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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 7, 1996

Time: 10:00 a.m. to 1:00 p.m.

Mine: Wellington Prep Plant

File Number: ACT/007/012

Folder # 2

DOG M Staff: Robert Davidson and Sharon Falvey

Other Attendees: Patrick D. Collins, Mt. Nebo Scientific, Inc.

Purpose:

On-site visit to review soil-related issues with amendment ACT/007/012-96B, Permit Condition Soil Sampling "Area E" Wellington Preparation Plant. Visual inspection of the siaperas Ditch.

Observations:

Looked at the following areas:

- Plant coarse refuse pile - high EC and SAR values.
- Field trial plots located at the plant coarse refuse pile - very little plant/vegetation success.
- Coarse slurry pile - high B and Se levels.
- Field trial plots located at the coarse and fine slurry areas - some success with vegetation establishment within certain treatments.
- Fine slurry ponds - high B and Se levels.
- Siaperas water diversion ditch - ponding water on eastern portion of ditch.
- Soil borrow areas A through E - Area E has marginal material and contains salt slickspot inclusions.

Recommendations/Conclusions:

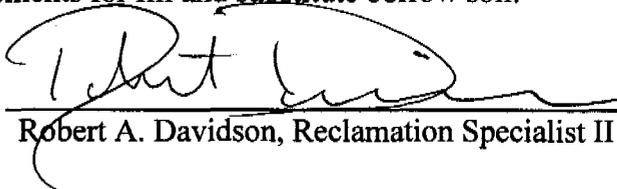
Some ideas for possible solutions during reclamation include:

- Plant coarse refuse pile
 - Look at field trial plots to help identify any correlation between vegetation success and treatments.
 - Consider capillary barrier, especially using a clay/bentonite barrier to prevent upward migration of salts into upper soil layers and provide increased available moisture to plants.
 - May recommend 18 inches of soil borrow material with capillary barrier
 - Check regulations on requirements for high EC and SAR.

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- Coarse slurry pile
 - Investigate the use of the large/coarse sandstone fraction as capillary barrier material for the fine slurry ponds.
 - Identify which fraction of the coarse slurry material contains the toxic levels of B and Se.
- Field trial plots located at the coarse and fine slurry areas
 - Sample trial plots for B, Se, EC and SAR by depth to check on salt migration patterns within each treatment. Check vegetation for Se accumulations & B toxicity.
 - Identify any significant correlation between vegetation establishment and treatments.
- Fine slurry ponds
 - Investigate the use of a capillary barrier for reclamation using less than 4 feet of cover material.
 - Check on fines for percentage of clay size particles.
 - Continue trying to find a buyer for selling fines as a fuel source.
- Siaperas water diversion ditch
 - Water accumulation provides vegetation water microsites
 - Does accumulated water impact ground water infiltration into adjacent slurry ponds?
 - Sample water in ditch and GW-3 during high water level.
 - May need to change ditch design for final reclamation.
- Soil borrow areas A through E
 - Find alternative areas other than Area E for soil materials. Base need on volume requirements for fill and substitute borrow soil.

Signature: _____



Robert A. Davidson, Reclamation Specialist II (Soils)

on August 8, 1996

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