



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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TECHNICAL FIELD VISIT

DATE: May 17, 1999
DOGM STAFF: Robert Davidson and Bill Malencik
ATTENDANTS: Johnny Pappas, Cyprus Plateau, and Larry W. Johnson, Castle Valley Services.
RE: Partial Monthly Inspection, Cyprus Plateau Mining Corporation, Star Point Mine, ACT/007/006-98B, File #2, Carbon County, Utah

Purpose:

- Inspect topsoil stockpiles, subsoil stockpile, refuse pile, and refuse test plots. Investigate the possibility of using less than 4 feet cover for reclaiming the refuse pile with the provision of monitoring vegetation for selenium toxicity during the 10 year bond clock period.

Background:

- Approval of the five year permit renewal package (1998) included permitting a topsoil borrow area.
- The subsoil stockpile contains enough soil to cover the refuse pile with 1 to 2 feet of soil depending on the refuse pile configuration. Additional soil is required to meet the minimum 4 feet cover requirement since the refuse contains toxic levels of selenium as defined by the Division's Guidelines.

Field Observations:

- The reclaimed refuse pile test plots have vegetation establishment on both the south and north aspect slopes. Vegetation establishment is markedly different between both aspects. The south aspect slope has much more diversity with large, well established shrubs and grasses. The north aspect slope has primarily grasses, with very few, small shrubs, which have mostly died back. Topsoil has very little rock and placement is approximately 10 inches. The south aspect slope is approximately 2:1 and is about 5 degrees steeper than the north aspect slope. The south aspect has considerably more erosion with rills that have cut down through the topsoil and into the refuse. The north aspect slope shows very little erosion. There are questions that need to be answered concerning vegetation establishment and diversity. However, soil erosion is evident on the southern exposures, even with good plant establishment and diversity. The soil is absent rocks, and no surface roughening techniques were used to help minimize runoff erosion.
- The subsoil stockpile is vegetated almost exclusively with grasses. What few signs of shrubs we could find have been browsed down to the ground. The terraces constantly need maintenance and still show signs of piping and erosion.
- The train load out topsoil stockpile appears to be well vegetated with good plant diversity. However, the soil is mancoes based and vegetation establishment was visually judged compared to other mancoes areas. Vegetation cover is discontinuous, and there are many interspersed bare soil areas.

Recommendations and Conclusions:

- Based on observations on the refuse test plots, the decision was made to stay with the currently approved plan for placing 4 feet of soil cover from the soil borrow area. This soil will provide angular rock and has a consistency of sandy silt loam, both of which will help minimize erosion. Coupled with surface gouging and pocking techniques, it is felt that reclamation success will be realized much faster without the burden of monitoring vegetation.

Signature: _____

Robert A. Davidson, Soils Reclamation Specialist

on May 19, 1999

cc: Mary Ann Wright Daron Haddock
 Joe Helfrich Paul Baker
 Susan White Priscilla Burton
 Sharon Falvey

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