



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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December 5, 1994

Mr Michael Glasson, Sr. Geologist
Andalex Resources, Inc.
P. O. Box 902
Price, Utah 84501

Re: Review of Proposed Fan Installation, Andalex Resources, Inc. Centennial Project, ACT/007/019-94G, Folder #3, Carbon County, Utah

Dear Mr. Glasson:

The Division has completed a review of your proposed plans for installation of a fan in Left Fork. Enclosed is a copy of the review. Deficiencies have been identified in your plans which will need to be corrected before they can be approved. Please examine the review document and respond to the identified requirements. Your response should be made by January 20, 1994.

Please call if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Daron R. Haddock".

Daron R. Haddock
Permit Supervisor

Enclosures

cc: P. Grubaugh-Littig
W. Western
S. Johnson
P. Baker
H. Sauer

FANCOVER.AND



Technical Review Remote Fan Installation

**Andalex Resources, Inc.
Centennial Project
ACT/007/019**

December 5, 1994

OVERVIEW OF PROJECT

On September 12, 1994, the Division received a proposal from Andalex Resources to develop a fan portal in the Left Fork of Deadman Canyon. Additional information was received October 24 and 31, and November 10, 1994. The proposal includes a copy of the BLM right-of-way, a general description of vegetation in the area, and the results of an archaeological survey. The current mining and reclamation plan already includes wildlife information.

The Operator proposes upgrading part of an existing dirt road and constructing a new road for access to the Left-Hand Fork fan installation. The existing road begins at Carbon County Road 299 and will be upgraded for maintenance and emergency access. The new road will be a single lane dirt road approximately 15 feet wide and 4000 feet long. There will be at least three widened sections to allow passing. The grade ranges from 0% to 15%.

The pad is approximately 320 feet long, 170 feet wide and 50 feet high. Three portals and a fan will be installed on the pad. The pad consists of a cut section where the portals and fan will be installed and a fill section. Fill will be placed in the drainage below the portals. A 42" culvert will be placed in the drainage before the fill being placed.

Topsoil from the pad and road will be placed in a storage area west of the pad. A short ancillary road will be constructed from the existing road to the topsoil storage area.

ANALYSIS

R645-301-200

Soils

The Division received supplemental information on November 10, 1994 to the soil survey and topsoil salvage plan. With this additional information the plan is considered adequate with regard to topsoil salvage and protection.

Findings:

The commitment for the removal and segregation of topsoil from the surface

disturbance associated with the installation of the Left Fork Fan, as revised, is adequate to meet the minimum regulatory requirement for topsoil salvage.

R645-301-114 Right of Entry

Analysis:

The submittal includes a copy of a right-of-way grant/temporary use permit from the Bureau of Land Management. The right-of-way is for an access road 16 feet wide and 3000 feet long, a pad site 70 feet wide and 250 feet long, and two coal tunnels.

Andalex proposes to place its topsoil pile within the current permit area. The fan portal itself would also be in the current permit area; only two entries would be in the right-of-way.

The present mining and reclamation plan quotes the federal leases as saying, "The lessor. . . grants and leases to the lessee. . . the right to construct all works, buildings, structures, equipment, and appliances which may be necessary for the mining and preparation of the coal for market. . .".

Based on the information in the mining and reclamation plan and in this submittal, Andalex has secured necessary right of entry to use the portions of the road in the Left Fork of Deadman Canyon on Bureau of Land Management lands and to construct the fan portal and associated pad and topsoil pile. Page 3 of the revised mining and reclamation plan references this agreement.

A small portion of the access road at the intersection with the County road crosses State lands. The State owns the SW $\frac{1}{4}$ of Section 18, Township 13 S., Range 11 E. Interestingly, the Bureau of Land Management right-of-way includes the NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 18 even though the land is apparently not under their control. Andalex needs to obtain right-of-entry for the portion of the road in Section 18 that is on State land.

Also in Section 18, Gladys Artman owns the SE $\frac{1}{4}$ NW $\frac{1}{4}$. The amendment includes no right-of-entry information for the portion of the road that crosses this land.

Requirements:

1. Andalex needs to obtain right-of-entry for the portion of the road in Section 18, Township 13 S., Range 11 E., that is on State and private land.

R645-301-115

Unsuitability Criteria

Analysis:

The material received in the submittal does not address this issue.

According to information from the Bureau of Land Management, the existing road is not considered a public road in either the county or BLM transportation plan, and the BLM does not spend money to maintain it. Therefore, the facilities proposed to be permitted are not within 100 feet of a public road.

Andalex is proposing that the access road be permitted as an ancillary road. The intersection of a permitted road with a public road is not considered mining and reclamation operations for which the Division needs to provide an opportunity for a public hearing. However, Andalex needs to discuss their proposed activities with Carbon County officials because there are potential safety and other factors that the County might want to consider. These issues are not within the scope of this regulation.

Findings:

Andalex does not need to include additional information in this section of the mining and reclamation plan to comply with this regulation.

R645-301-320

Vegetation and Wildlife Information

Analysis:

The submittal includes a soil survey report that includes general descriptions of the vegetation. Vegetation descriptions are correlated with range site categories. Range sites in the area include Upland Stony Loam (Pinyon-Juniper) of the Cabba family soils and the Datino soils, and Mountain Stony Loam (Oak) of the Brycan soils. Predominant species include Gambel oak, salina wild rye, big sage, low gray sage, Utah juniper, and pinyon. Vegetation in the Brycan soils areas is almost exclusively Gambel oak.

The soils and vegetation in this area are very similar to those in the main mine area. Because less than one acre will be disturbed and because the vegetation is similar to that in the Right Fork of Deadman Canyon, it is not necessary to establish a new reference area, and more detailed general vegetation information is not needed.

The current plan also includes wildlife information about this area. A golden eagle nest is in the cliffs above the proposed fan portal. This nest has been very productive in the past although it was not active in 1994.

The lower part of the access road is within critical deer winter range, and part of the proposed disturbance is in high priority elk winter range.

The Book Cliffs provide habitat for a candidate threatened or endangered species, canyon sweetvetch (*Hedysarum occidentale* var. *canone*). Although this species has no legal protection except under Bureau of Land Management regulations, it should be avoided if possible. It is understood that Andalex hired a person to survey for this plant and that it was not found, but this information needs to be in the mining and reclamation plan. Also needed with the report would be other information required by R645-301-130 for technical reporting.

Requirements:

1. The plan needs to include information about whether canyon sweetvetch (*Hedysarum occidentale* var. *canone*) occurs in the area of the proposed disturbance.

R645-301-330

Operation Plan

Analysis:

In this section, the proposal includes a statement that the road through the Left and Right Forks of Deadman Canyon will be left permanently after reclamation.

The current mining and reclamation plan contains a wildlife report from the Division of Wildlife Resources that includes some wildlife protection recommendations. Among these are statements that deer and elk winter ranges need to be protected from man's disturbance when the animals are present. The report also says that active golden eagle nests are extremely sensitive to man's disturbance within a one-half kilometer radius between April 15 and July 15.

The Bureau of Land Management right-of-way contains stipulations that are more specific and in line with current recommendations. Andalex should commit to follow the requirements of these stipulations. They are:

1. Andalex needs to commit to no construction activities within one-half mile of

the golden eagle nest during the nesting season, February 15 to July 15. In places that are both within line-of-sight and one-half mile of the nest, there should also be no new road construction.

2. There should be no construction activities from December 1 to April 15 to minimize disturbance to wintering elk and deer. If it is necessary to do construction during this period, some flexibility may be allowed but would need to be coordinated with the Bureau of Land Management, the State Division of Wildlife Resources, and the Division.
3. Except for snow removal, all routine maintenance should be done from within the mine from December 1 to July 1.

Bill Bates of the Division of Wildlife Resources said in a telephone conversation October 31, 1994, that most deer have already moved to lower elevations this year. Therefore, although Andalex must not disturb the site after December 1, deer and elk may already be in the area. It is important that construction be completed as soon as possible and that employees not harass any animals.

Assuming that canyon sweetvetch was not found in the survey discussed above, the commitments discussed above and those already in the plan should be adequate to protect important biological resources.

The current mining and reclamation plan does not include an interim revegetation plan. Every reference to revegetation under R645-301-330 appears to apply to final reclamation. The plan needs to show how vegetation will be established for interim stabilization of disturbed areas to minimize surface erosion. This may include all or part of the plan for final reclamation.

It is recommended that Andalex use the final reclamation seed mixture shown on page 80 and the planting mixture shown on page 76 of the mining and reclamation plan for interim revegetation. The fan portal will not be visited regularly from the surface; therefore, any revegetated area will provide wildlife habitat while the fan is in place.

Requirements:

Andalex needs to make the following commitments:

1. Andalex needs to commit to no construction activities within one-half mile of the golden eagle nest during the nesting season, February 15 to July 15. In places that are both within line-of-sight and one-half mile of the nest, there

should also be no new road construction.

2. There should be no construction activities from December 1 to April 15 to minimize disturbance to wintering elk and deer. If it is necessary to do construction during this period, some flexibility may be allowed but would need to be coordinated with the Bureau of Land Management, the State Division of Wildlife Resources, and the Division.
3. Except for snow removal, all routine maintenance should be done from within the mine from December 1 to July 1.

Even if construction is completed before December 1, it is important that employees not harass any deer or elk that have already moved into winter range.

The mining and reclamation plan needs to contain a plan for interim revegetation.

R645-301-340

Reclamation Plan

Analysis:

The proposal includes no new plans under this regulation.

The current mining and reclamation plan (new-reformatted) shows two seeding/planting mixtures. Either of these could be used for the fan portal area, but the plan needs to specify which will be used and what transplants will be planted. It is recommended that Andalex use the seed/planting mixture on page 80 with the transplants only used within about twenty feet of the drainage.

In 1994, Andalex attempted to transplant several shrubs on the topsoil pile near the Apex Mine. Vegetation is already established on this topsoil pile, but there are few shrubs. Most or all of the transplants died. Rather than trying to transplant more shrubs onto the Apex Mine topsoil pile, Andalex should try to show that shrubs can be successfully established by planting them on the fan portal topsoil pile. The pile should be left in a roughened condition and seeded with the seed mixture on page 80 this fall. In the spring, Andalex should plant shrubs from the list shown on page 74. These species would not be used in final reclamation at the fan portal if Andalex uses the recommendations given above, but using them on the topsoil pile would give some indication as to whether they can be successfully transplanted at the main mine site.

The amendment says on page 61, section R645-301-310, that the drainage area reference area is the most adaptable to the left fork fan installation. This reference area is appropriate for judging revegetation success for the fan portal area.

Requirements:

1. The plan needs to specify which seed/planting mixtures will be used for revegetation of the fan portal area. Andalex needs to try planting a shrub mixture on the fan portal topsoil pile as a field trial to see if shrubs can be successfully reestablished.

R645-301-411

Land Use Environmental Description

Analysis:

The proposal includes the findings of an archaeological survey performed on September 21, 1994. The investigators only checked the proposed pad and new access road areas, but the existing access road was checked in a survey done in 1986 by Senco-Phoenix. No sites were found in either survey. The Division should recommend a cultural clearance to the State Historic Preservation Officer.

Premining land uses include wildlife, limited grazing, and recreation

No new postmining land use information is presented for the fan portal area. The mining and reclamation plan says that postmining land uses will be the same as premining uses.

According to Section R645-301-330, the road in the Left Fork of Deadman Canyon will be left permanently after reclamation. The mining and reclamation plan says that Andalex will reestablish the terrain to as nearly the original as practical.

Because the road was present prior to any mining, Andalex should be allowed to leave it after mining operations have ended. Keeping with the commitment in the plan, the terrain along the road will need to be reestablished to as nearly the original as practical.

Findings:

Andalex has supplied information and included commitments in the mining and reclamation plan adequate to satisfy the requirements of this regulation. The Division needs

to obtain a clearance from the State Historic Preservation Officer. There is no reason to believe the clearance will not be given.

R645-301-500 Engineering

Reclamation costs for the project area estimated by the Operator to be \$7,540. The current reclamation bond is for \$1,080,000.

R645-301-534.130 says that all roads must have, at a minimum, a static safety factor of 1.3 for all embankments. The Operator says that all road embankments will have safety factors of 1.3 or greater. There are no stability studies in the PAP nor reference to the MRP that shows the slopes are stable.

The Operator has failed to mention what the safety factor for the pad will be. Nor does he describe how the fill will be placed. At a minimum the slopes of the pad must have a static safety factor of 1.3 and the lifts should be 4 feet thick or less.

The Operator did not address how reclamation of the pad will be accomplished, nor did he provide any maps that showed the reclaimed area. (R645-301-540 through R645-301-542.)

Requirements:

1. The Operator must demonstrate that all road embankments have a minimum static safety factor of 1.3.
2. The Operator must describe how the pad will be constructed. That description must include how the lifts will be placed and their maximum thickness. Static safety factor for both the cut and fill slopes must be shown to be at a minimum 1.3.
3. The Operator must supply a reclamation plan for how the pad area will be reclaimed. The reclamation plan must include maps showing the reclaimed surfaces.

HYDROLOGIC INFORMATION

Regulatory Reference: R645-301-722.500, 731.100, 731.600, 732.400, 742, 742.110, 742.300, 742.313, 742.320, 742.400, 751, 752, 760, 762

Analysis:

Construction of the fan portal and pad area in Left-Hand Fork of Deadman Canyon will require road improvements to an existing trail. The Bureau of Land Management (BLM) right of way application shows that the road will be graded from the existing county road to the fan portal pad. The purpose of the right-of-way is construction and maintenance access to the fan facility. Andalex has included two culverts into the design of the road and a series of water bars to rout water off of the road. The first culvert, located in the main canyon, is near the junction of the new road and the county road. The second is located below the pad fill, and is called the Upper Canyon Culvert. Andalex has included calculations and designs for the culverts. Portions of the road and the pad, and the entire topsoil pile are shown to be located within 100 feet of the stream channel.

Sediment control is shown on a Plate LF-1, Aberdeen Mine Left-Hand Fork Fan Installation Sedimentation/Drainage Control, as silt fence and/or straw dike along the base of the pad fill. Berms and a ditch will route flow from the upper portions of the pad to the sediment control measure. Top soil will be placed up canyon from the pad and will be encompassed by a berm.

Findings:

Andalex proposes to build a road and pad within 100 feet of the Left-Hand Fork stream channel. The drainage area for this reach is greater than one square mile, so, by regulation, this is an intermittent stream. No stream alteration permit is required by the Utah Division of Water Rights because it is not by their definition an intermittent or perennial stream. However, by the Utah coal mining rules it is an intermittent stream so all regulation regarding that definition, including stream buffer zones should be addressed to comply with R645-301-731.600, 732.400, and 742.320.

The use of alternate sediment control measures is allowable by the regulations. A diversion is shown on the map to help route flow to the sediment control, but there were no designs included for this diversion. Miscellaneous diversions should be designed to convey the 2-year, 10-hour storm event for miscellaneous flows (R645-301-742.333). Andalex has not included plans for sediment control in the construction stages of the pad and road and in the reclamation stages of these facilities. It is assumed that sediment control on the topsoil pile is a retention berm, but no design for such berm was included. The map shows a berm

around the pad area but no designs or mention for sediment control on the pad.

Drainage control for the road includes two culverts which route the main channel under the road. Andalex has designed water bars to route the smaller drainages across the road. There is no reclamation times schedule or reclamation sediment control plans for the pad area, road, and culverts. Andalex should submit these plans in accordance with R645-301-542-600, 742.313, and 764.

Requirements:

1. Andalex must address activity within the stream buffer zone and reclamation. They must commit to do work within the stream buffer zone only in periods of no flow. Andalex should submit reclamation plans in accordance with R645-301-542-600, 742.313, and 764. They must submit sufficient information and designs on miscellaneous diversions and berms on the pad and top soil pile. Andalex must submit these design and pages, or revised pages, to be inserted into the text of the MRP addressing the proposed activity.

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