



State of Utah
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 DIVISION OF OIL, GAS AND MINING

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TO: Daron Haddock, Permit Supervisor

FROM: Wayne H. Western, Reclamation Engineer *WHW*

DATE: March 21, 1994

RE: Aberdeen Modification Adding Seam to Lease UTU-69600, Andalex Resources Inc., Centennial Project, ACT/007/019, Folder #2, Carbon County, Utah

BACKGROUND:

Andalex Resources, Inc., submitted a Permit Application Package (PAP) for a permit revision for the Centennial Mine. The operator proposes to extend the underground mining operations into the 802-acre Federal lease U-69600. No new surface facilities would be needed for the lease addition. The only potential for surface disturbance would be mining induced subsidence.

R645-301-520 Operational Plan

R645-301-521 General. The applicant will include a plan, with maps, cross sections, narrative, descriptions, and calculations indicating how the relevant requirements are met. The permit application will describe and identify the lands subject to coal mining and reclamation operations over the estimated life of the operations and the size, sequence, and timing of the subareas for which it is anticipated that individual permits for mining will be sought.

Synopsis of Proposal:

There are four minable seams in the Centennial Project. They are in ascending order the: Aberdeen, Gilson, Centennial and Lower Sunnyside. The Centennial seam has been accessed via rock tunnels for the existing Pinnacle Mines (Gilson Seam).

Andalex has acquired the right to mine only the Aberdeen seam in lease UTU-69600. The new lease area is located west of the permit area. Access to the new lease will be through existing works. The existing surface facilities will not have to be modified because of the permit change.



Information about the coal quality and thickness in the new lease area is limited. The mine plans may be modified in the future.

Analysis:

The operator wants to expand the permit area to include the Aberdeen seam in lease UTU-69600. The new area will not require any additional surface facilities.

The current mine plans are based on limited information about the coal's quality and thickness. Surface access above the new lease is limited and so is the drillhole information. The mine plans should be seen as best guesses. No mining or subsidence will occur outside the permit boundary. (See the 'Subsidence' section for more information.)

Recommendation:

1. Approve the Applicant's proposal to change the existing operation plan.

R645-301-522

Coal Recovery. The permit application will include a description of the measures to be used to maximize the use and conservation of the coal resources.

Synopsis of Proposal:

The Applicant proposes to recover as much coal as is economically possible. The coal thickness decreases to the west. If the coal becomes too thin (under 5 feet) or if a rock split is encountered then coal recovery will decrease. Longwall mining to be used will have a high coal recovery rate.

Analysis:

The coal will be mined using longwall technique, which has a high recovery rate. Information about the coal is limited. If the coal contains rock splits or pinches out then the recovery will decrease. The applicant will recover as much coal as economically possible.

Recommendation:

1. Approve the Applicant's coal recovery plan.

R645-301-525.100 Subsidence.

Synopsis of Proposal:

Subsidence has not been detected at any monitoring location currently in place at Andalex, including two pillar extraction sections in close proximity to our initial longwall panel in the Gilson seam. These pillar sections extracted 90% of the coal that is similar to longwall extraction. This fact, in combination with research done by the Bureau of Mines, will justify Andalex using a maximum angle of draw on this property of 20 degrees. The Bureau's data on mines within seven miles of Andalex show the angle of draw to range between a maximum of 15.2 degrees and a minimum of -7.4 degrees.

Subsidence, due to mining on the Andalex property, will not occur outside the approved permit area. Stations have been set up as required for constant monitoring of subsidence movements. Resources on the lands above Andalex's mines consist only of wildlife habitat and limited grazing area.

Subsidence monitoring stations will be established as necessary along the first proposed longwall mining. The results of this monitoring program will define monitoring and permitting needs in the future. The proposed subsidence plan calls for installation of two monuments per station and an annual visible inspection.

If minor subsidence would occur, there would be no material damage or diminution of valuable or foreseeable use of lands including wildlife habitat. It should be noted that subsidence has been occurring in the Book Cliff coal field for decades with no diminution of resources.

The one spring located in Hoffman Creek is located stratigraphically well below the lowest coal to be mined. Springs above the seams, outside the permit area, will not be affected due to their distance from mining activities. Andalex has committed to replace water should it be proven that mining has disrupted water flow at any location.

Analysis:

There are no surface structures in the subsidence zone. The seeps and springs in the subsidence zone are located stratigraphically below Aberdeen seam. If subsidence does damage water resource the Applicant has committed to replace the water.

Renewable resources in the subsidence zone are grazing and wildlife habitat. Subsidence damage would be limited to cracks and minor rock falls. Should subsidence features result in injury or loss of livestock then the Applicant would have to pay compensation.

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The Applicant has committed to install a monitoring station and conduct annual surface inspection. The monitoring station will be based on a study over the first longwall panel.

Recommendations:

1. Accept the Applicant's mitigation plan.
2. Accept the Applicant's monitoring program. Modification to the subsidence monitoring plan will be made as needed.

ANDLYAEP.WHW