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# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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007/019 #2  
November 26, 1990

To: File

From: David W. Darby, Geologist 

RE: Revision, Technical Review, Graves Lease, Centennial Project, Andalex Resources, Inc., ACT/007/019, Carbon County, Utah

## Synopsis

On January 4, 1990, Andalex Resources, Inc. submitted a proposal to obtain and incorporate a new federal lease tract into their existing mine permit. The Graves Lease Tract (Federal Lease UTU 66066, 870 acres) is located northeast of the existing mine permit area in Sections 1 and 12 of T. 13S., R. 10E., SLM and Section 31 of T. 13S., R. 11E., SLM. The modification outlines plans to develop and mine the Aberdeen and Centennial coal seams within the lease. These seams are currently being mined in permitted areas. Mining strategy calls for mining the Centennial seam where reserves are greater than five feet thick. No coal will be mined from either the Lower Sunnyside seam or the Gilson seam.

## Analysis

Andalex incorporated new information concerning the Graves Lease in their Mining and Reclamation Plan (MRP) submitted September 10, 1989. A Probable Hydrologic Consequences (PHC) report was submitted February 15, 1990 (see Appendix L). Updated information to address deficiencies was submitted July 4, 1990.

The text and maps submitted by the applicant provides the information necessary to assess the potential environmental impacts from mining. The applicant has conducted baseline hydrologic inventories on springs and streams on and adjacent to the proposed mine area.

The existing subsidence monitoring plan has been expanded to include the Graves Lease area. Sites will be monitored to detect areas of the most likely surface disturbance from mining. Continuous miners, room and pillar method, will be used in both seams. It is anticipated that diminution to resources will not occur. Overburden isopleths shown on the proposed mine maps (Map 31 and Map 41) indicate that overburden depths will be between 1500 feet to 2000 feet above the escarpments and a minimum of 1000 feet in the area of the stream channel of the Left Fork of Deadman Canyon. Mining at these depths have not disturbed surface features in Utah currently. No faulting has been mapped in the Graves Lease area. This geologic feature will provide extra continuity, strength and protection to the overlying structure after mining. This feature is also thought one of the reasons for the low inflows of groundwater into the mine.

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The applicant has will carry out a surface water monitoring plan and has committed to notify the Division if any substantial amounts of groundwater are contacted during the mining process.

The applicant has sampled for acid and toxic materials in the coal, roof and floor of the current mine. A commitment was made to establish a sampling program to identify acid or toxic roof, seam and floor material over the proposed lease area. The sampling program will be designed to collect samples at selected intervals throughout the mine which reflect the lateral extent of the seam. The program will include a commitment to readily sample roof and floor material for the constituents outlined in the Division's Guidelines for Management of Soils and Overburden, Table 6.

Recommendation

This proposal is recommended for approval.

dwd/DWD

cc. Daron Haddock  
B Team