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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

BRIAN STEED  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

September 26<sup>th</sup>, 2019

Karin Madsen, Resident Agent  
Andalex Resources, Inc.  
P.O. Box 910  
East Carbon, Utah 84520-0910

Subject: Midterm Completion Response, Task ID #5986, Andalex Resources, Inc.,  
Centennial Mine, C/007/0019

Dear Ms. Madsen,

The Division of Oil, Gas and Mining (the Division) has reviewed the midterm completion response. Deficiencies have been identified that must be addressed prior to final approval.

The deficiency's author is identified to facilitate communication should questions arise. The plans as submitted are denied. Please resubmit the entire amendment by October 25<sup>th</sup>, 2019.

If you have questions, please call me at (801) 538-5350.

Sincerely,

Steve Christensen  
Coal Program Manager

SKC





**State of Utah**  
DEPARTMENT OF NATURAL RESOURCES

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Division of Oil, Gas and Mining

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**Technical Analysis and Findings**  
**Utah Coal Regulatory Program**

**PID:** C0070019  
**TaskID:** 5986  
**Mine Name:** CENTENNIAL MINE  
**Title:** MIDTERM COMPLETION RESPONSE

**General Contents**

**Violation Information**

*Analysis:*

The information provided meets the State of Utah R645 requirements for violation information, because the last three years violation history for the applicant (Andalex Resources, Inc) has been included in Appendix 1, Part 3 Violation History.

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**Right of Entry**

*Analysis:*

The application meets the State of Utah R645 requirements for Right of Entry, because the permit area and right of entry is clearly identified in the Mining and Reclamation Plan.

MRP page 1-12 provides the total permit area as 2,281.19 acres. This is the sum of the 1,740.18 acre lease area + 546.16 surface area – 5.45 OSO gas well & pipeline (page 1-19). The leases described on pages 1-11 through 1-16 have been updated with their current legal description and acreage, after portions were relinquished.

Appendix AA provides further information on lease relinquishment. In Table 1 of Appendix AA the former lease description, # acres released, date of relinquishment and current lease description is provided for each of the six federal leases. Table 1 also provides current lease area for the BLM ROW and fee leases. Table 1 specifies the removal of 5.45 acres for the WEM Gas Well Pad and pipeline (shown on Figure 2 Appendix AA). (WEM is the corporate owner of Liberty Pioneer, the entity gathering gas from the Centennial degas wells, refer to Attach 1-1 in Appendix X). Table 1 sums:

federal leases	894.50 acres
fee leases	+ 845.98 acres
surface ROW and Easements	+ 12.95 acres
surface reclamation only area	+ <u>527.76 acres</u>
	2,281.91 acres.

Appendix AA Figures 1 and 2 provide maps of the former and current lease areas, replacing the current Figures 1-1 and 1-2.

Appendix X describes the Centennial Degas Wells. Appendix Z describes the OSO gas well & pipeline removed from the permit area.

The listing of surface ownership contact information is current.

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## Operation Plan

### Topsoil and Subsoil

#### *Analysis:*

The application meets the requirements of R645-301-230, Soils Operation Plan, because the disturbed area is clearly stated on p. 2-6, the topsoil pile volumes reported on MRP page 2-4 and Plate 37 are consistent, and because substitute topsoil locations are adequately identified on Plate 6.

Chapter 2, p. 2-6 identifies 47.19 total disturbed acres:

34.2 acres disturbed in Deadman Canyon

+ 1.02 acres in Left Fork

+11.97 acres disturbed for GVH pads.

47.19 total acres disturbed

This total area agrees with the statement in Appendix AA p. 1-1.

Plate 6 Surface Facilities shows the locations of five topsoil stockpiles at the mine site. Plate 37 and p. 2-4 list the volume of topsoil stockpiled. The volumes stockpiled are as follows (from Plate 37):

2,233 CY Topsoil stockpile F (at the Apex mine)

6,221 CY Topsoil stockpile G (forming the outslope of the mine waste storage depression)

253 CY Topsoil stockpile C (just West of stockpile G).

1,323 CY Topsoil stockpile A (just East of the Administrative Offices).

3,500 CY Topsoil stockpile J below the Aberdeen mine.\*

13,530 CY Total

\* Topsoil Pile H is referenced on page 20 of Chapter 2. The total of piles H & J is stated as 3,500 cy. The Division assumes stockpiles H & J were combined at some point.

The volume of topsoil reported on Plate 37 (365,310 cu ft) will cover the 34.2 acre mine facilities (1,489,752 sq ft) to a depth of approximately 3 inches. Plate 6 shows two locations of substitute topsoil (below the bathhouse pad and below the Apex pad). Chapter 2, pages 2-3 and 2-4 states the total of 17,057 CY of substitute topsoil beneath the bathhouse pad and the Apex pad. Thus 6 inches of stockpiled topsoil or substitute topsoil will be placed over the final graded surface.

The Left Fork Fan topsoil stockpile is described on page 2-5. Prior to its recovery, the as built volume of the Left Fork

topsoil is confirmed to be approximately 750 CY. The stockpile location is shown on Plate LF-1 in Appendix W.

Gas well pad topsoil and subsoil is discussed in Appendix X. All gas wells and pads were reclaimed in 2019 with the exception of degas gas wells 8, 8A, and 9 on the Mathis Lease (Figure 1-1 in App. X).

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## Reclamation Plan

### Bonding Determination of Amount

#### Analysis:

The application does not meet the State of Utah R645 requirements for Determination of Bonding Amount.

A previous midterm review found this application deficient because the direct unit costs needed to account for overhead and profit in the bonding calculations as well as escalate bonding costs by 2.32% to 2024, the date of the next midterm review. A review of the submitted bonding calculations reveals that overhead and profit has been applied to the direct unit costs and the total costs escalated although the narrative on page 87 is somewhat confusing since it gives direct and indirect costs in 2017 dollars, total reclamation costs in 2021 dollars, and the required bond amount in 2024 dollars. Since the unit costs were gleaned from a 2019 cost manual the direct and indirect costs should be given in 2019 dollars, and in 2024 dollars after the 5-year escalation has been applied. In addition to this, there are a number of errors and inconsistencies throughout the bonding calculations that require attention. The submitted bonding calculations were compared to the current bond on file with the Division which was approved in 2014. The following discrepancies were identified:

#### DEMOLITION and REMOVAL

- The Demolition Cost Summary on page 89 lists all of the demolition items throughout the bond and a subtotal of \$284,049 is given. That subtotal is short by \$58,784 and should add to \$342,833.
- No. 4 Conveyor - The height was changed from 250 to 125, cutting the demolition cost in half. Preserving the original height results in this cost being \$1,440 instead of \$720.
- No. 11 Portals - The previously approved bond identified demolition costs for 4 portal structures and the sealing of 6 entries. The submitted calculations only account for the demolition of one portal structure. Preserving the demolition of all structures and entries results in this cost being \$31,608 instead of \$1,152.
- No. 22 Rock Dust Tank - This item is completely missing from the current bond submission. This item will need to be restored to the bonding calculations.
- No. 24 Portals - The previously approved bond identified demolition costs for 4 portal structures and the sealing of 4 entries. The submitted calculations only account for the demolition of one portal structure and sealing of one entry. Preserving the demolition of all structures and entries results in this cost being \$25,016 instead of \$6,254.
- No. 26 Portals - The previously approved bond identified demolition costs for 3 portal structures and the sealing of 3 entries. The submitted calculations only account for the demolition of one portal structure and backfilling of one entry. Preserving the demolition of all structures and entries results in this cost being \$16,524 instead of \$1,243.
- No. 28 Loadout - This item has been removed and replaced with a note that claims this item was moved to the Lila Canyon Mine. A review of the most recent reclamation bond for Lila Canyon does not reveal any evidence of a recently added loadout structure. The loadout must be restored to the bonding calculations of the Centennial Mine until the Lila Canyon bond is changed to reflect the addition of a loadout.
- No. 29 Conveyor - This item has been removed and replaced with a note that claims this item was moved to the Lila Canyon Mine. A review of the most recent reclamation bond for Lila Canyon does not reveal any evidence of a recently added conveyor. The conveyor must be restored to the bonding calculations of the Centennial Mine until the Lila Canyon bond is changed to reflect the addition of a conveyor.
- No. 41 Culverts - The approach to estimating culvert demolition costs was drastically altered and the newly submitted calculations do not account for demolition. Instead, two different excavation costs were proposed for each diameter of culvert on site. The culvert demolition costs need to be added back into the calculations. Preserving the demolition of culverts results in this cost being \$106,331 instead of \$24,037.
- Gob Vent Wells - The previous bond accounted for the reclamation of holes 3, 4, 5B, 6, 7, 7A, 8, 8A, 9, and 11. The currently submitted bond only accounts for the reclamation of holes 8, 8A, and 9 even though there has never been bond release performed for any of the GVH holes within the permit area.

#### EARTHWORK COSTS

The earthwork costs for the Gob Vent Holes have been changed to only account for the reclamation costs associated with holes 8, 8A, and 9 even though there has never been bond release performed for any of the other Gob Vent Holes within the permit area. The earthwork reclamation costs associated with all other GVH holes need to be restored to the original calculations until bond release is performed.

#### REVEGETATION COSTS

A table on page 140 outlines all of the anticipated revegetation costs for the main mine site. The following errors were identified and require clarification:

- In the first row containing mulching costs it appears there may be a typo in the Means Reference Number box because 32 92 13.16 0390 does not exist in the 2019 R.S. Means Cost Manual.
- The unit cost for hydroseeding (row 5) should be \$42.50, not \$27.84.
- There are no costs for seeding and/or revegetating any of the Gob Vent Holes. This is a significant cost that will need to be restored.

#### *Deficiencies Details:*

The application does not meet the State of Utah R645 requirements for Determination of Bonding Amount. The following deficiency must be addressed prior to final approval:

R645-301-830 - The Permittee must address all of the errors and inconsistencies in the bond as described above.

jeatchel