

### § 3930.11

(e) The operator/lessee must conduct operations to:

(1) Prevent waste and conserve the recoverable oil shale reserves and other resources;

(2) Prevent damage to or degradation of oil shale formations;

(3) Ensure that other resources are protected upon abandonment of operations; and

(f) The operator must save topsoil for use in final reclamation after the reshaping of disturbed areas has been completed.

#### **§ 3930.11 Performance standards for exploration and in situ operations.**

The operator/lessee must adhere to the following standards for all exploration and in situ drilling operations:

(a) At the end of exploration operations, all drill holes must be capped with at least 5 feet of cement and plugged with a permanent plugging material that is unaffected by water and hydrocarbon gases and will prevent the migration of gases and water in the drill hole under normal hole pressures. For holes drilled deeper than stripping limits, the operator/lessee, using cement or other suitable plugging material the BLM approves in advance, must plug the hole through the thickness of the oil shale bed(s) or mineral deposit(s) and through aquifers for a distance of at least 50 feet above and below the oil shale bed(s) or mineral deposit(s) and aquifers, or to the bottom of the drill hole. The BLM may approve a lesser cap or plug. Capping and plugging must be managed to prevent water pollution and the mixing of ground and surface waters and to ensure the safety of people, livestock, and wildlife;

(b) The operator/lessee must retain for 1 year all drill and geophysical logs. The operator must also make such logs available for inspection or analysis by the BLM. The BLM may require the operator/lessee to retain representative samples of drill cores for 1 year;

(c) The operator/lessee may, after the BLM's written approval, use drill holes as surveillance wells for the purpose of monitoring the effects of subsequent operations on the quantity, quality, or pressure of ground water or mine gases; and

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(d) The operator/lessee may, after written approval from the BLM and the surface owner, convert drill holes to water wells. When granting such approvals, the BLM will include a transfer to the surface owner of responsibility for any liability, including eventual plugging, reclamation, and abandonment.

#### **§ 3930.12 Performance standards for underground mining.**

(a) Underground mining operations must be conducted in a manner to prevent the waste of oil shale, to conserve recoverable oil shale reserves, and to protect other resources. The BLM must approve in writing permanent abandonment and operations that render oil shale inaccessible.

(b) The operator/lessee must adopt mining methods that ensure the proper recovery of recoverable oil shale reserves.

(c) Operators/lessees must adopt measures consistent with known technology to prevent or, where the mining method used requires subsidence, control subsidence, maximize mine stability, and maintain the value and use of surface lands. If the POD indicates that pillars will not be removed and controlled subsidence is not part of the POD, the POD must show that pillars of adequate dimensions will be left for surface stability, considering the thickness and strength of the oil shale beds and the strata above and immediately below the mined interval.

(d) The lessee/operator must have the BLM's approval to temporarily abandon a mine or portions thereof.

(e) The operator/lessee must have the BLM's prior approval to mine any recoverable oil shale reserves or drive any underground workings within 50 feet of any of the outer boundary lines of the federally-leased or federally-licensed land. The BLM may approve operations closer to the boundary after taking into consideration state and Federal environmental laws and regulations.

(f) The lessee/operator must have the BLM's prior approval before drilling any lateral holes within 50 feet of any outside boundary.

(g) Either the operator/lessee or the BLM may initiate the proposal to mine