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DIVISION OF OIL, GAS AND MINING

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DIVISION OF OIL GAS & MINING
FIELD VISIT FORM
TECHNICAL

Date : June 20, 1996

Time: 8:30 to 10:00 a.m. and 2:30 to 3:30 p.m.

Mine: Willow Creek Mine

File Number: ACT/007/038

DOGM Staff: Robert Davidson, Steven Johnson, Pete Hess (a.m.) & Paul Baker (p.m.)

Other Attendees: Howard Gross (a.m.) and Ben Grimes (p.m.)

Purpose:
Examine construction operations relevant to soil salvage compliance in new disturbance areas and construction of the altered stream channel.

Observations:

- There has been no new construction in undisturbed soil areas. The soil stockpile appeared unchanged from the last visit.

- The stream channel is constructed from the new culvert to the bend that leads into the present creek channel located at the NE corner of the lower facility pad. However, the lower two bends of the stream channel need improvements with boulder placement and channel depth.

  Crews were working on removing the old main Willow Creek culvert without diverting Willow Creek resulting in large increases in sediment loading to the stream flow. Prior to the culvert removal, water clarity was excellent and the channel bottom was plainly visible. As work commenced on the culvert removal, the channel quickly became sediment laden and with resulting turbidity that completely blocked visibility of the channel bottom. A rock filter was had been placed downstream from the culvert creating a small pond approximately twice the channel width. The rock filter was constructed of coarse rock and allowed rapid flow through the filter that resulted in too short of a detention time in the pool for adequate sediment removal. Excavation commenced while Steve and I were walking the constructed channel. Excavation was being performed by a track hoe and included the use of a wrecking ball to break up the culvert concrete casing and head wall. This resulting in dislodging copious amounts of earthen material into the stream flowing through the culvert. We viewed

the excavation activities from the northwest, upstream bank. After 10 minutes of viewing, the excavation activities were ceased. Several pictures were taken of the upstream flow, downstream flow, culvert excavation area and rock filter. After returning to the PFO to obtain sampling bottles, Pete Hess returned to the Willow Creek site and collected water samples upstream and downstream from the culvert.

Later that afternoon, Paul I revisited the Willow Creek culvert removal site to find that work had progressed with complete excavation of the fill materials around the culvert. Willow Creek was still flowing through the culvert. While viewing the operations from the highway adjacent to the Willow Creek site, CPMC proceeded in actually removing the culvert resulting in a severe sediment loading to the stream. We took several photos just prior and during the culvert removal. Ben Grimes, in the vehicle immediately in front of us, was video taping the process from his truck (note: there was a thunderstorm and it was raining during this process). Approximately 15 minutes later Paul collected a sample of the downstream flow below the rock filter.

Recommendations/Conclusions:
The lower portions of the constructed Willow Creek channel need to be reconstructed to match the quality of the upper channel. The culvert removal activities did not include best possible technology to prevent environmental damage and resulting in severe sediment loading of Willow Creek and possible impacts downstream to the Price River.

Signature: _____ on June 24, 1996
Robert A. Davidson, Reclamation Specialist II (Soils)

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