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

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May 2, 1994

Mr. Mike Glasson  
Andalex Resources, Inc.  
P.O. Box 902  
Price, UT 84501

Re: Abatement Plans for Violation #N94-34-1-3, Parts 1 of 3 and 3 of 3, Wildcat Loadout Facility, Andalex Resources, Inc., ACT/007/033-94C, Folder #2, Carbon County, Utah

Dear Mr. Glasson:

The Division received the abatement plans for violation #N94-34-1-3, part 1 of 3 and 2 of 3 on April 21, 1994. The Division will now review the changes to the plan (pages 62, 62-A, 80, 80-A, and Plate 22) and notify you about the plan's adequacy by May 25, 1994.

Sincerely,

A handwritten signature in cursive script, reading "Pamela Grubaugh-Littig".

Pamela Grubaugh-Littig  
Permit Supervisor

cc: Joe Helfrich



- At crusher building to serve crusher building and truck dump
- At office building (culinary usage)

5. Area of Operations

5.1 Proposed Permit Area

The proposed permit area consists of part of BLM right-of-way U-48027 and is shown on Plate 1 and revised Plate 22.

5.2 Surface Area to be Disturbed

The permit area has been previously impacted by mining and loading. The entire permit area at Wildcat has been used for loading and coal storage previously. The total existing surface area disturbed is 56.10 acres excluding the small area exemption. Facilities are indicated on Plates 1 & 22.

The disturbed area boundary has been modified to include additional area to the east of the main stockpile (radial stacker) (see Plate 22). This area has been lightly covered by wind-carried coal fines over the nine year history of Wildcat. Therefore, it is necessary to include this additional 3.7 acres as part of Andalex's disturbed area. It should be noted that this additional acreage does not constitute a significant revision (6%). Upon final reclamation this area will be cleaned of wind-carried coal fines and revegetated in a similar fashion to existing disturbed areas. Runoff from this area is currently passed through straw dikes. These dikes will be maintained on an annual basis as necessary.

Andalex has used, from time to time, a vacuuming system to pick up wind-carried coal fines at the minesite. Andalex proposes to clean as many coal fines as is practical at the Wildcat Loadout in the area east of the main stockpile. This vacuum system will be utilized in the Spring of 1994 and thereafter as necessary.

It should also be noted that due to the reoccurring situation regarding wind-carried coal fines, Andalex proposes to construct

additional drift-fences near the eastern boundary of the disturbed area. Drift-fences have proven to be effective in the past at Wildcat and, therefore, additional fences will aid in controlling wind-carried coal fines. These additional fences are depicted on the revised Plate 22.

6. Life of Project

The life of the project has been estimated at 30 years.

7. Schedule of Construction, Mine Development, Mining, and Reclamation

All surface facilities have been constructed for the Wildcat Loadout. Reclamation efforts, including, but not limited to, backfilling, grading, topsoil replacement, and revegetation, of all land that is disturbed by surface operations shall occur as contemporaneously as practicable with mining operations. Upon the conclusion of loading activities, the scheduled reclamation phase will begin immediately. Please refer to Part F of this Chapter re Reclamation.

8. Cessation of Operations

8.1 Temporary

Andalex will inform the division if it intends to cease operations for a period of more than thirty days. This notice will include information on any activities which may continue while the facility is not in use (water monitoring, etc.).

This analysis is included in Appendix D. Based on these tests, Andalex will commit to submitting a Soil Amendments Plan. Andalex is willing to commit to any necessary steps to insure that the topsoil material is suitable for final reclamation such as the use of additives, fertilizer, etc. Andalex suggests that the topsoil piles be tested several years prior to final reclamation as conditions in the piles may change over the next fifteen to twenty years. Parameters that are being analyzed are pH, Ec, saturation percent, texture, organic C, SAR, Total N, available P, percent CaCO<sub>3</sub>, Selenium, and Boron. Disturbed areas no longer required for the conduct of mining operations have been graded and revegetated. Once the topsoil was removed, the areas were graded to accommodate the surface facilities. Andalex has submitted plans to modify the disturbed area boundary and to increase the capacity of the Wildcat Loadout. This proposal includes plans to relocate topsoil piles on the east side of the permit area. It is proposed that these topsoil piles (A, B, C, D) be moved to the west side of Wildcat where they will be protected from additional wind-carried coal fines. After these piles have been relocated, they will be reseeded once again with an interim seed mixture which will provide further protection from erosion. Prior to moving these stockpiles, attempts will be made to remove existing wind-carried coal fines which have accumulated on top of the topsoil piles. It is estimated that the wind-carried coal fines which will be removed, if possible, constitute less than 1/100th of 1% of the topsoil material. For further information about topsoil, please see Appendix D.

Topsoil Pile Summary, Existing

Topsoil Pile A	11,877 ft. <sup>3</sup>
Topsoil Pile B	97,622 ft. <sup>3</sup>
Topsoil Pile C	158,694 ft. <sup>3</sup>
Topsoil Pile D	29,454 ft. <sup>3</sup>
Topsoil Pile E	<u>122,176</u> ft. <sup>3</sup>
Total	419,823 ft. <sup>3</sup>

Revised 04/21/94

4. Backfilling, Grading, and Soil Replacement and Stabilization

All disturbed areas will be backfilled and graded to as near as possible the approximate original contour with the exception of the natural drainage which came through the loadout site prior to Swisher Coal Company's establishment of their loadout facility. Andalex has diverted this natural drainage and will provide permanent protection of this diversion once reclamation is complete. Please refer to this chapter, Part K, Section 4.1, re Undisturbed Diversions for more detail. Slopes shall not exceed the angle of repose or such lesser slopes as required by the regulatory authority to maintain stability. Fill material will be compacted to assure stability. This is a flat lying area and therefore stabilization should be achieved easily.

Revised 04/21/94

TABLE IV-2

Drainage Areas/Flow Calculations

<u>Drainage Area</u>	<u>Area (acres)</u>	<u>Length (ft.)</u>	<u>Elev. Diff. (ft.)</u>	<u>Slope (%)</u>	<u>tc (hrs)</u>	<u>Q (cfs)</u>
A	7.85	800	38	4.75	0.14	11.03
B	2.29	600	18	3.27	0.14	3.22
C	18.03	1200	52	4.33	0.21	22.54
D	6.61	400	18	4.50	0.08	10.33
E	7.69	1250	52	4.16	0.22	9.31
F	7.50	1200	38	3.17	0.24	8.79

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TABLE IV-3

Runoff Calculations

<u>Area/Pond</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
Drainage Area (ac.)						
Precipitation	7.85	2.29	18.03	6.61	7.69	7.50
10 yr.-24 hr. (in.)	1.85	1.85	1.85	1.85	1.85	1.85
25 yr.-24 hr. (in.)	2.15	2.15	2.15	2.15	2.15	2.15
100 yr.-24 hr. (in.)	2.75	2.75	2.75	2.75	2.75	2.75
Runoff CN	90	90	90	90	90	90
Runoff to Pond:						
10 yr.-24 hr. (ac. ft.)	0.654	0.191	1.503	0.551	0.641	0.625
25 yr.-24 hr. (ac. ft.)	0.820	0.239	1.883	0.690	0.803	0.783
100 yr.-24 hr. (ac. ft.)	1.143	0.333	2.624	0.962	1.119	1.092
Peak Flow:						
10 yr.-24 hr. (cfs)	11.03	3.22	22.54	10.33	9.31	8.79
25 yr.-24 hr. (cfs)	13.71	4.00	28.02	12.84	11.57	10.93

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TABLE IV-7

Pond Specification Summary  
(10 year - 24 hour event)

<u>Pond</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
Drainage Area (ac.)	7.85	2.29	18.03	6.61	7.69	7.50
Required Volume (ac. ft.)	0.841	0.220	1.881	0.647	0.784	0.697
Existing Volume (ac. ft.)	2.410	0.310	4.430	0.880	0.849	0.700
Excess Volume (ac. ft.)	1.569	0.090	2.549	0.233	0.065	0.003
*Sed. Cleanout Level (ft.)	2.50	0.75	3.50	1.25	0.50	0.50
Embankment Slopes (%):						
Inside	3:1	5:1	3:1	3:1	3:1	2:1
Outside	2:1	2:1	2:1	2:1	2:1	3:1
Overflow Structures:						
Principal	18"cmp	12"cmp	18"cmp	18"cmp	18"cmp	18"cmp
Emergency	1'x 4'	1'x 4'	18"cmp	18"cmp	1'x 4'	1'x 4'

\* Sediment Cleanout Levels are based on 60% of sediment storage for 3 years plus excess pond volume

NOTE: In the event any of the ponds or the impoundment are to be decanted, Andalex will provide

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TABLE IV-8

Drainage Culvert Specifications

<u>Culvert</u>	<u>Size</u> (in.)	<u>Drainage</u> <u>Area</u>	<u>Design</u> <u>Flow</u> (cfs)	<sup>1</sup> <u>Capacity</u> <u>Flow</u> (cfs)	<sup>2</sup> <u>Velocity</u> (fps)	<sup>5</sup> <u>Erosion</u> <u>Protec.</u> (y/n)
✓C1	18	E	4.66	9.00	3.12	N
C2	24	E	4.66	18.00	1.76	N
✓C3	24	C	5.64	18.00	1.80	<sup>3</sup> Y
✓C4	24	C	5.64	18.00	3.59	N
✓C4A	24	C	5.64	18.00	3.59	N
✓C4B	24	C	11.27	18.00	3.59	N
✓C5	12	C	2.82	3.20	3.59	N
✓C6	15	C	5.64	5.50	4.59	<sup>3</sup> Y
✓C7	15	A	2.75	5.50	2.36	<sup>3</sup> Y
✓C7A	12	A	2.75	3.20	3.50	N
✓C8	12	A	2.75	3.20	3.50	N
✓C9A	15	A	5.51	5.50	4.48	N
✓C9B	12	A	5.51	5.50 <sup>4</sup>	7.02	<sup>3</sup> Y
✓C10	12	B	3.22	3.20	4.10	N
✓C11	18	C	7.51	9.00	4.24	N
†C12	18	E	4.66	9.00	2.63	N
✓C24	15	E	4.66	5.50	3.79	N
✓C25	15	E	4.66	5.50	3.79	N
†C26	12	E	2.33	3.20	2.97	N
✓C27	12	A	2.75	3.20	3.50	N
C28	15	C	2.82	5.50	2.29	N
C29	12	C	2.82	3.20	3.59	N

<sup>1</sup>Based on a minimum of H/D = 1.5 (See Figure IV-2)

<sup>2</sup>Velocity based on  $Q = AV$   
Culverts on 3% Slope (minimum)

<sup>3</sup>Rip-rap protection provided or required

<sup>4</sup>H/D = 4.0 available at this location

<sup>5</sup>Erosion protection may prove to be required at any or all locations. Outfalls will be checked for erosion and protection provided as needed.

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TABLE IV-8 (con't)

Additional Notes

<sup>6</sup>Culverts C-6, C-7a, C-10, C-11, and C-24 will be equipped with additional headwater protection. Such protection will consist of a minimum of 6" diameter rock hand placed no less than 1D above and around the culvert inlet, or a concrete grouted rock of no less than 2" diameter placed to the same dimensions.

<sup>7</sup>Flow in culvert C-4b is controlled by inlet conditions. The culvert is 400 feet long, and will be fitted with a trash rack at the inlet. The rack will consist of a steel frame 30" x 30" with 3/4" rebar (or steel rods) welded vertically on 4" centers.

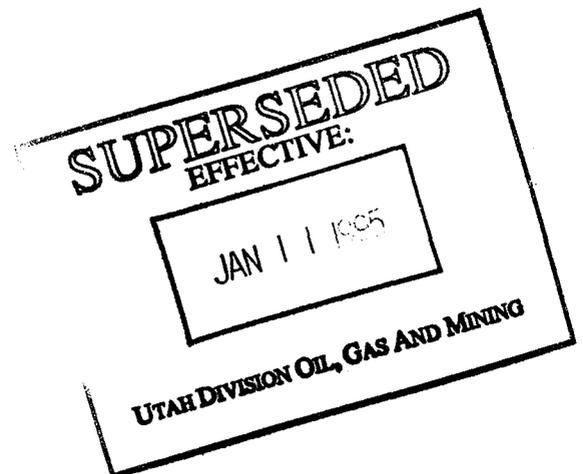


TABLE IV-9

Pond Culvert Specifications

<u>Culvert</u>	<u>Size (in.)</u>	<u>Pond</u>	<u>Design Flow (cfs)</u>	<sup>1</sup> <u>Capacity Flow (cfs)</u>	<sup>2</sup> <u>Velocity (fps)</u>	<sup>3</sup> <u>Erosion Protection (y/n)</u>
\C13	18	A	11.03	11.00	6.23	Y
\C14	12	B	3.22	4.00	4.10	Y
X C15	*24	C	22.54	23.00	12.73	Y
\C16	*24	C	28.02	45.00	12.73	Y
\C17	18	D	10.33	11.00	5.84	Y
\C18	18	D	12.84	22.00	7.25	Y
C19	18	E	9.31	11.00	5.26	Y
\C20	18	F	8.79	11.00	11.20	Y

<sup>1</sup>Based on headwater depth H/D = 2.0 (See Figure IV-2)

<sup>2</sup>Based on  $V = Q/A$   
Culverts on 3% Slope (minimum)

<sup>3</sup>Erosion protection will be provided at all sediment pond culvert outlets as per the typical section on Figure IV-2A.

\*Present culvert is 18" - to be replaced by 24" CMP.

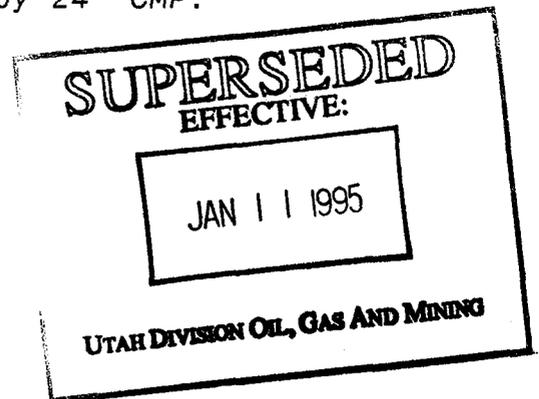


TABLE IV-9A

Access Road and UD-2 Culverts

<u>Culvert</u>	<u>Size (in.)</u>	<u>Drainage</u>	<u>Design Flow (cfs)</u>	<u>**** Capacity Flow (cfs)</u>	<u>***Velocity (fps)</u>	<u>Erosion Prot. (y/n)</u>
C-30	12	UD-2	0.67	3.20	0.85	N
C-31	12	UD-2	0.67	3.20	0.85	N
C-32	24	UD-2	0.67	18.00	0.21	N
* C-33	18	UD-2	8.76	9.10	4.96	Y
**C-34	36	ND-1	32.39	48.50	4.58	N

\* Access Road Culvert - Includes drainage from UD-2 and 44.5 acres from Beaver Creek Property. Erosion protection per Table IV-14.

\*\* Access (Haul) Road Culvert - Runoff area planimetered from Plate 15.

\*\*\* Based on  $V = Q/A$

\*\*\*\* 1.5 foot minimum headwall

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state of change - as a result, drainage patterns within the pad are subject to frequent change. Temporary ditches, such as the one recently placed in the Pond B drainage, may be placed to direct runoff over the short-term; however, such ditches are only temporary and are likely to be changed or eliminated with changes in the pile.

A temporary ditch, designated D-15T, is shown on Plate 2 near Sediment Pond B. This ditch is temporary and must be maintained to carry runoff with a 2-year recurrence interval. The ditch is actually sized to carry a 10-year 24-hour event as shown on Table IV-13, and will be maintained to the minimum cross-sectional area of 1.00 square feet as shown. The temporary designation does, however, allow the location of the ditch to vary slightly as changes in pile size and configuration dictate.

One ditch, designated D-17, is located adjacent to the waste coal area, and will carry the runoff from this area to Pond F. Under the new regulations, this ditch must be sized to carry runoff from a 100 year - 6 hour event; therefore, the calculations on Table IV-13 reflect the 100 year - 6 hour design for this ditch only. The calculated runoff is based on a 100 year - 6 year event of 1.91", a CN of 90 and an area of 1.47 acres for the refuse/waste coal area.

All ditches are shown on Plate 2.

5. Erosion Control

The majority of calculated velocities of culverts and ditches fall between 3 and 3 fms. Although it has been common to consider flows less than 3 fms. non-erosive, the Division has recommended that 3 fms be used on this site as the limit for non-erosive flow. Andalex will therefore commit to the following:

Constant observation of all ditches and in particular those which may have a erosive flow will be made periodically as well as following precipitation events to determine whether excessive erosion has occurred. Those

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ditches which may have an erosive flow according to the calculations are noted below:

Ditch D-2	Near Pond E Inlet
Ditch D-3	Near Pond D Inlet
Ditch D-7	Near Pond C Inlet
Ditch D-9	Mid-Point
Ditch D-11	Upper Portion of Ditch
Ditch D-13	Mid-Point
Ditch D-14	Mid-Point
Ditch D-17	Upper Portion of Ditch

Observations of these ditches were made periodically and following precipitation events. It was determined that erosion was going to be a constant problem in many of these ditches due to the nature of the soil material at Wildcat. Therefore, where erosion was consistently observed, the ditches were lined either with conveyor belt or half-round culvert. The following specific actions were taken after these observations were made. It has been noted that Diversion D-2 has eroded at the inlet to Sedimentation Pond E. Therefore, half round 18" culvert has been installed. Similarly Diversion D-3 has shown erosion at the sedimentation pond inlet and therefore 24" half round culvert has been installed. Diversion D-7 has also shown erosion at the Sediment Pond C inlet and therefore 24" half round culvert has been installed. Erosion has not been noted in Diversion D-9; in fact, Diversion D-9 has to be regularly cleaned out. Similarly Diversion D-11 must be periodically cleaned; erosion has not been observed. Erosion has also not been observed in Diversion D-13 except at the inlet to Sediment Pond A where the inlet culverts now spill onto conveyor belt. Diversion D-14 is also periodically cleaned; erosion has not been noted. The same note may be made on D-14 regarding the Sediment Pond A inlet. Diversion D-17 is periodically cleaned; the erosion which was noted is at the inlet to Sediment Pond F where 24" half round culvert has been installed. Plate 2 reflects all of these installations. It should also be noted that in addition to those ditches mentioned above, all pond inlets are equipped with erosion control. Also, Diversion D-1 has been lined entirely with 24" half round culvert. Diversion UD-1 near SAE 4 is equipped with 24"

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half round on one particularly steep slope. None of the other diversions have erosion problems but are cleaned periodically.

As stated on Table IV-9, erosion protection has been provided at all sediment pond outlets per Figure IV-2A. In addition, erosion protection is already in place at various culvert outlets and on disturbed ditch D-1 (see Plate 2 and page 129-A). Rip-rap protection and specifications are summarized in Table IV-14.

Erosion protection on all diversions consists of the following:

1. Rip-rap (Permanent Impoundment spillway)
  - a. Installed per Figure IV-2A.
2. Half-round culverts or full culverts.  
(See Plate 2 and Page 129-A)
3. Velocity Controls
  - a. Straw Bales
4. Revegetation
5. Other proven or approved structures.
  - a. Upon consultation with the Division.

Erosion protection is also provided at all pond emergency spillways as shown in Figure IV-2B.

Inlets on Pond F (Plate 7) are equipped with conveyor belting below the half round culverts to aid in erosion protection.

The main form of erosion control used on the property in addition to half round culvert is revegetation. All topsoil piles, sediment pond embankments, and other areas no longer needed for the operation have been reseeded using an interim seed mix for this site.

6. Effects of Operation on Surface Water

Since this is a surface processing and leaching operation, no mining or drilling will be done at this site; therefore, the only effects from this operation on surface water would be

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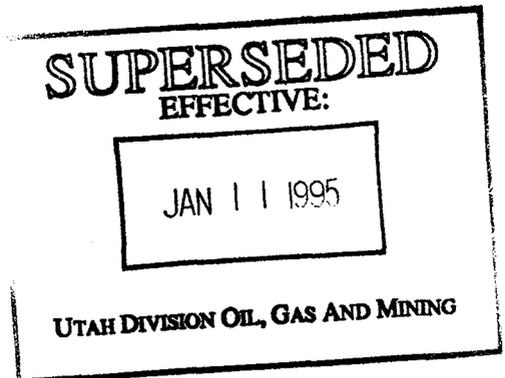
TABLE IV-14

Rip-Rap Specifications

Structure	Rip-Rap Size (in.)			Minimum Depth (in.)	Filter Blanket Depth (in.) (-3/4" Gravel)
	D15	D50	D85		
UD-1 (Berms)	3.75	9.00	14.50	13.5	13.5
UD-1 (New Pond F)	7.50	18.00	28.75	27.0	27.0
UD-2 (C-33)	2.50	6.00	9.50	9.0	9.0
ND-1 (C-34)	2.50	6.00	9.50	9.0	9.0
UD-3 (Outfall)	7.50	18.00	28.75	27.0	27.0
UD-4 (Outfall)	10.00	24.00	38.50	36.0	36.0
C-6	2.50	6.00	9.50	9.0	9.0
C-9B	2.50	6.00	9.50	9.0	9.0
C-13 thru C-20	3.75	9.00	14.50	13.5	13.5
*D-1C	2.50	6.00	9.50	9.0	9.0
**D-1	2.50	6.00	9.50	9.0	9.0
*D-2	2.50	6.00	9.50	9.0	9.0
*D-3	2.50	6.00	9.50	9.0	9.0
*D-4a	2.50	6.00	9.50	9.0	9.0
*D-4	3.75	9.00	14.50	13.5	13.5
*D-5	2.50	6.00	9.50	9.0	9.0
*D-7	2.50	6.00	9.50	9.0	9.0
*D-9	2.50	6.00	9.50	9.0	9.0
*D-11	3.75	9.00	14.50	13.5	13.5
*D-13	2.50	6.00	9.50	9.0	9.0
*D-14	2.50	6.00	9.50	9.0	9.0
*D-17	2.50	6.00	9.50	9.0	9.0
*D-18	2.50	6.00	9.50	9.0	9.0
RD-1 Thru RD-8	5.00	12.00	19.25	18.0	18.0

\* To be installed only if erosion is evident.

\*\* Conveyor Belting presently used.



9. Other Sediment Control - BTCA Areas

All topsoil piles are equipped with berms and have been revegetated. Andalex will not allow any topsoil pile to report directly to a sedimentation pond. This would result in a loss of topsoil material. The areas around these topsoil piles have been graded and revegetated to prevent erosion. A straw dike has been placed downstream from Pond B to prevent windblown coal fines from leaving the area as much as possible from the permit area. This dike will be maintained throughout the life of the project.

There are six small areas which do not drain to sedimentation ponds. These are designated BTCA Areas and all are shown on Plate 2. The areas each have an alternate sediment control method, consisting of strawbales, berms, vegetation or a combination of each. The total BTCA Area for this site is 7.63 acres or 11.36% of the total disturbed area. Drainage from each of these areas will be monitored for compliance with State and Federal limitations, to the extent possible. This will be accomplished by attempting to collect samples (as available) from points of discharge below the strawbales or other sediment controls.

Strawbales are "keyed-in" to the ground to prevent undercutting or routing of flows around the bales. Berms and bales are maintained on a regular basis and cleaned, repaired or changed out as needed. All control structures will be removed after reclamation of the site.

Table IV-15 is a summary of each of the BTCA Areas, along with size, runoff volume and treatment methods.

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TABLE IV-15  
B.T.C.A. Areas

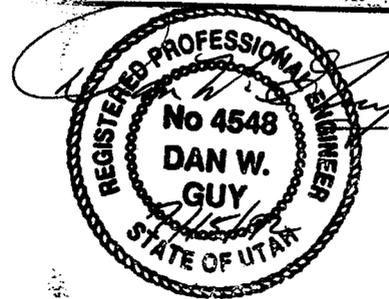
<u>B.T.C.A. Area*</u>	<u>Area (Acres)</u>	<u>*Runoff Volume (ac. ft.)</u>	<u>Treatment Method</u>
1	1.71	0.14	Berms/Straw Bales
2	0.44	0.04	Straw Bales
3	1.08	0.09	Straw Bales/Vegetation
4	2.69	0.22	Straw Bales/Vegetation
5	1.17	0.10	Straw Bales/Vegetation
6	0.54	0.05	Straw Bales
Totals	7.63	0.64	---

\*Runoff Volumes are based on a 10 year - 24 hour event and a runoff CN of 90.

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This analysis is included in Appendix D. Based on these tests, Andalex will commit to submitting a Soil Amendments Plan. Andalex is willing to commit to any necessary steps to insure that the topsoil material is suitable for final reclamation such as the use of additives, fertilizer, etc. Andalex suggests that the topsoil piles be tested several years prior to final reclamation as conditions in the piles may change over the next fifteen to twenty years. Parameters that are being analyzed are pH, Ec, saturation percent, texture, organic C, SAR, Total N, available P, percent CaCO<sub>3</sub>, Selenium, and Boron. Disturbed areas no longer required for the conduct of mining operations have been graded and revegetated. Once the topsoil was removed, the areas were graded to accommodate the surface facilities. For further information about topsoil, please see Appendix D.

Topsoil Pile Summary, Existing

Topsoil Pile A	11,877 ft. <sup>3</sup>
Topsoil Pile B	97,622 ft. <sup>3</sup>
Topsoil Pile C	158,694 ft. <sup>3</sup>
Topsoil Pile D	29,454 ft. <sup>3</sup>
Topsoil Pile E	122,176 ft. <sup>3</sup>
Total	419,823 ft. <sup>3</sup>

4. Backfilling, Grading, and Soil Replacement and Stabilization

All disturbed areas will be backfilled and graded to as near as possible the approximate original contour with the exception of the natural drainage which came through the loadout site prior to Swisher Coal Company's establishment of their loadout facility. Andalex has diverted this natural drainage and will provide permanent protection of this diversion once reclamation is complete. Please refer to this chapter, Part K, Section 4.1, re Undisturbed Diversions for more detail. Slopes shall not exceed the angle of repose or such lesser slopes as required by the regulatory authority to maintain stability. Fill material will be compacted to assure stability. This stabilizing area and therefore stabilization ~~EFFECTIVE~~ will be achieved easily.

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G. Monitoring Costs:

Years 1, 2, 3, 5, 9, and 10

Water - 24 mandays (once per quarter)

Revegetation - 6 mandays (once per monitoring year; will take place in the fall of the year)

Erosion - 24 mandays (once per quarter)

54 mandays total @ \$150.00/day = \$ 8,100

Phase I Subtotal \$ 500,100

Phase II:

A. Recontouring, Grading, Compaction, Topsoil Redistribution, Revegetation \$ 17,000  
 1. Ponds A, C, D, and F

B. Monitoring Costs:

Years 9 and 10

Water - 8 mandays (once per quarter)

Revegetation - 2 mandays (once per monitoring year; will take place in the fall of the year)

Erosion - 8 mandays (once per quarter)

18 mandays total @ \$150.00/day = 2,700

Phase II Subtotal \$ 19,700

Total Projected Reclamation Costs \$ 519,800

Contingency 10% 52,000

December, 1990 \$ 571,800

These costs are based on careful estimates of the time involved and the number of people required to perform each task. As can be seen from the above table, the cost of removing the structures is by far the highest cost of any of the reclamation steps and hence was detailed. The removal of each individual structure as outlined above is based on the following things: 1) the cost involved in dismantling the various structures so that they can be removed, and 2) the actual dismantling and

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site, this will be the largest part of the Phase I effort and will also be the most expensive. The following is a list of structures which will be brought down and removed either complete or as scrap/salvage.

1. 14 x 60 Scale House Trailer
  2. Truck Scales
  3. Substation
  4. Truck Dump (west side)\*
  5. Crushing Plant (west side)\*
  6. Radial Stacker (west side)\*
  7. Reclaim Tunnel (west side)
  8. Loadout Conveyor (west side)\*
  9. Control Building (west side)
  10. Truck Dump & Reclaim
  11. Conveyor T
  12. Crusher and Screening Plant
  13. Lump Coal Belt
  14. Stoker Radial Stacker
  15. Conveyor Y
  16. Main Radial Stacker
  17. Loadout Reclaim Tunnel, port supports, hoppers
  18. Conveyor R
  19. Loadout Tower
  20. Miscellaneous (Guard Rails, Office, Water Tanks, Motor Control Centers)
  21. Powerline
  22. 40' x 40' Shop Building and foundation
- \* Portable

Refer to Part A of this case file for information on these various structures.

The next step will be to remove any coal remaining on the various storage areas. This will not amount to a large volume of material and it will either be hauled to an approved storage area off-site or it will be disposed of within the loadout permit area by burial. This will include the coal refuse pile currently stored at Wildcat. The refuse pile will be flattened and buried according to the reclamation plan regarding coal mine refuse (Chapter IV, Section O).

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8.2 Permanent

Upon permanent cessation of operations, Andalex will reclaim all affected areas according to its' approved MRP and return the land to its' pre-mining conditions.

B. Wildcat Operations

1. Exploration and Development Drill Sites

Shallow holes for bedrock determination were drilled for foundation studies. Please see Appendix C.

2. Blasting

No blasting will occur at this facility.

3. Water Supply

Water is trucked into the facility by a local contractor and stored in 2 - 10,000 gallon storage tanks. One tank is used to supply culinary water to the bathhouse facilities and the other tank provides water for dust suppression for the preparation and loading operations.

There is no on-site development of surface or underground water for this facility. There are no wells.

4. Power Supply and Communication Facilities

Power and communications were pre-existing at this location. Andalex tapped the 46 KV powerline serving Beaver Creek Coal Company's mines and via an onsite substation, distributing 4160, 440, 220, and 110 V lines throughout the facility.

5. Landscaping

All disturbed areas are relatively flat, and vegetative cover has been promptly re-established to stabilize erosion.

6. Signs, Markers, Fences, and Gates

Signs of a uniform design, showing the company name, business address, and telephone number

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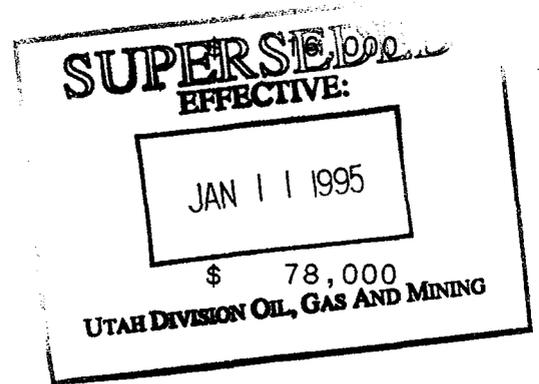
Wildcat Loadout Facility (Phase I)

Restoration to the pre-mining land use will require:

A.	Removal of Structures:		
	1.	14 x 60 Scale House Trailer and Truck Scales	\$ 9,300
	2.	Substation	7,500
	3.	Truck Dump (west side)	6,000
	4.	Crushing Plant (west side)*	
	5.	Radial Stacker (west side)*	
	6.	Reclaim Tunnel (west side)	7,000
	7.	Loadout Conveyor (west side)*	
	8.	Control Building (west side)	1,000
	9.	Truck Dump & Reclaim	17,500
	10.	Conveyor T	2,000
	11.	Crusher and Screening Plant	9,500
	12.	Lump Coal Belt	8,400
	13.	Stoker Radial Stacker	8,400
	14.	Conveyor Y	15,000
	15.	Main Radial Stacker	17,000
	16.	Loadout Reclaim Tunnel, port supports,	117,000
	17.	Conveyor R	23,000
	18.	Loadout Tower	27,900
	19.	Miscellaneous (Guard Rails, Office, Water Tanks, Motor Control Centers)	6,800
	20.	Powerline	2,700
	21.	40" x 40" Shop	14,000
		Total	<u>\$ 300,000</u>

\* Portable

- B. Cleanup Coal Piles:
1. Radial Stacker
  2. Stoker, Lump
  3. Mine Run and Lump
  4. West Side Stoker
  5. West Side Getty
- C. Recontouring and Regrading:  
(including covering of coal refuse storage pile)
1. Culvert Removal
  2. Move 74,000 yds.<sup>3</sup>
- D. Compaction and Scarification:
1. 56.1 acres
- E. Topsoil Redistribution:
1. 56.1 acres
- F. Revegetation:
1. 66 acres



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preparation; using native, local seed; and different fertilizing techniques, including no fertilizer. Andalex is hopeful that the original plots will improve in 1993, considering the climatic changes which have taken place during the winter of 1992-1993.

In the unlikely event it is determined that the fill material is not suitable for topsoil substitute, Andalex will commit to locating offsite topsoil substitute material. This will have to be accomplished in conjunction with a new Bureau of Land Management right-of-way issued for this purpose; therefore, it is hoped that the fill material proves suitable.

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4. Operator

Andalex Resources, Inc.  
P.O. Box 902  
Price, Utah 84501  
(801) 637-5385

5. Resident Agent of Applicant

Resident Agent who will accept service of process for Andalex Resources, Inc., Wildcat Loadout Facility, ACT/007/033:

Michael W. Glasson  
Andalex Resources, Inc.  
P.O. Box 902  
Price, Utah 84501

6. Business Entity Statement

The applicant, Andalex Resources, Inc., is a corporation organized and existing under the laws of Delaware and qualified to do business in Utah.

7. Officers, Partners, and Directors

Officers:

Peter B. Green ..... Chairman  
Robert Anderson, Jr. .... President  
John Bradshaw ..... Vice President  
Malcolm Thomas ..... Vice President  
Kenneth Taylor ..... Vice President  
Bruce J. Ferriell ..... Secretary

Directors:

Peter B. Green ..... Chairman  
Robert Anderson, Jr. .... President  
Ronald C. Beedie ..... Director

The address for all of the above is:

Andalex Resources, Inc.  
1201 Hurstbourne Place  
9300 Shelbyville Road  
Louisville, Kentucky 40222-5156  
Attention: Bruce J. Ferriell  
Council

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