

OTTER CREEK MINE EXHIBIT 313H: MANAGEMENT OF EXPLORATION DRILL HOLES

1.0 Introduction

From time to time it may be necessary to drill additional developmental holes within the permit area to refine the geologic model or define crop and burn lines. A prospecting permit will be obtained from the department for exploration drilling that is outside the permit area and will follow the requirements in ARM 17.24.1001 through 17.24.1004. Drilling and drill hole reclamation procedures will follow the requirements of ARM 17.24.1005 through 17.24.1018 as described below. It is not anticipated that test pits will be utilized as discussed in ARM 17.24.1014.

2.0 Drilling Procedures

Drilling will employ a truck-mounted rotary drill accompanied by support vehicle(s) as required by drilling personnel and the supervising geologist. Core drilling and sampling will be used for the coal seam. For burn and crop line delineation, rotary holes will be used. If required overburden samples will be collected. Upon completion of drilling activities, the hole will be reclaimed.

The typical drill hole will range between 5 1/8 inches to 7 7/8 inches in diameter. Drilling media to be used include air and water; use of drilling mud is not anticipated, but may be utilized if hole caving is encountered. Water used for and produced by drilling will not be contained and will be allowed to infiltrate into the ground surface.

Exploration holes will not be located near active streams, lakes, stock water ponds, wells or springs. Disturbance of the land surface will be minimized by avoiding or minimizing grading of new roads and locating drill hole sites at locations where construction of drill pads will not be required.

Inside the permit area travel will be confined to mine roads during times when off-road travel would cause excessive damage to vegetation or erosion of the land surface. Road construction, if required outside the permit area, will be limited to the minimum extent necessary to complete the drilling plan. No earth moving for drill pads or disposal pits is anticipated.

Drilling operations will be conducted to avoid degradation or diminution of any water supply and to avoid adverse impacts to existing or potential mining operations. Conversion of exploration holes to water wells is not anticipated. If necessary, appropriate techniques will be used to prevent the escape of water, oil or gas from drill holes, prevent the contamination of all surface and ground waters, and prevent inter-aquifer mixing and prevent aquifer contamination by surface drainage.

3.0 ARM 17.24.632 Permanent Sealing of Drill Holes

When no longer needed for its intended use as approved by the department and if not transferred as a water well under ARM 17.24.647, each prospecting hole, other drilled hole, borehole, or well will be abandoned according to the procedures described in ARM 17.24.1005. Other exposed underground openings will also be abandoned in accordance with ARM 17.24.1005 or, with department approval, be cased, sealed, or otherwise managed to prevent acid or other toxic drainage from entering the ground or surface waters, to minimize disturbance to the prevailing hydrologic balance, and to ensure safety of people, livestock, fish and wildlife, and machinery in the permit area and adjacent areas.

Exploration holes drilled within the permit area will be plugged using standard procedures, and in accordance with ARM 17.24.632, to prevent the escape of water, oil or gas, prevent contamination of all surface and underground waters and prevent interaquifer mixing, and prevent aquifer contamination by surface drainage. Holes will be filled with bentonite chips to a depth of two feet from the surface, and the remaining two feet will be filled with drill cuttings or soil. Drill cuttings will be leveled out to a maximum depth of one-half inch. Depending on location of planned drill holes with respect to advancing mine operations, OCC may request as part of the drilling plan approval to modify or skip the abandonment procedure.

Exploration holes outside of the permit area will be drilled and reclaimed according to the requirements and procedures described in Prospecting Permit X2011334 -Otter Creek.

Monitor wells in the immediate path of mining will be mined through; wells completed in strata below the floor of the Knobloch coal will be filled with bentonite chips to at least the bottom-of-coal elevation prior to removal. Monitor wells no longer needed for their intended purpose that are not retained for the post-mining land use or converted to livestock water use will be filled with bentonite chips, the casing cut two feet below the land surface, and the site reclaimed.

Other exposed underground openings are not anticipated. If encountered, they will be abandoned in accordance with ARM 17.24.1005 or, with department approval, be cased, sealed, or otherwise managed to prevent acid or other toxic drainage from entering the ground or surface waters, to minimize disturbance to the prevailing hydrologic balance, and to ensure safety of people, livestock, fish and wildlife, and machinery in the permit area and adjacent areas in accordance with ARM 17.24.652.

4.0 ARM 17 24.647 Transfer of Wells

In the event of transfer of an exploration well or monitoring well to the surface owner for use as a livestock well, prior department approval will be obtained and the procedures of ARM 17.24.647 will be followed.

5.0 ARM 17.24.652 Wells and Underground Openings: Safety

Each prospecting well, other well, and all other exposed underground openings in the permit area will be temporarily protected during use by barricades, fences, or other protective devices approved by the department, in accordance with ARM 17.24.652. These devices will be routinely inspected and maintained in good operating condition.