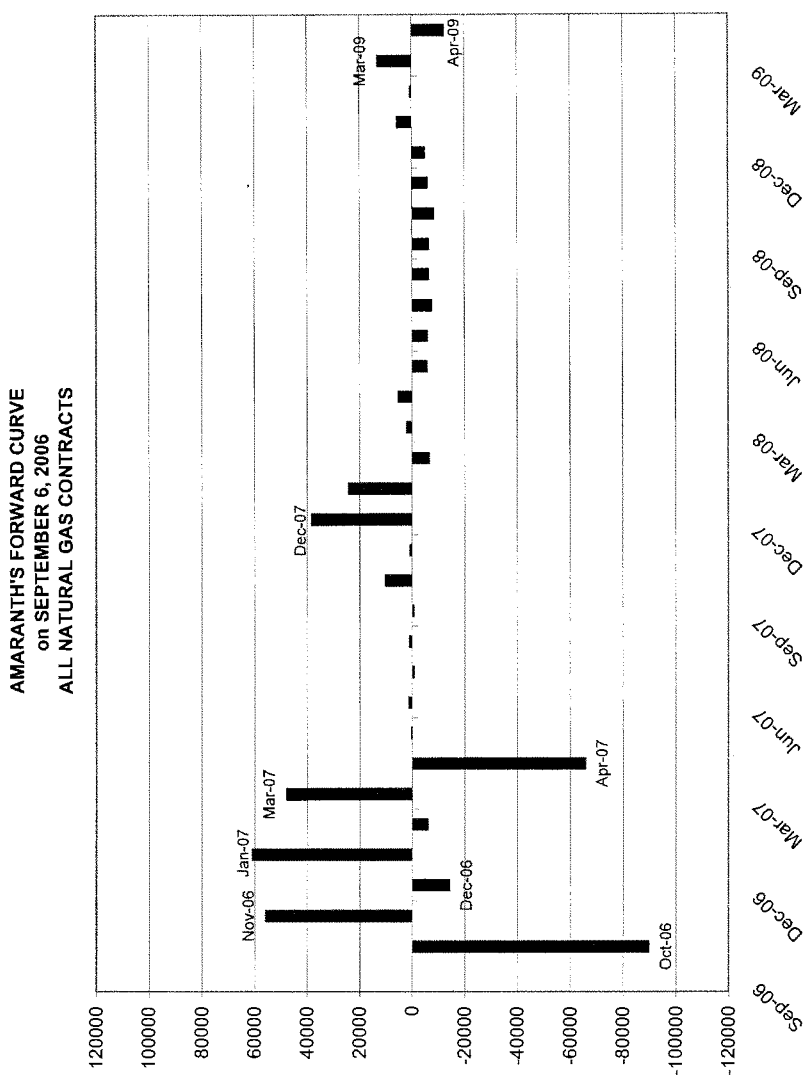
IV-165


AMARANTH'S FORWARD CURVE
on SEPTEMBER 6, 2006
ALL NATURAL GAS CONTRACTS
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Dec-06
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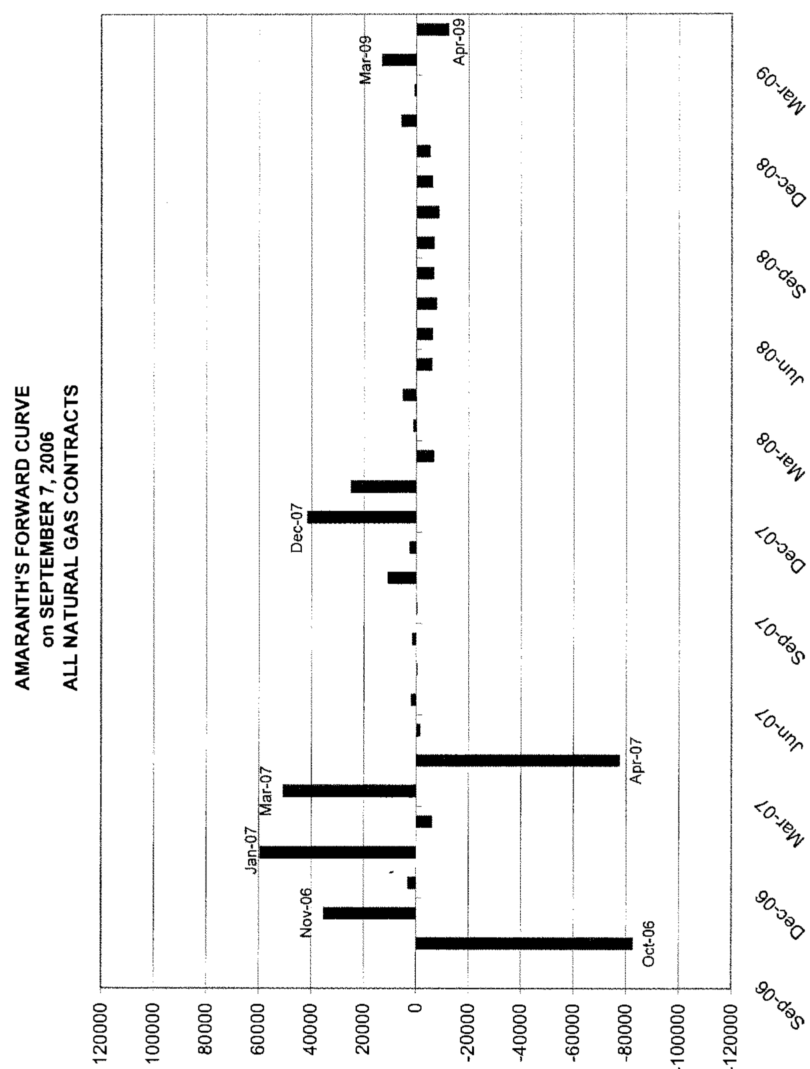
Apr-09

IV-166


AMARANTH'S FORWARD CURVE
on SEPTEMBER 7, 2006
ALL NATURAL GAS CONTRACTS
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Sep-06
Dec-06
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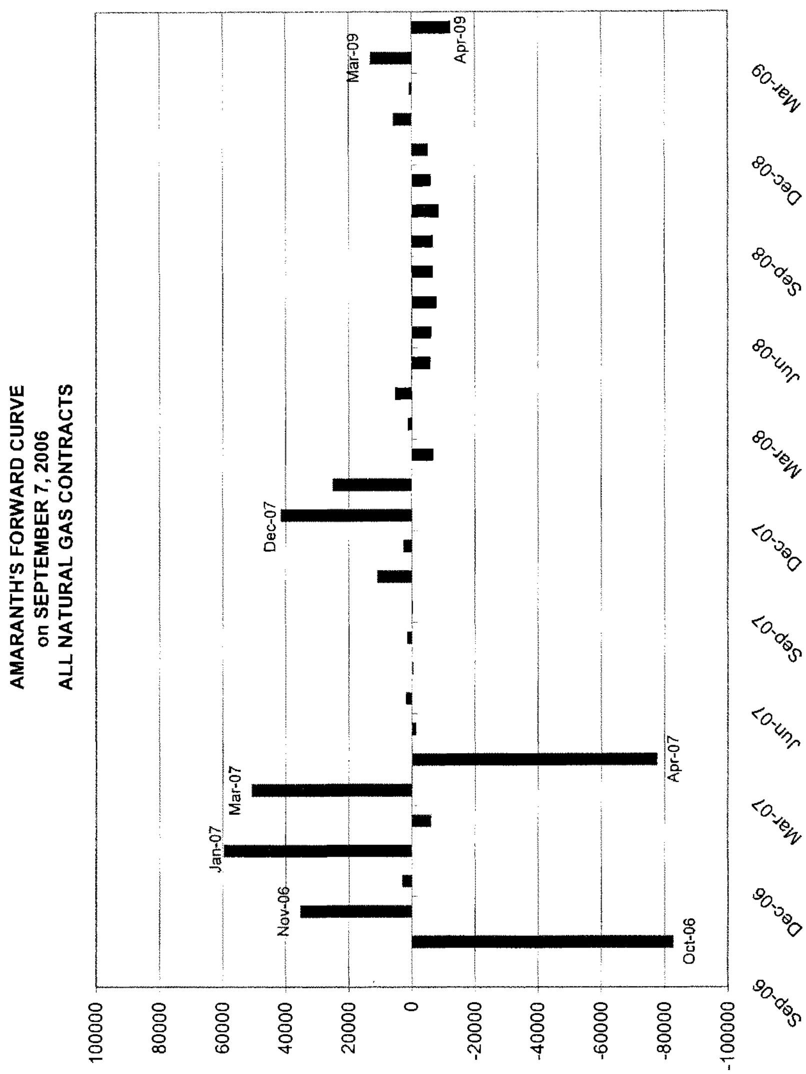
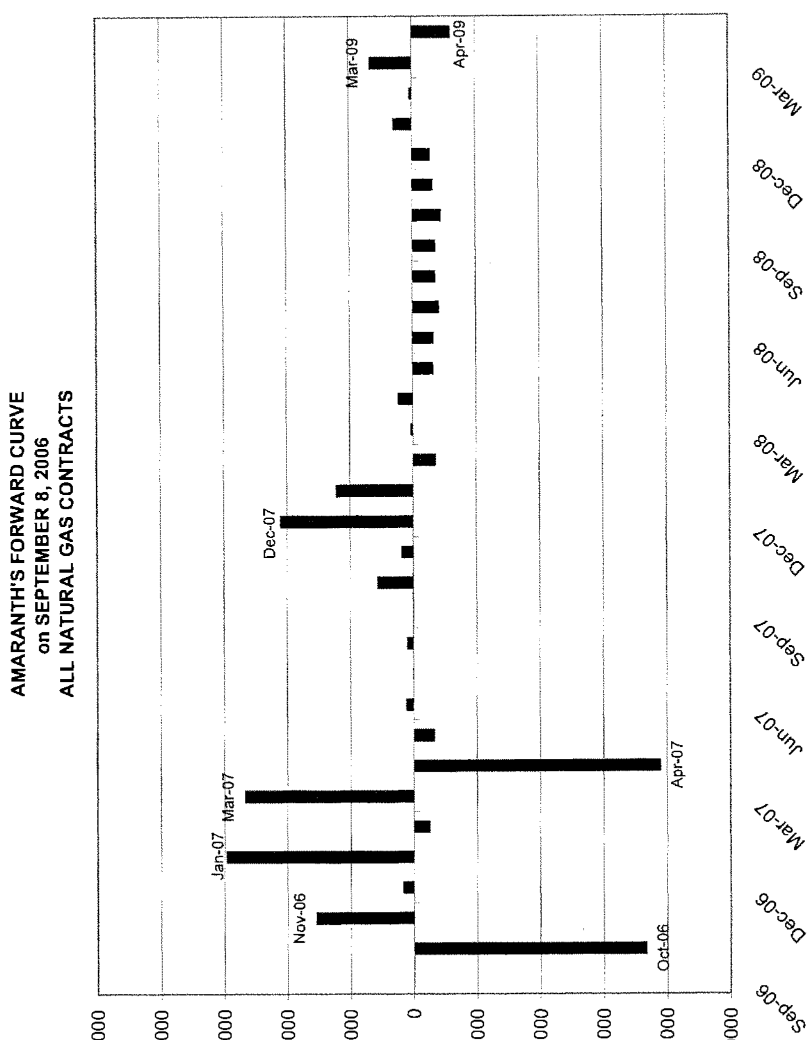
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-09
Apr-09

IV-167

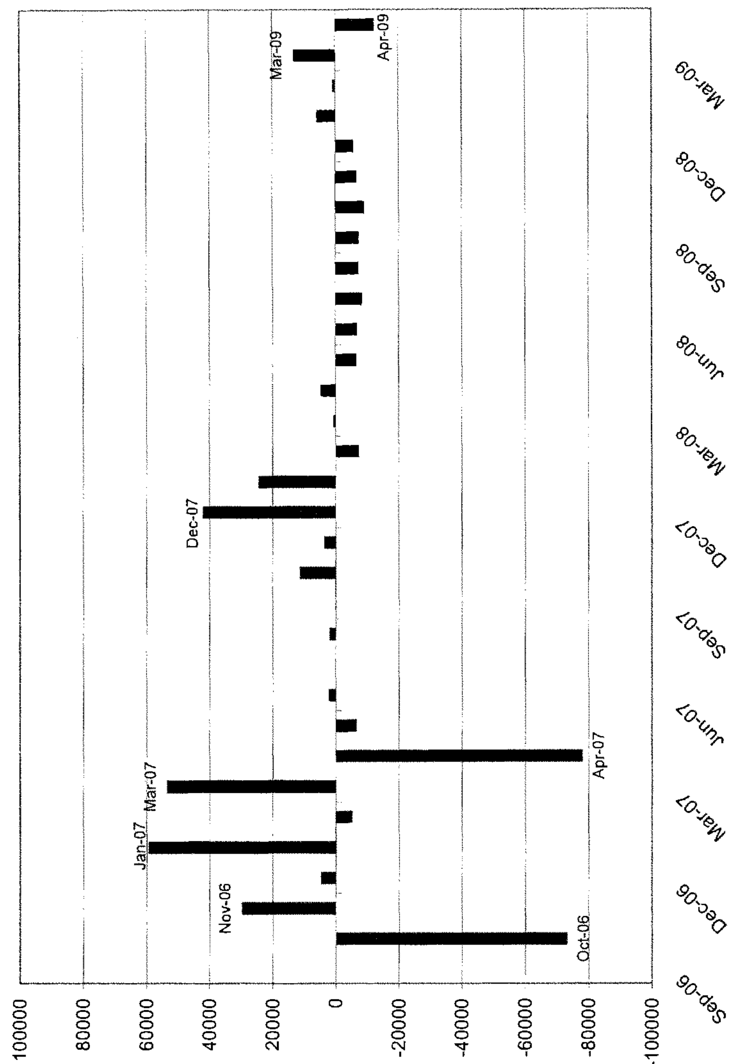

AMARANTH'S FORWARD CURVE
on SEPTEMBER 7, 2006
ALL NATURAL GAS CONTRACTS
100000
80000
60000
40000
20000
0
-20000
-40000
-60000
-80000
-100000
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
Dec-07
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-09
Apr-09

IV-168

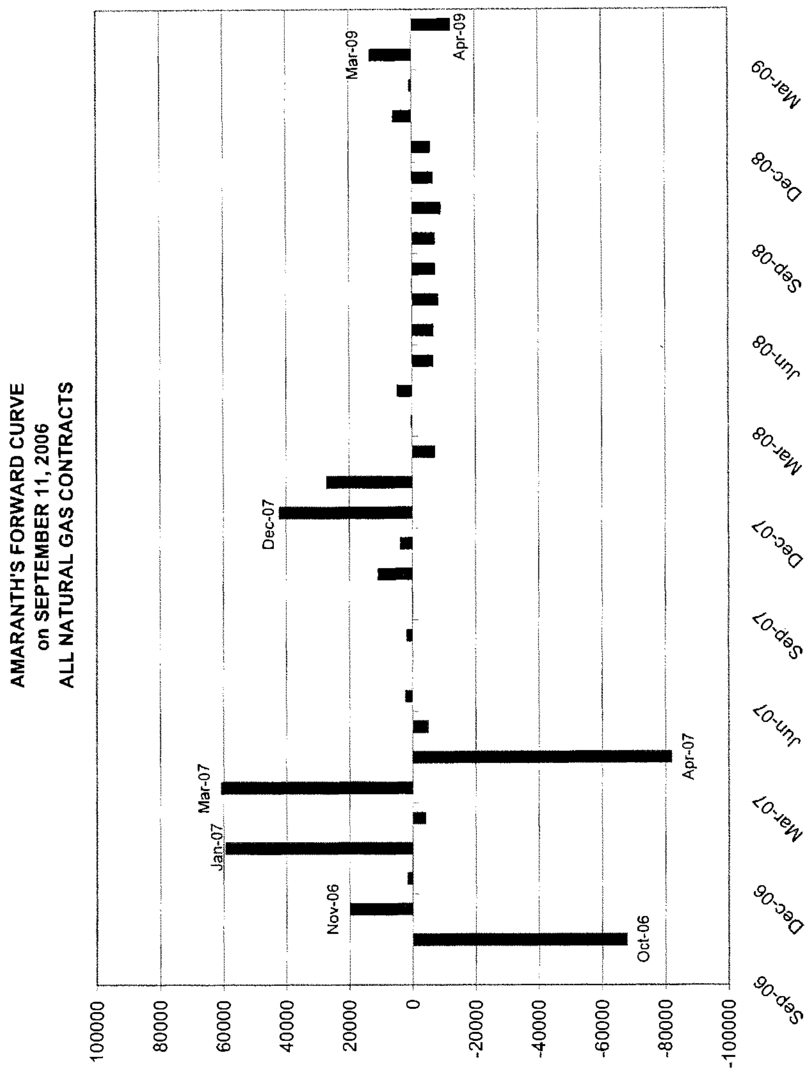

AMARANTH'S FORWARD CURVE
on SEPTEMBER 8, 2006
ALL NATURAL GAS CONTRACTS
100000
80000
60000
40000
20000
0
-20000
-40000
-60000
-80000
-100000
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
Dec-07
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-09
Apr-09

IV-169

AMARANTH'S FORWARD CURVE
on SEPTEMBER 10, 2006
ALL NATURAL GAS CONTRACTS



IV-170


AMARANTH'S FORWARD CURVE
on SEPTEMBER 11, 2006
ALL NATURAL GAS CONTRACTS
100000
80000
60000
40000
20000
0
-20000
-40000
-60000
-80000
-100000
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
Dec-07
Mar-08
Jun-08
Sep-08
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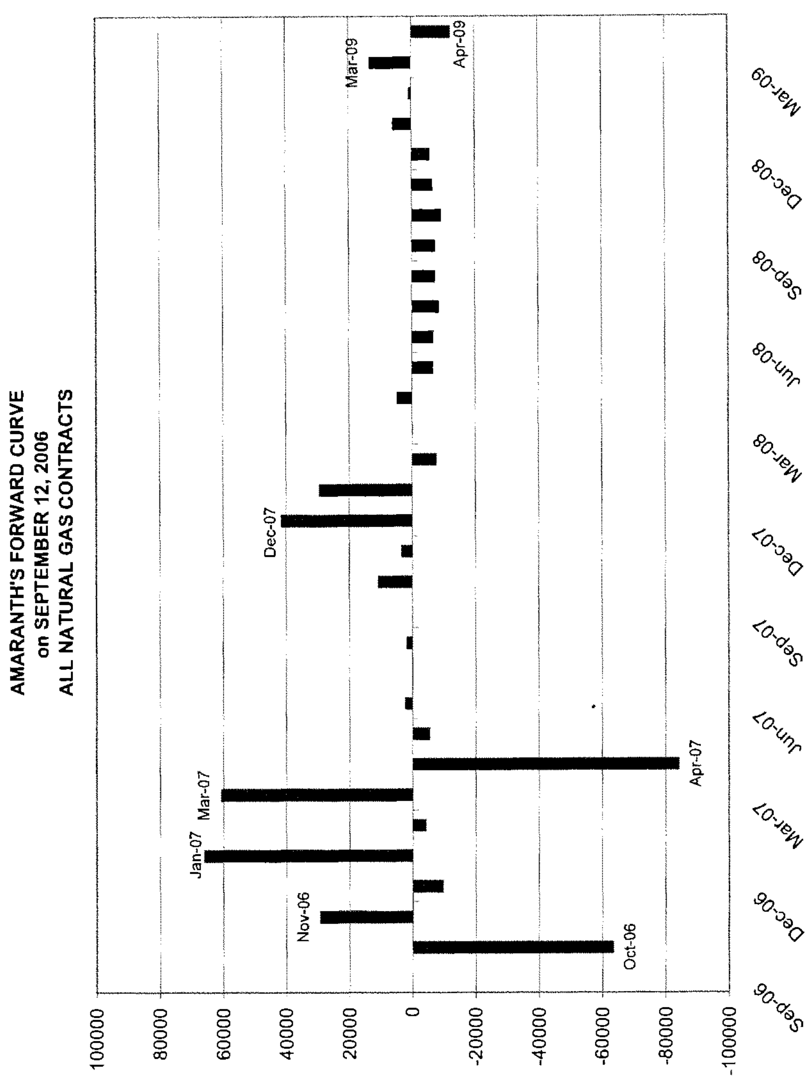
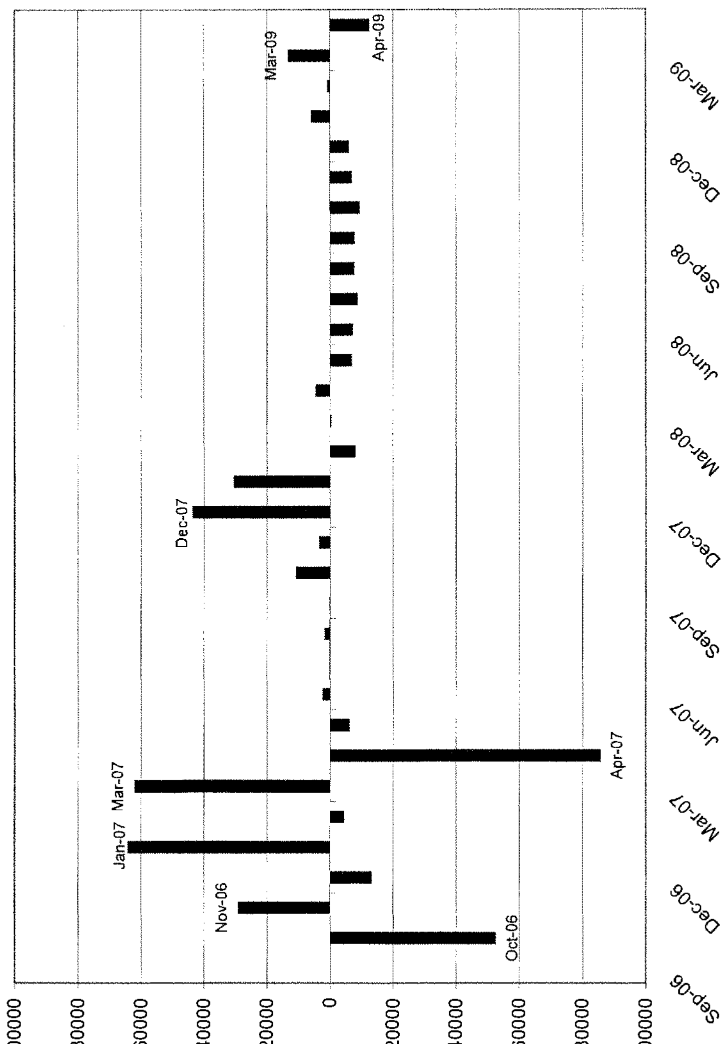
Mar-09
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-09
Apr-09

IV-171


AMARANTH'S FORWARD CURVE
on SEPTEMBER 12, 2006
ALL NATURAL GAS CONTRACTS
100000
80000
60000
40000
20000
0
-20000
-40000
-60000
-80000
-100000
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
Dec-07
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-09
Apr-09

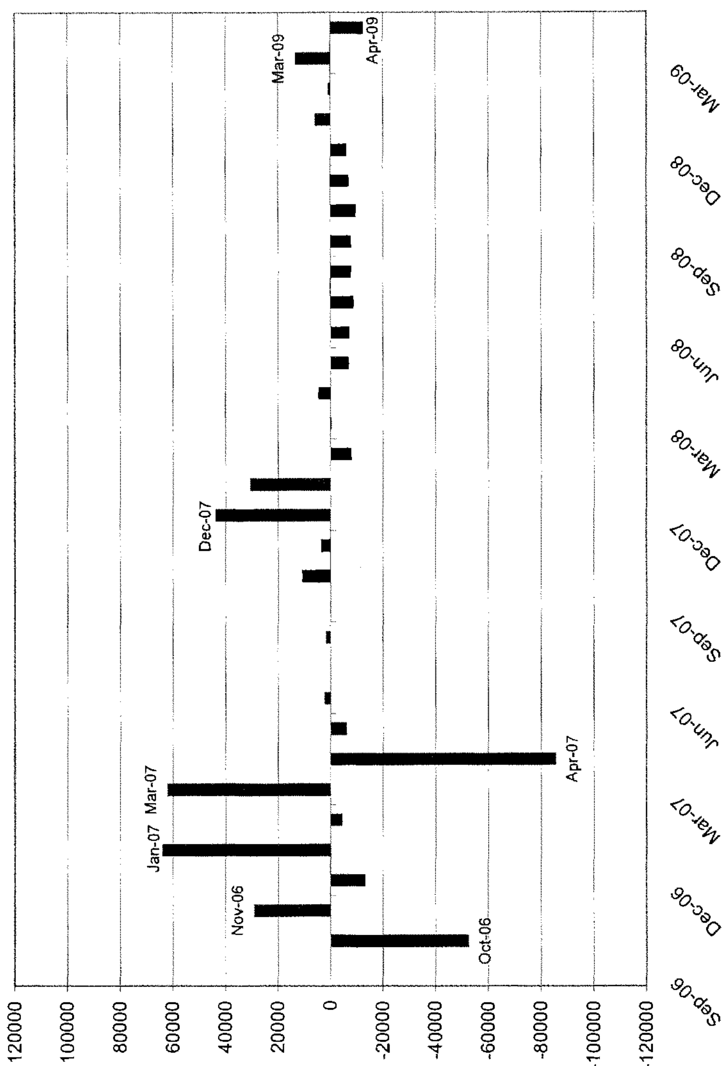
IV-172

AMARANTH'S FORWARD CURVE
on SEPTEMBER 13, 2006
ALL NATURAL GAS CONTRACTS



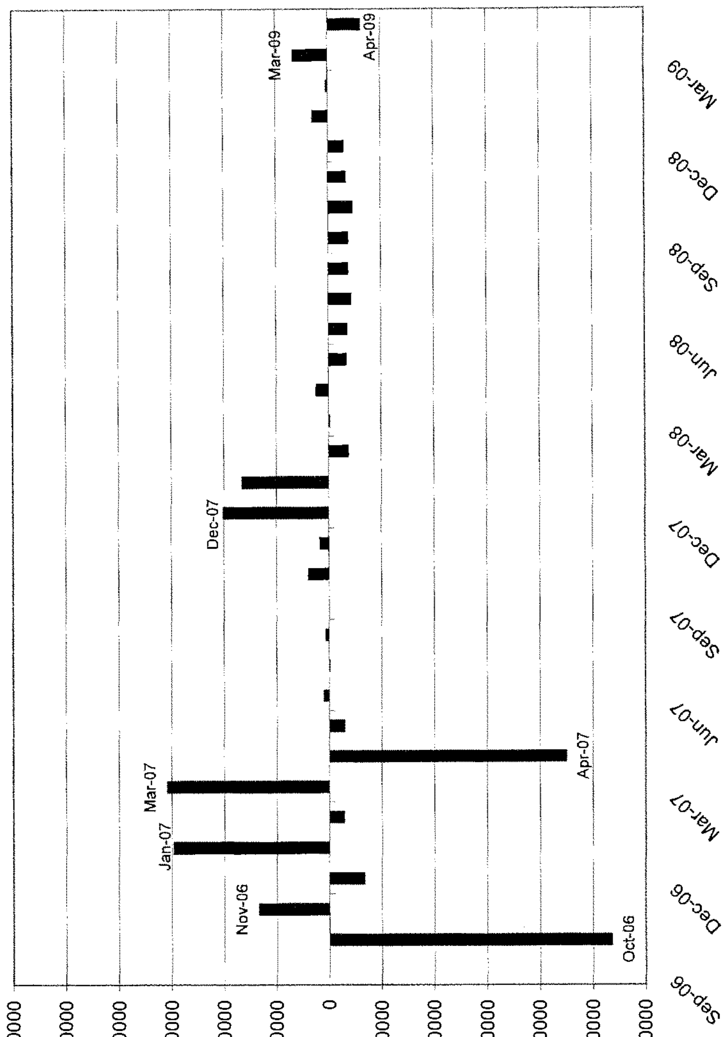
IV-173

AMARANTH'S FORWARD CURVE
on SEPTEMBER 13, 2006
ALL NATURAL GAS CONTRACTS



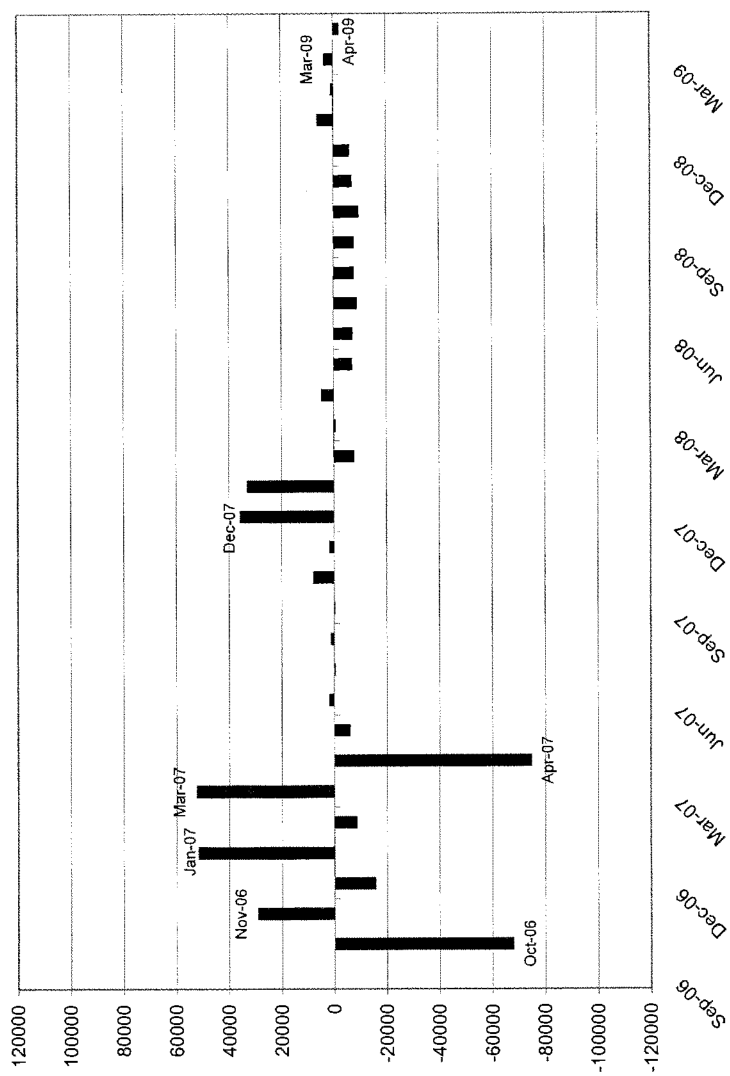
IV-174

AMARANTH'S FORWARD CURVE
on SEPTEMBER 14, 2006
ALL NATURAL GAS CONTRACTS



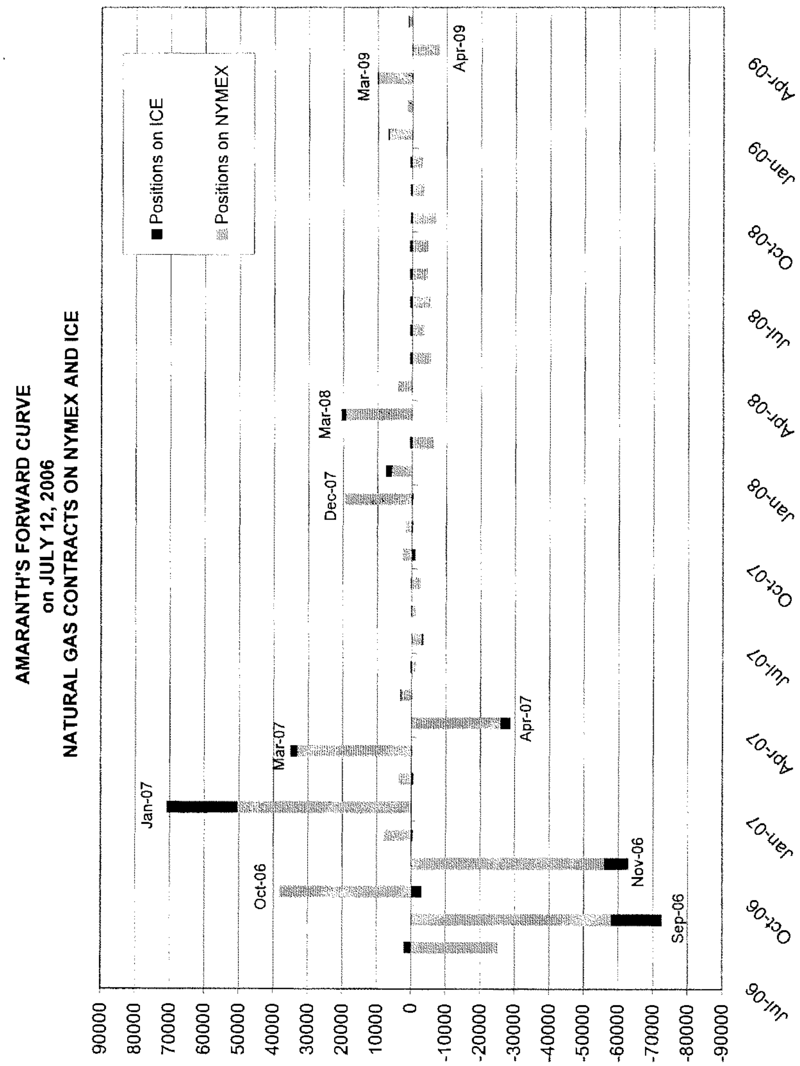
IV-175

AMARANTH'S FORWARD CURVE
on SEPTEMBER 15, 2006
ALL NATURAL GAS CONTRACTS



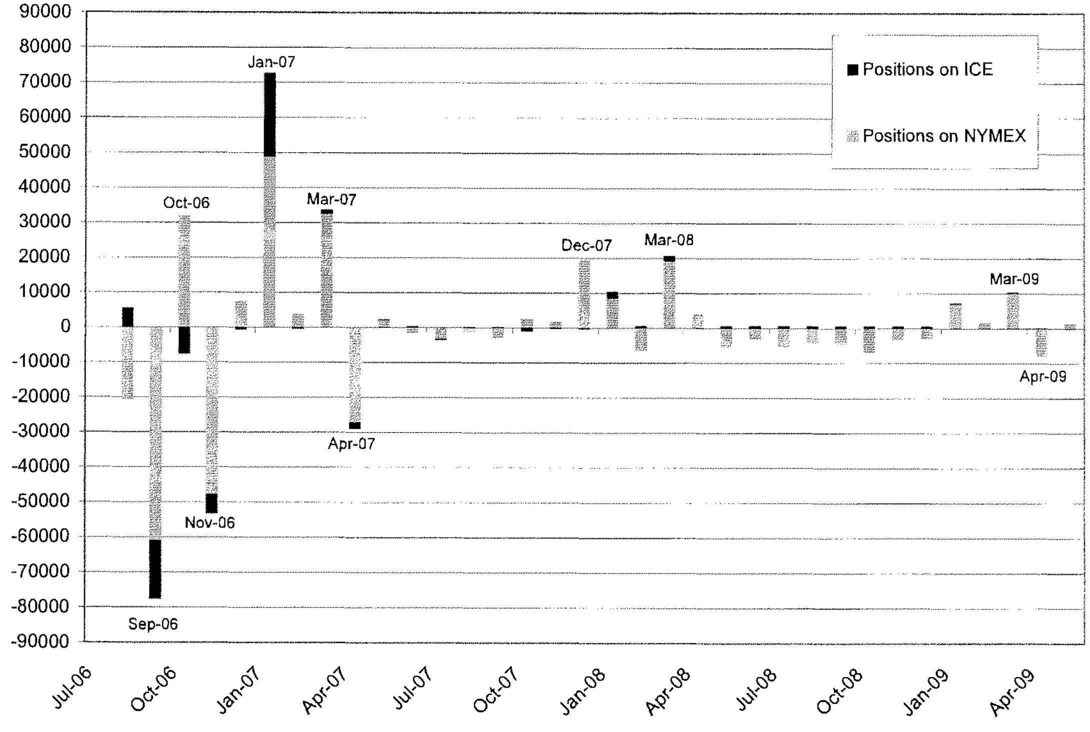
IV-176

APPENDIX V

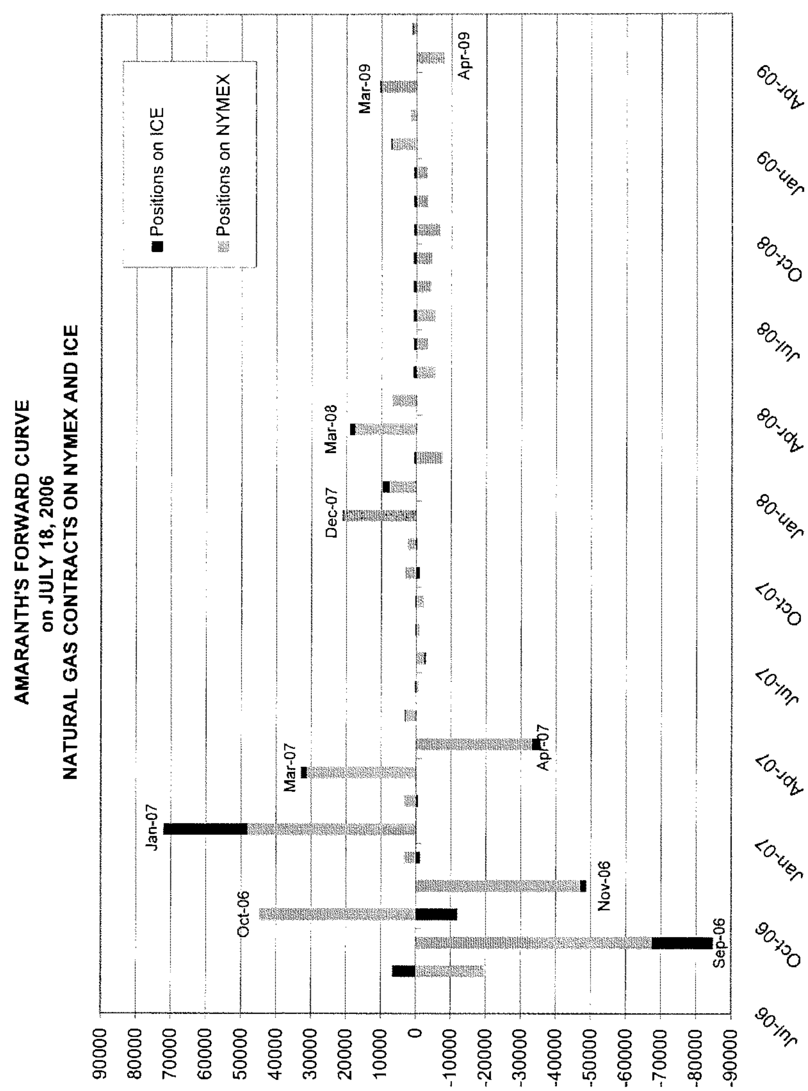

AMARANTH'S FORWARD CURVE
on JULY 12, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Sep-06
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Mar-09
Apr-09

V-1

AMARANTH'S FORWARD CURVE
on JULY 14, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE

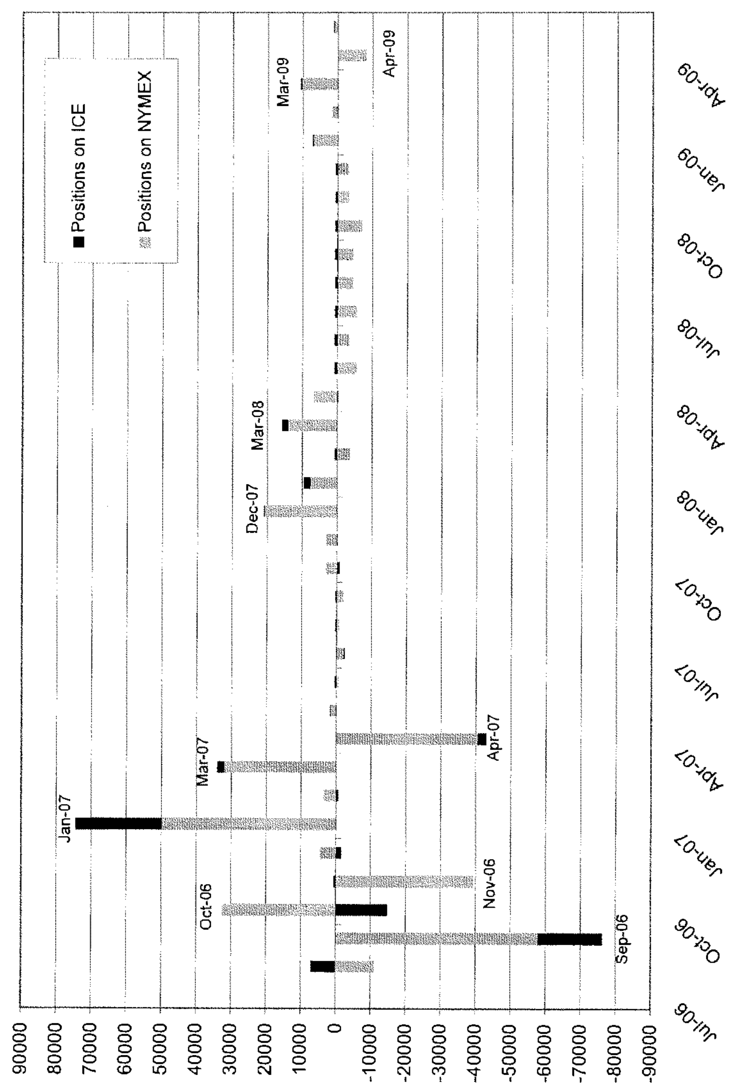


V-2

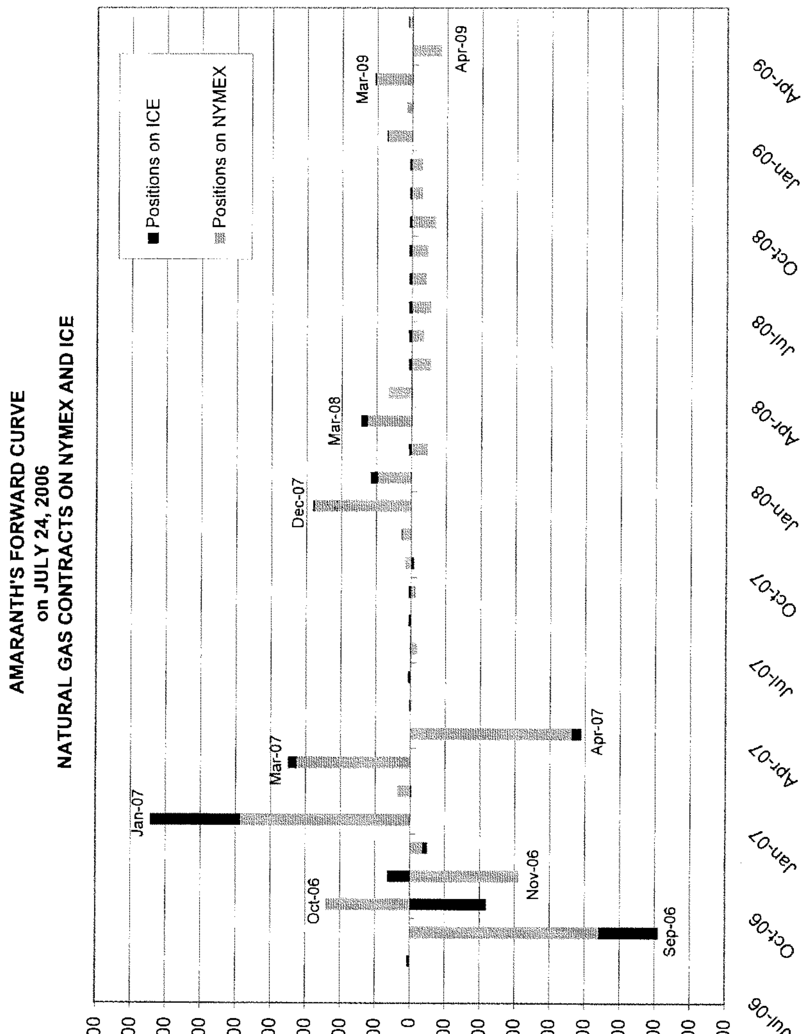

AMARANTH'S FORWARD CURVE
on JULY 18, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Sep-06
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Mar-09
Apr-09

V-3

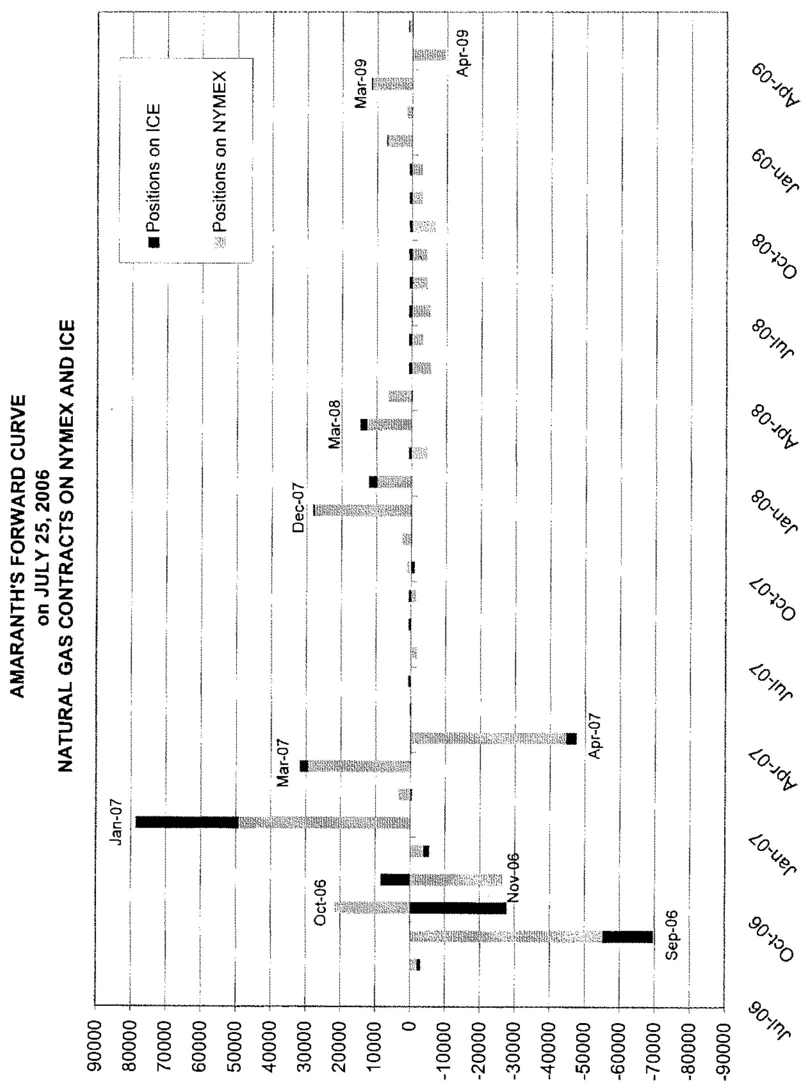
AMARANTH'S FORWARD CURVE
on JULY 20, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE



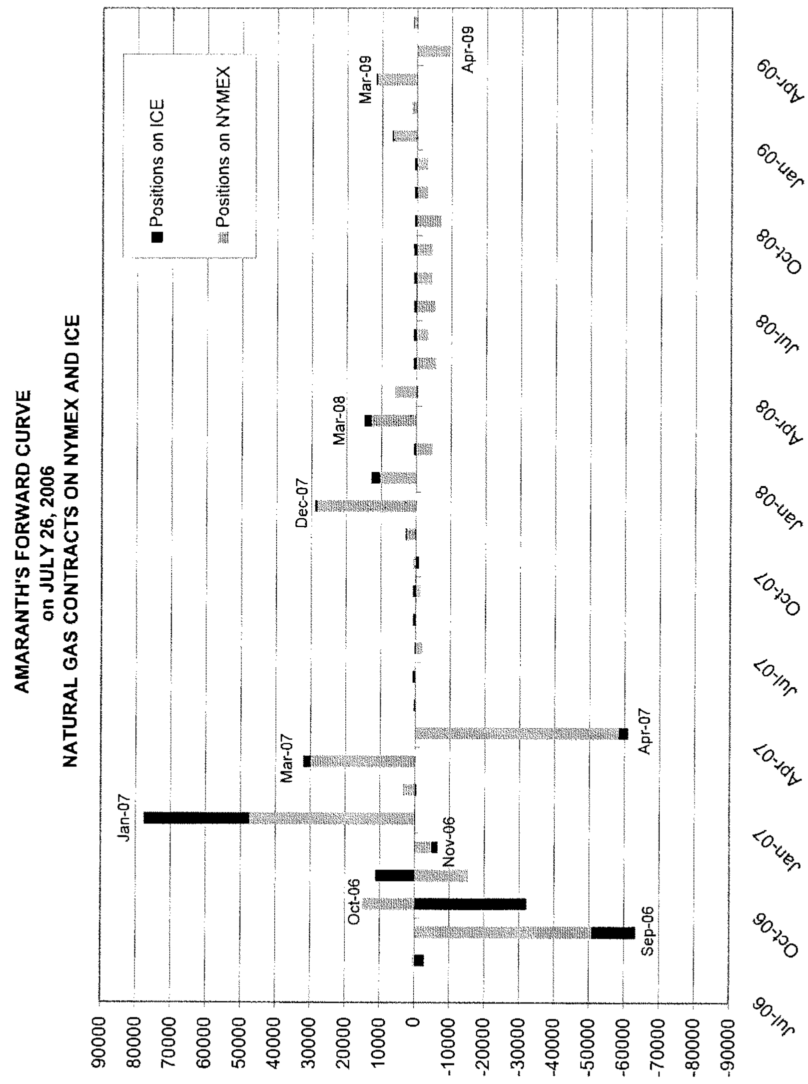
V-4


AMARANTH'S FORWARD CURVE
on JULY 24, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Sep-06
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Mar-09
Apr-09

V-5

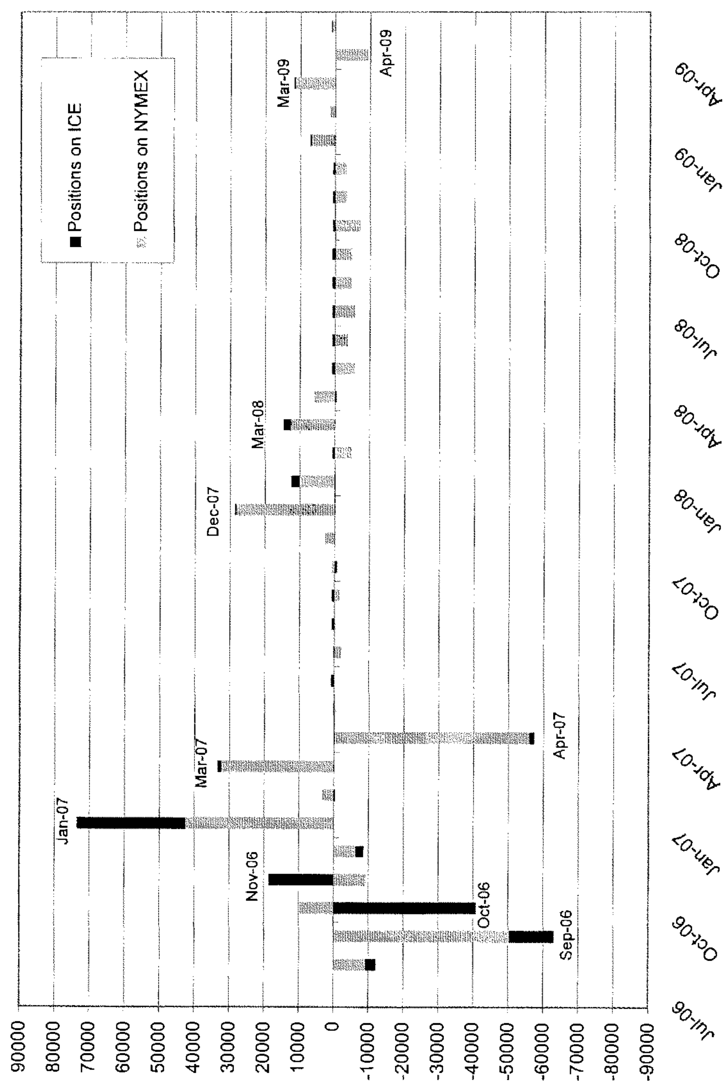

AMARANTH'S FORWARD CURVE
on JULY 25, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
Jan-07
Mar-07
Oct-06
Nov-06
Sep-06
Apr-07
Dec-07
Mar-08
Mar-09
Apr-09
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09

V-6

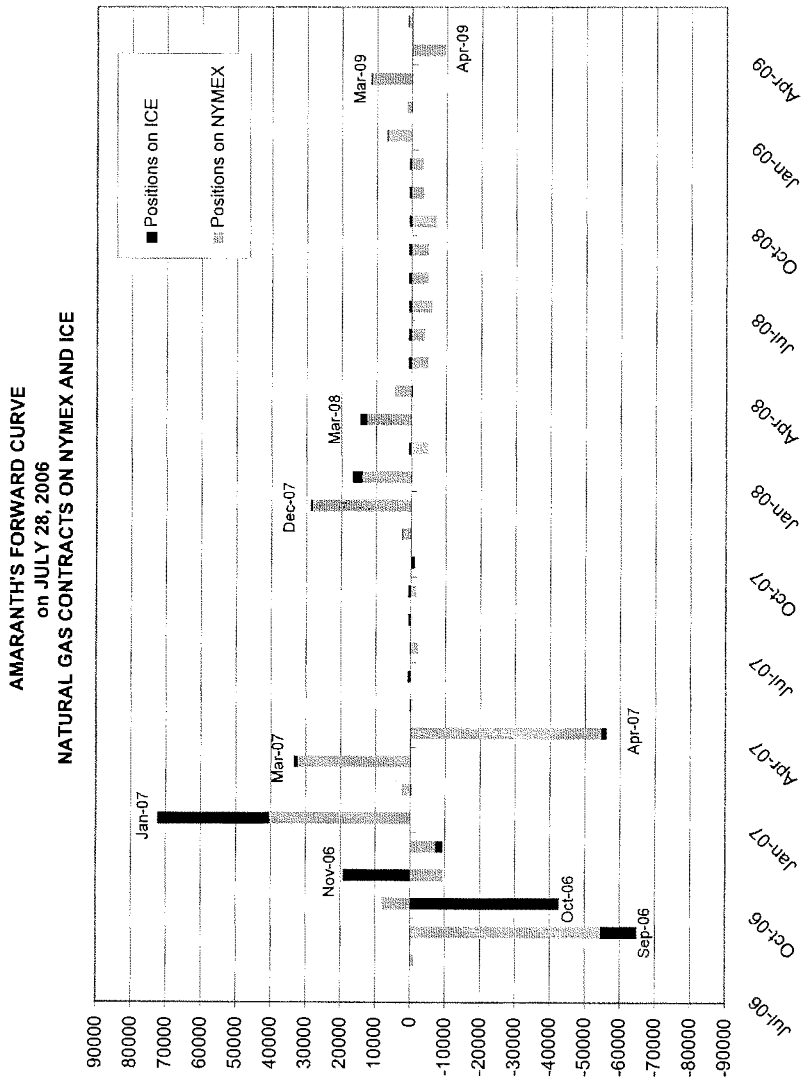


AMARANTH'S FORWARD CURVE
on JULY 26, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Sep-06
Oct-06
Nov-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Mar-09
Apr-09

AMARANTH'S FORWARD CURVE
on JULY 27, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE



V-8


AMARANTH'S FORWARD CURVE
on JULY 28, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
Jan-07
Nov-06
Oct-06
Sep-06
Mar-07
Apr-07
Dec-07
Mar-08
Mar-09
Apr-09
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
Jul-06
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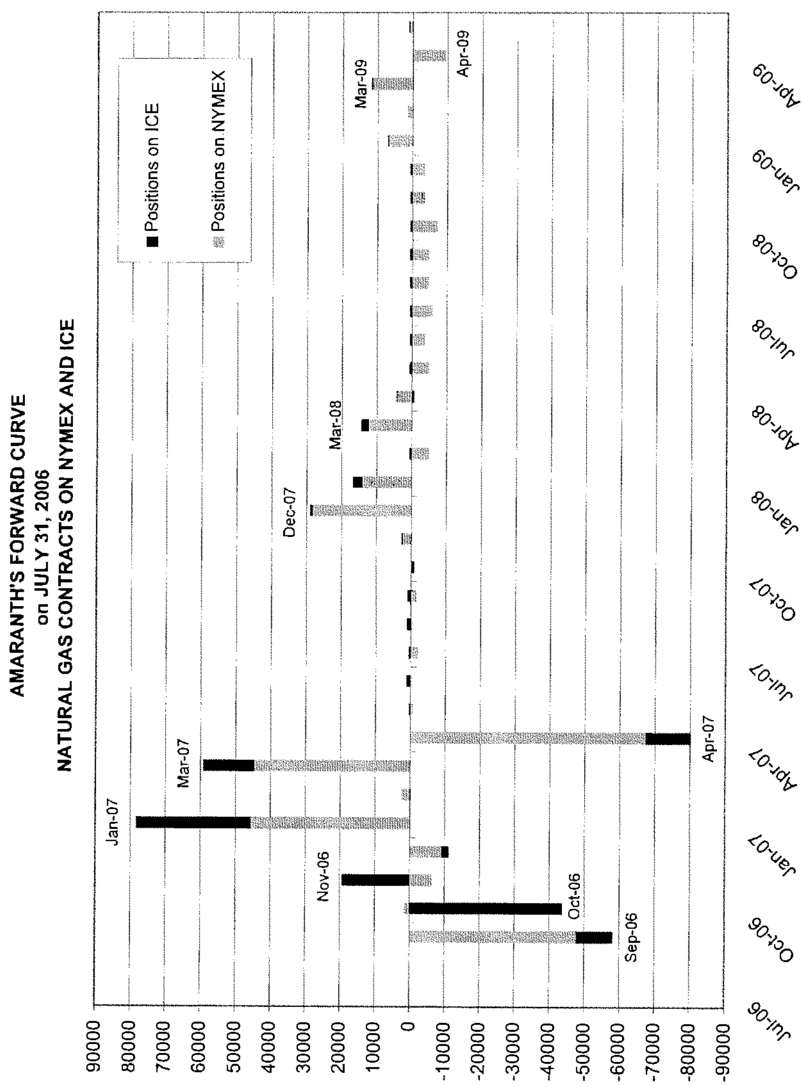
Jul-08
Oct-08
Jan-09
Apr-09

V-9


AMARANTH'S FORWARD CURVE
on JULY 31, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
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80000
70000
60000
50000
40000
30000
20000
10000
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-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
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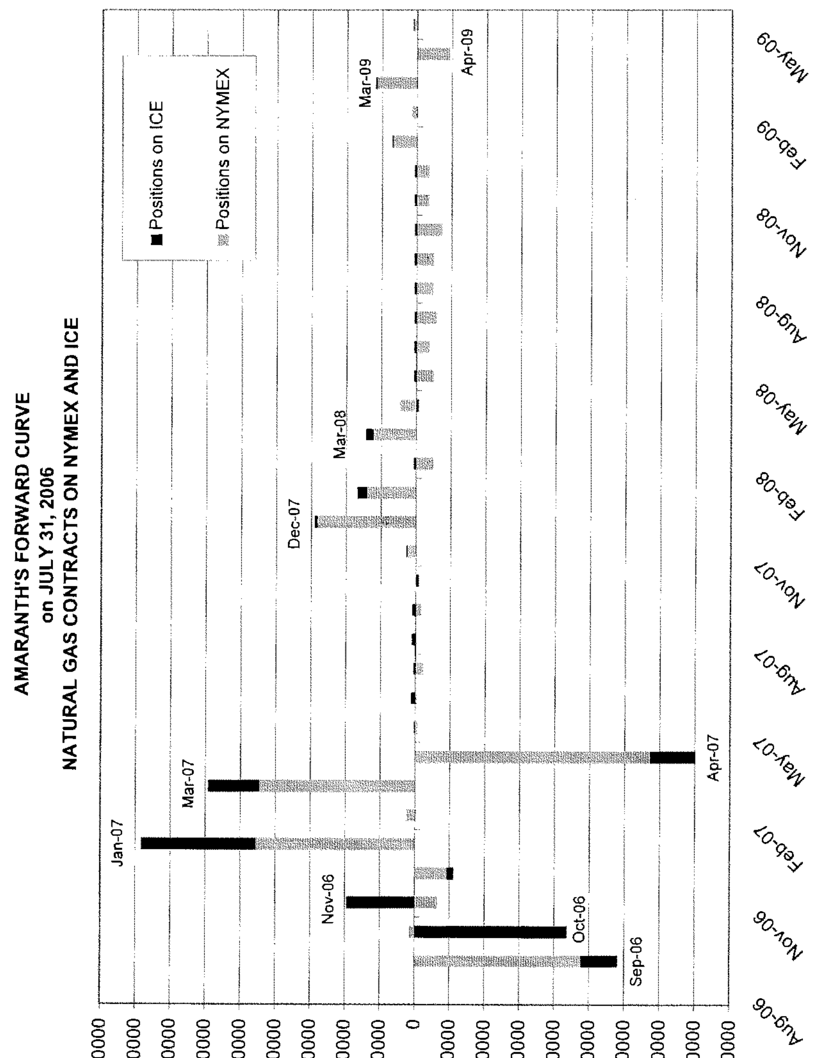
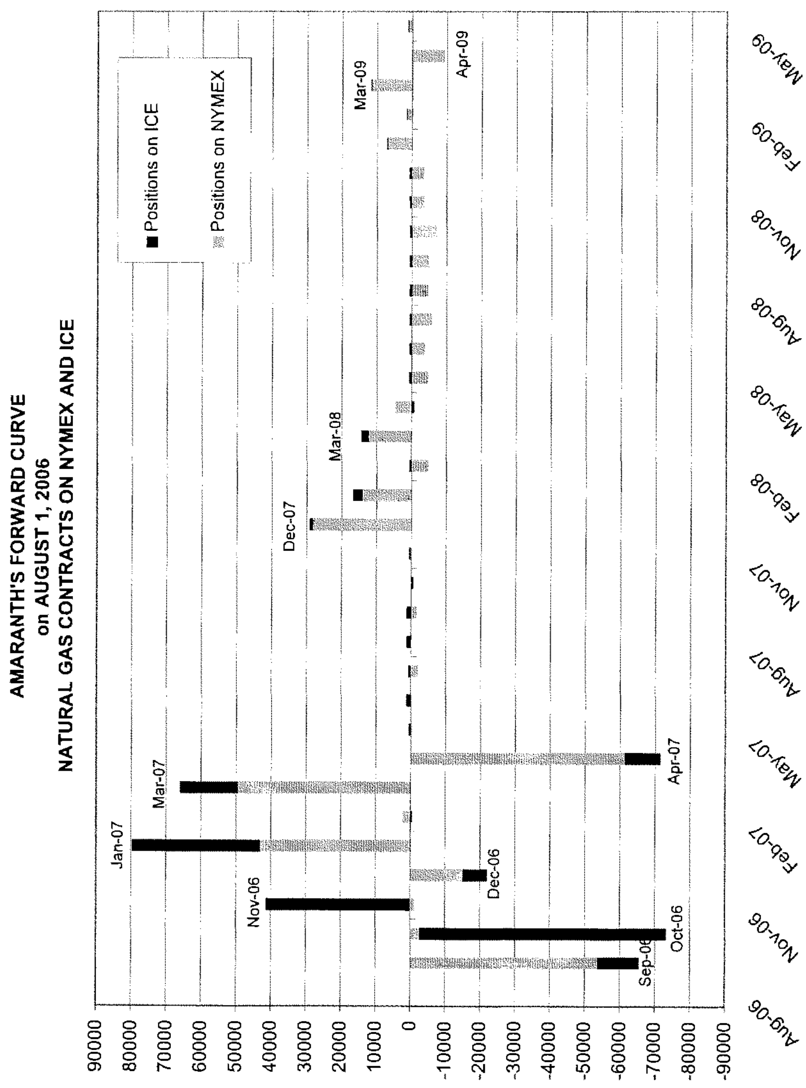
Dec-07
Mar-08
Mar-09
Apr-09

V-10


AMARANTH'S FORWARD CURVE
on JULY 31, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
Jan-07
Mar-07
Nov-06
Oct-06
Sep-06
Apr-07
Dec-07
Mar-08
Mar-09
Apr-09
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09

V-11


AMARANTH'S FORWARD CURVE
on AUGUST 1, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
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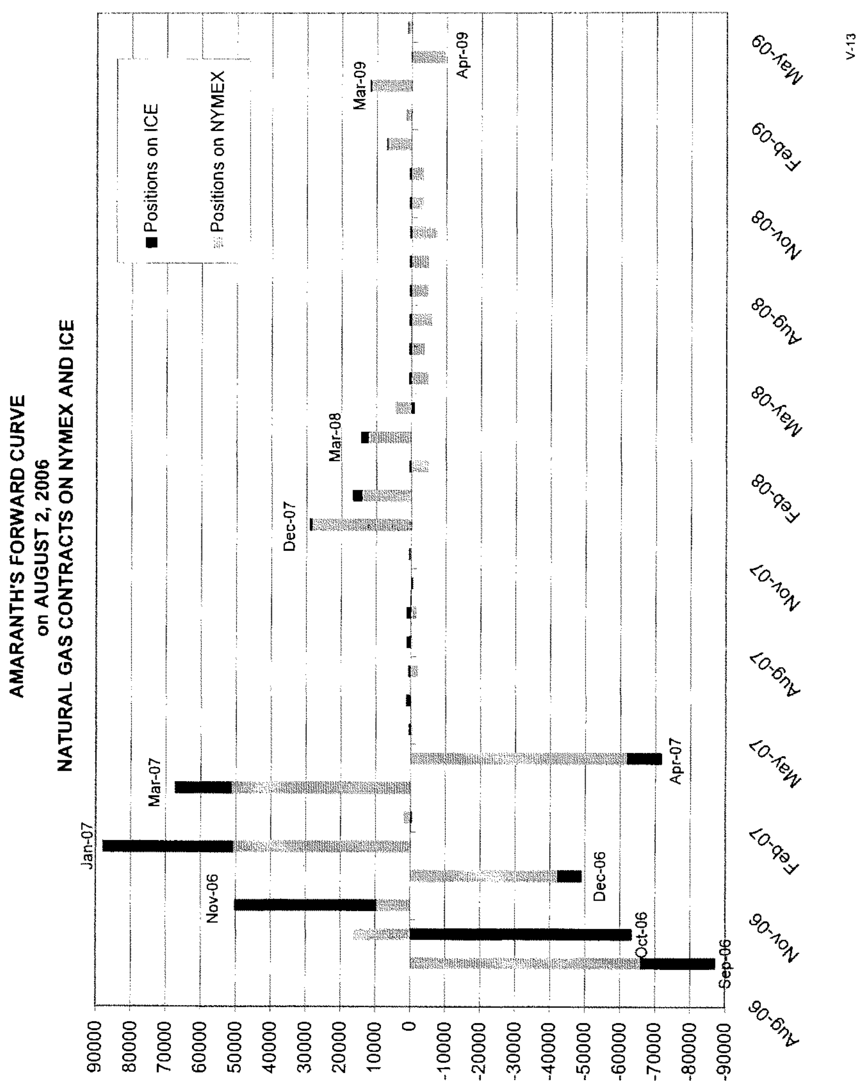
Mar-09
Apr-09

V-12


AMARANTH'S FORWARD CURVE
on AUGUST 2, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
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70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
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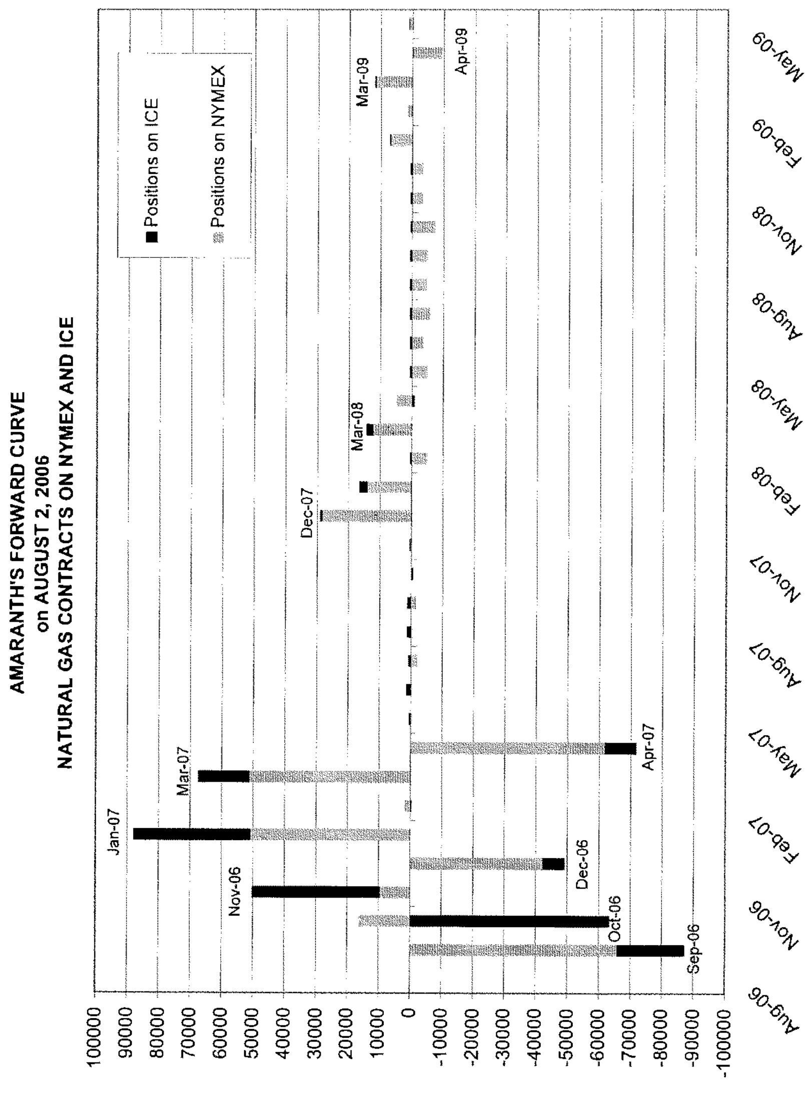
Mar-09
Apr-09
V-13


AMARANTH'S FORWARD CURVE
on AUGUST 2, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
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60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
-100000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
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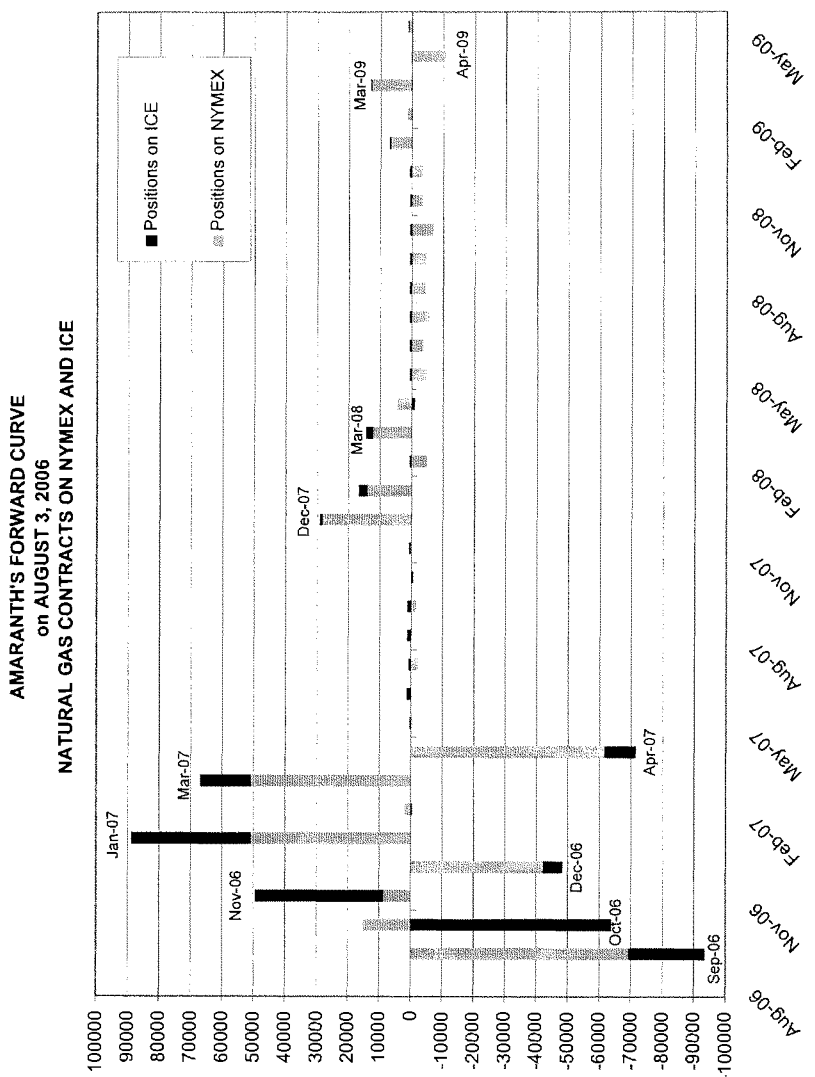
Apr-09

V-14


AMARANTH'S FORWARD CURVE
on AUGUST 3, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
Jan-07
Mar-07
Nov-06
Dec-07
Mar-08
Mar-09
Apr-09
Apr-07
Dec-06
Oct-06
Sep-06
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
-100000
Aug-06
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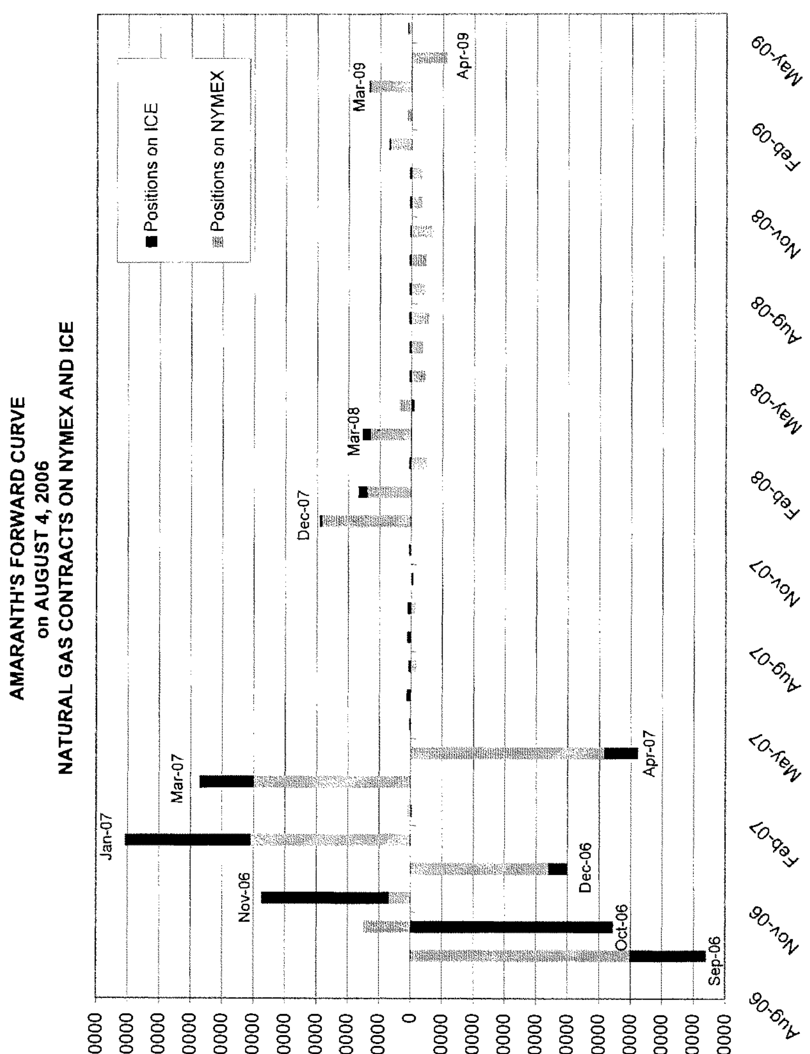
Nov-08
Feb-09
May-09

V-15


AMARANTH'S FORWARD CURVE
on AUGUST 4, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
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70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
-100000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
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Jan-07
Mar-07
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Dec-07
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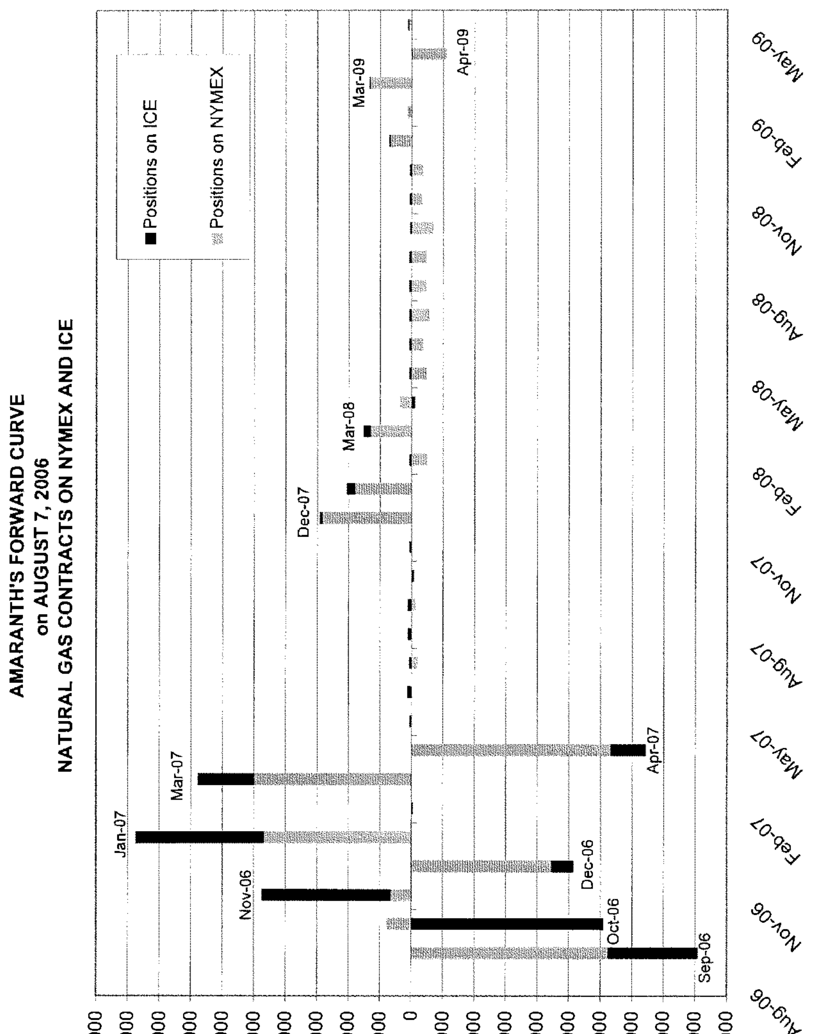
Mar-09
Apr-09

V-16


AMARANTH'S FORWARD CURVE
on AUGUST 7, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
Jan-07
Mar-07
Nov-06
Dec-07
Mar-08
Mar-09
Apr-09
Apr-07
Dec-06
Oct-06
Sep-06
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
-100000
Aug-06
Nov-06
Feb-07
May-07
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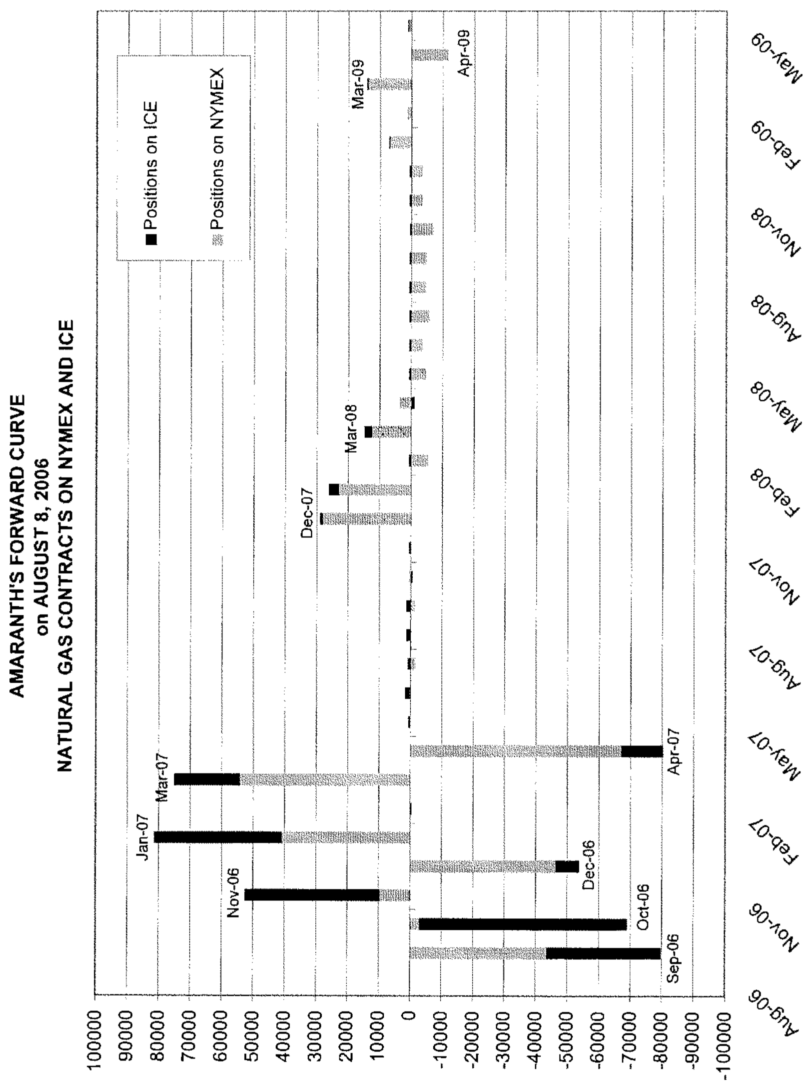
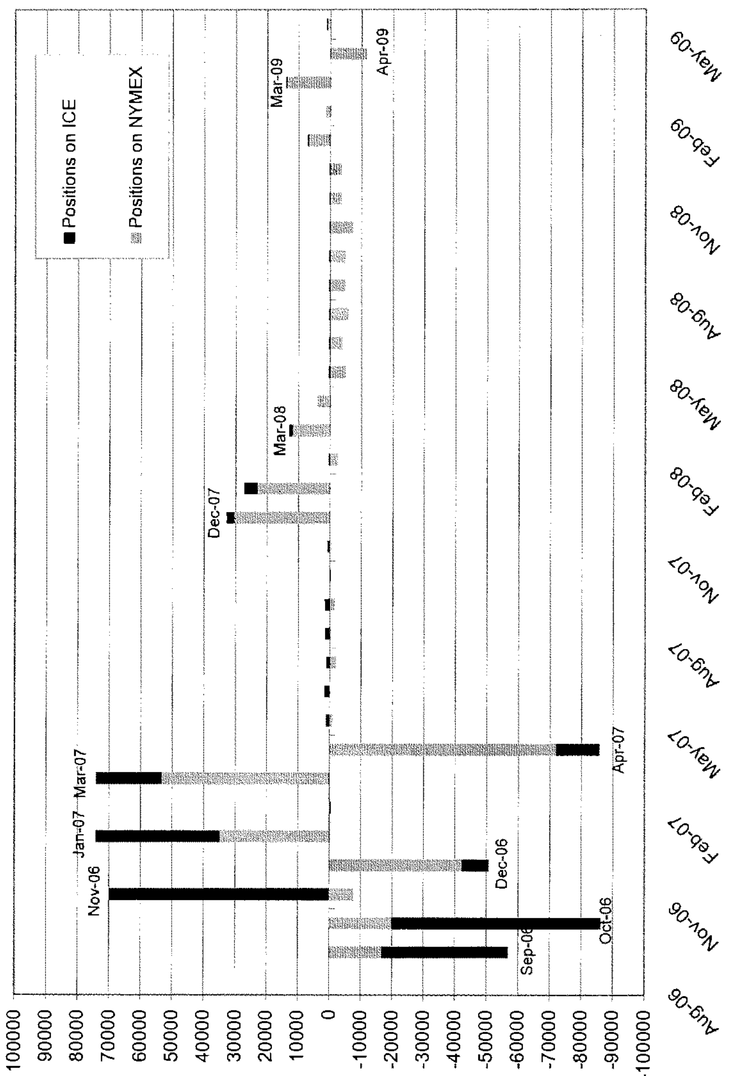
Nov-08
Feb-09
May-09


AMARANTH'S FORWARD CURVE
on AUGUST 8, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Mar-09
Apr-09
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
-100000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09

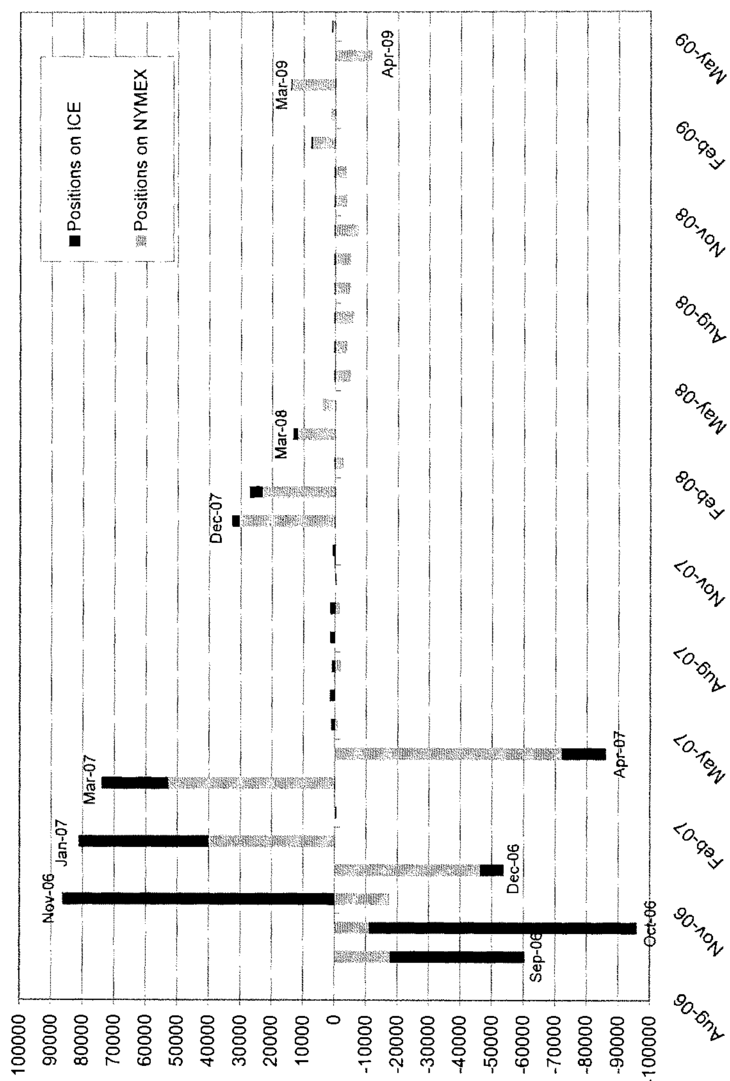
V-18

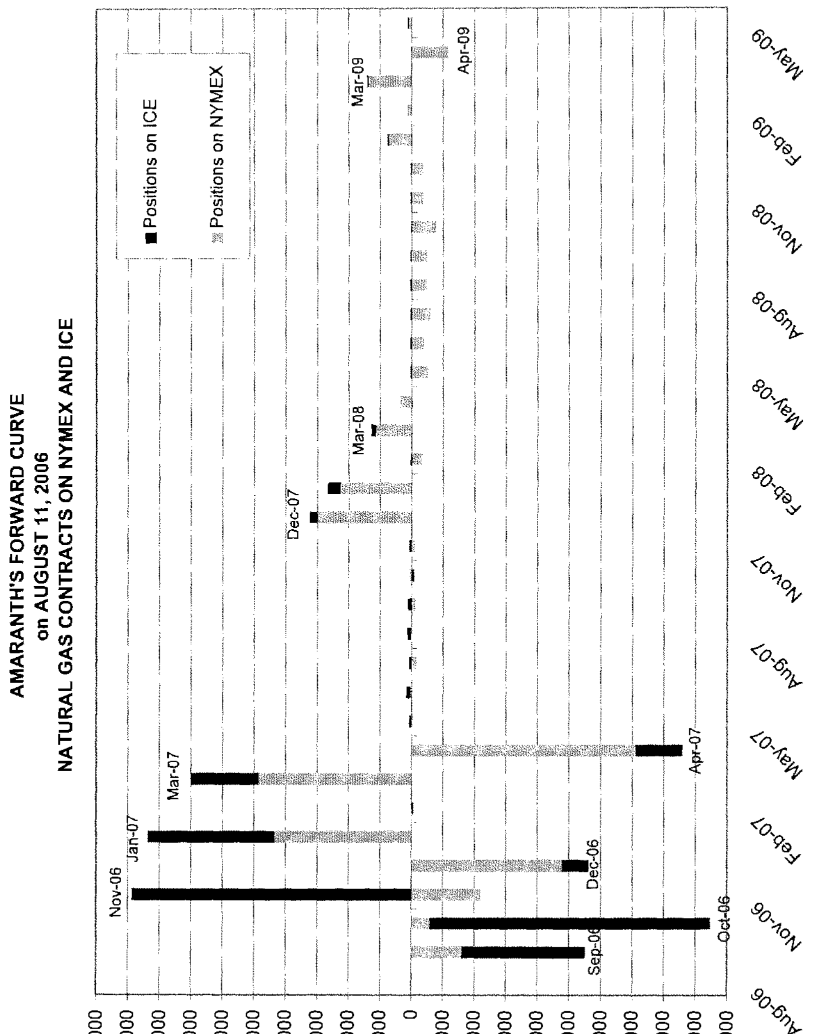
AMARANTH'S FORWARD CURVE
on AUGUST 9, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE



V-19

AMARANTH'S FORWARD CURVE
on AUGUST 10, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE

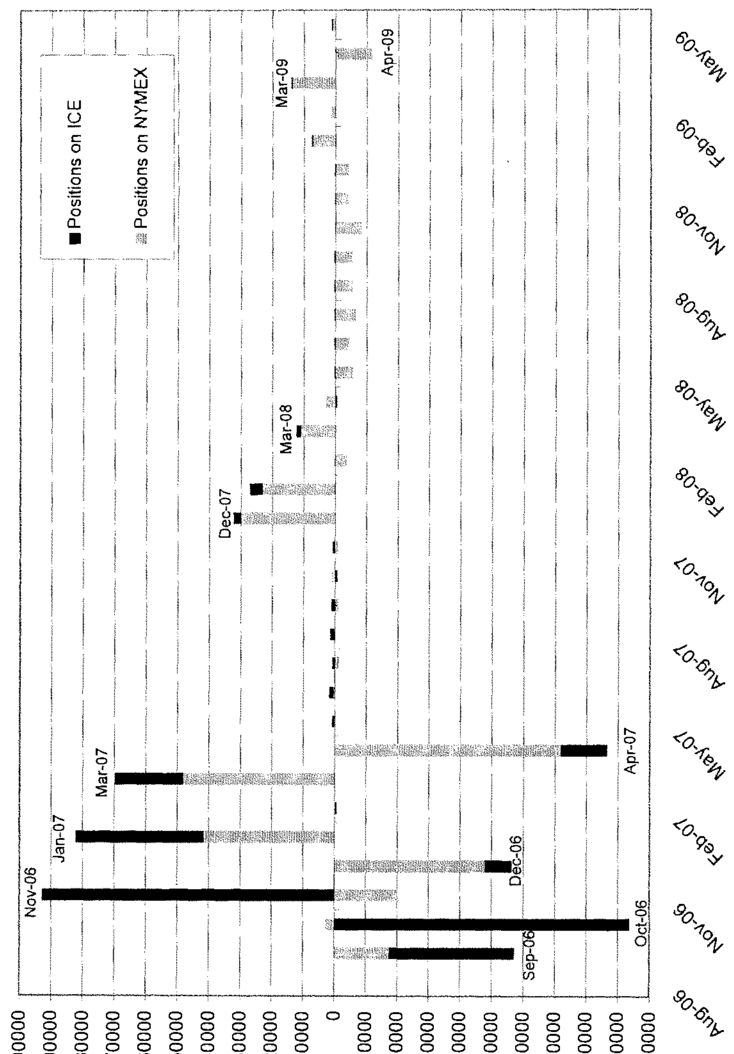




AMARANTH'S FORWARD CURVE
on AUGUST 11, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-20000
-30000
-40000
-50000
-60000
-70000
-80000
-90000
-100000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Mar-09
Apr-09

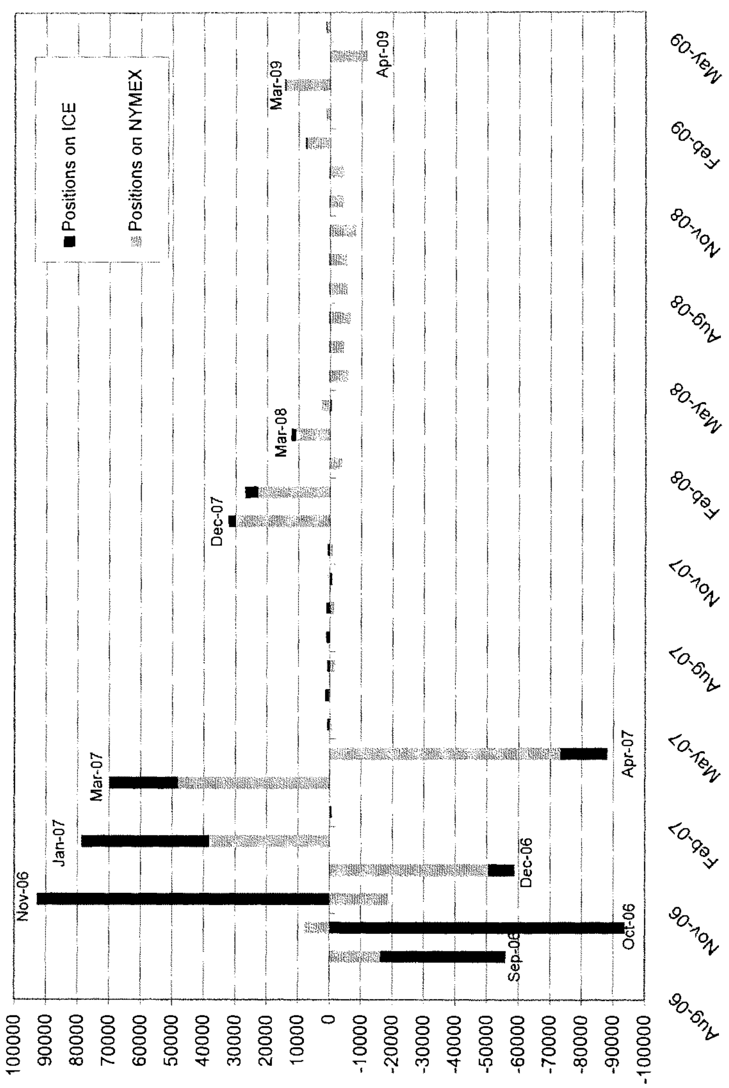
V-21

AMARANTH'S FORWARD CURVE
on AUGUST 14, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE



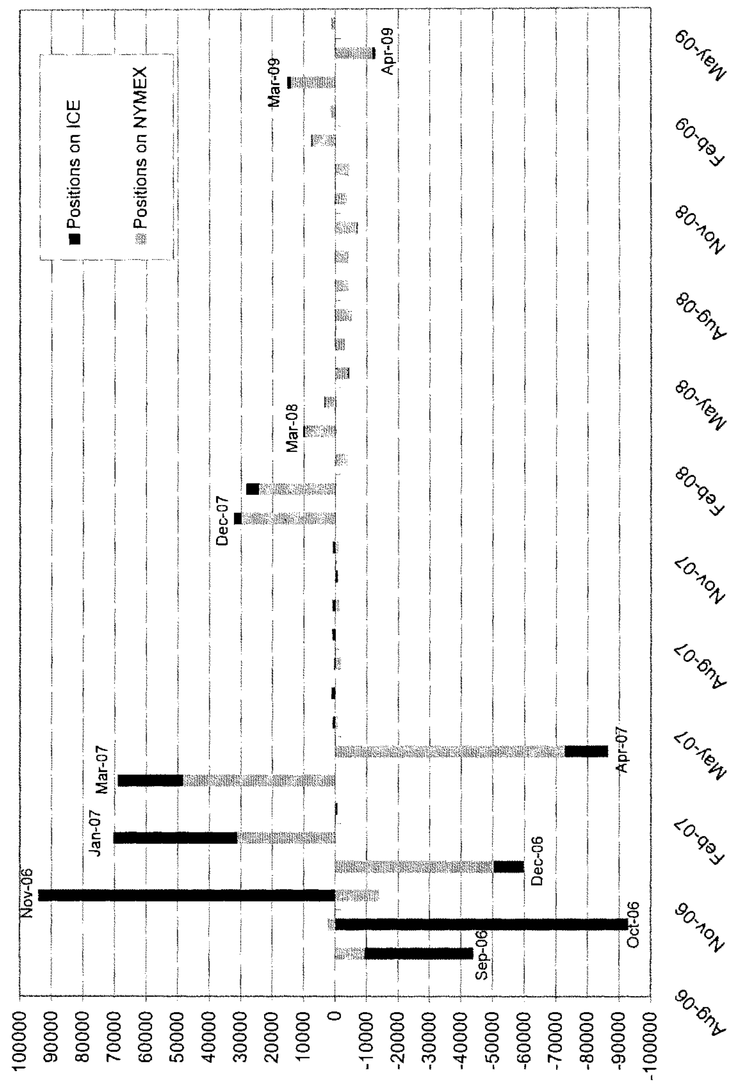
V-22

AMARANTH'S FORWARD CURVE
on AUGUST 15, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE



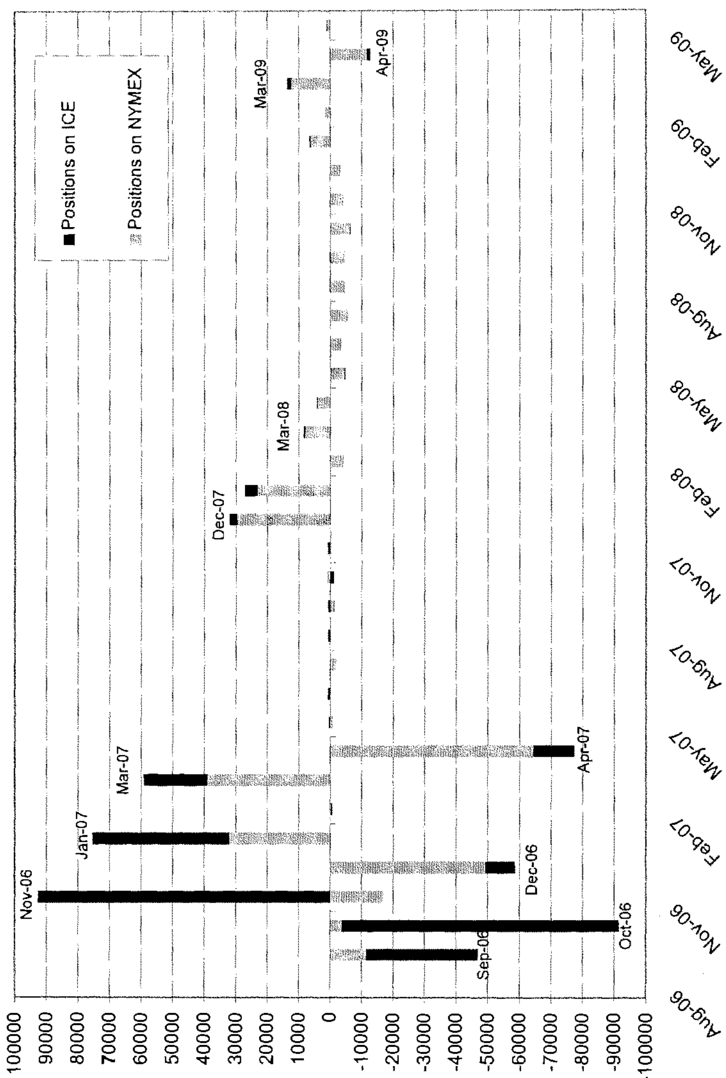
V-23

AMARANTH'S FORWARD CURVE
on AUGUST 16, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE



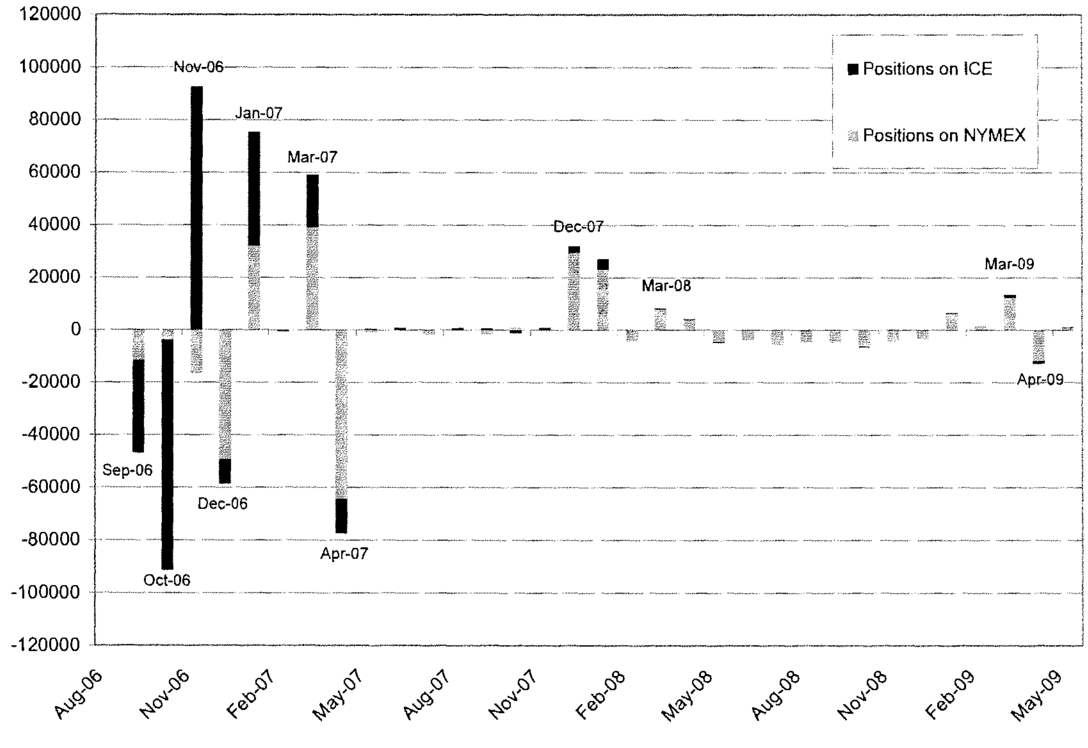
V-24

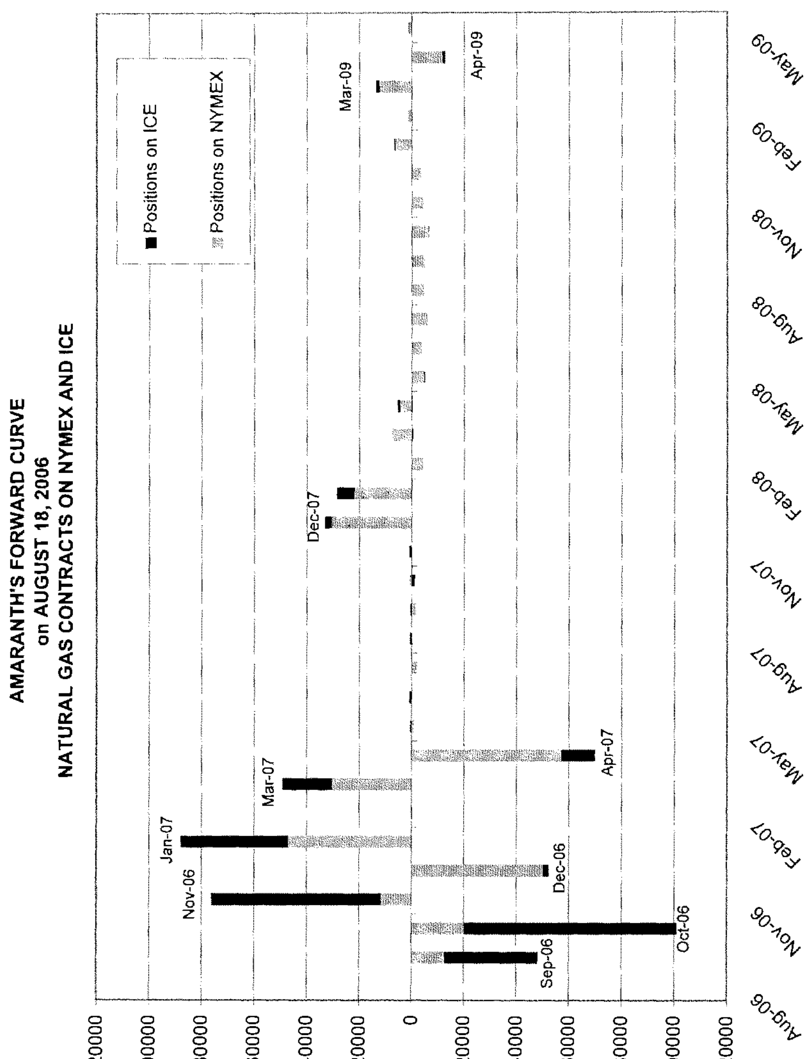
AMARANTH'S FORWARD CURVE
on AUGUST 17, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE



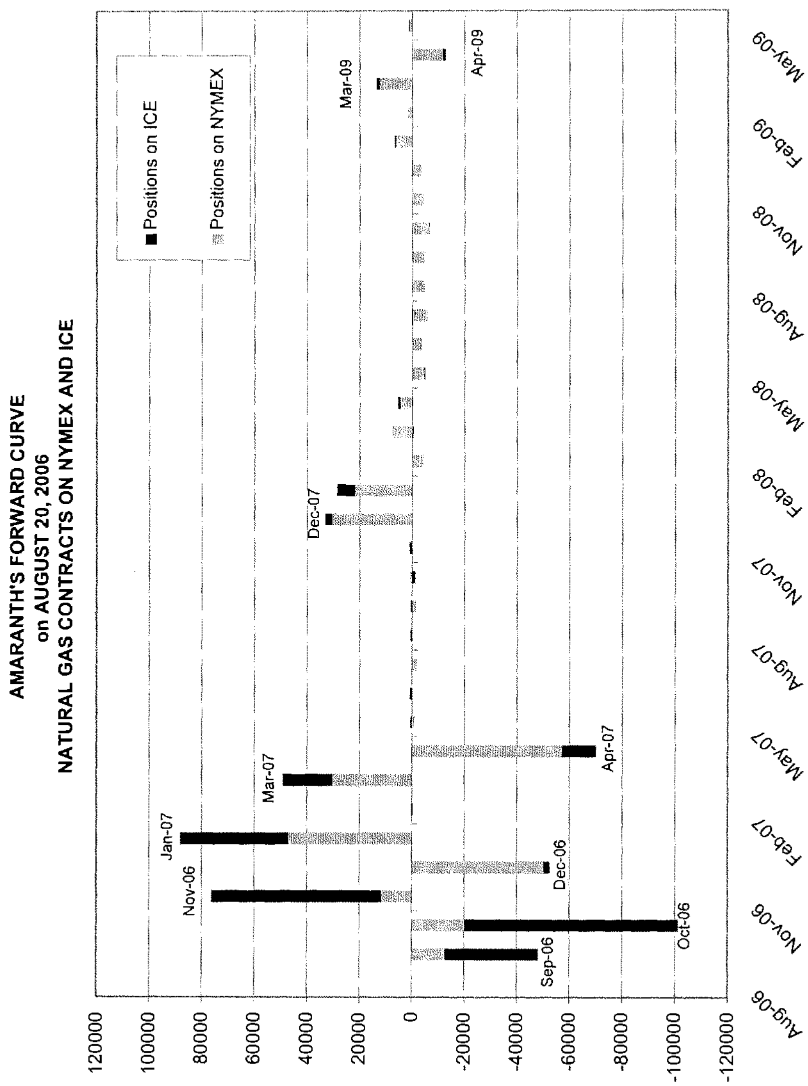
V-25

AMARANTH'S FORWARD CURVE
on AUGUST 17, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE

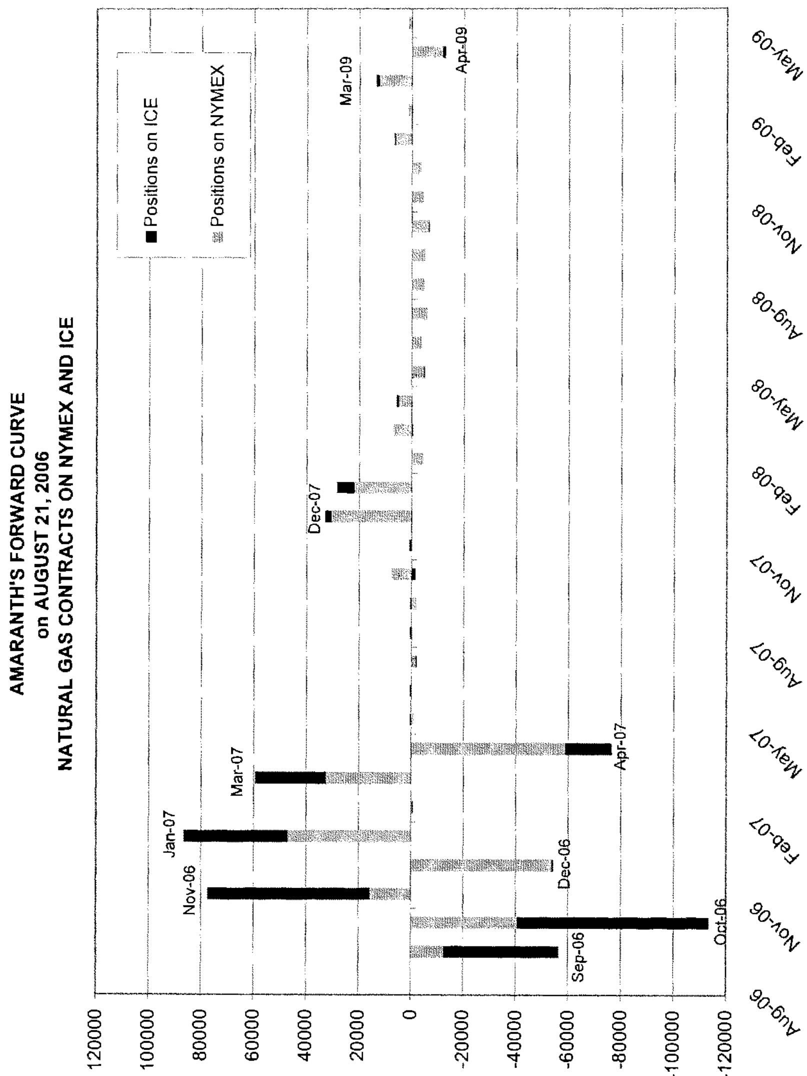



AMARANTH'S FORWARD CURVE
on AUGUST 18, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
120000
100000
80000
60000
40000
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-09
Apr-09

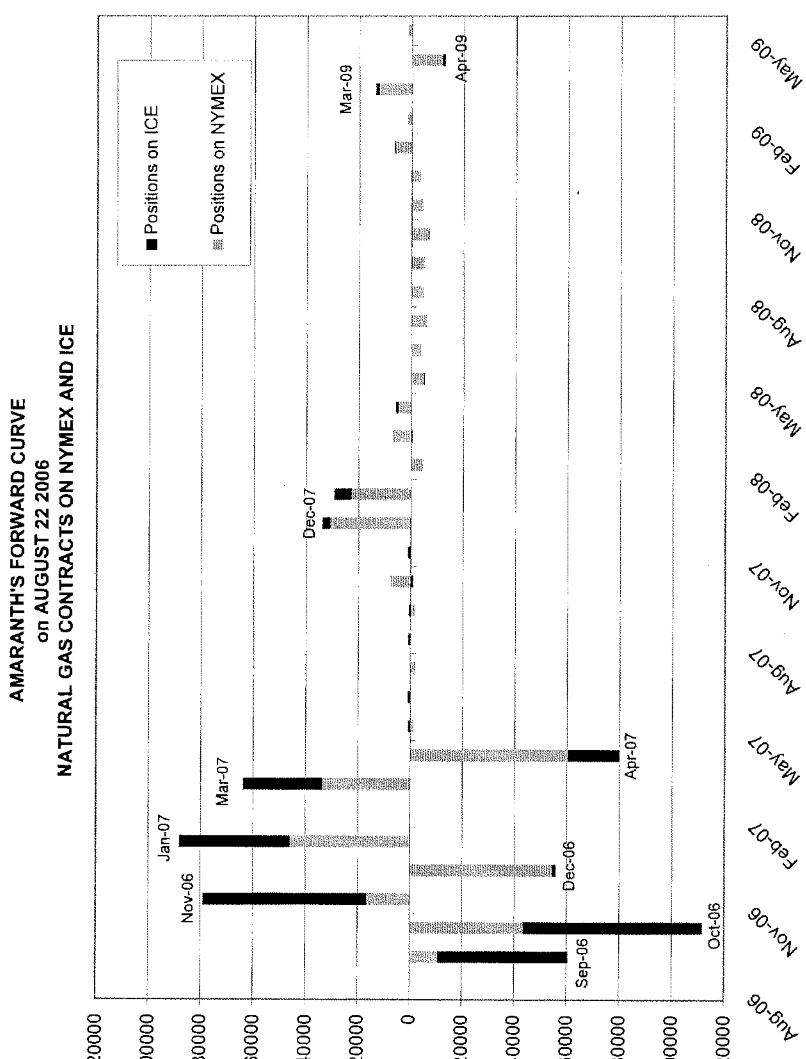
V-27


AMARANTH'S FORWARD CURVE
on AUGUST 20, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
120000
100000
80000
60000
40000
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-09
Apr-09

V-28

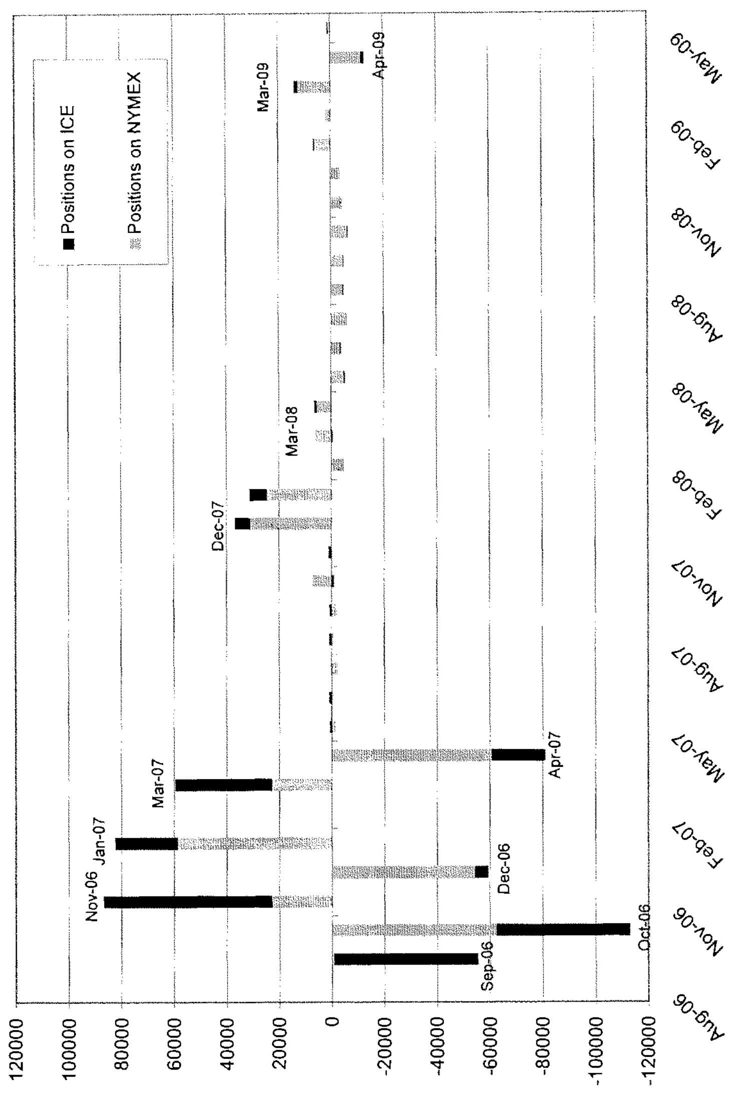

AMARANTH'S FORWARD CURVE
on AUGUST 21, 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
120000
100000
80000
60000
40000
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-09
Apr-09

V-29


AMARANTH'S FORWARD CURVE
on AUGUST 22 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
120000
100000
80000
60000
40000
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-09
Apr-09

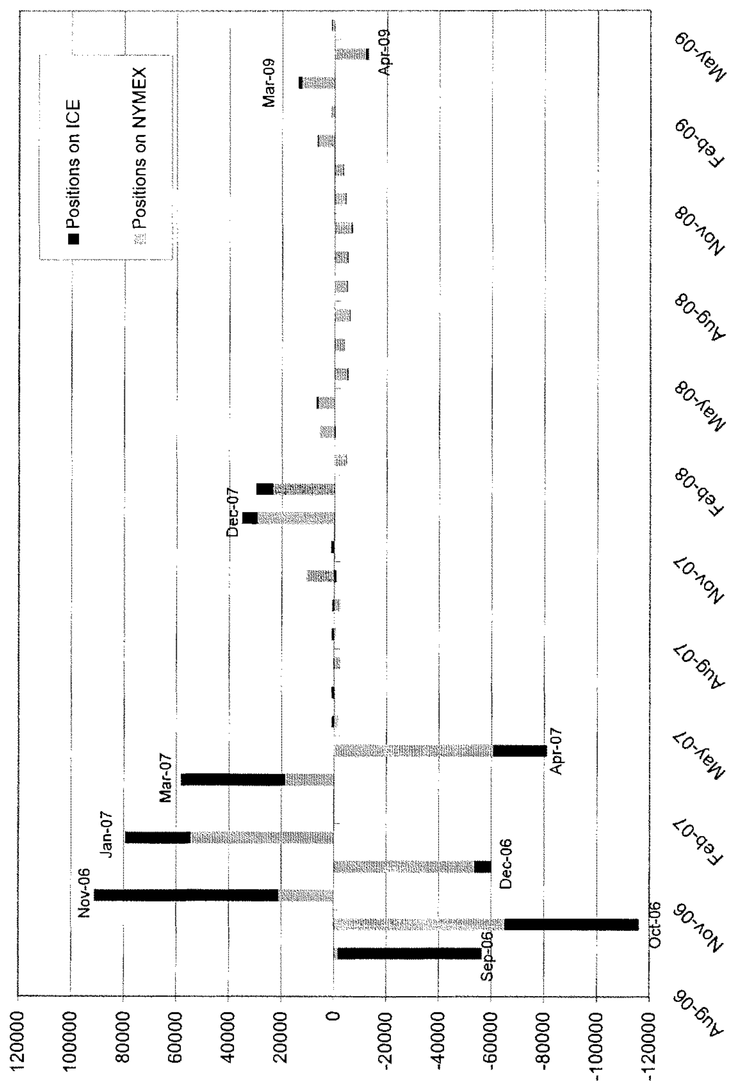
V-30

AMARANTH'S FORWARD CURVE
on AUGUST 23 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE

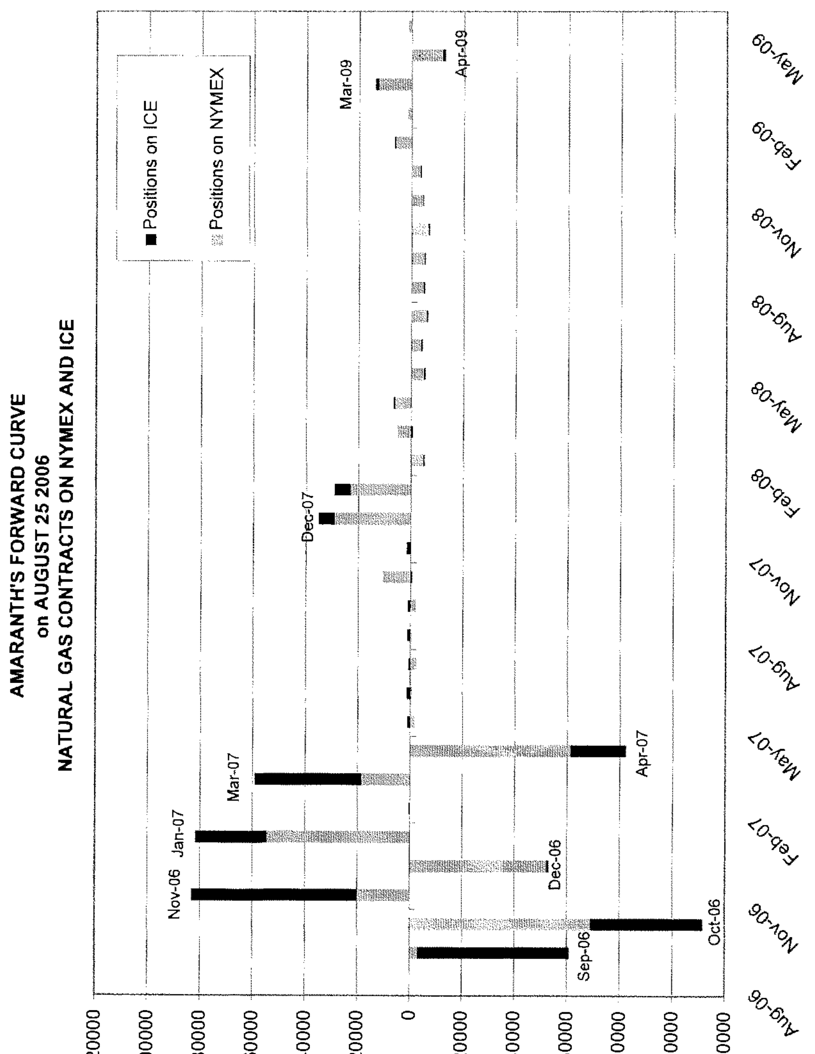


V-31

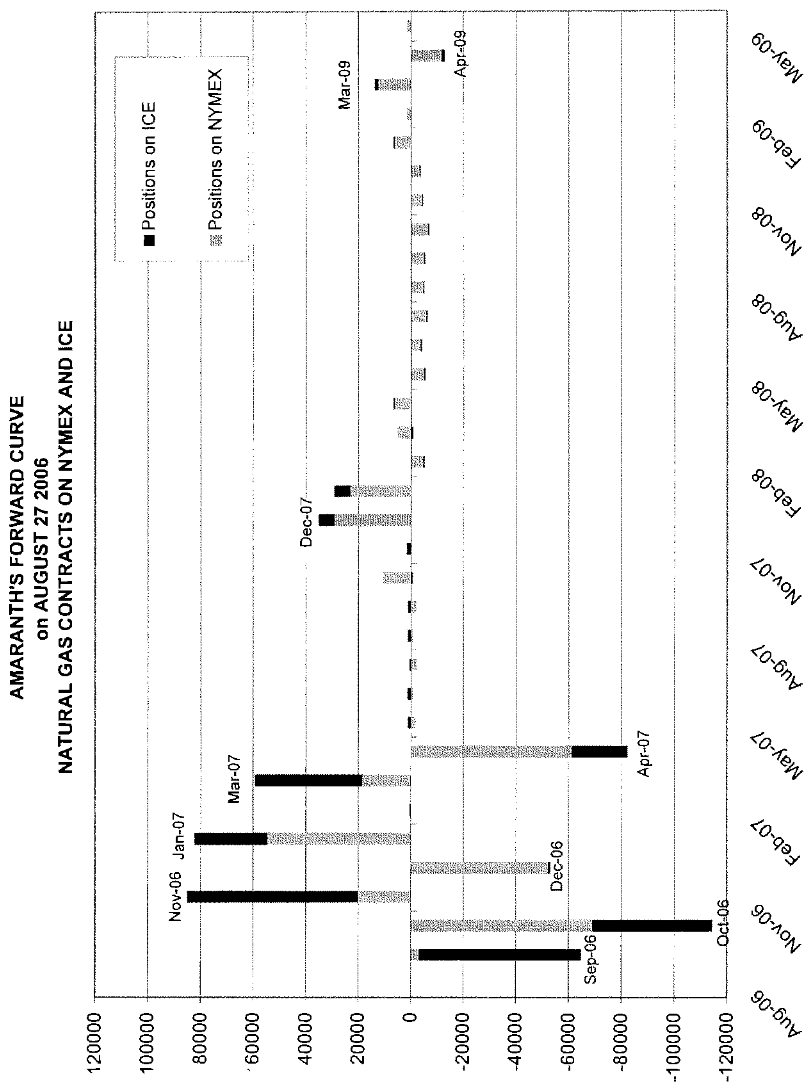
AMARANTH'S FORWARD CURVE
on AUGUST 24 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE



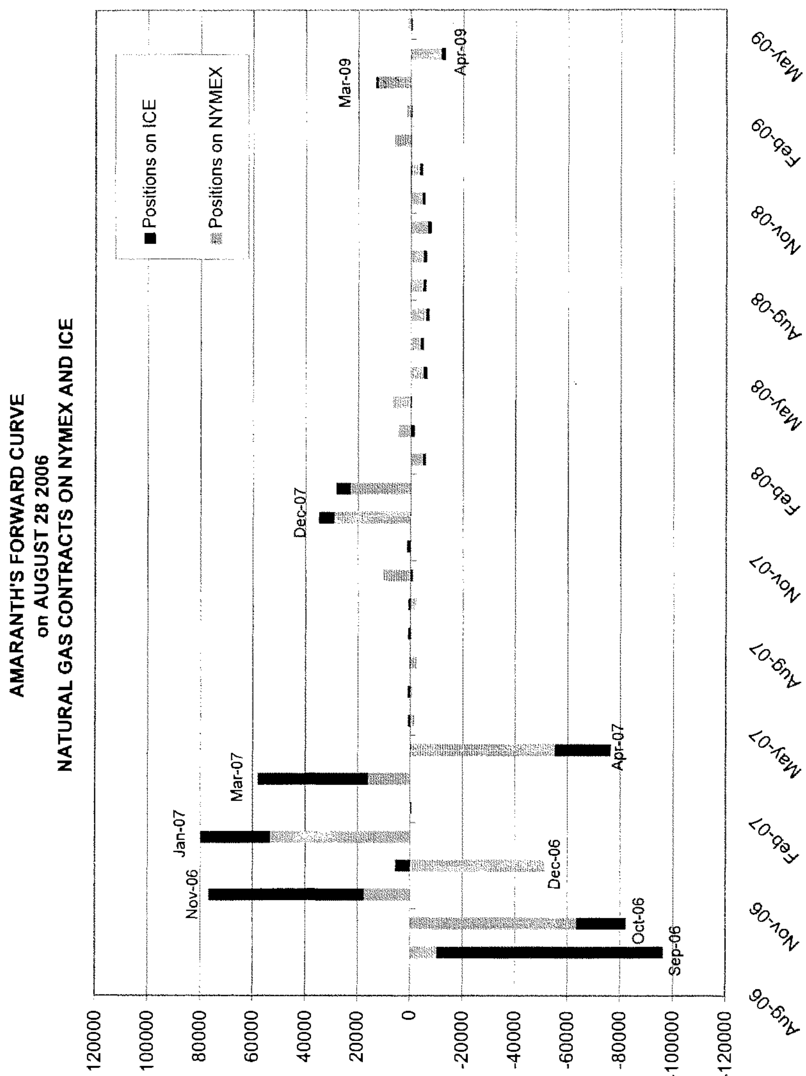
V-32


AMARANTH'S FORWARD CURVE
on AUGUST 25 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
120000
100000
80000
60000
40000
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-09
Apr-09

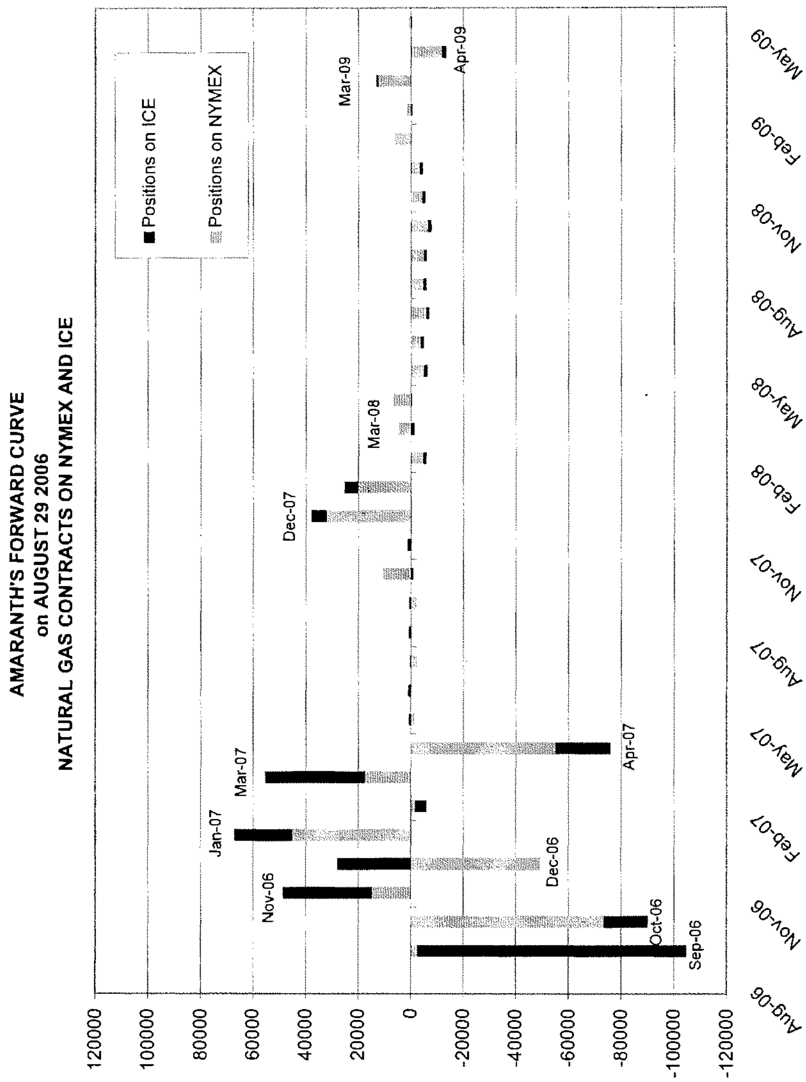
V-33


AMARANTH'S FORWARD CURVE
on AUGUST 27 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
120000
100000
80000
60000
40000
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-09
Apr-09

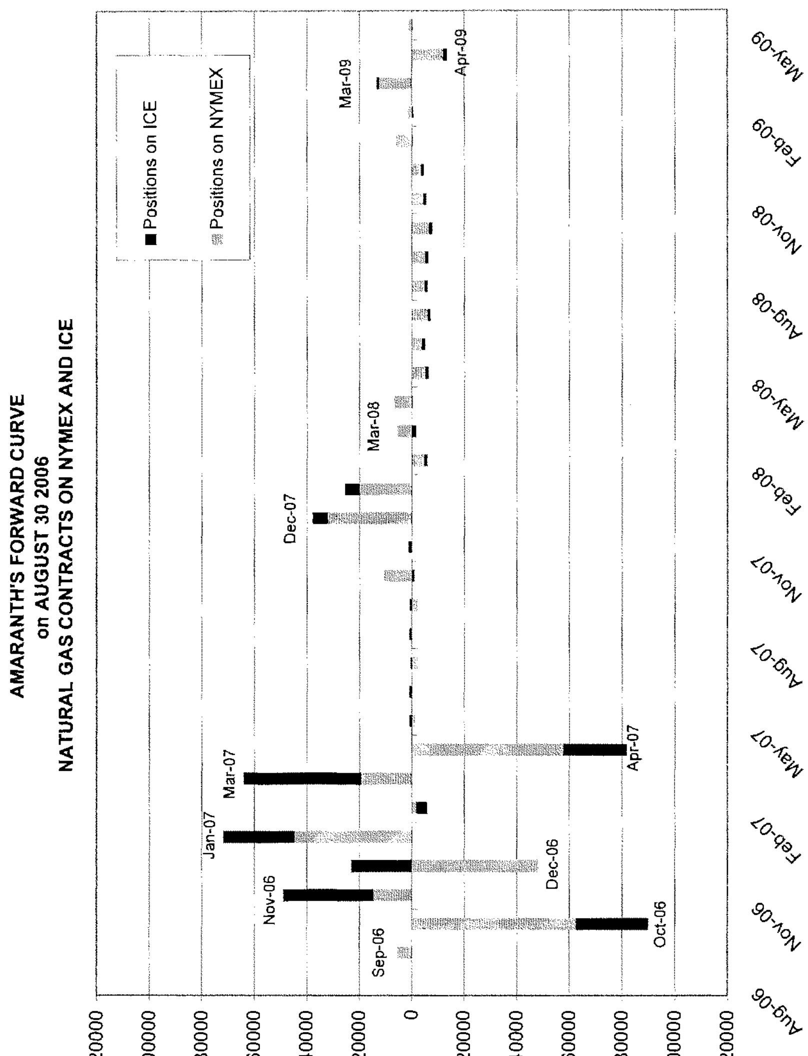
V-34


AMARANTH'S FORWARD CURVE
on AUGUST 28 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
120000
100000
80000
60000
40000
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-09
Apr-09

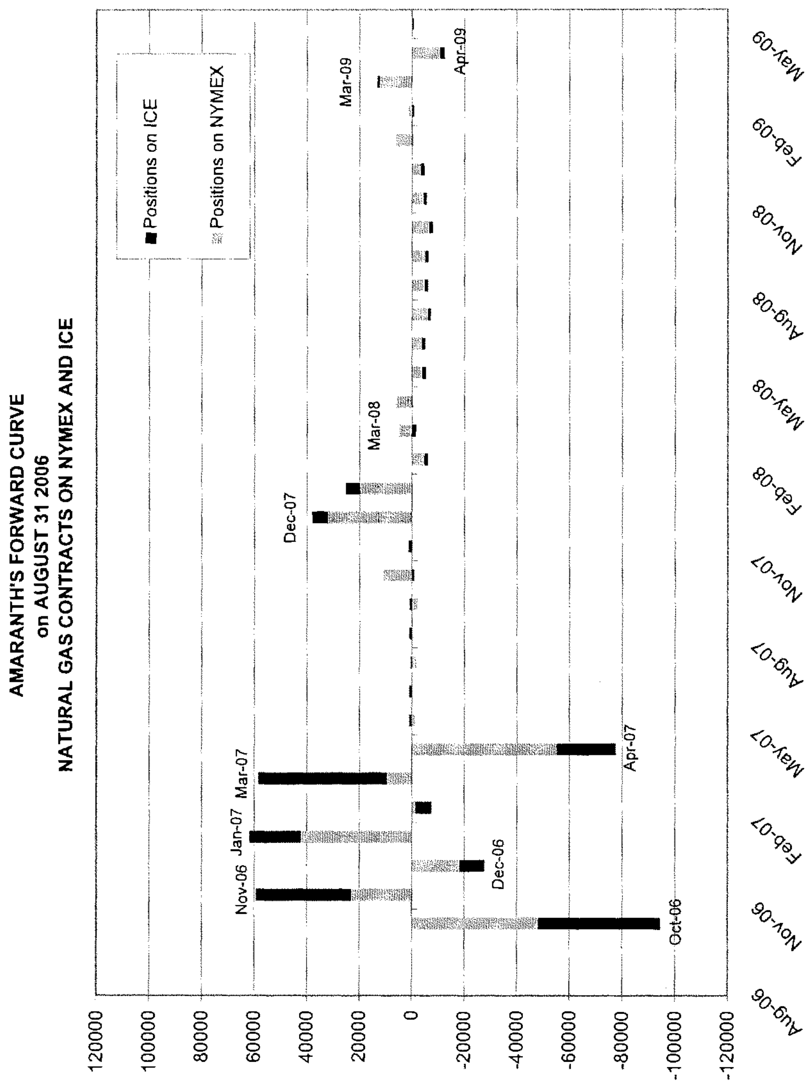
V-35


AMARANTH'S FORWARD CURVE
on AUGUST 29 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
120000
100000
80000
60000
40000
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Mar-09
Apr-09

V-36

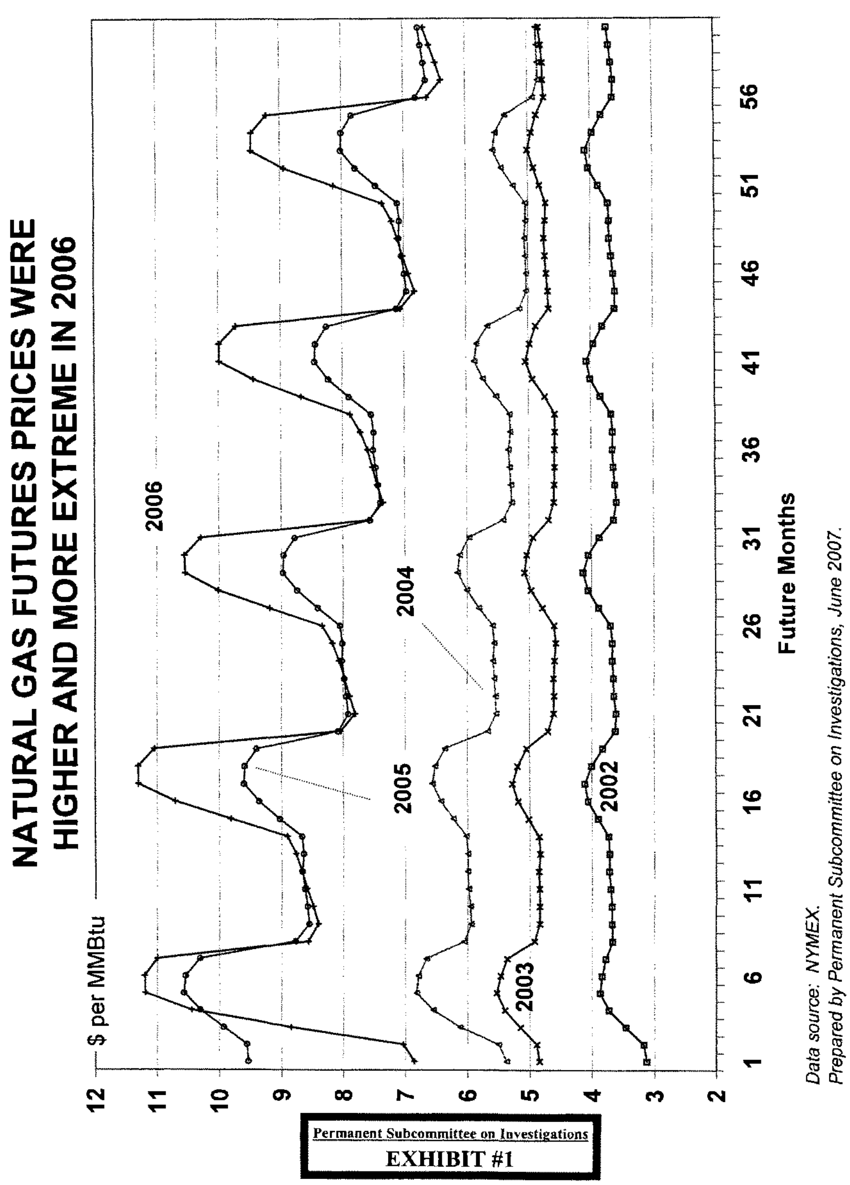

AMARANTH'S FORWARD CURVE
on AUGUST 30 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
120000
100000
80000
60000
40000
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Mar-09
Apr-09

V-37

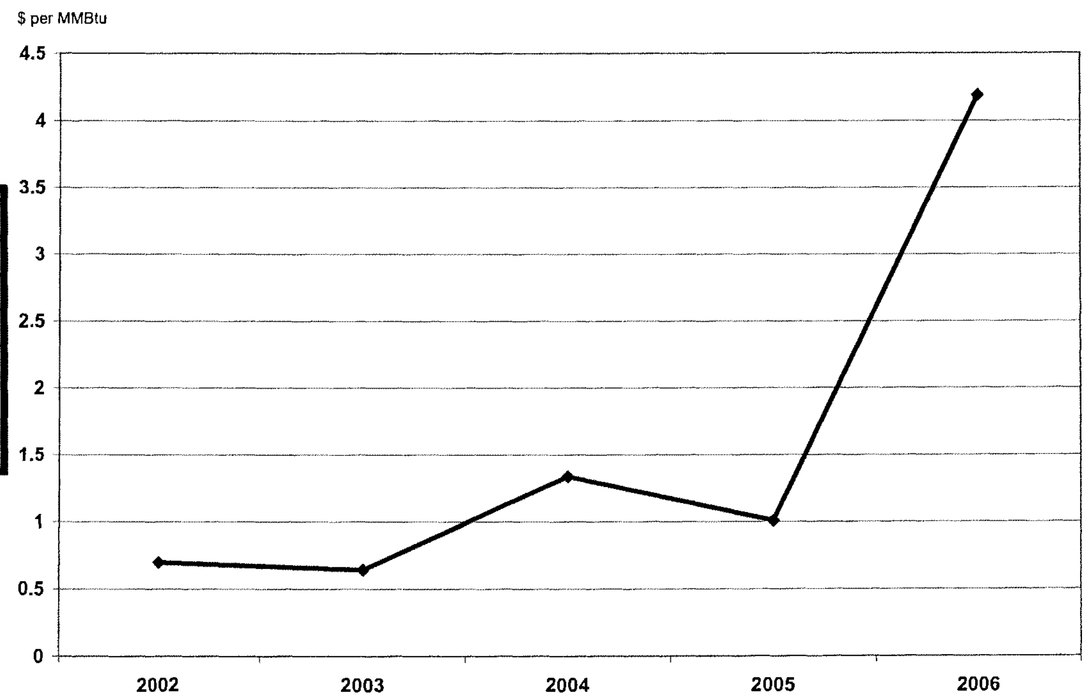


AMARANTH'S FORWARD CURVE
on AUGUST 31 2006
NATURAL GAS CONTRACTS ON NYMEX AND ICE
Positions on ICE
Positions on NYMEX
120000
100000
80000
60000
40000
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
Aug-06
Nov-06
Feb-07
May-07
Aug-07
Nov-07
Feb-08
May-08
Aug-08
Nov-08
Feb-09
May-09
Oct-06
Nov-06
Dec-06
Jan-07
Mar-07
Apr-07
Dec-07
Mar-08
Mar-09
Apr-09

V-38


NATURAL GAS FUTURES PRICES WERE
HIGHER AND MORE EXTREME IN 2006
$ per MMBtu
12
11
10
9
8
7
6
5
4
3
2
2006
2005
2004
2003
2002
1
6
11
16
21
26
31
36
41
46
51
56
Future Months
Data source: NYMEX.
Prepared by Permanent Subcommittee on Investigations, June 2007.
Permanent Subcommittee on Investigations
EXHIBIT #1

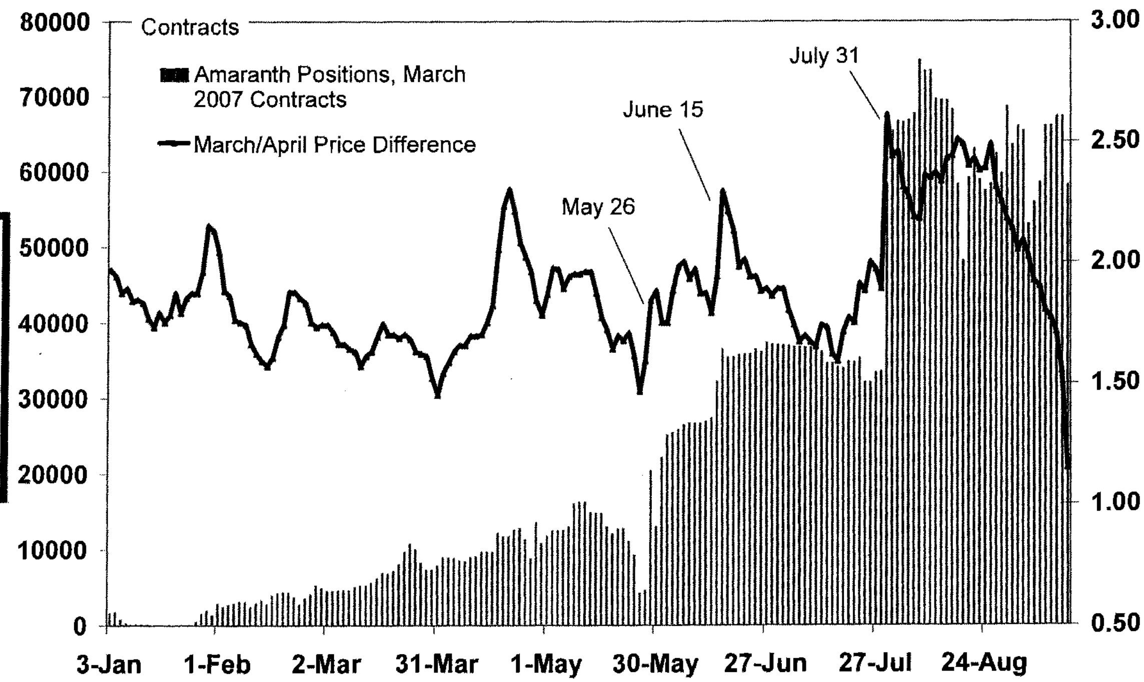
In mid-August of Each Year 2002 - 2006, the Difference in Contract Prices for Future Delivery of Natural Gas for the Next October and January



Data source: NYMEX
Prepared by Permanent Subcommittee on Investigations, June 2007

Permanent Subcommittee on Investigations
EXHIBIT #2

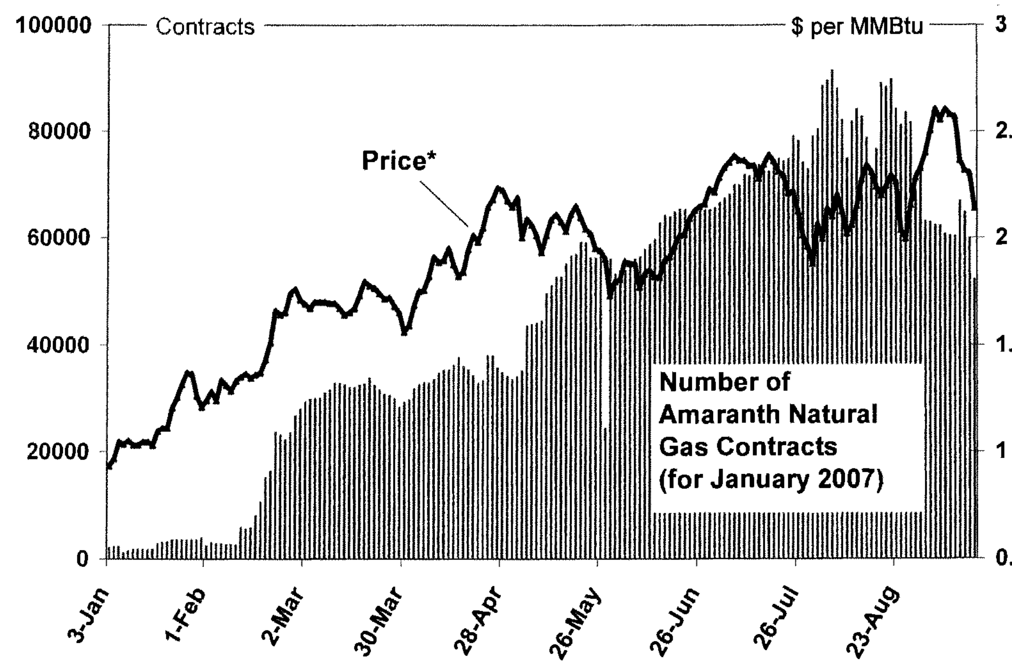
AMARANTH'S PURCHASES INCREASED PRICES



Amaranth's large purchases of the March and April 2007 contracts on May 26, June 14-15, and July 31, 2006, were a major cause of the price spread increases on those dates.
Data source: NYMEX.
Prepared by Permanent Subcommittee on Investigations. June 2007.

Permanent Subcommittee on Investigations
EXHIBIT #3

AMARANTH'S SIZE INCREASED PRICES



Amaranth's large purchases of January 2007 contracts, coupled with sales of Novermber 2006 contracts, increased the price spread between the two contracts.

** Price curve represents the difference in price between future contracts for January 2007 and November 2006.*

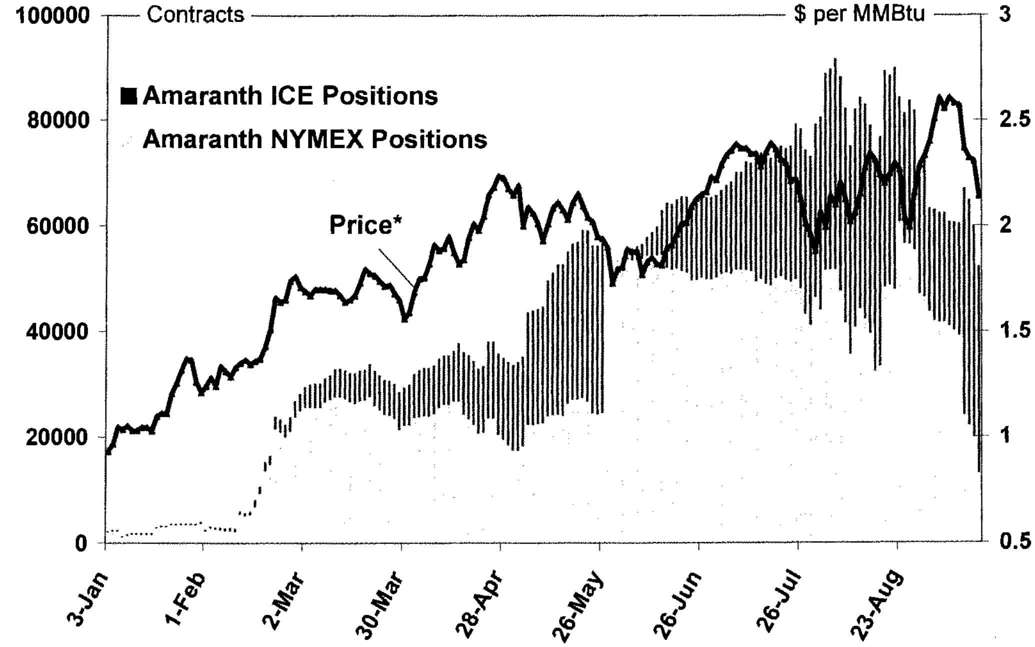
Data source: NYMEX.

Prepared by Permanent Subcommittee on Investigations, June 2007.

Permanent Subcommittee on Investigations

EXHIBIT #4a

NYMEX COULD NOT SEE AMARANTH'S ICE POSITIONS

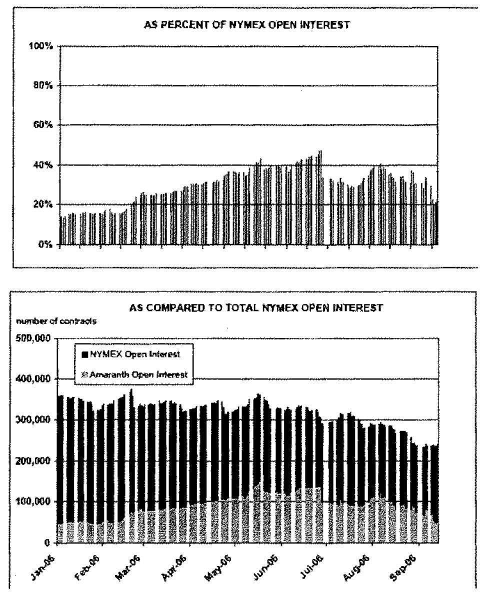


Amaranth's large sales of November 2006 futures contracts and purchases of roughly the same number of January 2007 futures contracts increased the price spread between the two contracts.
** Price curve represents the difference in price between future contracts for January 2007 and November 2006.*
Data source: NYMEX.
Prepared by Permanent Subcommittee on Investigations, June 2007.

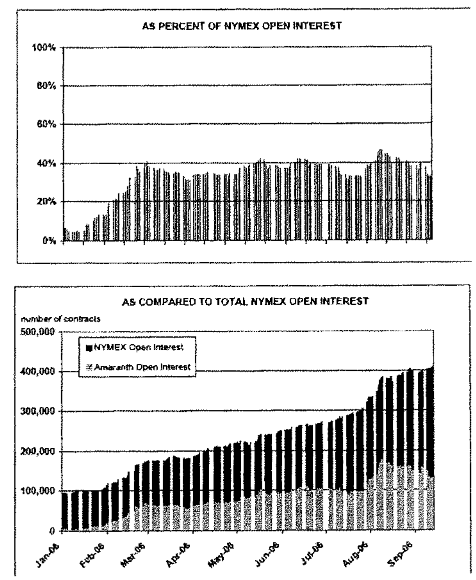
Permanent Subcommittee on Investigations
EXHIBIT #4b

Amaranth Held Very Large Amounts of Outstanding Natural Gas Futures Contracts (Open Interest)

AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR 2006



AMARANTH OPEN INTEREST ON NYMEX
NATURAL GAS FUTURES CONTRACT FOR WINTER 2006-07

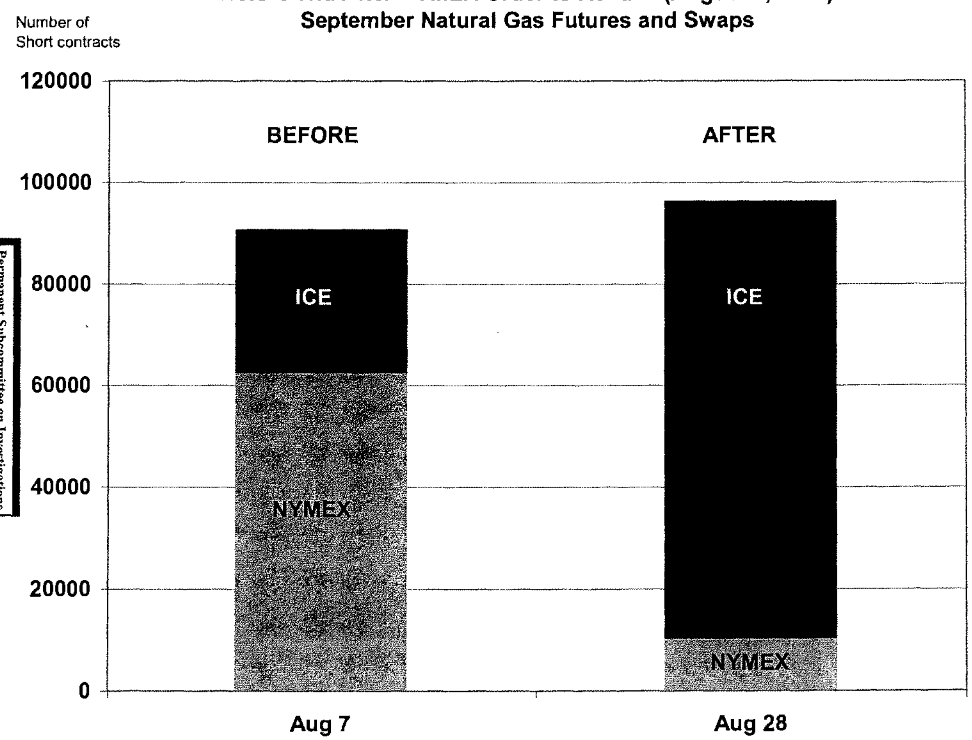


Prepared by Permanent Subcommittee on Investigations, June 2007.

Permanent Subcommittee on Investigations
EXHIBIT #5

Permanent Subcommittee on Investigations
EXHIBIT #6

Amaranth Positions on NYMEX and ICE
Before and After NYMEX Order to Reduce (August 8, 2006)
September Natural Gas Futures and Swaps



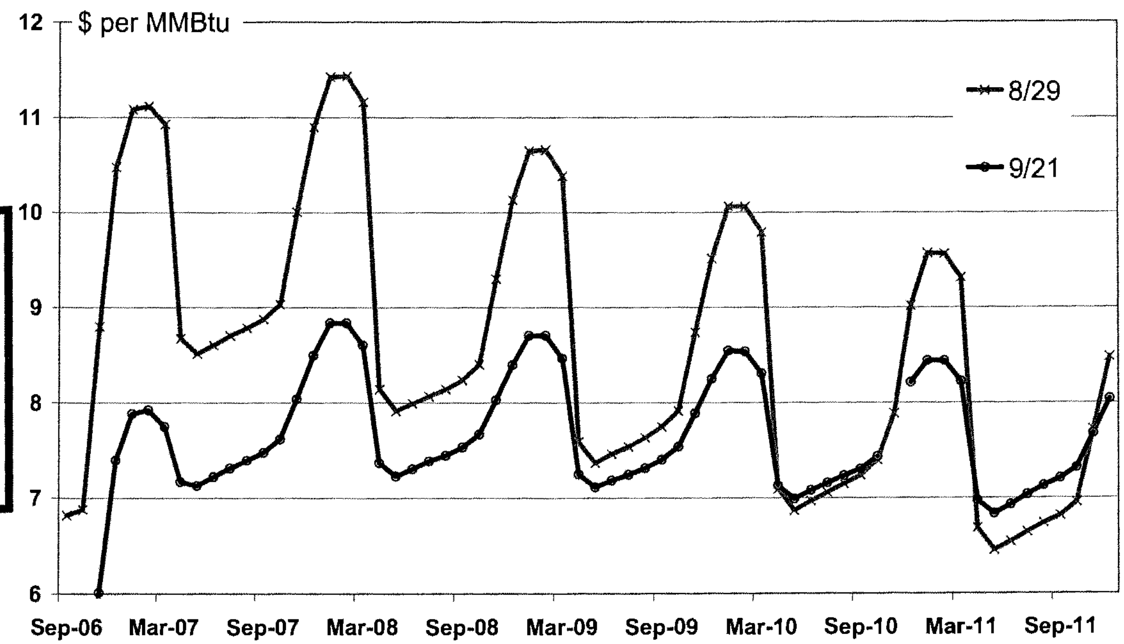
Data source: NYMEX, ICE
Prepared by Permanent Subcommittee on Investigations, June 2007

"UNTIL THEY MONITOR SWAPS NO BIG DEAL"

- Trader commenting on a possible CFTC inquiry, in instant message to Amaranth August 29, 2006

Permanent Subcommittee on Investigations
EXHIBIT #7

NATURAL GAS FUTURES PRICES FELL AS AMARANTH COLLAPSED



Natural gas futures prices were fell sharply as Amaranth collapsed in early September 2006. Both the absolute level of prices and the difference between the winter and summer prices dropped. Data source: NYMEX.
Prepared by Permanent Subcommittee on Investigations, June 2007

Permanent Subcommittee on Investigations
EXHIBIT #8

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

SELECTED EXCERPTS
FROM
INSTANT MESSAGES AND EMAILS
RELATED TO
AMARANTH ADVISORS LLC

Permanent Subcommittee on Investigations
EXHIBIT #9

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Participants:
"Brian Hunter," Amaranth head energy trader
[redacted]" Unidentified trader

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Thursday, April 13, 2006, 1:32:58 PM EDT

[redacted]: what do you think buddy
[redacted]: classic short squeeze?

Brian Hunter: yup
Brian Hunter: Arnold buying v/f [October/January spread] all day …

[redacted]: when do you put the boot to v/f
[redacted]: teach arnold a lesson on whats right and wrong

[redacted] = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Thursday, April 13, 2006 1:33 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "CRUMMERTD"; BHUNTER@AMARANTHLLC.COM

X-ZANTAZ-MESSAGE-DATE: 04/13/2006 17:32:58; 04/13/2006 17:33:05; 04/13/2006 17:37:47; 04/13/2006 17:37:53; 04/13/2006 17:38:46; 04/13/2006 17:38:51; 04/13/2006 17:39:07; 04/13/2006 17:39:26; 04/13/2006 17:40:35; 04/13/2006 17:41:02; 04/13/2006 17:41:54; 04/13/2006 17:41:57; 04/13/2006 17:42:02; 04/13/2006 17:42:07; 04/13/2006 17:42:11; 04/13/2006 17:42:15; 04/13/2006 17:42:21; 04/13/2006 17:42:49; 04/13/2006 17:43:08; 04/13/2006 17:43:16; 04/13/2006 17:43:34; 04/13/2006 17:43:36; 04/13/2006 17:44:39; 04/13/2006 17:44:41; 04/13/2006 17:44:47; 04/13/2006 17:44:52; 04/13/2006 17:46:11; 04/13/2006 17:46:22; 04/13/2006 17:46:36; 04/13/2006 17:46:47; 04/13/2006 17:47:14; 04/13/2006 17:47:21; 04/13/2006 17:48:05; 04/13/2006 17:48:19; 04/13/2006 17:48:29; 04/13/2006 17:48:34; 04/13/2006 17:48:38; 04/13/2006 17:48:46; 04/13/2006 17:48:50; 04/13/2006 17:49:24; 04/13/2006 17:49:28; 04/13/2006 17:49:34; 04/13/2006 17:49:42; 04/13/2006 17:49:46; 04/13/2006 17:49:51; 04/13/2006 17:49:54; !
04/13/2006 17:55:11; 04/13/2006 17:58:20; 04/13/2006 17:58:22; 04/13/2006 18:06:46; 04/13/2006 18:09:26; 04/13/2006 18:09:32; 04/13/2006 18:09:57
X-ZANTAZ-PARTICIPANT-IMNAMES: hunteramaranth; [redacted]
X-ZANTAZ-RECIPIENT-NAME: Brian Hunter; [redacted]
X-ZANTAZ-PARTICIPANT-IMNAMES: [redacted] hunteramaranth
X-ZANTAZ-SENDER-NAME: [redacted] Brian Hunter
X-ZANTAZ-GUID: CE6C70D2-8BA2-486C-BC02-85A85AAB5929799129498588 0814
X-ZANTAZ-URL: notused
X-OriginalArrivalTime: 13 Apr 2006 18:10:53.0075 (UTC) FILETIME=[9A1E6630:01C65F25]

IM Network: AOL IM

IM Users:

participant=[redacted]
participant=bhunter@amaranthllc.com "hunteramaranth"

IM Dialog:

Thursday, April 13, 2006 1:32:58 PM EDT crummertd started conversation.
Thursday, April 13, 2006 1:32:58 PM EDT Brian Hunter has entered the conversation.
Thursday, April 13, 2006 1:32:58 PM EDT [redacted] what do you think buddy Thursday, April 13, 2006 1:33:05 PM EDT [redacted] classic short sqeeze?
Thursday, April 13, 2006 1:37:47 PM EDT Brian Hunter: yup Thursday, April 13, 2006 1:37:53 PM EDT Brian Hunter: Arnold buying v/f all day Thursday, April 13, 2006 1:38:46 PM EDT Brian Hunter: 1.1 into AECO Thursday, April 13, 2006 1:38:51 PM EDT Brian Hunter: this weekend will have ALOT going in Thursday, April 13, 2006 1:39:07 PM EDT Brian Hunter: ABC still 1.7?
Thursday, April 13, 2006 1:39:26 PM EDT Brian Hunter: how much room in storagein Alberta Thursday, April 13, 2006 1:40:35 PM EDT [redacted] 310 without edson Thursday, April 13, 2006 1:40:35 PM EDT [redacted] most they can do is 20 my guess Thursday, April 13, 2006 1:41:02 PM EDT [redacted] abc should be lower for weekend Thursday, April 13, 2006 1:41:54 PM EDT Brian Hunter: 310 total Thursday, April 13, 2006 1:41:57 PM EDT Brian Hunter: how much left Thursday, April 13, 2006 1:42:02 PM EDT [redacted] sorry Thursday, April 13, 2006 1:42:07 PM EDT [redacted] 125 Thursday, April 13, 2006 1:42:11 PM EDT crummertd: to get to 310 Thursday, April 13, 2006 1:42:15 PM EDT [redacted] do the math Thursday, April 13, 2006 1:42:21 PM EDT [redacted] not good at 1.0/day Thursday, April 13, 2006 1:42:49 PM EDT Brian Hunter: uh no Thursday, April 13, 2006 1:43:08 PM EDT [redacted]: when do you put the boot to v/f Thursday, April 13, 2006 1:43:16 PM EDT [redacted] teach arnold a lesson on whats right and wrong Thursday, April 13, 2006 1:43:34 PM EDT Brian Hunter: he is buying F today Thursday, April 13, 2006 1:43:36 PM EDT Brian Hunter: selling v Thursday,

<u>Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC</u>

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Participants:
"Brian Hunter," Amaranth head energy trader
"[redacted]," Unidentified trader

Tuesday, April 25, 2006, 12:23:56 PM EDT

[redacted] everyone is high on ICE these days. you think its had its day or more to go?

Brian Hunter: one thing that's nice is there are no expiration limits like Nymex clearing
Brian Hunter: that alone will keep it strong

▬ = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Tuesday, April 25, 2006 12:14 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "CRAIGSCHOR"; BHUNTER@AMARANTHLLC.COM

IM Network: AOL IM

IM Users:

participant="[redacted]"
participant=bhunter@amaranthllc.com "hunteramaranth"

IM Dialog:

Tuesday, April 25, 2006 12:14:25 PM EDT [redacted] started conversation.
Tuesday, April 25, 2006 12:14:25 PM EDT Brian Hunter has entered the conversation.
Tuesday, April 25, 2006 12:14:25 PM EDT [redacted]: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, April 25, 2006 12:14:25 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, April 25, 2006 12:14:25 PM EDT Brian Hunter: no way Tuesday, April 25, 2006 12:14:29 PM EDT Brian Hunter: good god Tuesday, April 25, 2006 12:14:39 PM EDT Brian Hunter: of course power is 1 guy and gas is 4 Tuesday, April 25, 2006 12:15:24 PM EDT [redacted]: Who is the power guy? I heard Gerald is not there.
Tuesday, April 25, 2006 12:15:33 PM EDT Brian Hunter: really Tuesday, April 25, 2006 12:16:02 PM EDT [redacted] either way, that cracks me up.
Tuesday, April 25, 2006 12:16:33 PM EDT Brian Hunter: hey good for him Tuesday, April 25, 2006 12:16:38 PM EDT Brian Hunter: I actualyl think he is a nice guy Tuesday, April 25, 2006 12:16:51 PM EDT [redacted]: At least he is making the best of the situation Tuesday, April 25, 2006 12:17:37 PM EDT Brian Hunter: yeah Tuesday, April 25, 2006 12:17:38 PM EDT Brian Hunter: agreed Tuesday, April 25, 2006 12:17:40 PM EDT [redacted] let me tell you, you are the talk of the town these days.
Tuesday, April 25, 2006 12:18:28 PM EDT [redacted]: between the article and other rumors...
Tuesday, April 25, 2006 12:18:28 PM EDT Brian Hunter: wonderful Tuesday, April 25, 2006 12:18:30 PM EDT Brian Hunter: what now Tuesday, April 25, 2006 12:19:01 PM EDT [redacted] Latest jiberish is that you made 1Billion+ and pulled in 300MM for you and your wife.
Tuesday, April 25, 2006 12:20:09 PM EDT Brian Hunter: hahahahahahahaha Tuesday, April 25, 2006 12:20:12 PM EDT Brian Hunter: 30% payout Tuesday, April 25, 2006 12:20:13 PM EDT Brian Hunter: nice Tuesday, April 25, 2006 12:21:14 PM EDT [redacted] was hoping you can spare a few for a good friend?
Tuesday, April 25, 2006 12:21:37 PM EDT Brian Hunter: hahahaha Tuesday, April 25, 2006 12:21:40 PM EDT Brian Hunter: 300mm Tuesday, April 25, 2006 12:21:41 PM EDT Brian Hunter: whatever Tuesday, April 25, 2006 12:21:47 PM EDT Brian Hunter: Maybe next year :) Tuesday, April 25, 2006 12:22:11 PM EDT [redacted] Its always next year....
Tuesday, April 25, 2006 12:22:23 PM EDT Brian Hunter: hahahahahaha Tuesday, April 25, 2006 12:23:56 PM EDT [redacted] everyone is high on ICE these days. you think its had its day or more to go?
Tuesday, April 25, 2006 12:27:31 PM EDT Brian Hunter: one thing that's nice is there are no expiration limits like Nymex clearing Tuesday, April 25, 2006 12:27:37 PM EDT Brian Hunter: that alone will keep it strong Tuesday, April 25, 2006 12:27:48 PM EDT Brian Hunter: but will all the money miving into commods

From: Shane Lee [redacted]@amaranthllc.com]
Sent: Friday, May 19, 2006 6:12 PM
To: Brian Hunter
Subject: P&L breakdown

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Crude -2.83 (+6 fuel -8 straddle roll)
NG -37.7 (-24 main book, -9 basis, -5 cal spreads)
Transferred positions -1.8

Tried to ignore brad's positions for you

Some things of note in physical world:

- TCO gonna force withdraw commercial storage (71% down to 60%). I think this goes back to Maumee, Lebanon, and Panhandle/ANR, maybe even a little Niagara. Main effects should be on Michcon, Dawn, Chicago and some gulf. No idea how it will effect TCO yet, depends on if they restrict their west/east pools or if they have to sell it within the pools.
- Ship Channel for Q3 into -.25ish
- Socal Q3 into -.84ish
- Mich Q3 into -.10ish
- Supposedly NGPL scrapes are a little lighter than last week
- The west move is a stop out from the intel matt and I are getting

Some merc commentary from today:

- h/j was super bid today, probably because of you
- Not much fight from people on the z/f
- Backs were settled 10 cents BS
- [redacted] was the big spread seller up front, and they weren't behaving like they were getting out of anything
- OTC was calling me specifically looking for front spreads asking for size bids (Sempra asking), so the market smelled that you guys were out somehow...they don't usually call me on those
- The Cals were not trading much today....just lots of P&L management on the curve
- The crude barf was all at the end....lots of funds exiting commodities today
- Wasn't much fight in u/v today...people seemed more concerned with the n/q/u spreads today

Looks like group was down around 58 today

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Participants:
"Brian Hunter," Amaranth head energy trader
[redacted]," Unidentified trader

Tuesday, May 23, 2006, 12:36: 28 PM EDT

Brian Hunter: thanks for the Nymex/ICE
Brian Hunter: we were kind of hung
Brian Hunter: [Trader Matthew] Donohoe messed up

[redacted] what is that about
[redacted] ar [are] they not the same thing?

Brian Hunter: we have exachnge [exchange] limits

[redacted] u got me very confused

Brian Hunter: on Nymex not on ICE
Brian Hunter: for June expiry
Brian Hunter: they settle the same
Brian Hunter: but Nymex sends out warning letter

[redacted] okay

Brian Hunter: which is bad for fund
Brian Hunter: thanks anyways

[redacted]: i better find out my exchage [exchange] limit

= Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Tuesday, May 23, 2006 12:36 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; "MWDGUPTAA"

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant="[redacted]"

IM Dialog:

Tuesday, May 23, 2006 12:36:28 PM EDT Brian Hunter started conversation.
Tuesday, May 23, 2006 12:36:28 PM EDT [redacted] has entered the conversation.
Tuesday, May 23, 2006 12:36:28 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, May 23, 2006 12:36:28 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, May 23, 2006 12:36:28 PM EDT Brian Hunter: thanks for the Nymex/ICE Tuesday, May 23, 2006 12:36:31 PM EDT Brian Hunter: we were kind of hung Tuesday, May 23, 2006 12:36:43 PM EDT Brian Hunter: Donohoe messed up Tuesday, May 23, 2006 12:36:47 PM EDT [redacted] what is that aboutDisclaimer Tuesday, May 23, 2006 12:36:52 PM EDT [redacted] ar they not the same thing?
Tuesday, May 23, 2006 12:36:56 PM EDT Brian Hunter: we have exachnge limits Tuesday, May 23, 2006 12:37:01 PM EDT [redacted] u got me very confused Tuesday, May 23, 2006 12:37:02 PM EDT Brian Hunter: on Nymex not on ICE Tuesday, May 23, 2006 12:37:08 PM EDT Brian Hunter: for June expiry Tuesday, May 23, 2006 12:37:14 PM EDT Brian Hunter: they settle the same Tuesday, May 23, 2006 12:37:20 PM EDT Brian Hunter: but Nymex sends out warning letter Tuesday, May 23, 2006 12:37:34 PM EDT [redacted] okay Tuesday, May 23, 2006 12:37:36 PM EDT Brian Hunter: which is bad for fund Tuesday, May 23, 2006 12:37:42 PM EDT Brian Hunter: thanks anyways Tuesday, May 23, 2006 12:37:52 PM EDT [redacted] i better find out my exchage limit

From: Matthew Donohoe [[redacted]@amaranthllc.com]
Sent: Tuesday, May 23, 2006 3:14 PM
To: Michael Carrieri
Cc: Brian Hunter
Subject: Nymex compliance

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Bonnie from nymex compliance will be calling you. Since the broker was waiting on a decision from the nymex, theydidn't get the trade posted for today's date. As a result we are outside our limits for today, even though the trade was done earlier this afternoon.

Please give me a call back at 403[redacted] to discuss
Thanks
matt

= Redacted by the Permanent Subcommittee on Investigations

From: Michael Malach [[redacted]@amaranthllc.com]
Sent: Wednesday, May 24, 2006 9:22 AM
To: Michael Malach; Compliance Group
Cc: Brian Hunter; Jeff Baird; Matthew Donohoe; Matthew Calhoun; Brad Basarowich; Peter Geary; Hai Chen; Damir Durkovic; David Chasman; Energy Operations
Subject: RE: Position Limit Nat Gas June 06

According to the below from JPMU and our Delta report, we do **NOT** appear to be in compliance with the NYMEX. We needed to be under 2,500 contracts by COB yesterday and we are showing in excess of over 8,500.

Compliance Group- Please call the NYMEX and confirm our net positions and see if there is anything we can provide to cover the necessary 6,000 contracts.

Regards,

Mike

Product Description

Futures Code **Options Code** **Contract Limits % of Spot** **MMBtu** **GMI Qty** **Futures Equivalent**

Natural Gas Outrights

e-miNY^{sm} Henry Hub Natural Gas Futures QG NG SPOT 50% 5,000 -
-

Henry Hub Natural Gas Futures NG NG SPOT 100% 10,000 1,328
1,328

Henry Hub Natural Gas Penultimate Swap NP NG SPOT 25% 2,500 1,770
443

Henry Hub Natural Gas Swap Futures NN NG SPOT 25% 2,500 10,070
2,518 $ 4,288

GMI Qty Delta Equivalent

Henry Hub Natural Gas Calendar Spread Options IA NG SPOT 100% 10,000

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From: Michael Malach [[redacted]@amaranthllc.com]
Sent: Thursday, May 25, 2006 8:36 AM
To: Michael Malach; Compliance Group
Cc: Brian Hunter; Jeff Baird; Matthew Donohoe; Matthew Calhoun; Brad Basarowich; Peter Geary; Hai Chen; Damir Durkovic; David Chasman; Energy Operations
Subject: RE: Position Limit Nat Gas June 06

Ok –we are under the 2,500 limit as of yesterday. Please note that Options come off today and that could take us over by the end of the day. We need to manage our options throughout the day and make sure we put on the necessary offsets to remain under 2,500 contracts.

Regards,

Mike

Product Description

	Futures Code	Options Code	Contract Limits % of Spot	MMBtu	GMI Qty	Futures Equivalent
Natural Gas Outrights						
e-miNY^{sm} Henry Hub Natural Gas Futures	QG		NG SPOT 50%	5,000		-
						-
Henry Hub Natural Gas Futures	NG		NG SPOT 100%	10,000	1,828	1,828
Henry Hub Natural Gas Penultimate Swap	NP		NG SPOT 25%	2,500	23,670	5,918
Henry Hub Natural Gas Swap Futures	NN		NG SPOT 25%	2,500	20,170	5,043 $ 12,788

				GMI Qty	Delta Equivalent
Henry Hub Natural Gas Calendar Spread Options	IA	NG SPOT 100%	10,000		
Henry Hub Natural Gas Calendar Spread Options	IB	NG SPOT 100%	10,000		
Henry Hub Natural Gas Calendar Spread Options	IC	NG SPOT 100%	10,000		
Henry Hub Natural Gas European-Style Options	LN	NG SPOT 100%	10,000		

From: Shane Lee [redacted]@amaranthllc.com]
Sent: Friday, May 26, 2006 11:46 PM
To: Brian Hunter
Subject: Re:

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Brian there is no fundamental problem with our trade...we already know that...there is zero reason to be short NG past summer..
What flow will do is our 500 million dollar question.
Stop drinking and get some sleep.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hunter [redacted]@amaranthllc.com>
To: Shane Lee [redacted]@amaranthllc.com>
Sent: Fri May 26 23:42:34 2006
Subject: Re:

Says demand is lights out strong. Its never been higher. The biggest supply constraint are the stripping plants. Those prices are fine - just another data point to screwy NG. Demand vs x and z YoY is so screwy.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee [redacted]@amaranthllc.com>
To: Brian Hunter [redacted]@amaranthllc.com>
Sent: Fri May 26 23:37:37 2006
Subject: Re:

If those prices don't drop too.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hunter [redacted]@amaranthllc.com>
To: Shane Lee [redacted]@amaranthllc.com>
Sent: Fri May 26 23:36:07 2006
Subject: Re:

Having a good talk with brad about huge liquids production and prices. Yoy come sept might be 2bcf/d more deamnd from that and it won't price out until $13

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee [redacted]@amaranthllc.com>

To: Brian Hunter [redacted]@amaranthllc.com>
Sent: Fri May 26 23:30:12 2006
Subject: Re:

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Not sure yet...need to clear my head a little with some sleep... I am pretty banged up from this week. I know we did the right thing today...just don't know if it bought us time or if we were right and all of this is symptomatic of mispriced Q1. We did not move h/j that much...it was panic buying before we even touched it. Rummy didn't even get on it hard until it was over 1.70.

One thing that worries me is that if the fronts go up, does john blow up. I think his front short might me getting crazy to deal with the pain. Does a big up day without a back rally finish him off? We are somewhat protected with cal 7...but is he. He caused Dec 2003....does he cause May 2006? I think a down day in fronts is of course further pain...but I think most of it is cal 8.

I am less worried about producer selling coming in tham I am about one or two big guys starting to bail. Do you think anyone else may be thinking about banking this stuff like you are?
I think h/j can only go up another 30-50 cents or so this early in the season...market is short it but not as short as they will be 45 days from now. On a positive note though we know f/v can go up a lot. The whole friggen reason this iis happening is the markets paranoia with letting f/v release.

I think we can still head down...we have to be honest to ourselves about it. However we did see people willing to buy value this morning...especially deep back. We know h/j is short now....but we also know that it is not good value above 2.25 this early and that the market will sell it if it feels the same way, even if it is already short. I am not as worried about f/v and m/v...they are both limted in the short term...maybe 30 cents and 15 respectively. But the 7/10 could still do anything right now.

Take some time to rest your brain...I have been through this before and can tell you that you will only hurt yourself by thinking about it too much without decent rest. The answer should be simple to us by sunday I think.

I wonder on the power side if hai thinks heat rate guys might come sell heat rates soon in cal 7 or 8.

What I do know is gas cannot do this on its own for long. If it becomes producer panic...I think it leaks to the rest of energy too.

My gut really tells me we just capitulated...but that is only as long as another big deal comes through. So the key is trying to find out if another big one is coming down the pipe before some rfp's. All we can do in the short term is pick at scabs in the market and stay ahead of john.

Just promise me if things go bad I can at least be your bently driver...my kids will need to eat.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hunter [redacted]@amaranthllc.com>
To: Shane Lee [redacted]@amaranthllc.com>
Sent: Fri May 26 22:40:31 2006
Subject:

Getting nervous again - if fronts are down Monday think we bid h/j and we are ok?

▬ = Redacted by the Permanent Subcommittee on Investigations

From: Damir Durkovic [redacted]@amaranthllc.com]
Sent: Tuesday, May 30, 2006 3:28 PM
To: Jim Glynn; David Chasman; Jeff Baird; Brian Hunter
Cc: Michael Malach
Subject: Better late than never

JP Morgan just came back with the information we asked them to provide this morning. It took some manual work but here are the findings. Using yesterday's positions we asked them to convert all ICE Nat Gas positions into Nymex contracts and tell us what difference in initial margin was:

Before conversion:
NYMEX initial margin 422mil
ICE initial margin 570 mill
Total: 992 mil

After conversion:
NYMEX initial margin 397mil
ICE initial margin 120 mil (pertains to Power contracts)
Total: 517mil

Please call me with any questions.

Damir Durkovic
Director of Operations
/α/Amaranth Group Inc.
One American Lane
Greenwich CT 06831
T 203[redacted]
F 203[redacted]

From: Shane Lee [redacted]@amaranthllc.com]
Sent: Thursday, June 01, 2006 5:21 PM
To: Brian Hunter
Subject: Re:

= Redacted by the Permanent Subcommittee on Investigations

I am telling you q1 is last year's f/v. Eveyone too scared to short the front of the market.
Actually had a consty guy call me all panicked asking what I thought would happen to q1 if a cane hit

----
Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hunter <[redacted]@amaranthllc.com>
To: Shane Lee <[redacted]@amaranthllc.com>
Sent: Thu Jun 01 17:19:04 2006
Subject: Re:

People are whining about q1? You should tell them arnold loves it.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee <[redacted]@amaranthllc.com>
To: Brian Hunter <[redacted]@amaranthllc.com>
Sent: Thu Jun 01 17:17:17 2006
Subject: Re:

Trade got devasted today...hearing lots of whining about Q1.

Am getting more and more convinced this market is short f/v and h/j as an adversion to front positions this year....

Meeting with colin powell to get the inside on that encana storage and carlyle group stuff right now

----
Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hunter <[redacted]@amaranthllc.com>
To: Shane Lee <[redacted]@amaranthllc.com>
Sent: Thu Jun 01 12:19:23 2006
Subject: Re:

Calling some big guys direct.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee <shlee@amaranthllc.com>

To: Brian Hunter <[redacted]@amaranthllc.com>
Sent: Thu Jun 01 12:16:30 2006
Subject:

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Are we gonna release a news wire today looking for investors or you think we got them in hand already?

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Participants:
"Brian Hunter," Amaranth head energy trader
"Shane Lee," Amaranth energy trader

Thursday, June 8, 2006, 12:31:36 PM EDT

Shane Lee: supposedly a lot of the v/f [October/January spread] was Shaw selling size x/f [November/January spread]

Brian Hunter: v/x the one moving

Shane Lee: the v/x all on ICE
Shane Lee: otherwise i can't get any info anywhere

Brian Hunter: everyone trying to get out of v/f

Shane Lee: people are tired of it
Shane Lee: sick of it in their face 5 cents every morning
Shane Lee: as am i lol [laughing out loud]

Brian Hunter: hahahaha

Shane Lee: i don't think I have seen a market this irrational in my career

From: windowsadmin@amaranthllc.com
Sent: Sunday, January 08, 2006 11:32 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; "TRADERJROC"

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant="traderjroc"

IM Dialog:

Thursday, June 08, 2006 12:31:36 PM EDT Brian Hunter started conversation.
Thursday, June 08, 2006 12:31:36 PM EDT Shane Lee has entered the conversation.
Thursday, June 08, 2006 12:31:36 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, June 08, 2006 12:31:36 PM EDT Shane Lee: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, June 08, 2006 12:31:36 PM EDT Shane Lee: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, June 08, 2006 12:31:36 PM EDT Shane Lee: supposedly a lot of the v/f move was Shaw selling size x/f Thursday, June 08, 2006 12:31:36 PM EDT Shane Lee: supposedly a lot of the v/f move was Shaw selling size x/f Thursday, June 08, 2006 12:31:50 PM EDT Brian Hunter: v/x is the one moving Thursday, June 08, 2006 12:31:50 PM EDT Brian Hunter: v/x is the one moving Thursday, June 08, 2006 12:31:58 PM EDT Brian Hunter: they stopping out?
Thursday, June 08, 2006 12:31:58 PM EDT Brian Hunter: they stopping out?
Thursday, June 08, 2006 12:32:01 PM EDT Shane Lee: i dunno Thursday, June 08, 2006 12:32:01 PM EDT Shane Lee: i dunno Thursday, June 08, 2006 12:32:07 PM EDT Shane Lee: the v/x all ICE Thursday, June 08, 2006 12:32:07 PM EDT Shane Lee: the v/x all ICE Thursday, June 08, 2006 12:32:12 PM EDT Shane Lee: dont know who Thursday, June 08, 2006 12:32:12 PM EDT Shane Lee: dont know who Thursday, June 08, 2006 12:32:34 PM EDT Shane Lee: otherwise i cant get ANY info anywhere Thursday, June 08, 2006 12:32:34 PM EDT Shane Lee: otherwise i cant get ANY info anywhere Thursday, June 08, 2006 12:32:41 PM EDT Shane Lee: earily quiet Thursday, June 08, 2006 12:32:41 PM EDT Shane Lee: earily quiet Thursday, June 08, 2006 12:35:05 PM EDT Shane Lee: i think the v/x is a lot of peole just rolling some shorts Thursday, June 08, 2006 12:35:05 PM EDT Shane Lee: i think the v/x is a lot of peole just rolling some shorts Thursday, June 08, 2006 12:35:19 PM EDT Shane Lee: chatter is cash is very close to coal Thursday, June 08, 2006 12:35:19 PM EDT Shane Lee: chatter is cash is very close to coal Thursday, June 08, 2006 12:35:29 PM EDT Shane Lee: TCO was 5.9 so i think still 80 cents away Thursday, June 08, 2006 12:35:29 PM EDT Shane Lee: TCO was 5.9 so i think still 80 cents away Thursday, June 08, 2006 12:36:06 PM EDT Brian Hunter: everyone trying to get out of v/f Thursday, June 08, 2006 12:36:06 PM EDT Brian Hunter: everyone trying to get out of v/f Thursday, June 08, 2006 12:36:15 PM EDT Shane Lee: people are tired of it Thursday, June 08, 2006 12:36:15 PM EDT Shane Lee: people are tired of it Thursday, June 08, 2006 12:36:29 PM EDT Shane Lee: sick of it in their face 5 cents every morning Thursday, June 08, 2006 12:36:29 PM EDT Shane Lee: sick of it in their face 5 cents every morning Thursday, June 08, 2006 12:36:34 PM EDT Shane Lee: as am i lol Thursday, June 08, 2006 12:36:34 PM EDT Shane Lee: as am i lol Thursday, June 08, 2006 12:36:43 PM EDT Brian Hunter: hahahaha Thursday, June 08, 2006 12:36:43 PM EDT Brian Hunter: hahahaha Thursday, June 08, 2006 12:37:02 PM EDT Shane lee: i dont think i have seen a market this irrational in my career Thursday, June 08, 2006 12:37:02 PM EDT Shane Lee: i dont think i have seen a market this irrational in my career

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Participants:
"Brian Hunter," Amaranth head energy trader
[redacted]" Unidentified trader

Thursday, June 8, 2006, 4:47:39 PM EDT

Brian Hunter: market has beaten me up and now I just stay way

[redacted]**:** i dont think ill ever recover from the beating i took from you

Brian Hunter: I'm really sorry about that
Brian Hunter: I have no idea what happened to NG [natural gas futures]
Brian Hunter: call me on my cell in 20

▬ = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Sunday, January 08, 2006 3:47 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; "MWDGUPTAA"

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, June 08, 2006 4:47:28 PM EDT Brian Hunter started conversation. Thursday, June 08, 2006 4:47:28 PM EDT [redacted] has entered the conversation. Thursday, June 08, 2006 4:47:28 PM EDT Brian Hunter: I have no idea Thursday, June 08, 2006 4:47:39 PM EDT Brian Hunter: market has beaten me up and now I just stay way Thursday, June 08, 2006 4:48:04 PM EDT [redacted] i dont think ill ever recover from the beating i took from you Thursday, June [redacted] 4:48:22 PM EDT Brian Hunter: I'm really sorry abut that Thursday, June 08, 2006 4:48:29 PM EDT Brian Hunter: I have no idea what happened to NG Thursday, June 08, 2006 4:48:47 PM EDT Brian Hunter: call me on my cell in 20 Thursday, June 08, 2006 4:48:55 PM EDT Brian Hunter: [redacted] or email me your number Thursday, June 08, 2006 4:49:02 PM EDT Brian Hunter: [redacted] to airport - I'll call you Thursday, June 08, 2006 4:49:19 PM EDT [redacted] ill call you in 20 Thursday, June 08, 2006 4:49:26 PM EDT [redacted] have u plugged into my cell

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Participants:
"Brian Hunter," Amaranth head energy trader
"Shane Lee," Amaranth energy trader

Monday, June 12, 2006, 12:20:30 PM EDT

Shane Lee: I know exactly what market is thinking right now. Well if they are bullish we will just smash v/f [October/January spread] and if it is bearish we just just smash f/v [January/October spread]

Shane Lee: lol [laughing out loud]

Brian Hunter: hahahahahaha

▬ = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Thursday, January 12, 2006 11:10 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; SHLEE@AMARANTHLLC.COM

X-ZANTAZ-MESSAGE-DATE: /12/2006 16:10:08; /12/2006 16:10:09; /12/2006 16:10:26; /12/2006 16:10:33; /12/2006 16:10:41; /12/2006 16:10:42; /12/2006 16:11:08; /12/2006 16:11:17; /12/2006 16:11:20; /12/2006 16:11:19; /12/2006 16:11:23; /12/2006 16:11:48; /12/2006 16:11:53; /12/2006 16:12:16; /12/2006 16:12:18; /12/2006 16:12:19; /12/2006 16:12:27; /12/2006 16:12:28; /12/2006 16:12:31; /12/2006 16:12:38; /12/2006 16:12:39; /12/2006 16:12:45; /12/2006 16:12:47; /12/2006 16:13:24; /12/2006 16:13:23; /12/2006 16:13:31; /12/2006 16:13:35; /12/2006 16:13:34; /12/2006 16:14:33; /12/2006 16:14:40; /12/2006 16:15:28; /12/2006 16:15:48; /12/2006 16:15:49; /12/2006 16:17:30; /12/2006 16:18:57; /12/2006 16:20:30; /12/2006 16:20:32; /12/2006 16:20:33; /12/2006 16:20:38; /12/2006 16:20:48; /12/2006 16:21:04; /12/2006 16:21:05; /12/2006 16:21:07; /12/2006 16:21:06; /12/2006 16:21:09; /12/2006 16:21:13; /12/2006 16:21:14; /12/2006 16:21:27; /12/2006 16:21:38; /12/2006 16:21:39; /12/2006 16:21:5!
1; /12/2006 16:21:52; /12/2006 16:21:55; /12/2006 16:21:56; /12/2006 16:22:08; /12/2006 16:22:47; /12/2006 16:24:42; /12/2006 16:25:56; /12/2006 16:26:02; /12/2006 16:29:38; /12/2006 16:30:24; /12/2006 16:30:45; /12/2006 16:30:44; /12/2006 16:30:54; /12/2006 16:30:55; /12/2006 16:31:03; /12/2006 16:31:07; /12/2006 16:31:08; /12/2006 16:31:47; /12/2006 16:31:46; /12/2006 16:31:53; /12/2006 16:31:57; /12/2006 16:31:58; /12/2006 16:32:00; /12/2006 16:32:03; /12/2006 16:32:04; /12/2006 16:32:23; /12/2006 16:32:39; /12/2006 16:33:45; /12/2006 16:33:44; /12/2006 16:33:53; /12/2006 16:33:58; /12/2006 16:33:59; /12/2006 16:34:05; /12/2006 16:34:06; /12/2006 16:34:12; /12/2006 16:34:17; /12/2006 16:34:33; /12/2006 16:34:32; /12/2006 16:34:56; /12/2006 16:39:42
X-ZANTAZ-PARTICIPANT-IMNAMES: traderjroc; hunteramaranth
X-ZANTAZ-RECIPIENT-NAME: Shane Lee; Brian Hunter
X-ZANTAZ-PARTICIPANT-IMNAMES: hunteramaranth; traderjroc
X-ZANTAZ-SENDER-NAME: Brian Hunter; Shane Lee
X-ZANTAZ-GUID: AF965C12-FBE9-4821-9CB2-FF3432A158FE22431627651073296
X-ZANTAZ-URL: notused
X-OriginalArrivalTime: 12 Jun 2006 16:41:07.0695 (UTC) FILETIME=[00F79FF0:01C68E3F]

IM Network: AOL IM

IM Users:

participant=[redacted]amaranthllc.com "hunteramaranth"
participant=[redacted]maranthllc.com "traderjroc"

IM Dialog:

Monday, June 12, 2006 12:10:08 PM EDT Brian Hunter started conversation.
Monday, June 12, 2006 12:10:08 PM EDT Shane Lee has entered the conversation.
Monday, June 12, 2006 12:10:08 PM EDT Brian Hunter: taek the 69 Monday, June 12, 2006 12:10:09 PM EDT Brian Hunter: taek the 69 Monday, June 12, 2006 12:10:26 PM EDT Shane Lee: got it Monday, June 12, 2006 12:10:26 PM EDT Shane Lee: got it Monday, June 12, 2006 12:10:33 PM EDT Shane Lee: 3.75/day now Monday, June 12, 2006 12:10:33 PM EDT Shane Lee: 3.75/day now Monday, June 12, 2006 12:10:41 PM EDT Shane Lee: follow at 70 Monday, June 12, 2006 12:10:42 PM EDT Shane Lee: follow at 70 Monday, June 12, 2006 12:11:08 PM EDT Brian Hunter: taek that too Monday, June 12, 2006 12:11:08 PM EDT Brian Hunter: taek that too Monday, June 12, 2006 12:11:17 PM EDT Shane Lee: got it Monday, June 12, 2006 12:11:17 PM EDT Shane Lee: got it Monday, June 12, 2006 12:11:20 PM EDT Shane Lee: was 1/day Monday, June 12, 2006 12:11:19 PM EDT Shane Lee: was 1/day Monday, June 12, 2006 12:11:23 PM EDT Brian Hunter: ok Monday, June 12, 2006 12:11:23 PM EDT Brian Hunter: ok Monday, June 12, 2006 12:11:48 PM EDT Shane Lee: been dinging 3.02's is on auto offer right now Monday, June 12, 2006 12:11:48 PM EDT Shane Lee: been dinging 3.02's is on auto offer

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right now Monday, June 12, 2006 12:11:53 PM EDT Brian Hunter: ok Monday, June 12, 2006 12:11:53 PM EDT Brian Hunter: ok Monday, June 12, 2006 12:12:16 PM EDT Brian Hunter: auto offer Monday, June 12, 2006 12:12:16 PM EDT Brian Hunter: auto offer Monday, June 12, 2006 12:12:18 PM EDT Brian Hunter: freaking ICE Monday, June 12, 2006 12:12:19 PM EDT Brian Hunter: freaking ICE Monday, June 12, 2006 12:12:27 PM EDT Brian Hunter: locals smell blood on the upside I tihnk Monday, June 12, 2006 12:12:28 PM EDT Brian Hunter: locals smell blood on the upside I tihnk Monday, June 12, 2006 12:12:31 PM EDT Shane Lee: yes Monday, June 12, 2006 12:12:31 PM EDT Shane Lee: yes Monday, June 12, 2006 12:12:38 PM EDT Shane Lee: i am worried it gets taken out of n/v Monday, June 12, 2006 12:12:39 PM EDT Shane Lee: i am worried it gets taken out of n/v Monday, June 12, 2006 12:12:45 PM EDT Shane Lee: smells like it Monday, June 12, 2006 12:12:45 PM EDT Shane Lee: smells like it Monday, June 12, 2006 12:12:47 PM EDT Brian Hunter: only a little will Monday, June 12, 2006 12:12:47 PM EDT Brian Hunter: only a little will Monday, June 12, 2006 12:13:24 PM EDT Shane Lee: 1.87 h/j Monday, June 12, 2006 12:13:23 PM EDT Shane Lee: 1.87 h/j Monday, June 12, 2006 12:13:31 PM EDT Shane Lee: been really low volume on h/j lately Monday, June 12, 2006 12:13:31 PM EDT Shane Lee: been really low volume on h/j lately Monday, June 12, 2006 12:13:35 PM EDT Shane Lee: just a balancer Monday, June 12, 2006 12:13:34 PM EDT Shane Lee: just a balancer Monday, June 12, 2006 12:14:33 PM EDT Brian Hunter: it may be MS on the way up too Monday, June 12, 2006 12:14:33 PM EDT Brian Hunter: it may be MS on the way up too Monday, June 12, 2006 12:14:40 PM EDT Shane Lee: yeah Monday, June 12, 2006 12:14:40 PM EDT Shane Lee: yeah Monday, June 12, 2006 12:15:28 PM EDT Shane Lee: brad wants to buy 50 july you want to sell?
Monday, June 12, 2006 12:15:28 PM EDT Shane Lee: brad wants to buy 50 july you want to sell?
Monday, June 12, 2006 12:15:48 PM EDT Brian Hunter: y Monday, June 12, 2006 12:15:49 PM EDT Brian Hunter: y Monday, June 12, 2006 12:17:30 PM EDT Shane Lee: n/v 1.01 Monday, June 12, 2006 12:17:30 PM EDT Shane Lee: n/v 1.01 Monday, June 12, 2006 12:18:57 PM EDT Brian Hunter: can't wait for scrapes today Monday, June 12, 2006 12:18:57 PM EDT Brian Hunter: can't wait for scrapes today Monday, June 12, 2006 12:20:30 PM EDT Shane Lee: i know exactly what market is thinking right now. well if they are bullish we will just smash v/f. and if it is bearish we just just smash f/v Monday, June 12, 2006 12:20:30 PM EDT Shane Lee: i know exactly what market is thinking right now. well if they are bullish we will just smash v/f. and if it is bearish we just just smash f/v Monday, June 12, 2006 12:20:32 PM EDT Shane Lee: lol Monday, June 12, 2006 12:20:33 PM EDT Shane Lee: lol Monday, June 12, 2006 12:20:38 PM EDT Brian Hunter: hahahahahaha Monday, June 12, 2006 12:20:38 PM EDT Brian Hunter: hahahahahaha Monday, June 12, 2006 12:20:48 PM EDT Brian Hunter: [redacted] call0 90 bid looking Monday, June 12, 2006 12:20:48 PM EDT Brian Hunter: [redacted] call0 90 bid looking Monday, June 12, 2006 12:21:04 PM EDT Shane Lee: yeah the [redacted] over man Monday, June 12, 2006 12:21:05 PM EDT Shane Lee: yeah the backs are over man Monday, June 12, 2006 12:21:07 PM EDT Shane Lee: now.....
Monday, June 12, 2006 12:21:06 PM EDT Shane Lee: now.....
Monday, June 12, 2006 12:21:09 PM EDT Shane Lee: phase 2 Monday, June 12, 2006 12:21:09 PM EDT Shane Lee: phase 2 Monday, June 12, 2006 12:21:13 PM EDT Shane Lee: will take some time Monday, June 12, 2006 12:21:14 PM EDT Shane Lee: will take some time Monday, June 12, 2006 12:21:27 PM EDT Shane Lee: they have to give up on h/j and n/v first Monday, June 12, 2006 12:21:27 PM EDT Shane Lee: they have to give up on h/j and n/v first Monday, June 12, 2006 12:21:38 PM EDT Shane Lee: they have too much room on each side right now to manage P&L Monday, June 12, 2006 12:21:38 PM EDT Shane Lee: they have too much room on each side right now to manage P&L Monday, June 12, 2006 12:21:39 PM EDT Brian Hunter: yeah Monday, June 12, 2006 12:21:39 PM EDT Brian Hunter: yeah Monday, June 12, 2006 12:21:51 PM EDT Brian Hunter: can you lift call0 Monday, June 12, 2006 12:21:52 PM EDT Brian Hunter: can you lift call0 Monday, June 12, 2006 12:21:55 PM EDT Brian Hunter: 95 on box Monday, June 12, 2006 12:21:56 PM EDT Brian Hunter: 95 on box Monday, June 12, 2006 12:22:08 PM EDT Shane Lee: got it Monday, June 12, 2006 12:22:08 PM EDT Shane Lee: got it Monday, June 12, 2006 12:22:47 PM EDT Shane Lee: f'ing auto offer on this v/f Monday, June 12, 2006 12:22:47 PM EDT Shane Lee: f'ing auto offer on this v/f Monday, June 12, 2006 12:24:42 PM EDT Shane Lee: so 4.75 cal 8 0.5 cal 10 and 201 v/f totday so far Monday, June 12, 2006 12:24:42 PM EDT Shane Lee: so 4.75 cal 8 0.5 cal 10 and 201 v/f totday so far Monday, June 12, 2006 12:25:56 PM EDT Shane Lee: man volume sooo low everywhere today Monday, June 12, 2006 12:25:56 PM EDT Shane Lee: man volume sooo low everywhere today Monday, June 12, 2006 12:26:02 PM EDT Shane Lee: CL too Monday, June 12, 2006 12:26:02 PM EDT Shane Lee: CL too
Monday, June 12, 2006 12:29:38 PM EDT Brian Hunter: some very hot weather on the horizon
Monday, June 12, 2006 12:30:24 PM EDT Brian Hunter: some very hot weather on the horizon
Monday, June 12, 2006 12:30:45 PM EDT Shane Lee: hope this cane knocks out a couple nucs
Monday, June 12, 2006 12:30:44 PM EDT Shane Lee: hope this cane knocks out a couple nucs

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Monday, June 12, 2006 12:30:54 PM EDT Brian Hunter: some very hot weather on the horizon Monday, June 12, 2006 12:30:55 PM EDT Brian Hunter: some very hot weather on the horizon Monday, June 12, 2006 12:31:03 PM EDT Brian Hunter: noon run even hotter NE Monday, June 12, 2006 12:31:03 PM EDT Brian Hunter: noon run even hotter NE Monday, June 12, 2006 12:31:07 PM EDT Shane Lee: as [redacted] said top 1% demand scenario Monday, June 12, 2006 12:31:08 PM EDT Shane Lee: as [redacted] said top 1% demand scenario Monday, June 12, 2006 12:31:47 PM EDT Shane Lee: cal 10 trading 95 Monday, June 12, 2006 12:31:46 PM EDT Shane Lee: cal 10 trading 95 Monday, June 12, 2006 12:31:53 PM EDT Brian Hunter: really Monday, June 12, 2006 12:31:53 PM EDT Brian Hunter: really Monday, June 12, 2006 12:31:57 PM EDT Shane Lee: 7500 reoffered Monday, June 12, 2006 12:31:58 PM EDT Shane Lee: 7500 reoffered Monday, June 12, 2006 12:32:00 PM EDT Brian Hunter: bid hit or offer lifted Monday, June 12, 2006 12:32:00 PM EDT Brian Hunter: bid hit or offer lifted Monday, June 12, 2006 12:32:03 PM EDT Shane Lee: lift Monday, June 12, 2006 12:32:04 PM EDT Shane Lee: lift Monday, June 12, 2006 12:32:23 PM EDT Shane Lee: 8 offered 70 for 1/4 agai Monday, June 12, 2006 12:32:23 PM EDT Shane Lee: 8 offered 70 for 1/4 agai Monday, June 12, 2006 12:32:39 PM EDT Brian Hunter: fronts lower Monday, June 12, 2006 12:32:39 PM EDT Brian Hunter: fronts lower Monday, June 12, 2006 12:33:45 PM EDT Shane Lee: got lifted on 8 Monday, June 12, 2006 12:33:44 PM EDT Shane Lee: got lifted on 8 Monday, June 12, 2006 12:33:53 PM EDT Shane Lee: 7/8 trades 28 Monday, June 12, 2006 12:33:53 PM EDT Shane Lee: 7/8 trades 28 Monday, June 12, 2006 12:33:58 PM EDT Brian Hunter: wow Monday, June 12, 2006 12:33:59 PM EDT Brian Hunter: wow Monday, June 12, 2006 12:34:05 PM EDT Brian Hunter: jv8 is 78/80 Monday, June 12, 2006 12:34:06 PM EDT Brian Hunter: jv8 is 78/80 Monday, June 12, 2006 12:34:12 PM EDT Brian Hunter: bought 53's on close friday there Monday, June 12, 2006 12:34:12 PM EDT Brian Hunter: bought 53's on close friday there Monday, June 12, 2006 12:34:17 PM EDT Brian Hunter: opsria Monday, June 12, 2006 12:34:17 PM EDT Brian Hunter: opsria Monday, June 12, 2006 12:34:33 PM EDT Shane Lee: nicey Monday, June 12, 2006 12:34:32 PM EDT Shane Lee: nicey Monday, June 12, 2006 12:34:56 PM EDT Shane Lee: u/v .40 Monday, June 12, 2006 12:34:56 PM EDT Shane Lee: u/v .40 Monday, June 12, 2006 12:39:42 PM EDT Brian Hunter: [redacted] cal9 26.5@30 Monday, June 12, 2006 12:39:42 PM EDT Brian Hunter: [redacted] cal9 26.5@30

From: Shane Lee [[redacted]@amaranthllc.com]
Sent: Tuesday, June 13, 2006 10:25 PM
To: Brian Hunter
Subject: Re:

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Great nice to know we bought it all. Sheesh

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hunter <[redacted]@amaranthllc.com>
To: Shane Lee <[redacted]@amaranthllc.com>
Sent: Tue Jun 13 22:23:47 2006
Subject: Re:

Yesterday

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee <[redacted]@amaranthllc.com>
To: Brian Hunter <[redacted]@amaranthllc.com>
Sent: Tue Jun 13 21:40:11 2006
Subject: Re:

This was yesterday or over a while?
Didn't feel like that much....

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hunter <bhunter@amaranthllc.com>
To: John Bailey <[redacted]@amaranthllc.com>; Brad Basarowich <[redacted]@amaranthllc.com>; ENERGY TRADING [redacted]@amaranthllc.com>; Robert Jones [redacted]@amaranthllc.com>
CC: Jaime Gualy [redacted]amaranthllc.com>
Sent: Tue Jun 13 21:28:44 2006
Subject: Re:

I lied. They hedged 20kbpd and 120mm/d of Ng that's much higher.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: John Bailey [redacted]@amaranthllc.com>
To: Brian Hunter <[redacted]@amaranthllc.com>; Brad Basarowich <[redacted]@amaranthllc.com>; ENERGY TRADING <[redacted]@amaranthllc.com>; Robert Jones <[redacted]@amaranthllc.com>

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Participants:
"Brian Hunter," Amaranth head energy trader
"Shane Lee," Amaranth energy trader

Thursday, June 15, 2006, 1:09:00 PM EDT

Shane Lee: had 2 guys tell me today that this is the stupidest move the [they] have ever seen
Shane Lee: guys doing well dont say that

Brian Hunter: yeah
Brian Hunter: sounds like pain
Brian Hunter: the winter hatred is stunning

Shane Lee: they still protecting with v/f [October/January spread] a little, but it is light considering the move

▬ = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Sunday, January 15, 2006 11:45 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; SHLEE@AMARANTHLLC.COM

X-ZANTAZ-MESSAGE-DATE: /15/2006 16:45:25; /15/2006 16:50:24; /15/2006 16:50:30; /15/2006 16:50:52; /15/2006 16:50:53; /15/2006 16:51:12; /15/2006 16:51:16; /15/2006 16:51:41; /15/2006 16:52:11; /15/2006 16:52:18; /15/2006 16:52:27; /15/2006 16:52:37; /15/2006 16:52:53; /15/2006 16:52:56; /15/2006 16:53:20; /15/2006 16:53:47; /15/2006 16:53:48; /15/2006 16:53:50; /15/2006 16:54:03; /15/2006 16:54:02; /15/2006 16:54:06; /15/2006 16:54:18; /15/2006 16:54:49; /15/2006 16:54:57; /15/2006 16:55:00; /15/2006 16:55:03; /15/2006 16:55:08; /15/2006 16:55:13; /15/2006 16:55:25; /15/2006 16:55:33; /15/2006 16:55:50; /15/2006 16:55:59; /15/2006 16:55:58; /15/2006 16:56:00; /15/2006 16:56:03; /15/2006 16:56:07; /15/2006 16:56:09; /15/2006 16:56:11; /15/2006 16:57:02; /15/2006 16:57:35; /15/2006 16:57:40; /15/2006 16:57:45; /15/2006 16:57:48; /15/2006 16:57:52; /15/2006 16:58:02; /15/2006 16:58:15; /15/2006 16:58:20; /15/2006 17:02:13; /15/2006 17:02:38; /15/2006 17:02:49; /15/2006 17:02:5!
1; /15/2006 17:02:53; /15/2006 17:03:02; /15/2006 17:03:11; /15/2006 17:03:29; /15/2006 17:03:33; /15/2006 17:04:00; /15/2006 17:04:08; /15/2006 17:04:18; /15/2006 17:04:20; /15/2006 17:05:06; /15/2006 17:05:33; /15/2006 17:09:00; /15/2006 17:09:11; /15/2006 17:09:13; /15/2006 17:09:16; /15/2006 17:09:17; /15/2006 17:09:34; /15/2006 17:09:58
X-ZANTAZ-PARTICIPANT-IMNAMES: hunteramaranth; traderjroc
X-ZANTAZ-RECIPIENT-NAME: Brian Hunter; Shane Lee
X-ZANTAZ-PARTICIPANT-IMNAMES: traderjroc; hunteramaranth
X-ZANTAZ-SENDER-NAME: Shane Lee; Brian Hunter
X-ZANTAZ-GUID: 326C1E2C-5AC1-4172-A8BB-45EEFE3343B723159282472324780
X-ZANTAZ-URL: notused
X-OriginalArrivalTime: 15 Jun 2006 17:10:38.0708 (UTC) FILETIME=[9FD00340:01C6909E]

IM Network: AOL IM

IM Users:

participant=[redacted]@amaranthllc.com "hunteramaranth"
participant=[redacted]@amaranthllc.com "traderjroc"

IM Dialog:

Thursday, June 15, 2006 12:45:25 PM EDT Shane Lee started conversation.
Thursday, June 15, 2006 12:45:25 PM EDT Brian Hunter has entered the conversation.
Thursday, June 15, 2006 12:45:25 PM EDT Shane Lee: done close to 4000 f/h so far Thursday, June 15, 2006 12:45:25 PM EDT Shane Lee: done close to 4000 f/h so far Thursday, June 15, 2006 12:50:24 PM EDT Brian Hunter: cool Thursday, June 15, 2006 12:50:24 PM EDT Brian Hunter: cool Thursday, June 15, 2006 12:50:30 PM EDT Brian Hunter: still v/f buyer tomorrow?
Thursday, June 15, 2006 12:50:30 PM EDT Brian Hunter: still v/f buyer tomorrow?
Thursday, June 15, 2006 12:50:52 PM EDT Shane Lee: yeah Thursday, June 15, 2006 12:50:53 PM EDT Shane Lee: yeah Thursday, June 15, 2006 12:51:12 PM EDT Shane Lee: either that or x/f Thursday, June 15, 2006 12:51:12 PM EDT Shane Lee: either that or x/f Thursday, June 15, 2006 12:51:16 PM EDT Shane Lee: cant remember which one Thursday, June 15, 2006 12:51:16 PM EDT Shane Lee: cant remember which one Thursday, June 15, 2006 12:51:41 PM EDT Shane Lee: dont fall in love with that book man those volumes are small and you never know if they will ever come in Thursday, June 15, 2006 12:51:41 PM EDT Shane Lee: dont fall in love with that book man those volumes are small and you never know if they will ever come in Thursday, June 15, 2006 12:52:11 PM EDT Brian Hunter: yeah Thursday, June 15, 2006 12:52:11 PM EDT Brian Hunter: yeah Thursday, June 15, 2006 12:52:18 PM EDT Brian Hunter: v/f doing great today Thursday, June 15, 2006 12:52:18 PM EDT Brian Hunter: v/f doing great today Thursday, June 15, 2006 12:52:27 PM EDT Shane Lee: yep u were right Thursday,

June 15, 2006 12:52:27 PM EDT Shane Lee: yep u were right Thursday, June 15, 2006 12:52:37 PM EDT Shane Lee: h/j explosion too market very very very upset today Thursday, June 15, 2006 12:52:37 PM EDT Shane Lee: h/j explosion too market very very very upset today Thursday, June 15, 2006 12:52:53 PM EDT Brian Hunter: you think people are hurting? Thursday, June 15, 2006 12:52:53 PM EDT Brian Hunter: you think people are hurting? Thursday, June 15, 2006 12:52:56 PM EDT Shane Lee: yes Thursday, June 15, 2006 12:52:56 PM EDT Shane Lee: yes Thursday, June 15, 2006 12:53:20 PM EDT Shane Lee: backs are up enough so maybe not too too bad, but they hurting really bad q1 Thursday, June 15, 2006 12:53:20 PM EDT Shane Lee: backs are up enough so maybe not too too bad, but they hurting really bad q1 Thursday, June 15, 2006 12:53:47 PM EDT Shane Lee: think about how boone's last 2 days are going Thursday, June 15, 2006 12:53:48 PM EDT Shane Lee: think about how boone's last 2 days are going Thursday, June 15, 2006 12:53:50 PM EDT Shane Lee: 250 mill Thursday, June 15, 2006 12:53:50 PM EDT Shane Lee: 250 mill Thursday, June 15, 2006 12:54:03 PM EDT Brian Hunter: good point Thursday, June 15, 2006 12:54:03 PM EDT Brian Hunter: good point Thursday, June 15, 2006 12:54:02 PM EDT Brian Hunter: yeah Thursday, June 15, 2006 12:54:02 PM EDT Brian Hunter: yeah Thursday, June 15, 2006 12:54:06 PM EDT Brian Hunter: and Arnold Thursday, June 15, 2006 12:54:06 PM EDT Brian Hunter: and Arnold Thursday, June 15, 2006 12:54:18 PM EDT Shane Lee: arnold got ripped for 60 cents front to back yesterday Thursday, June 15, 2006 12:54:18 PM EDT Shane Lee: arnold got ripped for 60 cents front to back yesterday Thursday, June 15, 2006 12:54:49 PM EDT Shane Lee: boone will probably have to get on msnbc today Thursday, June 15, 2006 12:54:49 PM EDT Shane Lee: boone will probably have to get on msnbc today Thursday, June 15, 2006 12:54:57 PM EDT Brian Hunter: ha Thursday, June 15, 2006 12:54:57 PM EDT Brian Hunter: ha Thursday, June 15, 2006 12:55:00 PM EDT Brian Hunter: back end is cheap Thursday, June 15, 2006 12:55:00 PM EDT Brian Hunter: back end is cheap Thursday, June 15, 2006 12:55:03 PM EDT Shane Lee: it is Thursday, June 15, 2006 12:55:03 PM EDT Shane Lee: it is Thursday, June 15, 2006 12:55:08 PM EDT Brian Hunter: epopel are wrong about front s and 5.00 Thursday, June 15, 2006 12:55:08 PM EDT Brian Hunter: epopel are wrong about front s and 5.00 Thursday, June 15, 2006 12:55:13 PM EDT Shane Lee: yes Thursday, June 15, 2006 12:55:13 PM EDT Shane Lee: yes Thursday, June 15, 2006 12:55:25 PM EDT Brian Hunter: and really wrong about h/j Thursday, June 15, 2006 12:55:25 PM EDT Brian Hunter: and really wrong about h/j Thursday, June 15, 2006 12:55:33 PM EDT Shane Lee: and today proves the market structure was an irresponsible short in front 12 months Thursday, June 15, 2006 12:55:33 PM EDT Shane Lee: and today proves the market structure was an irresponsible short in front 12 months Thursday, June 15, 2006 12:55:50 PM EDT Shane Lee: no rreason to be up 60 cents on a small miss Thursday, June 15, 2006 12:55:50 PM EDT Shane Lee: no rreason to be up 60 cents on a small miss Thursday, June 15, 2006 12:55:59 PM EDT Brian Hunter: heard about Stone at DB Thursday, June 15, 2006 12:55:59 PM EDT Brian Hunter: heard about Stone at DB Thursday, June 15, 2006 12:55:58 PM EDT Shane Lee: it's all cause of structure Thursday, June 15, 2006 12:55:58 PM EDT Shane Lee: it's all cause of structure Thursday, June 15, 2006 12:56:00 PM EDT Brian Hunter: short front Thursday, June 15, 2006 12:56:00 PM EDT Brian Hunter: short front Thursday, June 15, 2006 12:56:03 PM EDT Brian Hunter: really short winter Thursday, June 15, 2006 12:56:03 PM EDT Brian Hunter: really short winter Thursday, June 15, 2006 12:56:07 PM EDT Brian Hunter: short cal7 Thursday, June 15, 2006 12:56:07 PM EDT Brian Hunter: short cal7 Thursday, June 15, 2006 12:56:09 PM EDT Shane Lee: whoopsies Thursday, June 15, 2006 12:56:09 PM EDT Shane Lee: whoopsies Thursday, June 15, 2006 12:56:11 PM EDT Brian Hunter: ouch Thursday, June 15, 2006 12:56:11 PM EDT Brian Hunter: ouch Thursday, June 15, 2006 12:57:02 PM EDT Shane Lee: sempra and centy been buying all these f/h's btw Thursday, June 15, 2006 12:57:02 PM EDT Shane Lee: sempra and centy been buying all these f/h's btw Thursday, June 15, 2006 12:57:35 PM EDT Brian Hunter: I know Thursday, June 15, 2006 12:57:35 PM EDT Brian Hunter: I know Thursday, June 15, 2006 12:57:40 PM EDT Brian Hunter: I acutally like that spread Thursday, June 15, 2006 12:57:40 PM EDT Brian Hunter: I acutally like that spread Thursday, June 15, 2006 12:57:45 PM EDT Brian Hunter: but too long f Thursday, June 15, 2006 12:57:45 PM EDT Brian Hunter: but too long f Thursday, June 15, 2006 12:57:48 PM EDT Shane Lee: yeah Thursday, June 15, 2006 12:57:48 PM EDT Shane Lee: yeah Thursday, June 15, 2006 12:57:52 PM EDT Shane Lee: i did the same Thursday, June 15, 2006 12:57:52 PM EDT Shane Lee: i did the same Thursday, June 15, 2006 12:58:02 PM EDT Shane Lee: moved my length to march for the short term Thursday, June 15, 2006 12:58:02 PM EDT Shane Lee: moved my length to march for the short term Thursday, June 15, 2006 12:58:15 PM EDT Shane Lee: but as rolls get into nov and dec that acts like h/j Thursday, June 15, 2006 12:58:15 PM EDT Shane Lee: but as rolls get into nov and dec that acts like h/j Thursday, June 15, 2006 12:58:20 PM EDT Shane Lee: never wanna be short it Thursday, June 15, 2006 12:58:20 PM EDT Shane Lee: never wanna be short it Thursday, June 15, 2006 1:02:13 PM EDT Shane Lee: think we high enough for market to get short front again?

Thursday, June 15, 2006 1:02:13 PM EDT Shane Lee: think we high enough for market to get short front again?
Thursday, June 15, 2006 1:02:38 PM EDT Brian Hunter: getting there Thursday, June 15, 2006 1:02:38 PM EDT Brian Hunter: getting there Thursday, June 15, 2006 1:02:49 PM EDT Brian Hunter: cummer says lots of producers in to Thursday, June 15, 2006 1:02:49 PM EDT Brian Hunter: cummer says lots of producers in to Thursday, June 15, 2006 1:02:51 PM EDT Brian Hunter: Juy/Oct Thursday, June 15, 2006 1:02:51 PM EDT Brian Hunter: Juy/Oct Thursday, June 15, 2006 1:02:53 PM EDT Shane Lee: i am gonna buy puts soon, even though i hate the vol Thursday, June 15, 2006 1:02:53 PM EDT Shane Lee: i am gonna buy puts soon, even though i hate the vol Thursday, June 15, 2006 1:03:02 PM EDT Shane Lee: sept i think Thursday, June 15, 2006 1:03:02 PM EDT Shane Lee: sept i think Thursday, June 15, 2006 1:03:11 PM EDT Shane Lee: maybe monday Thursday, June 15, 2006 1:03:11 PM EDT Shane Lee: maybe monday Thursday, June 15, 2006 1:03:29 PM EDT Shane Lee: prodcucers for july-oct? Thursday, June 15, 2006 1:03:29 PM EDT Shane Lee: prodcucers for july-oct?
Thursday, June 15, 2006 1:03:33 PM EDT Shane Lee: hmm Thursday, June 15, 2006 1:03:33 PM EDT Shane Lee: hmm Thursday, June 15, 2006 1:04:00 PM EDT Shane Lee: aeco only out 6 cents Thursday, June 15, 2006 1:04:00 PM EDT Shane Lee: aeco only out 6 cents Thursday, June 15, 2006 1:04:08 PM EDT Shane Lee: although backs are out 7 Thursday, June 15, 2006 1:04:08 PM EDT Shane Lee: although backs are out 7 Thursday, June 15, 2006 1:04:18 PM EDT Shane Lee: \well cal 7 Thursday, June 15, 2006 1:04:18 PM EDT Shane Lee: \well cal 7 Thursday, June 15, 2006 1:04:20 PM EDT Shane Lee: cal 8 3 Thursday, June 15, 2006 1:04:20 PM EDT Shane Lee: cal 8 3 Thursday, June 15, 2006 1:05:06 PM EDT Shane Lee: cant believ cal 10 under 8 Thursday, June 15, 2006 1:05:06 PM EDT Shane Lee: cant believ cal 10 under 8 Thursday, June 15, 2006 1:05:33 PM EDT Brian Hunter: no Thursday, June 15, 2006 1:05:33 PM EDT Brian Hunter: no Thursday, June 15, 2006 1:09:00 PM EDT Shane Lee: had 2 guys tell me today that this is the stupidist move the have ever seen Thursday, June 15, 2006 1:09:00 PM EDT Shane Lee: had 2 guys tell me today that this is the stupidist move the have ever seen Thursday, June 15, 2006 1:09:11 PM EDT Shane Lee: guys doing well dont say that Thursday, June 15, 2006 1:09:11 PM EDT Shane Lee: guys doing well dont say that Thursday, June 15, 2006 1:09:13 PM EDT Brian Hunter: yeah Thursday, June 15, 2006 1:09:13 PM EDT Brian Hunter: yeah Thursday, June 15, 2006 1:09:16 PM EDT Brian Hunter: sounds like pain Thursday, June 15, 2006 1:09:17 PM EDT Brian Hunter: sounds like pain Thursday, June 15, 2006 1:09:34 PM EDT Brian Hunter: the winter hatred is stunning Thursday, June 15, 2006 1:09:34 PM EDT Brian Hunter: the winter hatred is stunning Thursday, June 15, 2006 1:09:58 PM EDT Shane Lee: they still protecting with v/f a little, but it is light considering the move
Thursday, June 15, 2006 1:09:58 PM EDT Shane Lee: they still protecting with v/f a little, but it is light considering the move

From: Brian Hunter [[redacted]@amaranthllc.com]
Sent: Friday, June 16, 2006 11:18 AM
To: Shane Lee
Subject: Re: 10:30 update

[redacted] = Redacted by the Permanent Subcommittee on Investigations

What's cal7 doing. That v/f needs to be leaned into...

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee <[redacted]@amaranthllc.com>
To: Brian Hunter <[redacted]@amaranthllc.com>
CC: Matthew Calhoun <mcalhoun@amaranthllc.com>
Sent: Fri Jun 16 11:16:50 2006
Subject: RE: 10:30 update

Front down 12 now, all spreads same except h/j 2.20

> -----Original Message-----
> From: Shane Lee
> Sent: Friday, June 16, 2006 8:30 AM
> To: Brian Hunter
> Cc: Matthew Calhoun
> Subject: 10:30 update
>
> Front down 5 cents...7.15
>
> Cash trading -12 hub, all other points weak. Midwest getting obliterated with that ANR storage problem.
>
> Spreads:
> .265, .26, .335=.86
>
> 1.11, 1.25, .67=3.03, but of course trading 3.00 on box
>
> h/j is 2.23
>
> No bids in backs so far, and lots of front buying going on still even though we are down a little.
>
> Locals went short on open surprisingly

[redacted] = Redacted by the Permanent Subcommittee on Investigations

From: Brian Hunter [[redacted]@amaranthllc.com]
Sent: Sunday, June 18, 2006 9:24 PM
To: shane[redacted]
Subject: Re:

Winter hate. Its crazy.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee <[redacted]
To: Brian Hunter <[redacted]@amaranthllc.com>
Sent: Sun Jun 18 21:20:28 2006
Subject: RE:

that we were gonna get our faces ripped off

-----Original Message-----
From: Brian Hunter [mailto[redacted]r@amaranthllc.com]
Sent: Sunday, June 18, 2006 7:18 PM
To:[redacted]
Subject: Re:

Really? That's nuts. What did they say?

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee <[redacted]
To: Brian Hunter <[redacted]@amaranthllc.com>
Sent: Sun Jun 18 21:16:26 2006
Subject: RE:

thats pretty constructive...would have thought n/v out more but at leats the v/f moving. You wouldn't believe all the anger messages I got on that 3.12 bid earlier on ICE. I then offered it at 5 and some guy went ballistic on me. Seems like the market is not happy about this one......

-----Original Message-----
From: Brian Hunter [mailto:[redacted]@amaranthllc.com]
Sent: Sunday, June 18, 2006 7:09 PM
To:[redacted]
Subject: Re:

N/v 96/99

From: Shane Lee [redacted]@amaranthllc.com]
Sent: Monday, June 19, 2006 1:40 AM
To: Brian Hunter
Subject: Re:

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Sorry read more carefully I will just leave these 3 orders up overnight

----

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee <[redacted]@amaranthllc.com>
To: Brian Hunter <[redacted]@amaranthllc.com>
Sent: Mon Jun 19 01:37:40 2006
Subject: Re:

You want these on ice overnight in addition to your access?

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hunter <[redacted]@amaranthllc.com>
To: Shane Lee <[redacted]@amaranthllc.com>
Sent: Mon Jun 19 01:07:34 2006
Subject:

If you get this early tomorrow - start on v/f early. Maybe even leave up some bids overnight.

312 for 30
310 for 30
308 for 90

Just to keep some fire under the market overnight. I have some things in on access.

Sent from my BlackBerry Wireless Handheld

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Participants:
"Brian Hunter," Amaranth head energy trader
"Shane Lee," Amaranth energy trader

Monday, July 17, 2006, 12:24:49 PM EDT

Shane Lee: v/x [October/November spread] trading on lows of day
Shane Lee: ouch this is getting ugly

Brian Hunter: touch the offer a few ties [times]
Brian Hunter: 120 total

Shane Lee: did them, now you getting some v/f [October/January spread] small
Shane Lee: got about 90 v/f's back out of it

Brian Hunter: nice
Brian Hunter: I'll take that

Shane Lee: we only offers to 3.76 on v/f

Brian Hunter: ok
Brian Hunter: people ewill [people will] take them if we don't reoffer
Brian Hunter: do another 60 on v/x

Shane Lee: got them, now you got filled 3.72's
Shane Lee: so 100 v/f

Brian Hunter: where is v/f then

Shane Lee: 70/73
Shane Lee: our offer

Brian Hunter: anybody with us?

Shane Lee: no

[redacted] = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Tuesday, January 17, 2006 11:25 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; SHLEE@AMARANTHLLC.COM

IM Network: AOL IM

IM Users:

participant[redacted]@amaranthllc.com "hunteramaranth"
participant=[redacted]amaranthllc.com "traderjroc"

IM Dialog:

Monday, July 17, 2006 12:24:49 PM EDT Brian Hunter started conversation.
Monday, July 17, 2006 12:24:49 PM EDT Shane Lee has entered the conversation.
Monday, July 17, 2006 12:24:49 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Monday, July 17, 2006 12:24:49 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Monday, July 17, 2006 12:24:49 PM EDT Shane Lee: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Monday, July 17, 2006 12:24:49 PM EDT Shane Lee: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Monday, July 17, 2006 12:24:49 PM EDT Shane Lee: v/x trading on lows of day Monday, July 17, 2006 12:24:49 PM EDT Shane Lee: v/x trading on lows of day Monday, July 17, 2006 12:24:57 PM EDT Shane Lee: v/f 70/715 Monday, July 17, 2006 12:24:57 PM EDT Shane Lee: v/f 70/715 Monday, July 17, 2006 12:32:00 PM EDT Shane Lee: ouch this is getting ugly Monday, July 17, 2006 12:32:00 PM EDT Shane Lee: ouch this is getting ugly Monday, July 17, 2006 12:32:42 PM EDT Brian Hunter: v/x on box?
Monday, July 17, 2006 12:32:42 PM EDT Brian Hunter: v/x on box?
Monday, July 17, 2006 12:32:55 PM EDT Shane Lee: 1.362/1.378 Monday, July 17, 2006 12:32:55 PM EDT Shane Lee: 1.362/1.378 Monday, July 17, 2006 12:33:02 PM EDT Brian Hunter: touch the offer a few ties Monday, July 17, 2006 12:33:02 PM EDT Brian Hunter: touch the offer a few ties Monday, July 17, 2006 12:33:04 PM EDT Brian Hunter: 120 total Monday, July 17, 2006 12:33:04 PM EDT Brian Hunter: 120 total Monday, July 17, 2006 12:34:12 PM EDT Shane Lee: did them, now you getting some v/f small Monday, July 17, 2006 12:34:12 PM EDT Shane Lee: did them, now you getting some v/f small Monday, July 17, 2006 12:34:54 PM EDT Shane Lee: got about 90 v/f's back out of it Monday, July 17, 2006 12:34:54 PM EDT Shane Lee: got about 90 v/f's back out of it Monday, July 17, 2006 12:35:42 PM EDT Brian Hunter: nice Monday, July 17, 2006 12:35:42 PM EDT Brian Hunter: nice Monday, July 17, 2006 12:35:48 PM EDT Brian Hunter: I'll take that Monday, July 17, 2006 12:35:48 PM EDT Brian Hunter: I'll take that Monday, July 17, 2006 12:36:03 PM EDT Shane Lee: we only offers to 3.76 on v/f Monday, July 17, 2006 12:36:03 PM EDT Shane Lee: we only offers to 3.76 on v/f Monday, July 17, 2006 12:36:17 PM EDT Brian Hunter: ok Monday, July 17, 2006 12:36:17 PM EDT Brian Hunter: ok Monday, July 17, 2006 12:36:30 PM EDT Brian Hunter: peopl ewill take them if we don't reoffer Monday, July 17, 2006 12:36:30 PM EDT Brian Hunter: peopl ewill take them if we don't reoffer Monday, July 17, 2006 12:36:39 PM EDT Brian Hunter: do another 60 on v/x Monday, July 17, 2006 12:36:39 PM EDT Brian Hunter: do another 60 on v/x Monday, July 17, 2006 12:37:51 PM EDT Shane Lee: got them, now you got filled 3.72's Monday, July 17, 2006 12:37:51 PM EDT Shane Lee: got them, now you got filled 3.72's Monday, July 17, 2006 12:37:57 PM EDT Shane Lee: so 100 v/f Monday, July 17, 2006 12:37:57 PM EDT Shane Lee: so 100 v/f Monday, July 17, 2006 12:38:04 PM EDT Shane Lee: 180 v/x Monday, July 17, 2006 12:38:04 PM EDT Shane Lee: 180 v/x Monday, July 17, 2006 12:38:12 PM EDT Brian Hunter: where is v/f then Monday, July 17, 2006 12:38:12 PM EDT Brian Hunter: where is v/f then Monday, July 17, 2006 12:38:18 PM EDT Shane Lee: 70/73 Monday, July 17, 2006 12:38:18 PM EDT Shane Lee: 70/73 Monday, July 17, 2006 12:38:22 PM EDT Shane Lee: our offer Monday, July 17, 2006 12:38:21 PM EDT Shane Lee: our offer
Monday, July 17, 2006 12:38:28 PM EDT Brian Hunter: anybody with us?

Monday, July 17, 2006 12:38:28 PM EDT Brian Hunter: anybody with us?
Monday, July 17, 2006 12:38:31 PM EDT Shane Lee: no Monday, July 17, 2006 12:38:31 PM EDT Shane Lee: no Monday, July 17, 2006 12:38:58 PM EDT Shane Lee: some bids coming in u/v Monday, July 17, 2006 12:38:58 PM EDT Shane Lee: some bids coming in u/v Monday, July 17, 2006 12:38:59 PM EDT Brian Hunter: where is v/x here Monday, July 17, 2006 12:38:59 PM EDT Brian Hunter: where is v/x here Monday, July 17, 2006 12:39:05 PM EDT Shane Lee: 1.38 Monday, July 17, 2006 12:39:05 PM EDT Shane Lee: 1.38 Monday, July 17, 2006 12:39:10 PM EDT Brian Hunter: mid?
Monday, July 17, 2006 12:39:10 PM EDT Brian Hunter: mid?
Monday, July 17, 2006 12:39:19 PM EDT Shane Lee: 7/8 right now Monday, July 17, 2006 12:39:19 PM EDT Shane Lee: 7/8 right now Monday, July 17, 2006 12:39:26 PM EDT Shane Lee: trading 8 Monday, July 17, 2006 12:39:26 PM EDT Shane Lee: trading 8

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Participants:
"Brian Hunter," Amaranth head energy trader
"Shane Lee," Amaranth energy trader

Tuesday, July 18, 2006, 11:21:04 AM EDT

Shane Lee: market feels like it is trying to cover fronts

Brian Hunter: v/x [October/November spread]
Brian Hunter: ?

Shane Lee: trading 42
Shane Lee: still offered

Brian Hunter: take it to 43
Brian Hunter: how is it looking?

Shane Lee: not much pushback
Shane Lee: it took v/f [October/January spread] to 3.765

Brian Hunter: yeah

▬ = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Wednesday, January 18, 2006 10:14 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; SHLEE@AMARANTHLLC.COM

IM Network: AOL IM

IM Users:

participant=[redacted]@amaranthllc.com "hunteramaranth"
participant=[redacted]amaranthllc.com "traderjroc"

IM Dialog:

Tuesday, July 18, 2006 11:14:02 AM EDT Brian Hunter started conversation.
Tuesday, July 18, 2006 11:14:02 AM EDT Shane Lee has entered the conversation.
Tuesday, July 18, 2006 11:14:02 AM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, July 18, 2006 11:14:02 AM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, July 18, 2006 11:14:02 AM EDT Shane Lee: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, July 18, 2006 11:14:02 AM EDT Shane Lee: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, July 18, 2006 11:14:02 AM EDT Brian Hunter: v/x ICE?
Tuesday, July 18, 2006 11:14:02 AM EDT Brian Hunter: v/x ICE?
Tuesday, July 18, 2006 11:14:58 AM EDT Shane Lee: 1.40/1.407 Tuesday, July 18, 2006 11:14:58 AM EDT Shane Lee: 1.40/1.407 Tuesday, July 18, 2006 11:15:07 AM EDT Shane Lee: trades 40.7 Tuesday, July 18, 2006 11:15:07 AM EDT Shane Lee: trades 40.7 Tuesday, July 18, 2006 11:15:48 AM EDT Brian Hunter: take 100 Tuesday, July 18, 2006 11:15:48 AM EDT Brian Hunter: take 100 Tuesday, July 18, 2006 11:16:10 AM EDT Shane Lee: at 1 now, want those? didnt get any Tuesday, July 18, 2006 11:16:10 AM EDT Shane Lee: at 1 now, want those? didnt get any Tuesday, July 18, 2006 11:16:16 AM EDT Brian Hunter: y Tuesday, July 18, 2006 11:16:16 AM EDT Brian Hunter: y Tuesday, July 18, 2006 11:16:39 AM EDT Shane Lee: done Tuesday, July 18, 2006 11:16:39 AM EDT Shane Lee: done Tuesday, July 18, 2006 11:18:26 AM EDT Brian Hunter: hows the v/f doing Tuesday, July 18, 2006 11:18:26 AM EDT Brian Hunter: hows the v/f doing Tuesday, July 18, 2006 11:18:46 AM EDT Shane Lee: @75.5 for 60 Tuesday, July 18, 2006 11:18:46 AM EDT Shane Lee: @75.5 for 60 Tuesday, July 18, 2006 11:19:20 AM EDT Shane Lee: dunno how they get to that Tuesday, July 18, 2006 11:19:20 AM EDT Shane Lee: dunno how they get to that Tuesday, July 18, 2006 11:20:41 AM EDT Shane Lee: v/x just trades 42 Tuesday, July 18, 2006 11:20:41 AM EDT Shane Lee: v/x just trades 42 Tuesday, July 18, 2006 11:21:04 AM EDT Shane Lee: market feels like it is trying to cover fronts Tuesday, July 18, 2006 11:21:04 AM EDT Shane Lee: market feels like it is trying to cover fronts Tuesday, July 18, 2006 11:21:28 AM EDT Shane Lee: 1.60 trding h/j Tuesday, July 18, 2006 11:21:28 AM EDT Shane Lee: 1.60 trding h/j Tuesday, July 18, 2006 11:29:10 AM EDT Brian Hunter: v/x Tuesday, July 18, 2006 11:29:10 AM EDT Brian Hunter: v/x
Tuesday, July 18, 2006 11:29:12 AM EDT Brian Hunter: ?
Tuesday, July 18, 2006 11:29:12 AM EDT Brian Hunter: ?
Tuesday, July 18, 2006 11:29:32 AM EDT Shane Lee: trading 42 Tuesday, July 18, 2006 11:29:32 AM EDT Shane Lee: trading 42 Tuesday, July 18, 2006 11:29:37 AM EDT Shane Lee: still offered Tuesday, July 18, 2006 11:29:37 AM EDT Shane Lee: still offered Tuesday, July 18, 2006 11:30:16 AM EDT Brian Hunter: take it to 43 Tuesday, July 18, 2006 11:30:16 AM EDT Brian Hunter: take it to 43 Tuesday, July 18, 2006 11:32:12 AM EDT Brian Hunter: how is it looking?
Tuesday, July 18, 2006 11:32:12 AM EDT Brian Hunter: how is it looking?
Tuesday, July 18, 2006 11:32:20 AM EDT Shane Lee: not much pushback Tuesday, July 18, 2006 11:32:20 AM EDT Shane Lee: not much pushback Tuesday, July 18, 2006 11:32:28 AM EDT Shane Lee: it took v/f to 3.765 Tuesday, July 18, 2006 11:32:28 AM EDT Shane Lee: it took v/f to 3.765 Tuesday, July 18, 2006 11:32:33 AM EDT Brian Hunter: yeah Tuesday, July 18, 2006

11:32:33 AM EDT Brian Hunter: yeah Tuesday, July 18, 2006 11:32:40 AM EDT Brian Hunter: that seems really low Tuesday, July 18, 2006 11:32:40 AM EDT Brian Hunter: that seems really low Tuesday, July 18, 2006 11:32:45 AM EDT Shane Lee: yes Tuesday, July 18, 2006 11:32:45 AM EDT Shane Lee: yes Tuesday, July 18, 2006 11:32:55 AM EDT Shane Lee: fair should be 79 Tuesday, July 18, 2006 11:32:55 AM EDT Shane Lee: fair should be 79 Tuesday, July 18, 2006 11:32:58 AM EDT Shane Lee: or more Tuesday, July 18, 2006 11:32:58 AM EDT Shane Lee: or more

Tuesday, July 18, 2006 11:34:17 AM EDT Shane Lee: totals so far: oct -418.5nov 405

Tuesday, July 18, 2006 11:34:17 AM EDT Shane Lee: totals so far: oct -418.5nov 405

Tuesday, July 18, 2006 11:34:40 AM EDT Brian Hunter: ok Tuesday, July 18, 2006 11:34:40 AM EDT Brian Hunter: ok Tuesday, July 18, 2006 11:35:02 AM EDT Shane Lee: they offered z/f thats how Tuesday, July 18, 2006 11:35:02 AM EDT Shane Lee: they offered z/f thats how Tuesday, July 18, 2006 11:35:21 AM EDT Shane Lee: 76/765 z/f Tuesday, July 18, 2006 11:35:21 AM EDT Shane Lee: 76/765 z/f Tuesday, July 18, 2006 11:35:21 AM EDT Brian Hunter: where is that?

Tuesday, July 18, 2006 11:35:21 AM EDT Brian Hunter: where is that?

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Participants:
"Brian Hunter," Amaranth head energy trader
"Shane Lee," Amaranth energy trader

Tuesday, July 18, 2006, 1:11:16 PM EDT

Shane Lee: spreads coming in because of net buying
Shane Lee: surprised v/f [October/January spread] actually holding

Brian Hunter: actaully explodng [actually exploding]

Brian Hunter: v/x [October/November spread] HAS to stay strong

Shane Lee: v/x is at 5 again

Brian Hunter: take those
Brian Hunter: agressive pls [aggressive please]

Shane Lee: to where

Brian Hunter: 6

[redacted] = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Wednesday, January 18, 2006 12:10 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; SHLEE@AMARANTHLLC.COM

X-ZANTAZ-MESSAGE-DATE: /18/2006 17:10:13; /18/2006 17:10:22; /18/2006 17:10:35; /18/2006 17:11:05; /18/2006 17:11:16; /18/2006 17:11:26; /18/2006 17:11:37; /18/2006 17:11:39; /18/2006 17:11:46; /18/2006 17:11:50; /18/2006 17:11:52; /18/2006 17:11:53; /18/2006 17:12:58; /18/2006 17:18:04; /18/2006 17:18:06; /18/2006 17:19:06; /18/2006 17:19:16; /18/2006 17:19:21; /18/2006 17:19:29; /18/2006 17:19:31; /18/2006 17:19:37; /18/2006 17:19:42; /18/2006 17:19:44; /18/2006 17:19:43; /18/2006 17:19:46; /18/2006 17:26:17; /18/2006 17:26:19; /18/2006 17:26:32; /18/2006 17:26:50; /18/2006 17:26:59; /18/2006 17:28:12; /18/2006 17:32:16; /18/2006 17:32:47; /18/2006 17:32:51; /18/2006 17:34:12; /18/2006 17:36:36; /18/2006 17:36:45; /18/2006 17:36:46; /18/2006 17:36:51; /18/2006 17:36:59; /18/2006 17:37:07; /18/2006 17:37:15; /18/2006 17:37:48; /18/2006 17:37:56; /18/2006 17:42:16; /18/2006 17:42:33; /18/2006 17:45:49; /18/2006 17:46:59; /18/2006 17:47:01; /18/2006 17:47:05; /18/2006 17:48:1!
8; /18/2006 17:48:51; /18/2006 17:48:54; /18/2006 17:52:00; /18/2006 17:55:21; /18/2006 17:59:21; /18/2006 18:07:19; /18/2006 18:07:44
X-ZANTAZ-PARTICIPANT-IMNAMES: traderjroc; hunteramaranth
X-ZANTAZ-RECIPIENT-NAME: Shane Lee; Brian Hunter
X-ZANTAZ-PARTICIPANT-IMNAMES: hunteramaranth; traderjroc
X-ZANTAZ-SENDER-NAME: Brian Hunter; Shane Lee
X-ZANTAZ-GUID: 343983A1-96FD-4BB4-AD1A-4102D9B1A52031120031465183906
X-ZANTAZ-URL: notused
X-OriginalArrivalTime: 18 Jul 2006 18:11:21.0780 (UTC) FILETIME=[92E26F40:01C6AA95]

IM Network: AOL IM

IM Users:

participant=[redacted]@amaranthllc.com "hunteramaranth"
participant=[redacted]amaranthllc.com "traderjroc"

IM Dialog:

Tuesday, July 18, 2006 1:10:13 PM EDT Brian Hunter started conversation.
Tuesday, July 18, 2006 1:10:13 PM EDT Shane Lee has entered the conversation.
Tuesday, July 18, 2006 1:10:13 PM EDT Brian Hunter: cash spooking everyone Tuesday, July 18, 2006 1:10:13 PM EDT Brian Hunter: cash spooking everyone Tuesday, July 18, 2006 1:10:22 PM EDT Brian Hunter: tells me front is too low Tuesday, July 18, 2006 1:10:22 PM EDT Brian Hunter: tells me front is too low Tuesday, July 18, 2006 1:10:35 PM EDT Shane Lee: yes. i am net buying today. hope you dont care lol Tuesday, July 18, 2006 1:10:35 PM EDT Shane Lee: yes. i am net buying today. hope you dont care lol Tuesday, July 18, 2006 1:11:05 PM EDT Shane Lee: funds wont be short 5.50 futes Tuesday, July 18, 2006 1:11:05 PM EDT Shane Lee: funds wont be short 5.50 futes Tuesday, July 18, 2006 1:11:16 PM EDT Shane Lee: spreads coming in because of net buying Tuesday, July 18, 2006 1:11:16 PM EDT Shane Lee: spreads coming in because of net buying Tuesday, July 18, 2006 1:11:26 PM EDT Shane Lee: surprised v/f actually holding Tuesday, July 18, 2006 1:11:26 PM EDT Shane Lee: surprised v/f actually holding Tuesday, July 18, 2006 1:11:37 PM EDT Brian Hunter: actaully explodng Tuesday, July 18, 2006 1:11:37 PM EDT Brian Hunter: actaully explodng Tuesday, July 18, 2006 1:11:39 PM EDT Brian Hunter: where is now Tuesday, July 18, 2006 1:11:39 PM EDT Brian Hunter: where is now Tuesday, July 18, 2006 1:11:46 PM EDT Shane Lee: its @83.5 Tuesday, July 18, 2006 1:11:46 PM EDT Shane Lee: its @83.5 Tuesday, July 18, 2006 1:11:50 PM EDT Brian Hunter: take that Tuesday, July 18, 2006 1:11:50 PM EDT Brian Hunter: take that Tuesday, July 18, 2006 1:11:52 PM EDT Shane Lee: always offered better outright Tuesday, July 18, 2006 1:11:52 PM EDT Shane Lee: always offered better outright Tuesday, July 18, 2006 1:11:53 PM EDT Brian Hunter: small Tuesday, July 18, 2006 1:11:53

PM EDT Brian Hunter: small Tuesday, July 18, 2006 1:12:58 PM EDT Shane Lee: floor max short looking stops 5.60 Tuesday, July 18, 2006 1:12:58 PM EDT Shane Lee: floor max short looking stops 5.60 Tuesday, July 18, 2006 1:18:04 PM EDT Brian Hunter: lift all the legs on v/f Tuesday, July 18, 2006 1:18:04 PM EDT Brian Hunter: lift all the legs on v/f Tuesday, July 18, 2006 1:18:06 PM EDT Brian Hunter: 2/d each Tuesday, July 18, 2006 1:18:06 PM EDT Brian Hunter: 2/d each Tuesday, July 18, 2006 1:19:06 PM EDT Shane Lee: x/z heavy Tuesday, July 18, 2006 1:19:06 PM EDT Shane Lee: x/z heavy Tuesday, July 18, 2006 1:19:16 PM EDT Brian Hunter: that's fine Tuesday, July 18, 2006 1:19:16 PM EDT Brian Hunter: that's fine Tuesday, July 18, 2006 1:19:21 PM EDT Brian Hunter: the other concerned me more Tuesday, July 18, 2006 1:19:21 PM EDT Brian Hunter: the other concerned me more Tuesday, July 18, 2006 1:19:29 PM EDT Brian Hunter: v/x HAS to stay strong Tuesday, July 18, 2006 1:19:29 PM EDT Brian Hunter: v/x HAS to stay strong Tuesday, July 18, 2006 1:19:31 PM EDT Shane Lee: v/x is at 5 again Tuesday, July 18, 2006 1:19:31 PM EDT Shane Lee: v/x is at 5 again Tuesday, July 18, 2006 1:19:37 PM EDT Brian Hunter: take those Tuesday, July 18, 2006 1:19:37 PM EDT Brian Hunter: take those Tuesday, July 18, 2006 1:19:42 PM EDT Brian Hunter: agressive pls Tuesday, July 18, 2006 1:19:42 PM EDT Brian Hunter: agressive pls Tuesday, July 18, 2006 1:19:44 PM EDT Shane Lee: ok Tuesday, July 18, 2006 1:19:44 PM EDT Shane Lee: ok Tuesday, July 18, 2006 1:19:43 PM EDT Shane Lee: to where Tuesday, July 18, 2006 1:19:43 PM EDT Shane Lee: to where Tuesday, July 18, 2006 1:19:46 PM EDT Brian Hunter: 6 Tuesday, July 18, 2006 1:19:46 PM EDT Brian Hunter: 6 Tuesday, July 18, 2006 1:26:17 PM EDT Brian Hunter: v/f legs Tuesday, July 18, 2006 1:26:17 PM EDT Brian Hunter: v/f legs Tuesday, July 18, 2006 1:26:19 PM EDT Brian Hunter: how they look Tuesday, July 18, 2006 1:26:19 PM EDT Brian Hunter: how they look Tuesday, July 18, 2006 1:26:32 PM EDT Shane Lee: 1.46/1.615/.77 Tuesday, July 18, 2006 1:26:32 PM EDT Shane Lee: 1.46/1.615/.77 Tuesday, July 18, 2006 1:26:50 PM EDT Brian Hunter: drive out v/x to 47 Tuesday, July 18, 2006 1:26:50 PM EDT Brian Hunter: drive out v/x to 47 Tuesday, July 18, 2006 1:26:59 PM EDT Brian Hunter: keep this going Tuesday, July 18, 2006 1:26:59 PM EDT Brian Hunter: keep this going

Tuesday, July 18, 2006 1:28:12 PM EDT Shane Lee: 31 oct -1449.2530 nov 1492.531 dec 31 jan 77.528 feb 31 march 100.7530 apr -97.5

Tuesday, July 18, 2006 1:28:12 PM EDT Shane Lee: 31 oct -1449.2530 nov 1492.531 dec 31 jan 77.528 feb 31 march 100.7530 apr -97.5

Tuesday, July 18, 2006 1:32:16 PM EDT Shane Lee: v/x fighting now Tuesday, July 18, 2006 1:32:16 PM EDT Shane Lee: v/x fighting now Tuesday, July 18, 2006 1:32:47 PM EDT Brian Hunter: good way or bad way Tuesday, July 18, 2006 1:32:47 PM EDT Brian Hunter: good way or bad way Tuesday, July 18, 2006 1:32:51 PM EDT Shane Lee: bad Tuesday, July 18, 2006 1:32:51 PM EDT Shane Lee: bad

Tuesday, July 18, 2006 1:34:12 PM EDT Shane Lee: oct -1643nov 1657.5dec 7.75jan 93feb march 100.75apr -97.5 118.5

Tuesday, July 18, 2006 1:34:12 PM EDT Shane Lee: oct -1643nov 1657.5dec 7.75jan 93feb march 100.75apr -97.5 118.5

Tuesday, July 18, 2006 1:36:36 PM EDT Brian Hunter: v/x?

Tuesday, July 18, 2006 1:36:36 PM EDT Brian Hunter: v/x?

Tuesday, July 18, 2006 1:36:45 PM EDT Brian Hunter: is the front really 55 Tuesday, July 18, 2006 1:36:46 PM EDT Brian Hunter: is the front really 55 Tuesday, July 18, 2006 1:36:51 PM EDT Shane Lee: yes Tuesday, July 18, 2006 1:36:51 PM EDT Shane Lee: yes Tuesday, July 18, 2006 1:36:59 PM EDT Shane Lee: 1.46/148 Tuesday, July 18, 2006 1:36:59 PM EDT Shane Lee: 1.46/148 Tuesday, July 18, 2006 1:37:07 PM EDT Brian Hunter: buy 150 at 48 Tuesday, July 18, 2006 1:37:07 PM EDT Brian Hunter: buy 150 at 48 Tuesday, July 18, 2006 1:37:15 PM EDT Brian Hunter: lets push pig Tuesday, July 18, 2006 1:37:15 PM EDT Brian Hunter: lets push pig Tuesday, July 18, 2006 1:37:48 PM EDT Shane Lee: wasnt much there Tuesday, July 18, 2006 1:37:48 PM EDT Shane Lee: wasnt much there Tuesday, July 18, 2006 1:37:56 PM EDT Shane Lee: 22 lots lol Tuesday, July 18, 2006 1:37:56 PM EDT Shane Lee: 22 lots lol Tuesday, July 18, 2006 1:42:16 PM EDT Shane Lee: market is paniced threw up some 3.81 prints v/f LOL Tuesday, July 18, 2006 1:42:16 PM EDT Shane Lee: market is paniced threw up some 3.81 prints v/f LOL Tuesday, July 18, 2006 1:42:33 PM EDT Shane Lee: i got fair value 3.89 Tuesday, July 18, 2006 1:42:33 PM EDT Shane Lee: i got fair value 3.89 Tuesday, July 18, 2006 1:45:49 PM EDT Shane Lee: 12 and 31 front spreads Tuesday, July 18, 2006 1:45:49 PM EDT Shane Lee: 12 and 31 front spreads

Tuesday, July 18, 2006 1:46:59 PM EDT Shane Lee: oct -1860nov 1845dec -31jan 155feb march 100.75apr -97.5 112.25

Tuesday, July 18, 2006 1:46:59 PM EDT Shane Lee: oct -1860nov 1845dec -31jan 155feb march 100.75apr -97.5 112.25

Tuesday, July 18, 2006 1:47:01 PM EDT Brian Hunter: funny Tuesday, July 18, 2006 1:47:01 PM EDT Brian Hunter: funny Tuesday, July 18, 2006 1:47:05 PM EDT Shane Lee: lol Tuesday, July 18, 2006 1:47:05 PM EDT Shane Lee: lol Tuesday, July 18, 2006 1:48:18 PM EDT Shane Lee: they fighting now hard Tuesday, July 18, 2006 1:48:18 PM EDT Shane Lee: they fighting now hard Tuesday, July 18, 2006 1:48:51 PM EDT Brian Hunter: rally in front Tuesday, July 18, 2006 1:48:51 PM EDT Brian Hunter: rally in front Tuesday, July 18, 2006 1:48:54 PM EDT Brian Hunter: take v/x to 49 Tuesday, July 18, 2006 1:48:54 PM EDT Brian Hunter: take v/x to 49 Tuesday, July 18, 2006 1:52:00 PM EDT Shane Lee: box is offering v/f 2 cents through fair at min Tuesday, July 18, 2006 1:52:00 PM EDT Shane Lee: box is offering v/f 2 cents through fair at min

Tuesday, July 18, 2006 1:55:21 PM EDT Shane Lee: oct -2100.25nov 2077.5dec -31jan 155feb march 100.75apr -97.5 104.5

Tuesday, July 18, 2006 1:55:21 PM EDT Shane Lee: oct -2100.25nov 2077.5dec -31jan 155feb march 100.75apr -97.5 104.5

Tuesday, July 18, 2006 1:59:21 PM EDT Shane Lee: 5 min break have fun if you want Tuesday, July 18, 2006 1:59:21 PM EDT Shane Lee: 5 min break have fun if you want Tuesday, July 18, 2006 2:07:19 PM EDT Shane Lee: want v/x down to 9 still?

Tuesday, July 18, 2006 2:07:19 PM EDT Shane Lee: want v/x down to 9 still?

Tuesday, July 18, 2006 2:07:44 PM EDT Brian Hunter: y Tuesday, July 18, 2006 2:07:44 PM EDT Brian Hunter: y

From: Brian Hunter [redacted]@amaranthllc.com]
Sent: Friday, July 28, 2006 12:07 AM
To: Shane Lee
Subject: Re:

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Where is sept.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee <[redacted]@amaranthllc.com>
To: Brian Hunter <[redacted]r@amaranthllc.com>
Sent: Thu Jul 27 23:56:59 2006
Subject: Re:

If you are gonna do it do it with arnold.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hunter <[redacted]r@amaranthllc.com>
To: Shane Lee <[redacted]@amaranthllc.com>
Sent: Thu Jul 27 23:55:39 2006
Subject: Re:

Yeah. For risk I was thinking about pitching 35k x/z to Arnold direct or to 10 banks at once. I think its not really going to get popped but would get Rob and Nick calmed...

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee [redacted]amaranthllc.com>
To: Brian Hunter [redacted]@amaranthllc.com>
Sent: Thu Jul 27 23:51:55 2006
Subject: Re:

I would be quite concerned about centy in this move...- don't know how many bullets he has left. I guarentee he hasn't been as protected as us.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hunter <[redacted]@amaranthllc.com>
To: Shane Lee <[redacted]@amaranthllc.com>
Sent: Thu Jul 27 23:48:00 2006
Subject: Re:

I feel pretty convinced we tumble (Robry not withstanding - I need to hire him....). Cash and weather should force weakness. Negative cash and cool weather will give market a taste of potential downside. [redacted]s committed to 600q

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Sent from my BlackBerry Wireless Handheld

[redacted] = Redacted by the Permanent Subcommittee on Investigations

-----Original Message-----
From: Shane Lee <[redacted]@amaranthllc.com>
To: Brian Hunter [redacted]@amaranthllc.com>
Sent: Thu Jul 27 23:38:40 2006
Subject: Re:

He went from up 16 to 9 in this move. He was long west, long cal 8, long v/f, and long some q1. But not long enough.

The only way to have made money in this rally was to either have been just long front or had an offside amount of length against spreads. 90 percent of people I talked to got killed....no one saw this coming.

If the market is really starting to believe we may not fill, then why the hell is h/j only 2.00....fricken deviant market

----

Sent from my BlackBerry Wireless Handheld

-----Original Message[redacted]
From: Brian Hunter [redacted]@amaranthllc.com>
To: Shane Lee <[redacted]@amaranthllc.com>
Sent: Thu Jul 27 23:34:55 2006
Subject: Re:

How's [redacted] doin'?

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee [redacted]amaranthllc.com>
To: Brian Hunter [redacted]@amaranthllc.com>
Sent: Thu Jul 27 23:34:09 2006
Subject: Re:

For what its worth citadel thinks its gonna stay warm...and they have been wrong on weather for 3 months

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Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hu[redacted]@amaranthllc.com>
To: Shane Lee [redacted]amaranthllc.com>
Sent: Thu Jul 27 23:30:40 2006
Subject: Re:

Damn

From: Brian Hunter [redacted]@amaranthllc.com]
Sent: Friday, July 28, 2006 10:16 PM
To: Jeff Baird
Subject: Re: Idea

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We talked about that - you run the risk of collaspsing re h/j and the back one as well. Addionally you have to execute in a way everyone know what you are doing (no condors on ICE...

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Jeff Baird [redacted]@amaranthllc.com>
To: Brian Hunter [redacted]@amaranthllc.com>
Sent: Fri Jul 28 21:43:38 2006
Subject: Idea

Sorry I lost your call there ... feel free to call me over the weekend.

I have an idea to how to package this Mar/Apr buying. I think you should sell 15,000 red March April and buy 15,000 (or more) front Mar/Apr. My rationale is not that you should short the reds, just that you're moving risk ... not increasing it. Leveraging it to the part of the curve that is undervalued and lightening up on the one that is perhaps fair value.

Do you think that negates some of the market impact of the front Mar/Apr's?

= Redacted by the Permanent Subcommittee on Investigations

From: Brian Hunter [redacted]@amaranthllc.com]
Sent: Saturday, July 29, 2006 1:18 PM
To: Brad Basarowich
Subject: Re:

My gut tells me the chances of opening significantly higher are very good. A lot of stop out last week.

Only bearish help is the demise of the TD likely to form tonight and the apparently cooler weather by next weekend. Between now and then however.... Cash will be ripping monday and the next two numbers will be bullish. Assuming weather forecasts are right, then we fall off hard for bid week unless there is a severe hurricane threat

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Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brad Basarowich [redacted]@amaranthllc.com>
To: Brian Hunter [redacted]@amaranthllc.com>
Sent: Sat Jul 29 12:59:38 2006
Subject: Re:

Well....I am no better. I went in last week to flattem my posiution and instead of selling cal 7, I sold 700 seps and increased my spread position. I think I may be on dope...but it is so clearly the right thing to do in the long run.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hunter [redacted]@amaranthllc.com>
To: Brad Basarowich [redacted]@amaranthllc.com>
Sent: Fri Jul 28 23:31:38 2006
Subject: Re:

I think the same. We don't have time. That is the problem. Other groups and investors are all over us to get smaller.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brad Basarowich [redacted]@amaranthllc.com>
To: Brian Hunter [redacted]@amaranthllc.com>
Sent: Fri Jul 28 23:23:31 2006
Subject: Re:

U think people are out to get us...I think they have the same position that is killling them too and they are bailoing like rats cause they are getting killed.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hunter [redacted]@amaranthllc.com>

From: Matthew Donohoe [[redacted]@amaranthllc.com]
Sent: Monday, July 31, 2006 7:55 AM
To: Lauralyn Pestritto
Cc: Brian Hunter; Shane Lee
Subject: Ice counterparties

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Can you please turn off all direct counterparties on ice for myself and shane lee
We just want ice cleared only
ty

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Participants:
"Brian Hunter," Amaranth head energy trader
[redacted]," Unidentified

Monday, July 31, 2006, 4:02:34 PM EDT

[redacted]: Brian, u busy ... what the hell is going on out there, rumour is you are getting even more rich!!!

Brian Hunter: really
Brian Hunter: why is that

[redacted] let see ...
[redacted] I heard
[redacted]March April swap spd [spread] you made a killing
[redacted] some other swap spd too, Dec Mar I think
[redacted]: also I heard you were bullish vol [volume] and fixed price
[redacted]: so according to the market you are brilliant!!!!!!!
[redacted] can do no wrong ... ever!

▬ = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Tuesday, January 31, 2006 3:03 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "CATHYAECO"; "HUNTERAMARANTH"

IM Network: AOL IM

IM Users:

participant="[redacted]"
participant="hunteramaranth"

IM Dialog:

Monday, July 31, 2006 4:02:34 PM EDT [redacted] started conversation.
Monday, July 31, 2006 4:02:34 PM EDT Brian Hunter has entered the conversation.
Monday, July 31, 2006 4:02:34 PM EDT [redacted] Brian, u busy...what the hell is going on out there, rumour is you are getting even more rich!!!
Monday, July 31, 2006 4:02:34 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Monday, July 31, 2006 4:02:34 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Monday, July 31, 2006 4:03:21 PM EDT Brian Hunter: really Monday, July 31, 2006 4:03:23 PM EDT Brian Hunter: why is that Monday, July 31, 2006 4:03:29 PM EDT [redacted] let see....
Monday, July 31, 2006 4:03:34 PM EDT [redacted] I heard Monday, July 31, 2006 4:03:49 PM EDT [redacted] March April swap spd you made a killing Monday, July 31, 2006 4:04:01 PM EDT [redacted] some other swap spd too, Dec Mar I think Monday, July 31, 2006 4:04:16 PM EDT [redacted]: also I heard you were also bullish vol and fixed price Monday, July 31, 2006 4:04:28 PM EDT [redacted] so according to the market you are brilliant!!!!!!!
Monday, July 31, 2006 4:04:44 PM EDT [redacted] can do no wrong....ever!
Monday, July 31, 2006 4:04:48 PM EDT Brian Hunter: honestly we have flattened alot of risk
Monday, July 31, 2006 4:04:54 PM EDT Brian Hunter: don't really have tons on Monday, July 31, 2006 4:04:59 PM EDT Brian Hunter: but we did have a good Monday, July 31, 2006 4:05:00 PM EDT Brian Hunter: day Monday, July 31, 2006 4:05:05 PM EDT [redacted] r u going on vacation?
Monday, July 31, 2006 4:05:06 PM EDT Brian Hunter: but pretty flat on the month Monday, July 31, 2006 4:05:10 PM EDT Brian Hunter: nono Monday, July 31, 2006 4:05:14 PM EDT Brian Hunter: just paring down risk Monday, July 31, 2006 4:05:17 PM EDT Brian Hunter: had a nice year Monday, July 31, 2006 4:05:33 PM EDT Brian Hunter: we are likely going to roll out and energy fund later this year Monday, July 31, 2006 4:05:41 PM EDT Brian Hunter: so normalizing the books Monday, July 31, 2006 4:05:47 PM EDT Brian Hunter: pretty mush there now Monday, July 31, 2006 4:05:53 PM EDT [redacted]: what do you mean...under a new name?
Monday, July 31, 2006 4:06:06 PM EDT Brian Hunter: Amaranth Energy fundtry and raise a few billion Monday, July 31, 2006 4:06:11 PM EDT [redacted] wow Monday, July 31, 2006 4:06:17 PM EDT [redacted] that's huge Monday, July 31, 2006 4:06:36 PM EDT Brian Hunter: yeah should be good Monday, July 31, 2006 4:06:41 PM EDT Brian Hunter: anyways heading to audit meeting Monday, July 31, 2006 4:06:46 PM EDT Brian Hunter: I will be in Greenwich tomorrow
Monday, July 31, 2006 4:06:46 PM EDT [redacted] r u still the guy?
Monday, July 31, 2006 4:06:52 PM EDT Brian Hunter: y Monday, July 31, 2006 4:06:53 PM EDT [redacted]: oh ok Monday, July 31, 2006 4:06:57 PM EDT [redacted] have a good flight

[redacted] = Redacted by the Permanent Subcommittee on Investigations

From: [redacted]
Sent: Friday, August 04, 2006 10:28 AM
To: [redacted]
Subject: RE: collins

Bo is done, Monday blew them up. We are doing fine, gave a little back in July but within spitting distance of our all time high. Market going nuts with Amaranth the featured FU player, they took it to Mother Rock on Monday in the h/j spread.

[redacted]

From: [redacted]
Sent: Friday, August 04, 2006 9:18 AM
To: [redacted]
Subject: collins

How are things. I was just reading about Bo Collins mess. How are you guys doing?? Was Collins previously at el paso?? I thought he was swinging wood for them during the boom times???

From: Brian Hunter [[redacted]@amaranthllc.com]
Sent: Thursday, August 17, 2006 1:59 AM
To: Steven Ardovini
Subject: Re: Futures Brokers

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Still the net margin has increased 150mm but risk is lower - I'll work on some offsets, we should be able to get that back and more...

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Steven Ardovini <[redacted]@amaranthllc.com>
To: Brian Hunter <[redacted]@amaranthllc.com>
Sent: Wed Aug 16 21:23:16 2006
Subject: RE: Futures Brokers

Hi Brian - I tried to break out some of the points in your emails. Please let me know if it makes sense. -Steve

Since last Thursday ICE margin has gone up $87 million and NYMEX margin has gone up $476 million. At the time the JPM book was net long $312 million in options that offset margin. Right now the JPM book is net long only $56 million. I believe that his is part of the reason margin has gone up. When I get back to the office tomorrow I will compare individual product types in order to isolate the differences.

Regarding the liquidity - We started the day off with an increase of $170 million in overall liquidity. During the course of the day we paid out $5 million on ISDA collateral calls and $37 million for unfinanced bank loans. The loans should be financed within the next 7 days.

Also, overall margin requirements on the rest the firms positions increased by $25 million contributing to the reduction in liquidity since Tuesday.

-----Original Message-----
From: Brian Hunter
Sent: Wednesday, August 16, 2006 6:06 PM
To: Steven Ardovini
Subject: Re: Futures Brokers

I don't understand this huge increase in margin at jpmu. Last thursday it was 1.3 and todat is almost 2bn. Overall risk is low - is this an ICE/Nymex difference? Additionally we made 250mm yesterday and firm liquidity was unch. Where did that go? The day prior I notice the redemption reserve.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Steven Ardovini [redacted]@amaranthllc.com>
To: Artie DiRocco <[redacted]@amaranthllc.com>; Jim Glynn [redacted]@amaranthllc.com>; Tim Bailey <[redacted]@amaranthllc.com>; Brian Hunter <[redacted]@amaranthllc.com>; Jeff Baird[redacted]@amaranthllc.com>; David

Chasman <[redacted]@amaranthllc.com>; Mark Harvey [redacted]@amaranthllc.com>
Sent: Wed Aug 16 07:23:29 2006
Subject: Futures Brokers

[redacted] = Redacted by the Permanent Subcommittee on Investigations

<<STATEMENT.PDF>> <<Amaranth_Daily.pdf>>

	JPM	UBS
Margin RQMT	1,948,748,429.00	80,767,287.07
Net Option Value	55,756,101.80	60,520,499.81
Excess/Call	276,628,296.05	21,214,201.03

From: Shane Lee [redacted]@amaranthllc.com]
Sent: Tuesday, August 22, 2006 1:08 AM
To: Brian Hunter
Subject: Re:

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Do u think u can get off your h/j if sept starts to get smashed into bid week?
It won't go down now b/c no sellers...but I am pretty sure no one wants to get long it ar 2.45....

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hunter [redacted]@amaranthllc.com>
To: Shane Lee [redacted]@amaranthllc.com>
Sent: Tue Aug 22 01:00:27 2006
Subject: Re:

Total weather 180. Some east above in 11-15 but not much. Very warm west.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee [redacted]@amaranthllc.com>
To: Brian Hunter [redacted]@amaranthllc.com>
Sent: Tue Aug 22 00:45:17 2006
Subject: Re:

Yeah feels like a game of chicken right now...

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Brian Hunter [redacted]@amaranthllc.com>
To: Shane Lee [redacted]@amaranthllc.com>
Sent: Tue Aug 22 00:44:28 2006
Subject: Re:

Weather is significantly more bearish next 10 days - a lot different than yest.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee [redacted]@amaranthllc.com>
To: Brian Hunter [redacted]@amaranthllc.com>
Sent: Tue Aug 22 00:38:23 2006
Subject: Re:

Model graphics are not going to scare anyone....forecasters are downplaying it enough

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

= Redacted by the Permanent Subcommittee on Investigations

Participants:
"Brian Hunter," Amaranth head energy trader
[redacted]" Unknown trader

Tuesday, August 22, 2006, 2:41:07 PM EDT

[redacted] hunter...you are a friend and the market needs you...so keep it up whatever your doing...just be careful
[redacted] no

Brian Hunter: think this is a rally to stop us out of something?

[redacted]: i have no idea what you have on
[redacted]: i pray the best for you
[redacted] i really do

Brian Hunter: ha
Brian Hunter: ok
Brian Hunter: things are pretty good here

[redacted] i just dont want to get behind something you are about to kill

Brian Hunter: you'll hear it next week

▬ = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Tuesday, August 22, 2006 2:40 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTER_AMARANTH"; "TRDRXTRA"

X-ZANTAZ-MESSAGE-DATE: 08/22/2006 18:40:10; 08/22/2006 18:40:18; 08/22/2006 18:40:27; 08/22/2006 18:40:29; 08/22/2006 18:40:31; 08/22/2006 18:40:34; 08/22/2006 18:40:43; 08/22/2006 18:40:53; 08/22/2006 18:41:07; 08/22/2006 18:41:12; 08/22/2006 18:41:36; 08/22/2006 18:41:54; 08/22/2006 18:42:04; 08/22/2006 18:42:05; 08/22/2006 18:42:09; 08/22/2006 18:42:11; 08/22/2006 18:42:16; 08/22/2006 18:42:18; 08/22/2006 18:42:21; 08/22/2006 18:42:42; 08/22/2006 18:42:59; 08/22/2006 18:43:08; 08/22/2006 18:43:11; 08/22/2006 18:43:27; 08/22/2006 18:43:31; 08/22/2006 18:43:34; 08/22/2006 18:43:38; 08/22/2006 18:43:42; 08/22/2006 18:43:53; 08/22/2006 18:44:02; 08/22/2006 18:44:04; 08/22/2006 18:44:18; 08/22/2006 18:44:34; 08/22/2006 18:44:45; 08/22/2006 18:45:05; 08/22/2006 18:45:19; 08/22/2006 18:45:37; 08/22/2006 18:45:40; 08/22/2006 18:45:46; 08/22/2006 18:46:20; 08/22/2006 18:46:22; 08/22/2006 18:46:29; 08/22/2006 18:46:38; 08/22/2006 18:46:42; 08/22/2006 18:46:45; 08/22/2006 18:46:52; !
08/22/2006 18:47:06; 08/22/2006 18:47:21; 08/22/2006 18:47:30; 08/22/2006 18:47:39; 08/22/2006 18:47:45; 08/22/2006 18:47:55; 08/22/2006 18:48:55; 08/22/2006 18:49:17; 08/22/2006 18:49:24; 08/22/2006 18:49:27; 08/22/2006 18:49:29; 08/22/2006 18:49:45; 08/22/2006 18:50:17; 08/22/2006 18:50:23; 08/22/2006 18:50:28
X-ZANTAZ-PARTICIPANT-IMNAMES: [redacted]; hunter_amaranth
X-ZANTAZ-RECIPIENT-NAME: [redacted] Brian Hunter
X-ZANTAZ-PARTICIPANT-IMNAMES: hunter_amaranth; [redacted]
X-ZANTAZ-SENDER-NAME: Brian Hunter; [redacted]
X-ZANTAZ-GUID: 172B1463-B31D-410F-9120-9BF63D6AC743395627000404599B6
X-ZANTAZ-URL: notused
X-OriginalArrivalTime: 22 Aug 2006 19:11:34.0731 (UTC) FILETIME=[C8D441B0:01C6C61E]

IM Network: Yahoo IM

IM Users:

participant="hunter_amaranth"
participant="[redacted]

IM Dialog:

Tuesday, August 22, 2006 2:40:10 PM EDT Brian Hunter started conversation.
Tuesday, August 22, 2006 2:40:10 PM EDT [redacted] has entered the conversation.
Tuesday, August 22, 2006 2:40:10 PM EDT Brian Hunter: or closest too Tuesday, August 22, 2006 2:40:18 PM EDT Brian Hunter: I acutally was up pretty good today FYI Tuesday, August 22, 2006 2:40:27 PM EDT [redacted] no Tuesday, August 22, 2006 2:40:29 PM EDT [redacted] i mean Tuesday, August 22, 2006 2:40:31 PM EDT trdrxtra: the model run Tuesday, August 22, 2006 2:40:34 PM EDT [redacted] or the storm Tuesday, August 22, 2006 2:40:43 PM EDT Brian Hunter: the one day 12 Tuesday, August 22, 2006 2:40:53 PM EDT Brian Hunter: the wave that went into the guld without developing?
Tuesday, August 22, 2006 2:41:07 PM EDT [redacted] hunter..you are a friend and the market needs you...so keep it up whatever your doing...just be careful Tuesday, August 22, 2006 2:41:12 PM EDT [redacted] no Tuesday, August 22, 2006 2:41:36 PM EDT Brian Hunter: think this is a rally to stop us out of something?
Tuesday, August 22, 2006 2:41:54 PM EDT [redacted] i have no idea what you have on Tuesday, August 22, 2006 2:42:04 PM EDT [redacted] i pray the best for you Tuesday, August 22, 2006 2:42:05 PM EDT [redacted] i really do Tuesday, August 22, 2006 2:42:09 PM EDT Brian Hunter: ha Tuesday, August 22, 2006 2:42:11 PM EDT Brian Hunter: ok Tuesday, August 22, 2006 2:42:16 PM EDT Brian Hunter: things are pretty good here Tuesday, August 22, 2006 2:42:18 PM EDT [redacted] i just dont want to get behind something you are about to kill Tuesday, August 22, 2006 2:42:21 PM EDT Brian Hunter: you'll hear it next week Tuesday, August 22, 2006 2:42:42 PM EDT [redacted] there is a unnamed storm Tuesday, August 22, 2006 2:42:59 PM

= Redacted by the Permanent Subcommittee on Investigations

EDT [redacted]: the nhc is moving into the gulf Tuesday, August 22, 2006 2:43:08 PM EDT Brian Hunter: yeah Tuesday, August 22, 2006 2:43:11 PM EDT Brian Hunter: around day 12 right Tuesday, August 22, 2006 2:43:27 PM EDT [redacted]: i got no idea Tuesday, August 22, 2006 2:43:31 PM EDT Brian Hunter: stays a wave the whole time Tuesday, August 22, 2006 2:43:34 PM EDT [redacted]: but if it gets named overnight Tuesday, August 22, 2006 2:43:38 PM EDT [redacted]: this will be up huge Tuesday, August 22, 2006 2:43:42 PM EDT [redacted] i think so Tuesday, August 22, 2006 2:43:53 PM EDT [redacted]: the market will rally til thursday Tuesday, August 22, 2006 2:44:02 PM EDT [redacted] then get killed when the number comes out Tuesday, August 22, 2006 2:44:04 PM EDT [redacted] i hope Tuesday, August 22, 2006 2:44:18 PM EDT Brian Hunter: I have seen no storm Tuesday, August 22, 2006 2:44:34 PM EDT Brian Hunter: the only thing that showed up was a wave into the gulf at day12 Tuesday, August 22, 2006 2:44:45 PM EDT Brian Hunter: it doesn't even deveop into a wave until day5 Tuesday, August 22, 2006 2:45:05 PM EDT Brian Hunter: chances are less than 5% it will even show up as a wave tomorrow or near the gulf Tuesday, August 22, 2006 2:45:19 PM EDT [redacted] i realize that...this is an opp of a lifetime...but crap let it go and sell it .25 higher Tuesday, August 22, 2006 2:45:37 PM EDT [redacted]: what is your email Tuesday, August 22, 2006 2:45:40 PM EDT Brian Hunter: maybe Tuesday, August 22, 2006 2:45:40 PM EDT [redacted] send you what i got Tuesday, August 22, 2006 2:45:46 PM EDT Brian Hunter: 7.00 sept bidweek is awful high Tuesday, August 22, 2006 2:46:20 PM EDT [redacted]: just sent you what came out Tuesday, August 22, 2006 2:46:22 PM EDT [redacted]: at 1.30 Tuesday, August 22, 2006 2:46:29 PM EDT Brian Hunter: oh Tuesday, August 22, 2006 2:46:38 PM EDT Brian Hunter: are you talking about the hunderstorms in Carrieban Tuesday, August 22, 2006 2:46:42 PM EDT [redacted] y Tuesday, August 22, 2006 2:46:45 PM EDT Brian Hunter: it fell apart this afternoon Tuesday, August 22, 2006 2:46:52 PM EDT Brian Hunter: no models develop anymore Tuesday, August 22, 2006 2:47:06 PM EDT [redacted] nhc just started running models on it...i think that is only reason we up Tuesday, August 22, 2006 2:47:21 PM EDT Brian Hunter: A weak tropical wave is in the wrn Caribbean along 77w/78w S of 18n moving W 15 kt. Only a slight hint of low cloud curvature is noted on vis images about the axis. This wave is embedded in a dry stable environment producing only isolated showers in its vicinity.

Tuesday, August 22, 2006 2:47:30 PM EDT Brian Hunter: hat one right Tuesday, August 22, 2006 2:47:39 PM EDT [redacted] i thnk so Tuesday, August 22, 2006 2:47:45 PM EDT [redacted] go tme Tuesday, August 22, 2006 2:47:55 PM EDT [redacted]: trying to figure it out all day Tuesday, August 22, 2006 2:48:55 PM EDT Brian Hunter: [redacted]: caribbean stuff is junk Tuesday, August 22, 2006 2:49:17 PM EDT [redacted] agred Tuesday, August 22, 2006 2:49:24 PM EDT [redacted] let it settle high Tuesday, August 22, 2006 2:49:27 PM EDT [redacted] for sep Tuesday, August 22, 2006 2:49:29 PM EDT [redacted] huge sell Tuesday, August 22, 2006 2:49:45 PM EDT [redacted]: why was back end so strong Tuesday, August 22, 2006 2:50:17 PM EDT Brian Hunter: its pretty cheap Tuesday, August 22, 2006 2:50:23 PM EDT Brian Hunter: and alot of cal7 rfp's next few weeks Tuesday, August 22, 2006 2:50:28 PM EDT Brian Hunter: good volume

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Participants:
"Brian Hunter," Amaranth head energy trader
"[redacted]" Unidentified trader

Thursday, August 24, 2006, 12:35: 07 PM EDT

"[redacted]": nice offer on the f [January contract]
"[redacted],": all the guys that took on the h [March]
"[redacted]": prob [probably] choking
"[redacted],": u know they hedged it with x [November]

"Brian Hunter": y[es]

"[redacted]": u must find it hilarious all the liquidity that people provide u
"[redacted]": thinking that they are making money

[redacted] = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Thursday, August 24, 2006 12:35 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; "MWDGUPTAA"

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, August 24, 2006 12:35:07 PM EDT Brian Hunter started conversation.
Thursday, August 24, 2006 12:35:07 PM EDT [redacted] has entered the conversation.
Thursday, August 24, 2006 12:35:07 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, August 24, 2006 12:35:07 PM EDT [redacted]: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, August 24, 2006 12:35:07 PM EDT [redacted]: nice offer on the f Thursday, August 24, 2006 12:35:14 PM EDT [redacted]: all the guys that took the h Thursday, August 24, 2006 12:35:18 PM EDT [redacted]: prob choking Thursday, August 24, 2006 12:35:37 PM EDT [redacted]: u know they hedged it with x Thursday, August 24, 2006 12:36:41 PM EDT Brian Hunter: y Thursday, August 24, 2006 12:37:16 PM EDT [redacted]: u must find it hilarious all the liquidity that people provide u Thursday, August 24, 2006 12:37:28 PM EDT [redacted]: thinking that they are mkaing money

From: Shane Lee [redacted]@amaranthllc.com]
Sent: Sunday, August 27, 2006 11:08 PM
To: Brian Hunter
Subject: Fyi

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Cool new thing in ice. Somebody has built a system, I am assuming external, that auto trades prices at targets, but keeps the orders off screen. I noticed I would put in an order between the market and be done instantly. Happened many times today. Really cool...wonder who built it....that's exactly the thing u were talking about trying to do. Your numbers stay silent.

Sent from my BlackBerry Wireless Handheld

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Participants:
"Brian Hunter," Amaranth head energy trader
[redacted]" Unknown trader

Monday, August 28, 2006, 8:41:02 AM EDT

[redacted]: dude...i own the 6.50 puts
[redacted]: i have no idea
[redacted]: what to do

Brian Hunter: wait
Brian Hunter: lots of day left
Brian Hunter: and guys trying to defend this like crazy

[redacted]: uv [September/October spread] should blow out...but if we stay around 6.50...it might hang in there

Brian Hunter: not buying because they like
Brian Hunter: buying to defend price
Brian Hunter: which always always gets you

[redacted] = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Monday, August 28, 2006 8:41 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTER_AMARANTH"; "TRDRXTRA"

IM Network: Yahoo IM

IM Users:

participant="hunter_amaranth"
participant="[redacted]

IM Dialog:

Monday, August 28, 2006 8:40:49 AM EDT Brian Hunter started conversation.
Monday, August 28, 2006 8:40:49 AM EDT [redacted] has entered the conversation.
Monday, August 28, 2006 8:40:49 AM EDT Brian Hunter: see Z6 Monday, August 28, 2006 8:40:51 AM EDT Brian Hunter: 6.80 Monday, August 28, 2006 8:40:58 AM EDT Brian Hunter: uh oh Monday, August 28, 2006 8:41:02 AM EDT [redacted] dude..i own the 6.50 puts Monday, August 28, 2006 8:41:08 AM EDT [redacted] have no idea Monday, August 28, 2006 8:41:10 AM EDT [redacted]: what to do Monday, August 28, 2006 8:41:22 AM EDT Brian Hunter: wait Monday, August 28, 2006 8:41:30 AM EDT Brian Hunter: lots of day left Monday, August 28, 2006 8:41:41 AM EDT Brian Hunter: and guys trying to defend this like crazy Monday, August 28, 2006 8:41:43 AM EDT [redacted]: uv should blow out...but if we stay around 6.50...it might hang in there Monday, August 28, 2006 8:41:51 AM EDT Brian Hunter: not buying because they like Monday, August 28, 2006 8:41:55 AM EDT Brian Hunter: buying to defend price Monday, August 28, 2006 8:42:10 AM EDT Brian Hunter: which always always gets you Monday, August 28, 2006 8:43:01 AM EDT [redacted]: that guy that just swept it up to 70 on 1000 lots needs ot get out Monday, August 28, 2006 8:43:03 AM EDT [redacted] still Monday, August 28, 2006 8:43:54 AM EDT Brian Hunter: I think they might get broken Monday, August 28, 2006 8:46:53 AM EDT Brian Hunter: ICE guys said that was 30 seconds of buying Monday, August 28, 2006 8:47:16 AM EDT [redacted]: so one guy Monday, August 28, 2006 8:47:25 AM EDT [redacted]: i mean Monday, August 28, 2006 8:47:25 AM EDT [redacted]: so not one guy Monday, August 28, 2006 8:48:47 AM EDT Brian Hunter: it was one guy Monday, August 28, 2006 8:49:46 AM EDT [redacted]: ok this sucks Monday, August 28, 2006 8:49:52 AM EDT [redacted]: oh well Monday, August 28, 2006 8:49:59 AM EDT [redacted] cash under screen Monday, August 28, 2006 8:50:07 AM EDT [redacted] just means they wil kill it tomorrow Monday, August 28, 2006 8:50:13 AM EDT Brian Hunter: yeah Monday, August 28, 2006 8:50:16 AM EDT Brian Hunter: bid week Monday, August 28, 2006 8:50:20 AM EDT Brian Hunter: or nobid week Monday, August 28, 2006 8:59:59 AM EDT [redacted] kess selling vol Monday, August 28, 2006 9:00:03 AM EDT [redacted] pretty heavy Monday, August 28, 2006 9:01:52 AM EDT Brian Hunter: v vol is stupid bid Monday, August 28, 2006 9:02:19 AM EDT Brian Hunter: if people like Sept so much - v 5.50p are the sale of the year

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Participants:
"Brian Hunter," Amaranth head energy trader
"[redacted]" Unidentified broker

Monday, August 28, 2006, 9:13:29 AM EDT

Brian Hunter: get as many as you can on these

[redacted] k

Brian Hunter: you don't need me to tell you to stop
Brian Hunter: until 10k :)

[redacted] sweet

Brian Hunter: which will you will never get to

[redacted] you know i'll try

[redacted] = Redacted by the Permanent Subcommittee on Investigations

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From: windowsadmin@amaranthllc.com
Sent: Monday, August 28, 2006 9:10 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "CUPCRAZY2525"; "HUNTERAMARANTH"

IM Network: AOL IM

IM Users:

participant="[redacted]"
participant="hunteramaranth"

IM Dialog:

Monday, August 28, 2006 9:10:08 AM EDT [redacted] started conversation.
Monday, August 28, 2006 9:10:08 AM EDT Brian Hunter has entered the conversation.
Monday, August 28, 2006 9:10:08 AM EDT [redacted] that's what i said Monday, August 28, 2006 9:11:04 AM EDT [redacted]: buy 56 more Monday, August 28, 2006 9:11:13 AM EDT Brian Hunter: sold Monday, August 28, 2006 9:13:29 AM EDT Brian Hunter: get as many as you can on these Monday, August 28, 2006 9:13:33 AM EDT [redacted]: k Monday, August 28, 2006 9:13:44 AM EDT Brian Hunter: you don't need me to tell you to stop Monday, August 28, 2006 9:13:51 AM EDT Brian Hunter: until 10k :) Monday, August 28, 2006 9:13:55 AM EDT [redacted]: sweet Monday, August 28, 2006 9:13:58 AM EDT Brian Hunter: which will you will never get to Monday, August 28, 2006 9:14:13 AM EDT [redacted] you know i'll try
Monday, August 28, 2006 9:17:18 AM EDT [redacted]: 1.7 bid 1000 Monday, August 28, 2006 9:17:22 AM EDT cupcrazy2525: 1.5 bid Monday, August 28, 2006 9:17:38 AM EDT [redacted] says he has a 1.7 offer into him Monday, August 28, 2006 9:18:51 AM EDT Brian Hunter: ICE Monday, August 28, 2006 9:18:53 AM EDT Brian Hunter: all Monday, August 28, 2006 9:18:55 AM EDT Brian Hunter: pls Monday, August 28, 2006 9:19:10 AM EDT [redacted]: first 2 i did nymex Monday, August 28, 2006 9:19:22 AM EDT Brian Hunter: ok Monday, August 28, 2006 9:19:25 AM EDT Brian Hunter: can you checnge Monday, August 28, 2006 9:19:25 AM EDT [redacted] trying to change it Monday, August 28, 2006 9:19:34 AM EDT Brian Hunter: too close to nymex xpiry Monday, August 28, 2006 9:19:41 AM EDT Brian Hunter: I'd lower it by 2 tics Monday, August 28, 2006 9:19:50 AM EDT [redacted] k
Monday, August 28, 2006 9:35:40 AM EDT [redacted] nymex / ice flat / 5 tics
Monday, August 28, 2006 9:36:03 AM EDT Brian Hunter: I actually can take these as Nymex
Monday, August 28, 2006 9:36:06 AM EDT Brian Hunter: I have some room Monday, August 28, 2006 9:36:09 AM EDT Brian Hunter: just let Matt know Monday, August 28, 2006 9:36:16 AM EDT [redacted] k Monday, August 28, 2006 9:36:20 AM EDT Brian Hunter: I can do up to 1000 Nymex clear pen last Monday, August 28, 2006 9:36:23 AM EDT Brian Hunter: but let Matt know Monday, August 28, 2006 9:36:27 AM EDT [redacted] k

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Participants:
"Brian Hunter," Amaranth head energy trader
[redacted]" Unidentified

Monday, August 28, 2006, 9:19:04 AM EDT

Brian Hunter: pls
Brian Hunter: too close to Nymex expiry limits

[redacted] I will ask for ICE
[redacted]**:** he doesn't usually ICE

Brian Hunter: yeah
Brian Hunter: but I might be over Nymex limits tomorrow dependig [depending] on settle price

[redacted]**:** he will ICE clear

Brian Hunter: thanks

▬ = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Monday, August 28, 2006 9:11 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "CATHYAECO"; "HUNTERAMARANTH"

IM Network: AOL IM

IM Users:

participant=[redacted]"
participant="hunteramaranth"

IM Dialog:

Monday, August 28, 2006 9:10:41 AM EDT [redacted] started conversation.
Monday, August 28, 2006 9:10:41 AM EDT Brian Hunter has entered the conversation.
Monday, August 28, 2006 9:10:41 AM EDT [redacted] h 10.90 put live 2.235/2.295 Monday, August 28, 2006 9:13:16 AM EDT [redacted] r u in Calgary or CT?
Monday, August 28, 2006 9:14:17 AM EDT Brian Hunter: calgray Monday, August 28, 2006 9:15:48 AM EDT [redacted]: when did you go back?
Monday, August 28, 2006 9:16:00 AM EDT [redacted] is Donohoe in CT or Calgary?
Monday, August 28, 2006 9:16:29 AM EDT Brian Hunter: CT Monday, August 28, 2006 9:16:52 AM EDT Brian Hunter: what is the bid for cash going to be Monday, August 28, 2006 9:17:01 AM EDT Brian Hunter: for cash this weekend Monday, August 28, 2006 9:17:11 AM EDT [redacted] pen vs LD .02 bid 500/mo Monday, August 28, 2006 9:18:01 AM EDT [redacted]: 345 left now Monday, August 28, 2006 9:18:40 AM EDT Brian Hunter: sold Monday, August 28, 2006 9:18:58 AM EDT [redacted] done NYMEX cleared Richie Monday, August 28, 2006 9:19:01 AM EDT Brian Hunter: ICE Monday, August 28, 2006 9:19:04 AM EDT Brian Hunter: pls Monday, August 28, 2006 9:19:17 AM EDT Brian Hunter: too close to Nymex expiry limits Monday, August 28, 2006 9:19:38 AM EDT [redacted]: I will ask for ICE Monday, August 28, 2006 9:19:58 AM EDT [redacted]: he doesnt usually ICE Monday, August 28, 2006 9:20:12 AM EDT Brian Hunter: yeah Monday, August 28, 2006 9:20:27 AM EDT Brian Hunter: but I might be over Nymex limits tomorrow dependig on settle price Monday, August 28, 2006 9:20:37 AM EDT [redacted] he will ICE clear Monday, August 28, 2006 9:20:42 AM EDT Brian Hunter: thanks Monday, August 28, 2006 9:21:23 AM EDT [redacted] do you sell more PEN vs LD?
Monday, August 28, 2006 9:21:35 AM EDT Brian Hunter: yup Monday, August 28, 2006 9:21:42 AM EDT Brian Hunter: only ICE or direct though Monday, August 28, 2006 9:23:22 AM EDT [redacted] gotcha Monday, August 28, 2006 9:24:35 AM EDT [redacted] /.018 pen vs LD now Monday, August 28, 2006 9:24:49 AM EDT Brian Hunter: ok Monday, August 28, 2006 9:24:51 AM EDT Brian Hunter: I am best offer Monday, August 28, 2006 9:24:58 AM EDT [redacted] ok Monday, August 28, 2006 9:26:03 AM EDT [redacted]: cal7 9/7 ps 9.58x .865/.89 Monday, August 28, 2006 9:30:48 AM EDT [redacted] cal7 9/7 ps 9.58x .87/.88 Monday, August 28, 2006 9:32:05 AM EDT [redacted] Oct 8 call 6.70x .34/.37 Monday, August 28, 2006 9:32:43 AM EDT [redacted] Perkins is looking for a h 10.90 put live 3000/mo up...we got 2.235/2.295 500/mo up Monday, August 28, 2006 9:38:00 AM EDT [redacted] Oct 8 call 6.70x .35/.365

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Participants:
"Brian Hunter," Amaranth head energy trader
"mtjdonohoe," Amaranth trader

Monday, August 28, 2006, 12:26:07 PM EDT

mtjdonohoe: hey i would take [redacted] off pens [options expiring on penultimate day of trading]]....anything you sell through [redacted] will end up at cent [Centaurus]

Brian Hunter: ok
Brian Hunter: np [no problem]

mtjdonohoe: he's [Centaurus] .5 cents better bid than anyone else

Brian Hunter: lets hit him at close
Brian Hunter: with 1 minute left

mtjdonohoe: right

Brian Hunter: then he is short the LD [last day of trading]

▬ = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Monday, August 28, 2006 12:15 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; "MJTDONOHOE"

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant="mjtdonohoe"

IM Dialog:

Monday, August 28, 2006 12:15:04 PM EDT Matthew Donohoe started conversation.
Monday, August 28, 2006 12:15:04 PM EDT Brian Hunter has entered the conversation.
Monday, August 28, 2006 12:15:04 PM EDT Matthew Donohoe: hey] Monday, August 28, 2006 12:15:04 PM EDT Matthew Donohoe: hey] Monday, August 28, 2006 12:15:10 PM EDT Matthew Donohoe: cent is trying to buy pen Monday, August 28, 2006 12:15:10 PM EDT Matthew Donohoe: cent is trying to buy pen Monday, August 28, 2006 12:15:14 PM EDT Matthew Donohoe: lots of them Monday, August 28, 2006 12:15:15 PM EDT Matthew Donohoe: lots of them Monday, August 28, 2006 12:15:32 PM EDT Brian Hunter: yeah Monday, August 28, 2006 12:15:33 PM EDT Brian Hunter: yeah Monday, August 28, 2006 12:15:41 PM EDT Brian Hunter: we won't sell to them Monday, August 28, 2006 12:15:41 PM EDT Brian Hunter: we won't sell to them Monday, August 28, 2006 12:17:23 PM EDT Brian Hunter: calling Monday, August 28, 2006 12:17:23 PM EDT Brian Hunter: calling Monday, August 28, 2006 12:17:24 PM EDT Matthew Donohoe: just to let you know Monday, August 28, 2006 12:17:24 PM EDT Matthew Donohoe: just to let you know Monday, August 28, 2006 12:26:07 PM EDT Matthew Donohoe: hey i would take [redacted] off pens....anything you sell through [redacted] will end up at cent Monday, August 28, 2006 12:26:07 PM EDT Matthew Donohoe: hey i would take [redacted] off pens....anything you sell through [redacted] will end up at cent Monday, August 28, 2006 12:26:17 PM EDT Brian Hunter: ok Monday, August 28, 2006 12:26:17 PM EDT Brian Hunter: ok Monday, August 28, 2006 12:26:18 PM EDT Brian Hunter: np Monday, August 28, 2006 12:26:18 PM EDT Brian Hunter: np Monday, August 28, 2006 12:26:25 PM EDT Matthew Donohoe: he's .5 cents better bid than anyone else Monday, August 28, 2006 12:26:25 PM EDT Matthew Donohoe: he's .5 cents better bid than anyone else Monday, August 28, 2006 12:26:50 PM EDT Brian Hunter: lets hit him at close Monday, August 28, 2006 12:26:51 PM EDT Brian Hunter: lets hit him at close Monday, August 28, 2006 12:26:54 PM EDT Brian Hunter: with 1 minute left Monday, August 28, 2006 12:26:55 PM EDT Brian Hunter: with 1 minute left Monday, August 28, 2006 12:27:02 PM EDT Matthew Donohoe: right Monday, August 28, 2006 12:27:02 PM EDT Matthew Donohoe: right Monday, August 28, 2006 12:27:02 PM EDT Brian Hunter: then he is short the LD Monday, August 28, 2006 12:27:03 PM EDT Brian Hunter: then he is short the LD

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Participants:
"Brian Hunter," Amaranth head energy trader
[redacted]" Unidentified trader

Monday, August 29, 2006, 2:29:12 PM EDT

Brian Hunter: well-I would bet they'll be an investigation into this by Friday

[redacted] lol [laughing out loud], we have seen it before
[redacted] no limits on swaps just keep lifting
[redacted] everyone was short
[redacted] have to cover by buying futures

= Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Tuesday, August 29, 2006 2:12 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "CRUMMERTD"; "HUNTERAMARANTH"

IM Network: AOL IM

IM Users:

participant=[redacted]"
participant="hunteramaranth"

IM Dialog:

Tuesday, August 29, 2006 2:12:24 PM EDT [redacted] started conversation.
Tuesday, August 29, 2006 2:12:24 PM EDT Brian Hunter has entered the conversation.
Tuesday, August 29, 2006 2:12:24 PM EDT [redacted] told you it was short Tuesday, August 29, 2006 2:12:33 PM EDT [redacted]: this fricken market Tuesday, August 29, 2006 2:12:40 PM EDT [redacted]: crazy Tuesday, August 29, 2006 2:24:40 PM EDT [redacted] well I told you to do it, hopefully it was you Tuesday, August 29, 2006 2:24:46 PM EDT [redacted] you owe me a beer Tuesday, August 29, 2006 2:25:36 PM EDT [redacted] (9:52:25 AM): not saying short winte[redacted] (9:52:35 AM): I am saying squeeze all the sept oct spreaders[redacted] (9:52:38 AM): buy sept[redacted] (9:52:41 AM): sell oct Tuesday, August 29, 2006 2:25:42 PM EDT Brian Hunter: guess what setetlent vbolume is Tuesday, August 29, 2006 2:25:45 PM EDT Brian Hunter: 3000 Tuesday, August 29, 2006 2:25:47 PM EDT Brian Hunter: lots Tuesday, August 29, 2006 2:26:34 PM EDT [redacted]: told you this morning that was the trade Tuesday, August 29, 2006 2:26:41 PM EDT [redacted] by, by oct tomorrow Tuesday, August 29, 2006 2:29:12 PM EDT Brian Hunter: well - I would bet they'll be an investigation into this by Friday Tuesday, August 29, 2006 2:29:44 PM EDT [redacted] lol, we have seen it before Tuesday, August 29, 2006 2:30:14 PM EDT [redacted]: no limits on swaps just keep lifting Tuesday, August 29, 2006 2:30:19 PM EDT [redacted] everyone was short Tuesday, August 29, 2006 2:30:33 PM EDT [redacted] have to cover by buying futures Tuesday, August 29, 2006 2:31:49 PM EDT Brian Hunter: I think alot of people set up to go in long cash Tuesday, August 29, 2006 2:32:01 PM EDT [redacted] yup Tuesday, August 29, 2006 2:32:09 PM EDT [redacted] now they have to sell oct against it Tuesday, August 29, 2006 2:32:17 PM EDT [redacted] by by oct Tuesday, August 29, 2006 2:32:33 PM EDT [redacted]: hunter I showed you the play book this am Tuesday, August 29, 2006 2:32:44 PM EDT [redacted] you needed to pick up the ball Tuesday, August 29, 2006 2:32:49 PM EDT [redacted] and throw it Tuesday, August 29, 2006 2:33:09 PM EDT [redacted] old dog still has a few tricks up his sleeve Tuesday, August 29, 2006 2:33:29 PM EDT Brian Hunter: hahaha Tuesday, August 29, 2006 2:33:34 PM EDT Brian Hunter: I shorted hub dailes

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

— = Redacted by the Permanent Subcommittee on Investigations

Participants:
"Brian Hunter," Amaranth head energy trader
"[redacted]," Unidentified trader

Tuesday, August 29, 2006, 3:22:25 PM EDT

Brian Hunter: boy I bet you see some CFTC inquiries for the last two days

[redacted]: until they monitor swaps
[redacted]: no big deal
[redacted]: it's all swaps now

▬ = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Tuesday, August 29, 2006 3:22 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "CRUMMERTD"; "HUNTERAMARANTH"

X-ZANTAZ-MESSAGE-DATE: 08/29/2006 19:22:11; 08/29/2006 19:22:25; 08/29/2006 19:22:44;
08/29/2006 19:22:48; 08/29/2006 19:22:59; 08/29/2006 19:23:31; 08/29/2006 19:23:39;
08/29/2006 19:23:42; 08/29/2006 19:23:49; 08/29/2006 19:23:57; 08/29/2006 19:23:58;
08/29/2006 19:23:59; 08/29/2006 19:24:00; 08/29/2006 19:24:07; 08/29/2006 19:24:16;
08/29/2006 19:24:23; 08/29/2006 19:24:25; 08/29/2006 19:24:26; 08/29/2006 19:24:55;
08/29/2006 19:25:14; 08/29/2006 19:25:24; 08/29/2006 19:25:44; 08/29/2006 19:25:56;
08/29/2006 19:26:13; 08/29/2006 19:26:31; 08/29/2006 19:26:38; 08/29/2006 19:26:43;
08/29/2006 19:26:50; 08/29/2006 19:26:51; 08/29/2006 19:26:52; 08/29/2006 19:26:53;
08/29/2006 19:26:58; 08/29/2006 19:27:08; 08/29/2006 19:27:15; 08/29/2006 19:27:33;
08/29/2006 19:27:36; 08/29/2006 19:28:05; 08/29/2006 19:28:13; 08/29/2006 19:29:08;
08/29/2006 19:33:26; 08/29/2006 19:36:52; 08/29/2006 19:37:03; 08/29/2006 19:37:38;
08/29/2006 19:37:44; 08/29/2006 19:37:48; 08/29/2006 19:37:55; !
08/29/2006 19:38:03; 08/29/2006 19:38:12; 08/29/2006 19:38:29; 08/29/2006 19:39:44;
08/29/2006 19:39:56
X-ZANTAZ-PARTICIPANT-IMNAMES: hunteramaranth; [redacted]
X-ZANTAZ-RECIPIENT-NAME: Brian Hunter; [redacted]
X-ZANTAZ-PARTICIPANT-IMNAMES: [redacted] hunteramaranth
X-ZANTAZ-SENDER-NAME: [redacted]; Brian Hunter
X-ZANTAZ-GUID: 1AE4B42C-E6B6-4FB7-AAFB-742CB76DE9674125421087O103156
X-ZANTAZ-URL: notused
X-OriginalArrivalTime: 29 Aug 2006 19:40:39.0440 (UTC) FILETIME={01A5F900:01C6CBA3}

IM Network: AOL IM

IM Users:

participant="[redacted]
participant="hunteramaranth"

IM Dialog:

Tuesday, August 29, 2006 3:22:11 PM EDT [redacted] started conversation.
Tuesday, August 29, 2006 3:22:11 PM EDT Brian Hunter has entered the conversation.
Tuesday, August 29, 2006 3:22:11 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, August 29, 2006 3:22:11 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, August 29, 2006 3:22:11 PM EDT Brian Hunter: classic pump and dump Tuesday, August 29, 2006 3:22:25 PM EDT Brian Hunter: boy I bet you see some CFTC inquiries for the last two days Tuesday, August 29, 2006 3:22:44 PM EDT [redacted]: until they monitor swaps Tuesday, August 29, 2006 3:22:48 PM EDT [redacted] no big deal Tuesday, August 29, 2006 3:22:59 PM EDT [redacted] its all swaps now Tuesday, August 29, 2006 3:23:31 PM EDT Brian Hunter: any time there is a 70 cent rally in 40 minutes on no fundamental event Tuesday, August 29, 2006 3:23:39 PM EDT [redacted]: settle Tuesday, August 29, 2006 3:23:42 PM EDT [redacted] fundamental Tuesday, August 29, 2006 3:23:49 PM EDT [redacted] still a hole Tuesday, August 29, 2006 3:23:57 PM EDT [redacted] now oct on the other hand Tuesday, August 29, 2006 3:23:58 PM EDT Brian Hunter: 700 gas for Sept?
Tuesday, August 29, 2006 3:23:59 PM EDT [redacted] yours Tuesday, August 29, 2006 3:24:00 PM EDT Brian Hunter: I guess Tuesday, August 29, 2006 3:24:07 PM EDT [redacted] big spread to winter Tuesday, August 29, 2006 3:24:16 PM EDT Brian Hunter: aybe Tuesday, August 29, 2006 3:24:23 PM EDT Brian Hunter: it will get investigated Tuesday, August 29, 2006 3:24:25 PM EDT Brian Hunter: for sure Tuesday, August 29, 2006 3:24:26 PM EDT [redacted] yes Tuesday, August 29, 2006 3:24:55 PM EDT [redacted]: they should find out what morons were selling sept swaps 19 cents below swing swaps Tuesday, August 29, 2006 3:25:14 PM EDT

= Redacted by the Permanent Subcommittee on Investigations

[redacted] they need to look no further who got caught short Tuesday, August 29, 2006 3:25:24 PM EDT Brian Hunter: Those were PnL mange ment on sept/oct spread Tuesday, August 29, 2006 3:25:44 PM EDT [redacted]: well they managed it VERY poorly Tuesday, August 29, 2006 3:25:56 PM EDT [redacted] I told you this morning that could an should happen Tuesday, August 29, 2006 3:26:13 PM EDT [redacted]: even aeco was 30 cents under oct Tuesday, August 29, 2006 3:26:13 PM EDT Brian Hunter: true - I tohught they would bring v down though Tuesday, August 29, 2006 3:26:31 PM EDT [redacted] thats were we differed this am Tuesday, August 29, 2006 3:26:38 PM EDT [redacted] you thought they were long sept Tuesday, August 29, 2006 3:26:43 PM EDT Brian Hunter: y Tuesday, August 29, 2006 3:26:50 PM EDT [redacted]: I figured they were sort Tuesday, August 29, 2006 3:26:51 PM EDT Brian Hunter: I know everyone was long sept Tuesday, August 29, 2006 3:26:52 PM EDT [redacted] short Tuesday, August 29, 2006 3:26:53 PM EDT Brian Hunter: everyone Tuesday, August 29, 2006 3:26:58 PM EDT Brian Hunter: no dude Tuesday, August 29, 2006 3:27:08 PM EDT Brian Hunter: that was maipulated Tuesday, August 29, 2006 3:27:15 PM EDT [redacted] well they made a boat load Tuesday, August 29, 2006 3:27:33 PM EDT Brian Hunter: yeah Tuesday, August 29, 2006 3:27:36 PM EDT Brian Hunter: that's what I mean Tuesday, August 29, 2006 3:28:05 PM EDT [redacted]: I hear yah Tuesday, August 29, 2006 3:28:13 PM EDT [redacted]: nice settles Tuesday, August 29, 2006 3:29:08 PM EDT Brian Hunter: yeah cal7 just trades 26 under settle Tuesday, August 29, 2006 3:33:26 PM EDT [redacted] when are we having a beer Tuesday, August 29, 2006 3:36:52 PM EDT [redacted] hey BEER Tuesday, August 29, 2006 3:37:03 PM EDT [redacted] tough to grab your attention Tuesday, August 29, 2006 3:37:38 PM EDT Brian Hunter: yeah Tuesday, August 29, 2006 3:37:44 PM EDT Brian Hunter: Thursday Tuesday, August 29, 2006 3:37:48 PM EDT Brian Hunter: maybe next tues Tuesday, August 29, 2006 3:37:55 PM EDT Brian Hunter: when my hub swaps are ateal :) Tuesday, August 29, 2006 3:38:03 PM EDT [redacted] lol Tuesday, August 29, 2006 3:38:12 PM EDT [redacted]: you name it Tuesday, August 29, 2006 3:38:29 PM EDT [redacted] your busyier than I am Tuesday, August 29, 2006 3:39:44 PM EDT Brian Hunter: shold be good Tuesday, August 29, 2006 3:39:56 PM EDT Brian Hunter: my book hasn't looked this flat in some timw

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Participants:
"Brian Hunter," Amaranth head energy trader
[redacted]" Unidentified trader

Wednesday, August 30, 2006, 3:21:02 PM EDT

Brian Hunter: BTW [By the way] this settlement is unbelievable how much attention it has with regulators
Brian Hunter: it's a massiv subpoena-fest on the way

[redacted]: how come they always call you and never us
[redacted]: hmmmm
[redacted]: the problem they have is it will take them years to figure out what happened

Brian Hunter: its not that hard
Brian Hunter: and they have a lot more practice
Brian Hunter: its not physical manip [manipulation]

[redacted]: true
[redacted]: I think they should get the floor trades and the ice swaps

[redacted]: that would tell the tale

[redacted] = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Wednesday, August 30, 2006 3:21 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "CRUMMERTD"; "HUNTERAMARANTH"

IM Network: AOL IM

IM Users:

participant="[redacted]"
participant="hunteramaranth"

IM Dialog:

Wednesday, August 30, 2006 3:20:35 PM EDT Brian Hunter started conversation.
Wednesday, August 30, 2006 3:20:35 PM EDT [redacted] has entered the conversation.
Wednesday, August 30, 2006 3:20:35 PM EDT Brian Hunter: yeah Wednesday, August 30, 2006 3:21:02 PM EDT Brian Hunter: BTW this settlement is unbelievable how much attention it has with regulators Wednesday, August 30, 2006 3:21:13 PM EDT Brian Hunter: its a massiv subpoena-fest on the way Wednesday, August 30, 2006 3:21:57 PM EDT [redacted] how come they always call you and never us Wednesday, August 30, 2006 3:22:02 PM EDT [redacted] hmmmm Wednesday, August 30, 2006 3:30:32 PM EDT [redacted] the problem they have is it will take them years to figure out what happened Wednesday, August 30, 2006 3:30:42 PM EDT Brian Hunter: its not that hard Wednesday, August 30, 2006 3:30:52 PM EDT Brian Hunter: and they have alot more pratice Wednesday, August 30, 2006 3:30:59 PM EDT Brian Hunter: its not physical manip Wednesday, August 30, 2006 3:31:01 PM EDT [redacted] true Wednesday, August 30, 2006 3:31:25 PM EDT [redacted] I think they should get the floor trades and the ice swaps Wednesday, August 30, 2006 3:31:30 PM EDT [redacted] that would tell the tale Wednesday, August 30, 2006 3:31:33 PM EDT Brian Hunter: its easy Wednesday, August 30, 2006 3:31:43 PM EDT Brian Hunter: 1. Find out who was really long sept finaicnaical Wednesday, August 30, 2006 3:32:08 PM EDT [redacted] you really don't think arnold was involved?
Wednesday, August 30, 2006 3:32:12 PM EDT Brian Hunter: no Wednesday, August 30, 2006 3:32:13 PM EDT Brian Hunter: Sempra Wednesday, August 30, 2006 3:32:14 PM EDT Brian Hunter: Hess Wednesday, August 30, 2006 3:32:19 PM EDT Brian Hunter: that's it Wednesday, August 30, 2006 3:32:30 PM EDT [redacted] big move for two small shops Wednesday, August 30, 2006 3:33:11 PM EDT [redacted] has to be someone bigger in there helping out Wednesday, August 30, 2006 3:33:21 PM EDT Brian Hunter: 9500 during last half hour Wednesday, August 30, 2006 3:33:30 PM EDT Brian Hunter: they bought 7k-8k of it Wednesday, August 30, 2006 3:33:45 PM EDT [redacted] I thought 1k was the limit into settle Wednesday, August 30, 2006 3:33:49 PM EDT Brian Hunter: nope Wednesday, August 30, 2006 3:33:58 PM EDT Brian Hunter: they can take up to 5k Wednesday, August 30, 2006 3:34:41 PM EDT [redacted] what is the normal volume during settle?
Wednesday, August 30, 2006 3:35:07 PM EDT Brian Hunter: its been shrinking Wednesday, August 30, 2006 3:35:11 PM EDT Brian Hunter: used to be over 20 Wednesday, August 30, 2006 3:35:13 PM EDT Brian Hunter: this is near a low Wednesday, August 30, 2006 3:35:28 PM EDT [redacted] more people doing swaps Wednesday, August 30, 2006 3:35:54 PM EDT [redacted]: so you still up for a beer tomorrow?

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From: Scott Wittenberg [redacted]@amaranthllc.com]
Sent: Thursday, August 31, 2006 8:45 AM
To: Brian Hunter
Cc: Matthew Donohoe; Jim Glynn; Michael Carrieri; Michael Cairo; Scott Wittenberg
Subject: RE: NG OI%

When calculating for position limits purposes NYMEX looks at our net position, including the csos, options, and cp to derive our total position in their market.

However, in regards to our percentage of OI, NYMEX wears "blinders" to everything other than the physical NGs.

Even though the options are considered fungible offsets they are ignored when calculating our physical NG position relative to the OI.

-----Original Message-----
From: Brian Hunter
Sent: Thursday, August 31, 2006 8:32 AM
To: Scott Wittenberg; Matthew Donohoe
Cc: Michael Carrieri; Michael Cairo; Jim Glynn
Subject: Re: NG OI%

So need to buy EFS today. Note that our option position hugely offsets this...

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Scott Wittenberg [redacted]@amaranthllc.com>
To: Matthew Donohoe [redacted]@amaranthllc.com>
CC: Brian Hunter [redacted]r@amaranthllc.com>; Michael Carrieri [redacted]@amaranthllc.com>; Michael Cairo [redacted]@amaranthllc.com>; Jim Glynn [redacted]@amaranthllc.com>; Scott Wittenberg [redacted]@amaranthllc.com>
Sent: Thu Aug 31 08:24:27 2006
Subject: NG OI%

As of COB yesterday 8/30 we are AT the maximum percentabe of the OI in the physically settled NGV6 contract.

Product Description Cleared At Delivery Year Exchange
Sec Type Delivery Month Exchange Adjusted Quantity. Open
Interest. Percent of Market.
Natural Gas Futures Contract

Exchange

2006
NYM
FWDFT
10
(40,784) 122,616 33.26
11
(7,353) 67,443 10.90
12
(6,553) 52,041 12.59

Scott Wittenberg
/a/Amaranth Group Inc.
One American Lane

From: Brian Hunter [redacted]@amaranthllc.com]
Sent: Thursday, September 07, 2006 4:43 PM
To: Shane Lee
Subject: Re: Dawn +5.7

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Fundamentally v down here is a question mark. Cash monday could be flat to futures.

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee [redacted]@amaranthllc.com>
To: Brian Hunter <[redacted]@amaranthllc.com>
Sent: Thu Sep 07 15:57:22 2006
Subject: RE: Dawn +5.7

zero fundamental reason for winter to get smashed. Dude it's stupid...how can we exist at resid prices without super warm winter? The market is pricing in a warm winter 100%....so it is a great buy. Resid is 8.50 ish for the winter...is this market crazy?

However, from a flow perspective, people hate the spreads and we also have some weak hands trying to sell the winter we gave them. Market thinks it can get away with selling any spread now after that funky settle.
People are bleeding on vol and bleeding on the backs, so they need to make money somehow.
I know how the average guy on the trade side of the market thinks....they look at 5.50 cash and then they look at 10.00 january and 1.95 h/j and they cant help themselves. They sell it with impunity until a catalyst makes them pay the piper. No catalysts in Sept without a hurricane. I don't think RFP's are big enough.
The question is not what we think Brian, the question is whether we can weather this as a company. If a $1 fixed price drop in winter buries this company, then we either need to help the market here and quit qorrying about the new fund, or we need to be willing to take a massive haircut and step aside. Personally, I think losing 1 bill in the current fund is more important than getting the other off the ground. Are we willing to let the market take 1 bill from us just to start a fund?

As far as the front goes...they seem unafraid of hurricanes, but they will not find many sellers down here. Boone will be a steady buyer, and so will the options guys on all these strikes. Can it go down? Sure. But it wont be easy.

-----Original Message-----
From: Brian Hunter
Sent: Thursday, September 07, 2006 1:44 PM
To: Shane Lee
Subject: Re: Dawn +5.7

How do you really feel about this. Is winter and the front going to get obliterated?

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee [redacted]@amaranthllc.com>
To: Ryan Wilhoit [redacted]@amaranthllc.com>; Brad Basarowich <[redacted]@amaranthllc.com>; Brian Hunter

<[redacted]@amaranthllc.com>; David Chasman [redacted]@amaranthllc.com>; Hai Chen [redacted]@amaranthllc.com>;
Jason Parks [redacted]@amaranthllc.com>; Matthew Calhoun [redacted]@amaranthllc.com>; Matthew Donohoe
[redacted]@amaranthllc.com>
Sent: Thu Sep 07 15:41:57 2006
Subject: Dawn +5.7

[redacted] = Redacted by the Permanent Subcommittee on Investigations

From: Brian Hunter [[redacted]@amaranthllc.com]
Sent: Thursday, September 07, 2006 4:58 PM
To: Robert Jones
Subject: Fw: thoughts

[redacted] = Redacted by the Permanent Subcommittee on Investigations

FWIW

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Shane Lee <[redacted]@amaranthllc.com>
To: Brian Hunter <[redacted]@amaranthllc.com>
Sent: Thu Sep 07 16:54:24 2006
Subject: thoughts

Here's what I was gonna send you:

Tell me if I am wrong, but we have 3 choices here.
1) shut down and start energy fund, lose 0.3 to 1.0 getting out, and have great future potential. Hiwever, if we lose that, who is going to want in on the energy fund? If h/j drops to 1.50 or worse, the deferred positoons are all going to get obliterated too.
2) jump back in and help this market out. Risk losing some investors due to risk profile, but manage along until we get the proper catalyst to exit positions. Start energy fund when we can later. Without the market's ability to absorb some xh or even some back length right now, this market in a world of trouble. 2 days ago things were fine, but it feels like it just tipped overboard on risk. There is comfort selling spreads, and comfort selling price right now. If you were a cash trader caught long hub gas right now, would you buy or sell january?
3) Sit and wait. Let market take it's course, find natural fixed price demand.

There is no catalyst right now. That's the problem. You exit this size without one (without exiting every position in your book), and we got a big problem. Things were fine when we were holding the risk for the market, b/c we could handle it. That risk in 30 other hands is a much more dangerous proposition.

Calhoun thinks #2
Rummy thinks #3
And I havent decided yet.

All I know is I am personally 1 more bad day away from stopping out...can't afford to drop below 30 for my family.

From: Brian Hunter [redacted]@amaranthllc.com]
Sent: Sunday, September 17, 2006 9:30 AM
To: John Arnold
Subject: RE:

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I understand where you are coming from. Let me think about the indications for a moment.

-----Original Message-----
From: John Arnold [mailto[redacted]
Sent: Sunday, September 17, 2006 9:19 AM
To: Brian Hunter
Subject: RE:

A couple thoughts.

I was not in the office on Friday but I understand you were selling h/j. The market is now loaded up on recent, bad purchases that they will probably try to be spitting out on Monday if there is a lower opening given that spread has been in free fall. In my opinion, fundamentally, that spread is still a long way from fundamental value.

Over the past couple years the market has put a big risk premium into that spread yet it has paid out on expiry once in ten years. We'll be at all time high storage levels with mediocre s/d and an el nino. Even though that spread has collapsed over the past 2 weeks, the only reason it's still >$1 is because of your position. Historically, that spread would be well below $1 at this point given the scenario.

You have shopped this position to at least one other counterparty who will be a seller first thing Monday morning if I were to buy the book.

The market is generally long the winter already due to price risk associated with record commercial storage at this time of year.

I think the cash market is right at the tipping point of collapsing and the winter will likely follow October's price action given how it has behaved over the past two weeks.

I think the psychology of risk/reward of h/j has structurally changed given the recent move.

I expect customer buy side interest to support the strips given the extent of the fall in the front of the market.

▬ = Redacted by the Permanent Subcommittee on Investigations

Pira just came out with a new price forecast for the winter on Thursday or Friday with very low winter targets. Not that they have any clue but the market does listen to them.

The deferred h/j are still at very high levels historically and are there primarily because the front h/j was trading >$2 and specs buying z/z or f/f combined with TXU selling cal strips.

Storage players have been hedging summer/winter spreads for months and the spec community is caught long winter along the whole curve. I've had guys call me direct trying to sell size in deferred summer/winter as it's been under pressure in the last week.

If the front h/j collapses to $.50, the deferred spreads are going to go with it, the same way they behaved on Friday.

I am trying to get access to Bloomberg so I can do final analysis on a price, but here are my indications for the size you showed me...
H/J 45-60 cents
Deferred H/J $1.00-$1.20
V/X $1.15-$1.25

Please advise whether you want me to prepare a firm bid with these types of numbers or if the prices are too low.

From: Brian Hunter [mailto[redacted]@amaranthllc.com]
Sent: Saturday, September 16, 2006 5:47 PM
To: John Arnold
Subject:

If H/J doesn't fit as well, I can do z6/j7 or x6h7 vs jv7. Sorry for the hassle

Cheers.

Chronology of NYMEX Oversight of Amaranth in 2006

Date of NYMEX Observation	Amaranth Action	NYMEX Action
1/27/2006	Exceeded accountability levels for All Months and Any Month for March 2006 contract.	Increased accountability levels for both Any and All Months.
2/23/2006	Exceeded March 2006 spot month hedge exempt position limit.	Sent warning letter March 9th and March 13th.
3/23/2006	Exceeded accountability levels for All Months and Any Month for May 2006 and Jan. 2007 contracts.	Increased accountability level for Any Month.
4/04/2006	Exceeded accountability level for All Months.	Increased accountability level for All Months.
4/07/2006	Exceeded accountability level for May 2006 contract.	Recommended not increasing levels and contacting clearing broker or customer.
4/26/2006	Sold 2,517 May 2006 contracts during the final four minutes of regular trading hours.	Sent letter August 2nd requesting a written explanation of commercial need and justification for Amaranth's trading.
5/2/2006	Exceeded accountability level for All Months.	Increased accountability level for All Months.
5/10/2006	Exceeded accountability level for Any Month for June 2006 contract.	Increased accountability level for Any Month for short side only.
5/17/2006	Exceeded accountability level for Any Month for July 2006 contract.	Increased accountability level for Any Month for short side only.
5/23/2006	Exceeded June 2006 spot month hedge exempt position limit.	Sent warning letter May 31st.
6/01/2006	Exceeded accountability levels for All Months and Any Month for July 2006, Nov. 2006, Jan. 2007, March 2007, and March 2008 contracts.	Recommended accountability level increases for All Months and for Any Month. Noted that "customer holds a very large percentage of open interest in floor traded NG futures [not futures equivalents] in out months." Recommended discussion.
6/14/2006	Exceeded accountability levels for All Months and Any Month for July 2006, Nov. 2006, Jan. 2007, March 2007, March 2008 contracts.	Recommended accountability level increases for All Months and for Any Month.
7/05/2006	Applied for temporary swap exemption that expired 6/30/05.	Approved.
7/05/2006	Exceeded accountability level for All Months.	Increased accountability level for All Months.
7/12/2006	Exceeded accountability levels for All Months and Any Month for Aug. 2006, Sept. 2006, Oct. 2006, Nov. 2006, Jan. 2007, and March 2007.	Increased accountability level for both All Months (on long-side only) and for Any Month. Reviewed for concentrations.
8/02/2006	--	Sent letter asking Amaranth to explain the commercial need and justification for trading the May 2006 contract on April 26th, particularly during the final 30

Permanent Subcommittee on Investigations
EXHIBIT #10a

		minutes of trading.
8/03/2006	Exceeded gross option accountability levels for puts.	Increased accountability level for puts.
8/04/2006	Exceeded accountability level for Any Month Sept. 2006, Dec. 2006, Jan. 2007, March 2007, and April 2007.	Did not increase accountability levels. Recommended contacting Amaranth about Sept. 2006 natural gas futures positions.
8/08/2006		Contacted Amaranth about their large front month (Sept. 2006) position and open interest of more than 44%. Asked for frequent communication and reduction in size.
8/09/2006	Returned call to NYMEX.	Continued discussion about open interest and proportion of the Sept. 2006 contract. Also discussed reducing Oct. 2006 position.
8/10/2006		Placed another call about Oct. 2006 contracts.
8/11/2006		Discussed Amaranth's size once again.
8/15/2006	Responded to NYMEX letter from August 2nd regarding the expiration of the May 2006 contract, explaining that their large trades at the end of contract settlement were for risk reduction.	
8/18/2006		Noted large position in the cash settled natural cash contract.
8/21/2006		Started pulling records on Amaranth's April 26th trading.
8/24/2006	Called NYMEX to ask how to increase its natural gas exemption.	
8/29/2006	Emailed NYMEX about trading data related to April 26th trading.	
8/29/2006		Contacted Amaranth about reducing position in an orderly manner.
8/30/ 2006	Sent letter to NYMEX regarding concerns over August 29th trading for Sept. 2006 contracts.	
9/02/2006		Started reviewing Amaranth correspondence to determine if Amaranth utilized its hedge exemption in a responsible manner.
9/15/2006	Exceeded gross option accountability levels.	Did not change accountability levels.
10/4/2006	Asked for copies of all NYMEX position limits warning letters.	Sent letters October 10th.

Prepared by Permanent Subcommittee on Investigations, June 2007.
Data Source: Documentation provided by NYMEX

CONFIDENTIAL - CONTAINS PROPRIETARY BUSINESS INFORMATION

Ref #	Date of Observation	Date Closed	Analyst	Commodity	Customer/Group	Customer Position	COB	Rule Reference	Warning/ Advisory Letter	File Referral	Customer Contact	Customer Phone Number	Comments
248	8/24/2005	7/8/2005	CT	NG	Amaranth LLC	-1427.702	8/23/2005	9.27					Customer exceeded the spot month limit of 1,000 in NG05H. On second day of Spot Period (COB 8/24/05), customer exceeded the spot month limit due to a delta-move. Customer demonstrated OTC exposure, and was granted temporary exemption. Reviewing exemption application for possible future filing.
332	8/5/2005	8/9/2005	CT	ON	Amaranth LLC	[illegible]	8/4/2005	9.26					Customer exceeded ALL month options accountability level of 20,000. ALL month quad levels raised to Puts: 30k/std, Calls: std/30k.
359	8/25/2005	8/25/2005	CT	NG	Amaranth LLC	-1,198.89	8/24/2005	9.27					Customer exceeded spot month position limit in NG05U. Customer granted temporary exemption. Formal application has been submitted.
401	9/12/2005	8/7/2006	CT	ON	Amaranth LLC	[illegible]	9/9/2005	9.26					Customer exceeded Gross Option Accountability Levels. See follow up in 06-523.
445	9/26/2005	12/19/2005	CT	NG	Amaranth LLC	15,911.64	9/23/2005	9.26					Customer exceeded ALL month accountability level. ANY month level increased to 15K, ALL month level increased to 18K.
449	9/28/2005	9/28/2005	AM/ ET	HU	Amaranth LLC		9/27/2005	9.33					Appeared that customer position exceeded spot month position limit of 1,000, the position was erroneous, not open in clearing.
454	9/28/2005	9/28/2005	CT	NG	Amaranth LLC	2,947	9/27/2005	9.28					Customer appeared to have exceeded spot month exempt limit in NG05V. Position actually -1,241 including LN05V settles. No violation.
457	9/28/2005	9/28/2005	CT	NS	Amaranth LLC	-2,139	9/27/2005	9.27					Customer exceeded spot month limit in NS05V. Customer granted temporary exemption.
506	10/26/2005	10/26/2005	CT	NG	Amaranth LLC	-2,887.86	10/25/2005	9.28					Customer exceeded spot month exempt limit in NG05X due to a delta-move. No Violation.
541	11/4/2005	2/6/2006	CT	NG	Amaranth LLC	ANY [illegible], ALL 17,[illegible]	11/3/2005	9.28					Customer exceeded ANY (NG06H) and ALL month accountability level. ALL month level increased to 23K/23K, ANY month level increased to 20K/20K.
549	11/17/2005	11/22/2005	CR	CL	Amaranth LLC	-2101	11/16/2005	9.27					Amaranth went over if you are including the WZ contract that went off. As per Tony/Bonnie, discussed how contract is settled and if should be included. Tony to meet with Tom.
588	11/29/2005	11/29/2005	CT	NG	Amaranth LLC	-2,648	11/23/2005	9.28					Customer appeared to have exceeded spot month limit in HO05Z. Position actually 70 including LH settles. No violation.
619	12/19/2005	12/19/2005	CT	NG	Amaranth LLC	ANY: [illegible], ALL: [illegible]	12/18/2005	9.28					Customer exceeded ANY and ALL month accountability levels. ANY month level increased to 15K, ALL month level increased to 18K.

Permanent Subcommittee on Investigations
EXHIBIT #10b

NX - USSEN 081590

23	1/27/2006	1/27/2006	CT	NG	Amaranth LLC	-2,861	1/26/2006	9.26				Customer appeared to have exceeded spot month exempt limit in NG06G. Position actually 387 including LH settles. No Violation.
28	1/30/2006	2/6/2006	CT	NG	Amaranth LLC	ALL 39,273 ANY -16,641	1/27/2006	9.26				Customer exceeded ALL month accountability level and ANY month accountability level in NG06H. ALL month level increased to 23K/23K. ANY month level increased to 20K/20K.
79	2/24, 27/2006	3/13/2006	CT	NG	Amaranth LLC	-3646.25, -4348.25	2/23, 24/2006	9.26	WL			Customer exceeded spot month exempt position limit in NG06H. WL issued for violation at cob 2/23/06. Position on 2/24/06 just prior to closing range was -1,227.26.
118	3/23/2006	3/24/2006	CT	NG	Amaranth LLC	ANY 20,770 ANY 22,…	3/22/2006	9.26				Customer exceeded ANY month accountability level in two contract months, NG06K and NG07F. ANY month level raised to 25K/25K.
166	4/4/2006	5/5/2006	AM	NS	Amaranth LLC	-28,016	4/3/2006	9.26				Customer exceeded any/all month accountability level of 10,000. All month level raised to 2…
172	4/7/2006	5/10/2006	CT	NG	Amaranth LLC	-32,184.60	4/6/2006	9.26				Customer exceeded ANY month accountability level of 25K/25K in NG06K. ANY month level to remain the same. Follow up in 06-283.
219	4/27/2006	5/4/2006	CT	NG	Amaranth LLC	-2,980.75	4/26/2006	9.26		MS-06-04		Customer exceeded spot month limit in NG06K including NH's cash settled. Customer position prior to closing range was 183.25. No violation. CFTC hold order, part of subpoena. CFTC will be pursuing this investigation.
236	5/2/2006	5/3/2006	RH	NF	Amaranth LLC	-11418	5/1/2006	9.26				Customer exceeded all month accountability level. All month level increased.
263	5/10/2006	5/10/2006	CT	NG	Amaranth LLC	-28,139.29	5/9/2006	9.26				Customer exceeded ANY month accountability level in NG06N. ANY month level increased to 25K/25K. Follow up in 06-289.
289	5/17/2006	5/18/2006	CT	NG	Amaranth LLC	-36,856	5/16/2006	9.26				Customer exceeded any month accountability level in NG06N. ANY month level increased to 28K/28K. Follow up in 06-347.
318	5/24/2006	5/31/2006	CT	NG	Amaranth LLC	-8,466.02	5/23/2006	9.26	WL			Customer exceeded spot month hedge exempt limit in NG06M. WL issued on 5/31/06.
343	5/26/2006	5/26/2006	CT	NG	Amaranth LLC	18,923	5/25/2006	9.26				Customer appeared to have exceeded spot month limit in NG06M. Position actually -1942 including LH cash settles. No Violation.
347	5/30/2006	5/31/2006	CT	NG	Amaranth LLC	3,383.80	5/26/2006	9.26	WL (see 06-318)			Customer exceeded spot month hedge exempt limit in NG06M including NH's cash settled. WL for 06-318 and 06-347 issued on 5/31/06.
397	6/1/2006	7/26/2006	CT	NG	Amaranth LLC	see comments	5/31/2006	9.26				53,789.36 — Mar07 26,451.62 — Mar08 29,417.4. See 06-428. ALL month level increased to 30K/-30K, ANY month level increased to 40K/-40K. Follow up in 06-428.
418	7/5/2006	7/6/2006	ET	TC	Amaranth LLC	+11,994	6/30/2006	9.26				Customer exceeded all month accountability level.
428	7/12/2006	7/26/2006	CT	NG	Amaranth LLC	see comments	7/11/2006	9.26				Follow up of 06-397. Customer exceeded ANY and ALL month accountability. ALL: 46,722,347 ANY: Aug06 -31,628,804 — Sep06 -40,206,137 —Oct06 37,379,781 — Nov06 -46,831,837 — Jan07 46,784,648 — Mar07 38,906,386. ALL month level increased to 50K/-38K, ANY month level at 40K/-40K. Follow up in 06-530.
475	7/27/2006	7/27/2006	CT	NG	Amaranth LLC	-6,919	7/26/2006	9.26				Customer appeared to have exceeded spot month hedge exempt limit in NG06Q. Position actually 1,637 including LH settles. No Violation.
509	8/1/2006	8/7/2006	ET	TC	Amaranth LLC	11,864	7/31/2006	9.26				Customer exceeded All month accountability in level. Customer level raised.
523	8/2/2006	8/7/2006	CT	ON	Amaranth LLC	Puts: 19160/23675	8/1/2006	9.26				Customer exceeded gross option accountability levels. Puts increased to 30K/30K.
530	8/4/2006	8/10/2006	CT	NG	Amaranth LLC	see comments	8/3/2006	9.26				Customer exceeded ANY month accountability levels of 40K/40K. Sep06: -63,665. Dec06: -41,871. Jan07: 50,488. Mar07: 66,571. Apr07: -58,862. Levels to remain unchanged with continued monitoring. Also see 06-532, 06-535.
532	8/8/2006	8/8/2006	CT	NG	Amaranth LLC	n/a	8/7/2006	9.26			Michael Carriel	Afternoon Conference call with Amaranth LLC regarding NG06U position. Present were Nancy Minett, Bernie Yurga, Corey Traub.
535	8/9/2006	8/9/2006	CT	NG	Amaranth LLC	n/a	8/8/2006	9.26			Chief Compliance	Morning and afternoon conference calls with Amaranth LLC regarding both September and October NG position. Present were Tom LaSala, Nancy Minett, Bernie Yurga. Amaranth representatives were Mike Carriel and Scott Wittenberg.
546	8/10/2006	8/10/2006	CT	NG	Amaranth LLC	n/a	n/a	9.26			Michael Carriel	Conference call with Amaranth regarding September and October NG positions. Present were Tom LaSala, Bernie Yurga and Michael Carriel of Amaranth. Amaranth directed to reduce its October 2006 natural gas position.
588	8/22/2006	8/22/2006	CR	CL	Amaranth LLC	-2,030	8/21/2006	9.27				Customer exceeded spot month limit in CL06U do to data move to WA contract.
573	8/29/2006	8/30/2006	CT	NG	Amaranth LLC	-6,421	8/28/2006	9.26				Customer appeared to have exceeded spot month hedge exempt limit in NG06U. Position actually -2,341.88 including data adjusted LH cash settles. No violation.
625	9/18/2006	9/22/2006	CT	ON	Amaranth LLC	117180/108181:143421/163479	9/15/2006	9.26				Customer in excess of gross option accountability levels.
717	10/10/2006	10/10/2006	BHY	N/A	Amaranth LLC							Michael Carriel of Amaranth LLC requested copies of past WL correspondence which he did not have in his records. Emailed him copies of correspondence from March 13 and July 11, 2006.

CONFIDENTIAL - CONTAINS PROPRIETARY BUSINESS INFORMATION

Traub, Corey

From:	Densieski, Anthony
Sent:	Saturday, February 04, 2006 8:53 PM
To:	Traub, Corey
Subject:	AVD Accountability Issues in NG, NR, CI
Follow Up Flag:	Follow up
Flag Status:	Red

Corey:
All ten (10) items listed below are approved.
Very nice presentation...good comprehension of the facts.

Tony

Anthony V. Densieski
Senior Director
Market Surveillance
New York Mercantile Exchange, Inc.
World Financial Center
One North End Avenue
New York, NY 10282
[redacted]

From: Traub, Corey
Sent: Monday, January 30, 2006 4:39 PM
To: Densieski, Anthony
Cc: Merkel, Bonnie
Subject: Accountability Issues in NG, NR, CI

[redacted] = Redacted by the Permanent Subcommittee on Investigations

[redacted]

[redacted]

[redacted]

Permanent Subcommittee on Investigations
EXHIBIT #10c

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[redacted]

06-29 follow up of 05-541
Amaranth LLC
NG
Customer exceeded ALL month level. Position cob 1/27/06 is 20,273.
Customer exceeded ANY month level in March 06. Position cob 1/27/06 is -18,942.
I recommend ALL month level be raised to 23K/23K and
ANY month level be raised to 20K/20K.
ALL month FEQ OI = 1,993,045.5
March 06 FEQ OI = 433,837

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[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

2/6/2006

CONFIDENTIAL - CONTAINS PROPRIETARY BUSINESS INFORMATION

Traub, Corey

From: Densieski, Anthony
Sent: Thursday, March 23, 2006 1:17 PM
To: Traub, Corey
Subject: RE: Natural Gas Accountability Issues
Follow Up Flag: Follow up
Flag Status: Red

Corey:
OK to all below.
Tony

Anthony V. Densieski
Senior Director
Market Surveillance
New York Mercantile Exchange, Inc.
World Financial Center
One North End Avenue
New York, NY 10282
[redacted]

From: Traub, Corey
Sent: Thursday, March 23, 2006 12:47 PM
To: Densieski, Anthony
Cc: Merkel, Bonnie
Subject: Natural Gas Accountability Issues

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[redacted]

[redacted]

[redacted]

Permanent Subcommittee on Investigations
EXHIBIT #10d

NX - USSEN 081926

05-118
Amaranth LLC
NG
Customer exceeded ANY month accountability level of 20K/20K in May06 and Jan07
Their position cob 3/22/06 is May06 = -20,779 short
Jan07 = 23,959 long

May06 OI = 243,662
Jan07 OI = 110,694
I recommend increasing their ANY month level to 25K/25K.

Please let me know what you think.

Thanks,
Corey

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Murphy, Andrew

From: Murphy, Andrew
Sent: Tuesday, April 04, 2006 11:44 AM
To: Densieski, Anthony
Cc: Merkel, Bonnie
Subject: Accountability Issues

[redacted]

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06-166
Amaranth LLC
NS (Socal)
Position COB 4/3/06 is -20,018
All months OI is 200,000

Permanent Subcommittee on Investigations
EXHIBIT #10e

I recommend raising all month acct. level to 22,000.

[redacted]

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[redacted]

Let me know what you think.

Andrew

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Traub, Corey

From: Traub, Corey
Sent: Friday, April 07, 2006 12:21 PM
To: Densieski, Anthony
Cc: Merkel, Bonnie
Subject: NG Accountability Issue

06-172
Amaranth LLC
NG
Customer exceeded ANY month accountability level of 25K/25K in May06.
Their May06 FEQ position cob 4/6/06 = -32,154 short
May06 FEQ OI = 260,142
I do not think that Amaranth ANY month level should be increased any further in this case because May06 is the front month contract.
I recommend considering contacting the FCM or customer on this position because the spot month limit for May06 goes in to effect cob 4/21/06.

Amaranth LLC

cob 4/6/06	DATE	Name	NG2006K	
FEQ for Last Day				
	ng futs	flr traded	-31279	
	ng opts	flr traded	-2608.673	
	nn	hh swap	1956.75	FEQ
	la	1 mo cal sprd opt	0	
	ic	3 mo cal sprd opt	0	
	sub tot			-31930.923
Disappears at Penult. Settle	ln opts	Euro opts	-381.178	
	np	hh penult swap	157.5	FEQ
	qg		0	
	sub tot			-223.678
	Tot FEQ			-32,154.60

4/7/2006

Permanent Subcommittee on Investigations
EXHIBIT #10f

NX - USSEN 081782

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Murphy, Andrew

From: Densieski, Anthony
Sent: Wednesday, May 03, 2006 7:49 PM
To: Murphy, Andrew
Subject: RE: Accountability Issues

Andrew:
OK to all.
Tony

From: Murphy, Andrew
Sent: Wednesday, May 03, 2006 9:40 AM
To: Densieski, Anthony
Subject: FW: Accountability Issues

From: Murphy, Andrew
Sent: Tuesday, April 04, 2006 11:44 AM
To: Densieski, Anthony
Cc: Merkel, Bonnie
Subject: Accountability Issues

[redacted]

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Permanent Subcommittee on Investigations
EXHIBIT #10g

NX - USSEN 081931

[redacted]

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06-166
Amaranth LLC
NS (Socal)
Position COB 4/3/06 is -20,018
All months OI is 200,000
I recommend raising all month acct. level to 22,000.

[redacted]

Let me know what you think.

Andrew

CONFIDENTIAL - CONTAINS PROPRIETARY BUSINESS INFORMATION

Traub, Corey

From: Traub, Corey
Sent: Wednesday, May 10, 2006 1:18 PM
To: Densieski, Anthony
Cc: Merkel, Bonnie
Subject: Natural Gas Accountability Issues

[redacted]

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06-263
Amaranth LLC
NG
Customer exceeded ANY month level of 25K/25K in June06 NG
Their NG06M position cob 5/9/06 is -28,139
June06 NG FEQ OI = 232,243
I recommend increasing their ANY month level to 25K/30K. (Increase to short side only)

Please let me know what you think.

Thanks,

5/10/2006

Permanent Subcommittee on Investigations
EXHIBIT #10h

NX - USSEN 081780

Corey

5/10/2006

CONFIDENTIAL - CONTAINS PROPRIETARY BUSINESS INFORMATION

Traub, Corey

From: Densieski, Anthony
Sent: Wednesday, May 17, 2006 9:48 PM
To: Traub, Corey
Cc: Merkel, Bonnie
Subject: RE: Natural Gas Accountability

Cory:
OK...
Tony

From: Traub, Corey
Sent: Wednesday, May 17, 2006 11:39 AM
To: Densieski, Anthony
Cc: Merkel, Bonnie
Subject: Natural Gas Accountability

[redacted]

[redacted]

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[redacted]

06-289
Amaranth LLC
NG
Customer exceeded ANY month accountability of 25K/30K in July06 NG.
Their NG06N FEQ position cob 5/16/06 is -35,556
July06 NG FEQ OI = 243,787 July06 NG Futures only OI = 102,531
This position consists almost entirely of NG futures (-34,743).
I recommend increasing their ANY month level to 25K/35K (increase to short side only)

5/18/2006

Permanent Subcommittee on Investigations
EXHIBIT #10i

NX - USSEN 081756

Amaranth typically maintains a large short position in the front month and rolls the position forward to the second month in a ratable manner throughout the month using outright spreads and EFS spreads.
Given current NG06N Futures only OI, I do not think their ANY month level should be much greater than 35K.

Please let me know what you think.

Thanks,

Corey

CONFIDENTIAL - CONTAINS PROPRIETARY BUSINESS INFORMATION

New York
Mercantile Exchange

May 31, 2006

Mike Carrieri
Chief Compliance Officer
Amaranth LLC
One American Lane
Greenwich, CT 06831

[redacted] = Redacted by the Permanent Subcommittee on Investigations

RE: Violations of Exchange Rule 9.28

Dear Mr. Carrieri:

This letter addresses the matter of your firm's open commitments in the New York Mercantile Exchange, Inc. ("Exchange") June 2006 Henry Hub Natural Gas ("NG") Futures contract. The records of the Exchange show that Amaranth, LLC ("Amaranth") exceeded its current delivery month ("spot month") hedge exempt position limit of 2,500 contracts on two trade dates. At the close of business on May 23 and May 26, 2006, Amaranth maintained open commitments of 8,488 short and 3,363 long contracts, respectively. These open commitments exceeded your firm's spot month hedge exempt position limit by 5,988 and 863 contracts, respectively.

Owing to your firm's violations of the spot month NG position limit, and in accordance with the provisions of Exchange Rule 9.36, this letter shall constitute a warning to your firm. Please note that a previous violation of this rule was addressed in a warning letter issued to your firm on March 13, 2006. Any further violation of the Exchange's position limit rules will be handled pursuant to Rule 9.36 and may ultimately result in extraordinary sanctions as specified in this rule.

Please acknowledge receipt of this letter by e-mailing Corey Traub, Analyst, Market Surveillance at [redacted]@nymex.com. If you have comments concerning this matter, please contact the undersigned at (212)[redacted]or Mr. Traub at (212) [redacted]

Sincerely,

Nancy M. Minett
Vice President
Compliance Department

cc: Anthony V. Densieski (NYMEX)
Bonnie H. Yurga (NYMEX)
MS-06-318, 06-347

New York Mercantile Exchange, Inc.
World Financial Center
One North End Avenue
New York, NY 10282-1101
(212) 299-2000

The New York Mercantile Exchange, Inc., is composed of two divisions. The NYMEX Division offers trading in crude oil, heating oil, unleaded gasoline, natural gas, electricity, coal, propane, platinum, and palladium. The COMEX Division offers trading in gold, silver, copper, and aluminum.

Permanent Subcommittee on Investigations
EXHIBIT #10j

Traub, Corey

From: Traub, Corey
Sent: Wednesday, June 14, 2006 1:28 PM
To: Densieski, Anthony
Cc: Merkel, Bonnie
Subject: FW: Natural Gas Accountability Issues

Tony,

This is an update on Amaranth's NG positions for accountability purposes. (Rule Viol # 06-357)

Amaranth LLC	cob 6/13/06					
Month - Year	FEQ	Futures Only	Market FEQ Open Int.	Amaranth %	Market Futures Only Open Int.	Amaranth %
Aug-06	-47,353	-31,238	213,465	-22%	67,585	-46%
		-29,426	173,800	-23%	51,897	-57%
		25,302	202,350	26%	49,088	52%
		21,559	190,473	16%	52,124	41%
		22,749	68,659	39%	28,887	79%

Please let me know if you need any more information.

Thanks,

Corey

From: Traub, Corey
Sent: Thursday, June 01, 2006 4:55 PM
To: Densieski, Anthony
Cc: Merkel, Bonnie
Subject: Natural Gas Accountability Issues

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

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6/14/2006

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[redacted]

06-357
Amaranth LLC
NG
Customer exceeded ANY and ALL month accountability levels
Their position cob 5/31/06 is
ALL: 34,990.617 current level is 23K/35K
ANY: Jul06: -39,900.113 current level is 25K/30K
Nov06: -30,132.061
Jan07: 53,758.367
Mar07: 26,491.619
Mar08: 26,417.598
ALL month NG FEQ OI = 1,353,165
Jul06 NG FEQ OI = 294,534.875
Nov06 NG FEQ OI = 156,595.609
Jan07 NG FEQ OI = 197,245.500
Mar07 NG FEQ OI = 174,584.797
Mar08 NG FEQ OI = 66,924.438
I recommend increasing their ALL month level to 40K/35K (increase to long side only)
Increase ANY month level to 40K/40K.
*** This customer holds a very large percentage of open interest in floor traded NG futures (Not FEQ) in outer months.*** Please let me know if you want more (Non FEQ) figures.

Please let me know what you think.

Thanks,

Corey

CONFIDENTIAL - CONTAINS PROPRIETARY BUSINESS INFORMATION

Compliance Department
New York Mercantile Exchange
Tel: 212-[redacted]
Fax: 212[redacted]

From: Trujillo, Elisabeth
Sent: Wednesday, July 05, 2006 4:27 PM
To: Labrucherie, Jessica
Subject: FW: All Month Accountability (TC, NX & PG)

Hi Jessie,

Please see below.

Thanks,

Elisabeth Trujillo
Market Surveillance Analyst
Compliance Department
New York Mercantile Exchange
Tel: 21[redacted]
Fax: 21[redacted]

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From: Densieski, Anthony
Sent: Wednesday, July 05, 2006 4:26 PM
To: Trujillo, Elisabeth
Subject: RE: All Month Accountability (TC, NX & PG)

Elisabeth:
OK to all.
Tony

From: Trujillo, Elisabeth
Sent: Wednesday, July 05, 2006 4:07 PM
To: Densieski, Anthony
Subject: RE: All Month Accountability (TC, NX & PG)

Hi Tony,

[redacted]

06-418
Amarenth
TC
Customer exceeded ALL month accountability of 10K/10K

9/18/2006

Permanent Subcommittee on Investigations
EXHIBIT #101

NX - USSEN 081794

Their TC FEQ position cob 6/30/06 is -11,984
ALL month TC FEQ OI = 88,338
I recommend increasing their ALL month level to 10K/15K (increase to short side only)

[redacted]

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Please let me know what you think.

Elisabeth Trujillo
Market Surveillance Analyst
Compliance Department
New York Mercantile Exchange
Tel: 212-[redacted]
Fax: 212-[redacted]

9/18/2006

CONFIDENTIAL - CONTAINS PROPRIETARY BUSINESS INFORMATION

New York
Mercantile Exchange
NYMEX/COMEX. Two divisions, one marketplace

July 11, 2006

▬ = Redacted by the Permanent Subcommittee on Investigations

Mike Carrieri
Chief Compliance Officer
Amaranth LLC
One American Lane
Greenwich, CT 06831

2006 OCT 10 P 2: RECEIVED NYMEX

RE: Warning Letter Revision
Violation of Exchange Rule 9.28

Dear Mr. Carrieri:

The New York Mercantile Exchange, Inc. ("Exchange") has completed its review of the attached warning letter issued to Amaranth, LLC ("Amaranth") on May 31, 2006. Based on information that Amaranth has submitted regarding its position at the close of business on May 26, 2006, the Exchange has revised this warning effective today, July 11, 2006. Please note that this revision rescinds Amaranth's violation of the Exchange's position limit rules for the close of business on May 26, 2006, only. Amaranth's violation for the close of business on May 23, 2006, though, remains recorded as a violation of the Exchange's position limit rules.

Should you have any questions concerning this matter, please feel free to contact the undersigned at (212) [redacted]

Sincerely,

Anthony V. Densieski
Senior Director
Market Surveillance

cc: Nancy M. Minett (NYMEX)
Bonnie H. Yurga (NYMEX)
Corey Traub (NYMEX)
MS-06-318, 06-347

One North End Avenue
World Financial Center
New York, NY 10282-1101
(212) 299-2000

The New York Mercantile Exchange is composed of two divisions. The NYMEX Division offers trading in crude oil, heating oil, unleaded gasoline, natural gas, electricity, propane, platinum, and palladium. The COMEX Division offers trading in gold, silver, copper, and the Eurotop 100® index.

Permanent Subcommittee on Investigations
EXHIBIT #10m

CONFIDENTIAL - CONTAINS PROPRIETARY BUSINESS INFORMATION

Traub, Corey

From: Densieski, Anthony
Sent: Wednesday, July 26, 2006 8:10 AM
To: Traub, Corey
Subject: RE: Natural Gas Accountability (Amaranth)

Corey:
Good review...
Increases OK...
Review for % concentrations...
Tony

From: Traub, Corey
Sent: Tuesday, July 25, 2006 12:30 PM
To: Densieski, Anthony
Subject: RE: Natural Gas Accountability (Amaranth)

Tony:

For Amaranth, please see below:

cob 7/24/06	Amaranth FEQ	NG FEQ O.I.	Percent (%)		Amaranth Futures Only	NG Futures only O.I.	Percent (%)
Sep06	-50,482	331,035	-15.25%		-48,480	118,573	-40.89%
Oct06	28,809	407,670	7.07%		-14,645	66,257	-22.10%
Jan07	47,192	225,733	20.91%		26,442	52,582	50.29%
Mar07	38,550	237,723	16.22%		27,981	58,749	47.63%
Apr07	-48,082	160,036	-30.04%		-14,895	36,686	-40.60%
Dec07	28,703	69,711	41.17%		22,611	27,982	80.81%

From: Densieski, Anthony
Sent: Saturday, July 22, 2006 1:02 PM
To: Traub, Corey
Subject: RE: Natural Gas Accountability

Corey:
OK to all except 06-428 Amaranth LLC

All month increase to 50K/-35K ...is OK.

For one month requests...
Aug06: -31,628
Sep06: -40,206
Oct06: 37,379
Nov06: -48,831
Jan07: 48,784
Mar07: 38,906
Please advise each months total o.i.

7/28/2006

Permanent Subcommittee on Investigations
EXHIBIT #10n

NX - USSEN 081798

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Tony

From: Traub, Corey
Sent: Wednesday, July 12, 2006 3:18 PM
To: Densieski, Anthony
Cc: Merkel, Bonnie
Subject: Natural Gas Accountability

= Redacted by the Permanent Subcommittee on Investigations

[redacted]

[redacted]

[redacted]

06-428 follow up of 06-357
Amaranth LLC
NG
Customer exceeded ANY and ALL month levels of ANY: 25K/-30K. ALL: 23K/-35K
Their position cob 7/11/06 is
ALL: 46,722.
ANY: Aug06: -31,628
Sep06: -40,206
Oct06: 37,379
Nov06: -48,831
Jan07: 48,784
Mar07: 38,906
I recommend increasing their ALL month level to 50K/-35K. (Increase to long-side only)
Increase ANY month level to 40K/-40K.

Please let me know what you think.

Thanks,

Corey

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New York
Mercantile Exchange

August 2, 2006

Via E-mail and USPS

Mike Carrieri
Chief Compliance Officer
Amaranth LLC
One American Lane
Greenwich, CT 06831

= Redacted by the Permanent Subcommittee on Investigations

Dear Mr. Carrieri:

The Compliance Department of the New York Mercantile Exchange ("Exchange") has commenced Investigation Number MS-04-06 to review Amaranth LLC's ("Amaranth") NYMEX Natural Gas futures trading activity for **trade date April 26, 2006.** Exchange records indicated a heavy concentration of Amaranth's **May 2006 Natural Gas ("NG")** futures trading activity occurred in the final minutes prior to the termination of trading in the contract.

Specifically, Amaranth sold 2,527 futures contracts during the final 30 minutes of regular trading hours. Of these 2,527 contracts, Amaranth sold 99%, or 2,517 contracts, during the final four minutes of regular trading hours. Of these 2,517 contracts, Amaranth sold 75%, or 1,897 contracts, during the final minute of regular trading hours. Amaranth further sold 517 contracts during the "post-close" trading session.

The Exchange requests that Amaranth review its May 2006 NG trading activity for trade date April 26, 2006, and provide a written explanation of the commercial need and justification for their trading. Please submit your explanation on or before August 15, 2006. Should you have any questions concerning this matter, please contact the undersigned at (212)[redacted]

see H

Sincerely,

Anthony V. Densieski
Senior Director
Market Surveillance

cc: Nancy M. Minett (NYMEX)
Bonnie H. Yurga (NYMEX)
Corey Traub (NYMEX)
MS-04-06

New York Mercantile Exchange, Inc.
World Financial Center
One North End Avenue
New York, NY 10282-1101
(212) 299-2000

The New York Mercantile Exchange, Inc., is composed of two divisions. The NYMEX Division offers trading in crude oil, heating oil, unleaded gasoline, natural gas, electricity, coal, propane, platinum, and palladium. The COMEX Division offers trading in gold, silver, copper, and aluminum.

Permanent Subcommittee on Investigations
EXHIBIT #10o

CONFIDENTIAL - CONTAINS PROPRIETARY BUSINESS INFORMATION

From: Traub, Corey
Sent: Thursday, August 03, 2006 11:30 AM
To: Densieski, Anthony
Cc: Merkel, Bonnie
Subject: Natural Gas Options Accountability

Options Accountability

[redacted]

	Long	Short	Op. Int.	% Long	% Short	% Net
Puts	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Calls	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

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[redacted]

	Long	Short	Op. Int.	% Long	% Short	% Net
Puts	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Calls	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

[redacted]

	Long	Short	Op. Int.	% Long	% Short	% Net
Puts	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Calls	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

[redacted]

					%	

Permanent Subcommittee on Investigations
EXHIBIT #10p

NX - USSEN 081818

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	Long	Short	Op. Int.	% Long	Short	% Net
Puts	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Calls	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

[redacted]

	Long	Short	Op. Int.	% Long	% Short	% Net
Puts	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Calls	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

[redacted]

	Long	Short	Op. Int.	% Long	% Short	% Net
Calls	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

[redacted]

	Long	Short	Op. Int.	% Long	% Short	% Net
Puts	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Calls	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

[redacted]

	Long	Short	Op. Int.	% Long	% Short	% Net
Puts	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Calls	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

06-523

8/7/2006

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Amaranth LLC
ON
Customer in excess of gross option accountability levels of Puts: 30K/std
Position cob 8/1/06 is

	Long	Short	Op. Int.	% Long	% Short	% Net
Puts	19,160	23,875	752,910	2.54%	3.17%	-0.63%

I recommend increasing levels to Puts: std/30K.

Also, I recommend looking at Options accountability from a dollar exposure perspective which may be more meaningful than a gross quadrant volume basis.

Please let me know what you think.

Thanks,

Corey

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Traub, Corey

From: Densieski, Anthony
Sent: Friday, August 04, 2006 7:19 PM
To: Traub, Corey
Cc: Merkel, Bonnie
Subject: RE: Natural Gas Accountability Issues
Follow Up Flag: Follow up
Flag Status: Red

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Corey:
Good write up.
1) [redacted]
2) [redacted]
3) Amaranth...agree with you... NO CHANGE...[redacted] you Monday August 14. Before then I recommend Bonnie and yourself reach out to Amaranth re: NGU6 position,
-inquire what the NGU6 position is against...
-just ask them how they plan to trade out of same position in a commercial way.

Enjoy yourself this week.
Tony

From: Traub, Corey
Sent: Friday, August 04, 2006 4:34 PM
To: Densieski, Anthony
Cc: Merkel, Bonnie
Subject: Natural Gas Accountability Issues

[redacted]

[redacted]

[redacted]

Permanent Subcommittee on Investigations
EXHIBIT #10q

NX - USSEN 081827

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[redacted]

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06-530
Amaranth LLC
NG
Customer exceeded ANY month accountability level of 40K/40K.
Their position cob 8/3/06 is as follows:

cob 8/3/06 contract	Amaranth FEQ	NG FEQ O.I.	Percent (%)		Amaranth Futures Only	NG Futures only O.I.	Percent (%)
Sep-06	-63,055	344,002	-18.33%		-57,711	113,818	-50.70%
Dec-06	-41,671	232,535	-17.92%		-7,143	43,494	-16.42%
Jan-07	50,488	243,939	20.70%		26,255	54,761	47.94%
Mar-07	55,676	289,879	19.21%		46,870	72,768	64.41%
Apr-07	-55,882	192,928	-28.97%		-23,268	47,844	-48.63%

I do not think the levels should be raised any further for this customer. I think Amaranth's position with respect to Open Interest, particularly in Futures Only, is very large. I recommend speaking to the customer about these positions.

Please let me know what you think.

Thanks,

Corey

8/7/2006

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Trujillo, Elisabeth

From: Labrucherie, Jessica
Sent: Monday, August 07, 2006 5:19 PM
To: Trujillo, Elisabeth
Subject: RE: TC Accountability for Amaranth, LLC

Liz-

The change for Amaranth is entered into the Register and LTS.

Thanks!

From: Trujillo, Elisabeth
Sent: Friday, August 04, 2006 3:23 PM
To: Labrucherie, Jessica
Subject: FW: TC Accountability for Amaranth, LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Hi Jessie,

Please see below.

Elisabeth Trujillo
Market Surveillance Analyst
Compliance Department
New York Mercantile Exchange
Tel: 212-[redacted]
Fax: 212-[redacted]

From: Densieski, Anthony
Sent: Friday, August 04, 2006 11:00 AM
To: Trujillo, Elisabeth
Subject: RE: TC Accountability for Amaranth, LLC

E.
OK
Tony

From: Trujillo, Elisabeth
Sent: Friday, August 04, 2006 10:51 AM
To: Densieski, Anthony
Subject: TC Accountability for Amaranth, LLC
Importance: High

Hi Tony,

As we discussed yesterday, I corrected the subject line on this e-mail for All month accountability on the TC contract for Amaranth.

06-509

Permanent Subcommittee on Investigations
EXHIBIT #10r

NX - USSEN 081814

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Amaranth, LLC
TC
Customer exceeded ALL month accountability of 10K/10 K.
Their TC FEQ position cob 7/31/06 is 11,984
ALL month TC FEQ OI = 86,459
I recommend increasing their ALL month level to 15K/ 15K (increase long side only, Amaranth currently has an increase to the short side)

Thank you,

Elisabeth Trujillo
Market Surveillance Analyst
Compliance Department
New York Mercantile Exchange
Tel: 212-[redacted]
Fax: 212[redacted]

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NM cmnts Added

To: Files

From: Bonnie Yurga

Re: Amaranth LLC September 2006 and October 2006 Natural Gas Open Positions

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August 8, 2006

- Internally discussed Amaranth LLC's September 2006 natural gas position with Nancy Minett. Reviewed September Natural Gas position for concentration issues. Amaranth currently maintains -49,616 positions, 44.95% of open interest in the Natural Gas futures portion of their total -66,073. Scheduled call to Amaranth regarding position.

- Telephone call to Mike Carrieri of Amaranth. NYMEX staff included Corey Traub and myself. Discussed Amaranth's September position and informed Mike of the Exchange's concern with their % of September open interest and outright Natural Gas futures position of -49,616, specifically its potential weight in the marketplace based on 44.95% of open interest.
- Asked Mike about the commercial nature, if any, of the position and was told that it was speculative, a seasonal spread, and that he would discuss our concern with the traders.
- Accentuated the fact that we expect him to begin bringing the position down in a commercially reasonable manner to a more comfortable figure below his current percentage. Told him that we are generally comfortable with a customer not exceeding about 1/3 of the market, and expect trading to be orderly.

- Internally discussed with Tom who expressed extreme discomfort with size of the position.
- Arranging conference call for morning of August 9, 2006.

August 9, 2006

8:55 a.m. Confirmed Amaranth position and Tom LaSala left message for Mike Carrieri of Amaranth to contact Tom LaSala, Nancy Minett or myself.
9:15 am Call returned by Mike Carrieri. NYMEX staff included Tom LaSala, Nancy Minett and myself.

- Tom informed Mike that he is extremely uncomfortable with September position of -44,285 Natural Gas futures and current 44.34% of open interest. Overall position -37,429.
- Tom accentuated his extreme concern with the percentage portion of the front month position, specifically in the natural gas futures, and informed Amaranth of our general comfort levels between the 30-40% of open interest range.
- Tom asked Mike about internal policies surrounding share of market or the like, and was informed that Amaranth does not have any internal polices

Permanent Subcommittee on Investigations
EXHIBIT #10s

insofar as % of open interest and does not have stated policies with respect to open interest, but employs a seasonal strategy.

- He informed Mike that he would like the spot natural gas futures position, brought into the range of no more than 30-40% of open interest. Accentuated the fact that this must be done in a commercially reasonable manner and that Amaranth staff should be mindful that it is carrying weight in the marketplace and to trade in an orderly fashion.

Approximately 12:30, call with Mike Carrieri of Amaranth. NYMEX staff included Tom LaSala, Nancy Minett and myself

- Discussed the October position. Informed Mike that there October position represented 51.87% of open interest in the natural gas futures, was too large and we were concerned that as he brought down the September position, Amaranth would further increase the October position. The overall position 2,214.
- Mike informed Tom that they are almost net-flat insofar as risk, but Tom informed Mike that the outright natural gas future position of -51,615 was a concern in addition to the earlier stated September 2006 position.
- Mike informed Tom that it had brought its September 2006 position down through rolls into the October, so that its October position is higher at this point. Mike said he understood our concern to be the spot month only.
- Tom accentuated, once again, the comfort level of 30-40% and told Mike that he would like Amaranth to work its position into that range.

August 10, 2006: approximately 12:30 call with Mike Carrieri of Amaranth. NYMEX staff included Tom LaSala and myself.

- Tom expressed his alarm at Amaranth's position of -66,837 natural gas futures in the October 2006 contract, 63.47% of open interest.
- Mike was informed that this percentage was unacceptable and that it must begin bringing the position down immediately. Once again, Tom stressed commercially reasonable trading manner.
- Tom again accentuated the % comfort levels and again explained to Mike that the concern was not only September, which had been brought down to a position of -22,395 for 24.22% of open interest, but for October as well at this point.
- Mike stated that he would express Tom's concern, as well as his directive, to begin bringing the position down immediately. He noted that the increase in the October position was due to traders rolling the September position to bring the percentage of September positions into line and that those trades occurred prior to our midday conversation on August 9.

August 11, 2006: 8:45 call to Mike Carrieri of Amaranth. NYMEX staff included only myself.

- Confirmed open position of -22,347 natural gas futures, 28.95% of open interest, and overall position of -14,202, for September 2006 contract. Informed him that this was a comfortable percentage of open interest.

- Also confirmed open position of -47,811 natural gas futures for the October contract, 40.21% of open interest, and overall position of 6,010.
- Informed him to be mindful of his open interest percentage as the spot open interest begins dropping and to manage his position accordingly in line with the figures of 30-40% of open interest as discussed with Tom.

/α/Amaranth One American Lane
Greenwich CT 06831
T 203 422 3300
F 203 422 3500

August 15, 2006

Mr. Anthony Densieski
Senior Director
Market Surveillance
New York Mercantile Exchange
World Financial Center
One North End Avenue
New York, NY 10282-1101

Re: MS-04-06

Dear Mr. Densieski:

I am writing regarding the above-referenced matter in response to your letter to Amaranth LLC ("Amaranth") dated August 2, 2006, in which you requested that Amaranth explain the commercial need and justification for its trading in the NYMEX May 2006 Natural Gas futures contract ("NG") on April 26, 2006. Because this letter contains confidential and proprietary information concerning Amaranth's positions and trading strategies, we respectfully request that NYMEX protect the confidentiality of such information and that it be only disclosed to employees and officials of NYMEX on a "need to know" basis.

Amaranth is a multi-strategy fund that had approximately $8.7 billion in capital as of the end of April 2006. Among its strategies is energy trading, which typically involves taking positions in various energy derivatives, including exchange traded futures, options on futures, OTC forwards, swaps, and options on a bilateral and cleared basis. Amaranth does not trade physical natural gas. Amaranth has not, to-date, ever made or taken delivery under NG contracts, but has always closed out such contracts prior to the termination of trading.

Amaranth seeks to ensure that its trading activities, including the liquidation of open NG contracts during the spot month, are conducted in an orderly fashion so as not to disrupt the market. Amaranth's trading of natural gas derivatives, including NG contracts, is based upon its evaluation of fundamental market factors and forecasts relating to global and local production, storage, inventory, distribution, and consumption affecting the price of natural gas.

In April 2006, as in the preceding several months, Amaranth's primary natural gas trading strategy was to hold long winter month positions and short summer month positions (which consisted of NG, ICE OTC Cleared, OTC and ClearPort Contracts). This strategy had been successful, particularly in April. Consequently, Amaranth had begun to contemplate efficient strategies to reduce its holdings. One effective strategy had been to sell winter positions and cover short summer positions by allowing financially settled swaps to expire and by either selling or rolling futures prior to their expiration.

Permanent Subcommittee on Investigations
EXHIBIT #10t

Mr. Anthony Densieski
August 15, 2006
Page 2

Here's one way you might employ this strategy. As the end of April approaches, the goal is to reduce your short May positions and your long winter positions. Eliminating the May positions that expire in April is easy because you can hold short positions in financially settled May swaps that do not require any expiration day trading. To eliminate winter positions, you need to execute trades in the markets, and it is challenging to set a precise position size schedule. On expiration day, say you could confidently estimate the largest number of winter positions you thought you could eliminate. You would want to have a corresponding short position in financially settled swaps that would expire the same day. In order to accommodate the uncertainty regarding the actual number of winter contracts sold, you can hold some May NG contracts. These contracts give you the flexibility to adjust the amount your short summer position decreases. If you sell the maximum number of winter contracts, you simply roll your long May futures position forward (leaving your full financially settled swap position to expire). If you sell fewer winter contracts, you sell your May futures instead.

By April 26, Amaranth had established short positions of approximately 10,000 financially settled May ICE swaps and 3,000 financially settled May ClearPort swaps, and a long position of 3,044 May NG contracts. Using the logic described above, this gave Amaranth the ability to reduce its summer/winter spread holdings by as little as 10,000 lots (by selling the May contracts prior to expiry) and as many as approximately 13,000 lots (by rolling the May contracts forward).

Amaranth monitored the winter natural gas market on April 26th hoping to sell winter, and roll the long May NG to June on a spread. Towards the end of the trading day it became apparent that Amaranth would not be able to sell the winter contracts at attractive prices. Thus, Amaranth decided (to the best of its recollection), at some time between approximately 2:17-2:23 p.m., to sell the May NG contracts outright. During this period Amaranth placed three orders aggregating a total of 3,044 May NG contracts with three different NYMEX floor brokers (approximately 2000 contracts with ALX, 500 contracts with Gotham and 500 contracts with TFS) with the instruction to sell the contracts before the close at the best possible prices. Therefore, the timing of the execution of the trades in the trading pit was at the discretion of the floor brokers.

If any of Amaranth's orders were executed in the post-close session, that was not due to Amaranth's instructions to do so, but perhaps occurred because a floor broker erroneously failed to comply with Amaranth's instructions to complete the execution of its orders prior to the close. As noted above, Amaranth historically has not made or taken delivery under NG contracts and thus would not want to take the risk of its orders not being filled prior to the close of trading.

In conclusion, Amaranth's trading of May NG contracts during the close of the May NG market was motivated by the desire to achieve an aggregate reduction in the risk of its portfolio.

Mr. Anthony Densieski
August 15, 2006
Page 3

Please feel free to contact me at 203-422-3317 should you have any questions regarding the information in this letter.

Very Truly Yours,

Michael Carrieri

Compliance Director

cc: Nancy M. Minett

Bonnie H. Yurga

Corey Traub

Michael Philipp, Winston & Strawn LLP

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RECEIVED NYMEX
COMPLIANCE DEPT.

2006 AUG 31 A 10:00

/α/Amaranth

One American Lane
Greenwich CT 06831
T 203 422 3300
F 203 422 3500

August 30, 2006

Mr. Anthony Densieski
Senior Director
Market Surveillance
New York Mercantile Exchange
World Financial Center
One North End Avenue
New York, NY 10282-1101

Dear Mr. Densieski:

We are writing to express our concern about trading yesterday in the NYMEX Natural Gas futures contract (the NG contract). As you are no doubt aware, during the last 60 minutes of trading in the September NG contract, the price of the September NG contract spiked up by approximately 10%. We believe that such price movement did not reflect bona fide supply and demand market forces. (In fact, the cash market price for September natural gas did not experience the same price increase, and NG contract prices returned today to levels at or below prices before the spike.) We also believe that the trading that caused the price movement during the closing range of the September NG contract was motivated by the desire of one or more market participants to affect the settlement price of the September NG contract, which the public relies on as a key price benchmark for physical and financial contracts involving natural gas.

We are particularly concerned over yesterday's market activity in light of the call from you and your colleagues yesterday morning, in which you expressed your concern about the manner of liquidation of our September NG contract position. You said that you expected us to reduce our position in an orderly and non-disruptive manner, that we should liquidate our position ratably over the course of the day, and that you did not want us to enter any large orders, particularly during the last half hour of trading of the September NG contract. As a responsible market participant we abided by your request, and had completely liquidated our September NG position by approximately 1:15 pm. As a result, the significant liquidity that we bring to the NYMEX market was not available during the last half hour of trading when the large spike occurred, and we were unable to mitigate our market risk during this period of unusual volatility. The price spike and lack of liquidity on the close harmed all natural gas market participants, including consumers whose cost of natural gas most certainly will be tied to yesterday's inflated settlement price.

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EXHIBIT #10u

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It is apparent to us that certain market participants are not trading in a responsible manner. For the protection of the market integrity of the NG contract, we believe it is essential that NYMEX immediately initiate an investigation into the trades and traders that caused yesterday's artificial price spike. We also respectfully request an in-person meeting between senior Amaranth executives and you and other senior NYMEX representatives to discuss the above request, as well as the remedial steps necessary to allow us to effectively trade in the NG contract on a going forward basis. Please call me at (203) [redacted] to discuss setting up a date and time for such meeting; we look forward to meeting with you and your colleagues as soon as our schedules permit.

Thank you for your consideration of this urgent and important request.

Very truly yours,

Michael Carrieri
Compliance Director

cc: Thomas LaSala
Christopher Bowen
Nancy Minett
Bonnie Merkel

CHI:1777293.2

NX - USSEN - 000970

Amaranth Timeline

2003
- Amaranth opens clearing accounts at JPM (JPMFI for financial futures trading) and BankOne (BOCM for energy trading).

2004
- JPM and BankOne merge and consolidate Amaranth's accounts into JPMFI. Consolidated credit limit is $15mm.

2005
- JPM becomes Amaranth's primary clearer of natural gas with the transfer of ICE positions from UBS to JPM.

May 2006
- Amaranth has first material credit excession – dialogue between F&O, Credit and Amaranth begins

May 26:
- Leo Lai and Mike Christ met with Artie DiRocco (Treasurer) and Lauralyn Pestritto (VP-Counterparty Relations) to get an update on the portfolio and performance.
- Artie opened the discussion by stating Amaranth's desire to extract the premium on their sold, listed (nat gas) options by selling them to us and we would then swap them back to Amaranth via a TRS with a 10% haircut at a borrowing cost of L+40.
- Artie noted that they approached ABN, Barclays, UBS and BNP to do this and were close to finalizing with UBS.
- Discussed YTD performance and May's performance in particular, as well as summary of the current and projected capital allocations to each strategy.
- Artie said the fund would be down approximately 3-5% (was actually down 12% what the performance numbers were released a few weeks later).
- Losses were primarily concentrated in the energy portfolio (specifically in nat gas on the July-Dec calendar spreads)
- Losses exacerbated further due to paring down of nat gas risk position and managing down long volatility exposure on these positions
- Will be allocating less risk capital to energy going forward (allocation should go from mid-30% to mid-20%)

July 17:
- Mike Christ spoke with Artie DiRocco to get an update on June performance and redemptions following May's large drawdown.
- There were $400MM in withdrawals from long-time FoF investors…not happy with the fund's volatility
- Fund was up 6.5% in June
- Risk in the energy book was been pared down and they have moved out a portion of their nat calendar spread positions to further maturities through 2011

Permanent Subcommittee on Investigations
EXHIBIT #11

Aug 15:

- Mike Christ responded back to Artie on his email about a missed margin call on Amarete (sub of Amaranth financing bank loans through us via Masterswap); MC said he was less concerned about the missed call on this account and more concerned about the 56% capital allocation to energy, that appeared on their most recent risk, since we were told by back in May that this number would be in the mid-20% range.
- Artie called MC almost immediately and explained that the risk reports are misleading in that the capital allocation to the fund's various strategies is really risk capital allocation and not an allocation of total capital.
- Artie said that they have about $3 billion (out of about $8.5 billion) in unallocated capital sitting in cash for liquidity needs.
- Artie said the risk capital allocation to energy was in the mid-20% range.
- Also said that they were taking down risk in the energy book by trading OTC and clearing these trades via ICE and NYMEX ClearPort so as to keep their activity out of view of the floor/broker mkt.

Aug 18

- Amaranth's F&O Initial Margin requirement now exceeds $2B.

Aug 21:

- F&O makes a $300MM margin call on Amaranth which was relayed to HF Credit (Jack Matteis and Mike Christ) by Mike Schneider.
- This margin call was then relayed by Mike Christ to John Hogan and Donna Dellosso; MC asked JH to speak with Artie when JH was back in the office.
- HF credit conducts a more detailed review of Amaranth's F&O exposures.
- Schneider relayed that Amaranth now controls upwards of 20% of the volume on certain nat gas contracts.

Aug 22:

- HF Credit runs stress on Amaranth's commodity exposures with JPM (mostly energy related) and determines that these exposures have almost doubled from July to mid-August from $1.5 billion to $2.9 billion.

Aug 23:

- NYMEX requests position information for Amaranth of NYMEX and ICE. CFTC sends request for information.
- Mike Christ notifies John Hogan and Donna Dellosso of the magnitude of Amaranth's F&O energy exposures in light of the stress data and what appears to us as an increase in their energy risk position.
- It is decided that a more senior level discussion with Amaranth about their energy risk position is needed.

Aug 29:

- Mike Schneider alerts HF Credit that Amaranth exceeded their intraday ICE limit.

Aug 30:

- Amaranth F&O margin call is $944mm. F&O escalates call to Credit.
- Mike Schneider informs Jack Matteis in HF Credit of this call that resulted from Amaranth's activity on the ICE yesterday.
- HF Credit begins gathering limit, exposure, due diligence info on Amaranth for John Hogan and Carlos Hernandez's meeting at Amaranth the following day.

Aug 31:

- Initial Margin exceeds $2.5B.
- John Hogan & Carlos Hernandez visit Amaranth to discuss exposure – set Initial Margin "limit" at $2.75B.

Sept 5:

- Amaranth buys MotherRock F&O positions, which transfer from ABN to JPM on Sept 5 (NYMEX) and Sept 6 (ICE), in order to neutralize Amaranth long nat gas volatility exposure.

Sept 8:

- Initial Margin exceeds $3B.

Sept 15:

- NYMEX visits JPM's offices to discuss JPM's hedge fund credit risk management process and our views on Amaranth.
- Following that meeting the CFTC calls NYMEX to discuss rumor of Amaranth's $4B loss. NYMEX calls F&O to relay message. F&O escalates internally.
- John Hogan emails Artie DiRocco at Amaranth to find out how they are doing. Artie states that they "dropped more today" but will still have cash of around $1 billion on Monday.

Sept 16 (Sat):

- A risk team is assembled by John Hogan and visit to Amaranth the following day is arranged. Exposure and collateral levels are discussed throughout the day. Senior management (Steve Black, Bill Winters, Don Wilson, etc.) are made aware of the situation.

Sept 17 (Sun):

- JPM meets with Amaranth's management team and goes through their trading positions (nat gas, illiquids, etc), counterparty docs, exposures, and cash position.
- Artie DiRocco and Jim Glynn (CFO) provide an update of the losses incurred on Friday and the current liquidity position of the fund. Artie notes that Amaranth is in discussion with an undisclosed "strategic partner" who will buy the energy book and provide a bridge loan secured by other assets in Amaranth's portfolio.
- The JPM risk team has a 7pm conference call with Jamie and Steve to discuss the current situation.

- Beau Taylor and Parker Drew (JPM nat gas trader) joined the team at Amaranth to review the energy book and assess the possibility of bidding on Amaranth's energy portfolio.
- Amaranth informs the JPM team that Merrill has purchased 25% of the energy book (positions to settle Monday morning) and Goldman is bidding for the remainder.

Sept 18:
- Amaranth issues press release announcing loss and that negotiations are underway to sell the energy book.
- F&O blocks Amaranth from trading electronically.
- Goldman drops out of the bidding for Amaranth's energy book.
- Amaranth begins liquidating other positions across all strategies and portfolios.

Sept 19:
- F&O notifies executing brokers that give-in trades will not be accepted for Amaranth's account on NYMEX.
- Citadel's bid for Amaranth's energy book and bridge loan fall through due to concerns by Citadel's lawyers around preference issues associated with the bridge loan.
- JPM now back in bidding for Amaranth's energy book. The JPM team works with Citadel and Amaranth to finalize a bid for the energy book. Negotiations extend well into the night.

Sept 20:
- JPM and Citadel agree to acquire Amaranth's energy portfolio for a concession of $2.1 billion to be paid by Amaranth to JPM and Citadel.
- Asian convertible bond portfolio also jointly purchased by JPM and Citadel.

Sept 21:
- Amaranth transfers the F&O positions in its energy book to JPM. OTC positions to be novated to JPM in the upcoming days.

O Yes O No **Approval Date:** 11/08/2002

CP Leveraged Funds Due Diligence

Annual Review 2001

Created By Redacted by the Permanent Subcommittee on Investigations On 02/19/2002 11:12:43 AM

Global Family Name	GFN		
AMARANTH ADVISORS LLC	3035697		

Parties in Family:	SPN	Rating
AMARANTH LLC	3035735	6
AMARANTH FUND LP	2512513	6-

Fund Name	SPN	UCN	Relationship	Rating

Summary

Strengths

- Diversified investment strategy with relatively low leverage compared to peers; particularly in convert arb.
- Experienced trading team with good track record under Paloma.
- Good communication.

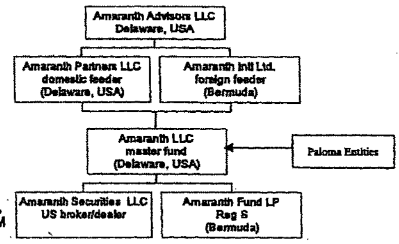
Weakness

- Paloma's investment represents significant investor concentration and is subject to monthly withdrawals.
- Back-office arrangement can be terminated with only 45 days notice.
- Lack of specific information regarding risk management and stress testing.

Organization

O 5 Outstanding	O 4	● 3	O 2	O 1 Poor

- Amaranth Advisors LLC, a Delaware Limited Liability Company, was organized in May 2000 by Nicholas Maounis to serve as the managing member of the Amaranth master fund. Donald Sussman, Chairman and CEO of Paloma Partners Management Company, is a minority owner of Amaranth Advisors and will be a significant investor in the master fund. The organization structure is outlined below.
- Nick Maounis had been employed directly by Paloma since 1990 where he was responsible for managing approximately 25 traders and assistants handling a variety of arbitrage portfolios in the US, Japanese, European and Canadian markets. Mr. Maounis had also been personally responsible for trading a large convertible-arbitrage portfolio.
- Given Mr. Maounis's strong track record at Paloma, he felt it was time to branch out on his own by founding Amaranth Advisors. Paloma will maintain a minority interest in his management



company, and has transferred the Paloma Strategic fund to Amaranth Advisors which will be renamed Amaranth Fund LP beginning October 1, 2000. Paloma Entities will also invest up to $200M directly into the master fund.

- Nick's entire trading team will now be employees of Amaranth. It will consist of 4 portfolio managers, 8 analysts (half senior, half junior), 5 traders, 4 quants, and the remaining consisting of tech support, clerks and trading assistants.
- Paloma will continue to provide Amaranth with risk management, back-office, accounting, and other administrative support.
- The group hopes to grow to $1 billion AUM over time. Nick will spend a fair amount of time marketing over the next year. Mr. Maounis will also continue to manage some capital directly for Paloma entities.

*Investment Strategy*Ӿ

○ 5 Outstanding ○ 4	● 3	○ 2	○ 1 Poor	Ӿ

- Amaranth will employ a diverse group of arbitrage trading strategies including covert arb, merger arb, statistical arb, utilities arb, capital structure arb (stub trading), and warrant/option arbitrage. Additionally, the fund may invest in distressed debt and can take directional positions in equity and fixed income instruments. Nick Maouins in conjunction with his team periodically determine the capital allocation based on market opportunities. The rough breakdown by strategy is as follows:

  Convertible Bond Arbitrage: (approx. 30% of capital). consists of buying a convertible bond and selling short the underlying common stock that the bond is convertible into. The portfolio is divided between US, Canada, and International which includes Japan and Europe. The book is about 55% US and 45% International; bulk of Int'l is Europe, some Japan, and small amount in Canada (albiet more highly levered at 8x). There are 4 PMs including Nick running convert arb, 5 credit analysts, and 3 traders. The team does its own credit analysis, and hedges credit risk where they can (virtually all International bonds asset swapped). The book consists of mostly of high delta converts. Leverage ranges from 3 - 4x.

  Merger Arbitrage: (approx. 40%) includes investing in securities of companies involved in prospective mergers, acquisitions, cash tender offers, recapitalizations and other corporate restructurings. Typical trade is long the target of an acquisition and short the buyer. They intend to keep a diversified book of trades, and may have up to 65 deals on at any time. The team consists of 1 PM, 4 analysts, and 2 traders. They are willing to take positions in much smaller cap companies. Leverage should be approximately 2x.

  Utilities Arbitrage: (approx. 30%) buying long a basket of utility stocks and selling short an approximately equivalently sized bask of utility stocks in anticipation of profiting from changes in the price differential between the two baskets. This strategy relies on both fundamental and statistical analysis to identify over valued and undervalued utility stocks. Typical trade is short one utility company versus long another. They do not go long a specific energy sector versus shorting another. There are approximately 50 positions. There is a team of 4 people focusing on this strategy including 1 PM, 2 analysts and a trader. Leverage should be approximately 2x.

Other: Opportunistically, the group may dabble in high yield and distressed debt instruments.

Risk Management

○ 5 Outstanding	○ 4	○ 3	● 2	○ 1 Poor

- Amaranth will rely on Paloma's existing risk management infrastructure in addition to their own analytics. Paloma will provide daily position and P&L information, greek sensitivities (delta, gamma, vega, rho), leverage reports, concentrations (size vs. ADV, etc.), premium at risk, and industry exposures.
- There are no formal stop losses, concentration limits or stress analyses. However, Nick informally limits capital at risk to any single position at 1-2 percent. Additionally, Long Market Value (notional) never exceeds 10% and is typically 5-6%. For risk arb situations, he estimates worse case loss based on fundamental analysis of the deal breaking (stocks return to pre-deal levels, etc.). With respect to converts, he looks at the loss from an overnight bankruptcy or cash take-over.
- Paloma performs stress testing at least on a monthly basis, and may do additional adhoc stress tests depending on market conditions. They will stress stock markets, interest rates, volatility and credit spreads based on historical worse case observations. However, they would not provide much detail regarding their scenarios. For Risk Arb book, they assume two largest positions break, and the spreads on the rest of the positions widen slightly.

Liquidity Management

○ 5 Outstanding	○ 4	● 3	○ 2	○ 1 Poor

- Amaranth is likely to follow Paloma's standard liquidity levels, whereby they seek to maintain 25-30% on average excess borrowing power from their prime brokers. The group will also have access to the Paloma Securities stock lending business, which should reduce their reliance on prime brokers.
- Although Bear Sterns will be used domestic prime brokerage, Amaranth will plan to use a diversified group of brokers for international securities. There will be approx. 6 - 10 OTC derivative counterparties, and they will expect 2-way margin agreements.

Capital

○ 5 Outstanding	○ 4	○ 3	● 2	○ 1 Poor

- Amaranth should commence with approximately $200MM in capital, the bulk of which is being provided by Paloma entities.
- New investors will be subject to a two year initial lock-up with annual liquidity thereafter upon 90 days notice. Existing investors of Paloma Strategic will not be subject to lock-up, but will have annual withdrawal rights with same notice period. Paloma, however, will be able to withdraw from Amaranth monthly.

Performance

○ 5 Outstanding	○ 4	○ 3	● 2	○ 1 Poor

- The manager does not have a stand-alone performance record. Performance benchmark is 15% annually.
- However, while at Paloma, Nick's team generated 22% annualized returns over the past 10 years and only experienced 10 down months.
- During the 1998 financial crisis, Nick's book was only down 2% while Paloma overall lost 30% primarily from fixed income strategies.
- Performance may differ considerably now that the group no longer has a free call on capital and may also have higher funding costs.

Internal/Operational:

○ 5 Outstanding ○ 4	● 3	○ 2	○ 1 Poor	

- Amaranth will rely totally on Polma's back-office and support structure. The two firms have signed a service agreement which can be terminated with 45 days notice.
- Paloma employs a large back-office to support its stock loan business. It has a good reputation on the street for its operational prowess. Although we have not met anyone from their back-office, which limits the score for this category.

Client Communication:

○ 5 Outstanding ● 4	○ 3	○ 2	○ 1 Poor	

- We have excellent communication with credit and risk management side of Paloma which will be providing all the administrative support. We should receive disclosure, on a monthly basis, of total footings (leverage) for each major strategy.
- In addition, we will now have more direct interaction with Nick Maounis.

Exposure Mgt Strategy:

Other Comments and/or Attachments:

Rating History
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Document Approval
○ Yes ○ No *Approval Date:* 11/08/2002

Author:	Last Edit:
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CP Leveraged Funds Due Diligence

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Annual Review 2004 Created By On 12/27/2005 11:20:38 AM

Global Family Name	GFN	UCN	Credit Officer
AMARANTH ADVISORS LLC	3035697	003803061000	Michael Christ

Fund Name	SPN	UCN	Relationship	Rating
AMARANTH LLC	3035735	003869245000	Active	5
AMARANTH SECS LLC	3043967	801687161000	Active	6+
AMARETE MASTER LTD	7016395	005810676000	Active Exception	5
AMARANTH ADVISORS LLC	3035697	003803061000	Investment Advisor (IA)	5

Summary

Strengths

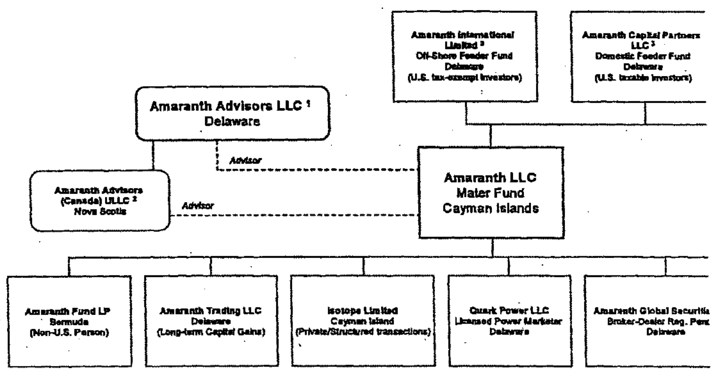
- Diversified investment strategy with relatively low leverage compared to peers; particularly in convert arb.
- Experienced trading team with good track record under Paloma.
- Sophisticated employee compensation program, focuses on firm wide profits; long term decision making and promotes employee ownership.
- Significant growth of assets under management and more restrictive withdrawal rights resulting in much more stable capital base.
- Good communication and transparency with JPMorgan hedge fund credit.

Weakness

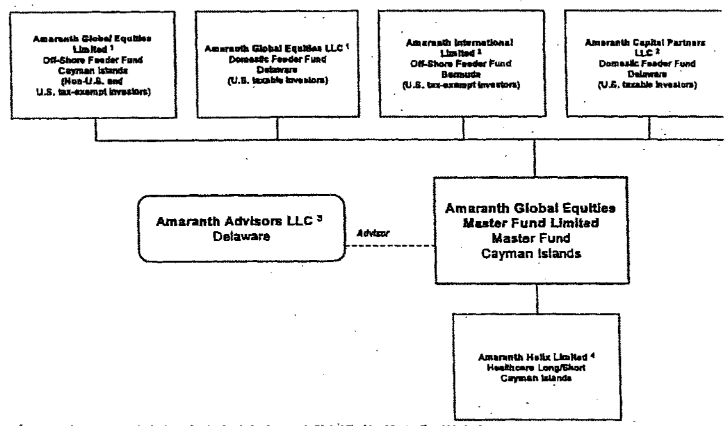
- Volatility in certain specialized markets, and potential illiquidity in convertible arbitrage and high yield markets.
- "Keyman risk", Nick Maounis is key component to success of Amaranth.
- Tendency to take higher risk (larger position sizes) vs. Paloma and some other peers; this is clearly exhibited in their significant energy position that they have built in 2005 (30% of capital allocation and 98% of 2005 performance)
- High percentage (60%) of hot money investors (fund of funds) albeit mitigated by more restrictive redemption terms.

Organization ⌘

○ 5 Outstanding	○ 4	● 3	○ 2	○ 1 Poor



1 Amaranth Advisors LLC has discretionary authority over all investment and trading activities of Amaranth LLC.
2 Amaranth Advisors (Canada) ULC is a wholly owned subsidiary of Amaranth Advisors LLC and has discretionary trading authority over certain portfolios of Amaranth LLC and Amaranth Fund LP
3 Each of the three feeders funds shown above also maintains a direct investment in Amaranth Global Equities Master Fund Limited (shown on the chart below).
4 Amaranth Global Equities Master Fund Limited also invests directly in this entity.



1 These entities serve exclusively as feeder funds for Amaranth Global Equities Master Fund Limited.
2 These entities are Amaranth's Multi-Strategy feeder funds and invest in both Amaranth LLC and Amaranth Global Equities Master Fund Limited.
3 Amaranth Advisors LLC has discretionary authority over all investment and trading activities of Amaranth Global Equities Master Fund Limited.
4 Amaranth LLC also invests directly in this entity.

- Amaranth Advisors LLC, a Delaware Limited Liability Company, was organized in May 2000 by Nicholas Maounis to serve as the managing member of the Amaranth master fund. Donald Sussman, Chairman and CEO of Paloma Partners Management Company, is a minority owner of Amaranth Advisors. Amaranth Partners LLC, Amaranth Capital Partners LLC and Amaranth International Ltd are multi-strategy arbitrage funds dedicated to maximizing returns on a risk adjusted basis. The Funds are part of a "Master Feeder" structure, in which the Master Fund has an investment objective identical to that of the Funds.

- Nick Maounis is the Managing Member of Amaranth had been employed directly by Paloma since 1990 where he was responsible for managing approximately 25 traders and assistants handling a variety of arbitrage portfolios in the US, Japanese, European and Canadian markets. During his tenor at Paloma Nick's group substantially outperformed both the S&P 500 Index and the CSFB Tremont Hedge fund Index. Nick's group amassed a strong track record with low correlation to the S&P 500 Index, returning a profit in 29 out of 33 down months against the S&P 500 during the same period. Prior to Paloma Nick was employed at Angelo, Gordon & Co. (1989 -1990) and LF Rothschild, Unterberg, Towbin (1985-1989), where he was an SVP in charge of all convertible arbitrage trading. Nick graduated from Uconn in 1985, with a Bachelor of Science degree. He is registered in his individual capacity as a commodity trading advisor with the CFTC.

Other Key individuals include Charles Winkler and Robert Jones

- Charles Winkler serves as Amaranth's Chief Operating Officer. Charles joined the firm in July 2001 and is responsible for managing all non-trading related details of the firm. From 1996 - 2001, Charles was Senior Managing Director and Chief Operating Officer for Citadel Investment Group, L.L.C. Prior to Citadel, Charles was a Partner with the Chicago law firm of Neal Gerber & Eisenberg. His 17 year legal practice focused on providing tax and corporate counseling to investment advisers and private investment firms. Charles graduated from Emory in 1976 with a Bachelor's degree in Business Administration in Accounting and from Northwestern University School of Law, receiving a Juris Doctor in 1979.

- Robert Jones serves as Amaranth's Chief Risk Officer. Prior to Amaranth Rob was employed at Goldman, Sachs & CO. specifically in the Fischer Black group. His objective was to develop proprietary arbitrage strategies and risk limited portfolio management techniques. Rob also was part of Goldman's equity arbitrage trading unit, where he ran a listed and OTC derivatives trading book. Notable event's in Mr. Jones career include being invited in 1988 by the NYSE Chairman, John Phelan, to assist him in evaluating and addressing operational risks exposed during the 1987 crash. In 1989, Rob joined the Paloma Entities where he managed an int'l derivative arbitrage portfolio. He met Nick Maounis and they worked together for 4 years managing pools of capital for Paloma Entities. Most recently Rob has led Stadivarius Capital, a firm helping quantitatively oriented hedge funds to identify and manage sources of performance uncertainty.
- David Geffin, serves as Amaranth's Credit Officer and is responsible for all counterparty credit analysis, establishing limits and negotiating ISDA and financing agreements. Before joining Amaranth in 2004, David was senior the credit officer in the hedge fund credit department of Goldman Sachs. David is the primary contact for the JPMorgan hedge fund credit group.
- Initially Paloma had a minority interest in his management company, and transferred the Paloma Strategic fund to Amaranth Advisors which was renamed Amaranth Fund LP beginning October 1, 2000. As of January, 2004 Paloma and any of individual employed by Paloma, no longer has any investment in any Amaranth entity.

Amaranth has been working to expand their presence internationally and have opened offices in London and Singapore to compliment their existing Greenwich, Houston and Toronto offices.

*Investment Strategy*Ӿ

○ 5 Outstanding	● 4	○ 3	○ 2	○ 1 Poor

Ӿ

- The principal strategies that Amaranth employs are covert arb, merger arb, statistical arb, capital structure arb, and opportunistic equity and distressed / credit arbitrage investments. Any position that is atleast 1% of total capital is considered a core position. Nick Maounis in conjunction with his team on a monthly basis determine the capital allocation to each strategy based on market opportunities. The rough breakdown by strategy is as follows:

  <u>Convertible Bond Arbitrage (15% of total Fund Capital, down from 60% at its peak)</u>: consists of buying a convertible bond and selling short a varying percentage of the underlying common stock that the bond is convertible into. The portfolio is divided between US, Canada, and International which includes Japan and Europe. There are 4 PMs including Nick running convert arb, 5 credit analysts, and 3 traders. Amaranth analyzes credit in house, and in most cases hedges credit risk where they can (virtually all international bonds asset swapped). Leverage ranges from 3 - 6x.

  <u>Merger Arbitrage (Approximately 5% of total Fund Capital):</u> includes investing in securities of companies involved in prospective mergers, acquisitions, cash tender offers, recapitalizations and other corporate restructurings. Typical trade is long the target of an acquisition and short the buyer. They intend to keep a diversified book of trades. They are willing to take positions in much smaller cap companies. Leverage should be approximately 2x.

  <u>Credit Arbitrage (25% of capital):</u> may be divided into a number sub strategies such as capital structure arbitrage, event driven arbitrage, and merger arbitrage. Trades may be in the form of buying and selling of different classes of securities of the same issuer due to a perceived mispricing between the two. Typical capital structure trade may involve purchasing senior debt of

an issuer and selling subordinated debt of the same issuer when the subordinated debt is believed to be overpriced relative to the senior debt. Alternatively, another form by which to exploit perceived mispricing may be buying credit default swaps of the same issuer with different maturities where certain default swap spreads are expected to widen or tighten based on the perceived financial stability of the underlying company. Other variations of "credit" related positions include trading of bank loans, pairs trading, credit default obligations, and credit options. 40% of the credit arbitrage portfolio has a long bias, 40% is in the form of bespoke synthetic CDOs and regular CDOs. Leverage is on average is 3-4x.

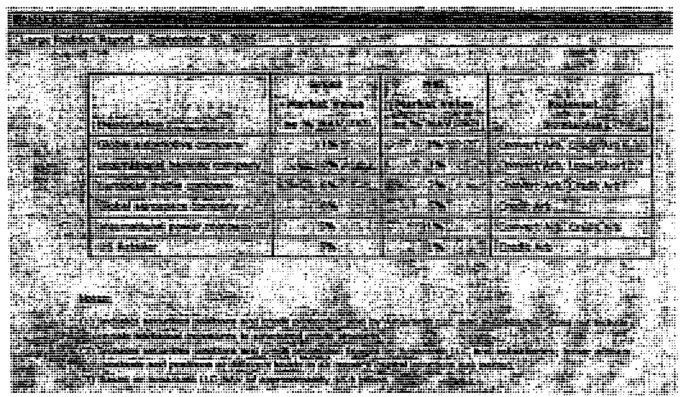
Volatility / Option Arbitrage (about 2% of capital): involves purchasing or selling an option on an underlying financial instrument and selling or purchasing a varying percentage of the underlying instrument. It is anticipated that a profit will be earned upon a substantial move in the price of the underlying instrument (in the case options are purchased) or upon a relative lack of movement in the price of the underlying instrument (in the case options are sold). In certain cases merely holding a position is anticipated to produce a financing profit. The current position bias for this strategy is to be net long volatility. Primarily looking for cheap priced volatility and they attempt to managed on a delta neutral basis.

Energy Arbitrage (30% of capital): The Fund has hired a couple of former Enron energy traders to build an Energy Arbitrage desk. Energy arbitrage opportunities can also take a number of forms due to the significant amount of available "Energy" products. A generic geographical energy arbitrage can be trading the difference of price in a given commodity either in the same location or in different geographical location. Other arbitrage opportunities include Grade arbitrage which encompasses trading the difference in price of two related crude oil based commodities such as the spread between WTI and Brent Crude. Generally these arbitrage opportunities are created by fundamental news affecting production and inventory. In addition trades may also may also be on the perceived price volatility of crude oil and other crude products such as gasoline, jet fuel and heating oil and or the correlation between one another. These views have been expressed through calendar spreads. In addition, deep out-of-the-money call options are purchased as a cheap way to take advantage price shocks. Leverage ranges from 5-8x.

Long / Short Equity (15% of capital): The Fund has recently carved out the Long / Short equity strategy and created a stand alone fund, the Amaranth Global Equities Master Fund Limited, to warehouse 20% of the equity strategy, the other 80% of the strategy is still booked in Amaranth LLC. The capital allocation of the Amaranth Global Equities Master Fund Limited is divided as follows; 35% healthcare (100% of Amaranth Helix Limited), 35% Technology, 15% Utilities, and 15% in Financials. Going forward each portfolio manager will have a separate fund similar to Helix structure, where each fund will have its own portfolio manager and a their own portfolio of equity positions specific to one industry. The Long / Short Equity strategy relies both on fundamental and statistical analysis to identify under and over priced equities. Leverage historically has never exceeded 1.4X and is currently 2x. The percentage of capital allocated to the Long / Short Equity strategy may never exceed 30% of total capital.

Statistical Arbitrage (8% of capital): is a relatively new strategy for the Investment Manager and currently only trading in the equity and foreign exchange markets. The statistical arbitrage focus in equity revolves around trading positions on the Russell 2000, average trade size is $0.5MM to $1.0MM. The statistical arbitrage focus in foreign exchanges is focused on trading the 11 most liquid currencies and average trade size is $1.0MM. The interest rate statistical arbitrage model is current in the process of development. The statistical arbitrage strategy is based off of 7 models which look for anomalies in the price correlation amongst the targeted underlying index or basket of securities. Investment horizon per trades are generally inside of 1 month. The stat arb book is still in its beta testing stages as senior management believes the incubation period for this strategy is approximately 3-5 years. Approximately 20 programmers who are refining the algorithms and code.

Largest positions by sector and strategy:



The fund's GM convert arb position accounts for the largest automotive company positive. This has been a core position for quite some time.

Risk Management

O 5 Outstanding ● 4	O 3	O 2	O 1 Poor

The Chief Risk Officer is Robert Jones and is one regarded as one of the 3 most senior officers at Amaranth. Rob's mandate is to create a more robust risk management system and process. Rob indicated that he is consulting both in house and outside individuals to achieve their objectives. There are 12 risk lieutenants in the risk management group under Rob. Roughly all of the individuals have an academic background, all of the individuals possess advanced degrees in various fields. Typically most hedge funds have one Risk Officer monitoring the risks of the trading book. However, at Amaranth Rob feels that to ensure traders are adhering to risk guidelines a risk manager is assigned to each trading desk / portfolio group. In addition, Rob feels by having the risk manager sit amongst the traders on the desk, the risk manager is more in tune with the markets b/c they see the flows and get a better idea of how the market trades. Thus, better able to understand and manage the risks. Another unique quality of the Chief Risk Officer at Amaranth, Rob has the authority to unwind / close out any position based on its risk profile.

The risk management group has agreements in place with ITO 33 a group which focuses on development of risk management systems. Rob is also actively hiring more risk management professionals.

- Amaranth has developed its own risk management infrastructure. The risk group provides daily position and P&L information, greek sensitivities (delta, gamma, vega, rho), leverage reports, concentrations , premium at risk, and industry exposures.

- Rob Jones on a daily basis receives the following risk reporting:

1. The risk management group produces daily VaR and Stress reports. The Var looks at different confidence levels from 1SD @ 68% to 4SD @ 99.99% over 20 days. Currently the Var has been less than 1% of total capital. The parameters for the stress reports are increasing credit spreads to 50%, volatility contracting 30% for 1 month, 15% for 3 months, 7% for 6 months and 3 % for 12 months, interest rates up 10% or 1.1 * the yield curve and stocks being flat. The shock is a worst case scenario and it would impact 3% of the total equity of the portfolio. However, the daily stresses tests each strategy separately and a overall portfolio stress to consolidate all the positions and effects to certain market events is in the works.
2. Rob also receives a daily report that breaks down all of the long and short positions, with largest concentrations. Further the report also provides detail regarding the top 5 and 10 long and short positions.
3. A real time P&L monitor for portfolios with liquid, exchange traded securities.
4. Liquidity report which presents positions and their volumes per each strategy which the managers use to constrain the size of each strategy.

- Each risk lieutenant per the product group they are assigned to generates a capital reserve for each individual position. The capital requirement is based off of the outcomes of 12 different stress scenarios which Rob Jones came up with.
- The risk lieutenants calculate expected loss based on 10% annualized vol per each individual position.
- There are no formal stop losses or concentration limits. However, Nick informally limits capital at risk to any single position at 3%. Additionally, Long Market Value (notional) never exceeds 10% and is typically 5-6%.

*Liquidity Management*ꭗ

○ 5 Outstanding ○ 4	● 3	○ 2	○ 1 Poor

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- Amaranth seeks to maintain 25% on average excess borrowing power from their prime brokers.
- Amaranth has built their own stock loan business to mitigate any potential prime broker service disruptions. The entity is Amaranth Securities LLC a registered broker-dealer incorporated in Delaware. It is ready to go live once it receives NASD approval (which is imminent).
- Amaranth uses 6 different prime brokers for domestic and international securities and they are Goldman Sachs, Morgan Stanley, Citigroup, Lehman Bros., Deutsche Bank, and Merrill Lynch.
- The Prime Brokerage agreements include lockups from 30 - 90 days for financing and margin levels. These lock-ups are generally subject to ISDA like covenants including a "Keyman Clause" and NAV triggers (of 30% a quarter).

*Capital*ꭗ

● 5 Outstanding ○ 4	○ 3	○ 2	○ 1 Poor

ꭗ

Amaranth LLC Net Assets as of 09/2005: $6,100.0MM

- Amaranth LLC commenced operations with approximately $200MM in capital, the bulk of which was provided by Paloma entities. A large portion of the capital (approx. 60%) comes from Fund of Funds, about 7% is from insurance companies, 6% from retirement and benefit programs, 6% from high net worth individuals, 5% from financial institutions, 2% from endowments and 3% is insider capital (which includes deferred compensation). The insider capital does not get charged management or performance fees.
- The largest investor amounts to 8% of total capital.
- 70% of all investors have been with the fund for longer than 1 year.
- All capital investments made by Paloma entities and individuals who are affiliated to Paloma has been returned.
- There are three ways out of the Fund via withdrawals:

1. Annual liquidity, 13 month initial lock up w/ 90 days written notice
2. After the initial 13 month lock up, quarterly liquidity, January, April, July and October w/ 45 days notice and a 2.5% fee.
3. Annual redemption of profits only w/ 45 days written notice.

* There is a 7.5% gate which counts against all redemptions made during the course of the year.
* Potential largest redemption would be 15% of nav if every qualified investor provided notice to redeem.

- Amaranth experienced a significant net inflow of new capital in 2005.
- Beginning in 2/05, new investors will be subject to a 2 year lock-up on capital.

Performance

○ 5 Outstanding ● 4	○ 3	○ 2	○ 1 Poor

- Since the fund's inception in October 2000, the greatest monthly loss has been less than 3%, occurring in June of 2002 at which time several notable large corporate frauds and bankruptcies occurred (WCOM, Adelphia, etc.).
- The Fund has performed quite well and has produced double digit returns for each of the last three years.

[illegible]

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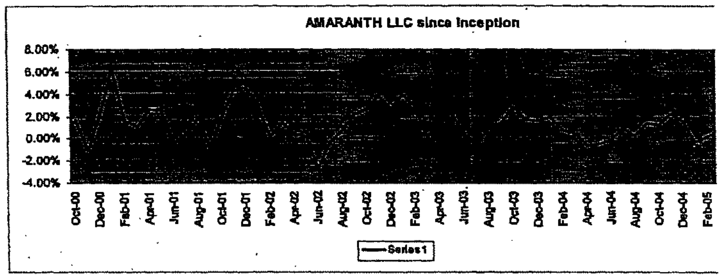
Given the amount of capital that needs to be deployed, double digit returns since inception is quite a significant accomplishment.

AMARANTH LLC

Date	Mtd	Ytd	Date	Mtd	Ytd	Date	Mtd	Ytd	Date	Mtd	Ytd
Jan-02	3.10%	3.10%	Jan-03	3.95%	3.95%	Jan-04	1.98%	1.98%	Jan-05	-0.27%	-0.27%
Feb-02	0.19%	3.30%	Feb-03	3.00%	7.07%	Feb-04	0.78%	2.78%	Feb-05	0.17%	-0.10%
Mar-02	1.43%	4.77%	Mar-03	0.17%	7.25%	Mar-04	0.50%	3.29%	Mar-05	0.90%	0.80%
Apr-02	0.46%	5.25%	Apr-03	1.33%	8.68%	Apr-04	-0.59%	2.68%	Apr-05	-2.62%	-1.84%
May-02	0.16%	5.42%	May-03	2.33%	11.21%	May-04	-0.40%	2.27%	May-05	-2.09%	-3.89%
Jun-02	-2.65%	2.63%	Jun-03	0.60%	11.88%	Jun-04	-0.12%	2.15%	Jun-05	3.03%	-0.98%
Jul-02	-0.28%	2.34%	Jul-03	-0.58%	11.23%	Jul-04	0.96%	3.13%	Jul-05	2.39%	1.38%
Aug-02	0.72%	3.08%	Aug-03	0.93%	12.26%	Aug-04	0.31%	3.45%	Aug-05	5.19%	6.65%
Sep-02	2.16%	5.31%	Sep-03	1.41%	13.84%	Sep-04	1.39%	4.88%	Sep-05	7.49%	14.63%
Oct-02	2.65%	8.10%	Oct-03	2.82%	17.17%	Oct-04	1.26%	6.21%	Oct-05	0.00%	14.63%
Nov-02	3.88%	12.29%	Nov-03	1.70%	19.16%	Nov-04	2.29%	8.64%	Nov-05	0.00%	14.63%
Dec-02	2.70%	15.32%	Dec-03	1.67%	21.15%	Dec-04	1.65%	10.43%	Dec-05	0.00%	14.63%



Although Amaranth's performance for the first half of 2005 was negatively impacted by events in the convert arb (long GM bonds/short GM stock) and structured credit/correlation positions, the funded has rebounded in the latter half of the year almost solely due to its large energy related calendar spread positions and deep out-of-the-money call options on energy that purchased prior to Hurricane Katrina. These energy positions account for 98% of the fund's 17% YTD performance (before fees) through November. These positions account for 30% of Amaranth capital allocation and the highest among all of its strategies.

Internal/Operational:

○ 5 Outstanding ● 4	○ 3	○ 2	○ 1 Poor	

- There are a total of 133 people in the operations group at Amaranth, The operations group encompass information technology, controllers, accounting, legal counsel, client relations, confirmations, and trade support.
- Amaranth performs their own back office and trade support in house.

Employee Compensation:
Amaranth senior mgmt has instituted a new form of annual employee compensation and deferred compensation. Annual compensation is determined by the degree of the individuals job function and how it contributes to generating income or if it is income neutral. The annual Compensation is based on the weightings in three different categories; 1)Firm wide performance 2)Divsion 3)Discretion. A Senior Trader may have the following weightings 1) Firm wide performance 30%, 2) Division 50% 3) Discretion 20%. According to these weightings the Senior Trader benefits from the overall Fund performance but the bulk of his / her compensation is based on the performance of his / her trading desk or division and less centered around satisfying the general job requirements i.e managerial and operations responsibilities. A junior person may have the following compensation weighting profile; 1) Firm wide performance 10%, 2) Divsion 10% 3) Discretion 80%. Where the majority of the compensation is based on execution of job function i.e operations and administrative personnel fall into the grouping. The deferred compensation is based on the firm's philosophy to maximize returns on a risk adjusted basis with capital preservation and risk management a priority. The deferred compensation payout is also spread over the course of three years. With the deferred compensation portfolio managers and traders are less likely to take unnecessary risks and attempt to "hit home runs with every swing".

Investment Terms:
- $ 5 MM minimum investment (subscriptions accepted monthly)

- 1.5% mgmt fee; 20% Incentive Fee (additionally reimbursement of certain expenses resulting from the operation of the Funds and the Master Fund.
- High-Water Mark is employed.

Client Communication※

○ 5 Outstanding ○ 4	● 3	○ 2	○ 1 Poor	

- We have very good communication with credit and risk management side of Amaranth. JPM hedge fund credit receives disclosure, on a monthly basis, of capital by entity, largest positions, capital allocation by strategy, leverage by strategy, total number of trading positions by strategy and overall performance

Exposure Mgt Strategy※

Other Comments and/or Attachments:

ASLLCStatFinCon1204.p

Rating History
Archive This Document
Document Approval

First Approval:		
	[redacted]	12/23/2005 07:07:17 PM

Second Approval:			
Approved	[redacted]	12/27/2005 11:20:27 AM	

[redacted] Author: 09/15/2000 10:51:20 AM	[redacted] Last Edit: 12/27/2005 11:20:30 AM

[redacted] = Redacted by the Permanent Subcommittee on Investigations

CP Leveraged Funds Due Diligence

Annual Review 2005 **Created By Michael Christ On 12/22/2006 03:00:13 PM**

Total Score -----> 17

Global Family Name	GFN	UCN	Credit Officer
AMARANTH ADVISORS LLC	3035697	003803061000	Redacted by the Permanent Subcommittee on Investigations

Fund Name	SPN	UCN	Relationship	Rating
AMARANTH LLC	3035735	003869245000	Active	6+
AMARANTH SECS LLC	3043967	801687161000	Active	6+
AMARETE MASTER LTD	7016395	005810676000	Active Exception	6+
AMARANTH ADVISORS LLC	3035697	003803061000	Investment Advisor (IA)	6+
AMARANTH PARTS LLC	7360525	006108005000	Active	6+
AMARANTH GBL EQ MTR FD LTD	5334756	004960480000	Active	6+

Please Note:

*Mandatory fields 5 -> Outstanding 1-> Poor

Comment should not be more than 500 characters

Summary

Strengths:

- Experienced trading team with good track record under Paloma.
- Adequate communication with JPMorgan hedge fund credit.

Weakness:

- Style drift, Amaranth originally launched in 2000 with a multi-strat focus. In 2005/6 over 80% of profit was attributed to investments in energy markets.
- Concentration in the energy markets, over 40% of capital allocated to investments in financial energy contracts.
- Volatility in the energy markets has led to similar volatility in Amaranth LLC's returns.
- High percentage (60%) of hot money investors (fund of funds) albeit mitigated by more restrictive redemption terms.
- Estimated performance in first two weeks of September 2006 may lead to capital under management to be down by -55% ytd (65% in the month of Sept).
- Potential for significant investor redemptions due large losses in energy trades has forced the manager to suspend redemptions.
-

Risk Rating Summary

Fund Name*	Rating*	Rationale*
AMARANTH LLC	6+	Over 5 years of operating performance. Downgrading the rating to 6+ given the style drift toward concentration in energy markets and huge losses incurred.

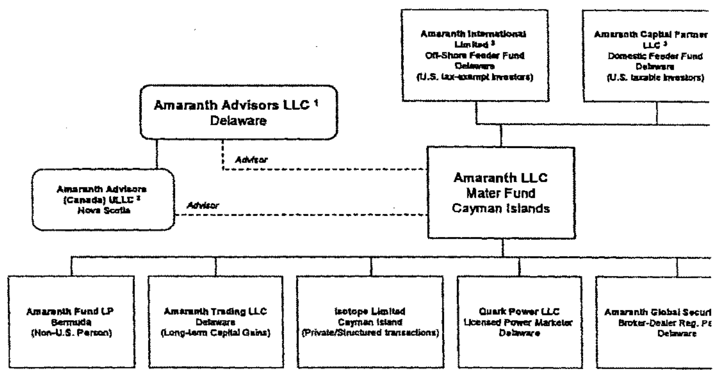
AMARANTH SECS LLC	6+	Sub of Amaranth Partners LLC. Little to no exposure to the stock borrow loan arm of Amaranth. However downgrading the rating to 6+ given the Investment Manager's lack of risk controls and poor judgement in regards to the energy trading book.
AMARETE MASTER LTD	6+	Entity is fully guaranteed by Amaranth LLC. However downgrading the rating to 6+ given the Investment Manager's lack of risk controls and poor judgement in regards to the energy trading book.
AMARANTH ADVISORS LLC	6+	Over 5 years of operating performance. Downgrading the rating to 6+ given the style drift concentration in energy markets and huge losses incurred.
AMARANTH PARTS LLC	6+	Over 5 years of operating performance. Downgrading the rating to 6+ given the style drift concentration in energy markets and huge losses incurred.
AMARANTH GBL EQ MTR FD LTD	6+	Little to no exposure to this entity. However downgrading the rating to 6+ given the Investment Manager's lack of risk controls and poor judgement in regards to the energy trading book.

Organization

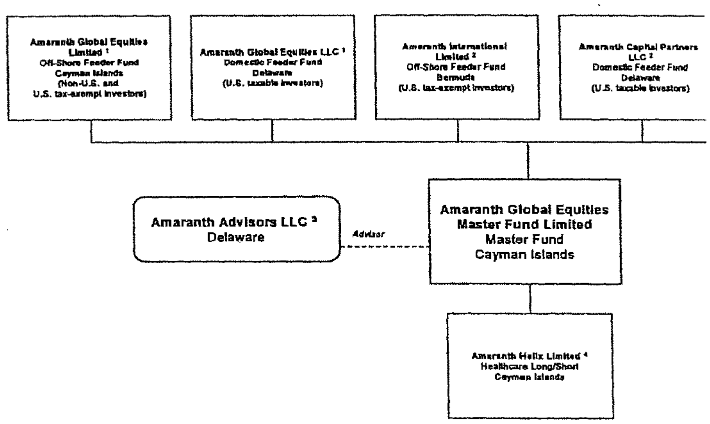
Organization

***Organization Score** 2

***Reputation and track record of Principals**	○ 5 ○ 4 ○ 3 ● 2 ○ 1
***Commentary**	Nick Maounis had significant prior experience managing a convertible arbitrage trading book for Paloma before launching Amaranth. Amaranth began with approximately $200MM in total capital under management in 2000 and peaked in 2006 to over $9.5bn. However due to recent heavy trading losses in the energy book, capital under management now down by 55% ytd.
***Lack of Key Man risk**	○ 5 ○ 4 ○ 3 ● 2 ○ 1
***Commentary**	There are a number of individuals who have authority to take on risk. Currently, Brian Hunter (NG Trader) has the largest risk capital allocation. Approximately 40% of the firm's capital is currently dedicated to energy positions. Certain degree of keyman risk given performance for 2005 and current 2006 relies heavily on performance of Brian Hunter.
***"Institutionalization" of the firm**	○ 5 ○ 4 ○ 3 ● 2 ○ 1
***Commentary**	Majority of senior professionals at the firm are seasoned and have significant prior experience at Wall street firms or other reputable hedge funds. Until recently the firm had over 5 years of operating history with exceptional annual performance.



1 Amaranth Advisors LLC has discretionary authority over all investment and trading activities of Amaranth LLC.
2 Amaranth Advisors (Canada) ULC is a wholly owned subsidiary of Amaranth Advisors LLC and has discretionary trading authority over certain portfolios of Amaranth LLC and Amaranth Fund LP
3 Each of the three feeders funds shown above also maintains a direct investment in Amaranth Global Equities Master Fund Limited (shown on the chart below).
4 Amaranth Global Equities Master Fund Limited also invests directly in this entity.



1 These entities serve exclusively as feeder funds for Amaranth Global Equities Master Fund Limited.
2 These entities are Amaranth's Multi-Strategy feeder funds and invest in both Amaranth LLC and Amaranth Global Equities Master Fund Limited.
3 Amaranth Advisors LLC has discretionary authority over all investment and trading activities of Amaranth Global Equities Master Fund Limited.
4 Amaranth LLC also invests directly in this entity.

- Amaranth Advisors LLC, a Delaware Limited Liability Company, was organized by Nicholas Maounis to serve as the managing member of the Amaranth funds. Amaranth Partners LLC, Amaranth Capital Partners LLC and Amaranth International Ltd are multi-strategy arbitrage funds dedicated to maximizing returns on a risk adjusted basis. The Funds are part of a "Master Feeder" structure, in which Amaranth LLC has an investment objective identical to that of the Funds.
- Amaranth Global Equities Master Fund Ltd is a Cayman Islands exempted company. Amaranth Global Equities Limited, Amaranth Global Equities LLC, Amaranth International Limited, Amaranth Partners LLC, and Amaranth Capital Partners LLC are the principal investors in the master fund. Amaranth Advisors LLC is the trading advisor for the master fund.
- Amaranth Securities LLC a Delware Limitated Liability Company. The company is a registered broker dealer that was setup to facilitate the stock borrow loan business.

- Nick Maounis is the Managing Member of Amaranth, he had been employed directly by Paloma since 1990 where he was responsible for managing approximately 25 traders and assistants handling a variety of arbitrage portfolios in the US, Japanese, European and Canadian markets. During his tenor at Paloma Nick's group substantially outperformed both the S&P 500 Index and the CSFB Tremont Hedge fund Index. Nick's group amassed a strong track record with low correlation to the S&P 500 Index, returning a profit in 29 out of 33 down months against the S&P 500 during the same period. Prior to Paloma Nick was employed at Angelo, Gordon & Co. (1989 -1990) and LF Rothschild, Unterberg, Towbin (1985-1989), where he was an SVP in charge of all convertible arbitrage trading. Nick graduated from the University of Connecticut in 1985, with a

Bachelor of Science degree. He is registered in his individual capacity as a commodity trading advisor with the CFTC.

Other Key individuals include:

- Charles Winkler serves as Amaranth's Chief Operating Officer. Charles joined the firm in July 2001 and is responsible for managing all non-trading related details of the firm. From 1996 - 2001, Charles was Senior Managing Director and Chief Operating Officer for Citadel Investment Group, L.L.C. Prior to Citadel, Charles was a Partner with the Chicago law firm of Neal Gerber & Eisenberg. His 17 year legal practice focused on providing tax and corporate counseling to investment advisers and private investment firms. Charles graduated from Emory in 1976 with a Bachelor's degree in Business Administration in Accounting and from Northwestern University School of Law, receiving a Juris Doctor in 1979.
- Robert Jones serves as Amaranth's Chief Risk Officer. Prior to Amaranth, Rob was employed at Goldman, Sachs & CO. specifically in the Fischer Black group. His objective was to develop proprietary arbitrage strategies and risk limited portfolio management techniques. Rob also was part of Goldman's equity arbitrage trading unit, where he ran a listed and OTC derivatives trading book. Notable event's in Mr. Jones career include being invited in 1988 by the NYSE Chairman, John Phelan, to assist him in evaluating and addressing operational risks exposed during the 1987 crash. In 1989, Rob joined the Paloma Entities where he managed an international derivative arbitrage portfolio. He met Nick Maounis and they worked together for 4 years managing pools of capital for Paloma Entities. Most recently Rob has led Stradivarius Capital, a firm helping quantitatively oriented hedge funds to identify and manage sources of performance uncertainty.
- Artie DiRocco is the Treasurer and is responsible for counterparty relations and maintaining all financing relationships. Lauralyn Pestritto assists in maintaining counterparty relationships and negotiates trading agreements with counterparties. We maintain regular contact with both individuals and they are our primary contacts. The senior principals (Nick Maounis and Charlie Winkler), as well as Artie DiRocco, are well known to JPMC.
- Initially Paloma had a minority interest in the Investment Manager, and transferred the Paloma Strategic fund to Amaranth Advisors which was renamed Amaranth Fund LP beginning October 1, 2000. As of January 2004, neither Paloma nor any individual employed by Paloma, had any investment in any Amaranth entity.

Amaranth has been working to expand their presence internationally and have opened offices in London and Singapore to compliment their existing Greenwich, Houston and Toronto offices.

Although Nick Maounis had significant prior experiance managing a proprietary trading book at Paloma and other senior investmant Professionals such as Charles Winkler COO and Robert Jones CRO had a reasonable amount of related experience at other reputable hedge funds and Wall street firms, their recent decision to take outsized positions in the energy markets deserves a downgrade of the Organization rating to a 2.

Organization Score Change History

Investment Strategy

Investment Strategy

***Investment Strategy Score** 2

***Clearly defined and executed investment program**	○ 5 ○ 4 ● 3 ○ 2 ○ 1
***Commentary**	Amaranth is a multi strategy fund and has the flexibility to invest in virtually any market with no limitation on position size.
***Diversification of risk positions within portfolio**	○ 5 ○ 4 ○ 3 ○ 2 ● 1
***Commentary**	The Funds do not have strict concentration and stop loss limits. Current capital allocation to energy/nat gas clearly demonstrates style drift and lack of portfolio diversification, greatly reducing any benefits from other uncorrelated

	investment strategies.	
*Clear definition of leverage with usage levels consistent with strategy and peers ②		○ 5 ○ 4 ○ 3 ● 2 ○ 1
*Commentary	Leverage varies depending on investment strategy. In certain strategies leverage employed may be up to 8X, but there are no restrictions as to the amount of leverage they may employ.	

<u>Amaranth Global Equities Master Fund Ltd</u>

- Amaranth Global Equities Master Fund Ltd primarily focusses on both long and short investments globally using fundamental research and proprietary valuation models. The fund concentrates on equity and equity-linked instruments and related options, but the investment objective permits the fund to trade in securities and derivatives of any type. No restrictions are placed on the instruments, strategies, markets, or countries in which the fund may invest.

<u>Amaranth Securities LLC</u>

- Amaranth Securities LLC primary focus to facilitate stock borrow loan business. Amaranth Securities LLC primarily ensures the Amaranth Funds ability to cover short equity positions taken in its convertible arb. book. Their ability to perform this task (and not rely totally on their prime broker) is something that reduces liquidity risk, and therefore sets them apart from their peers. The business is a source of positive cash flow, however it increases the leverage of the institution and may cuase liquidity concerns.

<u>Amaranth LLC</u>

- The principal strategies that Amaranth LLC employs are energy arb, covert arb, merger arb, statistical arb, capital structure arb, and opportunistic equity and distressed / credit arbitrage investments. Any position that is at least 1% of total capital is considered a core position. Nick Maounis in conjunction with his team on a monthly basis determine the capital allocation to each strategy based on market opportunities. The rough breakdown by strategy is as follows:

<u>Energy Arbitrage (56% of capital) Other commodities (6%):</u> Energy arbitrage opportunities can take a number of forms due to the significant amount of available "Energy" products. A generic geographical energy arbitrage can be trading the difference of price in a given commodity either in the same location or in different geographical location. Other arbitrage opportunities include Grade arbitrage which encompasses trading the difference in price of two related crude oil based commodities such as the spread between WTI and Brent Crude. Generally these arbitrage opportunities are created by fundamental news affecting production and inventory. In addition trades may take a view on the perceived price volatility of crude oil and other crude products such as gasoline, jet fuel and heating oil and or the correlation between one another. These views have been expressed through calendar spreads. In addition, deep out-of-the-money call options are purchased as a cheap way to take advantage of price shocks. Brian Hunter (ex-Deutsche Bank) was hired in 2004 and he was the head of Amaranth's energy trading portfolio. His expertise is in trading natural gas. Natural gas, in particular, is an extremely volatile commodity. The 2006 calendar spreads have traded as high as $4 and as low as $0.50. Products traded in the other commodities include precious and base metals. The current amount of leverage employed in Energy book 4.52X, number of positions 6,671. Current amount of leverage employed in Other Commodities book 5.05X, 1,685 positions. The energy and commodities portfolio experienced losses in July, predominately driven by tightening of seasonal spreads in natural gas. During the month there was significant volatility in natural gas prices due in large part to the first ever "draw" from natural gas reserves during a summer month, and the announcement in July ' 06 that a natural gas hedge fund was going to liquidate its portfolio (Mother Rock). The Investment Manager is considering re-calibrating to have a smaller allocation in natural gas in the future, however, they still believe opportunities in natural gas remain attractive and continue to maintain positions where they believe fundamentals are disconnected with current prices . Aside from natural gas, other areas in commodities investments that performed in July were power, crude and copper . The Investment Manager is also building the crude and petroleum business and expects this strategy to be a larger component of their energy portfolio over time . 2006 performance attribution: 78% (energy), 8% (other commodities)

<u>Convertible Bond Arbitrage (2% of total Fund Capital, down from 60% at its peak)</u>: consists of buying a convertible bond and selling short a varying percentage of the underlying common stock that the bond is

convertible into. The portfolio is divided between US, Canada, and International which includes Japan and Europe. There are 4 PMs including Nick running convert arb, 5 credit analysts, and 3 traders. Amaranth analyzes credit in house, and in most cases hedges credit risk where they can (virtually all international bonds asset swapped). Leverage used in the Convertible Bond Arbitrage book 7.78X, 146 positions. As of July, 2006 the performance for the convertible portfolio was positive for the month as both the U.S and Asian exposures generated gains, as a direct result of the increase levels of volatility . 2006 performance attribution: 2%

Merger Arbitrage (Approximately 1% of total Fund Capital): Includes investing in securities of companies involved in prospective mergers, acquisitions, cash tender offers, recapitalizations and other corporate restructurings. Typical trade is long the target of an acquisition and short the buyer. They intend to keep a diversified book of trades. They are willing to take positions in small cap companies. Leverage utilized in the Merger Arbitrage book is 1.26X, 72 positions. The merger arb and stat arb book both generated modest gains in July, 2006. In merger arb, the investment manager saw some select opportunities driven by increase in leveraged buyout and private equity deals . One example, the Investment Manager view the spread in the planned leveraged buyout of HCA, Inc . as very attractive. 2006 performance attribution: 1%

Credit Arbitrage (17% of capital): may be divided into a number of sub strategies such as capital structure arbitrage, event driven arbitrage, and merger arbitrage. Trades may be in the form of buying and selling different classes of securities of the same issuer due to a perceived mispricing between the two. Typical capital structure trade may involve purchasing senior debt of an issuer and selling subordinated debt of the same issuer when the subordinated debt is believed to be overpriced relative to the senior debt. Alternatively, another form by which to exploit perceived mispricing may be buying credit default swaps of the same issuer with different maturities where certain default swap spreads are expected to widen or tighten based on the perceived financial stability of the underlying company. Other variations of "credit" related positions include trading of bank loans, pairs trading, credit default obligations, and credit options. 40% of the credit arbitrage portfolio has a long bias, 40% is in the form of bespoke synthetic CDOs and regular CDOs. Leverage employed in the Credit Arbitrage book 4.20X, 1,217 positions. Spread tightening in the CDO book and a price recovery in select high yield and term loan positions in the European credit portfolio all contributed to positive performance in July, 2006. The Investment Manager believes that we are in the beginning stages of a global repricing of risk in the credit markets which they think should present attractive opportunities in the future . In the meantime the Investment Manager remains extremely cautious on public opportunities given historically tight spread levels which they view as being unsustainable over the longer term . As a result the investment manager remains focused on structured products and private market opportunities, particularly in Asia, where they continue to identify opportunities . 2006 performance attribution: 12%

Volatility / Option Arbitrage (about 7% of capital): involves purchasing or selling an option on an underlying financial instrument and selling or purchasing a varying percentage of the underlying instrument. It is anticipated that a profit will be earned upon a substantial move in the price of the underlying instrument (in the case options are purchased) or upon a relative lack of movement in the price of the underlying instrument (in the case options are sold). In certain cases merely holding a position is anticipated to produce a financing profit. The current position bias for this strategy is to be net long volatility. Primarily looking for cheaply priced volatility and they attempt to managed on a delta neutral basis. Leverage used in the Volatility book 4.53X, 2,178 positions. The volatility book incurred loses in July, 2006 as global index implied correlation continued to increase . Over the last two months the Investment Manager has significantly reduced exposure to this strategy due to an increasingly challenging environment. 2006 performance attribution: - 8%

Long / Short Equity (7% of capital): The Fund has recently carved out the Long / Short equity strategy and created a stand alone fund, the Amaranth Global Equities Master Fund Limited, to warehouse 20% of the equity strategy, the other 80% of the strategy is still booked in Amaranth LLC. The capital allocation of the Amaranth Global Equities Master Fund Limited is divided as follows; 35% healthcare (100% of Amaranth Helix Limited), 35% Technology, 15% Utilities, and 15% in Financials. Going forward each portfolio manager will have a separate fund similar to Helix structure, where each fund will have its own portfolio manager and a their own portfolio of equity positions specific to one industry. The

Long / Short Equity strategy relies both on fundamental and statistical analysis to identify under and over priced equities. Current leverage in Long / Short Equity book is 2.39X, 499 positions. The long/short equities portfolio performed well in July, 2006 as seven out of the right sector portfolios produced gains. 2006 performance attribution: 4%

<u>Statistical Arbitrage (4% of capital):</u> is a relatively new strategy for the Investment Manager and currently only trading in the equity and foreign exchange markets. The statistical arbitrage focus in equity revolves around trading positions on the Russell 2000, average trade size is \$0.5MM to \$1.0MM. The statistical arbitrage focus in foreign exchanges is focused on trading the 11 most liquid currencies and average trade size is \$1.0MM. The interest rate statistical arbitrage model is currently being developed. The statistical arbitrage strategy is based on 7 models which look for anomalies in the price correlation amongst the targeted underlying index or basket of securities. Investment horizon per trade is generally inside of 1 month. The stat arb book is still in its beta testing stages as senior management believes the incubation period for this strategy is approximately 3-5 years. There are approximately 20 programmers who are refining the algorithms and code. Leverage utilized in Stat Arb book is 2.84X, 4,456 positions. Performance for July, 2006 for the stat arb book was favorable and the Investment Manager intends to increase the capital allocation to this book over the next 6-12 months. 2006 performance attribution: 3%

Capital allocation to the different strategies has changed significantly in the last two years . At Amaranth's inception, approximately 60% of the capital was allocated to Convertible Arbitrage versus the current amount of 2%. In the past two years the capital allocation to the energy and other commodities books has increased sharply . Although Amaranth claims to be a credit multi -strategy fund, the annual return relies significantly on the performance of the Energy and the Other Commodities trading books. Over 86% of the year to date performance attribution is generated from these two trading books. Investment strategy rating has been downgraded to a 2 due to the concentration of capital allocated to the Energy and Other Commodities books and Investment strategy style drift .

Investment Strategy Score Change History

Market Risk Management

Market Risk Management

***Market Risk Management Score** 2

***Risk management process corresponds to firm scope**	○ 5 ○ 4 ○ 3 ● 2 ○ 1
***Commentary**	Amaranth has a risk manager for each trading book and that individual sits on the desk with the risk takers. Given recent performance and risk controls around the energy portfolio, it appears that Amaranth's risk managers did not have an understanding of the market risks associated with energy trading or were over-ridden by the principals.
***Developed risk reporting infrastructure**	○ 5 ○ 4 ○ 3 ● 2 ○ 1
***Commentary**	The chief risk officer Rob Jones reviews risk reporting across each strategy daily. The risk management systems and reporting were all created in collaboration with ITO 33, Rob Jones and his team. Risk Manager appears to have disregarded the Funds concentration limits in natural gas or did not comprehend the potential downside risk.
***Clearly defined and enforced trading limits**	○ 5 ○ 4 ○ 3 ○ 2 ● 1
***Commentary**	There are no strict stop loss limits. All risk and position limits are soft limits. Recent performance support the lack of controls at Amaranth.

The Chief Risk Officer is Robert Jones and is regarded as one of the 3 most senior officers at Amaranth. Rob's mandate is to create a more robust risk management system and process. Rob indicated that he is consulting both in house and external individuals to achieve their objectives. There are 12 risk lieutenants in the risk management group under Rob. Roughly all of the

Individuals have an academic background, with advanced degrees in various fields. Typically, most hedge funds have one Risk Officer monitoring the risks of the trading book. However, at Amaranth Rob feels that to ensure traders are adhering to risk guidelines a risk manager is assigned to each trading desk / portfolio group. In addition, Rob feels that by having the risk manager sitting among the traders on the desk, allow the manager to be more in tune with the markets b/c they see the flows and get a better idea of how the market trades. Thus, this means they are better able to understand and manage the risks. Another unique quality of the Chief Risk Officer at Amaranth, Rob has the authority to unwind / close out any position based on its risk profile.

The risk management group has agreements in place with ITO 33, a group which focuses on development of risk management systems. Rob is also actively hiring more risk management professionals.

- Amaranth has developed its own risk management infrastructure. The risk group provides daily position and P&L information, greek sensitivities (delta, gamma, vega, rho), leverage reports, concentrations , premium at risk, and industry exposures.
- Rob Jones on a daily basis receives the following risk reporting:

1. The risk management group produces daily VaR and Stress reports. The Var looks at different confidence levels from 1SD @ 68% to 4SD @ 99.99% over 20 days. Currently the Var has been less than 1% of total capital. The parameters for the stress reports are increasing credit spreads to 50%, volatility contracting 30% for 1 month, 15% for 3 months, 7% for 6 months and 3 % for 12 months, interest rates up 10% or 1.1 * the yield curve and stocks being flat. The shock is a worst case scenario and it would impact 3% of the total equity of the portfolio. However, they daily stress each strategy separately and an overall portfolio stress to consolidate all the positions and effects to certain market events is in the works.
2. Rob also receives a daily report that breaks down all of the long and short positions, with largest concentrations. Further the report also provides detail regarding the top 5 and 10 long and short positions.
3. A real time P&L monitor for portfolios with liquid, exchange traded securities.
4. Liquidity report which presents positions and their volumes per each strategy which the managers use to constrain the size of each strategy.

- Each risk lieutenant, per the product group they are assigned to generates a capital reserve for each individual position. The capital requirement is based on the outcomes of 12 different stress scenarios which Rob Jones came up with.
- The risk lieutenants calculate expected loss based on 10% annualized vol per each individual position.
- There are no formal stop losses or concentration limits.

Risk management rating of 2 granted due to lack of formal stop loss and concentration limits . In addition, given performance of the fund in the first few weeks of September, the senior investment professionals either disregarded the risk reporting or the risk managers did not fully comprehend the risks in the energy portfolio.

Risk Management Score Change History

Liquidity

Liquidity

***Liquidity Score** 2

***Cash needs correspond to liquidity of assets**	○ 5 ○ 4 ○ 3 ○ 2 ● 1
***Commentary**	Amaranth indicates they will maintain a certain amount of risk capital to be used for anticipated margin calls. Risk capital varies depending upon strategy. Cash levels in May'06 were around $3 billion or 30% of capital. That dwindled to around $1 billion in the middle of Sept. '06 due to

	significant drawdowns in natural gas positions. Amaranth clearly misjudged the liquidity in the nat gas market when scaling their positions.
*Diversity and stability of financing sources	○ 5 ○ 4 ● 3 ○ 2 ○ 1
*Commentary	Amaranth has a number of equity prime brokers it can rely on for liquidity. In addition, the Amaranth Funds have ISDAs in place with a number of Wall street banks and broker dealers.
*Clearly defined cash management policy	○ 5 ○ 4 ○ 3 ● 2 ○ 1
*Commentary	No strict guideline as to the amount of unencumbered cash the Funds must maintain.

- Amaranth seeks to maintain 25% on average excess borrowing power from their prime brokers.
- Per investment strategy the risk management group calculates a risk capital amount which is suppose to be available in the event of large market moves.
- Amaranth has built their own stock loan business to mitigate any potential prime broker service disruptions. The entity is Amaranth Securities LLC a registered broker-dealer incorporated in Delaware. It is ready to go live once it receives NASD approval (which is imminent).
- Amaranth uses 6 different prime brokers for domestic and international securities and they are Goldman Sachs, Morgan Stanley, Citigroup, Lehman Bros., Deutsche Bank, and Merrill Lynch.
- The Prime Brokerage agreements include lockups from 30 - 90 days for financing and margin levels. These lock-ups are generally subject to ISDA like covenants including a "Keyman Clause" and NAV triggers (of 30% a quarter).

Liquidity rating of 1, given the heavy losses incurred by the energy book in the first two weeks of September 2006, which created serious liquidity issues for the Fund. The Investment Manager had previously indicated that they maintain sufficient liquidity for such market moves, however in reality it was not the case. In order to prevent any further losses and mitigate the risk of potentially defaulting on margin calls with their liquidity providers, the energy portfolio was sold to JPM at a significant discount that lead to further losses. In addition, to generate additional liquidity the Fund has sold portions or all of the investments in other trading books.

Liquidity Management Score Change History

Capital

Capital

***Capital Score** 2

*Relative size and stability of capital base (for each fund and firm overall)	○ 5 ○ 4 ○ 3 ● 2 ○ 1
*Commentary	Significant amount of investors are comprised of FOF investors. Potential for large investor redemptions given recent performance.
*Redemption features correspond to asset liquidity	○ 5 ○ 4 ● 3 ○ 2 ○ 1
*Commentary	After initial lock up, quarterly liquidity should allow enough time for the Investment Manager if necessary to liquidate positions to satisfy investor redemptions.
*Quality and diversity of equity investors	○ 5 ○ 4 ○ 3 ○ 2 ● 1
*Commentary	Investor concentration risk associated with large number of FOF investors.

Amaranth LLC Net Assets as of 08/2006: $7,850.0MM, 09/21/06: $4,317.5MM Amarete Master Ltd is a wholly-owned sub and fully guaranteed by Amaranth LLC.
Amaranth Ptnrs LLC Net Assets as of 08/2006: $1451.0MM, 09/21/2006: $798.05MM
Amaranth Global Equities Master Fd Ltd Net Assets as of 8/2006: $310.0MM, 09/21/2006: $170.5MM

Amaranth Secs LLC Net Assets as of 8/2006: $57.0MM, 09/21/2006: $31.35MM

- Amaranth LLC commenced operations with approximately $200MM in capital, the bulk of which was provided by Paloma entities. A large portion of the capital (approx. 60%) comes from Fund of Funds, about 7% is from insurance companies, 6% from retirement and benefit programs, 6% from high net worth individuals, 5% from financial institutions, 2% from endowments and 3% is insider capital (which includes deferred compensation). The insider capital does not get charged management or performance fees.
- The largest investor amounts to 8% of total capital.
- 70% of all investors have been with the fund for longer than 1 year.
- All capital investments made by Paloma entities and individuals who are affiliated to Paloma has been returned.
- There are three ways out of the Fund via withdrawals:

1. Annual liquidity, 13 month initial lock up w/ 90 days written notice
2. After the initial 13 month lock up, quarterly liquidity, January, April, July and October w/ 45 days notice and a 2.5% fee.
3. Annual redemption of profits only w/ 45 days written notice.

* There is a 7.5% gate which counts against all redemptions made during the course of the year.
* Potential largest redemption would be 15% of nav if every qualified investor provided notice to redeem.
* The fund manager can suspend redemptions in its sole discretion if market conditions warrant.

- Beginning in 2/05, new investors were subject to a 2 year lock-up on capital.

Capital rating of 2 given the significant decrease in capital under management in the past two weeks.

Capital Score Change History

Performance

Performance

***Performance Score** 1

***Performance relative to peers**		○ 5 ○ 4 ○ 3 ○ 2 ● 1
***Commentary**	Performance relative to peers over the last couple of years has been very good. However Amaranth has indicated in the first two weeks of Sept 06', ytd performance may be down over 60%.	
***Appropriateness of return volatility relative to strategy**		○ 5 ○ 4 ○ 3 ○ 2 ● 1
***Commentary**	Fund has incurred significant losses due to their concentration in energy contracts.	
***Performance during crisis periods**		○ 5 ○ 4 ○ 3 ○ 2 ● 1
***Commentary**	Performance in first two weeks of Sept 06' lead to a 55% ytd decrease in capital.	

Performance statistics:

March	$7,283,611	($37,559)	$7,246,052	$211,059	($86,947)	$7,370,164	2.91%	14.26%
April	$7,370,164	($10,053)	$7,360,111	$1,061,143	($134,174)	$8,287,080	14.42%	30.73%
May	$8,287,080	$64,524	$8,351,604	($974,202)	$0	$7,377,402	-11.66%	15.48%
June	$7,377,402	$379,400	$7,756,802	$548,434	($15,054)	$8,290,182	7.07%	23.65%
July	$8,290,182	$48,997	$8,339,179	($44,258)	($444,873)	$7,850,048	-0.53%	22.99%
August	$7,850,048	$33,373	$7,883,421	$549,936	($38,834)	$8,394,523	6.98%	31.57%

Dec 2005 year end performance: 21.21%.

Date	Mtd	Ytd
Jan-03	3.95%	3.95%
Feb-03	3.00%	7.07%
Mar-03	0.17%	7.25%
Apr-03	1.33%	8.68%
May-03	2.33%	11.21%
Jun-03	0.60%	11.88%
Jul-03	-0.58%	11.23%
Aug-03	0.93%	12.26%
Sep-03	1.41%	13.84%
Oct-03	2.92%	17.17%
Nov-03	1.70%	19.16%
Dec-03	1.67%	21.15%

Date	Mtd	Ytd
Jan-04	1.98%	1.98%
Feb-04	0.78%	2.78%
Mar-04	0.50%	3.29%
Apr-04	-0.59%	2.68%
May-04	-0.40%	2.27%
Jun-04	-0.12%	2.15%
Jul-04	0.96%	3.13%
Aug-04	0.31%	3.45%
Sep-04	1.39%	4.88%
Oct-04	1.26%	8.21%
Nov-04	2.29%	8.64%
Dec-04	1.65%	10.43%

Date	Mtd	Ytd
Jan-05	-0.27%	-0.27%
Feb-05	0.17%	-0.10%
Mar-05	0.90%	0.80%
Apr-05	-2.62%	-1.84%
May-05	-2.09%	-3.89%
Jun-05	3.03%	-0.98%
Jul-05	2.39%	1.38%
Aug-05	5.19%	6.65%
Sep-05	7.48%	14.63%
Oct-05	-0.90%	13.60%
Nov-05	3.46%	17.53%
Dec-05	3.13%	21.21%

Date	Mtd	Ytd
Jan-06	6.45%	6.45%
Feb-06	4.30%	11.03%
Mar-06	2.91%	14.28%
Apr-06	14.42%	30.73%
May-06	-11.66%	15.48%
Jun-06	7.07%	23.65%
Jul-06	-0.53%	22.99%
Aug-06	6.98%	31.57%

[illegible]

[illegible]

Month	Beginning NAV	First Day Contributions/ Withdrawals	Adjusted Beginning NAV	Net Performance	Month-end Withdrawals/ Adjustments	Ending NAV	Monthly Rate of Return	YTD Rate of Return
January	$1,292,202	$37,355	$1,329,557	$69,503	($25,566)	$1,373,494	5.23%	5.23%
February	$1,373,494	$1,064	$1,374,558	$47,955	($35,804)	$1,386,709	3.49%	8.90%
March	$1,386,709	$34	$1,386,743	$34,582	($21,729)	$1,399,596	2.49%	11.61%
April	$1,399,596	$25,695	$1,425,291	$170,732	($29,051)	$1,566,972	11.98%	24.98%
May	$1,566,972	$89,640	$1,656,612	($158,663)	($35,962)	$1,461,987	-9.58%	13.01%
June	$1,461,987	$43,733	$1,505,720	$87,126	($14,812)	$1,578,034	5.79%	19.55%
July	$1,578,034	$2,446	$1,580,480	($7,124)	($122,206)	$1,451,150	-0.45%	19.01%
August	$1,451,150	$5,404	$1,456,554	$82,638	($17,249)	$1,521,943	5.67%	25.77%

Date	Mtd	Ytd
Jan-05	-0.07%	-0.07%
Feb-05	0.17%	0.10%
Mar-05	0.59%	0.69%
Apr-05	-2.18%	-1.50%
May-05	-1.76%	-3.26%
Jun-05	2.91%	-0.44%
Jul-05	1.91%	1.46%
Aug-05	4.10%	5.62%
Sep-05	5.84%	11.79%
Oct-05	-0.59%	11.13%
Nov-05	2.80%	14.24%
Dec-05	4.09%	18.91%

Date	Mtd	Ytd
Jan-06	5.23%	5.23%
Feb-06	3.49%	8.90%
Mar-06	2.49%	11.61%
Apr-06	11.98%	24.98%
May-06	-9.58%	13.01%
Jun-06	5.79%	19.55%
Jul-06	-0.45%	19.01%
Aug-06	5.67%	25.77%

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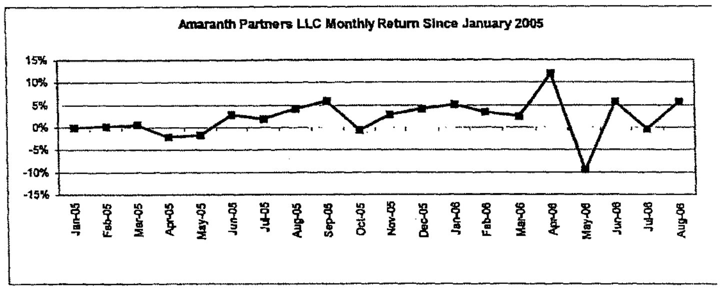

For both Amaranth LLC and Amaranth Partners LLC, the majority of the positive performance for 2005 came from profits in the energy book, approximately 98% of the funds, ytd performance was related to energy trades. Energy trading profits/losses are derived primarily from natural gas calendar sreads .

Through Sept 2006, both Funds are down approximately 60% ytd because of energy trading. Approximately 40% of the Funds capital is committed to natural gas trading . Brian Hunter had positioned the book net long going into the U .S hurricane season. The energy book apparently has an outsized long position in the October 06 ng contract and an outsized long position in the Oct 06-Dec06 and March07-April07 spreads. These positions have incurred heavy losses . Much of the losses have come in the first two weeks of September as prompt natural gas has steadily declined since the middle of August from $8 to $4.8 current due to a so far benign hurricane season, cooler weather, and an increase in inventories.

AMARANTH GLOBAL EQUITIES MASTER FUND LIMITED

Performance and Net Asset Value Report – August 31, 2006 YTD [1]

Month	Beginning NAV	First Day Contributions/ Withdrawals	Adjusted Beginning NAV	Net Performance	Month-end Withdrawals	Ending NAV	Monthly Rate of Return	YTD Rate of Return
January	$427,612	$850	$428,462	$16,753	$0	$445,215	3.91%	3.91%
February	$445,215	($69)	$445,146	$5,598	$0	$450,744	1.26%	5.22%
March	$450,744	($2)	$450,742	$18,125	($771)	$468,096	4.02%	9.45%
April	$468,096	$2,996	$471,092	$9,602	($9,664)	$471,030	2.04%	11.68%
May	$471,030	$914	$471,944	($1,935)	($12,174)	$457,835	-0.41%	11.22%
June	$457,835	($149,426)	$308,409	($3,028)	($687)	$304,694	-0.98%	10.13%
July	$304,694	$312	$305,006	$5,007	$0	$310,013	1.64%	11.94%
August	$310,013	$0	$310,013	$2,111	($398)	$311,726	0.68%	12.70%

Date	Mtd	Ytd
Jan-06	3.91%	3.91%
Feb-06	1.26%	5.22%
Mar-06	4.02%	9.45%
Apr-06	2.04%	11.68%
May-06	-0.41%	11.22%
Jun-06	-0.98%	10.13%
Jul-06	1.64%	11.94%
Aug-06	0.68%	12.70%

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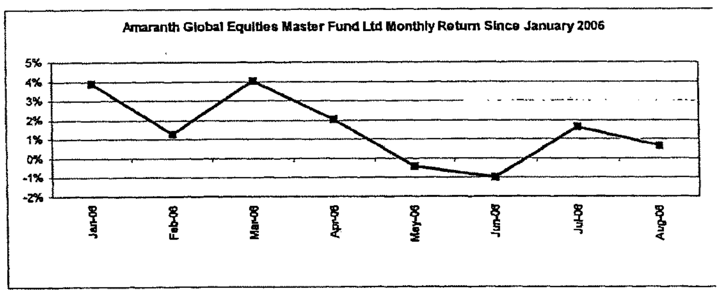

Performance rating 1 given the significant volatility and recent large losses .

Performance Score Change History

Operational Risk Management

Operational Risk Management

***Operational Risk Management** 3

***Depth and efficiency of back office given strategy**	○ 5 ○ 4 ● 3 ○ 2 ○ 1
***Commentary**	The trade support and back office at Amaranth is quite extensive, over 200 individuals dedicated to operations.
***Responsiveness to margin calls and confirms**	○ 5 ○ 4 ● 3 ○ 2 ○ 1
***Commentary**	Historically the client has meet margin calls with limited disputes. However we have had a problem with the client countersigning confirms within a reasonable amount of time. On one occasion we halted trading with Amaranth due to the number of outstanding unsigned confirms.
***Caliber of portfolio pricing procedures**	○ 5 ○ 4 ● 3 ○ 2 ○ 1
***Commentary**	Majority of the energy positions were exchange traded and therefore priced daily.
***Quality of service providers**	○ 5 ○ 4 ● 3 ○ 2 ○ 1
***Commentary**	Auditors, PB, legal counsel and liquidity providers are reputable firms.

- There are a total of approximately 200 people in the operations group at Amaranth, The operations group encompass information technology, controllers, accounting, legal counsel, client relations, confirmations, and trade support.
- Amaranth performs their own back office and trade support in house.

Employee Compensation:
Amaranth senior mgmt has instituted a new form of annual employee compensation and deferred compensation. Annual compensation is determined by the degree of the individuals job function and how it contributes to generating income or if it is income neutral. The annual Compensation is based on the weightings in three different categories; 1)Firm wide performance 2)Divsion 3)Discretion. A Senior Trader may have the following weightings 1) Firm wide performance 30%, 2) Division 50% 3) Discretion 20%. According to these weightings the Senior Trader benefits from the overall Fund performance but the bulk of his / her compensation is based on the performance of his / her trading desk or division and less centered around satisfying the general job requirements i.e managerial and operations responsibilities. A junior person may have the following compensation weighting profile; 1) Firm wide performance 10%, 2) Division 10% 3) Discretion 80%. The deferred compensation is based on the firm's philosophy to maximize returns on a risk adjusted basis with capital preservation and risk management a priority. The deferred compensation payout is also spread over the course of three years. With the deferred compensation portfolio managers and traders are less likely to take unnecessary risks and attempt to "hit home runs with every swing".

Investment Terms:
- $ 5 MM minimum investment (subscriptions accepted monthly)
- 1.5% mgmt fee; 20% Incentive Fee (additionally reimbursement of certain expenses resulting from the operation of the Funds and the Master Fund.
- High-Water Mark is employed.

Internal/Operational Score Change History

Client Communication/Transparency

Client Communication/ Transparency

*Client communications/Transparency ② 3

*Extent of information provided②	○ 5 ○ 4 ○ 3 ● 2 ○ 1
*Commentary	Adequate disclosure provided. In addition, we rely on periodic meetings and conference calls for more detailed disclosure of how the trading books are positioned. However, in hindsight, we were mislead by individuals at the Fund when we raised concerns about the concentration to natual gas trading. Senior investment professionals informed us that the capital allocation to energy would be decreased immediately and instead they increased it significantly in June '06 to 56% of capital.
*Frequency and timeliness of information provided②	○ 5 ○ 4 ● 3 ○ 2 ○ 1
*Commentary	Historically, general info regarding the funds navs and performance are provided within the time frame set forth in the ISDA.
*Access to key decision makers②	○ 5 ○ 4 ● 3 ○ 2 ○ 1
*Commentary	Reasonable access to Amaranth's senior risk managers and risk takers.

- JPM hedge fund credit receives some disclosure, on a monthly basis, of capital by entity, capital allocation by strategy; leverage by strategy, total number of trading positions by strategy and overall performance.

Commentary released to investors 9/20/06:

Dear Investor:
As communicated to you earlier today, the Amaranth Multi-Strategy Funds concluded a transaction to transfer our energy portfolio to a third party. Having achieved this important step, we wanted to share additional information on the status of the Multi-Strategy Funds.

During the week of September 11, 2006, we experienced significant mark-to-market losses in our natural gas derivatives portfolio. The resulting margin calls on these positions created serious constraints on the Funds' liquidity. In order to prevent further mark-to-market losses on the natural gas positions, and to reduce the risk of defaulting on margin calls, we transferred these positions to a third party at a price that resulted in additional significant losses. To generate the liquidity required to avoid defaults under our counterparty documents, we also sold a significant number of positions in the Funds' other portfolios.

These actions have eliminated the prospect of further significant mark-to-market losses in the natural gas portfolio and helped us avoid the termination of our credit facilities and the risk of a consequent forced liquidation by our creditors. We have continued to meet all margin calls. Our major financial counterparties have confirmed that they are now comfortable with our portfolio and overall liquidity position. We expect that, once all of the trades associated with these actions have been settled, our leverage will be approximately 1.3:1. We are now focused on communicating with our investors and defining the future of our business.

After taking into consideration the mark-to-market losses on the natural gas portfolio, the significant cost of the third-party transaction, and, to a much lesser degree, realized losses on other positions that were sold in order to generate liquidity, we estimate that, as of September 19, the Net Asset Value of the Multi-Strategy Funds had declined approximately 65% month-to-date and approximately 55% year-to-date.

Monday, September 18, was the deadline for submitting October 31 quarterly redemption requests. We are evaluating all redemption requests received to date and will report back to you when we have completed our analysis.

We are planning to hold a conference call for investors this Friday, September 22. Details for the call will follow. Next week, we intend to begin scheduling one-on-one meetings with investors. Amaranth is determined to earn back its investors' trust, and one step towards that end is to share as much information as we reasonably can. We assure you that we are eager to do so.

Nick Maounis

Client Communication Score Change History

Exposure Management Strategy

Exposure Mgt Strategy
In light of the significant drawdown in capital due to related trading losses in Amaranth's energy portfolio, our risk will be reduced accordingly and all trades, other than unwinds/offsetting trades, will be subject to prior credit approval.

Other Comments

Other Comments and/or Attachments:
Memo from Amaranth describing new feeder funds that become effective Feb 1, 2006 and 25-month investor lock-up on new subscriptions starting Feb 1, 2006.

ALLC 2006 Distribution Cover Memc

Rating History
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Document Approval

First Approval:	Redacted by the Permanent Subcommittee on Investigations	09/21/2006 10:52:13 AM
Second Approval: Approved		12/22/2006 02:56:18 PM

Author:	**Last Edit:**
Redacted by the Permanent Subcommittee on Investigations 09/15/2000 10:51:20 AM	Redacted by the Permanent Subcommittee on Investigations 2/22/2006 02:56:29 PM

CP Leveraged Funds Due Diligence

Total Score -----> 17

[redacted]

Redacted by the Permanent Subcommittee on Investigations

[redacted]

Please Note:

*Mandatory fields 5 -> Outstanding 1-> Poor

Comment should not be more than 500 characters

Summary

Strengths:

- Experienced trading team with good track record under Paloma.
- Adequate communication with JPMorgan hedge fund credit.

Weakness:

- Style drift, Amaranth originally launched in 2000 with a multi-strat focus. In 2005/6 over 80% of profit was attributed to investments in energy markets.
- Concentration in the energy markets, over 40% of capital allocated to investments in financial energy contracts.
- Volatility in the energy markets.
- High percentage (60%) of hot money investors (fund of funds) albeit mitigated by more restrictive redemption terms.
- Estimated performance in first two weeks of September 2006 may lead to capital under management to be down by -55% ytd (65% in the month of Sept).
- Potential investor redemptions due large losses in energy trades.

Risk Rating Summary

Fund Name*	Rating*	Rationale*
AMARANTH LLC	6+	Over 5 years of operating performance. Downgrading the rating to 6+ given the style drift toward concentration in energy

Permanent Subcommittee on Investigations
EXHIBIT #12d

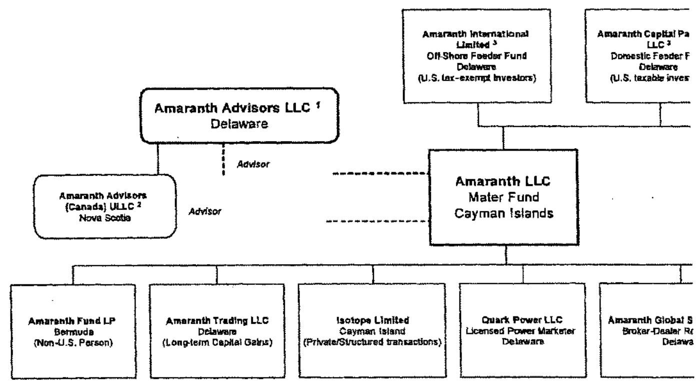
		markets and huge losses incurred.
AMARANTH SECS LLC	6+	Sub of Amaranth Partners LLC. Little to no exposure to the stock borrow loan arm of Amaranth. However downgrading the rating to 6+ given the Investment Manager's lack of risk controls and poor judgement in regards to the energy trading book.
AMARETE MASTER LTD	6+	Entity is fully guaranteed by Amaranth LLC. However downgrading the rating to 6+ given the Investment Manager's lack of risk controls and poor judgement in regards to the energy trading book.
AMARANTH ADVISORS LLC	6+	Over 5 years of operating performance. Downgrading the rating to 6+ given the style drift concentration in energy markets and huge losses incurred.
AMARANTH PARTS LLC	6+	Over 5 years of operating performance. Downgrading the rating to 6+ given the style drift concentration in energy markets and huge losses incurred.
AMARANTH GBL EQ MTR FD LTD	6+	Little to no exposure to this entity. However downgrading the rating to 6+ given the Investment Manager's lack of risk controls and poor judgement in regards to the energy trading book.

Organization

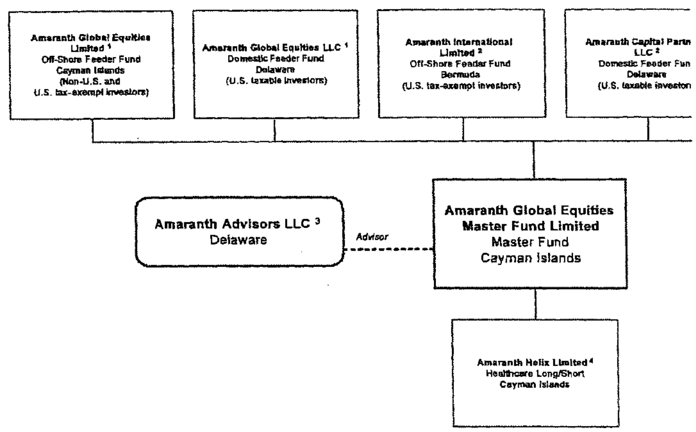
Organization

***Organization Score** 2 Change Score

***Reputation and track record of Principals**	○ 5 ○ 4 ○ 3 ● 2 ○ 1
***Commentary**	Nick Maounis has significant prior experience managing a convertible arbitrage trading book for Paloma before launching Amaranth. Amaranth began with approximately $200.0MM in total capital under management in 2000 and peaked in 2006 to over $9.5bn. However due to recent heavy trading losses in the energy book, capital under management now down by 55% ytd.
***Lack of Key Man risk**	○ 5 ○ 4 ○ 3 ● 2 ○ 1
***Commentary**	There are a number of individuals who have authority to take on risk. Currently, Brian Hunter (NG Trader) has the largest risk capital allocation. Approximately 40% of the firm's capital is currently dedicated to energy positions. Certain degree of keyman risk given performance for 2005 and current 2006 relies heavily on performance of Brian Hunter.
***"Institutionalization" of the firm**	○ 5 ○ 4 ○ 3 ● 2 ○ 1
***Commentary**	Majority of senior professionals at the firm are seasoned and have significant prior experience at Wall street firms or other reputable hedge funds. Until recently the firm had over 5 years of operating history with exceptional annual performance.



1 Amaranth Advisors LLC has discretionary authority over all investment and trading activities of Amaranth LLC.
2 Amaranth Advisors (Canada) ULC is a wholly owned subsidiary of Amaranth Advisors LLC and has discretionary trading authority over certain portfolios of Amaranth LLC and Amaranth Fund LP
3 Each of the three feeders funds shown above also maintains a direct investment in Amaranth Global Equities Master Fund Limited (shown on the chart below).
4 Amaranth Global Equities Master Fund Limited also invests directly in this entity.



1 These entities serve exclusively as feeder funds for Amaranth Global Equities Master Fund Limited.
2 These entities are Amaranth's Multi-Strategy feeder funds and invest in both Amaranth LLC and Amaranth Global Equities Master Fund Limited.
3 Amaranth Advisors LLC has discretionary authority over all investment and trading activities of Amaranth Global Equities Master Fund Limited.
4 Amaranth LLC also invests directly in this entity.

- **Amaranth Advisors LLC,** a Delaware Limited Liability Company, was organized by Nicholas Maounis to serve as the managing member of the Amaranth funds. **Amaranth Partners LLC, Amaranth Capital Partners LLC and Amaranth International Ltd** are multi-strategy arbitrage funds dedicated to maximizing returns on a risk adjusted basis. The Funds are part of a "Master Feeder" structure, in which **Amaranth LLC** has an investment objective identical to that of the Funds.
- **Amaranth Global Equities Master Fund Ltd** is a Cayman Islands exempted company. Amaranth Global Equities Limited, Amaranth Global Equities LLC, Amaranth International Limited, Amaranth Partners LLC, and Amaranth Capital Partners LLC are the principal investors in the master fund. Amaranth Advisors LLC is the trading advisor for the master fund.
- **Amaranth Securities LLC** a Delware Limitated Liability Company. The company is a registered broker dealer that was setup to facilitate the stock borrow loan business.

- Nick Maounis is the Managing Member of Amaranth, he had been employed directly by Paloma since 1990 where he was responsible for managing approximately 25 traders and assistants handling a variety of arbitrage portfolios in the US, Japanese, European and Canadian markets. During his tenor at Paloma Nick's group substantially outperformed both the S&P 500 Index and the CSFB Tremont Hedge fund Index. Nick's group amassed a strong track record with low correlation to the S&P 500 Index, returning a profit in 29 out of 33 down months against the S&P 500 during the same period. Prior to Paloma Nick was employed at Angelo, Gordon & Co. (1989 -1990) and LF

Rothschild, Unterberg, Towbin (1985-1989), where he was an SVP in charge of all convertible arbitrage trading. Nick graduated from Uconn in 1985, with a Bachelor of Science degree. He is registered in his individual capacity as a commodity trading advisor with the CFTC.

Other Key individuals include:

- Charles Winkler serves as Amaranth's Chief Operating Officer. Charles joined the firm in July 2001 and is responsible for managing all non-trading related details of the firm. From 1996 - 2001, Charles was Senior Managing Director and Chief Operating Officer for Citadel Investment Group, L.L.C. Prior to Citadel, Charles was a Partner with the Chicago law firm of Neal Gerber & Eisenberg. His 17 year legal practice focused on providing tax and corporate counseling to investment advisers and private investment firms. Charles graduated from Emory in 1976 with a Bachelor's degree in Business Administration in Accounting and from Northwestern University School of Law, receiving a Juris Doctor in 1979.
- Robert Jones serves as Amaranth's Chief Risk Officer. Prior to Amaranth, Rob was employed at Goldman, Sachs & CO. specifically in the Fischer Black group. His objective was to develop proprietary arbitrage strategies and risk limited portfolio management techniques. Rob also was part of Goldman's equity arbitrage trading unit, where he ran a listed and OTC derivatives trading book. Notable event's in Mr. Jones career include being invited in 1988 by the NYSE Chairman, John Phelan, to assist him in evaluating and addressing operational risks exposed during the 1987 crash. In 1989, Rob joined the Paloma Entities where he managed an international derivative arbitrage portfolio. He met Nick Maounis and they worked together for 4 years managing pools of capital for Paloma Entities. Most recently Rob has led Stradivarius Capital, a firm helping quantitatively oriented hedge funds to identify and manage sources of performance uncertainty.
- Artie DiRocco is the Treasurer and is responsible for counterparty relations and maintaining all financing relationships. Lauralyn Pestritto assists in maintaining counterparty relationships and negotiates trading agreements with counterparties. We maintain regular contact with both individuals and they are our primary contacts. The senior principals (Nick Maounis and Charlie Winkler), as well as Artie DiRocco, are well known to John Hogan.
- Initially Paloma had a minority interest in the Investment Manager, and transferred the Paloma Strategic fund to Amaranth Advisors which was renamed Amaranth Fund LP beginning October 1, 2000. As of January 2004, neither Paloma nor any individual employed by Paloma, had any investment in any Amaranth entity.

Amaranth has been working to expand their presence internationally and have opened offices in London and Singapore to compliment their existing Greenwich, Houston and Toronto offices.

Although Nick Maounis had significant prior experience managing a proprietary trading book at Paloma and other senior Investment Professionals such as Charles Winkler COO and Robert Jones CRO had a reasonable amount of related experience at other reputable hedge funds and Wall street firms their recent decision to take outsized positions in the energy markets deserves a org rating of 2.

Organization Score Change History

Investment Strategy

Investment Strategy

***Investment Strategy Score**	2	Change Score
***Clearly defined and executed investment program**	○ 5 ○ 4 ● 3 ○ 2 ○ 1	
***Commentary**	Amaranth is a multi strategy fund and has the flexibility to invest in virtually any market with no limitation on position size.	

*Diversification of risk positions within portfolio		○ 5 ○ 4 ○ 3 ○ 2 ● 1
*Commentary	The Funds do not have strict concentration and stop loss limits. Current capital allocation to energy/nat gas clearly demonstrates style drift and lack of portfolio diversification, greatly reducing any benefits from other uncorrelated investment strategies.	
*Clear definition of leverage with usage levels consistent with strategy and peers		○ 5 ○ 4 ○ 3 ● 2 ○ 1
*Commentary	Leverage varies depending on investment strategy. In certain strategies leverage employed may be up to 8X, but there are no restrictions as to the amount of leverage they may employ.	

<u>Amaranth Global Equities Master Fund Ltd</u>

- Amaranth Global Equities Master Fund Ltd primarily focusses on both long and short investments globally using fundamental research and proprietary valuation models. The fund concentrates on equity and equity-linked instruments and related options, but the investment objective permits the fund to trade in securities and derivatives of any type. No restrictions are placed on the instruments, strategies, markets, or countries in which the fund may invest

<u>Amaranth Securities LLC</u>

- Amaranth Securities LLC primary focus to facilitate stock borrow loan business. Amaranth Securities LLC primarily ensures the Amaranth Funds ability to cover short equity positions taken in its convertible arb. book. Their ability to perform this task (and not rely totally on their prime broker) is something that reduces liquidity risk, and therefore sets them apart from their peers. The business is a source of positive cash flow, however it increases the leverage of the institution and may cuase liquidity concerns.

<u>Amaranth LLC</u>

- The principal strategies that Amaranth LLC employs are energy arb, covert arb, merger arb, statistical arb, capital structure arb, and opportunistic equity and distressed / credit arbitrage investments. Any position that is at least 1% of total capital is considered a core position. Nick Maounis in conjunction with his team on a monthly basis determine the capital allocation to each strategy based on market opportunities. The rough breakdown by strategy is as follows:

<u>Energy Arbitrage (56% of capital) Other commodities (6%):</u> Energy arbitrage opportunities can take a number of forms due to the significant amount of available "Energy" products. A generic geographical energy arbitrage can be trading the difference of price in a given commodity either in the same location or in different geographical location. Other arbitrage opportunities include Grade arbitrage which encompasses trading the difference in price of two related crude oil based commodities such as the spread between WTI and Brent Crude. Generally these arbitrage opportunities are created by fundamental news affecting production and inventory. In addition trades may take a view on the perceived price volatility of crude oil and other crude products such as gasoline, jet fuel and heating oil and or the correlation between one another. These views have been expressed through calendar spreads. In addition, deep out-of-the-money call options are purchased as a cheap way to take advantage of price shocks. Brian Hunter (ex-Deutsche Bank) was hired in 2004 and he is currently the head of Amaranth's energy trading portfolio. His expertise is in trading natural gas. Natural gas, in particular, is an extremely voladle commodity. The 2006 calendar spreads have traded as high as $4 and as low as $0.50. Products traded in the other commodities include precious and base metals. **The current amount of leverage employed in Energy book 4.52X, number of positions 6,671. Current amount of leverage employed in Other Commodities book 5.05X, 1,685 positions. The energy and commodities portfolio experienced losses in July, predominately driven by tightening of seasonal spreads in natural gas. During the month there was significant volatility in natural gas prices due in large part to the first ever "draw" from natural gas reserves during a summer month, and the announcement that a natural gas hedge fund was going to liquidate its portfolio (Mother Rock). The Investment Manager is considering re-calibrating to have a smaller allocation in natural gas in the future, however, they still believe opportunities in natural gas remain attractive and continue to**

maintain positions where they believe fundamentals are disconnected with current prices. Aside from natural gas, other areas in commodities investments that performed in July were power, crude and copper. The Investment Manager is also building the crude and petroleum business and expects this strategy to be a larger component of their energy portfolio over time. 2006 performance attribution: 78% (energy), 8% (other commodities)

Convertible Bond Arbitrage (2% of total Fund Capital, down from 60% at its peak): consists of buying a convertible bond and selling short a varying percentage of the underlying common stock that the bond is convertible into. The portfolio is divided between US, Canada, and International which includes Japan and Europe. There are 4 PMs including Nick running convert arb, 5 credit analysts, and 3 traders. Amaranth analyzes credit in house, and in most cases hedges credit risk where they can (virtually all international bonds asset swapped). **Leverage used in the Convertible Bond Arbitrage book 7.78X, 146 positions. As of July, 2006 the performance for the convertible portfolio was positive for the month as both the U.S and Asian exposures generated gains, as a direct result of the increase levels of volatility. 2006 performance attribution: 2%**

Merger Arbitrage (Approximately 1% of total Fund Capital): includes investing in securities of companies involved in prospective mergers, acquisitions, cash tender offers, recapitalizations and other corporate restructurings. Typical trade is long the target of an acquisition and short the buyer. They intend to keep a diversified book of trades. They are willing to take positions in small cap companies. **Leverage utilized in the Merger Arbitrage book is 1.26X, 72 positions. The merger arb and stat arb book both generated modest gains in July, 2006. In merger arb, the Investment manager saw some select opportunities driven by increase in leveraged buyout and private equity deals. One example, the Investment Manager view the spread in the planned leveraged buyout of HCA, Inc. as very attractive. 2006 performance attribution: 1%**

Credit Arbitrage (17% of capital): may be divided into a number of sub strategies such as capital structure arbitrage, event driven arbitrage, and merger arbitrage. Trades may be in the form of buying and selling different classes of securities of the same issuer due to a perceived mispricing between the two. Typical capital structure trade may involve purchasing senior debt of an issuer and selling subordinated debt of the same issuer when the subordinated debt is believed to be overpriced relative to the senior debt. Alternatively, another form by which to exploit perceived mispricing may be buying credit default swaps of the same issuer with different maturities where certain default swap spreads are expected to widen or tighten based on the perceived financial stability of the underlying company. Other variations of "credit" related positions include trading of bank loans, pairs trading, credit default obligations, and credit options. 40% of the credit arbitrage portfolio has a long bias, 40% is in the form of bespoke synthetic CDOs and regular CDOs. **Leverage employed in the Credit Arbitrage book 4.20X, 1,217 positions. Spread tightening in the CDO book and a price recovery in select high yield and term loan positions in the European credit portfolio all contributed to positive performance in July, 2006. The Investment Manager believes that we are in the beginning stages of a global repricing of risk in the credit markets which they think should present attractive opportunities in the future. In the meantime the Investment Manager remains extremely cautious on public opportunities given historically tight spread levels which they view as being unsustainable over the longer term. As a result the Investment manager remains focused on structured products and private market opportunities, particularly in Asia, where they continue to identify opportunities. 2006 performance attribution: 12%**

Volatility / Option Arbitrage (about 7% of capital): involves purchasing or selling an option on an underlying financial instrument and selling or purchasing a varying percentage of the underlying instrument. It is anticipated that a profit will be earned upon a substantial move in the price of the underlying instrument (in the case options are purchased) or upon a relative lack of movement in the price of the underlying instrument (in the case options are sold). In certain cases merely holding a position is anticipated to produce a financing profit. The current position bias for this strategy is to be net long volatility. Primarily looking for cheaply priced volatility and they attempt to managed on a delta neutral basis. **Leverage used in the Volatility book 4.53X, 2,178 positions. The volatility book incurred loses in July, 2006 as global index implied correlation continued to increase. Over the last two months the Investment Manager has significantly reduced exposure to this strategy due to an increasingly challenging environment. 2006 performance attribution: - 8%**

Long / Short Equity (7% of capital): The Fund has recently carved out the Long / Short equity strategy and created a stand alone fund, the Amaranth Global Equities Master Fund Limited, to warehouse 20% of the equity strategy, the other 80% of the strategy is still booked in Amaranth LLC. The capital allocation of the Amaranth Global Equities Master Fund Limited is divided as follows; 35% healthcare (100% of Amaranth Helix Limited), 35% Technology, 15% Utilities, and 15% in Financials. Going forward each portfolio manager will have a separate fund similar to Helix structure, where each fund will have its own portfolio manager and a their own portfolio of equity positions specific to one industry. The Long / Short Equity strategy relies both on fundamental and statistical analysis to identify under and over priced equities. **Current leverage in Long / Short Equity book is 2.39X, 499 positions. The long/short equities portfolio performed well in July, 2006 as seven out of the right sector portfolios produced gains. 2006 performance attribution: 4%**

Statistical Arbitrage (4% of capital): is a relatively new strategy for the Investment Manager and currently only trading in the equity and foreign exchange markets. The statistical arbitrage focus in equity revolves around trading positions on the Russell 2000, average trade size is $0.5MM to $1.0MM. The statistical arbitrage focus in foreign exchanges is focused on trading the 11 most liquid currencies and average trade size is $1.0MM. The interest rate statistical arbitrage model is currently being developed. The statistical arbitrage strategy is based on 7 models which look for anomalies in the price correlation amongst the targeted underlying index or basket of securities. Investment horizon per trade is generally inside of 1 month. The stat arb book is still in its beta testing stages as senior management believes the incubation period for this strategy is approximately 3-5 years. There are approximately 20 programmers who are refining the algorithms and code. **Leverage utilized in Stat Arb book is 2.84X, 4,456 positions. Performance for July, 2006 for the stat arb book was favorable and the Investment Manager intends to increase the capital allocation to this book over the next 6-12 months. 2006 performance attribution: 3%**

Capital allocation to the different strategies has changed significantly in the last two years. At Amaranth's inception, approximately 60% of the capital was allocated to Convertible Arbitrage versus the current amount of 2%. In the past two years the capital allocation to the energy and other commodities books has increased sharply. Although Amaranth claims to be a credit multi-strategy fund, the annual return relies significantly on the performance of the Energy and the Other Commodities trading books. Over 86% of the year to date performance attribution is generated from these two trading books. Investment strategy rating of 2 due to the concentration of capital allocated to the Energy and Other Commodities books and investment strategy style drift.

Investment Strategy Score Change History

Market Risk Management

Market Risk Management

***Market Risk Management Score** 2 Change Score

***Risk management process corresponds to firm scope** ○ 5 ○ 4 ○ 3 ● 2 ○ 1

***Commentary**

	Difference from other hedge fund counterparties, Amaranth has a risk manager for each trading book and that individual sits on the desk with the risk takers. Rob Jones believes that a risk manager for each risk book, who sits on the desk, will be in the flow and have a better understanding of the trades being done and markets traded. However, given recent performance and risk controls around the energy portfolio, it appears that Amaranth's risk managers did not have an understanding of the market risks associated with energy trading or were over-ridden by the principals.	
***Developed risk reporting infrastructure**		○ 5 ○ 4 ○ 3 ● 2 ○ 1
***Commentary**	The chief risk officer Rob Jones reviews risk reporting across each strategy daily. The risk management systems and reporting were all created in collaboration with ITO 33, Rob Jones and his team. Risk Manager appears to have disregarded the Funds concentration limits in natural gas or did not comprehend the potential downside risk.	
***Clearly defined and enforced trading limits**		○ 5 ○ 4 ○ 3 ○ 2 ● 1
***Commentary**	There are no strict stop loss limits. All risk and position limits are soft limits. Recent performance support the lack of controls at Amaranth.	

The Chief Risk Officer is Robert Jones and is regarded as one of the 3 most senior officers at Amaranth. Rob's mandate is to create a more robust risk management system and process. Rob indicated that he is consulting both in house and external individuals to achieve their objectives. There are 12 risk lieutenants in the risk management group under Rob. Roughly all of the individuals have an academic background, with advanced degrees in various fields. Typically, most hedge funds have one Risk Officer monitoring the risks of the trading book. However, at Amaranth Rob feels that to ensure traders are adhering to risk guidelines a risk manager is assigned to each trading desk / portfolio group. In addition, Rob feels that by having the risk manager sitting among the traders on the desk, allow the manager to be more in tune with the markets b/c they see the flows and get a better idea of how the market trades. Thus, this means they are better able to understand and manage the risks. Another unique quality of the Chief Risk Officer at Amaranth, Rob has the authority to unwind / close out any position based on its risk profile.

The risk management group has agreements in place with ITO 33, a group which focuses on development of risk management systems. Rob is also actively hiring more risk management professionals.

- Amaranth has developed its own risk management infrastructure. The risk group provides daily position and P&L information, greek sensitivities (delta, gamma, vega, rho), leverage reports, concentrations , premium at risk, and industry exposures.
- Rob Jones on a daily basis receives the following risk reporting:

1. The risk management group produces daily VaR and Stress reports. The Var looks at different confidence levels from 1SD @ 68% to 4SD @ 99.99% over 20 days. Currently the Var has been less than 1% of total capital. The parameters for the stress reports are increasing credit spreads to 50%, volatility contracting 30% for 1 month, 15% for 3 months, 7% for 6 months and 3 % for 12 months, interest rates up 10% or 1.1 * the yield curve and stocks being flat. The shock is a worst case scenario and it would impact 3% of the total equity of the portfolio. However, they daily stress each strategy separately and an overall portfolio stress to consolidate all the positions and effects to certain market events is in the works.
2. Rob also receives a daily report that breaks down all of the long and short positions, with largest concentrations. Further the report also provides detail regarding the top 5 and 10 long and short positions.
3. A real time P&L monitor for portfolios with liquid, exchange traded securities.
4. Liquidity report which presents positions and their volumes per each strategy which the managers use to constrain the size of each strategy.

- Each risk lieutenant, per the product group they are assigned to generates a capital reserve for each individual position. The capital requirement is based on the outcomes of 12 different stress scenarios which Rob Jones came up with.

- The risk lieutenants calculate expected loss based on 10% annualized vol per each individual position.
- There are no formal stop losses or concentration limits.

Risk management rating of 2 granted due to lack of formal stop loss and concentration limits. In addition, given performance of the fund in the first few weeks of September, the senior investment professionals either disregarded the risk reporting or the risk managers did not fully comprehend the risks in the energy portfolio.

Risk Management Score Change History

Liquidity

Liquidity

***Liquidity Score** 2 Change Score

***Cash needs correspond to liquidity of assets**	○ 5 ○ 4 ○ 3 ○ 2 ● 1
***Commentary**	Amaranth indicates they will maintain a certain amount of risk capital to be used for anticipated margin calls. Risk capital varies depending upon strategy. Cash levels in May'06 were around $3 billion or 30% of capital. That dwindled to around $1 billion in the middle of Sept. '06 due to significant drawdowns in natural gas positions. Amaranth clearly misjudged the liquidity in the nat gas market when scaling their positions.
***Diversity and stability of financing sources**	○ 5 ○ 4 ● 3 ○ 2 ○ 1
***Commentary**	Amaranth has a number of equity prime brokers it can rely on for liquidity. In addition, the Amaranth Funds have ISDAs in place with a number of Wall street banks and broker dealers.
***Clearly defined cash management policy**	○ 5 ○ 4 ○ 3 ● 2 ○ 1
***Commentary**	No strict guideline as to the amount of unencumbered cash the Funds must maintain.

- Amaranth seeks to maintain 25% on average excess borrowing power from their prime brokers.
- Per investment strategy the risk management group calculates a risk capital amount which is suppose to be available in the event of large market moves.
- Amaranth has built their own stock loan business to mitigate any potential prime broker service disruptions. The entity is Amaranth Securities LLC a registered broker-dealer incorporated in Delaware. It is ready to go live once it receives NASD approval (which is imminent).
- Amaranth uses 6 different prime brokers for domestic and International securities and they are Goldman Sachs, Morgan Stanley, Citigroup, Lehman Bros., Deutsche Bank, and Merrill Lynch.
- The Prime Brokerage agreements include lockups from 30 - 90 days for financing and margin levels. These lock-ups are generally subject to ISDA like covenants including a "Keyman Clause" and NAV triggers (of 30% a quarter).

Liquidity rating of 1, given the heavy losses incurred by the energy book in the first two weeks of September 2006, which created serious liquidity issues for the Fund. The Investment Manager had previously indicated that they maintain sufficient liquidity for such market moves, however in reality it was not the case. In order to prevent any further losses and mitigate the risk of potentially defaulting on margin calls with their

liquidity providers, the energy portfolio was sold to JPM at a significant discount that lead to further losses. In addition, to generate additional liquidity the Fund has sold portions or all of the investments in other trading books.

Liquidity Management Score Change History

Capital

Capital

***Capital Score**	2	Change Score

***Relative size and stability of capital base (for each fund and firm overall)**	○ 5 ○ 4 ○ 3 ● 2 ○ 1
***Commentary**	Significant amount of investors are comprised of FOF investors. Potential for large investor redemptions given recent performance.
***Redemption features correspond to asset liquidity**	○ 5 ○ 4 ● 3 ○ 2 ○ 1
***Commentary**	After initial lock up, quarterly liquidity should allow enough time for the Investment Manager if necessary to liquidate positions to satisfy investor redemptions.
***Quality and diversity of equity investors**	○ 5 ○ 4 ○ 3 ○ 2 ● 1
***Commentary**	Investor concentration risk associated with large number of FOF investors.

Amaranth LLC Net Assets as of 08/2006: $7,850.0MM, 09/21/06: $4,317.5MM Amarete Master Ltd is a wholly-owned sub and fully guaranteed by Amaranth LLC.
Amaranth Ptnrs LLC Net Assets as of 08/2006: $1451.0MM, 09/21/2006: $798.05MM
Amaranth Global Equities Master Fd Ltd Net Assets as of 8/2006: $310.0MM, 09/21/2006: $170.5MM
Amaranth Secs LLC Net Assets as of 8/2006: $57.0MM, 09/21/2006: $31.35MM

- Amaranth LLC commenced operations with approximately $200MM in capital, the bulk of which was provided by Paloma entities. A large portion of the capital (approx. 60%) comes from Fund of Funds, about 7% is from insurance companies, 6% from retirement and benefit programs, 6% from high net worth individuals, 5% from financial institutions, 2% from endowments and 3% is insider capital (which includes deferred compensation). The insider capital does not get charged management or performance fees.
- The largest investor amounts to 8% of total capital.
- 70% of all investors have been with the fund for longer than 1 year.
- All capital investments made by Paloma entities and individuals who are affiliated to Paloma has been returned.
- There are three ways out of the Fund via withdrawals:

1. Annual liquidity, 13 month initial lock up w/ 90 days written notice
2. After the initial 13 month lock up, quarterly liquidity, January, April, July and October w/ 45 days notice and a 2.5% fee.
3. Annual redemption of profits only w/ 45 days written notice.

* There is a 7.5% gate which counts against all redemptions made during the course of the year.
* Potential largest redemption would be 15% of nav if every qualified investor provided notice to redeem.

- Beginning in 2/05, new investors will be subject to a 2 year lock-up on capital.

Capital rating of 2 given the significant decrease in capital under management in the

past two weeks.

Capital Score Change History

Performance

Performance

***Performance Score**	1	Change Score

***Performance relative to peers**	○ 5 ○ 4 ○ 3 ○ 2 ● 1
***Commentary**	Performance relative to peers over the last couple of years has been very good. However Amaranth has indicated in the first two weeks of Sept 06', ytd performance may be down over 60%.
***Appropriateness of return volatility relative to strategy**	○ 5 ○ 4 ○ 3 ○ 2 ● 1
***Commentary**	Fund has incurred significant losses due to their concentration in energy contracts.
***Performance during crisis periods**	○ 5 ○ 4 ○ 3 ○ 2 ● 1
***Commentary**	Performance in first two weeks of Sept 06' lead to a 55% ytd decrease in capital.

Performance statistics:

[illegible]

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Dec 2005 year end performance: 31.21%.

Date	Mtd	Ytd
Jan-03	3.95%	3.95%
Feb-03	3.00%	7.07%
Mar-03	0.17%	7.25%
Apr-03	1.33%	8.68%
May-03	2.33%	11.21%
Jun-03	0.60%	11.88%
Jul-03	-0.58%	11.23%
Aug-03	0.93%	12.26%
Sep-03	1.41%	13.84%
Oct-03	2.92%	17.17%
Nov-03	1.70%	19.16%
Dec-03	1.67%	21.15%

Date	Mtd	Ytd
Jan-04	1.98%	1.98%
Feb-04	0.78%	2.78%
Mar-04	0.50%	3.29%
Apr-04	-0.59%	2.68%
May-04	-0.40%	2.27%
Jun-04	-0.12%	2.15%
Jul-04	0.96%	3.13%
Aug-04	0.31%	3.45%
Sep-04	1.39%	4.88%
Oct-04	1.26%	6.21%
Nov-04	2.29%	8.64%
Dec-04	1.65%	10.43%

Date	Mtd	Ytd
Jan-05	-0.27%	-0.27%
Feb-05	0.17%	-0.10%
Mar-05	0.90%	0.80%
Apr-05	-2.62%	-1.84%
May-05	-2.09%	-3.89%
Jun-05	3.03%	-0.98%
Jul-05	2.39%	1.38%
Aug-05	5.19%	6.65%
Sep-05	7.49%	14.63%
Oct-05	-0.90%	13.60%
Nov-05	3.46%	17.53%
Dec-05	3.13%	21.21%

Date	Mtd	Ytd
Jan-06	6.45%	6.45%
Feb-06	4.30%	11.03%
Mar-06	2.91%	14.26%
Apr-06	14.42%	30.73%
May-06	-11.56%	15.48%
Jun-06	7.07%	23.65%
Jul-06	-0.53%	22.99%
Aug-06	6.98%	31.57%

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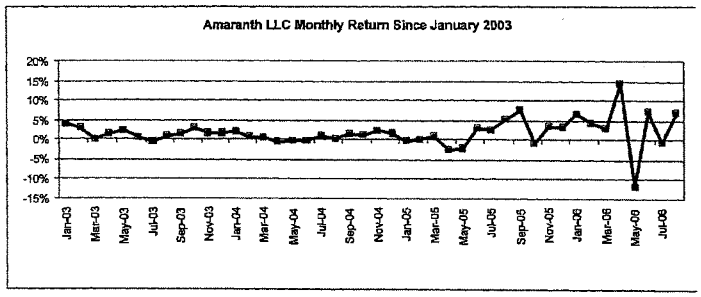

AMARANTH PARTNERS LLC

Performance and Net Asset Value Report – August 2006 YTD 10

Month	Beginning NAV	First Day Contributions/ Withdrawals	Adjusted Beginning NAV	Net Performance	Month-end Withdrawals/ Adjustments	Ending NAV	Monthly Rate of Return	YTD Rate of Return
January	$1,292,202	$37,355	$1,329,557	$69,503	($25,566)	$1,373,494	5.23%	5.23%
February	$1,373,494	$1,064	$1,374,558	$47,955	($35,804)	$1,388,709	3.49%	8.90%
March	$1,388,709	$34	$1,388,743	$34,582	($21,729)	$1,399,596	2.49%	11.61%
April	$1,399,596	$25,695	$1,425,291	$170,732	($29,051)	$1,566,972	11.98%	24.98%
May	$1,566,972	$89,640	$1,656,612	($158,663)	($35,962)	$1,461,987	-9.58%	13.01%
June	$1,461,987	$43,733	$1,505,720	$87,126	($14,812)	$1,578,034	5.79%	19.55%
July	$1,578,034	$2,446	$1,580,480	($7,124)	($122,206)	$1,451,150	-0.45%	19.01%
August	$1,451,150	$5,404	$1,456,554	$82,638	($17,249)	$1,521,943	5.67%	25.77%

Dec 2005 year end performance:18.92%

Date	Mtd	Ytd
Jan-05	-0.07%	-0.07%
Feb-05	0.17%	0.10%
Mar-05	0.59%	0.69%
Apr-05	-2.18%	-1.50%
May-05	-1.78%	-3.26%
Jun-05	2.91%	-0.44%
Jul-05	1.91%	1.46%
Aug-05	4.10%	5.62%
Sep-05	5.84%	11.79%
Oct-05	-0.59%	11.13%
Nov-05	2.80%	14.24%
Dec-05	4.09%	18.91%

Date	Mtd	Ytd
Jan-06	5.23%	5.23%
Feb-06	3.49%	8.90%
Mar-06	2.49%	11.61%
Apr-06	11.98%	24.98%
May-06	-9.58%	13.01%
Jun-06	5.79%	19.55%
Jul-06	-0.45%	19.01%
Aug-06	5.67%	25.77%

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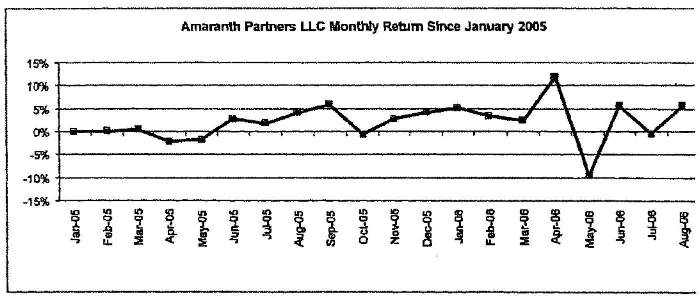

For both Amaranth LLC and Amaranth Partners LLC, the majority of the positive performance for 2005 came from profits in the energy book, approximately 98% of the funds, ytd performance was related to energy trades. Energy trading profits/losses are

derived primarily from natural gas calendar swaps.

Currently in 2006, both Funds are down approximately 60% ytd because of energy trading. Approximately 40% of the Funds capital is committed to natural gas trading. Brian Hunter had positioned the book net long going into the U.S hurricane season. The energy book apparently has an outsized long position in the October 06 ng contract and an outsized long position in the Oct06-Dec06 and March07-April07 spreads. These positions have incurred heavy losses. Much of the losses have come in the first two weeks of September as prompt natural gas has steadily declined since the middle of August from $8 to $4.8 current due to a so far benign hurricane season, cooler weather, and an increase in inventories.

[illegible]

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Date	Mtd	Ytd
Jan-06	3.91%	3.91%
Feb-06	1.26%	5.22%
Mar-06	4.02%	9.45%
Apr-06	2.04%	11.68%
May-06	-0.41%	11.22%
Jun-06	-0.98%	10.13%
Jul-06	1.64%	11.94%
Aug-06	0.68%	12.70%

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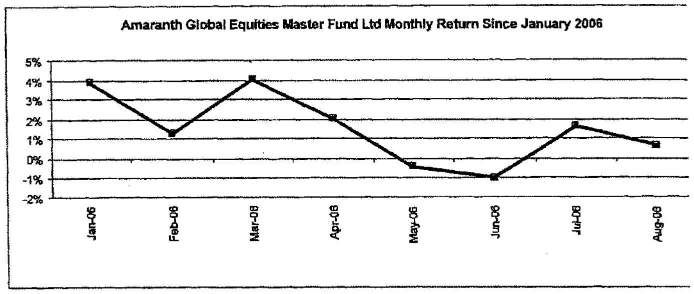

Performance rating 1 given the significant volatility and recent large losses.

Performance Score Change History

Operational Risk Management

Operational Risk Management

***Operational Risk Management** 3 Change Score

***Depth and efficiency of back office given strategy**	○ 5 ○ 4 ● 3 ○ 2 ○ 1
***Commentary**	The trade support and back office at Amaranth is quite extensive, over 200 individuals dedicated to operations.
***Responsiveness to margin calls and confirms**	○ 5 ○ 4 ● 3 ○ 2 ○ 1
***Commentary**	Historically the client has meet margin calls with limited disputes. However we have had a problem with the client countersigning confirms within a reasonable amount of time. On one occasion we halted trading with Amaranth due to the number of outstanding unsigned confirms.
***Caliber of portfolio pricing procedures**	○ 5 ○ 4 ● 3 ○ 2 ○ 1
***Commentary**	Majority of the energy positions were exchange traded and therefore priced daily.
***Quality of service providers**	○ 5 ○ 4 ● 3 ○ 2 ○ 1
***Commentary**	Auditors, PB, legal counsel and liquidity providers are reputable firms.

- There are a total of approximately 200 people in the operations group at Amaranth. The operations group encompass information technology, controllers, accounting, legal counsel, client relations, confirmations, and trade support.
- Amaranth performs their own back office and trade support in house.

Employee Compensation:
Amaranth senior mgmt has instituted a new form of annual employee compensation and deferred compensation. Annual compensation is determined by the degree of the individuals job function

and how it contributes to generating income or if it is income neutral. The annual Compensation is based on the weightings in three different categories; 1)Firm wide performance 2)Divsion 3)Discretion. A Senior Trader may have the following weightings 1) Firm wide performance 30%, 2) Division 50% 3) Discretion 20%. According to these weightings the Senior Trader benefits from the overall Fund performance but the bulk of his / her compensation is based on the performance of his / her trading desk or division and less centered around satisfying the general job requirements i.e managerial and operations responsibilities. A junior person may have the following compensation weighting profile; 1) Firm wide performance 10%, 2) Division 10% 3) Discretion 80%. The deferred compensation is based on the firm's philosophy to maximize returns on a risk adjusted basis with capital preservation and risk management a priority. The deferred compensation payout is also spread over the course of three years. With the deferred compensation portfolio managers and traders are less likely to take unnecessary risks and attempt to "hit home runs with every swing".

Investment Terms:

- $ 5 MM minimum investment (subscriptions accepted monthly)
- 1.5% mgmt fee; 20% Incentive Fee (additionally reimbursement of certain expenses resulting from the operation of the Funds and the Master Fund.
- High-Water Mark is employed.

Internal/Operational Score Change History

Client Communication/Transparency

Client Communication/ Transparency

***Client communications/Transparency** 3 Change Score

***Extent of information provided**		○ 5 ○ 4 ○ 3 ● 2 ○ 1
***Commentary**	Limited disclosure provided. We rely on periodic meetings and conference calls with management for more detailed disclosure of how the trading books are positioned. However, in hind sight, we were mislead by individuals at the Fund when we pointed out the concentration risk in the portfolio related to the size of their natural gas positions. Senior investment professionals informed us that the capital allocation to energy would be decreased immediately and instead they increased it significantly in June '06 to 56% of capital.	
***Frequency and timeliness of information provided**		○ 5 ○ 4 ● 3 ○ 2 ○ 1
***Commentary**	Historically, general info regarding the funds navs and performance are provided within the time frame set forth in the ISDA.	
***Access to key decision makers**		○ 5 ○ 4 ● 3 ○ 2 ○ 1
***Commentary**	Reasonable access to Amaranth's senior risk managers and risk takers.	

- JPM hedge fund credit receives some disclosure, on a monthly basis, of capital by entity, capital allocation by strategy, leverage by strategy, total number of trading positions by strategy and overall performance
- Client communication is unsatisfactory with credit and risk management side of Amaranth, risk management and investment professionals indicated during a due diligence visit that the capital allocation to energy trading would decrease significantly. However, capital allocation to energy trading increased significantly from 25% to over 50% of the capital under management.

Commentary released to investors 9/20/06:

Dear Investor:
As communicated to you earlier today, the Amaranth Multi-Strategy Funds concluded a transaction to transfer our energy portfolio to a third party. Having achieved this important step, we wanted to share additional information on the status of the Multi-Strategy Funds.

During the week of September 11, 2006, we experienced significant mark-to-market losses in our natural gas derivatives portfolio. The resulting margin calls on these positions created serious constraints on the Funds' liquidity. In order to prevent further mark-to-market losses on the natural gas positions, and to reduce the risk of defaulting on margin calls, we transferred these positions to a third party at a price that resulted in additional significant losses. To generate the liquidity required to avoid defaults under our counterparty documents, we also sold a significant number of positions in the Funds' other portfolios.

These actions have eliminated the prospect of further significant mark-to-market losses in the natural gas portfolio and helped us avoid the termination of our credit facilities and the risk of a consequent forced liquidation by our creditors. We have continued to meet all margin calls. Our major financial counterparties have confirmed that they are now comfortable with our portfolio and overall liquidity position. We expect that, once all of the trades associated with these actions have been settled, our leverage will be approximately 1.3:1. We are now focused on communicating with our investors and defining the future of our business.

After taking into consideration the mark-to-market losses on the natural gas portfolio, the significant cost of the third-party transaction, and, to a much lesser degree, realized losses on other positions that were sold in order to generate liquidity, we estimate that, as of September 19, the Net Asset Value of the Multi-Strategy Funds had declined approximately 65% month-to-date and approximately 55% year-to-date.

Monday, September 18, was the deadline for submitting October 31 quarterly redemption requests. We are evaluating all redemption requests received to date and will report back to you when we have completed our analysis.

We are planning to hold a conference call for investors this Friday, September 22. Details for the call will follow. Next week, we intend to begin scheduling one-on-one meetings with investors. Amaranth is determined to earn back its investors' trust, and one step towards that end is to share as much information as we reasonably can. We assure you that we are eager to do so.

Nick Maounis

Client Communication Score Change History

Exposure Management Strategy

Exposure Mgt Strategy

Other Comments

Other Comments and/or Attachments:
Memo from Amaranth describing new feeder funds that become effective Feb 1, 2006 and 25-month investor lock-up on new subscriptions starting Feb 1, 2006.

ALLC 2006 Distribution Cover Memo.pdf

Rating History

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Move to Archives View

Document Approval

First Approval:

Redacted by the Permanent Subcommittee on Investigations 09/21/2006 10:52:13 AM

Second Approval:

Approved 12/27/2005 11:20:27 AM

Author:	Last Edit:
Redacted by the Permanent Subcommittee on Investigations 09/15/2000 10:51:20 AM	Redacted by the Permanent Subcommittee on Investigations 09/21/2006 12:15:01 PM

/α/Amaranth

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Amaranth April 2006 Update

For the month of April, investors in Amaranth Capital Partners LLC, Amaranth Partners LLC and Amaranth International Limited (the "Funds") earned positive net returns as we had our best month to date. Although extreme volatility in the energy markets is primarily responsible for our out-performance, we are proud of the fact that our other businesses have made strong contributions as well. In fact, if we eliminate the capital and profits attributable to our energy trading business, investors in the Funds would have earned approximately 2% during April and 10% year to date.

Fund	April 2006	Year to Date
Amaranth Capital Partners LLC (with IPO)	13.19%	27.17%
Amaranth Capital Partners LLC (w/o IPO)	13.15%	27.00%
Amaranth Partners LLC (with IPO)	11.97%	24.95%
Amaranth Partners LLC (w/o IPO)	11.93%	24.80%
Amaranth International Limited (with IPO)	13.24%	27.14%
Amaranth International Limited (w/o IPO)	13.21%	26.99%

Our convertible and volatility portfolios generated positive returns in April. Similar to last month, General Motors (GM) and volatility dispersion trades were the primary contributors to performance. These gains were partially offset by modest losses in our Japanese convertible positions. We anticipate increased new issuance in the U.S. which may present attractive opportunities in the upcoming months.

Our long/short equity portfolios were profitable in the aggregate, with gains experienced by most portfolios. Please refer to our Amaranth Global Equities letter for more detailed information regarding our long/short equity activity.

Our merger arbitrage and statistical arbitrage portfolios both posted modest gains for the month. Although M&A deal flow has increased on a global basis, spreads are not yet wide enough to warrant a larger allocation. Statistical arbitrage is off to its best start since the inception of the strategy, and we will likely increase the allocation over the intermediate term.

Our energy and commodities portfolios generated outsized returns due to unusual volatility across the crude oil, natural gas, and metals businesses. Primary drivers of returns included (1) natural gas spread trades, which benefited from the significant increase in crude oil prices and the glut of summer 2006 natural gas relative to storage capacity and prospective summer demand, and (2) a profound increase in base metal prices (copper in particular) with an associated volatility spike. As volatility increased during the month, we took the opportunity to reduce exposure in our natural gas and metals portfolios and realized profits. As recently announced, I am pleased to

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welcome Jeff Baird, who joined Amaranth on May 9th as Portfolio Manager and Co-Head of our Global Energy & Commodities business. Jeff joined us from Caxton Associates where he was Co-Portfolio Manager focused on global crude oil and refined products as well as North American natural gas markets. Jeff will have direct oversight for our crude/petroleum and non-energy commodities businesses while Brian Hunter will continue to oversee our natural gas and power businesses. Brian, who has been Co-Head of our Global Energy & Commodities team since last June, invited Jeff to partner with him to lead one of Amaranth's core businesses based upon their mutual respect for one another and Jeff's exceptional talents as a trader and investor. With Jeff's addition, we feel our Global Energy & Commodities team is stronger and better positioned than ever.

Our credit products portfolio had a particularly strong month with significant contributions from relative value positions within our CDO book, private financings in Asia, exposure to GMAC, and our European credit portfolios. We remain extremely cautious on public opportunities given historically tight spread levels which we view as unsustainable over the longer term. As a result, we continue to focus much of our attention on CDO and private market opportunities, particularly in Asia, where we continue to find value.

At the beginning of April, capital was allocated among our strategies as follows: 5% to U.S. convertibles, 13% to international convertibles/volatility, 8% to statistical arbitrage, 34% to energy, 4% to commodities, 2% to merger arbitrage, 9% to long/short equity and 25% to credit products.

At the beginning of April, long market value exposure was as follows: 12.7% to Canada, 11.8% to Europe, 6.4% to Asia (non-Japan), 3.5% to Japan, 64.5% to the United States, and 1.1% to other regions. Short market value exposure was as follows: 13.7% to Canada, 14.1% to Europe, 4.1% to Asia (non-Japan), 4.4% to Japan, 63.2% to the United States and 0.5% to other regions.*

Subscription Agreement Policy Reminder

The deadline to receive Subscription Agreements for new investments is five business days prior to the dealing date (e.g., May 24th for June 1st subscriptions). Subscription Agreements are processed in the order in which they are received; therefore, we strongly recommend that you submit your subscription documents as early as possible in order to assist us in processing your request and accepting your investment.

As always, please feel free to contact Charlie Winkler, Steve Johnson or me at 203.422.3300 with any questions.

Regards,

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This information is being provided solely for the use of your firm's Credit Department for the purpose of evaluating the creditworthiness of one or more funds managed by Amaranth Advisors LLC or its affiliates ("Amaranth"). This information is CONFIDENTIAL and should not be shared outside of your Credit Department without the express written consent of Amaranth.

/o/Amaranth

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Amaranth May 2006 Update

For the month of May, investors in Amaranth Capital Partners LLC, Amaranth Partners LLC and Amaranth International Limited (the "Funds") experienced losses as we had our worst month since inception. Our natural gas book - still this year's most profitable strategy - accounted for the majority of the drawdown as dislocations in certain relationships across the natural gas forward curve resulted in significant mark-to-market losses. Excluding the capital and profits attributable to the natural gas portfolio, the Funds would have been down approximately 1.5% for the month.

Fund	May 2006	Year to Date
Amaranth Capital Partners LLC (with IPO)	-10.71%	13.55%
Amaranth Capital Partners LLC (w/o IPO)	-10.72%	13.39%
Amaranth Partners LLC (with IPO)	-9.49%	13.10%
Amaranth Partners LLC (w/o IPO)	-9.49%	12.96%
Amaranth International Limited (with IPO)	-10.71%	13.53%
Amaranth International Limited (w/o IPO)	-10.71%	13.38%

To put our losses in perspective, our energy and commodities businesses generated over $1.5 billion in profits during the six week period beginning April 1st. Normally, after generating gains of this magnitude, we would endeavor to reposition the portfolio both to realize profits and neutralize exposures which are incurred as the portfolio generates gains. Historically, the market has provided sufficient liquidity and opportunity for us to tailor the portfolio as desired despite rapidly changing market dynamics. This "expansion/contraction" approach has enabled us to generate more profits than if we had required the team to unwind trades aggressively whenever markets moved in our favor. In this case, as we endeavored to monetize gains (and reduce risk) within the portfolio, liquidity in the middle part of the natural gas forward curve seized up due to high volumes of producer hedging that oversaturated market demand for forward natural gas. While this was a humbling experience that has led us to recalibrate how we assess risk in this business, we believe certain spread relationships involving natural gas remain disconnected from their fundamental value drivers. As a result, we maintain exposure to spread positions that we believe have significant upside potential over the near term. Aside from our natural gas related strategies, the remainder of our energy and commodity businesses were modestly profitable.

Our convertible portfolio was slightly negative for the month as our U.S. portfolio generated gains while our Asian exposures experienced losses as the Asian markets traded off. Our non-convertible volatility book also experienced significant losses when global index implied volatilities spiked in May. We maintain a small allocation to traditional convertible markets (U.S., Europe and Japan) and continue to be opportunistic in non-traditional convertible markets (Canada, non-Japan Asia) where our infrastructure provides competitive advantage.

Permanent Subcommittee on In3estigations
EXHIBIT #14

Our long/short equity portfolios lost money in the aggregate, but held up quite well despite the difficult market environment for global equities. Our dedicated Amaranth Global Equities feeder funds were down -0.53% to -0.73% depending on the fund, while the S&P 500 was down -3.1% and international equity markets were down considerably more. Please refer to our Amaranth Global Equities letter for additional information regarding our long/short activity.

Our merger arbitrage and statistical arbitrage portfolios both experienced modest losses. We continue to believe there are limited opportunities in merger arbitrage as spreads are not at wide enough levels to justify a larger allocation. Our statistical arbitrage portfolio performed quite well considering the challenging market environment for global equities and CTAs.

Our credit products portfolio experienced losses that were primarily driven by our Asian private financing exposures and spread widening in our CDO book. As we have discussed in past letters, we remain extremely cautious on public opportunities given historically tight spread levels which we view as unsustainable over the longer term. As a result, we continue to focus most of our efforts on CDO and private market opportunities, particularly in Asia, where we continue to find value.

At the beginning of May, capital was allocated among our strategies as follows: 3% to U.S. convertible arbitrage, 12% to international convertible arbitrage/volatility, 9% to statistical arbitrage, 38% to energy, 6% to commodities, 1% to merger arbitrage, 8% to long/short equity, and 23% to credit products.

As always, please feel free to contact Charlie Winkler, Steve Johnson or me at 203.422.3300 with any questions.

Regards,

Nick Maounis

Performance information is presented net of all fees and expenses. Particular investors' returns will vary from the respective composite returns of the Funds due to the timing of subscriptions, withdrawals, redemptions and other factors. Performance information is unaudited and subject to adjustment. Performance information is presented only for Annual Liquidity Interests; the Funds also offer Four-Year Liquidity Interests with different redemption rights and fees.

Past performance is not necessarily indicative of future results, particularly in the case of speculative trading strategies such as those implemented by the Funds. Furthermore, the Funds' strategies, as well as the markets and instruments they trade, are continually evolving. There is no material limitation on the strategies the Funds may implement or on the markets or instruments in which they may trade. The Funds are a suitable investment only for financially sophisticated investors who are independently capable of evaluating the merits and risks of the Funds.

All investors in the Funds are reminded that:

- *an investment in the Funds is speculative and involves a substantial degree of risk;*
- *investors must be prepared to lose all or substantially all of their investment in the Funds;*
- *the Funds trade with a high degree of leverage;*
- *the Funds' performance may be volatile;*

10kWIZARD

FORM 10-K

INTERCONTINENTALEXCHANGE INC - ICE

Filed: February 26, 2007 (period: December 31, 2006)

Annual report which provides a comprehensive overview of the company for the past year

Permanent Subcommittee on Investigations
EXHIBIT #15

Table of Contents

Regulation

We are primarily subject to the jurisdiction of regulatory agencies in the United States and the United Kingdom and, with respect to the ICE Futures products, we have permission from over 45 jurisdictions to allow trading on our platform.

Regulation of Our OTC Business in the United States

We operate our OTC electronic platform as an exempt commercial market under the Commodity Exchange Act and regulations of the Commodity Futures Trading Commission, or the CFTC. The CFTC generally oversees, but does not substantively regulate, the trading of OTC derivative contracts on our platform. All of our participants must qualify as eligible commercial entities, as defined by the Commodity Exchange Act, and each participant must trade for its own account, as a principal. Eligible commercial entities include entities with at least $10 million in assets that incur risks (other than price risk) relating to a particular commodity or have a demonstrable ability to make or take delivery of that commodity, as well as entities that regularly purchase or sell commodities or related contracts that are either (i) funds offered to participants that do not meet specified sophistication standards that have (or are part of a group of funds that collectively have) at least $1 billion in assets, or (ii) have, or are part of a group that has, at least $100 million in assets. We have also obtained orders from the CFTC permitting us to treat floor brokers and floor traders on U.S. exchanges and ICE Futures as eligible commercial entities, subject to their meeting certain requirements. As an exempt commercial market, we are required to comply with access, reporting and record-keeping requirements of the CFTC. Currently, our OTC business is not otherwise subject to substantive regulation by the CFTC or other U.S. regulatory authorities. Both the CFTC and the Federal Energy Regulatory Commission have view only access to our trading screens on a real-time basis. In addition, we are required to:

- report to the CFTC certain information regarding transactions in products that are subject to the CFTC's jurisdiction and that meet certain specified trading volume levels,
- report to the CFTC certain large trader position information for our cleared OTC natural gas markets pursuant to special call issued by the CFTC,
- record and report to the CFTC complaints that we receive of alleged fraud or manipulative trading activity related to certain of our products, and
- if it is determined by the CFTC that any of our markets for products that are subject to CFTC jurisdiction serve a significant price discovery function (that is, they are a source for determining the best price available in the market for a particular contract at any given moment), publicly disseminate certain market and pricing information free of charge on a daily basis.

Members of Congress have, at various times over the last several years, introduced legislation seeking to restrict OTC derivatives trading of energy generally and to bring electronic trading of OTC energy derivatives within the direct scope of CFTC regulation. Separate pieces of legislation have recently been introduced in Congress that would (i) eliminate the category of exempt commercial market for energy commodities, requiring that we register our OTC business as a regulated futures exchange, (ii) restrict or effectively eliminate our ability to provide clearing services for our OTC products, (iii) provide the CFTC with the authority to require exempt commercial markets to comply with additional regulatory requirements and to require some participants on exempt commercial markets to file reports on their positions, and (iv) place price controls on natural gas derivatives and make those derivatives tradable only on a designated contract market, which is a regulatory status we do not presently hold. If any of these proposals are adopted, they could restrict or foreclose some of our business, require us and our participants to operate under heightened regulatory burdens and incur additional costs in order to comply with additional regulations, and could deter some participants from trading on our OTC platform.

We cannot predict whether this legislation will be adopted. If such legislation or other legislation were to be enacted into law, it could have an adverse effect on our business.

The Energy Policy Act of 2005 that was signed into law by the President on August 8, 2005 grants to the Federal Energy Regulatory Commission the power to prescribe rules related to the collection and government dissemination of information regarding the availability and price of natural gas and wholesale electric energy. On January 19, 2006, the Federal Energy Regulatory Commission also issued final rules clarifying the agency's authority over market manipulation by all electricity and natural gas sellers, transmission owners and pipelines, regardless of whether they are regulated by the Federal Energy Regulatory Commission. These rules and possible future exercises of the Federal Energy Regulatory Commission's rulemaking powers could adversely impact demand for our data products in the United States.

At various times in recent history, regulators in some states have publicly questioned whether some form of regulation, including price controls, should be reimposed in OTC commodities markets, particularly in states where the power markets were recently deregulated. We or our participants may, in the future, become subject to additional legislative or regulatory measures. These could require us to incur significant compliance costs or to modify our business strategy. Any measures affecting our participants in connection with their OTC commodities trading activities could potentially discourage participants from trading on our electronic platform and adversely affect our competitive position.

Commodity Futures Trading Commission
Office of Commissioner Michael V. Dunn
Three Lafayette Centre
1155 21st Street, NW
Washington, DC 20581
202.418.5070

Excerpt from

**Remarks of Commissioner Michael V. Dunn
before the
National Grain Trade Council's
Mid-Year Meeting
Kansas City, MO
September 8, 2006**

Thank you, I am very happy to be here today. On the Commission, I have tried to be a voice for agriculture, I appreciate the help and advice that many of you have given me in this endeavor.

. . .

Given the critical nature of energy as a commodity, recent high prices and scandals affecting the energy sector have brought renewed attention to energy markets. Due to the complexity of these markets, there are no easy answers. I think our central mission should be to make sure that energy markets are as transparent and resistant to manipulation and fraud as possible.

One of the biggest questions the public has is why are energy prices so high? Well, we all know it is a tough question to answer definitively why the price of a market is what it is. Breaking down the fundamentals of a market is as much art as science. One person's market fundamentals may be another's speculative excess.

One of the purposes of having a market is, of course, price discovery. Barring some kind of squeeze, corner, or other manipulation, it probably is not possible to say whether a price is too high. You or I might have an opinion on that, but there really is no other objective price to compare too.

While I think it would be valuable for the Commission to formally study what, if any, effect the large influx of speculative money has had on trends in commodity markets, it would be quite difficult, if not impossible, to define at what point an influx of open interest, for instance from index funds, created conditions that led to "unreasonable

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Remarks of Commissioner Michael V. Dunn
September 8, 2006

fluctuations" or "unwarranted changes" in price. The Commission is not in a position to pick among different economic uses of a particular futures contract and decide which are to be discouraged or encouraged.

I think the key thing is to make sure there is sufficient openness and transparency so the Commission or someone can make sure a market is functioning fairly and efficiently. The Commission does that for energy markets traded on a designated contract market. Through our commitment of trader reports we can even pass some of that information back to the public.

However, a large portion of energy trading occurs in the over-the-counter market, mostly beyond the scrutiny of any federal agency. The Commission's enforcement actions continue to uncover repeated examples of people and companies trying to game the energy markets, often in the belief that no one is watching, or that if someone is, there is nothing that can be done to them.

Most of the energy cases we file affect narrow segments of the industry, and each one individually probably does not have a large impact on consumers overall. However, each of these cases calls into question the integrity of the energy markets they involve, and as Enron showed, there can be large consequences for consumers in the biggest cases. At the end of the day, the Federal Government simply needs to get a decent handle on exactly what the extent of the problem may be. Unfortunately that task too easily falls through the cracks in the regulatory framework for energy.

I think it is a good idea for Congress to consider whether the integrity and transparency of energy commodity markets face any challenges. Certainly those markets have changed a great deal since deregulation began in the 1990s. Because the CFTC is barred from regulating the OTC energy markets, it cannot collect large trader data from unregulated energy markets, or conducting regular surveillance of them. It is virtually impossible to know, therefore, the extent of fraud and manipulation that may be occurring in the over-the-counter markets.

The nature of the OTC markets is such that it would not be feasible or useful to require surveillance of the entire OTC market. However, I think it is important that Congress consider whether there should be increased surveillance of key OTC markets that fulfill a price discovery function. It is these markets where we have seen most of our energy-related enforcement cases arise from, and that are most likely to affect consumers when there are problems.

Bloomberg.com

Amaranth Hedge-Fund Losses Hit 3M Pension, Goldman (Correct)

By Jenny Strasburg

(Corrects size of Arden investment in seventh paragraph in story published yesterday.)

Sept. 20 (Bloomberg) -- 3M Co., Goldman Sachs Group Inc. and San Diego County's retirement fund say the meltdown of Amaranth Advisors LLC, the hedge-fund manager that lost about $4.6 billion in the past month, may cost them millions.

The $9.2 billion pension fund of 3M, maker of Post-it Notes and electronics and cleaning products, gave less than $92 million to Amaranth, according to Jacqueline Berry, a spokeswoman for the St. Paul, Minnesota-based company. Goldman Sachs Hedge Fund Partners LLC has about $13 million with the firm, according to a regulatory filing today.

``This will spark activity by Congress, or by regulators, for some oversight of an area that has not been watched,'' said Dan McAllister, a board member of the $7.2 billion San Diego County Employees Retirement Association. The fund invested $175 million with Amaranth in 2005.

Amaranth, named for an imaginary flower that never fades, had gained more than 25 percent earlier this year on bets natural-gas prices would rise. Prices tumbled this month, triggering losses that grew as it scrambled to unwind trades. The Greenwich, Connecticut-based firm's blowup is the biggest since Long-Term Capital Management LP almost collapsed in 1998.

In a bid to stem losses, Amaranth plans to give up its energy trades to Citadel Investment Group LLC, a $12 billion hedge fund in Chicago, and New York-based bank JPMorgan Chase & Co., two people with knowledge of the decision said today. Citigroup Inc., the largest U.S. bank by assets, may buy a stake in Amaranth.

Wall Street Clients

Amaranth has managed money for Wall Street banks Morgan Stanley, Credit Suisse Group, Deutsche Bank AG and Bank of New York Co., according to U.S. Securities and Exchange Commission filings. A $2.3 billion Morgan Stanley pool that invests in other hedge funds had about $126 million in Amaranth as of June 30, according to regulatory filings. Bank of New York allocated $10 million of a $165 million fund to the firm.

Caisse de Depot et Placement du Quebec, Canada's biggest pension-fund manager, had C$77.3 million ($68.5 million) with Amaranth at the end of 2005. New York-based Arden Asset Management, which farms out $13 billion to hedge funds, invested about 3 percent of its assets in Amaranth across several funds. Arden spokesman Jonathan Gasthalter declined to comment.

Max Re Capital Ltd., a Bermuda-based reinsurer, may also be a casualty. The company said today third-quarter earnings will be reduced by $35 million because of losses from hedge-fund investments. Max Re didn't disclose which hedge fund caused the losses, and spokeswoman Sheila Gringley didn't respond to a phone message seeking comment.

Natural-Gas Selloff

Connecticut Attorney General Richard Blumenthal said he's examining Amaranth's losses.

``We are taking some initial steps to investigate what went so terribly wrong, whether there was a truthful and accurate disclosure to investors,'' he said today in an interview.

Tom Carson, a spokesman for U.S. Attorney Kevin O'Connor in Connecticut, declined to comment, as did Bryan Sierra, a spokesman for the Justice Department in Washington and SEC spokesman John Nester.

Natural-gas futures have plunged 17 percent this month. The losses may have been exacerbated by Amaranth's attempt to exit bets on rising prices, said Robert Van Batenburg, head of research at Louis Capital Markets LP in New York.

Permanent Subcommittee on Investigations
EXHIBIT #17a

``The whole debacle has left Amaranth trying to unwind its positions,'' he said.

MotherRock LP, a $400 million fund run by former Nymex President Robert ``Bo'' Collins, shut last month after unsuccessful bets on the direction of natural gas.

Amaranth Equity Stakes

Both funds attempted to profit from spreads, or discrepancies in price, between different gas-futures contracts. Amaranth used loans to expand its bets, increasing its losses.

Shares of companies in which Amaranth invested have also been hurt.

The stock of Cinram International Income Fund, a Toronto- based maker of digital-video discs, fell 5.4 percent earlier this week on concern that Amaranth would sell its 15 percent stake. The shares rose 50 cents to C$22.10 at 4:30 p.m. in Toronto after the Globe and Mail reported Amaranth had received bids for its holdings.

Counsel Corp.'s stock has dropped 14 percent this week. The investment firm, also based in Toronto, said in a Sept. 18 filing with Canadian regulators that Amaranth proposed selling its 34 percent stake.

Consultant's Advice

The San Diego County pension board invested in Amaranth on the recommendation of consultants Rocaton Investment Advisors in Norwalk, Connecticut, board member McAllister said. The San Diego County fund is unconnected to the San Diego City Employees' Retirement System, which has a deficit of more than $1 billion.

``We are aware of the Amaranth situation, and we are in dialogue with our clients,'' Rocaton spokesman Todd Miller said, declining further comment.

It will take weeks to find out how much pension money melted away with Amaranth's bad trades, Damon Silvers, associate general counsel of the Washington-based AFL-CIO, said in an interview today.

The largest U.S. labor association, whose member unions hold more than $400 billion in pension assets, has criticized provisions of the pension-reform law signed by President Bush last month that loosened restrictions on pension-money flows into hedge funds.

``This shows what an appalling decision that was,'' Silvers said.

Caveat Investor

Hedge-fund investors should take Amaranth as a warning to do better homework before trusting money with a fund, said Robert Schulman, chief executive officer of Tremont Capital Management Inc., a Rye, New York-based investment firm.

``Investors need to understand the risks,'' Schulman said.

McAllister, who is also San Diego County's treasurer and tax collector, said the pension fund was led to believe by Rocaton that the Amaranth investment would reduce its risk.

``If it looks too good to be true, maybe it is,'' he said.

To contact the reporter on this story: Jenny Strasburg in New York at **jstrasburg@bloomberg.net**

Last Updated: September 21, 2006 07:35 EDT

Amaranth Seeks to Dismiss Pension Fund's Lawsuit
San Diego Business Journal on the web
http://sdbj.com/article.asp?aID=114215&link=perm
Posted date: 6/8/2007

Amaranth Advisors, the Connecticut hedge fund that lost billions in misplaced energy future investments last year, filed a motion June 7 to dismiss a lawsuit filed by the San Diego County Employees Retirement Association over significant losses sustained by the workers' pension fund.

The motion filed in U.S. District Court in New York states managers of the $8 billion pension fund were well aware of the speculative and leveraged investment strategies used by Amaranth, and that these were clearly detailed in offering documents signed by county officials.

Simply put, SDCERA took a known risk and lost money. It now seeks to recover, both its initial investment, and unrealized profits earned through the speculative trading that this lawsuit decries," the court filing states.

SDCERA invested $175 million as part of a higher-risk strategy to improve its returns starting in 2005. After Amaranth sustained more than $6 billion in losses, its managers decided to liquidate the hedge fund's remaining assets of about $3 billion.

According to the filing, the county pension fund passed up several dates it could have withdrawn its investment if it determined it was too volatile and risky. After eight months, the county's investment grew to more than $244 million or 40 percent, and even when the hedge fund reported losses of 10 percent in May 2006, the county continued to maintain its investment. Only after the fund took substantial losses in September did the county request withdrawal, but by then, all withdrawals were temporarily suspended, the filing says.

So far, the county fund has recouped about $61 million from Amaranth, which is still liquidating its assets. The county lawsuit seeks $150 million in lost assets and damages.

– Mike Allen

Permanent Subcommittee on Investigations
EXHIBIT #17b

Exempt Commercial Markets, 2001 – 2006

Electronic trading facilities providing for the execution of principal-to-principal transactions between eligible commercial entities in exempt commodities may operate as exempt commercial markets (ECMs) under the CEA. The requirements and provisions related to ECMs are set forth in Sections 2(h)(3)-(5) of the CEA and in Part 36.3 of the CFTC's regulations. Under Section 2(h)(4), an ECM is subject to antifraud and anti-manipulation provisions and a requirement that, if performing a significant price discovery function, the market must provide pricing information to the public. A facility that elects to operate as an ECM must give notice to the Commission and comply with certain informational, record keeping and other requirements. An ECM is prohibited from claiming that the facility is registered with, or recognized, designated, licensed or approved by, the Commission. To date, 17 ECMs have filed notices with the Commission.

Exempt Commercial Markets[5]	2001	2002	2003	2004	2005	2006
CCX			✓	✓	✓	✓
CDXchange		✓	✓	✓	✓	✓
HSE		✓	✓	✓	✓	✓
ICE	✓	✓	✓	✓	✓	✓
IMAREX	✓	✓	✓	✓	✓	✓
NGX		✓	✓	✓	✓	✓
OPEX	✓	✓	✓	✓	✓	✓
SL			✓	✓	✓	✓
TFSE			✓	✓	✓	✓
TFS			✓	✓	✓	✓
TS		✓	✓	✓	✓	✓
ChemConnect						✓
ICAP ETC						✓
ICAP						✓
ICAP HYDE						✓
TCX					✓	✓
NTP						✓
TOTAL	3	7	11	11	12	17

Table 4: Exempt Commercial Markets

[5] Refer to the Table of Acronyms in Appendix 6 for full names of organizations.

Permanent Subcommittee on Investigations

EXHIBIT #18

/α/Amaranth

AMARANTH LLC

Performance and Net Asset Value Report – September 2006 YTD (1)

Month	Beginning NAV	First Day Contributions/ Withdrawals	Adjusted Beginning NAV	Net Performance	Month-end Withdrawals	Ending NAV	Monthly Rate of Return	YTD Rate of Return
January	$6,744,353	$48,000	$6,792,353	$436,165	($165,656)	$7,064,862	6.45%	6.45%
February	$7,064,862	$5,781	$7,070,643	$303,633	($90,865)	$7,283,611	4.30%	11.03%
March	$7,283,611	($37,559)	$7,246,052	$211,059	($86,947)	$7,370,164	2.91%	14.26%
April	$7,370,164	($10,053)	$7,360,111	$1,061,143	($134,174)	$8,287,080	14.42%	30.73%
May	$8,287,080	$64,524	$8,351,604	($974,202)	$0	$7,377,402	-11.66%	15.48%
June	$7,377,402	$379,400	$7,756,802	$548,434	($15,054)	$8,290,182	7.07%	23.65%
July	$8,290,182	$48,997	$8,339,179	($44,258)	($444,873)	$7,850,048	-0.53%	22.99%
August	$7,850,048	$33,373	$7,883,421	$549,936	($38,834)	$8,394,523	6.98%	31.57%
September	$8,394,523	$21,334	$8,415,857	($6,046,838)	$0	$2,369,019	-71.85%	-62.96%

(1) Management fees and incentive fees (net of certain accrued Designated Trader bonuses) are accrued directly at the feeder fund level; all Rate of Return information above is reported without deduction of these amounts. All information above is unaudited and all dollar figures are in thousands of USD. Past performance is not necessarily indicative of future results.

(2) Month-end Withdrawals are the amount of capital redeemed by Amaranth LLC's feeder funds effective on the last day of each month. For any feeder fund, in any month for which the aggregate dollar amount of capital withdrawals is less than the aggregate amount of contributions into such fund (which are effective on the first day of the following month), such feeder fund's month-end withdrawals from Amaranth LLC will be reflected as zero since the feeder fund will not need to redeem capital from Amaranth LLC to pay its withdrawing investors.

CONFIDENTIAL

This information is being provided solely for the use of your firm's Credit Department for the purpose of evaluating the creditworthiness of one or more funds managed by Amaranth Advisors L.L.C. or its affiliates ("Amaranth"). This information is CONFIDENTIAL and should not be shared outside of your Credit Department without the express written consent of Amaranth.

Permanent Subcommittee on Investigations

EXHIBIT #19

JPM-PSI 00006995

CONFIDENTIAL - CONTAINS PROPRIETARY BUSINESS INFORMATION

New York
Mercantile Exchange

March 13, 2006

Mike Carrieri
Chief Compliance Officer
Amaranth LLC
One American Lane
Greenwich, CT 06831

RE: Violation of Exchange Rule 9.28

Dear Mr. Carrieri:

This letter addresses the matter of your firm's open commitment in the New York Mercantile Exchange, Inc. ("Exchange") March 2006 Henry Hub Natural Gas ("NG") Futures contract. The records of the Exchange show that Amaranth, LLC ("Amaranth") exceeded its current delivery month ("spot month") hedge exempt position limit of 2,500 contracts. At the close of business on February 23, 2006, Amaranth maintained an open commitment of 3,646 short contracts, 1,146 contracts over its spot month hedge exempt position limit.

Owing to your firm's violation of the spot month NG position limit, and in accordance with the provisions of Exchange Rule 9.36, this letter shall constitute a warning to your firm. Any further violation of the Exchange's position limit rules will be handled pursuant to Rule 9.36.

Please acknowledge receipt of this letter by e-mailing Corey Traub, Analyst, Market Surveillance at [redacted]@nymex.com. If you have comments concerning this matter, please contact the undersigned at (212) [redacted] or Mr. Traub at (212) [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Sincerely,

Nancy M. Minett
Vice President
Compliance Department

cc: Anthony V. Densieski (NYMEX)
Nicholas G. Galati (NYMEX)
Bonnie H. Yurga (NYMEX)
MS-06-79

New York Mercantile Exchange, Inc.
World Financial Center
One North End Avenue
New York, NY 10282-1101
(212) 299-2000

The New York Mercantile Exchange, Inc., is composed of two divisions. The NYMEX Division offers trading in crude oil, heating oil, unleaded gasoline, natural gas, electricity, coal, propane, platinum, and palladium. The COMEX Division offers trading in gold, silver, copper, and aluminum.

Permanent Subcommittee on Investigations
EXHIBIT #20

NX - USSEN 081909

CONFIDENTIAL – CONTAINS PROPRIETARY TRADING INFORMATION

From: [redacted]@jpmchase.com
Sent: Friday, May 19, 2006 11:14 AM
To: [redacted]@jpmorgan.com
Cc: Traub, Corey
Subject: Fw: Amaranth LLC June06 Natural Gas

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Hi [redacted]

Would you please remind Amaranth that they need to be at/below their NYMEX Nat Gas exempt level COB May 23. If you have questions/concerns, please call me. Note: beginning Monday, my new phone # 201595 8174.

Corey.....thanks for the heads-up.

Have a nice weekend,

[redacted]
JPMorgan
[redacted]

----- Forwarded by [redacted]/JPMCHASE on 05/19/2006 11:10 AM -----

[redacted]@NYMEX.com>
05/19/2006 11:07 AM

To: [redacted]@jpmchase.com>
cc:
Subject: Amaranth LLC June06 Natural Gas

Hi [redacted]

I just wanted to reach out to you on the Amaranth LLC June06 Natural Gas position. Usual limit reminder stuff- spot limit goes in to effect at the close of business on 5/23/06.

Give me a call if you have any questions or need further detail on the position we see here.

Thanks,

[redacted]
Market Surveillance Analyst
Compliance Department
New York Mercantile Exchange, Inc.
[redacted]

Permanent Subcommittee on Investigations
EXHIBIT #21

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

ADDITIONAL SELECTED EXCERPTS
FROM
INSTANT MESSAGES AND MAILS
RELATED TO
AMARANTH ADVISORS LLC

The following represents a selection of instant message exchanges between Brian Hunter, head energy trader at Amaranth, and another trader at a different energy trading firm. This trader and Mr. Hunter discussed their observations and views on the natural gas market throughout 2006.

Permanent Subcommittee on Investigations
EXHIBIT #22

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Wednesday, January 25, 2006, 1:53:58 PM

▬ = Redacted by the Permanent Subcommittee on Investigations

[redacted]: bids coming back in 8/10

Brian Hunter: yeah
Brian Hunter: TXU out in Cal10
Brian Hunter: sweet
Brian Hunter: no one wants to tough him

[redacted]: people finally realizing jv6 should not be premium to jv7

Brian Hunter: its hard on that
Brian Hunter: when resid for the same spread is like 70 cents lower
Brian Hunter: in jv6
Brian Hunter: jv xh out
Brian Hunter: H.J out
Brian Hunter: all good

[redacted]: summer winter 200 in jan WOW

Brian Hunter: 1650 end Mar will do that
Brian Hunter: at 9.00 summer gas
Brian Hunter: everyone has huge put bets in Oct
Brian Hunter: I am thinking they might not get what they are looking for
Brian Hunter: might go down uch earlier

[redacted]: i think so too, we are going to overshoot in the next few weeks
[redacted]: guys around here getting way too comfortable being short

Brian Hunter: one of those things
Brian Hunter: H in cash can get real messy
Brian Hunter: but wwe go under resid
Brian Hunter: ethane
Brian Hunter: and :NG should suck
Brian Hunter: just to stop getting to 3.4
Brian Hunter: but everyone forgets industrial demand increase
Brian Hunter: could be strong into winter

[redacted]: also saw some cal 10 sellers today unwinding spreads against crude

From: windowsadmin@amaranthllc.com
Sent: Wednesday, January 25, 2006 1:52 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant="[redacted]"

IM Dialog:

Wednesday, January 25, 2006 1:51:33 PM EST Brian Hunter started conversation.
Wednesday, January 25, 2006 1:51:33 PM EST [redacted] has entered the conversation.
Wednesday, January 25, 2006 1:51:33 PM EST Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, January 25, 2006 1:51:33 PM EST [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, January 25, 2006 1:51:33 PM EST [redacted] hello Wednesday, January 25, 2006 1:51:41 PM EST Brian Hunter: yo Wednesday, January 25, 2006 1:51:56 PM EST [redacted] nice isnt it Wednesday, January 25, 2006 1:52:01 PM EST Brian Hunter: yeah Wednesday, January 25, 2006 1:52:05 PM EST Brian Hunter: all good last few days Wednesday, January 25, 2006 1:52:10 PM EST [redacted] or should i say ice Wednesday, January 25, 2006 1:53:12 PM EST Brian Hunter: don't get it Wednesday, January 25, 2006 1:53:23 PM EST Brian Hunter: too subtle Wednesday, January 25, 2006 1:53:48 PM EST Brian Hunter: simple Canadian boy doesn't get all that new fangled Texas humour Wednesday, January 25, 2006 1:53:58 PM EST [redacted] bids coming back in 8/10 Wednesday, January 25, 2006 1:54:31 PM EST Brian Hunter: yeah Wednesday, January 25, 2006 1:54:35 PM EST Brian Hunter: TXU out in Cal10 Wednesday, January 25, 2006 1:54:41 PM EST Brian Hunter: sweet Wednesday, January 25, 2006 1:54:47 PM EST Brian Hunter: no one wants to tough him Wednesday, January 25, 2006 1:54:58 PM EST [redacted] people finally realizing jv6 should not be premium to jv7 Wednesday, January 25, 2006 1:55:18 PM EST Brian Hunter: its hard on that Wednesday, January 25, 2006 1:55:28 PM EST Brian Hunter: when resid for the same spread is like 70 cents lower Wednesday, January 25, 2006 1:55:31 PM EST Brian Hunter: in jv6 Wednesday, January 25, 2006 1:55:38 PM EST Brian Hunter: jv xh out Wednesday, January 25, 2006 1:55:41 PM EST Brian Hunter: H.J out Wednesday, January 25, 2006 1:55:42 PM EST Brian Hunter: all good Wednesday, January 25, 2006 1:56:01 PM EST [redacted] summer winter 200 in Jan WOW Wednesday, January 25, 2006 1:56:16 PM EST Brian Hunter: 1650 end Mar will do that Wednesday, January 25, 2006 1:56:20 PM EST Brian Hunter: at 9.00 summer gas Wednesday, January 25, 2006 1:56:30 PM EST Brian Hunter: everyone has huge put bets in Oct Wednesday, January 25, 2006 1:56:38 PM EST Brian Hunter: I am thinking they might not get what they are looking for Wednesday, January 25, 2006 1:56:46 PM EST Brian Hunter: might go down uch earlier Wednesday, January 25, 2006 1:57:19 PM EST [redacted]: i think so too, we are going to overshoot in the next few weeks Wednesday, January 25, 2006 1:57:37 PM EST [redacted]: guys around here getting way too comfortable being short Wednesday, January 25, 2006 1:57:37 PM EST Brian Hunter: one of those things Wednesday, January 25, 2006 1:57:45 PM EST Brian Hunter: H in cash can get real messy Wednesday, January 25, 2006 1:57:49 PM EST Brian Hunter: but wwe go under resid Wednesday, January 25, 2006 1:57:53 PM EST Brian Hunter: ethane Wednesday, January 25, 2006 1:59:01 PM EST Brian Hunter: and :NG should suck Wednesday, January 25, 2006 1:58:08 PM EST Brian Hunter: just to stop getting to 3.4 Wednesday, January 25, 2006 1:58:17 PM EST Brian Hunter: but everyone forgets industrial demand increase Wednesday, January 25, 2006 1:58:24 PM EST Brian Hunter: could be strong into winter Wednesday, January 25, 2006 2:02:41 PM EST [redacted] also saw some cal 10 sellers today unwinding spreads against crude

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Thursday, April 13, 2006, 3:13:30 PM

[redacted]: I was going to mention that there seems to be a lot of sell side in 9-15 right now really moving spreads back there

Brian Hunter: yeah
Brian Hunter: tons of deals lined up
Brian Hunter: I have had three banks call looking for a direct bid out there

[redacted]: same size seller as the 8,9,10

Brian Hunter: I thinking there or a few differnet deals
Brian Hunter: 40-60 lots not including TXU
Brian Hunter: 40k-60k

[redacted]: banks are going to choke on it

Brian Hunter: no one to take risk out there
Brian Hunter: and lots of spec shorts still in Cal7
Brian Hunter: CL is a monster
Brian Hunter: I like these rallies tohugh – drive up q107
Brian Hunter: H/J's in the back are monstrous

[redacted] yeah they have really performed well
[redacted]: summer winters as well

Brian Hunter: Bo's attempt to sel in H8/j8 hasn't worked

[redacted] not a bit
[redacted] that has been tryed twice now, berke earlier this year now him
[redacted]: i dont think you see that again

Brian Hunter: Toot is long
Brian Hunter: so that's good
Brian Hunter: ensured of big settles

[redacted] some of our guys have turned dark on vf

Brian Hunter: really
Brian Hunter: why is that

[redacted] they puked it out in the 60s at quarter end
[redacted] bought it back at 300

Brian Hunter: yeah

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

▬ = Redacted by the Permanent Subcommittee on Investigations

[redacted]: and puked it out again today

Brian Hunter: that squeeze really hurt some people
Brian Hunter: Its one number

[redacted] they should just stop looking at it so much

Brian Hunter: 4 week averages and 3 week averages are still more bearish YoY vs weather
Brian Hunter: LNG starting to pick up
Brian Hunter: and Canada goign to be an exporting mahie in two months

[redacted] what do you think about crude does it keep going

Brian Hunter: Phirbo gusy love it
Brian Hunter: I think it willstay strong
Brian Hunter: q107 will keep getting pulled higher
Brian Hunter: winter demand will be very big at this price level to CL
Brian Hunter: fronts
Brian Hunter: different story

[redacted] we are completely dislocated in the summer switching done need to price lower to stimulate demand

Brian Hunter: yeah
Brian Hunter: Canada building very big

From: windowsadmin@amaranthllc.com
Sent: Thursday, April 13, 2006 3:14 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant="[redacted]"

IM Dialog:

Thursday, April 13, 2006 3:13:30 PM EDT [redacted] started conversation.
Thursday, April 13, 2006 3:13:30 PM EDT Brian Hunter has entered the conversation.
Thursday, April 13, 2006 3:13:30 PM EDT [redacted] i was going to mention that there seems to be a lot of sell side in 9-15 right now really moving spreads back there Thursday, April 13, 2006 3:13:54 PM EDT Brian Hunter: yeah Thursday, April 13, 2006 3:13:59 PM EDT Brian Hunter: tons of deals lined up Thursday, April 13, 2006 3:14:14 PM EDT Brian Hunter: I have had three banks call looking for a direct bid out there Thursday, April 13, 2006 3:14:14 PM EDT [redacted] same size seller as the 8,9,10 Thursday, April 13, 2006 3:14:32 PM EDT Brian Hunter: I thinking there or a few differnet deals Thursday, April 13, 2006 3:14:48 PM EDT Brian Hunter: 40-60 lots not including TXU Thursday, April 13, 2006 3:14:54 PM EDT Brian Hunter: 40k-60k Thursday, April 13, 2006 3:15:14 PM EDT [redacted]: banks are going to choke on it Thursday, April 13, 2006 3:15:29 PM EDT Brian Hunter: no one to take risk out there Thursday, April 13, 2006 3:15:37 PM EDT Brian Hunter: and lots of spec shorts still in Cal7 Thursday, April 13, 2006 3:15:47 PM EDT Brian Hunter: CL is a monster Thursday, April 13, 2006 3:15:59 PM EDT Brian Hunter: I like these rallies tohugh - drive up q107 Thursday, April 13, 2006 3:16:09 PM EDT Brian Hunter: H/J's in the back are monstrous Thursday, April 13, 2006 3:16:30 PM EDT [redacted] yeah they have really performed well Thursday, April 13, 2006 3:16:42 PM EDT [redacted] summer winters as well Thursday, April 13, 2006 3:16:49 PM EDT Brian Hunter: Bo's attempt to sel in H8/j8 hasn't worked Thursday, April 13, 2006 3:16:54 PM EDT [redacted] not a bit Thursday, April 13, 2006 3:17:31 PM EDT [redacted] that has been tryed twice now, berke earlier this year now him Thursday, April 13, 2006 3:17:53 PM EDT [redacted] i dont think you see that again Thursday, April 13, 2006 3:17:56 PM EDT Brian Hunter: Toot is long Thursday, April 13, 2006 3:17:58 PM EDT Brian Hunter: so that's good Thursday, April 13, 2006 3:18:02 PM EDT Brian Hunter: ensured of big settles Thursday, April 13, 2006 3:19:07 PM EDT [redacted]: some of our guys have turned dark on vf Thursday, April 13, 2006 3:19:26 PM EDT Brian Hunter: really Thursday, April 13, 2006 3:19:28 PM EDT Brian Hunter: why is that Thursday, April 13, 2006 3:19:30 PM EDT [redacted] they puked it out in the 60s at quarter end Thursday, April 13, 2006 3:19:37 PM EDT [redacted] bought it back at 300 Thursday, April 13, 2006 3:19:38 PM EDT Brian Hunter: yeah Thursday, April 13, 2006 3:19:46 PM EDT [redacted]: and puked it again today Thursday, April 13, 2006 3:19:49 PM EDT Brian Hunter: that squeeze really hurt some people Thursday, April 13, 2006 3:20:01 PM EDT Brian Hunter: Its one number Thursday, April 13, 2006 3:20:01 PM EDT [redacted] they should just stop looking at it so much Thursday, April 13, 2006 3:20:17 PM EDT Brian Hunter: 4 week averages and 3 week averages are still more bearish YoY vs weather Thursday, April 13, 2006 3:20:22 PM EDT Brian Hunter: LNG starting to pick up Thursday, April 13, 2006 3:20:36 PM EDT Brian Hunter: and Canada goign to be an exporting mahie in two months Thursday, April 13, 2006 3:22:54 PM EDT [redacted]: want do you think about crude does it keep going Thursday, April 13, 2006 3:24:24 PM EDT Brian Hunter: Phirbo gusy love it Thursday, April 13, 2006 3:24:29 PM EDT Brian Hunter: I think it willstay strong Thursday, April 13, 2006 3:24:38 PM EDT Brian Hunter: q107 will keep getting pulled higher Thursday, April 13, 2006 3:24:52 PM EDT Brian Hunter: winter demand will be very big at this price level to CL Thursday, April 13, 2006 3:25:36 PM EDT Brian Hunter: fronts Thursday, April 13, 2006 3:25:39 PM EDT Brian Hunter: different story Thursday, April 13, 2006 3:26:52 PM EDT [redacted] we are completely dislocated in the summer switching done need to price lower to

stimulate demand Thursday, April 13, 2006 3:27:22 PM EDT Brian Hunter: yeah Thursday, April 13, 2006 3:27:29 PM EDT Brian Hunter: Canada building very big

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

= Redacted by the Permanent Subcommittee on Investigations

Thursday, April 27, 2006, 2:35:21 PM

Brian Hunter: Freaking Kerr Mcgee
Brian Hunter: such a grat day out the door
Brian Hunter: I love q107 NG
Brian Hunter: to bad people hate v/f

[redacted] i doubt you had that bad of day

Brian Hunter: still good day
Brian Hunter: but was glorious until front fropped 20 cents and v/f didn't move
Brian Hunter: sigh
Brian Hunter: producer selling

[redacted]: true
[redacted]: we had custy interest as well in 8 that didnt get done, tomorrow maybe
[redacted]: sell side

Brian Hunter: NG is the most skittish market about buying when produer come in
Brian Hunter: cal7 feels so imbalanced
Brian Hunter: producers have unloaded

[redacted]: the summer winters are amazing
[redacted]: printing money

Brian Hunter: that's all good

[redacted]: so good

Brian Hunter: 7/10 coming in and I am making $$
Brian Hunter: beauty

[redacted]: i know its stunning i love it
[redacted]: my best month this year

Brian Hunter: yeah me too
Brian Hunter: APril was outrageous
Brian Hunter: i actaully had to reduce positions
Brian Hunter: since fud getting nervous

From: windowsadmin@amaranthllc.com
Sent: Thursday, April 27, 2006 2:35 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; [redacted]

IM Network: AOL IM

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Users:

participant="hunteramaranth"
participant="[redacted]"

IM Dialog:

Thursday, April 27, 2006 2:35:21 PM EDT Brian Hunter started conversation.

Thursday, April 27, 2006 2:35:21 PM EDT [redacted] has entered the conversation.

Thursday, April 27, 2006 2:35:21 PM EDT Brian Hunter: Freaking Kerr Mcgee Thursday, April 27, 2006 2:35:21 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.

Thursday, April 27, 2006 2:35:21 PM EDT [redacted]: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.

Thursday, April 27, 2006 2:35:23 PM EDT [redacted]: This conversation is being recorded.

Thursday, April 27, 2006 2:35:28 PM EDT Brian Hunter: such a grat day out the door

Thursday, April 27, 2006 2:35:41 PM EDT Brian Hunter: I love q107 NG Thursday, April 27, 2006 2:35:47 PM EDT Brian Hunter: to bad people hate v/f Thursday, April 27, 2006 2:36:17 PM EDT [redacted]: i doubt you had that bad of day Thursday, April 27, 2006 2:36:51 PM EDT Brian Hunter: still good day Thursday, April 27, 2006 2:37:06 PM EDT Brian Hunter: but was glorious util front fropped 20 cents and v/f didn't move Thursday, April 27, 2006 2:37:08 PM EDT Brian Hunter: sigh Thursday, April 27, 2006 2:37:12 PM EDT Brian Hunter: producer selling Thursday, April 27, 2006 2:37:14 PM EDT [redacted]: true Thursday, April 27, 2006 2:37:44 PM EDT [redacted]: we had custy interest as well in 8 that didnt get done, tomorrow maybe Thursday, April 27, 2006 2:37:53 PM EDT [redacted]: sell side Thursday, April 27, 2006 2:37:59 PM EDT Brian Hunter: NG is the most skittish market about buying when produer come in Thursday, April 27, 2006 2:38:05 PM EDT Brian Hunter: cal7 feels so imbalanced Thursday, April 27, 2006 2:38:21 PM EDT Brian Hunter: producers have unloaded Thursday, April 27, 2006 2:38:28 PM EDT [redacted]: the summer winters are amazing Thursday, April 27, 2006 2:38:35 PM EDT [redacted] printing money Thursday, April 27, 2006 2:38:37 PM EDT Brian Hunter: that's all good Thursday, April 27, 2006 2:38:40 PM EDT schlencl: so good Thursday, April 27, 2006 2:38:49 PM EDT Brian Hunter: 7/10 coming in and I am making $$ Thursday, April 27, 2006 2:39:00 PM EDT Brian Hunter: beauty Thursday, April 27, 2006 2:39:00 PM EDT [redacted]: i know its stunning i love it Thursday, April 27, 2006 2:39:12 PM EDT [redacted]: my best month this year Thursday, April 27, 2006 2:39:32 PM EDT Brian Hunter: yeah me too Thursday, April 27, 2006 2:39:39 PM EDT Brian Hunter: APril was outrageous Thursday, April 27, 2006 2:39:45 PM EDT Brian Hunter: I actaully had to reduce positions Thursday, April 27, 2006 2:39:51 PM EDT Brian Hunter: since fud getting nervous

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Thursday, April 27, 2006, 2:40:26 PM

[redacted]: this year is shaping up in a very interesting way
[redacted]: a lot of opportunity
[redacted] keep you head straight

Brian Hunter: jv7 so under resid
Brian Hunter: that will never last

[redacted] agree
[redacted] what do you think about these k/v spreads out the curve so well bid
[redacted] 41 cents in 7

Brian Hunter: dunno
Brian Hunter: I usually have some on anyways
Brian Hunter: since I like those wider
Brian Hunter: HOWEVER
Brian Hunter: this winter is so discounted from demand standpoint

[redacted]: i've got a bit on but i'll dump it quick once we start to tighten
[redacted] want no part of it

From: windowsadmin@amaranthllc.com
Sent: Thursday, April 27, 2006 2:40 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant="[redacted]

IM Dialog:

Thursday, April 27, 2006 2:40:26 PM EDT [redacted] started conversation.
Thursday, April 27, 2006 2:40:26 PM EDT Brian Hunter has entered the conversation.
Thursday, April 27, 2006 2:40:26 PM EDT [redacted]: this year is shaping up in a very interesting way Thursday, April 27, 2006 2:40:32 PM EDT [redacted]: a lot of opportunity Thursday, April 27, 2006 2:40:43 PM EDT [redacted] keep your head straight Thursday, April 27, 2006 2:40:51 PM EDT Brian Hunter: jv7 so under resid Thursday, April 27, 2006 2:40:56 PM EDT Brian Hunter: that will never last Thursday, April 27, 2006 2:41:15 PM EDT [redacted]: agree Thursday, April 27, 2006 2:42:01 PM EDT [redacted]: what do you think about these k/v spreads out the curve so well bid Thursday, April 27, 2006 2:42:28 PM EDT [redacted]: 41 cents in 7 Thursday, April 27, 2006 2:42:52 PM EDT Brian Hunter: dunno Thursday, April 27, 2006 2:43:03 PM EDT Brian Hunter: I usually have some on anyways Thursday, April 27, 2006 2:43:08 PM EDT Brian Hunter: since I like those wider Thursday, April 27, 2006 2:43:12 PM EDT Brian Hunter: HOWEVER Thursday, April 27, 2006 2:43:35 PM EDT Brian Hunter: this winter is so discounted from demand standpoint Thursday, April 27, 2006 2:46:42 PM EDT [redacted]: i've got a bit on but i'll dump it quick once we start to tighten Thursday, April 27, 2006 2:46:53 PM EDT [redacted] want no part of it

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

= Redacted by the Permanent Subcommittee on Investigations

Tuesday, May 9, 2006, 1:30:14 PM

[redacted]: you around

Brian Hunter: yeah

[redacted]: what u think about this spread action
[redacted] u/v/x fly has really come in

Brian Hunter: yeah
Brian Hunter: we are buyer at .5
Brian Hunter: a few people got screwed on that

[redacted]: v-f is behaving a bit scared
[redacted]: we have been buying some keeps going in our face
[redacted]: i dont know though
[redacted] 7/8 is bid

From: windowsadmin@amaranthllc.com
Sent: Tuesday, May 09, 2006 1:30 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]"

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]

IM Dialog:

Tuesday, May 09, 2006 1:30:14 PM EDT Brian Hunter started conversation.
Tuesday, May 09, 2006 1:30:14 PM EDT [redacted] has entered the conversation.
Tuesday, May 09, 2006 1:30:14 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, May 09, 2006 1:30:14 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, May 09, 2006 1:30:14 PM EDT [redacted] you around Tuesday, May 09, 2006 1:30:16 PM EDT [redacted] This conversation is being recorded.
Tuesday, May 09, 2006 1:34:17 PM EDT Brian Hunter: yeah Tuesday, May 09, 2006 1:34:24 PM EDT [redacted] what u think about this spread action Tuesday, May 09, 2006 1:34:38 PM EDT [redacted] u/v/x fly has really come in Tuesday, May 09, 2006 1:34:52 PM EDT Brian Hunter: yeah Tuesday, May 09, 2006 1:34:58 PM EDT Brian Hunter: we are buyer at .5 Tuesday, May 09, 2006 1:35:05 PM EDT Brian Hunter: a few people got screwed on that Tuesday, May 09, 2006 1:35:50 PM EDT [redacted] v-f is behaving a bit scared Tuesday, May 09, 2006 1:36:39 PM EDT [redacted] we have been buying some keeps going in our face Tuesday, May 09, 2006 1:37:49 PM EDT [redacted] i dont know though Tuesday, May 09, 2006 1:38:20 PM EDT [redacted] 7/8 is bid

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Wednesday, May 10, 2006, 3:11:31 PM

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Brian Hunter: natural
Brian Hunter: good lord

[redacted] whats up

Brian Hunter: just natural
Brian Hunter: god some of these guys on H.J is ugly
Brian Hunter: poor Bo

[redacted] i hadnt seen the settles yet
[redacted] i gotta admit i am stunned by the hjs
[redacted] luv the vz's though

From: windowsadmin@amaranthllc.com
Sent: Wednesday, May 10, 2006 3:12 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]

IM Dialog:

Wednesday, May 10, 2006 3:11:31 PM EDT Brian Hunter started conversation.
Wednesday, May 10, 2006 3:11:31 PM EDT [redacted] has entered the conversation.
Wednesday, May 10, 2006 3:11:31 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, May 10, 2006 3:11:31 PM EDT [redacted]: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, May 10, 2006 3:11:31 PM EDT Brian Hunter: natural Wednesday, May 10, 2006 3:11:34 PM EDT [redacted] This conversation is being recorded.
Wednesday, May 10, 2006 3:11:33 PM EDT Brian Hunter: good lord Wednesday, May 10, 2006 3:17:00 PM EDT [redacted]whats up Wednesday, May 10, 2006 3:20:41 PM EDT Brian Hunter: just natural Wednesday, May 10, 2006 3:20:51 PM EDT Brian Hunter: god some of these guys on H.J is ugly Wednesday, [redacted], 2006 3:20:53 PM EDT Brian Hunter: poor Bo Wednesday, May 10, 2006 3:21:03 PM EDT [redacted]: i hadnt seen the settles yet Wednesday, May 10, 2006 3:21:28 PM EDT [redacted] i gotta admit i am stunned by the hjs Wednesday, May 10, 2006 3:22:13 PM EDT [redacted] luv the vz's though

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Thursday, May 11, 2006, 3:39:49 PM

[redacted] = Redacted by the Permanent Subcommittee on Investigations

[redacted] get ready for the bear icon

4:09:54 PM

Brian Hunter: yeah
Brian Hunter: its nuts though

4:12:27 PM

[redacted] lots of cal spread haters
[redacted]: you feel that

Brian Hunter: yeah
Brian Hunter: all form sumemr winter
Brian Hunter: k/v are spectatualr

[redacted] bo's trying the other way now

Brian Hunter: all those k/f's from way back when are scary large

[redacted] selling hj didnt go so well

Brian Hunter: no

[redacted]: yeah
[redacted] u think the vf gets a bit sticky here for a while?

Brian Hunter: actually not really
Brian Hunter: CL very strong
Brian Hunter: ALOT of people stoping out

[redacted] seems that way to me, cant figure out where all the gas goes as we move through summer
[redacted] 3b/d surplus
[redacted] 1 std weather is about .5/d
[redacted] industrial isn't going to pick up that much

Brian Hunter: no
Brian Hunter: there is nothing untl coal
Brian Hunter: we should see 2 or 3 100+ builds
Brian Hunter: late may early June

From: windowsadmin@amaranthllc.com
Sent: Thursday, May 11, 2006 3:40 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant=[redacted]"

IM Dialog:

Thursday, May 11, 2006 3:39:49 PM EDT Brian Hunter started conversation.
Thursday, May 11, 2006 3:39:49 PM EDT [redacted] has entered the conversation.
Thursday, May 11, 2006 3:39:49 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, May 11, 2006 3:39:49 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, May 11, 2006 3:39:49 PM EDT [redacted] get ready for the bear icon

From: windowsadmin@amaranthllc.com
Sent: Thursday, May 11, 2006 4:10 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH";[redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, May 11, 2006 4:09:54 PM EDT Brian Hunter started conversation.
Thursday, May 11, 2006 4:09:54 PM EDT [redacted] has entered the conversation.
Thursday, May 11, 2006 4:09:54 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, May 11, 2006 4:09:54 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, May 11, 2006 4:09:54 PM EDT Brian Hunter: yeah Thursday, May 11, 2006 4:09:58 PM EDT Brian Hunter: its nuts though

From: windowsadmin@amaranthllc.com
Sent: Thursday, May 11, 2006 4:12 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]"

IM Network: AOL IM

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]"

IM Dialog:

Thursday, May 11, 2006 4:12:27 PM EDT [redacted] started conversation.
Thursday, May 11, 2006 4:12:27 PM EDT Brian Hunter has entered the conversation.
Thursday, May 11, 2006 4:12:27 PM EDT [redacted] lots of cal spread haters Thursday, May 11, 2006 4:12:31 PM EDT [redacted] you feel that Thursday, May 11, 2006 4:12:35 PM EDT Brian Hunter: yeah Thursday, May 11, 2006 4:12:39 PM EDT Brian Hunter: all form sumemr winter Thursday, May 11, 2006 4:12:46 PM EDT Brian Hunter: k/v are spectatualr Thursday, May 11, 2006 4:12:51 PM EDT [redacted] bo's trying the other way now Thursday, May 11, 2006 4:13:01 PM EDT Brian Hunter: all those k/f's from way back when are scary large Thursday, May 11, 2006 4:13:03 PM EDT [redacted]: selling hj didnt go so well Thursday, May 11, 2006 4:13:07 PM EDT Brian Hunter: no Thursday, May 11, 2006 4:13:08 PM EDT [redacted] yeah Thursday, May 11, 2006 4:14:14 PM EDT [redacted]: u think the vf gets a bit sticky here for a while?
Thursday, May 11, 2006 4:15:09 PM EDT Brian Hunter: actually not really Thursday, May 11, 2006 4:15:12 PM EDT Brian Hunter: CL very strong Thursday, May 11, 2005 4:15:17 PM EDT Brian Hunter: ALOT of people stoping out Thursday, May 11, 2006 4:16:29 PM EDT [redacted]: seems that way to me, cant figure out where all the gas goes as we move through summer Thursday, May 11, 2006 4:17:10 PM EDT [redacted] 3b/d surplus Thursday, May 11, 2006 4:17:27 PM EDT [redacted]: 1 std weather is about .5/d Thursday, May 11, 2006 4:17:49 PM EDT [redacted] industrial isn't going to pick up that much Thursday, May 11, 2006 4:17:53 PM EDT Brian Hunter: no Thursday, May 11, 2006 4:17:57 PM EDT Brian Hunter: there is nothing untl coal Thursday, May 11, 2006 4:18:05 PM EDT Brian Hunter: we should see 2 or 3 100+ builds Thursday, May 11, 2006 4:18:13 PM EDT Brian Hunter: late may early June Thursday, May 11, 2006 4:20:06 PM EDT [redacted] congrats on getting [redacted] Thursday, May 11, 2006 4:20:32 PM EDT [redacted] spoke to him a couple of times on the phone, seems like a really good guy Thursday, May 11, 2006 4:20:51 PM EDT [redacted]: very well spoken Thursday, May 11, 2006 4:21:42 PM EDT Brian Hunter: yeah Thursday, May 11, 2006 4:21:57 PM EDT Brian Hunter: it was a last minute pull the rug on him Thursday, May 11, 2006 4:22:07 PM EDT Brian Hunter: but I reallly think he is good Thursday, May 11, 2006 4:22:14 PM EDT Brian Hunter: I wanted to set you up with him Thursday, May 11, 2006 4:22:18 PM EDT Brian Hunter: he was going somewhere else Thursday, May 11, 2006 4:23:06 PM EDT [redacted]: yeah, I kinda got excited after speaking to him but [redacted] would have been a tough move for me right now Thursday, May 11, 2006 4:23:16 PM EDT Brian Hunter: ahh Thursday, May 11, 2006 4:23:25 PM EDT Brian Hunter: I tohught [redacted] was a personal thing Thursday, May 11, 2006 4:23:41 PM EDT [redacted]: i'd like to do it at some point Thursday, May 11, 2006 4:24:12 PM EDT Brian Hunter: we'll have an office there in a year Thursday, May 11, 2006 4:24:37 PM EDT [redacted] we are just crushing it this year so going anywhere got very tough after March Thursday, May 11, 2006 4:24:45 PM EDT Brian Hunter: yeah Thursday, May 11, 2006 4:24:46 PM EDT Brian Hunter: I bet Thursday, May 11, 2006 4:26:44 PM EDT [redacted]: gotta go look at a RR sport for my wife now, later Thursday, May 11, 2006 4:26:46 PM EDT [redacted] women Thursday, May 11, 2006 4:27:04 PM EDT Brian Hunter: haha Thursday, May 11, 2006 4:27:04 PM EDT Brian Hunter: nice

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Friday, May 12, 2006, 2:53:35 PM

[redacted] = Redacted by the Permanent Subcommittee on Investigations

[redacted]: that was fun

Brian Hunter: yeah
Brian Hunter: alot of v/f hater still thogh
Brian Hunter: H.J in front gve
Brian Hunter: but man backs are soft

[redacted]: we sold SO much this morning
[redacted]: and last night

Brian Hunter: nice – Monday might pop a little
Brian Hunter: everyone knew cash gonna stink this AM

[redacted]: forecast coming a bit warmer

Brian Hunter: yeah

[redacted]: happy either way, covered a lot of the outrights, VF haters yes but I still like
[redacted]: you are right about the cals
[redacted]: producers relentless

Brian Hunter: no kidding
Brian Hunter: its unreal

[redacted]: we are even seeing it and we normally suck with that part of the market
[redacted]: origination i mean

Brian Hunter: yeah

[redacted]: you usually tell me about it before my orig guys know

Brian Hunter: there is a ton of prod selling

[redacted]: :-D

Brian Hunter: hahahaha
Brian Hunter: it will end
Brian Hunter: there are always out in spring and winter
Brian Hunter: selling away

[redacted]: or [redacted] after he buries me with it

Brian Hunter: need to RFP's to get hot and heavt

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

[redacted]: yes

Brian Hunter: hahahaha

From: windowsadmin@amaranthllc.com
Sent: Friday, May 12, 2006 2:54 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]

IM Dialog:

Friday, May 12, 2006 2:53:35 PM EDT Brian Hunter started conversation.
Friday, May 12, 2006 2:53:35 PM EDT [redacted] has entered the conversation.
Friday, May 12, 2006 2:53:35 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Friday, May 12, 2006 2:53:35 PM EDT [redacted]: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Friday, May 12, 2006 2:53:35 PM EDT [redacted] that was fun Friday, May 12, 2006 2:55:05 PM EDT Brian Hunter: yeah Friday, May 12, 2006 2:55:11 PM EDT Brian Hunter: alot of v/f hater still thogh Friday, May 12, 2006 2:55:18 PM EDT Brian Hunter: H.J in front gve Friday, May 12, 2006 2:55:22 PM EDT Brian Hunter: but man backs are soft Friday, May 12, 2006 2:55:33 PM EDT [redacted]: we sold SO much this morning Friday, May 12, 2006 2:55:44 PM EDT [redacted] and last night Friday, May 12, 2006 2:55:50 PM EDT Brian Hunter: nice - Monday might pop a little Friday, May 12, 2006 2:55:59 PM EDT Brian Hunter: everyone knew cash gonna stink this AM Friday, May 12, 2006 2:56:17 PM EDT [redacted] forecast coming a bit warmer Friday, May 12, 2006 2:56:59 PM EDT Brian Hunter: yeah Friday, May 12, 2006 2:58:52 PM EDT [redacted]: happy either way, covered a lot of the outrights, VF haters yes but I still like Friday, May 12, 2006 2:59:09 PM EDT [redacted] you are right about the cals Friday, May 12, 2006 2:59:17 PM EDT [redacted] producers relentless Friday, May 12, 2006 2:59:23 PM EDT Brian Hunter: no kidding Friday, May 12, 2006 2:59:25 PM EDT Brian Hunter: its unreal Friday, May 12, 2006 2:59:52 PM EDT [redacted] we are even seeing it and we normally suck with that part of the market Friday, May 12, 2006 3:00:00 PM EDT [redacted]: origination i mean Friday, May 12, 2006 3:00:14 PM EDT Brian Hunter: yeah Friday, May 12, 2006 3:00:29 PM EDT [redacted] you usually tell`me about it before my orig guys know Friday, May 12, 2006 3:00:32 PM EDT Brian Hunter: there is a ton of prod selling Friday, May 12, 2006 3:00:43 PM EDT [redacted] :-D Friday, May 12, 2006 3:00:50 PM EDT Brian Hunter: hahahaha Friday, May 12, 2006 3:00:54 PM EDT Brian Hunter: it will end Friday, May 12, 2006 3:01:00 PM EDT Brian Hunter: there are always out in spring and winter Friday, May 12, 2006 3:01:05 PM EDT Brian Hunter: selling away Friday, May 12, 2006 3:01:06 PM EDT [redacted]: o[redacted] at [redacted] after he buries me with it Friday, May 12, 2006 3:01:13 PM EDT Brian Hunter: need to RFP's to get hot and heavt Friday, May 12, 2006 3:01:17 PM EDT [redacted]: yes Friday, May 12, 2006 3:01:20 PM EDT Brian Hunter: hahahaha

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Thursday, May 18, 2006, 11:12:53 AM

[redacted] = Redacted by the Permanent Subcommittee on Investigations

[redacted] why so much hate for vf

Brian Hunter: no idea
Brian Hunter: winter is awful cheap
Brian Hunter: on a relative fuel basis
Brian Hunter: v/f doesn't have that much hate
Brian Hunter: m/v
Brian Hunter: that's hate
Brian Hunter: m/n tighter than cash/futures

[redacted]: true
[redacted]: vf is hedgers of cal7
[redacted] me thinks

Brian Hunter: yeah
Brian Hunter: need some consumers
Brian Hunter: 1 month of cal7 sellig is screwinthg things
Brian Hunter: hwoever – then why is h/j so offered
Brian Hunter: if its hedgers then there would be bids yes?

[redacted] i heard there was a power action in the east going out soon, buyers of gas
[redacted]: thats true

Brian Hunter: yeah there was one Thusday

[redacted] i'm confused by the hj but i think it doesn't go much lower than 150 for now

Brian Hunter: there will be alot of FRP's soon

From: windowsadmin@amaranthllc.com
Sent: Thursday, May 18, 2006 11:13 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant="[redacted]

IM Dialog:

Thursday, May 18, 2006 11:12:53 AM EDT Brian Hunter started conversation.
Thursday, May 18, 2006 11:12:53 AM EDT [redacted] has entered the conversation.
Thursday, May 18, 2006 11:12:53 AM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, May 18, 2006 11:12:53 AM EDT [redacted]: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, May 18, 2006 11:12:53 AM EDT [redacted]: why so much hate for vf Thursday, May 18, 2006 11:13:07 AM EDT Brian Hunter: no idea Thursday, May 18, 2006 11:13:17 AM EDT Brian Hunter: winter is awful cheap Thursday, May 18, 2006 11:13:21 AM EDT Brian Hunter: on a relative fuel basis Thursday, May 18, 2006 11:13:37 AM EDT Brian Hunter: v/f doesn't have that much hate Thursday, May 18, 2006 11:13:43 AM EDT Brian Hunter: m/v Thursday, May 18, 2006 11:13:45 AM EDT Brian Hunter: that's hate Thursday, May 18, 2006 11:13:53 AM EDT Brian Hunter: m/n tighter than cash/futures Thursday, May 18, 2006 11:13:58 AM EDT [redacted]: true Thursday, May 18, 2006 11:14:12 AM EDT [redacted] vf is hedgers of cal7 Thursday, May 18, 2006 11:14:15 AM EDT [redacted]: me thinks Thursday, May 18, 2006 11:14:20 AM EDT Brian Hunter: yeah Thursday, May 18, 2006 11:14:25 AM EDT Brian Hunter: need some consumers Thursday, May 18, 2006 11:14:33 AM EDT Brian Hunter: 1 month of cal7 sellig is screwinthg things Thursday, May 18, 2006 11:14:41 AM EDT Brian Hunter: hwoever - then why is h/j so offered Thursday, May 18, 2006 11:14:54 AM EDT Brian Hunter: if its hedgers then there would be bids yes?
Thursday, May 18, 2006 11:15:02 AM EDT [redacted]: i heard there was a power action in the east going out soon, buyers of gas Thursday, May 18, 2006 11:15:27 AM EDT [redacted] thats true Thursday, May 18, 2006 11:16:16 AM EDT Brian Hunter: yeah there was one Thusday Thursday, May 18, 2006 11:16:18 AM EDT [redacted] i'm confused by the hj but i think it doesn't go much lower than 150 for now Thursday, May 18, 2006 11:16:22 AM EDT Brian Hunter: there will be alot of FRP's soon

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Thursday, May 18, 2006, 3:05:26 PM

[redacted] the vxz makes no sense to me

Brian Hunter: no neither –
Brian Hunter: two reasons – both flimsy
Brian Hunter: 1. No one wants to be short Oct
Brian Hunter: 2. Its max pain for market because of 1.

From: windowsadmin@amaranthllc.com
Sent: Thursday, May 18, 2006 3:05 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; "[redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant="[redacted]

IM Dialog:

Thursday, May 18, 2006 3:05:26 PM EDT Brian Hunter started conversation.
Thursday, May 18, 2006 3:05:26 PM EDT [redacted] has entered the conversation.
Thursday, May 18, 2006 3:05:26 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, May 18, 2006 3:05:26 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, May 18, 2006 3:05:26 PM EDT [redacted] the vxz fly makes no sense to me Thursday, May 18, 2006 3:06:00 PM EDT Brian Hunter: no neither - Thursday, May 18, 2006 3:06:05 PM EDT Brian Hunter: two reasons - both flimsy Thursday, May 18, 2006 3:06:11 PM EDT Brian Hunter: 1. No one wants to be short Oct Thursday, May 18, 2006 3:06:25 PM EDT Brian Hunter: 2. Its max pain for market because of 1.

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

= Redacted by the Permanent Subcommittee on Investigations

Wednesday, May 24, 2006, 11:22:02 AM

Brian Hunter: hearing its sort of carnage out there

[redacted] yeah, I'm feeling that as well, phys guys selling crap out of M/V

Brian Hunter: yeah – I think alot of people have been stopped out

[redacted] feels like trading to close out no view

Brian Hunter: Oct is looking awful low
Brian Hunter: for hurricanes
Brian Hunter: wintre and cal7 are the most interesting

[redacted]: winter looks cheap cheap cheap
[redacted]: 7/8 spread??

Brian Hunter: its all squished
Brian Hunter: hard to believe

[redacted] way to early to give up on cal7

Brian Hunter: its all people rotating front to backs
Brian Hunter: hearin lots of consumers coming in q3 and out today

[redacted] do you have nay thoughts on u/v

Brian Hunter: I think it will go wider eventually
Brian Hunter: but NG is hard to read
Brian Hunter: cash is crap into bid week – except the hub

[redacted] i friggin' hate treading water, didn't like it as a kid don't like it now
[redacted] :-)

12:55:16 PM

[redacted] in reference to earlier who is getting toe tagged these days

Brian Hunter: what's that

[redacted] you mentioned carnage

Brian Hunter: see that dec is under resid now
Brian Hunter: sheesh

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

[redacted] i didnt know that

Brian Hunter: only q1 over
Brian Hunter: and even that is close

[redacted] in all seriousness how do you think people have done this year
[redacted]: in general

Brian Hunter: I think this last week has made people give back alot

[redacted] i have been stunned by the summer winters in the back
[redacted] cant figure out if the buying is people stopping out
[redacted] not complaining however

Brian Hunter: no
Brian Hunter: that stuff has saved me
Brian Hunter: because front spreads obliterated me
Brian Hunter: now out of alot fo everything

[redacted] i let go of pretty much all my jv7/x7h8 and jv8/x8h9

Brian Hunter: I ahve the latter
Brian Hunter: not the former
Brian Hunter: I still like red winter fixed price
Brian Hunter: which has held well

[redacted] it really has

Brian Hunter: i gues it the only part of the market thats rational
Brian Hunter: i heard Motherrock
Brian Hunter: JPM
Brian Hunter: and DB got really nutted
Brian Hunter: we are still up this month
Brian Hunter: but were up really big earlier

[redacted] bo took the jv8/x8h9 out
[redacted] i am doing pretty well this month but kinda more luck than brains

Brian Hunter: rumours abound though
Brian Hunter: everywhere

[redacted] short hj7 vs hj8 made me a lot of money
[redacted] now im flat hj7

From: windowsadmin@amaranthllc.com
Sent: Wednesday, May 24, 2006 11:21 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]

IM Dialog:

Wednesday, May 24, 2006 11:21:10 AM EDT [redacted] started conversation.
Wednesday, May 24, 2006 11:21:10 AM EDT Brian Hunter has entered the conversation.
Wednesday, May 24, 2006 11:21:10 AM EDT [redacted] F&#$(%'d up crazy market Wednesday, May 24, 2006 11:21:10 AM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, May 24, 2006 11:21:10 AM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, May 24, 2006 11:21:39 AM EDT Brian Hunter: you are tell me Wednesday, May 24, 2006 11:21:52 AM EDT Brian Hunter: we have done ok through this but not great Wednesday, May 24, 2006 11:22:02 AM EDT Brian Hunter: hearing its sort of carnage out there
Wednesday, May 24, 2006 11:23:00 AM EDT [redacted] yeah, I'm feeling that as well, phys guys selling the crap out of M/V Wednesday, May 24, 2006 11:23:21 AM EDT Brian Hunter: yeah - I think alot of people have been stopped out Wednesday, May 24, 2006 11:23:34 AM EDT [redacted]: feels like trading to close out no view Wednesday, May 24, 2006 11:23:43 AM EDT Brian Hunter: Oct is looking awful low Wednesday, May 24, 2006 11:23:51 AM EDT Brian Hunter: for hurricanes Wednesday, May 24, 2006 11:23:59 AM EDT Brian Hunter: wintre and cal7 are the most interesting Wednesday, May 24, 2006 11:24:05 AM EDT [redacted] winter looks cheap cheap cheap Wednesday, May 24, 2006 11:24:20 AM EDT [redacted] 7/8 spread?? Wednesday, May 24, 2006 11:24:47 AM EDT Brian Hunter: its all squished Wednesday, May 24, 2006 11:24:50 AM EDT Brian Hunter: hard to believe Wednesday, May 24, 2006 11:26:13 AM EDT [redacted]: way to early to give up on cal7 Wednesday, May 24, 2006 11:27:03 AM EDT Brian Hunter: its all pople rotating front to backs Wednesday, May 24, 2006 11:27:20 AM EDT Brian Hunter: hearin lots of consumers coming in q3 and out today Wednesday, May 24, 2006 11:27:49 AM EDT [redacted]: do you have any thoughts on u/v Wednesday, May 24, 2006 11:28:26 AM EDT Brian Hunter: I think it will go wider eventually Wednesday, May 24, 2006 11:28:32 AM EDT Brian Hunter: but NG is hard to read Wednesday, May 24, 2006 11:28:39 AM EDT Brian Hunter: cash is crap into bid week - except the hub Wednesday, May 24, 2006 11:33:52 AM EDT [redacted]: i friggin' hate treading water, didn't like it as a kid don't like it now
Wednesday, May 24, 2006 11:34:01 AM EDT [redacted] :-)

From: windowsadmin@amaranthllc.com
Sent: Wednesday, May 24, 2006 12:55 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant="[redacted]

IM Dialog:

Wednesday, May 24, 2006 12:55:16 PM EDT Brian Hunter started conversation.
Wednesday, May 24, 2006 12:55:16 PM EDT [redacted] has entered the conversation.
Wednesday, May 24, 2006 12:55:16 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, May 24, 2006 12:55:16 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, May 24, 2006 12:55:16 PM EDT [redacted] in reference to earlier who is getting toe tagged these days Wednesday, May 24, 2006 12:55:33 PM EDT Brian Hunter: what's that Wednesday, May 24, 2006 12:56:09 PM EDT [redacted]: you mentioned carnage Wednesday, May 24, 2006 12:56:13 PM EDT Brian Hunter: see that dec is under resid now Wednesday, May 24, 2006 12:56:17 PM EDT Brian Hunter: sheesh Wednesday, May 24, 2006 12:56:36 PM EDT [redacted] i didnt know that Wednesday, May 24, 2006 12:56:49 PM EDT Brian Hunter: only q1 over Wednesday, May 24, 2006 12:56:52 PM EDT Brian Hunter: and even that is close Wednesday, May 24, 2006 12:57:49 PM EDT [redacted]: in all seriousness how do you think people have done this year Wednesday, May 24, 2006 12:57:55 PM EDT [redacted] in general Wednesday, May 24, 2006 12:58:11 PM EDT Brian Hunter: I think this last week has made people give back alot Wednesday, May 24, 2006 12:59:24 PM EDT [redacted] i have been stunned by the summer winters in the back Wednesday, May 24, 2006 12:59:45 PM EDT [redacted]: cant figure out if the buying is people stopping out Wednesday, May 24, 2006 1:00:02 PM EDT [redacted] not complaining however Wednesday, May 24, 2006 1:00:07 PM EDT Brian Hunter: no Wednesday, May 24, 2006 1:00:12 PM EDT Brian Hunter: that stuff has saved me Wednesday, May 24, 2006 1:00:24 PM EDT Brian Hunter: becuase front spreads obliterated me Wednesday, May 24, 2006 1:00:35 PM EDT Brian Hunter: now out of alot fo everything Wednesday, May 24, 2006 1:01:38 PM EDT [redacted]: i let go of pretty much all my jv7/x7h8 and jv8/x8h9 Wednesday, May 24, 2006 1:01:57 PM EDT Brian Hunter: I ahve the latter Wednesday, May 24, 2006 1:02:01 PM EDT Brian Hunter: not the former Wednesday, May 24, 2006 1:02:10 PM EDT Brian Hunter: I still like red winter fixed price Wednesday, May 24, 2006 1:02:15 PM EDT Brian Hunter: which has held well Wednesday, May 24, 2006 1:02:23 PM EDT [redacted]: it really has Wednesday, May 24, 2006 1:02:46 PM EDT Brian Hunter: I gues it the only part of the market thats rational Wednesday, May 24, 2006 1:05:39 PM EDT Brian Hunter: I heard Motherrock Wednesday, May 24, 2006 1:05:41 PM EDT Brian Hunter: JPM Wednesday, May 24, 2006 1:05:46 PM EDT Brian Hunter: and DB got really nutted Wednesday, May 24, 2006 1:05:50 PM EDT Brian Hunter: we are still up this month Wednesday, May 24, 2006 1:05:57 PM EDT Brian Hunter: but were up really big earlier Wednesday, May 24, 2006 1:07:19 PM EDT [redacted]: bo took the jv8/x8h9 out Wednesday, May 24, 2006 1:08:02 PM EDT [redacted] i am doing pretty well this month but kinda more luck than brains Wednesday, May 24, 2006 1:08:42 PM EDT Brian Hunter: rumours abound though Wednesday, May 24, 2006 1:08:44 PM EDT Brian Hunter: everywhere Wednesday, May 24, 2006 1:08:49 PM EDT [redacted] short hj7 vs hj8 made me a lot of money Wednesday, May 24, 2006 1:09:09 PM EDT [redacted] now im flat hj7

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Thursday, May 25, 2006, 1:10:30 PM

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Brian Hunter: you around
Brian Hunter: I could use a pepe talk
Brian Hunter: getting kiled today
Brian Hunter: been ok until today
Brian Hunter: but today is a mess
Brian Hunter: what's your phone number

[redacted]

From: windowsadmin@amaranthllc.com
Sent: Thursday, May 25, 2006 1:11 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

▬ = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, May 25, 2006 1:10:30 PM EDT Brian Hunter started conversation.
Thursday, May 25, 2006 1:10:30 PM EDT [redacted] has entered the conversation.
Thursday, May 25, 2006 1:10:30 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, May 25, 2006 1:10:30 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, May 25, 2006 1:10:30 PM EDT Brian Hunter: you around Thursday, May 25, 2006 1:10:36 PM EDT Brian Hunter: I could use a pepe talk Thursday, May 25, 2006 1:10:39 PM EDT Brian Hunter: getting kiled today Thursday, May 25, 2006 1:10:43 PM EDT Brian Hunter: been ok until today Thursday, May 25, 2006 1:10:48 PM EDT Brian Hunter: but today is a mess Thursday, May 25, 2006 1:10:58 PM EDT Brian Hunter: what's your phone number Thursday, May 25, 2006 1:11:07 PM EDT [redacted]

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Friday, June 2, 2006 3:10:20 PM

Brian Hunter: the only way this thing recovers is when market gives up the hate on q1

3:11:15 PM

Brian Hunter: I don't get the backs

3:11:22 PM

Brian Hunter: but I hear it was pain all aroudn the market
Brian Hunter: specs just got saturated

[redacted] had to see if there are real sellers of these spreads

Brian Hunter: it will recover

[redacted] dont believe it

Brian Hunter: I think that industrial demand right now is getting very strong

[redacted] i dont believe real sellers of spreads is what i mean

Brian Hunter: How many NG ethanl platns you think are being built in US over next 18 months
Brian Hunter: yeah
Brian Hunter: I agree
Brian Hunter: TXU will be back in cal11
Brian Hunter: and they all move out again

[redacted] they asked for my bid for 5/d cal 11 today
[redacted] wouldn't hit
[redacted] i managed to pick up some 8/11 at decent levels and some hj9 and 10

Brian Hunter: yeah
Brian Hunter: I took some of those today
Brian Hunter: the H.J

[redacted]: we'll see waht happens, 7/8 really moved out nice

Brian Hunter: I get the feelign lots of pople are short q107

[redacted] agree

Brian Hunter: and really short H.J
Brian Hunter: deamnd looking really good

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

[redacted] watch the way hj trades you can see it

Brian Hunter: I only have 89 for this week
Brian Hunter: people will have to give up the hate soon on v/f
Brian Hunter: H.J wider
Brian Hunter: jv7 can't really go lower
Brian Hunter: and fronts are strong already

[redacted]: what stock do you put in all this stuff about 4BCF of capacity
[redacted] if so why did cash trade so weak the last two years
[redacted]: we dont see that
[redacted]: every part of cal 7 looks cheap right now
[redacted]: cl and ho rally is bullish q1
[redacted] jv7 below resid
[redacted] demand will be very strong

Brian Hunter: yeah demand looks spectacular

From: windowsadmin@amaranthllc.com
Sent: Monday, January 02, 2006 2:10 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; "SCHLENCL"

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]

IM Dialog:

Friday, June 02, 2006 3:10:11 PM EDT [redacted] started conversation.
Friday, June 02, 2006 3:10:11 PM EDT Brian Hunter has entered the conversation.
Friday, June 02, 2006 3:10:11 PM EDT [redacted] had the baby at 2:13am on Wed Friday, June 02, 2006 3:10:20 PM EDT Brian Hunter: the only way this thing recovers is when market gives up the hate on q1 Friday, June 02, 2006 3:10:22 PM EDT Brian Hunter: 213 Friday, June 02, 2006 3:10:22 PM EDT Brian Hunter: dude really Friday, June 02, 2006 3:10:25 PM EDT [redacted] im back here Thurs at 6:00am Friday, June 02, 2006 3:10:25 PM EDT Brian Hunter: tiring Friday, June 02, 2006 3:10:31 PM EDT Brian Hunter: really?
Friday, June 02, 2006 3:10:45 PM EDT [redacted] felt like the friggin sky was falling
Friday, June 02, 2006 3:10:46 PM EDT [redacted] yes Friday, June 02, 2006 3:11:09 PM EDT Brian Hunter: must have been tired Friday, June 02, 2006 3:11:15 PM EDT Brian Hunter: I don't get the backs Friday, June 02, 2006 3:11:15 PM EDT [redacted] still am Friday, June 02, 2006 3:11:22 PM EDT Brian Hunter: but I hear it was pain all aroudn the market Friday, June 02, 2006 3:11:27 PM EDT Brian Hunter: specs just got saturated Friday, June 02, 2006 3:11:35 PM EDT [redacted] had to see if there are real sellers of these spreads Friday, June 02, 2006 3:11:36 PM EDT Brian Hunter: it will recover Friday, June 02, 2006 3:11:41 PM EDT [redacted]: dont believe it Friday, June 02, 2006 3:12:11 PM EDT Brian Hunter: I think that industrial demand right now is getting very strong Friday, June 02, 2006 3:12:26 PM EDT [redacted]: i dont believe real sellers of spreads is what i mean Friday, June 02, 2006 3:12:30 PM EDT Brian Hunter: How many NG ethanl platns you think are being built in US over next 18 months Friday, June 02, 2006 3:12:32 PM EDT Brian Hunter: yeah Friday, June 02, 2006 3:12:35 PM EDT Brian Hunter: I agree Friday, June 02, 2006 3:12:41 PM EDT Brian Hunter: TXU will be back in cal11 Friday, June 02, 2006 3:12:48 PM EDT Brian Hunter: and they all move out again Friday, June 02, 2006 3:12:59 PM EDT [redacted] they asked for my bid for 5/d cal 11 today Friday, June 02, 2006 3:13:07 PM EDT [redacted] wouldn't hit Friday, June 02, 2006 3:13:50 PM EDT [redacted] i managed to pick up some 8/11 at decent levels and some hj9 and 10 Friday, June 02, 2006 3:14:02 PM EDT Brian Hunter: yeah Friday, June 02, 2006 3:14:07 PM EDT Brian Hunter: I took some of those today Friday, June 02, 2006 3:14:09 PM EDT Brian Hunter: the H.J Friday, June 02, 2006 3:14:17 PM EDT [redacted] we'll see what happens, 7/8 really moved out nice Friday, June 02, 2006 3:14:21 PM EDT Brian Hunter: I get the feelign lots of pople are short q107 Friday, June 02, 2006 3:14:32 PM EDT [redacted] agree Friday, June 02, 2006 3:14:37 PM EDT Brian Hunter: and really short H.J Friday, June 02, 2006 3:14:46 PM EDT Brian Hunter: deamnd looking really good Friday, June 02, 2006 3:14:49 PM EDT [redacted] watch the way hj trades you can see it Friday, June 02, 2006 3:14:52 PM EDT Brian Hunter: I only have 89 for this week Friday, June 02, 2006 3:15:09 PM EDT Brian Hunter: people will have to give up the hate soon on v/f Friday, June 02, 2006 3:15:17 PM EDT Brian Hunter: H.J wider Friday, June 02, 2006 3:15:22 PM EDT Brian Hunter: jv7 can't really go lower Friday, June 02, 2006 3:15:27 PM EDT Brian Hunter: and fronts are strong already Friday, June 02, 2006 3:17:48 PM EDT [redacted] what stock do you put in all this stuff about 4BCF of capacity Friday, June 02, 2006 3:18:10 PM EDT [redacted]: if so why did cash trade so weak the last two years Friday, June 02, 2006 3:18:26 PM EDT [redacted] we dont see that Friday, June 02, 2006 3:20:23 PM EDT [redacted] every part of cal 7 looks cheap right now Friday, June 02, 2006 3:20:39 PM EDT [redacted] cl and ho rally is bullish q1 Friday, June 02, 2006 3:20:50 PM EDT [redacted] jv7 below resid Friday, June 02, 2006 3:21:03 PM EDT [redacted] demand will be very strong

Friday, June 02, 2006 3:28:31 PM EDT Brian Hunter: yeah demand looks spectacular

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Wednesday, June 7, 2006, 10:03:12 AM

[redacted] this mkt is wearing me out

Brian Hunter: yeah
Brian Hunter: where are the consumers

[redacted] every time I think I've got a clue....

Brian Hunter: Although produers are done we think
Brian Hunter: now its length finding a home and then I think bac ks rally
Brian Hunter: Its the v/f that's the problem

[redacted] We aren't seeing the producers right now
[redacted] that is so true

Brian Hunter: producers are done
Brian Hunter: too many guys short q1 against backs
Brian Hunter: I tihnk that selling v/f and buying h.j to short April
Brian Hunter: is what people are doing
Brian Hunter: but q1 at 10.00 is pretty low
Brian Hunter: Of course I think we can only fill to 3.4

[redacted] next weeks number looks like it may put some life into the v/f
that is still our premise as well

Brian Hunter: hearing some other good things as well
Brian Hunter: [redacted] sniffing around a buy NG and sellign resid for q3 07
Brian Hunter: and [redacted] was looking at buying cal10 NG and selling cal10 resid

From: windowsadmin@amaranthllc.com
Sent: Saturday, January 07, 2006 9:03 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; [redacted]

IM Network: AOL IM

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Users:

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Wednesday, June 07, 2006 10:03:12 AM EDT Brian Hunter started conversation.
Wednesday, June 07, 2006 10:03:12 AM EDT [redacted] has entered the conversation.
Wednesday, June 07, 2006 10:03:12 AM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, June 07, 2006 10:03:12 AM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, June 07, 2006 10:03:12 AM EDT [redacted] this mkt is wearing me out Wednesday, June 07, 2006 10:03:24 AM EDT Brian Hunter: yeah Wednesday, June 07, 2006 10:03:28 AM EDT Brian Hunter: where are the consumers Wednesday, June 07, 2006 10:03:47 AM EDT [redacted] every time I think I've got a clue....
Wednesday, June 07, 2006 10:03:49 AM EDT Brian Hunter: Although producers are done we think Wednesday, June 07, 2006 10:04:08 AM EDT Brian Hunter: now its length finding a home and then I think bac ks rally Wednesday, June 07, 2006 10:04:14 AM EDT Brian Hunter: Its the v/f that's the problem Wednesday, June 07, 2006 10:04:18 AM EDT [redacted]: We aren't seeing the producers right now Wednesday, June 07, 2006 10:04:26 AM EDT [redacted] that is so true Wednesday, June 07, 2006 10:04:29 AM EDT Brian Hunter: producers are done Wednesday, June 07, 2006 10:04:37 AM EDT Brian Hunter: too many guys short q1 against backs Wednesday, June 07, 2006 10:05:32 AM EDT Brian Hunter: I tihnk that selling v/f and buying h.j to short April Wednesday, June 07, 2006 10:05:41 AM EDT Brian Hunter: is what people are doing Wednesday, June 07, 2006 10:05:47 AM EDT Brian Hunter: but q1 at 10.00 is pretty low Wednesday, June 07, 2006 10:05:56 AM EDT Brian Hunter: Of course I think we can only fill to 3.4 Wednesday, June 07, 2006 10:05:56 AM EDT [redacted] next weeks number looks like it may put some life into the v/f Wednesday, June 07, 2006 10:06:12 AM EDT [redacted]: that is still our premise as well Wednesday, June 07, 2006 10:09:00 AM EDT Brian Hunter: hearing some other good things as well Wednesday, June 07, 2006 10:09:13 AM EDT Brian Hunter: [redacted] snifffing around at buy NG and sellign resid for q3 07 Wednesday, June 07, 2006 10:09:30 AM EDT Brian Hunter: and [redacted] was looking at buying cal10 NG and selling cal10 resid

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Wednesday, June 07, 2006 4:19:05 PM

[redacted] i feel like a punching bag

Brian Hunter: yeah no shit
Brian Hunter: we flattened alto a back stuff
Brian Hunter: thank god-but its still painful
Brian Hunter: espeically given market is short q1 against abck length
Brian Hunter: that H.J could run some people straight over

[redacted] im just tired of these marks being so screwed up

From: windowsadmin@amaranthllc.com
Sent: Saturday, January 07, 2006 3:19 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant="[redacted]

IM Dialog:

Wednesday, June 07, 2006 4:19:05 PM EDT Brian Hunter started conversation.
Wednesday, June 07, 2006 4:19:05 PM EDT schlencl has entered the conversation.
Wednesday, June 07, 2006 4:19:05 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, June 07, 2006 4:19:05 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, June 07, 2006 4:19:05 PM EDT [redacted] i feel like a punching bag Wednesday, June 07, 2006 4:19:17 PM EDT Brian Hunter: yeah no shit Wednesday, June 07, 2006 4:19:25 PM EDT Brian Hunter: we flattened alto a back stuff Wednesday, June 07, 2006 4:19:56 PM EDT Brian Hunter: thank god - but its still painful Wednesday, June 07, 2006 4:20:07 PM EDT Brian Hunter: espeically given market is short q1 against abck length Wednesday, June 07, 2006 4:20:21 PM EDT Brian Hunter: that H.J could run some people straight over
Wednesday, June 07, 2006 4:24:55 PM EDT [redacted] im just tired of these marks being so screwed up

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Wednesday, June 07, 2006 4:46:55 PM

[redacted]: so a big discussion today on how you stay short the summer and protect against mkt's kneejerk reaction to "windy days" in the gulf
[redacted]: any thoughts

Brian Hunter: my thinking is the market is really short H/J
Brian Hunter: frankly you get long u/v
Brian Hunter: hope that there are no serious storm prior to Aug 29th
Brian Hunter: cause sep will go off like a pile of shit and Oct is going to be wicked strong

[redacted]: i was in the minority suggesting being long cal spreads at these levels
[redacted]: people just love to sell them when they see them go down
[redacted]: or at least not short
[redacted]: everyone wants to short h/j as well

Brian Hunter: yeah- that I am not so sure about
Brian Hunter: yes lots of gas
Brian Hunter: but also really great demand

[redacted]: i so hope we get cold this winter, that with the demand pick up would be so nice
[redacted]: set some folks straight on risk/reward

Brian Hunter: yeah market needs a scare
Brian Hunter: I am a little surprised futures went straight to cash
Brian Hunter: also nice to see power buyers out there
Brian Hunter: only [redacted] an[redacted] selling now
Brian Hunter: everyone else buyers

From: windowsadmin@amaranthllc.com
Sent: Saturday, January 07, 2006 3:47 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]

IM Dialog:

Wednesday, June 07, 2006 4:46:55 PM EDT Brian Hunter started conversation.
Wednesday, June 07, 2006 4:46:55 PM EDT [redacted] has entered the conversation.
Wednesday, June 07, 2006 4:46:55 PM EDT Brian Hunter: yeah Wednesday, June 07, 2006 4:47:02 PM EDT Brian Hunter: we mark our own curve Wednesday, June 07, 2006 4:47:05 PM EDT Brian Hunter: much easier Wednesday, June 07, 2006 4:48:23 PM EDT [redacted] i lost that fight internally Wednesday, June 07, 2006 4:48:50 PM EDT Brian Hunter: yeah - I still have to justify Wednesday, June 07, 2006 4:49:00 PM EDT [redacted] too many people that look at it Wednesday, June 07, 2006 4:49:03 PM EDT Brian Hunter: but that easy when cal 10 settles 15 cents out from ICE all the time Wednesday, June 07, 2006 4:49:04 PM EDT [redacted] around here Wednesday, June 07, 2006 4:51:46 PM EDT [redacted] so a big discussion today on how you stay short the summer and protect against mkt's kneejerk reaction to "windy days" in the gulf Wednesday, June 07, 2006 4:51:58 PM EDT [redacted] any thoughts Wednesday, June 07, 2006 4:52:19 PM EDT Brian Hunter: my thinking is the market is really short H/J Wednesday, June 07, 2006 4:52:26 PM EDT Brian Hunter: frankly you get long u/v Wednesday, June 07, 2006 4:52:45 PM EDT Brian Hunter: hope that there are no serious storm prior to Aug 29th Wednesday, June 07, 2006 4:53:05 PM EDT Brian Hunter: cause sep will go off like a pile of shit and Oct is going to be wicked strong Wednesday, June 07, 2006 4:54:19 PM EDT [redacted] i was in the minority suggesting being long cal spreads at these levels Wednesday, June 07, 2006 4:54:38 PM EDT [redacted] people just love to sell them when they see them go down Wednesday, June 07, 2006 4:54:48 PM EDT schlencl: or at least not short Wednesday, June 07, 2006 4:55:44 PM EDT [redacted] everyone wants to short h/j as well Wednesday, June 07, 2006 4:56:08 PM EDT Brian Hunter: yeah - that I am not so sure about Wednesday, June 07, 2006 4:56:12 PM EDT Brian Hunter: yes lots of gas Wednesday, June 07, 2006 4:56:21 PM EDT Brian Hunter: but also really great demand Wednesday, June 07, 2006 4:58:05 PM EDT [redacted] i so hope we get cold this winter, that with the demand pick up would be so nice Wednesday, June 07, 2006 4:58:29 PM EDT [redacted] set some folks straight on risk / reward Wednesday, June 07, 2006 4:58:30 PM EDT Brian Hunter: yeah market needs a scare Wednesday, June 07, 2006 4:58:46 PM EDT Brian Hunter: I am a little surpised futures went straight to cash Wednesday, June 07, 2006 4:58:59 PM EDT Brian Hunter: also nice to see power buyers out there Wednesday, June 07, 2006 4:59:05 PM EDT Brian Hunter: only [redacted] and [redacted] selling now Wednesday, June 07, 2006 4:59:09 PM EDT Brian Hunter: everyone else buyers

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Thursday, June 08, 2006 9:58:02 AM

Brian Hunter: you think this weakness in the back is all this talk of 3.7 total storage?

[redacted] if you mean outrights, no
[redacted] my take is that if people REALLY believed 3.7 or 4.1 or whatever they would be selling q1 vs q2 across the curve pretty hard
[redacted] that hasn't happened (yet)

Brian Hunter: good point

[redacted]: maybe just scared
[redacted] but we cant get to 3.7

Brian Hunter: we took a good look at this and still think that 3.4 is tops

[redacted] we did as well

Brian Hunter: 3.4 in change

[redacted] we are pretty confident in 3.4-3.5 max
[redacted]: de shaw looking to but cal 10 today
[redacted] i heard [redacted] was the buyer of 10 on ice yest
[redacted]: and they bought the 10/11 this morning
[redacted] and sold 11
[redacted]: this morning
[redacted] so looks like they are getting a bit of 10/11 bought
[redacted] i have bought 100/mo now all on the floor at 34
[redacted] am flat
[redacted] look to add
[redacted] the cal10 report was whispered to me
[redacted] so maybe it was bs

From: windowsadmin@amaranthllc.com
Sent: Sunday, January 08, 2006 8:58 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH";[redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, June 08, 2006 9:58:02 AM EDT Brian Hunter started conversation.
Thursday, June 08, 2006 9:58:02 AM EDT [redacted] has entered the conversation.
Thursday, June 08, 2006 9:58:02 AM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, June 08, 2006 9:58:02 AM EDT [redacted]: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, June 08, 2006 9:58:02 AM EDT Brian Hunter: you think this weakness in the back is all this talk of 3.7 total storage?
Thursday, June 08, 2006 9:58:45 AM EDT [redacted] if you mean outrights, no Thursday, June 08, 2006 9:59:38 AM EDT [redacted] my take is that if people REALLY believed 3.7 or 4.1 or whatever they would be selling q1 vs q2 across the curve pretty hard Thursday, June 08, 2006 9:59:50 AM EDT [redacted] that hasn't happened (yet) Thursday, June 08, 2006 9:59:52 AM EDT Brian Hunter: good point Thursday, June 08, 2006 10:00:04 AM EDT [redacted]: maybe just scared Thursday, June 08, 2006 10:00:12 AM EDT [redacted] but we cant get to 3.7 Thursday, June 08, 2006 10:00:11 AM EDT Brian Hunter: we took a good look at this and still think that 3.4 is tops Thursday, June 08, 2006 10:00:19 AM EDT [redacted]: we did as well Thursday, June 08, 2006 10:00:21 AM EDT Brian Hunter: 3.4 and change Thursday, June 08, 2006 10:00:36 AM EDT [redacted] we are pretty confident in 3.4-3.5 max Thursday, June 08, 2006 10:01:12 AM EDT [redacted]: de shaw looking to but cal 10 today Thursday, June 08, 2006 10:01:30 AM EDT [redacted] i heard [redacted] was the buyer of 10 on ice yest Thursday, June 08, 2006 10:01:46 AM EDT [redacted]: and they bought the 10/11 this morning Thursday, June 08, 2006 10:01:53 AM EDT [redacted]: and sold 11 Thursday, June 08, 2006 10:02:00 AM EDT [redacted]: this morning Thursday, June 08, 2006 10:02:29 AM EDT [redacted] so looks like they are getting a bit of 10/11 bought Thursday, June 08, 2006 10:02:49 AM EDT [redacted] i have bought 100/mo now all on the floor at 34 Thursday, June 08, 2006 10:02:52 AM EDT [redacted]: am flat Thursday, June 08, 2006 10:02:58 AM EDT [redacted] look to add Thursday, June 08, 2006 10:04:48 AM EDT [redacted]: the call0 report was whispered to me Thursday, June 08, 2006 10:04:57 AM EDT [redacted] so maybe it was bs

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

▬ = Redacted by the Permanent Subcommittee on Investigations

Thursday, June 08, 2006 11: 56:51 AM

[redacted] well i guess there are still some sellers in the red winter

Brian Hunter: its all v/f
Brian Hunter: I think
Brian Hunter: how do you guys feel about that
Brian Hunter: the hatred of Jan

[redacted] we honestly are still quite bearish the structure
[redacted]: we see the potential for winter prices to go nuts

Brian Hunter: so who is laying waste to v/f
Brian Hunter: that's the thing casing the backs the pinch
Brian Hunter: I think

[redacted] I really dont know
[redacted]: i can tell you it is wearing people out
Brian Hunter: yeah
Brian Hunter: no shit

[redacted]: we got out a bunch tuesday

Brian Hunter: v/f?

[redacted]: yeah
[redacted] then got right back in'

Brian Hunter: hahaha
Brian Hunter: sounds like everyone is getting out

[redacted] only one who made out on that was the brokers

Brian Hunter: hehehe

[redacted] but really when I see the way our desks are trading the spreads now you can sense the fear and some loss of confidence

From: windowsadmin@amaranthllc.com
Sent: Sunday, January 08, 2006 10:57 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, June 08, 2006 11:56:51 AM EDT Brian Hunter started conversation.
Thursday, June 08, 2006 11:56:51 AM EDT [redacted] has entered the conversation.
Thursday, June 08, 2006 11:56:51 AM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, June 08, 2006 11:56:51 AM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, June 08, 2006 11:56:51 AM EDT [redacted] well i guess there are still some sellers in the red winter Thursday, June 08, 2006 11:57:05 AM EDT Brian Hunter: its all v/f Thursday, June 08, 2006 11:57:07 AM EDT Brian Hunter: I think Thursday, June 08, 2006 11:57:18 AM EDT Brian Hunter: how do you guys feel about that Thursday, June 08, 2006 11:57:22 AM EDT Brian Hunter: the hatred of Jan Thursday, June 08, 2006 11:58:45 AM EDT [redacted]: we honestly are still quite bearish the structure Thursday, June 08, 2006 11:59:08 AM EDT [redacted]: we see the potential for winter prices to go nuts Thursday, June 08, 2006 11:59:23 AM EDT Brian Hunter: so who is laying waste to v/f Thursday, June 08, 2006 11:59:33 AM EDT Brian Hunter: that's the thing casing the backs the pinch Thursday, June 08, 2006 11:59:34 AM EDT Brian Hunter: I think Thursday, June 08, 2006 11:59:39 AM EDT [redacted] I really dont know Thursday, June 08, 2006 12:00:03 PM EDT [redacted]: i can tell you it is wearing people out Thursday, June 08, 2006 12:00:11 PM EDT Brian Hunter: yeah Thursday, June 08, 2006 12:00:12 PM EDT Brian Hunter: no shit Thursday, June 08, 2006 12:00:26 PM EDT [redacted]: we got out of a bunch tuesday Thursday, June 08, 2006 12:00:30 PM EDT Brian Hunter: v/f?
Thursday, June 08, 2006 12:00:35 PM EDT [redacted] yeah Thursday, June 08, 2006 12:00:43 PM EDT [redacted] then got right back in'
Thursday, June 08, 2006 12:00:46 PM EDT Brian Hunter: hahaha Thursday, June 08, 2006 12:00:45 PM EDT Brian Hunter: sounds ike everyone is getting out Thursday, June 08, 2006 12:01:11 PM EDT [redacted] only one who made out on that was the brokers Thursday, June 08, 2006 12:01:22 PM EDT Brian Hunter: hehehe Thursday, June 08, 2006 12:09:30 PM EDT [redacted] but really when I see the way our desks are trading the spreads now you can sense the fear and some loss of confidence

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Thursday, June 08, 2006 2:23: PM

Brian Hunter: dude what is up cal7

[redacted]: red winter?

Brian Hunter: dunno everyone selling cal7

[redacted]: getting killed
[redacted]: windy in the gulf....
[redacted]: maybe
[redacted]: they want the front
[redacted]: v/x/z fly my god
[redacted]: i am so friggin screwed

Brian Hunter: the back is painful

3:04:23 PM

[redacted] u see these vf's in 7,8, & 9

From: windowsadmin@amaranthllc.com
Sent: Sunday, January 08, 2006 1:23 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, June 08, 2006 2:23:23 PM EDT Brian Hunter started conversation.
Thursday, June 08, 2006 2:23:23 PM EDT [redacted] has entered the conversation.
Thursday, June 08, 2006 2:23:23 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, June 08, 2006 2:23:23 PM EDT [redacted]: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, June 08, 2006 2:23:23 PM EDT Brian Hunter: dude what is up cal7 Thursday, June 08, 2006 2:24:53 PM EDT [redacted]: red winter?
Thursday, June 08, 2006 2:25:09 PM EDT Brian Hunter: dunno everyone selling cal7 Thursday, June 08, 2006 2:25:12 PM EDT [redacted]: getting killed Thursday, June 08, 2006 2:25:56 PM EDT [redacted]: windy in the gulf....
Thursday, June 08, 2006 2:26:00 PM EDT [redacted] maybe Thursday, June 08, 2006 2:26:30 PM EDT [redacted]: they want the front Thursday, June 08, 2006 2:31:52 PM EDT [redacted]: v/x/z fly my god Thursday, June 08, 2006 2:32:08 PM EDT [redacted] i am so friggin screwed
Thursday, June 08, 2006 2:32:23 PM EDT Brian Hunter: the back is painful

From: windowsadmin@amaranthllc.com
Sent: Sunday, January 08, 2006 2:04 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"[redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, June 08, 2006 3:04:23 PM EDT Brian Hunter started conversation.
Thursday, June 08, 2006 3:04:23 PM EDT [redacted] has entered the conversation.
Thursday, June 08, 2006 3:04:23 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, June 08, 2006 3:04:23 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, June 08, 2006 3:04:23 PM EDT [redacted] u see these vf's in 7, 8 & 9

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

▬ = Redacted by the Permanent Subcommittee on Investigations

Friday, June 09, 2006 10:41:16 AM

Brian Hunter: you have to explain to me what is happening in Cal8

[redacted]: I dont know, buyers of 7.8 now and still sellers of 7 so 8

Brian Hunter: you got any explanation for the back

[redacted]: is dogshit
[redacted] no
[redacted]: now sellers of 9-11 trying to get 11 higher
[redacted]: v-f has to stop here
[redacted] questionable risk reward to selling it

Brian Hunter: the v/f has been back driven

[redacted] who is trying so hard to keep the 9/10 so low on the floor

Brian Hunter: where is it?

[redacted] they settle it at 26 every night

From: windowsadmin@amaranthllc.com
Sent: Monday, January 09, 2006 9:41 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; [redacted]

IM Network: AOL IM

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Users:

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Friday, June 09, 2006 10:41:16 AM EDT Brian Hunter started conversation.
Friday, June 09, 2006 10:41:16 AM EDT [redacted] has entered the conversation.
Friday, June 09, 2006 10:41:16 AM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Friday, June 09, 2006 10:41:16 AM EDT [redacted]: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Friday, June 09, 2006 10:41:16 AM EDT Brian Hunter: you have to explain to me what is happening in Cal8 Friday, June 09, 2006 10:44:14 AM EDT [redacted]: I dont know, buyers of 7.8 now and still sellers of 7 so 8 Friday, June 09, 2006 10:44:19 AM EDT Brian Hunter: you got any explanation for the back Friday, June 09, 2006 10:44:23 AM EDT [redacted]: is dogshit Friday, June 09, 2006 10:44:28 AM EDT [redacted] no Friday, June 09, 2006 10:45:09 AM EDT [redacted] now sellers of 9-11 trying to get 11 higher Friday, June 09, 2006 10:45:53 AM EDT [redacted]: v-f has to stop here Friday, June 09, 2006 10:46:29 AM EDT [redacted]: questionable risk reward to selling it Friday, June 09, 2006 10:47:30 AM EDT Brian Hunter: the v/f has been back driven Friday, June 09, 2006 10:47:43 AM EDT [redacted] who is trying so hard to keep the 9/10 so low on the floor Friday, June 09, 2006 10:48:01 AM EDT Brian Hunter: where is it?
Friday, June 09, 2006 10:48:17 AM EDT [redacted] they settle it at 26 every night

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Monday, June 12, 2006 4:21:24 PM

[redacted]: this is not an easy mkt to trade right now

5:00:52 PM

Brian Hunter: no shit
Brian Hunter: yeah
Brian Hunter: [redacted] if you want to call
Brian Hunter: beware the nnumber
Brian Hunter: 10bcf less gas from Cnaada last week

From: windowsadmin@amaranthllc.com
Sent: Thursday, January 12, 2006 3:21 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]

IM Dialog:

Monday, June 12, 2006 4:21:24 PM EDT Brian Hunter started conversation.
Monday, June 12, 2006 4:21:24 PM EDT [redacted] has entered the conversation.
Monday, June 12, 2006 4:21:24 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Monday, June 12, 2006 4:21:24 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Monday, June 12, 2006 4:21:24 PM EDT [redacted] this is not an easy mkt to trade right now

From: windowsadmin@amaranthllc.com
Sent: Thursday, January 12, 2006 4:01 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; [redacted]

IM Network: AOL IM

IM Users:

[redacted] = Redacted by the Permanent Subcommittee on Investigations

participant="hunteramaranth"
participant=[redacted]"

IM Dialog:

Monday, June 12, 2006 5:00:52 PM EDT [redacted] started conversation.
Monday, June 12, 2006 5:00:52 PM EDT Brian Hunter has entered the conversation.
Monday, June 12, 2006 5:00:52 PM EDT [redacted]: I am away from my computer right now.
Monday, June 12, 2006 5:00:52 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Monday, June 12, 2006 5:00:52 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Monday, June 12, 2006 5:00:53 PM EDT Brian Hunter: no shit Monday, June 12, 2006 5:00:52 PM EDT Brian Hunter: yeah Monday, June 12, 2006 5:01:04 PM EDT Brian Hunter: [redacted] if you want to call Monday, June 12, 2006 5:09:45 PM EDT Brian Hunter: beware the nnumber
Monday, June 12, 2006 5:09:52 PM EDT Brian Hunter: 10bcf less gas from Cnaada last week

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Tuesday, June 13, 2006 9:35:12 AM

[redacted] = Redacted by the Permanent Subcommittee on Investigations

[redacted] morning

Brian Hunter: yo
Brian Hunter: what's shkin'
Brian Hunter: winter hatred continues-but this time from summer spreads

[redacted] every winter

Brian Hunter: yeah- backs had a nice rally goign
Brian Hunter: then [redacted] gets 4/d cal7 and 8 prodcuer deal at 1:30
Brian Hunter: it was a big cl sale

[redacted]: It's like these producers all get together at the same time
[redacted]: jeez
[redacted]: all the phones start ringing

Brian Hunter: there is some back and buying

[redacted] bentek could be a lot lower than mkt

From: windowsadmin@amaranthllc.com
Sent: Friday, January 13, 2006 8:35 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"[redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Tuesday, June 13, 2006 9:35:12 AM EDT Brian Hunter started conversation.
Tuesday, June 13, 2006 9:35:12 AM EDT[redacted] has entered the conversation.
Tuesday, June 13, 2006 9:35:12 AM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, June 13, 2006 9:35:12 AM EDT[redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, June 13, 2006 9:35:12 AM EDT[redacted]: morning Tuesday, June 13, 2006 9:35:29 AM EDT Brian Hunter: yo Tuesday, June 13, 2006 9:35:33 AM EDT Brian Hunter: what's shkin' Tuesday, June 13, 2006 9:36:15 AM EDT Brian Hunter: winter hatred continues - but this time from summer spreads Tuesday, June 13, 2006 9:37:37 AM EDT [redacted] every winter Tuesday, June 13, 2006 9:37:53 AM EDT Brian Hunter: yeah - backs had a nice rally goign Tuesday, June 13, 2006 9:38:12 AM EDT Brian Hunter: then[redacted] gets 4/d cal7 and 8 prodcuer deal at 1:30 Tuesday, June 13, 2006 9:38:29 AM EDT Brian Hunter: it was a big cl sale Tuesday, June 13, 2006 9:38:42 AM EDT [redacted] It's like these producers all get together at the same time Tuesday, June 13, 2006 9:38:45 AM EDT[redacted]: jeez Tuesday, June 13, 2006 9:38:56 AM EDT[redacted] all the phones start ringing Tuesday, June 13, 2006 9:39:09 AM EDT Brian Hunter: there is some back end buying Tuesday, June 13, 2006 9:39:52 AM EDT [redacted] bentek could be a lot lower that mkt

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Tuesday, June 13, 2006 9:40:09 AM

Brian Hunter: freaking [redacted]
Brian Hunter: has to demolish summer spreads because the think bullish weather is coing- and kills the back end

[redacted]: get bullish news sell Jan, thats how it feels

Brian Hunter: yeah
Brian Hunter: no shit

[redacted]: front doesn't move just get chopped
[redacted] selling the red hj yest on ice

Brian Hunter: I'l let that fall for a littl
Brian Hunter: e

[redacted] he prob did the x6/j8

Brian Hunter: ouch

[redacted]: now sell the hj, thats smart....
[redacted] you got bloomberg

Brian Hunter: y

[redacted] did you see the commentary on hedge funds at the bottom of

Brian Hunter: yeah
Brian Hunter: read that last night

[redacted] nice title

Brian Hunter: hahahaha

From: windowsadmin@amaranthllc.com
Sent: Friday, January 13, 2006 8:40 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

= Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]"

IM Dialog:

Tuesday, June 13, 2006 9:40:09 AM EDT Brian Hunter started conversation.
Tuesday, June 13, 2006 9:40:09 AM EDT [redacted] has entered the conversation.
Tuesday, June 13, 2006 9:40:09 AM EDT Brian Hunter: scrapes are low Tuesday, June 13, 2006 9:40:15 AM EDT Brian Hunter: we are under 80 now Tuesday, June 13, 2006 9:40:28 AM EDT [redacted]: word Tuesday, June 13, 2006 9:40:46 AM EDT Brian Hunter: freaking [redacted]
Tuesday, June 13, 2006 9:41:04 AM EDT Brian Hunter: has to demolish summer spreads because the think bullish weather is coing - and kills the back end Tuesday, June 13, 2006 9:44:04 AM EDT [redacted]: get bullish news sell Jan, thats how it feels Tuesday, June 13, 2006 9:44:47 AM EDT Brian Hunter: yeah Tuesday, June 13, 2006 9:44:49 AM EDT Brian Hunter: no shit Tuesday, June 13, 2006 9:45:05 AM EDT [redacted] front doesn't move just get chopped
Tuesday, June 13, 2006 9:45:31 AM EDT [redacted] [redacted] selling the red hj yest on ice
Tuesday, June 13, 2006 9:45:43 AM EDT Brian Hunter: I'l let that fall for a littl Tuesday, June 13, 2006 9:45:44 AM EDT Brian Hunter: e Tuesday, June 13, 2006 9:45:55 AM EDT [redacted]: he prob did the x6/j8 Tuesday, June 13, 2006 9:46:11 AM EDT Brian Hunter: ouch
Tuesday, June 13, 2006 9:46:14 AM EDT[redacted]: now sell the hj, thats smart.....
Tuesday, June 13, 2006 9:46:47 AM EDT [redacted]: you got bloomberg Tuesday, June 13, 2006 9:47:02 AM EDT Brian Hunter: y Tuesday, June 13, 2006 9:47:48 AM EDT[redacted] did you see the commentary on hedge funds at the bottom of Tuesday, June 13, 2006 9:48:11 AM EDT Brian Hunter: yeah Tuesday, June 13, 2006 9:48:14 AM EDT Brian Hunter: read that last night
Tuesday, June 13, 2006 9:48:16 AM EDT[redacted]: nice title Tuesday, June 13, 2006 9:48:20 AM EDT Brian Hunter: hahahaha

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Tuesday, June 13, 2006 10:10:11 AM

Brian Hunter: Dmeand massive-sell winter

12:13:13 PM

Brian Hunter: ok- this is so confusing
Brian Hunter: I do not get the backs
Brian Hunter: hatred on that stuff

1:18:36 PM

[redacted] hi
[redacted] just saw your message
[redacted] nothing makes sense
[redacted] people trying to survive

Brian Hunter: yeah

[redacted] including me

Brian Hunter: I tihnk its messy all aroudn

Brian Hunter: why is v/f so offered
Brian Hunter: that's the problem
Brian Hunter: whoever is trying to crush it everyday

[redacted] its made quite a recovery from what i can tell......
[redacted] 290 this morning

Brian Hunter: yeah _ mean why all the selling
Brian Hunter: in general
Brian Hunter: peope stopping
Brian Hunter: or some trying to squeeze

[redacted] do you really think squeezing?
[redacted] that would be ballsy

Brian Hunter: seems that someone was trying to force it

[redacted] we had some folk around here hitting the panic button when [redacted] was leaning on it this morning
[redacted] i can stand back and watch
[redacted] gotta be a bit careful right now

<u>Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC</u>

Tuesday, June 13, 2006 2:37:28 PM

Brian Hunter: not sure if market is squeezing or stopping out
Brian Hunter: personally I see 7/d offers and 10/d offer in v/f
Brian Hunter: I think its squeezing

From: windowsadmin@amaranthllc.com
Sent: Friday, January 13, 2006 9:10 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]

IM Dialog:

Tuesday, June 13, 2006 10:10:11 AM EDT Brian Hunter started conversation.
Tuesday, June 13, 2006 10:10:11 AM EDT [redacted] as entered the conversation.
Tuesday, June 13, 2006 10:10:11 AM EDT Brian Hunter: Dmeand massive - SELL winter

From: windowsadmin@amaranthllc.com
Sent: Friday, January 13, 2006 11:13 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant=[redacted]

IM Dialog:

Tuesday, June 13, 2006 12:13:13 PM EDT Brian Hunter started conversation.
Tuesday, June 13, 2006 12:13:13 PM EDT [redacted] has entered the conversation.
Tuesday, June 13, 2006 12:13:13 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, June 13, 2006 12:13:13 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, June 13, 2006 12:13:13 PM EDT Brian Hunter: ok - this is so confusing Tuesday, June 13, 2006 12:16:58 PM EDT Brian Hunter: I do not get the backs Tuesday, June 13, 2006 12:17:06 PM EDT Brian Hunter: hatred on that stuff

From: windowsadmin@amaranthllc.com
Sent: Friday, January 13, 2006 12:19 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH";[redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant="[redacted]

IM Dialog:

Tuesday, June 13, 2006 1:18:36 PM EDT Brian Hunter started conversation.
Tuesday, June 13, 2006 1:18:36 PM EDT [redacted] has entered the conversation.
Tuesday, June 13, 2006 1:18:36 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, June 13, 2006 1:18:36 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, June 13, 2006 1:18:36 PM EDT [redacted] hi Tuesday, June 13, 2006 1:18:44 PM EDT [redacted] just saw your message Tuesday, June 13, 2006 1:18:53 PM EDT [redacted] nothing makes sense Tuesday, June 13, 2006 1:19:10 PM EDT [redacted] people trying to survive Tuesday, June 13, 2006 1:19:17 PM EDT Brian Hunter: yeah Tuesday, June 13, 2006 1:19:21 PM EDT [redacted] including me Tuesday, June 13, 2006 1:19:22 PM EDT Brian Hunter: I tihnk its messy all aroudn Tuesday, June 13, 2006 1:19:28 PM EDT Brian Hunter: why is v/f so offered Tuesday, June 13, 2006 1:19:42 PM EDT Brian Hunter: that's the problem Tuesday, June 13, 2006 1:19:56 PM EDT Brian Hunter: whoever is trying to crush it everyday Tuesday, June 13, 2006 1:19:59 PM EDT [redacted] its made quite a recovery from what i can tell.....
Tuesday, June 13, 2006 1:20:08 PM EDT [redacted] 290 this morning Tuesday, June 13, 2006 1:20:16 PM EDT Brian Hunter: yeah _ mean why all the selling Tuesday, June 13, 2006 1:20:19 PM EDT Brian Hunter: in general Tuesday, June 13, 2006 1:20:23 PM EDT Brian Hunter: peope stopping Tuesday, June 13, 2006 1:20:30 PM EDT Brian Hunter: or some trying to squeeze Tuesday, June 13, 2006 1:20:56 PM EDT [redacted] do you really think squeezing? Tuesday, June 13, 2006 1:21:02 PM EDT [redacted] that would be ballsy Tuesday, June 13, 2006 1:21:08 PM EDT Brian Hunter: seems that someone was trying to force it Tuesday, June 13, 2006 1:27:05 PM EDT [redacted] we had some folk around here hitting the panic button when [redacted] was leaning on it this morning Tuesday, June 13, 2006 1:27:15 PM EDT [redacted] i stand back and watch Tuesday, June 13, 2006 1:27:41 PM EDT [redacted] gotta be a bit careful right now

From: windowsadmin@amaranthllc.com
Sent: Friday, January 13, 2006 1:37 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH";[redacted]"

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant=[redacted]"

▬ = Redacted by the Permanent Subcommittee on Investigations

IM Dialog:

Tuesday, June 13, 2006 2:37:28 PM EDT Brian Hunter started conversation.
Tuesday, June 13, 2006 2:37:28 PM EDT[redacted]has entered the conversation.
Tuesday, June 13, 2006 2:37:28 PM EDT Brian Hunter: I think you just wait Tuesday, June 13, 2006 2:37:28 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, June 13, 2006 2:37:28 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, June 13, 2006 2:37:38 PM EDT Brian Hunter: not sure if market is squeezing or stopping out Tuesday, June 13, 2006 2:37:50 PM EDT Brian Hunter: personally I see 7/d offers and 10/d offer in v/f Tuesday, June 13, 2006 2:37:54 PM EDT Brian Hunter: I think its squeezing

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Wednesday, June 14, 2006 1:08:18 PM

Brian Hunter: BTW sorry I issed you
Brian Hunter: its these random desks

[redacted]: hasn't been indoctrinated into the [redacted] we are bearish all the time
[redacted]: thinks this hj could be the highest ever
[redacted]: i'm not just playing here either

Brian Hunter: I am there too
Brian Hunter: I agree

[redacted]: he has a very well thought out argument

Brian Hunter: we have some models that guys are shoring v/f at 6.00
Brian Hunter: what is it

1:10:27 PM

[redacted]: except no one around here wants to here it because they all say it is going to zero

Brian Hunter: what's the argument
Brian Hunter: that H pricec is just too low

[redacted]: q1 actually
[redacted]: thinks we have to trade up to HO
[redacted]: $16

Brian Hunter: agree

[redacted]: also look at the first year 2003 when we blew out
[redacted]: this feels like it

Brian Hunter: yeah

[redacted]: everyone gives up so soon

Brian Hunter: deamnd suddenly huge

[redacted]: so unless the crude and product mkts really change

[redacted]: too many people looking at 2001 sumer

Brian Hunter: y

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

[redacted] ignoring 03
[redacted]: you think there is any suprise left in a 80 number tomorrow

Brian Hunter: nope
Brian Hunter: maybe a little
Brian Hunter: Robry still showing 90's
Brian Hunter: so some surprises
Brian Hunter: I think that if this is 80
Brian Hunter: next is lower
Brian Hunter: then the one after is freak show low

[redacted]: spreads are performing well today so I cant disagree

Brian Hunter: no immedaite gas problem through Oct
Brian Hunter: no matter what heepens
Brian Hunter: after that
Brian Hunter: s
Brian Hunter: who know

[redacted] i so hope for some cold this winter

Brian Hunter: dude
Brian Hunter: market has to get to winter
Brian Hunter: selling is so big in the backs

From: windowsadmin@amaranthllc.com
Sent: Saturday, January 14, 2006 12:08 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"[redacted]

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Wednesday, June 14, 2006 1:08:18 PM EDT Brian Hunter started conversation.
Wednesday, June 14, 2006 1:08:18 PM EDT [redacted] has entered the conversation.
Wednesday, June 14, 2006 1:08:18 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, June 14, 2006 1:08:18 PM EDT [redacted]: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, June 14, 2006 1:08:18 PM EDT [redacted] so this [redacted] who works for me
Wednesday, June 14, 2006 1:08:26 PM EDT Brian Hunter: y Wednesday, June 14, 2006 1:08:31 PM EDT Brian Hunter: BTW sorry I issed you Wednesday, June 14, 2006 1:08:36 PM EDT Brian Hunter: its these random desks Wednesday, June 14, 2006 1:08:42 PM EDT [redacted] hasn't been indoctrinated into the [redacted] we are bearish all the time Wednesday, June 14, 2006 1:09:00 PM EDT [redacted] thinks this hj could be the highest ever Wednesday, June 14, 2006 1:09:12 PM EDT [redacted] i'm not just playing here either Wednesday, June 14, 2006 1:09:23 PM EDT Brian Hunter: I am there too Wednesday, June 14, 2006 1:09:26 PM EDT Brian Hunter: I agree Wednesday, June 14, 2006 1:09:36 PM EDT [redacted] he has a very well thought out argument Wednesday, June 14, 2006 1:09:40 PM EDT Brian Hunter: we have some models that guys are shoring v/f at 6.00 Wednesday, June 14, 2006 1:10:00 PM EDT Brian Hunter: what is it

▬ = Redacted by the Permanent Subcommittee on Investigations

From: windowsadmin@amaranthllc.com
Sent: Saturday, January 14, 2006 12:10 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = BHUNTER@AMARANTHLLC.COM; [redacted]

X-ZANTAZ-MESSAGE-DATE: /14/2006 17:10:27; /14/2006 17:10:35; /14/2006 17:10:46; /14/2006 17:10:56; /14/2006 17:11:09; /14/2006 17:11:14; /14/2006 17:11:35; /14/2006 17:11:46; /14/2006 17:11:58; /14/2006 17:12:05; /14/2006 17:12:06; /14/2006 17:12:08; /14/2006 17:12:28; /14/2006 17:12:59; /14/2006 17:13:04; /14/2006 17:13:08; /14/2006 17:16:16; /14/2006 17:16:20; /14/2006 17:16:26; /14/2006 17:16:33; /14/2006 17:16:38; /14/2006 17:16:44; /14/2006 17:16:46; /14/2006 17:16:54; /14/2006 17:17:21; /14/2006 17:18:01; /14/2006 17:18:07; /14/2006 17:18:09; /14/2006 17:18:15; /14/2006 17:18:14; /14/2006 17:19:16; /14/2006 17:19:27; /14/2006 17:19:30; /14/2006 17:19:37; /14/2006 17:21:05; /14/2006 17:22:43; /14/2006 17:23:08; /14/2006 17:23:11; /14/2006 17:23:15; /14/2006 17:23:22; /14/2006 17:23:27; /14/2006 17:23:52; /14/2006 17:23:56; /14/2006 17:24:22; /14/2006 17:24:26; /14/2006 17:24:34; /14/2006 17:26:44; /14/2006 17:28:08; /14/2006 17:28:14; /14/2006 17:28:18; /14/2006 17:28:2!
3; /14/2006 17:28:53; /14/2006 17:29:07; /14/2006 17:29:10; /14/2006 17:29:11; /14/2006 17:29:16; /14/2006 17:29:20; /14/2006 17:30:08
X-ZANTAZ-PARTICIPANT-IMNAMES: hunteramaranth; [redacted]
X-ZANTAZ-RECIPIENT-NAME: Brian Hunter; [redacted]l
X-ZANTAZ-PARTICIPANT-IMNAMES: [redacted]; hunteramaranth
X-ZANTAZ-SENDER-NAME: [redacted] Brian Hunter
X-ZANTAZ-GUID: 8B03CDAF-29F3-4F4B-8577-778B9565F0EE22928422590390832
X-ZANTAZ-URL: notused
X-OriginalArrivalTime: 14 Jun 2006 18:10:41.0634 (UTC) FILETIME=[D8E92420:01C68FDD]

IM Network: AOL IM

IM Users:

participant=bhunter@amaranthllc.com "hunteramaranth"
participant="[redacted]

IM Dialog:

Wednesday, June 14, 2006 1:10:27 PM EDT [redacted] started conversation.
Wednesday, June 14, 2006 1:10:27 PM EDT Brian Hunter has entered the conversation.
Wednesday, June 14, 2006 1:10:27 PM EDT [redacted] except no one around here wants to here it because they all say it is going to zero Wednesday, June 14, 2006 1:10:35 PM EDT Brian Hunter: what's the argument Wednesday, June 14, 2006 1:10:46 PM EDT Brian Hunter: that H pricec is just too low Wednesday, June 14, 2006 1:10:56 PM EDT [redacted]: q1 actually Wednesday, June 14, 2006 1:11:09 PM EDT [redacted] thinks we have to trade up to HO Wednesday, June 14, 2006 1:11:14 PM EDT [redacted] $16 Wednesday, June 14, 2006 1:11:35 PM EDT Brian Hunter: agree Wednesday, June 14, 2006 1:11:46 PM EDT [redacted] also look at the first year 2003 when we blew out Wednesday, June 14, 2006 1:11:58 PM EDT [redacted]: this feels like it Wednesday, June 14, 2006 1:12:05 PM EDT Brian Hunter: yeah Wednesday, June 14, 2006 1:12:06 PM EDT [redacted] everyone gives up so soon Wednesday, June 14, 2006 1:12:08 PM EDT Brian Hunter: deamnd suddenly huge Wednesday, June 14, 2006 1:12:28 PM EDT [redacted] so unless the crude and product mkts really change Wednesday, June 14, 2006 1:12:59 PM EDT [redacted]: too many people looking at 2001 summer Wednesday, June 14, 2006 1:13:04 PM EDT Brian Hunter: y Wednesday, June 14, 2006 1:13:08 PM EDT [redacted] ignoring 03 Wednesday, June 14, 2006 1:16:16 PM EDT [redacted] you think there is any suprise left in a 80 number tomorrow Wednesday, June 14, 2006 1:16:20 PM EDT Brian Hunter: nope Wednesday, June 14, 2006 1:16:26 PM EDT Brian Hunter: maybe a little Wednesday, June 14, 2006 1:16:33 PM EDT Brian Hunter: Robry still showing 90's Wednesday, June 14, 2006 1:16:38 PM EDT Brian Hunter: so some surprises Wednesday, June 14, 2006 1:16:44 PM EDT Brian Hunter: I think that if this is 80 Wednesday, June 14, 2006 1:16:46 PM EDT Brian

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Hunter: next is lower Wednesday, June 14, 2006 1:16:54 PM EDT Brian Hunter: then the one after is freak show low Wednesday, June 14, 2006 1:17:21 PM EDT [redacted] spreads are performing well today so I cant disagree Wednesday, June 14, 2006 1:18:01 PM EDT Brian Hunter: no immedaite gas problem though Oct Wednesday, June 14, 2006 1:18:07 PM EDT Brian Hunter: no matter what heepens Wednesday, June 14, 2006 1:18:09 PM EDT Brian Hunter: after that Wednesday, June 14, 2006 1:18:15 PM EDT Brian Hunter: s Wednesday, June 14, 2006 1:18:14 PM EDT Brian Hunter: who know Wednesday, June 14, 2006 1:19:16 PM EDT [redacted] i so hope for some cold this winter Wednesday, June 14, 2006 1:19:27 PM EDT Brian Hunter: dude Wednesday, June 14, 2006 1:19:30 PM EDT Brian Hunter: market has to get to winter Wednesday, June 14, 2006 1:19:37 PM EDT Brian Hunter: selling is so big in the backs Wednesday, June 14, 2006 1:21:05 PM EDT [redacted] no worries about yest, i didnt realize u were in CT Wednesday, June 14, 2006 1:22:43 PM EDT [redacted] i'm just trying to figure out whether to try to do a start up with some folks, wouldn't be till next year Wednesday, June 14, 2006 1:23:08 PM EDT Brian Hunter: yeah Wednesday, June 14, 2006 1:23:11 PM EDT Brian Hunter: I can help you Wednesday, June 14, 2006 1:23:15 PM EDT Brian Hunter: just been busy Wednesday, June 14, 2006 1:23:22 PM EDT Brian Hunter: painful market Wednesday, June 14, 2006 1:23:27 PM EDT [redacted]: i understand completely Wednesday, June 14, 2006 1:23:52 PM EDT [redacted] heard [redacted] increased he fees and perf Wednesday, June 14, 2006 1:23:56 PM EDT [redacted] 3/30 Wednesday, June 14, 2006 1:24:22 PM EDT Brian Hunter: I think its higher than that Wednesday, June 14, 2006 1:24:26 PM EDT [redacted] wow Wednesday, June 14, 2006 1:24:34 PM EDT [redacted] is 3/30 Wednesday, June 14, 2006 1:26:44 PM EDT [redacted]: where i struggle is trying to figure how much capital you need to raise Wednesday, June 14, 2006 1:28:08 PM EDT Brian Hunter: lots Wednesday, June 14, 2006 1:28:14 PM EDT Brian Hunter: 400mm I tihnk Wednesday, June 14, 2006 1:28:18 PM EDT Brian Hunter: costs are high Wednesday, June 14, 2006 1:28:23 PM EDT Brian Hunter: brokerage etc...

Wednesday, June 14, 2006 1:28:53 PM EDT [redacted] would that support 4 traders? or less Wednesday, June 14, 2006 1:29:07 PM EDT Brian Hunter: y Wednesday, June 14, 2006 1:29:10 PM EDT Brian Hunter: and back office Wednesday, June 14, 2006 1:29:11 PM EDT Brian Hunter: legal Wednesday, June 14, 2006 1:29:16 PM EDT Brian Hunter: CFO/cah management Wednesday, June 14, 2006 1:29:20 PM EDT Brian Hunter: risk guy Wednesday, June 14, 2006 1:30:08 PM EDT Brian Hunter: power number large

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Wednesday, June 14, 2006 3:21:07 PM

[redacted]: this market is killing people
[redacted]: they dont know whether to sell buy or pray

Brian Hunter: Cal11 was a might low

[redacted]: but just look how skittish
[redacted]: settles come out
[redacted]: cal 9 gets hammered

Brian Hunter: its summer winters in the back
Brian Hunter: too offered
Brian Hunter: if those go bid tomorrow
Brian Hunter: backs will fix up
Brian Hunter: that's the pivot
Brian Hunter: - assuming people want to own cal11 there

[redacted] that was my discussion with my canadian office 5 minutes ago
[redacted] two decisions, either bid the summer/winter or let the backs go

Brian Hunter: yup
Brian Hunter: but look at May2011
Brian Hunter: 6.19 settle
Brian Hunter: hahahahahahahaha

[redacted] gotta believe they bid the summer winters
[redacted]: nice

Brian Hunter: yeah
Brian Hunter: that was my doing today
Brian Hunter: people were getting out of control on H/J selling
Brian Hunter: market needed a settlement lesson
Brian Hunter: those H/J's are scry

[redacted] you are evil
[redacted] in a nice way

From: windowsadmin@amaranthllc.com
Sent: Saturday, January 14, 2006 2:21 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant="[redacted]"

IM Dialog:

Wednesday, June 14, 2006 3:21:07 PM EDT Brian Hunter started conversation.
Wednesday, June 14, 2006 3:21:07 PM EDT [redacted] has entered the convetsation.
Wednesday, June 14, 2006 3:21:07 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, June 14, 2006 3:21:07 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Wednesday, June 14, 2006 3:21:07 PM EDT [redacted] this market is killing people Wednesday, June 14, 2006 3:21:47 PM EDT [redacted] they dont know whether to sell buy or pray Wednesday, June 14, 2006 3:32:04 PM EDT Brian Hunter: call1 was a might low Wednesday, June 14, 2006 3:32:32 PM EDT [redacted] but just look how skittish Wednesday, June 14, 2006 3:32:38 PM EDT [redacted] settles come out Wednesday, June 14, 2006 3:32:49 PM EDT [redacted] cal 9 gots hammered Wednesday, June 14, 2006 3:33:24 PM EDT Brian Hunter: its summer winters in the back Wednesday, June 14, 2006 3:33:29 PM EDT Brian Hunter: too offered Wednesday, June 14, 2006 3:33:33 PM EDT Brian Hunter: if those go bid tomorrow Wednesday, June 14, 2006 3:33:36 PM EDT Brian Hunter: backs will fix up Wednesday, June 14, 2006 3:33:44 PM EDT Brian Hunter: that's the pivot Wednesday, June 14, 2006 3:33:56 PM EDT Brian Hunter: - assuming people want to own call1 there Wednesday, June 14, 2006 3:34:08 PM EDT [redacted] that was my discussion with my canadian office 5 minutes ago Wednesday, June 14, 2006 3:35:36 PM EDT [redacted] two decisions, either bid the summer/winter or let the backs go Wednesday, June 14, 2006 3:35:41 PM EDT Brian Hunter: yup Wednesday, June 14, 2006 3:35:50 PM EDT Brian Hunter: but look at May2011 Wednesday, June 14, 2006 3:35:56 PM EDT Brian Hunter: 6.19 settle Wednesday, June 14, 2006 3:35:59 PM EDT Brian Hunter: hahahahahahahaha Wednesday, June 14, 2006 3:36:01 PM EDT [redacted] gotta believe they bid the summer winters Wednesday, June 14, 2006 3:36:04 PM EDT [redacted] nice Wednesday, June 14, 2006 3:36:05 PM EDT Brian Hunter: yeah Wednesday, June 14, 2006 3:36:12 PM EDT Brian Hunter: that was my doing today Wednesday, June 14, 2006 3:36:21 PM EDT Brian Hunter: people were getting out of control on H/J selling Wednesday, June 14, 2006 3:36:28 PM EDT Brian Hunter: market needed a settlemnt lesson Wednesday, June 14, 2006 3:36:33 PM EDT Brian Hunter: those H/J's are scry Wednesday, June 14, 2006 3:37:34 PM EDT [redacted]: you are evil Wednesday, June 14, 2006 3:37:42 PM EDT [redacted] in a nice way

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

Thursday, August 10, 2006 9:42:08 AM

[redacted] = Redacted by the Permanent Subcommittee on Investigations

[redacted] hello bh

Brian Hunter: yoyo

[redacted] feels a bit messy out there
[redacted] in natty land

Brian Hunter: oh yeah
Brian Hunter: sold 300 red h/j yest
Brian Hunter: this front one is still ofered like mad
Brian Hunter: but its just a matter of time

[redacted] quite the deal with bo, you think it affects the interest in energy related funds?

Brian Hunter: I hope not
Brian Hunter: given we are going to try and raise 3bn for an energy fund

[redacted] wow

Brian Hunter: our thoughts are the interest is huge still

[redacted] should be, i am having trouble understanding how spreads are behaving right now but we are doing really well on vol

Brian Hunter: yeah
Brian Hunter: me too
Brian Hunter: on both counts
Brian Hunter: feels like the market has a massive hurricane bet on
Brian Hunter: long oct
Brian Hunter: short jan
Brian Hunter: only have a month for that to play out

10:26:32 AM

Brian Hunter: Heard a rumour there are some pipes being pigged in the Gulf right now
Brian Hunter: explains cash strength

11:47:52 AM

Brian Hunter: So
Brian Hunter: I could really use some insight into the cash market
Brian Hunter: as to why is so freaking strong
Brian Hunter: Arnold has a massive short cash pos on in Aug

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Brian Hunter: is this just people indexing it up his ass
Brian Hunter: maybe a pipe curtailment or something

[redacted] I have been trying to get that story straight all week
[redacted]: the people around here that should know have not had what i would consider a very good explaination

Brian Hunter: last time I checked a shit load of gas is going to get injected between now and sept
Brian Hunter: And intentioal pipe out is my guess
Brian Hunter: power not lending support at least up here
Brian Hunter: unless industrial demand is really freaking people out

[redacted] I'll shoot you a note in a bit I've got to take care a few things here

Brian Hunter: np

From: windowsadmin@amaranthllc.com
Sent: Thursday, August 10, 2006 9:42 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"[redacted]

IM Network: AOL IM

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Users:

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, August 10, 2006 9:42:08 AM EDT Brian Hunter started conversation.
Thursday, August 10, 2006 9:42:08 AM EDT [redacted] has entered the conversation.
Thursday, August 10, 2006 9:42:08 AM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, August 10, 2006 9:42:08 AM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, August 10, 2006 9:42:08 AM EDT [redacted]: hello bh Thursday, August 10, 2006 9:42:49 AM EDT Brian Hunter: yoyo Thursday, August 10, 2006 9:43:24 AM EDT [redacted]: feels a bit messy out there Thursday, August 10, 2006 9:43:28 AM EDT [redacted]: in natty land Thursday, August 10, 2006 9:43:36 AM EDT Brian Hunter: oh yeah Thursday, August 10, 2006 9:43:45 AM EDT Brian Hunter: sold 300 red h/j yest Thursday, August 10, 2006 9:43:55 AM EDT Brian Hunter: this front one is still ofered like mad Thursday, August 10, 2006 9:44:01 AM EDT Brian Hunter: but its just a matter of time Thursday, August 10, 2006 9:45:35 AM EDT [redacted]: quite the deal with bo, you think it affects the interest in energy related funds?
Thursday, August 10, 2006 9:45:55 AM EDT Brian Hunter: I hope not Thursday, August 10, 2006 9:46:08 AM EDT Brian Hunter: given we are going to try and raise 3bn for an energy fund Thursday, August 10, 2006 9:46:24 AM EDT [redacted] wow Thursday, August 10, 2006 9:46:49 AM EDT Brian Hunter: our thoughts are the interest is huge still Thursday, August 10, 2006 9:48:18 AM EDT [redacted] should be, i am having trouble understanding how spreads are behaving right now but we are doing really well on vol Thursday, August 10, 2006 9:48:28 AM EDT Brian Hunter: yeah Thursday, August 10, 2006 9:48:30 AM EDT Brian Hunter: me too Thursday, August 10, 2006 9:48:47 AM EDT Brian Hunter: on both counts Thursday, August 10, 2006 9:48:56 AM EDT Brian Hunter: feels like the market has a massive hurriance bet on Thursday, August 10, 2006 9:49:07 AM EDT Brian Hunter: long oct Thursday, August 10, 2006 9:49:11 AM EDT Brian Hunter: short jan Thursday, August 10, 2006 9:49:20 AM EDT Brian Hunter: only have a month for that to play out

From: windowsadmin@amaranthllc.com
Sent: Thursday, August 10, 2006 10:27 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH",[redacted]

= Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, August 10, 2006 10:26:32 AM EDT Brian Hunter started conversation.
Thursday, August 10, 2006 10:26:32 AM EDT [redacted] has entered the conversation.
Thursday, August 10, 2006 10:26:32 AM EDT Brian Hunter: Heard a rumour there are some pipes being pigged in the Gulf right now Thursday, August 10, 2006 10:26:32 AM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, August 10, 2006 10:26:32 AM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, August 10, 2006 10:26:39 AM EDT Brian Hunter: explains cash strength

From: windowsadmin@amaranthllc.com
Sent: Thursday, August 10, 2006 11:48 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; [redacted]

IM Network: AOL IM

▬ = Redacted by the Permanent Subcommittee on Investigations

IM Users:

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, August 10, 2006 11:47:52 AM EDT Brian Hunter started conversation.
Thursday, August 10, 2006 11:47:52 AM EDT [redacted] has entered the conversation.
Thursday, August 10, 2006 11:47:52 AM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, August 10, 2006 11:47:52 AM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, August 10, 2006 11:47:52 AM EDT Brian Hunter: So Thursday, August 10, 2006 11:48:02 AM EDT Brian Hunter: I could really use some insight into the cash market
Thursday, August 10, 2006 11:48:25 AM EDT Brian Hunter: as to why is so freaking strong
Thursday, August 10, 2006 11:48:39 AM EDT Brian Hunter: Arnold has a massive short cash pos on in Aug Thursday, August 10, 2006 11:48:54 AM EDT Brian Hunter: is this just people indexing it up his ass Thursday, August 10, 2006 11:49:02 AM EDT Brian Hunter: maybe a pipe curtailment or something Thursday, August 10, 2006 11:49:13 AM EDT [redacted] I have been trying to get that story straight all week Thursday, August 10, 2006 11:50:00 AM EDT [redacted]: the people around here that should know have not had what i would consider a very good explaination Thursday, August 10, 2006 11:50:06 AM EDT Brian Hunter: last time I checked a shit load of gas is going to get injected between now and sept Thursday, August 10, 2006 11:50:16 AM EDT Brian Hunter: And intentioal pipe out is my guess Thursday, August 10, 2006 11:50:24 AM EDT Brian Hunter: power not lending support at least up here Thursday, August 10, 2006 11:50:34 AM EDT Brian Hunter: unless industrial demand is really freaking people out Thursday, August 10, 2006 11:51:47 AM EDT [redacted]: I'll shoot you a note in a bit I've got to take care a few things here Thursday, August 10, 2006 11:52:00 AM EDT Brian Hunter: np

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Thursday, August 10, 2006, 2:44:48 PM

[redacted] so it sounds to me like all you said has all contributed to cash strength; pigging, short, heat. question now is what happens when weather demand falls and we get near(er) the end of the season... sounds like mixed views to me some people definately think uv will tighten from here but I'm not there yet

[redacted] we have gotten good u/x and u/z interest from the phys side

From: windowsadmin@amaranthllc.com
Sent: Thursday, August 10, 2006 2:45 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; [redacted]

IM Network: AOL IM

▬ = Redacted by the Permanent Subcommittee on Investigations

IM Users:

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, August 10, 2006 2:44:48 PM EDT Brian Hunter started conversation.
Thursday, August 10, 2006 2:44:48 PM EDT [redacted] has entered the conversation.
Thursday, August 10, 2006 2:44:48 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, August 10, 2006 2:44:48 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, August 10, 2006 2:44:48 PM EDT [redacted] so it sounds to me like all you said has all contributed to cash strength; pigging, short, heat. question now is what happens when weather demand falls and we get near(er) the end of season... sounds like mixed views to me some people definately think uv will tighten from here but I'm not there yet
Thursday, August 10, 2006 2:47:48 PM EDT [redacted] we have gotten good u/x and u/z interest from the phys side

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Thursday, August 24, 2006, 9:52:58 AM

[redacted] morning
[redacted] how u been

Brian Hunter: pretty good
Brian Hunter: busy though
Brian Hunter: you guys have any thoughts on Hub cash or this storm
Brian Hunter[redacted] is 5b for hub combos
Brian Hunter: damn
Brian Hunter: last time I saw that Rita was coming

[redacted] cash is stronger/longer than I expected

Brian Hunter: Yeah
Brian Hunter: I heard is a total squeeze there

[redacted] storm looks like it will be an issue for a bit

Brian Hunter: I guess

[redacted] but I thought that hype would bring the vxz fly in and it HAS NOT

Brian Hunter: My rule of thumb is until GFS takes it serious then i ignnore it
Brian Hunter: I'll be hnest with you
Brian Hunter: I think Nov will be hard pressed to fall
Brian Hunter: substantially
Brian Hunter: Too much dmeand
Brian Hunter: normal weather I see 200 draw
Brian Hunter: back in5

[redacted] It is starting to feel that was I need to rethink my position on Nov

Brian Hunter: The way I see it
Brian Hunter: is if we pull every week in Nov – which I think is likely with normal weather, How does Nov trade below April

10:12:22 AM

[redacted] which I suppose is accounting for some of the weakness in HJ so long as XF Isn't falling apart
[redacted] by that I mean tightening on the XF

Brian Hunter: yeah
Brian Hunter: I think it just has to stay strong

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Brian Hunter: it certainly can be weak in the month
Brian Hunter: but if we are pulling, then Novcash will be above April
Brian Hunter: and S/D implies decent draw in Nov

10:41:23 AM

[redacted]: there has been good selling of summer red summer seems like new money being put against that one

Brian Hunter: yeah
Brian Hunter: risky form a flow standpoint

[redacted] I agree I think there are people who need to buy it but waiting because of the redHJ

Brian Hunter: yeah
Brian Hunter: that is impressive by the way
Brian Hunter: I have sold a bunch of it
Brian Hunter: and it keeps coming

[redacted]: yup
[redacted]: goes to your point on flow
[redacted] and they are scared to sell the summer/winter

From: windowsadmin@amaranthllc.com
Sent: Thursday, August 24, 2006 9:53 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH";[redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, August 24, 2006 9:52:58 AM EDT Brian Hunter started conversation.
Thursday, August 24, 2006 9:52:58 AM EDT schlencl has entered the conversation.
Thursday, August 24, 2006 9:52:58 AM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, August 24, 2006 9:52:58 AM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Thursday, August 24, 2006 9:52:58 AM EDT [redacted] morning Thursday, August 24, 2006 9:53:07 AM EDT [redacted] how u been Thursday, August 24, 2006 9:56:39 AM EDT Brian Hunter: pretty good Thursday, August 24, 2006 9:56:41 AM EDT Brian Hunter: busy though Thursday, August 24, 2006 9:56:56 AM EDT Brian Hunter: you guys have any thoughts on Hub cash or this storm Thursday, August 24, 2006 9:57:05 AM EDT Brian Hunter [redacted] is 5b for hub combos Thursday, August 24, 2006 9:57:07 AM EDT Brian Hunter: damn Thursday, August 24, 2006 9:57:37 AM EDT Brian Hunter: last time I saw that Rita was coming Thursday, August 24, 2006 9:57:54 AM EDT [redacted] cash is stronger/longer than I expected Thursday, August 24, 2006 9:58:09 AM EDT Brian Hunter: Yeah Thursday, August 24, 2006 9:58:14 AM EDT Brian Hunter: I heard is a total squeeze there Thursday, August 24, 2006 9:58:25 AM EDT [redacted] storm looks like it will be an issue for a bit Thursday, August 24, 2006 9:58:49 AM EDT Brian Hunter: I guess Thursday, August 24, 2006 9:59:11 AM EDT [redacted] but I thought that hype would bring the vxz fly in and it HAS NOT Thursday, August 24, 2006 9:59:17 AM EDT Brian Hunter: My rule of thumb is until GFS takes it serious then I ignnore it Thursday, August 24, 2006 9:59:26 AM EDT Brian Hunter: I'll be hnest with you Thursday, August 24, 2006 9:59:35 AM EDT Brian Hunter: I think Nov will be hard pressed to fall Thursday, August 24, 2006 9:59:40 AM EDT Brian Hunter: substantially Thursday, August 24, 2006 9:59:45 AM EDT Brian Hunter: Too much dmeand Thursday, August 24, 2006 9:59:51 AM EDT Brian Hunter: normal weather I see 200 draw Thursday, August 24, 2006 9:59:53 AM EDT Brian Hunter: back in5 Thursday, August 24, 2006 10:00:25 AM EDT [redacted] It is starting to feel that was I need to rethink my position on Nov Thursday, August 24, 2006 10:09:02 AM EDT Brian Hunter: The way I see it Thursday, August 24, 2006 10:09:32 AM EDT Brian Hunter: is if we pull every week in Nov - which I think is likely with normal weather, How does Nov trade below April

1

From: windowsadmin@amaranthllc.com
Sent: Thursday, August 24, 2006 10:12 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH";[redacted]

▬▬ = Redacted by the Permanent Subcommittee on Investigations

IM Network: AOL IM

IM Users:

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, August 24, 2006 10:12:22 AM EDT [redacted] started conversation.
Thursday, August 24, 2006 10:12:22 AM EDT Brian Hunter has entered the conversation.
Thursday, August 24, 2006 10:12:22 AM EDT [redacted]: which I suppose is accounting for some of the weakness in HJ so long at XF Isn't falling apart Thursday, August 24, 2006 10:13:21 AM EDT [redacted]: by that I mean tightening on the XF Thursday, August 24, 2006 10:38:26 AM EDT Brian Hunter: yeah Thursday, August 24, 2006 10:38:32 AM EDT Brian Hunter: I think it just has to stay strong Thursday, August 24, 2006 10:38:44 AM EDT Brian Hunter: it certainly can be weak in the month Thursday, August 24, 2006 10:39:00 AM EDT Brian Hunter: but if we are pulling, then Novcash will be above April Thursday, August 24, 2006 10:39:08 AM EDT Brian Hunter: and S/D implies decent draw in Nov

From: windowsadmin@amaranthllc.com
Sent: Thursday, August 24, 2006 10:41 AM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; [redacted]

IM Network: AOL IM

IM Users:

[redacted] = Redacted by the Permanent Subcommittee on Investigations

participant="hunteramaranth"
participant=[redacted]

IM Dialog:

Thursday, August 24, 2006 10:41:23 AM EDT [redacted] started conversation.
Thursday, August 24, 2006 10:41:23 AM EDT Brian Hunter has entered the conversation.
Thursday, August 24, 2006 10:41:23 AM EDT [redacted] there has been good selling of summer red summer seems like some new money being put against that one Thursday, August 24, 2006 10:43:33 AM EDT Brian Hunter: yeah Thursday, August 24, 2006 10:43:38 AM EDT Brian Hunter: risky form a flow standpoint Thursday, August 24, 2006 10:45:31 AM EDT [redacted] I agree I think there are people who need to buy it but waiting because of the redHJ Thursday, August 24, 2006 10:45:56 AM EDT Brian Hunter: yeah Thursday, August 24, 2006 10:46:01 AM EDT Brian Hunter: that is impressive by the way Thursday, August 24, 2006 10:46:06 AM EDT Brian Hunter: I have sold a bunch of it Thursday, August 24, 2006 10:46:09 AM EDT Brian Hunter: and it keeps coming Thursday, August 24, 2006 10:47:38 AM EDT [redacted] yup Thursday, August 24, 2006 10:48:02 AM EDT [redacted]: goes to your point on flow Thursday, August 24, 2006 10:48:17 AM EDT [redacted]: and they are scared to sell the summer / winter Thursday, August 24, 2006 10:49:35 AM EDT [redacted] off topic u still liking the GT Thursday, August 24, 2006 10:50:31 AM EDT Brian Hunter: yeah Thursday, August 24, 2006 10:50:33 AM EDT Brian Hunter: awesome car Thursday, August 24, 2006 10:50:45 AM EDT [redacted] any mechanical issues for u?
Thursday, August 24, 2006 10:51:26 AM EDT Brian Hunter: nope Thursday, August 24, 2006 10:51:36 AM EDT [redacted] cool, thnks Thursday, August 24, 2006 10:56:58 AM EDT Brian Hunter: cash getting destroyed Thursday, August 24, 2006 10:57:00 AM EDT Brian Hunter: FINALLY Thursday, August 24, 2006 11:07:45 AM EDT Brian Hunter: Here is the market call - IF Nov is constrained by April, Then how wide can v/x go

Permanent Subcommittee on Investigations Selected Excerpts from Instant Messages and E-mails Obtained from Amaranth LLC

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Tuesday, August 29, 2006 3:41:59 PM

Brian Hunter: want tp price up the remainder of that deal now?
Brian Hunter: I know its nutty

[redacted] it is so f*$*(#$% up
[redacted] i am starting to feel very confused

Brian Hunter: these were wild swings the last few days
Brian Hunter: I ahve no idea what's happening
Brian Hunter: makes me nervous

[redacted] what u looking at on the 8-10 is it the same

Brian Hunter: y
Brian Hunter: last 35%

[redacted] well, i guess we should price it

Brian Hunter: yup

[redacted] what cal 8 u see right now

From: windowsadmin@amaranthllc.com
Sent: Tuesday, August 29, 2006 3:42 PM
To: amaranth.dom@amaranth.digitalsafe.net
Subject: SUBJECT: CONVERSATION PARTICIPANTS = "HUNTERAMARANTH"; [redacted]

IM Network: AOL IM

IM Users:

= Redacted by the Permanent Subcommittee on Investigations

participant="hunteramaranth"
participant="[redacted]"

IM Dialog:

Tuesday, August 29, 2006 3:41:59 PM EDT Brian Hunter started conversation.
Tuesday, August 29, 2006 3:41:59 PM EDT [redacted] has entered the conversation.
Tuesday, August 29, 2006 3:41:59 PM EDT Brian Hunter: IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, August 29, 2006 3:41:59 PM EDT [redacted] IM Administrator: NOTE: This session is recorded and the recording is the sole property of Amaranth.
Tuesday, August 29, 2006 3:41:59 PM EDT Brian Hunter: want tp price up the remainder of that deal now?
Tuesday, August 29, 2006 3:42:03 PM EDT Brian Hunter: I know its nutty Tuesday, August 29, 2006 3:42:23 PM EDT [redacted]: it is so f*S*(#_$% up Tuesday, August 29, 2006 3:42:40 PM EDT [redacted]: i am starting to feel very confused Tuesday, August 29, 2006 3:42:57 PM EDT Brian Hunter: these were wild swings the last few days Tuesday, August 29, 2006 3:43:05 PM EDT Brian Hunter: I ahve no idea what's happening Tuesday, August 29, 2006 3:43:09 PM EDT Brian Hunter: makes me nervous Tuesday, August 29, 2006 3:47:19 PM EDT [redacted]: what u looking at on the 8-10 is it the same?
Tuesday, August 29, 2006 3:47:24 PM EDT Brian Hunter: y Tuesday, August 29, 2006 3:47:29 PM EDT Brian Hunter: last 35% Tuesday, August 29, 2006 3:51:09 PM EDT [redacted] well, i guess we should price it Tuesday, August 29, 2006 3:53:12 PM EDT Brian Hunter: yup
Tuesday, August 29, 2006 4:01:23 PM EDT [redacted]: what cal 8 u see right now

DEWEY BALLANTINE LLP

975 F STREET, N.W.
WASHINGTON, D.C. 20004-1405
TEL 202 862-1000 FAX 202 862-1093

TIMOTHY J. COLEMAN
202 429 2337
tcoleman@deweyballantine.com

July 20, 2007

VIA EMAIL AND FEDERAL EXPRESS
Mary D. Robertson
Chief Clerk
Permanent Subcommittee on Investigations
199 Russell Senate Office Building
Washington, DC 20510

Re: **Mr. Shane Lee's Testimony Before the Senate Permanent Subcommittee on Investigations**

Dear Ms. Robertson:

We have reviewed the draft transcript (the "Draft Testimony Transcript") of Mr. Shane Lee's testimony on June 25 before the Senate Permanent Subcommittee on Investigations. Based on that review, we wish to clarify the following:

1. With respect to pages 145 to 146 of the Draft Testimony Transcript, as of June 25, Solengo Capital ("Solengo") received expressions of interest from potential (rather than actual) investors, but Solengo was not yet formally created. Accordingly, it could not accept funds from any investors.

2. Mr. Lee testified regarding "two of the problems that happened in the Amaranth situation." Draft Testimony Transcript at 145: 12-13. We wish to clarify that this statement refers to two of the publicly-debated issues regarding the events that led to the losses that Amaranth suffered. In particular, Mr. Lee's testimony should not be construed as any indication on Mr. Lee's part that there were any "problems" at Amaranth with capital invested in any one market.

3. Mr. Lee testified that there will be "significantly smaller trades" at Solengo. *Id.* at ll. 22-24. We wish to clarify that Mr. Lee does not at present expect that Solengo's proposed trading strategy will involve trades that are as large-scale as some of the trades at Amaranth.

Permanent Subcommittee on Investigations
EXHIBIT #23

4. Mr. Lee testified that: "I have never spoken to any of those investors [from oil-producing countries]. I am not part of the fundraising process. . . . I know some of the countries that these people live in and yes, they would have an interest in high oil prices." *Id.* at 146: 6-10. We wish to clarify that while some of the countries where the potential investors are based might have economies that have a relationship to the energy markets, Mr. Lee is not aware of any specific potential investor that has an interest in higher or lower energy prices.

Please contact me if you have any questions.

Very truly yours,

Timothy Coleman /ss

Timothy J. Coleman

cc: Dan M. Berkovitz, Esq.
Mark D. Nelson, Esq.

SHANE LEE RESPONSE TO

SUPPLEMENTAL QUESTIONS FROM SENATOR TOM COBURN

SENATE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

HEARING ON

EXCESSIVE SPECULATION IN THE NATURAL GAS MARKET

SUBMITTED ON JULY 31, 2007

Permanent Subcommittee on Investigations

EXHIBIT #24

1. How reliable is the statistical analysis which proves causation in this matter? Are there multiple interpretations of the data?

Although I am a trader and not a statistician, I would offer the following observations in response to this question. First, the Subcommittee Staff's report posits a correlation between Amaranth's purchases of, and positions in, natural gas contracts, on the one hand, and spread prices on the other. *See Excessive Speculation in the Natural Gas Market, Staff Report with Additional Minority Views*, Permanent Subcommittee on Investigations (the "Report"), at 65-67, 80-87. Yet, as the Report itself recognizes, a mere correlation does not establish causation. *See* Report at 66 (noting that "[a] high degree of statistical correlation between two variables does not, by itself, establish a causal relationship between the two.").

A report prepared for Amaranth by Lexecon presents an economic analysis showing that the data at issue is subject to more than one conclusion. The Lexecon analysis concludes that further testing of the applicable data would be required to establish causation. Lexecon found that, when a "first differences analysis" is applied to the data, much of the correlation discussed in the Report disappears. Thus, there are multiple interpretations of the data on which the Report relies, including the fact that in 2006, spreads continued to widen as the market gained further confidence that storage was expected to become full before the heating season. In short, there may well have been fundamental reasons such as supply, demand and crude oil and storage capacity that affected spread prices.

2. The subcommittee report implies converting NYMEX contracts into ICE contracts is very simple. Is this true, and if so, shouldn't this loophole be closed?

Most parties have no outstanding futures positions on expiry because they cannot make or take delivery. Meanwhile, ICE swaps, NYMEX swaps, and OTC bilateral swaps (trades directly with another company) are derivative contractual obligations that are based upon NYMEX futures and that are generally identical financially to futures except during the 30-minute settlement process each month. Because of the nearly identical value of futures and swaps, and the inability of some market participants -- such as Amaranth -- to make or take physical delivery on the expiration of futures contracts, those market participants regularly convert futures to swaps. This conversion can be done at little cost using a product called an EFS (Exchange Future for Swap), which makes the EFS highly liquid and a necessary risk mitigation tool for the natural gas market.

The fact that futures on expiry require a party to make or take physical delivery also explains why futures and swaps have a different set of rules. NYMEX sets accountability and position limits on futures during the three days leading up to the expiry. The swap market does not require these regulations because the actual settlement of the product is different and trading in these swaps will generally not affect settlement prices. Because of these differences, I would suggest that it is inaccurate to describe the ability to convert futures to swaps as a "loophole."

As I testified previously, in my opinion, market participants and regulators simply need more information. All swaps and futures should have large position reporting, as well as accountability limits. In particular, reporting is more important now due to the billions of "long only" dollars invested in natural gas by commodity indices (*e.g.*, the Goldman Sachs Commodity Index) and Exchange Traded Funds (ETFs).

In terms of setting position limits on swaps, care should be taken before imposing more regulation. I do not see a need for limits on swaps before the settlement process. Due to the increase in commodity indices, ETFs, and even large power producer hedging, imposing such limits could result in a flight of capital away from North America.

RESPONSE TO SUPPLEMENTAL QUESTION FOR THE RECORD
FROM
SENATOR TOM COBURN
to
ARTHUR CORBIN
President and CEO
Municipal Gas Authority of Georgia
Kennesaw, Georgia
(On behalf of the American Public Gas Association)

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
HEARING ON
EXCESSIVE SPECULATION
IN THE NATURAL GAS MARKET
June 25, 2007

Q. Even if Amaranth's full position (including ICE and NYMEX positions) had been known, what could the CFTC have done to slow Amaranth's position in the ICE exchange, since it is a private, OTC market?

RESPONSE: Senator Coburn, I appreciate the opportunity to answer this question. As you stated, the CFTC has limited authority with respect to oversight of trading on the ICE exchange. Nevertheless, if the CFTC had the ability to have known Amaranth's full position through a routine reporting requirement (which as you stated it did not), the CFTC does have a number of informal and formal tools that it might have been able to use to respond to Amaranth's market activities as they unfolded.

First and foremost, the CFTC has authority to bring enforcement actions against persons who manipulate or who attempt to manipulate the price of commodities in interstate commerce. This is in addition to the CFTC's authority to bring enforcement actions against persons who manipulate or who attempt to manipulate the price of futures contracts traded on a futures exchange. If the CFTC had seen Amaranth's entire position, both the positions remaining on NYMEX as well as the positions that Amaranth moved to ICE, they might have contacted Amaranth to inquire with respect to the commercial need and justification for its trading decisions and for the positions that Amaranth had amassed. The fact that the CFTC would have contacted Amaranth and asked questions regarding Amaranth's market activities in and of itself may have resulted in a change of course by Amaranth.

If Amaranth's response to the CFTC's inquiry regarding Amaranth's market activities did not address CFTC concerns, the CFTC could have issued a warning letter to Amaranth to remind them that the manipulation or attempted manipulation of the price of commodities in interstate commerce is a violation of law. Receipt of a CFTC warning letter may also result in a person or entity altering their market conduct. These informal actions would have represented the so-called "jaw-boning" referred to by CFTC Interim Chairman Lukken in recent testimony before Congress.

Permanent Subcommittee on Investigations
EXHIBIT #25

Finally, if the developing facts warranted, the CFTC had, and has, the authority under Section 6(d) of the Commodity Exchange Act to issue a cease and desist order against any person manipulating or attempting to manipulate the market price of any commodity in interstate commerce or on any futures exchange. Alternatively, if the developing facts warranted, the CFTC had, and has, the authority under Section 6c of the Commodity Exchange Act, to seek an injunction from a U.S. district court against a person who has engaged, is engaging, or who is about to engage in a violation of the Act, including price manipulation or attempted manipulation.

All of the affirmative actions identified above that the CFTC could have taken are predicated upon the CFTC having a complete picture of the market. A complete picture would enable the CFTC to identify market activities, such as those taken by Amaranth, while they are happening and to respond in a timely manner that would protect consumers. The level of transparency that would provide the CFTC with that complete picture is currently not in place.

# # #

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