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State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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**DIVISION OF OIL GAS & MINING
FIELD VISIT FORM
TECHNICAL**

Date : August 12, 1996

Time: 9:15a.m. to 12:00p.m.

Mine: Castle Gate Mine (Hardscrabble Canyon)

File Number: ACT/007/004, Folder #2

DOG M Staff: Steven Johnson, Robert Davidson, and Paul Baker

Other Attendees: Johnny Pappas (Cyprus/Amax), and Bill Minchey (Minchey Digging)

Purpose:
Pre-reclamation site discussion.

Observations:

Three major hydrology issues were discussed. First, Mr. Pappas voiced a desire to build the reclamation channel to the proper grade without removing several large oaks in the upper part of the main channel near the connection with a previously reclaimed section. The conclusions reached on site were that some of the oaks may be lost but others retained if the reclamation of the channel were to include a small section of the previously reclaimed section. This is necessary because of a sharp change in the grade between the two channels.

Second, reclamation activities in the Dog Flats area would make it necessary to remove the current diversion prior to completion of the final channel. Amax will need a temporary diversion in this area to route flow around the reclamation work. Because this channel is temporary it will not necessarily meet the same standard as the existing or final diversion, but most water will be controlled and all water will be routed to the sediment ponds.

Third, Mr. Minchey had questions about the sizing of large riprap. The conclusion drawn here was that the middle rock diameter should be used as the representative diameter for the rock. Mr. Minchey was informed that he should beware of a proper gradation but some semi-rounded rock was acceptable for the smaller portion of the riprap makeup.

Soils issues included identifying acceptable sources as substitute soil. The upper north-west end holds the best soil resources. A series of four pits showed excellent soil material to depths



of six feet or greater. Soil samples were taken by Johnny Pappas with the assistance of Robert Davidson. These will be analyzed to identify the best soil to be used as growth media. Soils in this area will be excavated and stockpiled while coal waste, coal contaminated soils and high SAR soils will be used as fill. Several pad areas were also sampled to identify salt affected soils.

Recommendations/Conclusions:

The Division representatives and the Mr. Pappas agreed that frequent site visits by the Division Staff would help in assuring successful reclamation.

Signature:  on August 14, 1996
Steven M. Johnson, Reclamation Hydrologist

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