

ANDALEX RESOURCES, INC.

1992 ANNUAL POND INSPECTION REPORT

POND: SED. BASIN "B"

LOCATION: CENTENNIAL

IMPOUNDMENTS

(1) Stability	<u>Slopes Stable.</u>
(2) Structural Weakness/Erosion	<u>None Noted.</u>
(3) Potential Safety Hazards	<u>None Noted.</u>
(4) Depth of Impounded Water	<u>N/A - Dry.</u>
(5) Existing Storage Capacity	<u>0.505 Ac. Ft.</u>
(6) Monitoring Procedures	<u>Sediment Level.</u> <u>Cleanout @ 50% Accum.</u>

SEDIMENT PONDS ONLY

(7) Sediment Accumulation (Elev.)	<u>7070.5</u>
(8) Sediment Cleanout Level (Elev.)	<u>7072.6</u>
(9) Principle Spillway (Elev.)	<u>7077.0</u>
(10) Emergency Spillway (Elev.)	<u>7078.0</u>
(11) Existing Sediment Capacity (To Cleanout)	<u>0.235 Ac. Ft.</u>

GENERAL

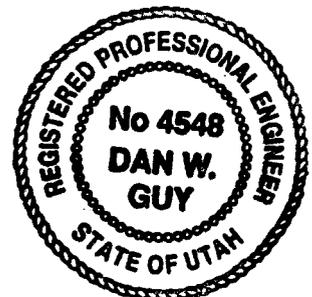
(12) Comments/Recommendations	<u>Cell B4 - Full of Sed</u> <u>Cell B3 - 35% Full.</u> <u>Cells B1 &amp; B2 - 0% Sed.</u>
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STATEMENT

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

*Dan W. Guy*  
(Signature)

10-16-92  
(Date)



ANDALEX RESOURCES, INC.

1992 ANNUAL POND INSPECTION REPORT

POND: SED. POND "C"

LOCATION: CENTENNIAL

IMPOUNDMENTS

(1) Stability	<u>Slopes Stable.</u>
(2) Structural Weakness/Erosion	<u>None Noted.</u>
(3) Potential Safety Hazards	<u>None Noted.</u>
(4) Depth of Impounded Water	<u>N/A - Dry.</u>
(5) Existing Storage Capacity	<u>2.799 Ac. Ft.</u>
(6) Monitoring Procedures	<u>U.P.D.E.S.</u> <u>Quarterly Inspection.</u>

SEDIMENT PONDS ONLY

(7) Sediment Accumulation (Elev.)	<u>7045.9</u>
(8) Sediment Cleanout Level (Elev.)	<u>7046.9</u>
(9) Principle Spillway (Elev.)	<u>7053.5</u>
(10) Emergency Spillway (Elev.)	<u>7055.0</u>
(11) Existing Sediment Capacity (To Cleanout)	<u>0.218 Ac. Ft.</u>

GENERAL

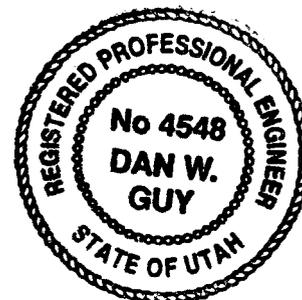
(12) Comments/Recommendations	<u>Interior Vegetated.</u> <u>No Discharge.</u>
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STATEMENT

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*Dan W. Guy*  
(Signature)

10-16-92  
(Date)



ANALEX RESOURCES, INC.

1992 ANNUAL POND INSPECTION REPORT

POND: SED. POND "E"

LOCATION: CENTENNIAL

IMPOUNDMENTS

(1) Stability	<u>Slopes Stable.</u>
(2) Structural Weakness/Erosion	<u>None Noted.</u>
(3) Potential Safety Hazards	<u>None Noted.</u>
(4) Depth of Impounded Water	<u>N/A - Dry.</u>
(5) Existing Storage Capacity	<u>2.422 Ac. Ft.</u>
(6) Monitoring Procedures	<u>U.P.D.E.S.</u> <u>Quarterly Inspection.</u>

SEDIMENT PONDS ONLY

(7) Sediment Accumulation (Elev.)	<u>6940.7</u>
(8) Sediment Cleanout Level (Elev.)	<u>6946.5</u>
(9) Principle Spillway (Elev.)	<u>6957.6</u>
(10) Emergency Spillway (Elev.)	<u>6958.6</u>
(11) Existing Sediment Capacity (To Cleanout)	<u>0.451 Ac. Ft.</u>

GENERAL

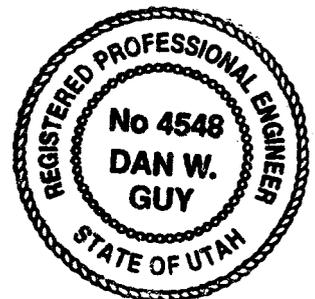
(12) Comments/Recommendations	<u>Vegetation on Slopes.</u> <u>No Discharge.</u>
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STATEMENT

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

*Dan W. Guy*  
(Signature)

10-16-92  
(Date)



# SEDIMENTATION POND Inspection Report Catch Basin B

Date: 3-31-92

Inlet & Outlet Conditions: All ok

Erosion Problems: None observed. Rip rap holding up between 1 & 2

Embankment Stability: All stable

Water Level: approximately 1' in cell 2

Weather Conditions: Warm, sunny

Additional Comments: Top cell full

Time of Inspection: 1300

Person Conducting Inspection: Michael W. Starn

# SEDIMENTATION POND Inspection Report Pond C

Date: 3-31-92

Inlet & Outlet Conditions: Cleaned out & repaired south inlet  
Others ok. Waiting on DOEM spillway  
approval

Erosion Problems: None observed

Embankment Stability: All embankments stable

Water Level: None

Weather Conditions: Warm, Sunny

Additional Comments: No waiting for approvals

Time of Inspection: 1300

Person Conducting Inspection: Michael W. Blanton

# SEDIMENTATION POND Inspection Report Pond E

Date: March 31, 1992

Inlet & Outlet Conditions: Secondary inlet needs silt & debris  
cleaned out. Others all OK. Assigned SOP  
to project.

Erosion Problems: No erosion observed

Embankment Stability: West embankment OK, some vegetation  
all ready returning. All other embankments OK

Water Level: Approximately 3' in bottom

Weather Conditions: Sunny, warm

Additional Comments: No

Time of Inspection: 1300

Person Conducting Inspection: Michael W. Blum

# SEDIMENTATION POND Inspection Report Catch Basin B

Date: 6-30-92

Inlet & Outlet Conditions: All OK

Erosion Problems: None noted, rip rap appears OK  
between cells 1 & 2

Embankment Stability: The embankment is stable.

Water Level: None

Weather Conditions: Clear

Additional Comments: Cell 1 is full, cell 2 is  
approximately 30% full

Time of Inspection: 0800

Person Conducting Inspection: Michael W. Gasson *Michael W. Gasson*

# SEDIMENTATION POND Inspection Report Pond E

Date: 6-30-92

Inlet & Outlet Conditions: Inlets and outlets both clear  
and functional

Erosion Problems: No erosion noted except in the sediment  
near the bottom of the pond

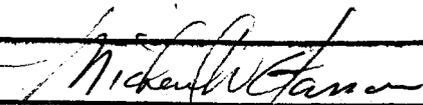
Embankment Stability: Embankment is stable - vegetation  
is doing very well

Water Level: Approximately 2' of water in base of pond

Weather Conditions: Clear

Additional Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Time of Inspection: 0800

Person Conducting Inspection: Michael W. Glasson 

# SEDIMENTATION POND Inspection Report Pond C

Date: 6-30-92

Inlet & Outlet Conditions: South inlet repaired with new gravel others all OK

Erosion Problems: None except in pond sediments

Embankment Stability: No problems with the embankment

Water Level: None

Weather Conditions: Clear

Additional Comments: Still awaiting spillway approval

Time of Inspection: 0800

Person Conducting Inspection: Michael W. Glasson Michael W. Glasson

# SEDIMENTATION POND Inspection Report Pond C

Date: 9-30-92

Inlet & Outlet Conditions: South Inlet needs a little  
definition. New gravel has been added  
to the inlet. Other inlets & outlets OK

Erosion Problems: None noted

Embankment Stability: Embankment is stable

Water Level: No water at time of inspection

Weather Conditions: Cool, Clear

Additional Comments: Approval received for spillway  
amendment. Access ramp to be completed  
by 10-25-92

Time of Inspection: 1200

Person Conducting Inspection: Michael W. Stanon

# SEDIMENTATION POND Inspection Report Catch Basin B

Date: 9-30-92

Inlet & Outlet Conditions: All OK

Erosion Problems: None Noted

Embankment Stability: Embankments all OK

Water Level: Cell 1 dry, Cell 2 contains 2' of water

Weather Conditions: Clear, Cool

Additional Comments: Top Cell full, 2<sup>nd</sup> Cell 50% full

Time of Inspection: 1200

Person Conducting Inspection: Michael W. Glass

# SEDIMENTATION POND Inspection Report Pond E

Date: 9-30-92

Inlet & Outlet Conditions: All Ok. Northeast inlet repaired  
after US West went through with a  
new phone cable.

Erosion Problems: None Noted

Embankment Stability: Embankment is stable

Water Level: Roughly 2 feet in bottom

Weather Conditions: Clear, Cool

Additional Comments: None

Time of Inspection: 1200

Person Conducting Inspection: Michael W. Glaser

# SEDIMENTATION POND Inspection Report Catch Basin B

Date: 12-31-92

Inlet & Outlet Conditions: All OK culverts also checked  
in October

Erosion Problems: No erosion

Embankment Stability: Embankments are stable

Water Level: None

Weather Conditions: Clear, Cold

Additional Comments: Certified inspection done 10-16-92  
Top cell is full, Cell 2 is 1/3  
full

Time of Inspection: 1200

Person Conducting Inspection: Michael W. Blanton

# SEDIMENTATION POND Inspection Report Pond E

Date: 12-31-92

Inlet & Outlet Conditions: All inlets and outlets are ok  
The northeast inlet requires occasional  
maintenance because of truck traffic

Erosion Problems: None

Embankment Stability: All embankments are stable

Water Level: Small amount (~3') in bottom - frozen

Weather Conditions: Cold, Clear

Additional Comments: Annual Certified inspection during  
this '94. (October 16)

Time of Inspection: - 01200 -

Person Conducting Inspection: Michael W. Garrison

# SEDIMENTATION POND Inspection Report Pond C

Date: 12-31-92

Inlet & Outlet Conditions: All OK  
South inlet requires occasional  
maintenance

Erosion Problems: None noted

Embankment Stability: Embankments are stable

Water Level: Small amount of ice in bottom

Weather Conditions: Clear, Cold

Additional Comments: Certified inspection done 10-16-92

Time of Inspection: 1200

Person Conducting Inspection: Michael W. Glavin

UMC 784.20 Subsidence Control Plan

P. Subsidence

1. Survey of Structures and Renewable Resource Lands

There are no structures present other than those constructed for mining operations, on the proposed permit area. The land is presently used for grazing and wildlife habitat which constitutes a renewable resource area. See Part 5.

Revised 01/22/91, 02/28/92

2. Mining Method

Mining will consist of the underground method of coal extraction using continuous miners, shuttle cars, and conveyor haulage. Room and pillar design will be employed with pillar extraction completing the operation. For more information on the mining method, please see Part B, Section 2.

3. Geologic Factors

The Pinnacle Mine is located within the Blackhawk formation of the upper Cretaceous Meseverde Group. As is the case with all the active mines in the Book Cliffs coal field, the Pinnacle Mine drifts in from the outcrop and immediately the cover drastically increases as there are very steep sided cliff-like canyons. Naturally, the same factors are present in the Lower Sunnyside, Aberdeen and the Centennial Seams. Therefore, from a geologic standpoint, the following conclusion can be drawn: it is assumed, as mining progresses, that as pillars are pulled, the roof will cave in behind the crews as they retreat. This is the normal scheme of mining in this type of development. In fact, if the cave does not occur as planned, serious mining problems can result. However, in a case such as ours, where the average cover over the coal seams is 1,000 feet or more, these caves will appear on the surface as minor cracks if at all. A solid block of overburden 1,000 feet thick will not drop into the 6 or 7 foot void resulting from pillar extraction. In fact, the rock will bridge off very quickly and result in minimal disturbance of the overlying country rock.

4. Preventive Measures

Stations have been set up as required for constant monitoring of subsidence movements. However, it should be pointed out, major subsidence is not expected to occur. The only preventative measure possible is to leave coal in place. This is in direct contrast to maximum economic coal recovery.

With the addition of our newly acquired AEP Lease, one additional subsidence monitoring station will be added to the currently approved monitoring station system. This additional station is indicated on Plate 25 with this submittal. The average cover over the coal on the AEP Lease is 1,000 feet. Please refer to Plate 25 for the three new

subsidence monitoring locations above the Graves Lease. Due to excessive cover it is unknown at this time whether pillar extraction will be possible; however, the subsidence monitoring stations will be established in any case.

Revised 07/04/90

5. Mitigative Measures

As previously pointed out, no major subsidence is expected to occur. However, if minor subsidence would occur, there would be no material damage or diminution of valuable or foreseeable use of lands including wildlife habitat. The one spring located in Hoffman Creek is located stratigraphically well below the lowest coal to be mined.

6. Monitoring

There are no structures or surface features which would be affected adversely by subsidence if it does occur. Monitoring stations, however, have been set up at the locations shown on Plate 32 as required under 30 CFR. These locations are where pillar removal has commenced. The station on the AEP Lease would be set up prior to pillar extraction.

Monitoring of the stations will occur on a yearly basis once pillar extraction has commenced. To date, subsidence monitoring stations have not detected any movement on the surface. See end of Appendix E for this determination.

# Bruce T. S. Ware

REGISTERED LAND SURVEYOR

RT. 1, BOX 146 H-2

HELPER, UTAH 84526

Phone 637-2620

August 1, 1992

Andalex Resources Inc.

Attn: Mike Glasson

P. O. Box 902

Price, Utah 84501

Dear Mr. Glasson,

As you requested I surveyed to your Company's Subsidence Monitoring Points on July 19, 1992. I have calculated the survey and find that there has been no movement horizontally or vertically since they were established. A visual inspection was made when walking between Subsidence points and no subsidence was seen.

Sincerely

*Bruce T. Ware*



# COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • (708) 953-9300

Member of the SGS Group (Société Générale de Surveillance)

PLEASE ADDRESS ALL CORRESPONDENCE TO:  
P.O. BOX 1020, HUNTINGTON, UT 84528  
TELEPHONE: (801) 653-2311  
FAX: (801) 653-2479

July 22, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at

Lower Sunnyside  
Roof

Sample taken by Andalex

Date sampled -----

Date received June 25, 1992

SOIL ONLY

Analysis report no. 59-148988

## SOIL ANALYSIS

pH 7.6 units  
Conductivity 0.86mmhos/cm  
Saturation % 26.1

Rock Fragments 79.8 %  
Total Nitrogen 0.05 %  
Nitrate-nitrogen 2.20 mg/kg  
Organic Carbon 1.9 %

### PARTICLE SIZE ANALYSIS

% Sand 38.7  
% Silt 44.4  
% Clay 16.9

Texture Loam

Total Available Selenium  
<0.02mg/kg  
Total Available Boron  
0.48mg/kg

### SOLUBLE CATIONS

Calcium 2.68 meq/l  
Magnesium 4.95 meq/l  
Sodium 1.29 meq/l

Available Water Capacity  
9.8 (1/3)  
3.8 (15)

Sodium Adsorption Ratio 0.66  
Exchangeable Sodium Percentage 3.02

### ACID BASE POTENTIAL

Maximum Acid Potential 1.56 tons CaCO<sub>3</sub>/ 1000 tons  
Neutralization Potential 176.0 tons CaCO<sub>3</sub>/ 1000 tons  
Acid-Base Potential 175.0 tons CaCO<sub>3</sub>/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

*W. W.*  
Manager, Huntington Laboratory



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FAX: (801) 653-2479

July 22, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at

Lower Sunnyside Mid-Seam

Sample taken by Andalex

Date sampled -----

Date received June 25, 1992

SOIL ONLY

Analysis report no. 59-148981

## SOIL ANALYSIS

pH 7.1 units  
Conductivity 0.44mmhos/cm  
Saturation % 55.8

Total Nitrogen 1.48 %  
Nitrate-nitrogen 1.10 mg/kg  
Organic Carbon 10.0 %

### PARTICLE SIZE ANALYSIS

% Sand 90.5  
% Silt 8.0  
% Clay 1.5

Total Available Selenium  
<0.02mg/kg  
Total Available Boron  
1.30mg/kg

### SOLUBLE CATIONS

Calcium 1.69 meq/l  
Magnesium 0.49 meq/l  
Sodium 1.99 meq/l

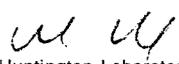
Available Water Capacity  
5.5 (1/3)  
3.4 (15)

Sodium Adsorption Ratio 1.91  
Exchangeable Sodium Percentage 60.2

### ACID BASE POTENTIAL

Maximum Acid Potential 16.9 tons CaCO<sub>3</sub>/ 1000 tons  
Neutralization Potential 6.40 tons CaCO<sub>3</sub>/ 1000 tons  
Acid-Base Potential -10.5 tons CaCO<sub>3</sub>/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

  
Manager, Huntington Laboratory

# COMMERCIAL TESTING & ENGINEERING CO.

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TELEPHONE: (801) 653-2311  
FAX: (801) 653-2479

July 22, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at

Lower Sunnyside  
Floor

Sample taken by Andalex

Date sampled -----

Date received June 25, 1992

SOIL ONLY

Analysis report no. 59-148990

## SOIL ANALYSIS

pH 7.4 units  
Conductivity 1.48mmhos/cm  
Saturation % 20.1

Rock Fragments 72.7 %  
Total Nitrogen 0.04 %  
Nitrate-nitrogen 2.15 mg/kg  
Organic Carbon 1.7 %

### PARTICLE SIZE ANALYSIS

% Sand 48.7  
% Silt 38.0  
% Clay 13.3  
Texture Loam

Total Available Selenium  
<0.02mg/kg  
Total Available Boron  
0.45mg/kg

### SOLUBLE CATIONS

Calcium 6.15 meq/l  
Magnesium 9.32 meq/l  
Sodium 1.40 meq/l  
Sodium Adsorption Ratio 0.50  
Exchangeable Sodium Percentage 4.70

Available Water Capacity  
7.2 (1/3)  
2.4 (15)

### ACID BASE POTENTIAL

Maximum Acid Potential 1.87 tons CaCO<sub>3</sub>/ 1000 tons  
Neutralization Potential 101.0 tons CaCO<sub>3</sub>/ 1000 tons  
Acid-Base Potential 99.1 tons CaCO<sub>3</sub>/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

*W. C. C.*  
Manager, Huntington Laboratory

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FAX: (801) 653-2479

March 3, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

RECEIVED

MAR -4 1992

ANDALEX RESOURCES, INC.

Lower Sunnyside Roof

Kind of sample Coal  
reported to us

Sample taken at Wildcat Loadout

Sample taken by Andalex

Date sampled February 25, 1991

Date received February 25, 1992

Analysis report no. 59-143871

## ACID BASE POTENTIAL

Maximum Acid Potential

7.02 tons CaCO<sub>3</sub> equivalent/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

  
Manager, Huntington Laboratory

# COMMERCIAL TESTING & ENGINEERING CO.

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TELEPHONE: (801) 653-2311  
FAX: (801) 653-2479

March 3, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at Wildcat Loadout

Lower Sunnyside Floor

Sample taken by Andalex

Date sampled February 25, 1991

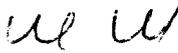
Date received February 25, 1992

Analysis report no. 59-143872

## ACID BASE POTENTIAL

Maximum Acid Potential 21.13 tons CaCO<sub>3</sub> equivalent/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

  
Manager, Huntington Laboratory



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TELEPHONE: (801) 653-2311  
FAX: (801) 653-2479

July 22, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at

Sample taken by Andalex

Centennial  
Roof  
*Graves lease*

Date sampled -----

Date received June 25, 1992

SOIL ONLY

Analysis report no. 59-148989

## SOIL ANALYSIS

pH 7.5 units  
Conductivity 3.91mmhos/cm  
Saturation % 23.0

Rock Fragments 90.5 %  
Total Nitrogen 0.03 %  
Nitrate-nitrogen 4.32 mg/kg  
Organic Carbon 0.8 %

### PARTICLE SIZE ANALYSIS

% Sand 54.4  
% Silt 33.2  
% Clay 12.4  
Texture Sandy Loam

Total Available Selenium  
<0.02mg/kg  
Total Available Boron  
0.45mg/kg

### SOLUBLE CATIONS

Calcium 16.2 meq/l  
Magnesium 27.4 meq/l  
Sodium 7.96 meq/l

Available Water Capacity  
7.5 (1/3)  
2.8 (15)

Sodium Adsorption Ratio 1.70  
Exchangeable Sodium Percentage 5.48

### ACID BASE POTENTIAL

Maximum Acid Potential 0.00 tons CaCO<sub>3</sub>/ 1000 tons  
Neutralization Potential 242.0 tons CaCO<sub>3</sub>/ 1000 tons  
Acid-Base Potential 242.0 tons CaCO<sub>3</sub>/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

*UU UU*  
Manager, Huntington Laboratory

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FAX: (801) 653-2479

July 22, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at

Sample taken by Andalex

Centennial Mid-Seam

*Graves lease*

Date sampled -----

Date received June 25, 1992

SOIL ONLY

Analysis report no. 59-148980

## SOIL ANALYSIS

pH 6.9 units  
Conductivity 0.37mmhos/cm  
Saturation % 53.3

Total Nitrogen 1.57 %  
Nitrate-nitrogen 1.36 mg/kg  
Organic Carbon 4.2 %

### PARTICLE SIZE ANALYSIS

% Sand 93.3  
% Silt 5.2  
% Clay 1.5

Total Available Selenium  
<0.02mg/kg  
Total Available Boron  
0.70mg/kg

Texture Sand

### SOLUBLE CATIONS

Calcium 1.21 meq/l  
Magnesium 0.50 meq/l  
Sodium 1.44 meq/l

Available Water Capacity  
5.3 (1/3)  
3.7 (15)

Sodium Adsorption Ratio 1.56  
Exchangeable Sodium Percentage 44.9

### ACID BASE POTENTIAL

Maximum Acid Potential 14.1 tons CaCO<sub>3</sub>/ 1000 tons  
Neutralization Potential 10.9 tons CaCO<sub>3</sub>/ 1000 tons  
Acid-Base Potential -3.12 tons CaCO<sub>3</sub>/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

*U U*  
Manager, Huntington Laboratory



# COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • (708) 953-9300

Member of the SGS Group (Société Générale de Surveillance)

PLEASE ADDRESS ALL CORRESPONDENCE TO:  
P.O. BOX 1020, HUNTINGTON, UT 84528  
TELEPHONE: (801) 653-2311  
FAX: (801) 653-2479

July 22, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at

Sample taken by Andalex

Centennial  
Floor

Date sampled -----

*Graves Lease*

Date received June 25, 1992

SOIL ONLY

Analysis report no. 59-148984

### SOIL ANALYSIS

pH 6.4 units  
Conductivity 1.74mmhos/cm  
Saturation % 19.0

Rock Fragments 77.4 %  
Total Nitrogen 0.03 %  
Nitrate-nitrogen 1.82 mg/kg  
Organic Carbon 1.5 %

#### PARTICLE SIZE ANALYSIS

% Sand 57.8  
% Silt 30.7  
% Clay 11.5  
Texture Sandy Loam

Total Available Selenium  
<0.02mg/kg  
Total Available Boron  
0.59mg/kg

#### SOLUBLE CATIONS

Calcium 8.31 meq/l  
Magnesium 8.56 meq/l  
Sodium 1.69 meq/l

Available Water Capacity  
7.3 (1/3)  
2.0 (15)

Sodium Adsorption Ratio 0.58  
Exchangeable Sodium Percentage 7.76

#### ACID BASE POTENTIAL

Maximum Acid Potential 0.00 tons CaCO<sub>3</sub>/ 1000 tons  
Neutralization Potential 31.9 tons CaCO<sub>3</sub>/ 1000 tons  
Acid-Base Potential 31.9 tons CaCO<sub>3</sub>/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory



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TELEPHONE: (801) 653-2311  
FAX: (801) 653-2479

March 3, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample reported to us Coal

Sample taken at Wildcat Loadout

Sample taken by Andalex

Centennial Roof  
*Graves*

Date sampled February 25, 1991

Date received February 25, 1992

Analysis report no. 59-143873

## ACID BASE POTENTIAL

Maximum Acid Potential 5.66 tons CaCO<sub>3</sub> equivalent/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

*W U*  
Manager, Huntington Laboratory



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TELEPHONE: (801) 653-2311  
FAX: (801) 653-2479

March 3, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample reported to us Coal  
Sample taken at Wildcat Loadout  
Sample taken by Andalex  
Date sampled February 25, 1991  
Date received February 25, 1992

Centennial Floor  
*Graves lease*

Analysis report no. 59-143877

## ACID BASE POTENTIAL

Maximum Acid Potential 5.40 tons CaCO<sub>3</sub> equivalent/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

*W U*  
Manager, Huntington Laboratory

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FAX: (801) 653-2479

July 22, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at

Sample taken by Andalex

Gilson  
Roof

Date sampled -----

Date received June 25, 1992

SOIL ONLY

Analysis report no. 59-148985

## SOIL ANALYSIS

pH 7.2 units  
Conductivity 1.01mmhos/cm  
Saturation % 27.6

Rock Fragments 94.1 %  
Total Nitrogen <0.01%  
Nitrate-nitrogen 5.22 mg/kg  
Organic Carbon 0.5 %

### PARTICLE SIZE ANALYSIS

% Sand 76.0  
% Silt 16.2  
% Clay 7.8  
Texture Sandy Loam

Total Available Selenium  
<0.02mg/kg  
Total Available Boron  
0.33mg/kg

### SOLUBLE CATIONS

Calcium 4.14 meq/l  
Magnesium 4.47 meq/l  
Sodium 1.83 meq/l

Available Water Capacity  
5.7 (1/3)  
1.8 (15)

Sodium Adsorption Ratio 0.88  
Exchangeable Sodium Percentage 15.2

### ACID BASE POTENTIAL

Maximum Acid Potential 0.00 tons CaCO<sub>3</sub>/ 1000 tons  
Neutralization Potential 65.5 tons CaCO<sub>3</sub>/ 1000 tons  
Acid-Base Potential 65.5 tons CaCO<sub>3</sub>/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

*UU UU*  
Manager, Huntington Laboratory

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TELEPHONE: (801) 653-2311  
FAX: (801) 653-2479

July 22, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at

Gilson Mid-Seam

Sample taken by Andalex

Date sampled -----

Date received June 25, 1992

SOIL ONLY

Analysis report no. 59-148982

## SOIL ANALYSIS

pH 7.1 units  
Conductivity 0.38mmhos/cm  
Saturation % 54.1

Total Nitrogen 1.61 %  
Nitrate-nitrogen 1.52 mg/kg  
Organic Carbon 7.6 %

### PARTICLE SIZE ANALYSIS

% Sand 90.5  
% Silt 8.0  
% Clay 1.5

Texture Sand

Total Available Selenium  
<0.02mg/kg  
Total Available Boron  
1.64mg/kg

### SOLUBLE CATIONS

Calcium 1.62 meq/l  
Magnesium 0.46 meq/l  
Sodium 1.60 meq/l

Available Water Capacity  
8.5 (1/3)  
3.5 (15)

Sodium Adsorption Ratio 1.57  
Exchangeable Sodium Percentage 33.6

### ACID BASE POTENTIAL

Maximum Acid Potential 14.1 tons CaCO<sub>3</sub>/ 1000 tons  
Neutralization Potential 9.65 tons CaCO<sub>3</sub>/ 1000 tons  
Acid-Base Potential -4.41 tons CaCO<sub>3</sub>/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

*W W*  
Manager, Huntington Laboratory

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TELEPHONE: (801) 653-2311  
FAX: (801) 653-2479

July 22, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at

Sample taken by Andalex

Gilson  
Floor

Date sampled -----

Date received June 25, 1992

SOIL ONLY

Analysis report no. 59-148987

## SOIL ANALYSIS

pH 7.3 units  
Conductivity 0.93mmhos/cm  
Saturation % 27.1

Rock Fragments 90.1 %  
Total Nitrogen 0.02 %  
Nitrate-nitrogen 3.18 mg/kg  
Organic Carbon 1.0 %

### PARTICLE SIZE ANALYSIS

% Sand 65.1  
% Silt 25.3  
% Clay 9.6  
Texture Sandy Loam

Total Available Selenium  
<0.02mg/kg  
Total Available Boron  
0.48mg/kg

### SOLUBLE CATIONS

Calcium 3.76 meq/l  
Magnesium 4.17 meq/l  
Sodium 1.95 meq/l

Available Water Capacity  
6.2 (1/3)  
2.0 (15)

Sodium Adsorption Ratio 0.98  
Exchangeable Sodium Percentage 8.19

### ACID BASE POTENTIAL

Maximum Acid Potential 0.62 tons CaCO<sub>3</sub>/ 1000 tons  
Neutralization Potential 39.8 tons CaCO<sub>3</sub>/ 1000 tons  
Acid-Base Potential 39.2 tons CaCO<sub>3</sub>/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

*WU*  
Manager, Huntington Laboratory



**COMMERCIAL TESTING & ENGINEERING CO.**

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P.O. BOX 1020, HUNTINGTON, UT 84528  
TELEPHONE: (801) 653-2311  
FAX: (801) 653-2479

March 3, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample reported to us Coal  
Sample taken at Wildcat Loadout  
Sample taken by Andalex  
Date sampled February 25, 1991  
Date received February 25, 1992

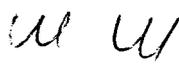
Gilson Roof

Analysis report no. 59-143875

ACID BASE POTENTIAL

Maximum Acid Potential 13.51 tons CaCO<sub>3</sub> equivalent/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

  
Manager, Huntington Laboratory



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FAX: (801) 653-2479

March 3, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at Wildcat Loadout

Gilson Floor

Sample taken by Andalex

Date sampled February 25, 1991

Date received February 25, 1992

Analysis report no. 59-143876

## ACID BASE POTENTIAL

Maximum Acid Potential 30.02 tons CaCO<sub>3</sub> equivalent/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.



Manager, Huntington Laboratory



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TELEPHONE: (801) 653-2311  
FAX: (801) 653-2479

July 22, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at

Sample taken by Andalex

Aberdeen  
Roof

Date sampled -----

Date received June 25, 1992

SOIL ONLY

Analysis report no. 59-148986

## SOIL ANALYSIS

pH 7.0 units  
Conductivity 5.42mmhos/cm  
Saturation % 29.4

Rock Fragments 90.8 %  
Total Nitrogen 0.04 %  
Nitrate-nitrogen 6.80 mg/kg  
Organic Carbon 1.7 %

### PARTICLE SIZE ANALYSIS

% Sand 66.0  
% Silt 24.4  
% Clay 9.6  
Texture Sandy Loam

Total Available Selenium  
0.03 mg/kg  
Total Available Boron  
0.64mg/kg

### SOLUBLE CATIONS

Calcium 23.8 meq/l  
Magnesium 45.3 meq/l  
Sodium 7.27 meq/l

Available Water Capacity  
7.3 (1/3)  
2.2 (15)

Sodium Adsorption Ratio 1.24  
Exchangeable Sodium Percentage 6.97

### ACID BASE POTENTIAL

Maximum Acid Potential 2.50 tons CaCO<sub>3</sub>/ 1000 tons  
Neutralization Potential 43.6 tons CaCO<sub>3</sub>/ 1000 tons  
Acid-Base Potential 41.1 tons CaCO<sub>3</sub>/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

*U U*  
Manager, Huntington Laboratory



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TELEPHONE: (801) 653-2311  
FAX: (801) 653-2479

July 22, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at

Aberdeen Mid-Seam

Sample taken by Andalex

Date sampled -----

Date received June 25, 1992

SOIL ONLY

Analysis report no. 59-148983

## SOIL ANALYSIS

pH 7.5 units  
Conductivity 0.38mmhos/cm  
Saturation % 53.7

Total Nitrogen 1.51 %  
Nitrate-nitrogen 1.22 mg/kg  
Organic Carbon 8.4 %

### PARTICLE SIZE ANALYSIS

% Sand 90.5  
% Silt 8.0  
% Clay 1.5

Total Available Selenium <0.02mg/kg  
Total Available Boron 1.49mg/kg

Texture Sand

### SOLUBLE CATIONS

Calcium 0.77 meq/l  
Magnesium 0.52 meq/l  
Sodium 2.70 meq/l

Available Water Capacity  
5.4 (1/3)  
7.4 (15)

Sodium Adsorption Ratio 3.37  
Exchangeable Sodium Percentage 32.4

### ACID BASE POTENTIAL

Maximum Acid Potential 14.4 tons CaCO<sub>3</sub>/ 1000 tons  
Neutralization Potential 11.2 tons CaCO<sub>3</sub>/ 1000 tons  
Acid-Base Potential -3.17 tons CaCO<sub>3</sub>/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

*UW UW*  
Manager, Huntington Laboratory



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TELEPHONE: (801) 653-2311  
FAX: (801) 653-2479

July 22, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at

Sample taken by Andalex

Aberdeen  
Floor

Date sampled -----

Date received June 25, 1992

SOIL ONLY

Analysis report no. 59-148991

## SOIL ANALYSIS

pH 7.2 units  
Conductivity 5.90mmhos/cm  
Saturation % 26.0

Rock Fragments 88.2 %  
Total Nitrogen <0.01%  
Nitrate-nitrogen 8.16 mg/kg  
Organic Carbon 0.8 %

### PARTICLE SIZE ANALYSIS

% Sand 79.6  
% Silt 12.6  
% Clay 7.8  
Texture Loamy Sand

Total Available Selenium  
0.02 mg/kg  
Total Available Boron  
0.67mg/kg

### SOLUBLE CATIONS

Calcium 26.5 meq/l  
Magnesium 33.3 meq/l  
Sodium 11.6 meq/l

Available Water Capacity  
4.0 (1/3)  
1.7 (15)

Sodium Adsorption Ratio 2.11  
Exchangeable Sodium Percentage 9.08

### ACID BASE POTENTIAL

Maximum Acid Potential 3.44 tons CaCO<sub>3</sub>/ 1000 tons  
Neutralization Potential 27.8 tons CaCO<sub>3</sub>/ 1000 tons  
Acid-Base Potential 24.4 tons CaCO<sub>3</sub>/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

  
Manager, Huntington Laboratory



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FAX: (801) 653-2479

March 3, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample Coal  
reported to us

Sample taken at Wildcat Loadout

Aberdeen Roof

Sample taken by Andalex

Date sampled February 25, 1991

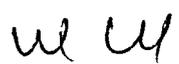
Date received February 25, 1992

Analysis report no. 59-143874

## ACID BASE POTENTIAL

Maximum Acid Potential 20.74 tons CaCO<sub>3</sub> equivalent/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

  
Manager, Huntington Laboratory



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FAX: (801) 653-2479

March 3, 1992

ANDALEX RESOURCES  
P.O. Box 902  
Price UT 84501

Sample identification by  
ANDALEX RESOURCES

Kind of sample reported to us Coal  
Sample taken at Wildcat Loadout Aberdeen Floor  
Sample taken by Andalex  
Date sampled February 25, 1991  
Date received February 25, 1992

Analysis report no. 59-143878

## ACID BASE POTENTIAL

Maximum Acid Potential 7.58 tons CaCO<sub>3</sub> equivalent/ 1000 tons

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.



Manager, Huntington Laboratory

**VEGETATION MONITORING  
AT THE CENTENNIAL MINE AREA**

- 1992 -

Prepared by

*MT. NEBO SCIENTIFIC RESEARCH & CONSULTING*  
330 East 400 South, Suite 6  
P.O. Box 337  
Springville, Utah 84663  
(801) 489-6937

for  
*ANDALEX RESOURCES, INC.*  
P.O. Box 902  
Price, Utah 84501

Report: Patrick D. Collins, Ph.D.

Fieldwork: Patrick D. Collins  
Dean Collins

Report Date: March 1993

**VEGETATION MONITORING  
AT THE CENTENNIAL MINE AREA**

- 1992 -

**INTRODUCTION**

The mine site has some stockpiled "topsoil substitute material" that has been seeded with a mixture that could potentially be used for final revegetation. In an attempt to monitor the success of the plant species seeded, the piles were sampled. Results of sampling the vegetation this year and subsequent years could provide the mine personnel with information to help predict the suitability of this material as a topsoil substitute for final reclamation.

**METHODS**

Cover and Composition

Sample locations were determined by placing quadrats in a regular/random fashion. This was accomplished by establishing transect lines at regular intervals on each end of the sample areas. These transect lines were placed over the entire study

area to adequately represent the area as a whole. Regular points on the transect lines were then marked. From these marks, the sample points were determined by random distance numbers at right angles to the transect lines.

Cover estimates were made using ocular methods with meter square quadrats. Species composition and relative frequencies were also assessed from the quadrats. Additional information recorded on data sheets were: estimated precipitation, slope, exposure, grazing use, animal disturbance and other appropriate notes.

#### Woody Species Density

Woody species densities were not recorded because some containerized plantings had been planned in some areas for the near future.

#### Sample Adequacy

Sample adequacy for cover was achieved employing a the formula below.

$$\left[ \frac{1.28 (s)}{x (.1)} \right]^2 = n_{\min}$$

where:

x = sample mean  
s = standard deviation  
nmin = minimum number of samples.

### Raw Data

Raw data summary sheets were included in this report to facilitate any additional statistical analyses.

## **RESULTS**

### Topsoil Substitute Pile (South)

Total living cover of the area was estimated at 46.20% and was dominated by grass species (Table 1). Most of the species were becoming established were "desirable" plant species. Dominate grass species were intermediate and crested wheatgrasses (Table 2). Dominate forbs species by cover and frequency were cicer milkvetch and alfalfa.

### Topsoil Substitute Pile (North)

The total living of this stockpile was estimated at 36.00% (Table 3). Grasses also dominated this site representing over 59% of the composition. The same grass species dominated this

site as the previous one, but the diversity was lower here.

Also, more weedy species were becoming established on this pile

(Table 4) when compared to the previous pile.

**TABLE 1:** Cover and composition summary for the 1992 vegetation monitoring at the Centennial Mine: Topsoil Substitute Pile (south).

<b>TOTAL COVER</b>	<b>% MEAN COVER</b>	<b>STANDARD DEVIATION</b>	<b>SAMPLE SIZES</b>
Living Cover	46.20	13.51	25
Litter	17.80	10.11	25
Bareground	21.80	11.91	25
Rock	14.20	9.56	25
<b>COMPOSITION</b>			
Trees & Shrubs	3.09	10.17	25
Forbs	24.61	25.33	25
Grasses	72.31	27.75	25

RAW DATA

ANDALEX - Centennial Mine  
 Topsoil Substitute  
 Soil Area SOUTH of Shop/Warehouse  
 Revegetated  
 Slope: 25 deg  
 Exposure: SE-S  
 Sample Date: 18 Sept 1992

	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
<b>SHRUBS</b>										
<i>Purshia tridentata</i>	0.00	7.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Chrysothamnus nauseosus</i>	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Symphoricarpos oreophilus</i>	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
<b>FORBS</b>										
<i>Machaeranthera grindelii</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Melilotus officinalis</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Astragalus cicer</i>	10.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00
<i>Kochia scoparia</i>	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Medicago sativa</i>	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	15.00
<i>Linum lewisii</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00
<b>GRASSES</b>										
<i>Elymus hispidus</i>	0.00	0.00	0.00	0.00	0.00	0.00	15.00	10.00	5.00	0.00
<i>Elymus cinereus</i>	0.00	0.00	5.00	5.00	0.00	0.00	5.00	0.00	0.00	0.00
<i>Agropyron cristatum</i>	20.00	0.00	20.00	15.00	15.00	5.00	10.00	20.00	15.00	10.00
<i>Elymus smithii</i>	5.00	0.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00
<i>Bromus carinatus</i>	5.00	8.00	0.00	10.00	5.00	20.00	5.00	0.00	5.00	10.00
<i>Stipa hymenoides</i>	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>COVER</b>										
Total Living Cover	40.00	75.00	30.00	35.00	40.00	50.00	35.00	30.00	35.00	35.00
Litter	10.00	10.00	25.00	10.00	30.00	15.00	10.00	30.00	10.00	10.00
Bareground	45.00	10.00	25.00	40.00	25.00	20.00	35.00	35.00	20.00	35.00
Rock	5.00	5.00	20.00	15.00	5.00	15.00	20.00	5.00	35.00	20.00
<b>% COMPOSITION</b>										
Shrubs	0.00	49.33	0.00	0.00	12.50	0.00	0.00	0.00	0.00	0.00
Forbs	25.00	40.00	0.00	14.29	0.00	50.00	0.00	0.00	28.57	42.86
Grasses	75.00	10.67	100.00	85.71	87.50	50.00	100.00	100.00	71.43	57.14

11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.00	0.00	0.00	0.00	0.00	0.00	35.00	55.00	15.00	5.00	5.00	0.00
0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	5.00	0.00	5.00	10.00	0.00	0.00	0.00	0.00	0.00
5.00	10.00	10.00	15.00	0.00	10.00	0.00	10.00	30.00	0.00	10.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.00	15.00	45.00
10.00	5.00	25.00	20.00	7.00	25.00	5.00	5.00	5.00	10.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
0.00	10.00	0.00	0.00	8.00	0.00	0.00	5.00	0.00	10.00	0.00	0.00
15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00
40.00	75.00	35.00	45.00	45.00	40.00	55.00	75.00	50.00	60.00	40.00	45.00
15.00	15.00	15.00	25.00	5.00	15.00	10.00	10.00	25.00	10.00	10.00	40.00
10.00	5.00	30.00	20.00	45.00	15.00	25.00	10.00	20.00	20.00	20.00	5.00
35.00	5.00	20.00	10.00	5.00	30.00	10.00	5.00	5.00	10.00	30.00	10.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25.00	66.67	0.00	22.22	66.67	12.50	81.82	73.33	30.00	8.33	12.50	0.00
75.00	33.33	100.00	77.78	33.33	87.50	18.18	25.67	70.00	91.67	87.50	100.00

ANDALEX - Centennial Mine  
 Topsoil Substitute  
 Soil Area SOUTH of Shop/Warehouse  
 Revegetated  
 Slope: 25%  
 Exposure: SE-S  
 Sample Date: 18 Sept 1992

23.00	24.00	25.00	Mean	SDev	Freq	
<hr/>						SHRUBS
0.00	0.00	0.00	0.28	1.37	4.00	Purshia tridentata
0.00	0.00	0.00	1.20	5.88	4.00	Chrysothamnus nauseosus
10.00	0.00	0.00	0.60	2.15	8.00	Symphoricarpos oreophilus
 						FORBS
0.00	0.00	0.00	0.40	1.96	4.00	Machaeranthera grindelioides
0.00	0.00	0.00	1.00	4.00	8.00	Melilotus officinalis
10.00	0.00	0.00	7.00	13.34	40.00	Astragalus cicer
0.00	0.00	0.00	0.40	1.36	8.00	Kochia scoparia
0.00	0.00	0.00	3.60	11.00	12.00	Medicago sativa
0.00	0.00	0.00	1.00	2.45	8.00	Linum lewisii
 						GRASSES
45.00	5.00	10.00	7.60	10.40	52.00	Elymus hispidus
0.00	10.00	0.00	4.80	11.09	28.00	Elymus cinereus
0.00	0.00	30.00	11.08	8.79	80.00	Agropyron cristatum
0.00	10.00	0.00	1.40	3.61	16.00	Elymus smithii
0.00	15.00	0.00	4.64	5.44	52.00	Bromus carinatus
0.00	0.00	0.00	1.20	3.54	12.00	Stipa hymenoides
<hr/>						COVER
65.00	40.00	40.00	46.20	13.51		Total Living Cover
15.00	35.00	40.00	17.80	10.11		Litter
5.00	15.00	10.00	21.80	11.91		Bareground
15.00	10.00	10.00	14.20	9.56		Rock
<hr/>						% COMPOSITION
15.38	0.00	0.00	3.09	10.17		Shrubs
15.38	0.00	0.00	24.61	25.33		Forbs
69.23	100.00	100.00	72.31	27.75		Grasses

ANDALEX - Centennial Mine  
 Topsoil Substitute  
 Soil Area NORTH of Shop/Warehouse  
 Revegetated  
 Slope: 20 deg  
 Exposure: South  
 Sample Date: 18 Sept 1992

1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00

SHRUBS

FORBS

Salsola iberica	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00
Astragalus cicer	25.00	45.00	10.00	5.00	10.00	0.00	0.00	0.00	5.00	0.00
Machaeranthera grindelioi	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00
Kochia scoparia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	0.00
Iva axillaris	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00

GRASSES

Elymus hispidus	0.00	10.00	20.00	25.00	10.00	5.00	0.00	5.00	0.00	0.00
Agropyron cristatum	0.00	10.00	5.00	0.00	20.00	5.00	15.00	15.00	10.00	5.00
Elymus smithii	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bromus carinatus	5.00	0.00	5.00	0.00	5.00	25.00	5.00	5.00	5.00	0.00

COVER

Total Living Cover	50.00	65.00	40.00	35.00	45.00	35.00	25.00	30.00	25.00	15.00
Litter	25.00	20.00	10.00	5.00	10.00	25.00	15.00	25.00	10.00	5.00
Bareground	15.00	10.00	40.00	45.00	40.00	30.00	40.00	40.00	35.00	60.00
Rock	10.00	5.00	10.00	15.00	5.00	10.00	20.00	5.00	30.00	20.00

% COMPOSITION

Shrubs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forbs	50.00	69.23	25.00	28.57	22.22	0.00	20.00	16.67	40.00	66.67
Grasses	50.00	30.77	75.00	71.43	77.78	100.00	80.00	83.33	60.00	33.33

ANDALEX - Centennial Mine  
 Topsoil Substitute  
 Soil Area SOUTH of Shop/Warehouse  
 Revegetated  
 Slope: 25%  
 Exposure: SE-S  
 Sample Date: 18 Sept 1992

11.00 12.00 13.00 14.00 15.00 Mean SDev Freq

SHRUBS



FORBS

11.00	12.00	13.00	14.00	15.00	Mean	SDev	Freq	Species
0.00	0.00	0.00	0.00	0.00	0.33	1.25	6.67	Salsola iberica
30.00	5.00	30.00	15.00	0.00	12.00	13.64	66.67	Astragalus cicer
0.00	0.00	0.00	0.00	0.00	0.33	1.25	6.67	Machaeranthera grindelioides
0.00	10.00	0.00	5.00	0.00	1.67	2.98	16.00	Kochia scoparia
0.00	0.00	0.00	0.00	0.00	0.67	2.49	6.67	Iva axillaris

GRASSES

11.00	12.00	13.00	14.00	15.00	Mean	SDev	Freq	Species
0.00	0.00	10.00	10.00	0.00	6.33	7.63	32.00	Elymus hispidus
0.00	0.00	0.00	10.00	30.00	8.33	8.50	66.67	Agropyron cristatum
0.00	0.00	0.00	0.00	0.00	1.33	4.99	6.67	Elymus smithii
10.00	5.00	0.00	0.00	5.00	5.00	6.06	66.67	Bromus carinatus

COVER

11.00	12.00	13.00	14.00	15.00	Mean	SDev	Freq	Category
40.00	20.00	40.00	40.00	35.00	36.00	12.00		Total Living Cover
5.00	10.00	10.00	10.00	10.00	13.00	7.02		Litter
50.00	60.00	45.00	40.00	50.00	40.00	13.42		Bareground
5.00	10.00	5.00	10.00	5.00	11.00	7.12		Rock

% COMPOSITION

11.00	12.00	13.00	14.00	15.00	Mean	SDev	Freq	Category
0.00	0.00	0.00	0.00	0.00	0.00	0.00		Shrubs
75.00	75.00	75.00	50.00	0.00	40.89	26.13		Forbs
25.00	25.00	25.00	50.00	100.00	59.11	26.13		Grasses

**TABLE 2:** Cover (by species) summary for the 1992 vegetation monitoring at the Centennial Mine: Topsoil Substitute Pile (south).

<b>SPECIES</b>	<b>% MEAN COVER</b>	<b>STANDARD DEVIATION</b>	<b>SAMPLE SIZE</b>	<b>RELATIVE FREQUENCY</b>
<b>SHRUBS</b>				
<i>Chrysothamnus nauseosus</i>	1.20	5.88	25	4.00
<i>Purshia tridentata</i>	0.28	1.37	25	4.00
<i>Symphoricarpos oreophilus</i>	0.60	2.15	25	8.00
<b>FORBS</b>				
<i>Astragalus cicer</i>	7.00	13.34	25	40.00
<i>Kochia scoparia</i>	0.40	1.36	25	8.00
<i>Linum lewsi</i>	1.00	2.45	25	8.00
<i>Machaeranthera grindelioides</i>	0.40	1.96	25	4.00
<i>Medicago sativa</i>	3.60	11.00	25	12.00
<i>Melilotus officinalis</i>	1.00	4.00	25	8.00
<b>GRASSES</b>				
<i>Agropyron cristatum</i>	11.08	8.79	25	80.00
<i>Bromus carinatus</i>	4.64	5.44	25	52.00
<i>Elymus smithii</i>	1.40	3.61	25	16.00
<i>Elymus hispidus</i>	7.60	10.40	25	52.00
<i>Elymus cinereus</i>	4.80	11.09	25	28.00
<i>Stipa hymenoides</i>	1.20	3.54	25	12.00

**TABLE 3:** Cover and composition summary for the 1992 vegetation monitoring at the Centennial Mine: Topsoil Substitute Pile (north).

<b>TOTAL COVER</b>	<b>% MEAN COVER</b>	<b>STANDARD DEVIATION</b>	<b>SAMPLE SIZES</b>
Living Cover	36.00	12.00	15
Litter	13.00	7.02	15
Bareground	40.00	13.42	15
Rock	11.00	7.12	15
<b>COMPOSITION</b>			
Trees & Shrubs	0.00	0.00	15
Forbs	40.89	26.13	15
Grasses	59.11	26.13	15

**TABLE 4:** Cover (by species) summary for the 1992 vegetation monitoring at the Centennial Mine: Topsoil Substitute Pile (north).

<b>SPECIES</b>	<b>% MEAN COVER</b>	<b>STANDARD DEVIATION</b>	<b>SAMPLE SIZE</b>	<b>RELATIVE FREQUENCY</b>
<b>FORBS</b>				
<i>Astragalus cicer</i>	12.00	13.64	15	66.67
<i>Iva acillaris</i>	0.67	2.49	15	6.67
<i>Kochia scoparia</i>	1.67	2.98	15	16.00
<i>Machaeranthera grindelioides</i>	0.33	1.25	15	6.67
<i>Salsola iberica</i>	0.33	1.25	15	6.67
<b>GRASSES</b>				
<i>Agropyron cristatum</i>	8.33	8.50	15	66.67
<i>Bromus carinatus</i>	5.00	6.06	15	66.67
<i>Elymus hispidus</i>	6.33	7.63	15	32.00
<i>Elymus smithii</i>	1.33	4.99	15	6.67

22  
~~19~~  
 16.00

SAMPLE AREA



Topsoil Substitute Pile (South)



Topsoil Substitute Pole (North

II. Part UMC 782 - Requirements for Legal, Financial, Compliance, and Related Information

Scope

The objective of this chapter is to set forth all relevant information concerning ownership and control of Andalex Resources, Inc., the ownership and control of the property to be affected by mining activities and all other information and documentation required under Part UMC 782.

Please note that right-of-entry information for all new Leases is included in Appendix J, "Other Approvals".

UMC 782.13 Identification of Interests

a) Permit Applicant

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

b) Legal and Equitable Owners of Record

Earth work for the Aberdeen Mine was completed in 1989. Surface facilities for the Aberdeen Mine were completed early in 1990. All existing facilities are located either on land owned by Zions Securities Corporation or on federal land. The addresses of these owners of record are as follow:

Bureau of Land Management (801) 524-3004  
Utah State Office  
324 South State Street  
Salt Lake City, Utah 84111

Zion Securities Corporation (801) 363-3841  
10 East South Temple  
Salt Lake City, Utah 84111

All coal to be mined on the permit area is owned by the federal government, Zion Securities Corporation, or Sunedco Coal Company. The addresses of these owners of record are as follow:

Bureau of Land Management  
Utah State Office  
324 South State Street  
Salt Lake City, Utah 84111

Zion Securities Corporation  
10 East South Temple  
Salt Lake City, Utah 84111

Sunedco Coal Company  
7401 West Mansfield Avenue  
Suite 418  
P.O. Box 35-B  
Lakewood, Colorado 80235

c) Purchasers of Record under Real Estate Contracts

There are no purchasers of record under any real estate contracts of areas to be affected by surface operations and facilities of this mine plan and there are no purchasers of record under any real estate contracts of the coal to be mined.

d) Operator

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

e) Resident Agent of Applicant

Resident Agent who will accept service of process for Andalex Resources, Inc., Centennial Mines, ACT/007/019:

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

f) 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.

g) 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

Revised 09/30/91

Directors:

Peter B. Green ..... Chairman  
Robert Anderson, Jr. .... Director  
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

h) Principal Shareholders

The capital stock of Andalex Resources, Inc., is 100 percent owned and controlled by Andalex Resources B.V., a Netherlands company:

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

i) Other Operating Names

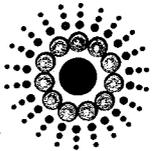
Other names under which the principal shareholder has or is operating coal mining activities in the United States within the last five years preceding the date of this application are listed below:

Andalex Resources, Inc., Tower Division  
Andalex Resources, Inc., Cimarron Division  
AMCA Coal Leasing, Inc.  
West Ken Coal Corporation  
Andalex Resources, Inc., Little Creek Division

j) Single Proprietor

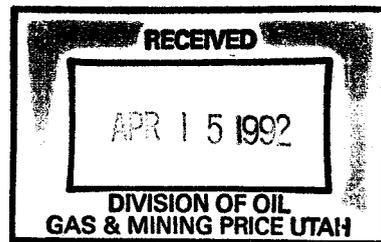
Andalex Resources, Inc., holds the exclusive coal operating interests in the permit area.

**CENTENNIAL 1991 ANNUAL  
REPORT ACT/007019**



**ANDALEX**  
**RESOURCES, INC.**  
Tower Division

P.O. BOX 902  
PRICE, UTAH 84501  
PHONE (801) 637-5385  
TELECOPIER (801) 637-8860



April 15, 1992

State of Utah  
Department of Natural Resources  
Division of Oil, Gas and Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

**RECEIVED**

APR 16 1992

DIVISION OF  
OIL GAS & MINING

Attn.: Daron Haddock, Permit Supervisor

Re.: Annual Report ACT 007/019

Dear Mr. Haddock:

Enclosed is Andalex Resources' annual report for the Centennial Mines.

Regarding stipulations, 8 of 10 are completed; the post mining land use comments will be addressed by April 30, 1992, and the permit reformatting will be completed by the next mid-term.

The mining sequence maps for all four coal seams are attached.

All monitoring activities have been included and are both in the form of hard copies and database (Lotus). Files for water monitoring are listed under MON-CEN. Files for the UPDES are listed under UPDESCEN. Files for climatological data are under RAIN-CEN. It was a very unremarkable year for water monitoring of any type.

A summary of subsidence monitoring is attached. No stations recorded movement in 1991. A map showing locations is included.

No vegetation data is available for 1991. Tests will be submitted as part of the 1992 annual report.

Impoundment certifications as well as pond inspections are enclosed.

No tests of the roof, floor or mid seam were performed in 1991. They will be included in the 1992 report as they were tested earlier this year as a requirement of our permit stipulations. A new coal refuse (boney pile) testing procedure has been implemented at Wildcat Loadout (ACT 007/033). These results can be included in the 1992 annual report.



**ANDALEX**  
**RESOURCES, INC.**

Tower Division

Mr. Daron Haddock  
April 15, 1992  
Page Two

We have enclosed the newest permit revisions which were approved in 1991. This permit was renewed January 4, 1992.

Air quality and water quality inspection reports are included.

Please call with any questions.

Sincerely,

Michael Glasson  
Senior Geologist

MWG/as

Enclosures

cc: File

COAL MINING AND RECLAMATION OPERATIONS FOR 1991

(Must be submitted to the Division by March 31, 1992)

State of Utah  
Department of Natural Resources  
Division of Oil, Gas and Mining  
3 Triad Center, Suite 350  
355 West North Temple  
Salt Lake City, Utah 84180-1203  
(801) 538-5340

Permittee: Andalex Resources, Inc.  
Mine Name: Centennial (Apex, Pinnacle, Aberdeen)  
Mailing Address: P.O. Box 902, Price, Utah 84501  
Company Representative: Michael W. Glasson  
Resident Agent: Michael W. Glasson  
Permit Number: ACT 007/019  
MSHA ID Number: 42-01750, 42-01474, 42-02028  
Date of Initial Permanent Program Permit: January 4, 1982 (Federal)  
Date of Permit Renewal: January 4, 1987, 1992  
Quantity of Coal Mined (tonnage) 1991: 1,213,274

Attach Updated Mine Sequence Map  
(Same as Lease Royalty Payment Map and/or MSHA Progress Map)

All monitoring activities during the report period to be submitted with this report (including, but not limited to):

A. Summarized Water Monitoring Data:

1. List of monitoring points and their locations and respective frequencies of monitoring (monthly, quarterly, etc.) as approved in the PAP
2. UPDES permit number, UPDES discharge points and their locations
3. Summary of findings based on water monitoring during 1991
4. Submit water monitoring as database files (ASCII, Lotus, dBase, etc.)  
(Please contact Ken Wyatt if you have any questions)

B. Precipitation or Other Climatological Data (please submit as database files: ASCII, Lotus, dBase, etc.-- Contact Ken Wyatt if you have any questions)

FEDERAL  
(April 1987)

Permit Number ACT/007/019, April 8, 1991  
(Revised)

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
(801) 538-5340

This permit, ACT/007/019, is issued for the state of Utah by the Utah Division of Oil, Gas and Mining (DOGM) to:

Andalex Resources, Inc.  
P. O. Box 902  
Price, Utah 84501  
(801) 637-5383

for the Centennial Project. Andalex Resources Inc. is the lessee of federal coal leases SL-027304, SL-063058, U-010581, U-05067, U-52341 and UTU-66060, and the lessee of fee-owned parcels, Zion's fee lease and the Sunedco fee lease. A performance bond is filed with the DOGM in the amount of \$1,080,839.00, payable to the state of Utah, Division of Oil, Gas and Mining and the Office of Surface Mining Reclamation and Enforcement (OSMRE). DOGM must receive a copy of this permit signed and dated by the permittee.

Sec. 1 STATUTES AND REGULATIONS - This permit is issued pursuant to the Utah Coal Mining and Reclamation Act of 1979, Utah Code Annotated (UCA) 40-10-1 et seq, hereafter referred to as the Act.

Sec. 2 PERMIT AREA - The permittee is authorized to conduct underground coal mining activities on the following described lands (as shown on the map appended as Attachment B) within the permit area at the Centennial Mines Complex situated in the state of Utah, Carbon County, and located:

Township 13 South, Range 11 East, SLBM

Section 4: S 1/2

Section 5: All

Section 6: All

Section 7: All

Section 8: All

Section 9: All but SE 1/4 SE 1/4

Section 17: N 1/2, NE 1/4 SE 1/4, N 1/2 NW 1/4 SE 1/4,  
N 1/2 NE 1/4 SW 1/4, NE 1/4 NW 1/4 SW 1/4, W 1/2 NW 1/4  
SW 1/4

Section 18: N 1/2 N 1/2, SW 1/4 NE 1/4, NW 1/4 SE 1/4  
NE 1/4, E 1/2 SE 1/4 NE 1/4, E 1/2 NE 1/4 SE 1/4

Township 13 South, Range 10 East, SLBM

Section 1: Lots 1-8, S 1/2 N 1/2,

Section 12: Lot 1

Township 12 South, Range 11 East, SLBM

Section 31: Lots 3-6 and Lots 13-22

This legal description is for the permit area (as shown on Attachment B) of the Centennial Mines Complex. The permittee is authorized to conduct underground coal mining activities connected with mining on the foregoing described property subject to the conditions of the leases, the approved mining plan, including all conditions and all other applicable conditions, laws and regulations.

- Sec. 3 PERMIT TERM - This revised permit is effective on April 8, 1991 and expires on January 5, 1992.
- Sec. 4 ASSIGNMENT OF PERMIT RIGHTS - The permit rights may not be transferred, assigned or sold without the approval of the Director, DOGM. Transfer, assignment or sale of permit rights must be done in accordance with applicable regulations, including but not limited to 30 CFR 740.13(e) and R614-303.
- Sec. 5 RIGHT OF ENTRY - The permittee shall allow the authorized representative of the DOGM, including but not limited to inspectors, and representatives of OSMRE, without advance notice or a search warrant, upon presentation of appropriate credentials, and without delay to:
- A. have the rights of entry provided for in 30 CFR 840.12, R614-400-110, 30 CFR 842.13 and R614-400-220; and,
  - B. be accompanied by private persons for the purpose of conducting an inspection in accordance with R614-400-100, R614-400-200 and 30 CFR 842, when the inspection is in response to an alleged violation reported by the private person.
- Sec. 6 SCOPE OF OPERATIONS - The permittee shall conduct underground coal mining activities only on those lands specifically designated as within the permit area on the maps submitted in the mining and reclamation plan and permit application and approved for the term of the permit and which are subject to the performance bond.

- Sec. 7 ENVIRONMENTAL IMPACTS - The permittee shall minimize any adverse impact to the environment or public health and safety through but not limited to:
- A. accelerated monitoring to determine the nature and extent of noncompliance and the results of the noncompliance;
  - B. immediate implementation of measures necessary to comply; and
  - C. warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.
- Sec. 8 DISPOSAL OF POLLUTANTS - The permittee shall dispose of solids, sludge, filter backwash or pollutants in the course of treatment or control of waters or emissions to the air in the manner required by the approved Utah State Program and the Federal Lands Program which prevents violation of any applicable state or federal law.
- Sec. 9 CONDUCT OF OPERATIONS - The permittee shall conduct its operations:
- A. in accordance with the terms of the permit to prevent significant, imminent environmental harm to the health and safety of the public; and
  - B. utilizing methods specified as conditions of the permit by DOGM in approving alternative methods of compliance with the performance standards of the Act, the approved Utah State Program and the Federal Lands Program.
- Sec. 10 AUTHORIZED AGENT - The permittee shall provide the names, addresses and telephone numbers of persons responsible for operations under the permit to whom notices and orders are to be delivered.
- Sec. 11 COMPLIANCE WITH OTHER LAWS - The permittee shall comply with the provisions of the Water Pollution Control Act (33 USC 1151 et seq,) and the Clean Air Act (42 USC 7401 et seq), UCA 26-11-1 et seq, and UCA 26-13-1 et seq.
- Sec. 12 PERMIT RENEWAL - Upon expiration, this permit may be renewed for areas within the boundaries of the existing permit in accordance with the Act, the approved Utah State Program and the Federal Lands Program.

- Sec. 13 CULTURAL RESOURCES - If during the course of mining operations, previously unidentified cultural resources are discovered, the permittee shall ensure that the site(s) is not disturbed and shall notify DOGM. DOGM, after coordination with OSMRE, shall inform the permittee of necessary actions required. The permittee shall implement the mitigation measures required by DOGM within the time frame specified by DOGM.
- Sec. 14 APPEALS - The permittee shall have the right to appeal as provided for under R614-300.
- Sec. 15 SPECIAL CONDITIONS - In addition to the general obligations and/or requirements set out in the leases, the federal mining plan approval, and this permit, the permittee shall comply with the special conditions appended hereto as Attachment A.

The above conditions (Secs. 1-15) are also imposed upon the permittee's agents and employees. The failure or refusal of any of these persons to comply with these conditions shall be deemed a failure of the permittee to comply with the terms of this permit and the lease. The permittee shall require his agents, contractors and subcontractors involved in activities concerning this permit to include these conditions in the contracts between and among them. These conditions may be revised or amended, in writing, by the mutual consent of DOGM and the permittee at any time to adjust to changed conditions or to correct an oversight. DOGM may amend these conditions at any time without the consent of the permittee in order to make them consistent with any new federal or state statutes and any new regulations.

THE STATE OF UTAH

By: *Dennis R. Nielson*  
Date: *April 12, 1991*

I certify that I have read, understand and accept the requirements of this permit and any special conditions attached.

*Michael W. Hansen*  
Authorized Representative of  
the Permittee  
Date: *April 16, 1991*

ATTACHMENT A

STIPULATIONS

ANDALEX RESOURCES INC.  
Centennial Mines Complex  
ACT/007/019  
Carbon County, Utah

April 8, 1991

Stipulation UDOH (1)

Within 30 days of permit issuance ARI will provide a detailed description of the mine water system, particularly the collection of surface water for use underground which will include schematic diagrams, flow rates, volumes and ets.

Stipulation UDOH (2)

Within 30 days of permit issuance, ARI, in conjunction with the State Health Department will determine the need for upgrading the septic system.

Stipulation UDOH (3)

Within 30 days of permit issuance, ARI will provide plans for the proper dosposal of waste oil generated at the mine site. References to disposal of waste oil in the county landfill will be deleted from the plan.

Stipulation UDOH (4)

Within 30 days of permit issuance, ARI will submitt for insertion to the mine plan the latest revision of all environmental permits; including Discharge (UPDES), Construction (sediment ponds), Sewage Disposal (Septic Tank), Air Quality, and Potable Water System permits or approvals.

Stipulation OSM (1)

Within 60 days after mining plan approval, Andalex Resources, Inc. shall submit to Utah Division of Oil, Gas & Mining properly executed riders adding the following provision to any applicable bond instruments:

To the extent that Federal lands are involved, release of this surety bond also is conditioned upon compliance with applicable Federal laws and regulations and the provisions of the Utah State-Federal Cooperative Agreement at 30 CFR 944.30. If the Utah State-Federal Cooperative Agreement is terminated, this surety bond shall revert to being payable only to the United States and the phrase "Utah Division of Oil, Gas and Mining" and the term "UDOGM" and "DOGM" and any other acronyms or abbreviations for the phrase "Utah Division of Oil, Gas and Mining" shall be interpreted to mean OSM to the extent that Federal lands are involved.

T12S  
T13S

R10E

R11E

PERMIT BOUNDARY

SCALE: 1"=2400'

T12S

T13S

U-010581

U-05067

MINING PLAN APPROVAL AREA

FEE

APEX MINE PORTAL & SURFACE FACILITIES

FEE

PINNACLE MINE PORTAL & SURFACE FACILITIES

U-05234

SL-027304

ANDALEX RESOURCES, INC. ADMINISTRATIVE OFFICE

ABERDEEN MINE PORTAL & SUPPORT FACILITIES

SL-063058

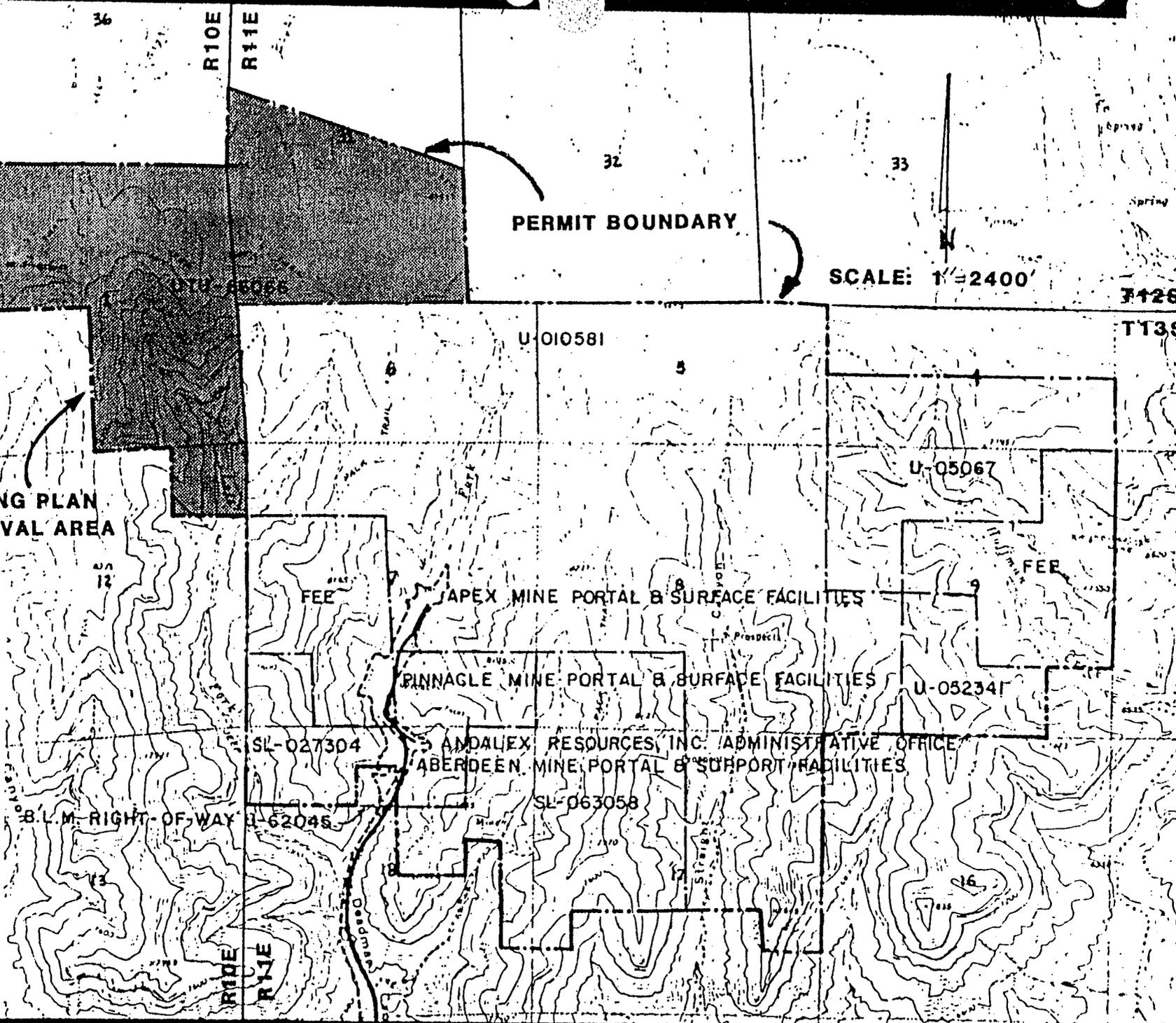
B.L.M. RIGHT-OF-WAY

U-62046

R10E

R11E

Attachment B  
MINING PLAN APPROVAL AREA MAP  
Centennial Project Mine  
Carbon County, Utah





# United States Department of the Interior

OFFICE OF SURFACE MINING  
RECLAMATION AND ENFORCEMENT  
BROOKS TOWERS  
1020 15TH STREET  
DENVER, COLORADO 80202



March 15, 1991

**RECEIVED**

MAR 18 1991

ANDALEX RESOURCES, INC.

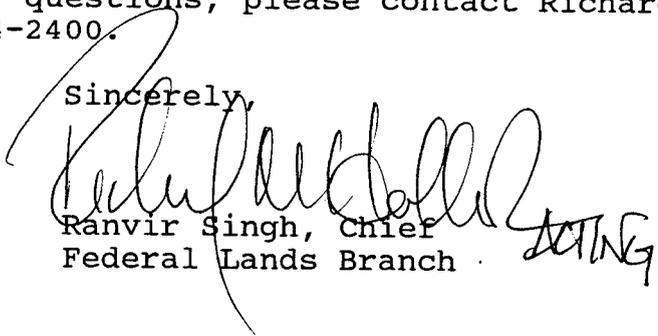
Michael Glasson  
Andalex Resources, Inc.  
P.O.Box 902  
Price, Utah 84501

Dear Mr. Glasson:

The Assistant Secretary, Land and Minerals Management, Department of the Interior, approved on March 12, 1991 the Centennial Project mine mining plan for Federal lease UTU-66060. The mining plan approval authorized mining of about 8.8 million tons of Federal coal in 933 acres of Federal lease UTU-66060. Approval of this mining plan supplements the Centennial Project mine mining plan for Federal leases U-010581, SL-063058, SL-027304, U-05067 approved on November 12, 1981.

Mining operations must be conducted in accordance with both the Utah State permit and the approved mining plan. I have enclosed a copy of the mining plan approval document. Please read the terms and conditions of the mining plan approval document carefully. If you have any questions, please contact Richard Holbrook or me at (303) 844-2400.

Sincerely,

  
Ranvir Singh, Chief  
Federal Lands Branch

Enclosure

cc: BLM Moab District Office  
Utah Division of Oil, Gas & Mining  
Albuquerque Field Office

UNITED STATES

DEPARTMENT OF THE INTERIOR

This mining plan approval document is issued by the United States of America to:

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

for the Centennial Project mine mining plan for Federal lease UTU-66060 subject to the following conditions. Andalex Resources, Inc. is hereinafter referred to as the operator.

1. Statutes and Regulations.--This mining plan approval is issued pursuant to Federal lease UTU-66060; the Mineral Leasing Act of 1920, as amended (30 U.S.C. 181 et seq.); and in the case of acquired lands, the Mineral Leasing Act for Acquired Lands of 1947, as amended (30 U.S.C. 351 et seq.). This mining plan approval is subject to all applicable regulations of the Secretary of the Interior which are now or hereafter in force; and all such regulations are made a part hereof. The operator shall comply with the provisions of the Water Pollution Control Act (33 U.S.C. 1151 et seq.), the Clean Air Act (42 U.S.C. 7401 et seq.), and other applicable Federal laws.
2. This document approves the Centennial Project mine mining plan for Federal lease UTU-66060, and authorizes coal development or mining operations on the Federal lease within the area of mining plan approval. This authorization is not valid beyond

T. 13 S., R. 10 E., SLM, Utah

Sec 1: Lots 1-8, S1/2N1/2;

Sec 12: Lot 1

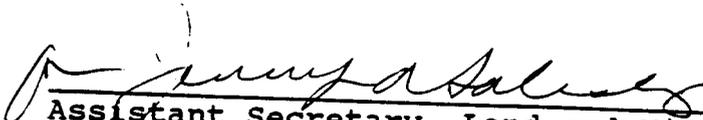
T. 12 S., R. 11 E., SLM, Utah

Sec 31: Lots 3-6 and Lots 13-22

as shown on the map appended hereto as Attachment A.

3. The operator shall conduct coal development and mining operations only as described in the complete permit application package, and approved by the Utah Division of Oil, Gas & Mining, except as otherwise directed in the conditions added to this mining plan approval.

4. The operator shall comply with the terms and conditions of the lease, this mining plan approval, the special conditions appended hereto as Attachment B, and the requirements of the Utah Permit number ACT/007/019 issued under the Utah State program, approved pursuant to the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 et seq.).
5. This mining plan approval shall be binding on any person conducting coal development or mining operations under the approved mining plan and shall remain in effect until superseded, cancelled, or withdrawn.
7. If during mining operations unidentified prehistoric or historic resources are discovered, the operator shall ensure that the resources are not disturbed and shall notify Utah Division of Oil, Gas & Mining and OSM. The operator shall take such actions as are required by Utah Division of Oil, Gas & Mining in coordination with OSM.

  
Assistant Secretary, Land and Minerals Management

3/12/91  
Date

T128  
T127

R10E

R11E

PERMIT BOUNDARY

SCALE: 1" = 2400'

T128

U-010581

T128

MINING PLAN APPROVAL AREA

Attachment A  
MINING PLAN APPROVAL AREA MAP  
Centennial Project Mine  
Carbon County, Utah

FEE

JAPEX MINE PORTAL & SURFACE FACILITIES

U-05067

PINNACLE MINE PORTAL & SURFACE FACILITIES

U-052341

SL-027304

ANDALOX RESOURCES, INC. ADMINISTRATIVE OFFICE

ABERDEEN MINE PORTAL & SUPPORT FACILITIES

SL-063058

R.I.M. RIGHT-OF-WAY

R10E

R11E

ATTACHMENT B

Special Condition

Within 60 days after mining plan approval, Andalex Resources, Inc. shall submit to Utah Division of Oil, Gas & Mining properly executed riders adding the following provision to any applicable bond instruments:

To the extent that Federal lands are involved, release of this surety bond also is conditioned upon compliance with applicable Federal laws and regulations and the provisions of the Utah State-Federal Cooperative Agreement at 30 CFR § 944.30. If the Utah State-Federal Cooperative Agreement is terminated, this surety bond shall revert to being payable only to the United States and the phrase "Utah Division of Oil, Gas and Mining" and the term "UDOGM" and "DOGM" and any other acronyms or abbreviations for the phrase "Utah Division of Oil, Gas and Mining" shall be interpreted to mean OSM to the extent that Federal lands are involved.

May chloride

Sustchem

0.5 gal / yd<sup>2</sup>

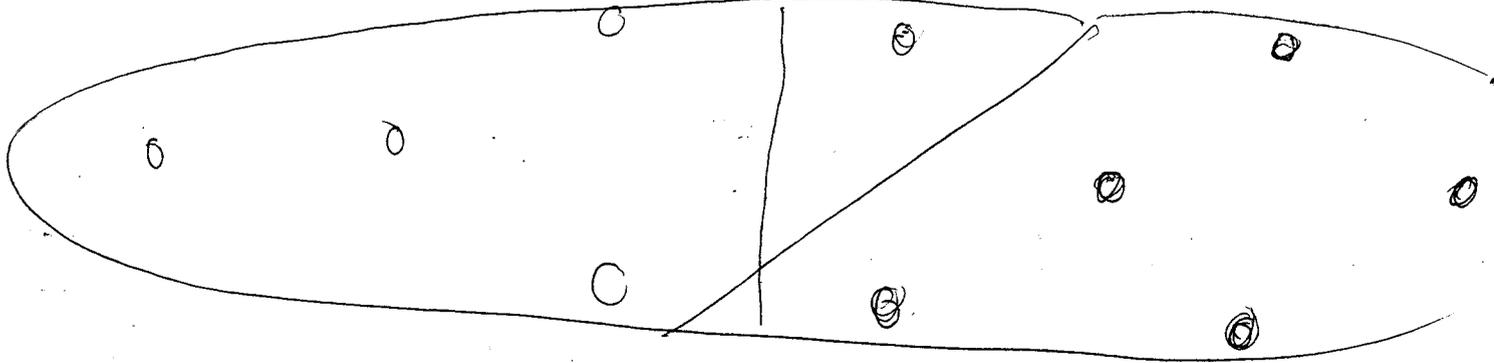
x 4/11/90 - mine  
6/27/90 - wildcat  
6/27/90 - mine (Aberdeen)  
8/31/90 - wildcat & mine

✓ May 15, 1991 - Mine  
and Wildcat

✓ August 10, 1991 -  
Mine and Wildcat

7/11/90 - wildcat

6/24/89 - wildcat/mine



W

STATE OF UTAH DEPARTMENT OF HEALTH  
 DIVISION OF ENVIRONMENTAL HEALTH  
 BUREAU OF AIR QUALITY  
 VISIBLE EMISSION OBSERVATION FORM



Type of Inspection: Initial ( ) Stack Test ( ) CEM ( ) Annual (X) Followup ( ) Surveillance ( ) Complaint ( )

Date 3/19/91 Time Arrived 1:45 pm Time Departed \_\_\_\_\_

Memorandum To: File - Andalex Resources

Date County Contacted: 3/18/91

Through: Jeff N. Dean, Compliance Manager

Observer's Signature: Mike Glasgow

Company: Andalex Resources

Certification Date: 10/90

Location & County: 10 mi. NE of Price Airport, Carbon Co.

Copy Of Report Given To: Mike Glasgow

Phone: 637-5385

I Have Received \_\_\_\_\_ Copy Of These Observations

Mailing Address: P.O. Box 902

Signature: Michael W. Dean

Price, Utah

OBSERVATION AND WEATHER CONDITIONS

Source Class: A1 ( ) A2 (M) B ( ) Unknown ( ) State ID: \_\_\_\_\_

Distance To Source: 50 yds

Government Code: FED ( ) ST ( ) CO ( ) Municipal ( ) District ( )

Background Description: Mountain

Status: Under Construction ( ) Temp. Shut Down ( )

Plume Color: \_\_\_\_\_ Length: \_\_\_\_\_

Seasonal ( ) Permanently Shut Down ( ) Operating (M)

Steam Plume Y (M) Attached Y/N Length of Steam Plume: \_\_\_\_\_

Code: SIP ( ) PSD ( ) NESHAP ( ) NSPS ( ) CDS: 00003, ~~00004~~

Wind Direction: S Speed: 30-40 mph

Source: Mine operations

Ambient Temp: ~30°F Relative Humidity: ~70%

Height Of Discharge: \_\_\_\_\_ Dimensions: Various

Operating Parameters Of Source - Normal Yes (M) No ( )

Actual Pinnacle 600k @ 1990 Design Pinnacle 500,000#/yr

Type Of Burner Fuel NA

Control Facility Water / Coal Moisture

Applicable Regulations/Approval Orders/Limitations Compliance

#1. 12/88 AO #1 Operate as per NOI Y/N

#2. Void 5/14/85 AO Y/N

#3. Visible emissions, Crushers 15%, Screens 10%, Y/N

Conveyer transfer 10%, Reclaim conveyer 20% Y/N

All other pts. 20% Haul roads, piles - min. fugitives Y/N

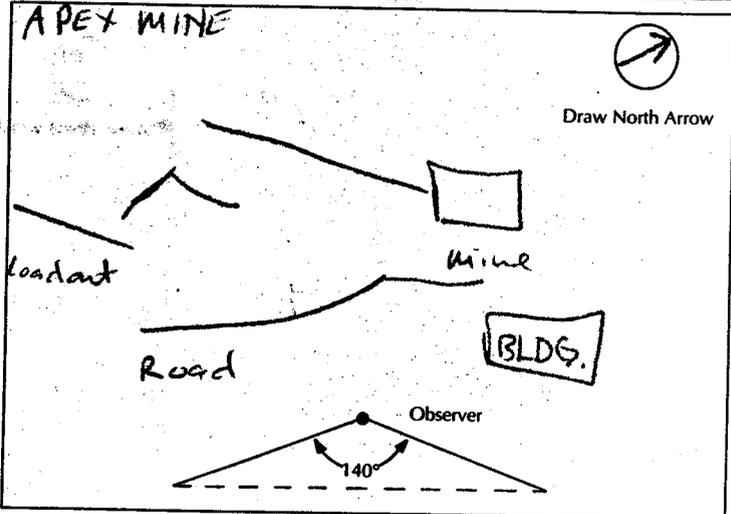
#4. Use Method 9 for VEG, modify for interim Y/N

#5. Production limits - 500k @/yr - each mine Y/N

#6. Unpaved roads watered / Records kept Y/N

#7. Sprinkler crushers, screens, transfer points Y/N

#8. Sulfur content of fuel burned Y/N



Stack Test Information

Maximum Allowable Emission Rate \_\_\_\_\_

Last Test Date \_\_\_\_\_ Test Due Date \_\_\_\_\_

Roads & Yard

No.	Hr: Min	0	15	30	45	Avg.
1.	1:30	L 5%				L 5%
2.						
3.						
4.						
5.						
6.		L 5%				L 5%

No.	Hr: Min	0	15	30	45	Avg.
1.						
2.						
3.		Minimal fugitives				
4.						
5.						
6.						

- #9. NSPS 40 CFR 60 A-Y apply Y/N
- #10. VEG's for initial inspection NA
- #11. Control fugitives from storage piles Y/N
- #12. Small conveyor drop distance ≤ 5ft. Y/N
- #13. Railcar load/unload under pile reclaim, ≤ 5ft. drop distance Y/N
- #14. Moisture content of coal crushed Y/N
- #15. Cover all conveyors Y/N
- #16. Facility Maintained Y/N

COMMENTS  
 Mgt roads 2 times/yr = will be done early in April.  
 Most roads gravelled - to be paved.  
 Apex = 5ft & decreasing  
 Pinnacle = 5ft "

RECOMMENDATION: In compliance at time of

Rock dust silo - enclosed - loaded



# State of Utah

DEPARTMENT OF HEALTH  
DIVISION OF ENVIRONMENTAL HEALTH

Norman H. Bangarter  
Governor

Suzanne Dandoy, M.D., M.P.H.  
Executive Director

Kenneth L. Alkema  
Director

288 North 1460 West

P.O. Box 16690

Salt Lake City, Utah 84116-0690

(801) 538-6121

July 15, 1991

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

RE: UPDES Permit UTG040007 and  
UTG040008 Inspection Report

Dear Michael Glasson:

May 29, 1991, Harry Campbell and Mike Herkimer of the Division of Water Quality met with Michael Glasson of Andalex and completed a reconnaissance inspection of the Wildcat Loadout area and the Pinnacle Mine. Enclosed is a report of that inspection.

If you have any questions please call Harry Campbell.

Sincerely,

Donald A. Hilden, Ph.D., Manager  
Permitting & Compliance Section  
Utah Division of Water Quality

Enclosure

DAH:hc

cc: U.S. EPA, Region VIII, 8WM-C  
David Ariotti, Regional Engineer  
Southeastern Utah District Health Department

S:NPDES  
FILE:ANDELEX.LTR

**RECEIVED**

JUL 17 1991

ANDELEX RESOURCES, INC.



# NPDES Compliance Inspection Report

## Section A: National Data System Coding

Transaction Code NPDES yr/mo/day Inspection Type Inspector Fac Type

1 N 2 5 3 U T G 0 4 0 0 0 7 11 12 9 1 0 5 2 9 17 18 R 19 S 20 2

Remarks

21 Reserved Facility Evaluation Rating BI OA -----Reserved----- 66

67   69 70  71  72  73  74 75     80

## Section B: Facility Data

Name and Location of Facility Inspected  
Andalex Resources, Inc.  
PO BOX 902  
PRICE, UTAH 84501

Entry Time 1:30  AM  PM Permit Effective Date June 28, 1989

Exit Time/Date 5:00 May 29, 1991 Permit Expiration Date April 30, 1993

Name(s) of On-Site Representative(s)  
Michael Glasson

Title(s)  
Senior Geologist

Phone No(s)  
(801) 637-5385

Name, Address of Responsible Official  
Michael Glasson  
PO BOX 902  
PRICE, UTAH 84501

Title  
Senior Geologist

Phone No.  
(801) 637-5385

Contacted  Yes  No

## Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

Permit	Flow Measurement	Pretreatment	S	Operations & Maintenance
M S Records/Reports	Laboratory	Compliance Schedules		Sludge Disposal
Facility Site Review	S Effluent/Receiving Waters	S Self-Monitoring Program		Other:

## Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

See attached report

Name(s) and Signature(s) of Inspector(s)  
*Henry Campbell*

Agency/Office/Telephone  
Division of Water Quality

Date  
7-15-91

Signature of Reviewer  
*Donald W. Zilden*

Agency/Office  
Division of Water Quality

Date  
7/15/91

### Regulatory Office Use Only

Action taken

Date

Compliance Status  
 Noncompliance  
 Compliance

**RECONNAISSANCE INSPECTION**

**ANDELEX RESOURCES, INC.**

**PINNACLE MINE**

**UTG040007**

**MAY 29, 1991**

**DESCRIPTION OF THE SYSTEM:** The three discharges associated with this permit are from dewatering of the Pinnacle mine and two discharges from sediment ponds containing the runoff of disturbed areas from mining operations. Discharges #001 and #002 are from the sediment ponds. Discharge #003 is from the mine. The sediment ponds have not discharged since they were constructed. The mine discharge is intermittent.

**NARRATIVE:** Harry Campbell and Mike Herkimer of the Division of Water Quality met with Michael Glasson of Andalex Coal Company in the afternoon on May 29, 1991. We discussed the waste water system and current issues with handling runoff. We asked to see the records of the DMR's of the Pinnacle mine. We made a site inspection of all discharge water treatments and conveyances. No samples were taken.

**DEFICIENCIES:** When the records were searched for completeness of the past three years some were difficult to find and it did not seem to be filed so as to be accessed readily. The corrective action required is to give more attention to the filing system of DMR's and correspondence related to the NPDES permit; have the files complete, organized, and readily accessible.

**Bruce T. S. Ware**  
**REGISTERED LAND SURVEYOR**  
**RT. 1, BOX 146 H-2 HELPER, UTAH 84526**  
**Phone 637-2620**

July 1, 1991

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

Dear Mr. Glasson:

As you requested I surveyed to your Company's Subsidence Monitoring Points on June 21, 1991. I have calculated the survey and find that there has been no movement horizontally or vertically since they were established.

Sincerely

*Bruce T. Ware*



POND INSPECTION REPORT  
(1991 ANNUAL INSPECTION)

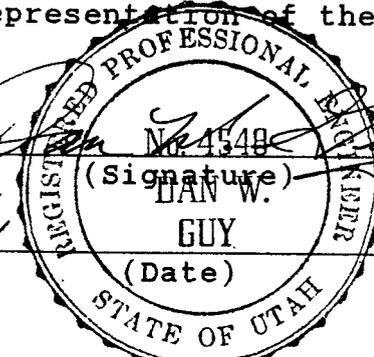
POND: Catch Basin "B"

LOCATION: Centennial Mines

<u>ITEM</u>	<u>REMARKS</u>
(1) Potential Safety Hazards	None Noted.
(2) Slope Stability	Slopes appear stable. Basins incised. Vegetation on interior.
(3) Erosion	None noted.
(4) Construction and Maintenance Performance Standards	Cell #1 is full of sediment. Cell #2 - 20% full. Cells #3 and #4 are clean.
(5) Recommendations/Comments	Volume - O.K.; Sed. Level 26" from cleanout marker in #4. Basins Dry - No Discharge.

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

*[Signature]*  
No. 4548  
(Signature)  
DAN W. GUY  
(Date)  
12/13/91



POND INSPECTION REPORT

(1991 ANNUAL INSPECTION)

POND: Sediment Pond "C"

LOCATION: Centennial Mines

<u>ITEM</u>	<u>REMARKS</u>
(1) Potential Safety Hazards	None Noted.
(2) Slope Stability	Slopes appear stable. Pond incised. Vegetation on interior.
(3) Erosion	None noted. Well vegetated inside and along inlet from Catch Basin "B".
(4) Construction and Maintenance Performance Standards	Volume O.K.- Sediment Level is 17" from cleanout. Inlets and outlets are O.K.
(5) Recommendations/Comments	None. Pond Dry - No Discharge.

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

12/13/91

REGISTERED PROFESSIONAL ENGINEER  
No. 1548  
Signed: GUY  
GUY  
(Date)  
STATE OF UTAH

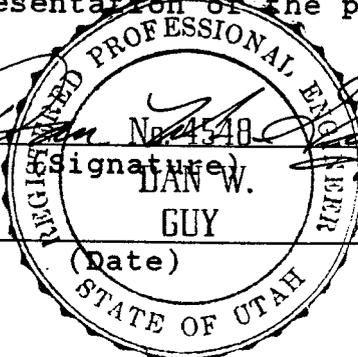
POND INSPECTION REPORT  
(1991 ANNUAL INSPECTION)

POND: Sediment Pond "E"

LOCATION: Centennial Mines

<u>ITEM</u>	<u>REMARKS</u>
(1) Potential Safety Hazards	None Noted.
(2) Slope Stability	Slopes appear stable. Slopes seeded. Good veg. on interior and dam exterior.
(3) Erosion	None noted.
(4) Construction and Maintenance Performance Standards	Volume O.K.- Sediment Level is 7'+ from cleanout. Inlets and outlets are O.K.
(5) Recommendations/Comments	None. Pond Dry - No Discharge.

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

  
\_\_\_\_\_  
Signature)  
DAN W.  
GUY  
\_\_\_\_\_  
(Date)  
12/13/91

# SEDIMENTATION POND Inspection Report Catch Basin B

Date: 3-28-91

Inlet & Outlet Conditions: No problems, no discharge

Erosion Problems: - outlet of culvert between cells 1 & 2  
- will repair when cell 1 is cleaned

Embankment Stability: Stable

Water Level: None

Weather Conditions: Cold, flurries

Additional Comments: Cell 1 should be cleaned this  
spring, as conditions permit.

Time of Inspection: 1200

Person Conducting Inspection: Michael D. Brown

# SEDIMENTATION POND Inspection Report Pond C

Date: 3-28-91

Inlet & Outlet Conditions: No problems all inlets functional  
No discharge

Erosion Problems: No

Embankment Stability: Stable

Water Level: Approx 2' deep

Weather Conditions: Cloudy, cold, flurries

Additional Comments: wet snow during March added water

Time of Inspection: 1200

Person Conducting Inspection: Michael W. Glass

# SEDIMENTATION POND Inspection Report Pond E

Date: 3-28-91

Inlet & Outlet Conditions: No problems, no discharge

Erosion Problems: No

Embankment Stability: Stable

Water Level: Approx 5' deep

Weather Conditions: Cloudy, cold, snow flurries

Additional Comments: Wet snows during March added water

Time of Inspection: Noon 1200 hr

Person Conducting Inspection: Michael W. Starnes

# SEDIMENTATION POND Inspection Report Catch Basin B

Date: June 28, 1991

Inlet & Outlet Conditions: All clear, free from debris

Erosion Problems: None observed - rip rap added  
between cells 1 & 2

Embankment Stability: Stable

Water Level: None

Weather Conditions: Hot, Clear

Additional Comments: Top cell to be cleaned  
out this year

Time of Inspection: 1200

Person Conducting Inspection: Michael W. Blanton

# SEDIMENTATION POND Inspection Report Pond E

Date: 6-28-91

Inlet & Outlet Conditions: Clear & free from debris

Erosion Problems: None noted. Vegetation, mostly  
clover is covering the pond.

Embankment Stability: Stable

Water Level: Approx 2'

Weather Conditions: Hot, Clear

Additional Comments: \_\_\_\_\_

Time of Inspection: 1200

Person Conducting Inspection: Michael Wetmore

# SEDIMENTATION POND Inspection Report Pond C

Date: 6-28-91

Inlet & Outlet Conditions: All clear. We are awaiting  
approvals for a spillway  
change

Erosion Problems: None Noted

Embankment Stability: Stable

Water Level: None

Weather Conditions: Hot, Clear

Additional Comments: We have submitted plans to  
cut an open notch type spillway  
in pond C.

Time of Inspection: 1200

Person Conducting Inspection: Michael Whelan

# SEDIMENTATION POND Inspection Report Catch Basin B

Date: 9-30-91

Inlet & Outlet Conditions: No problems observed

Erosion Problems: No erosion observed

Embankment Stability: All embankments stable Rip Rap in embankment between 1 & 2 is functioning

Water Level: None

Weather Conditions: Clear, Warm

Additional Comments: Cell 1 will be cleaned this year if weather permits. Rick Krampel is on alert to do the work on the next available weekend.

Time of Inspection: 1200

Person Conducting Inspection: Michael Whelan

# SEDIMENTATION POND Inspection Report Pond C

Date: 9-30-91

Inlet & Outlet Conditions: No major problems observed. Culvert inlet has a few rocks rolled down, needs maintenance

Erosion Problems: Small amount at south inlet

Embankment Stability: Embankment is stable

Water Level: None

Weather Conditions: Warm, Clear

Additional Comments: Submitted response to spillway amendment deficiency letter 10-1-91.

Time of Inspection: 1200

Person Conducting Inspection: Michael W. Stanen

# SEDIMENTATION POND Inspection Report Pond E

Date: 9-30-91

Inlet & Outlet Conditions: All inlets & outlets uneroded  
and stable

Erosion Problems: None observed

Embankment Stability: Vegetation somewhat successful, embankment  
is stable.

Water Level: Approximately 4 to 5' off bottom. Heavy Sept. rain

Weather Conditions: Clear, warm

Additional Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Time of Inspection: 1200

Person Conducting Inspection: Michael W. Blum

# SEDIMENTATION POND Inspection Report Catch Basin B

Date: 12.31.91

Inlet & Outlet Conditions: All OK

Erosion Problems: Rip Rap holding up between cells  
1 & 2

Embankment Stability: All OK

Water Level: None

Weather Conditions: Fog, Cold

Additional Comments: Top cell still full, however  
pond is in compliance

Time of Inspection: 1300

Person Conducting Inspection: Michael W. Hansen

# SEDIMENTATION POND Inspection Report Pond C

Date: 12/3/91

Inlet & Outlet Conditions: All ok still waiting for  
Division approvals on spillway.

Erosion Problems: None Noted

Embankment Stability: All ok

Water Level: None

Weather Conditions: Fog, cold

Additional Comments: Original spillway plan submitted  
in May, deficiencies answered in  
October

Time of Inspection: 1300

Person Conducting Inspection: Michael W. Gerson

# SEDIMENTATION POND Inspection Report Pond E

Date: 12-31-91

Inlet & Outlet Conditions: Tumbleweeds were cleared from  
northeast inlet. Others are OK

Erosion Problems: None Noted

Embankment Stability: Appears OK. A new hand  
broadcasting of Yellow Clover was  
conducted on all steep slopes

Water Level: None

Weather Conditions: Partly foggy, cold

Additional Comments: \_\_\_\_\_

Time of Inspection: 1300

Person Conducting Inspection: Michael W. Hansen

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME ARDALEY RESOURCES--PINNACLE  
 ADDRESS P.O. BOX 102  
PRICE UT 84501

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER 01000008 DISCHARGE NUMBER 001

SEE DND DISCHG TO DEADMAN CREEK

FACILITY \_\_\_\_\_  
 LOCATION \_\_\_\_\_  
 ATTN: MICHAEL W. GLASTON

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
91	01	01		91	01	31
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	QUANTITY OR LOADING (3 Card Only) (46-53)			QUALITY OR CONCENTRATION (4 Card Only) (38-45) (46-53) (54-61)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
FLOW RATE		ALL DISCHARGE			*****						
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT	REPORT	GPD	*****					ONCE/MONTH	24544
PH	SAMPLE MEASUREMENT	*****	*****		*****						
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***	6.5	*****	9.0			ONCE/MONTH	24544
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	*****	*****		*****						
00530 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	*****	*****	***	*****	25	70			ONCE/MONTH	GRAB
SOLIDS, SETTLEABLE	SAMPLE MEASUREMENT	*****	*****		*****						
00545 R 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	*****	*****	***	*****	*****	0.5			ONCE/MONTH	GRAB
OIL AND GREASE	SAMPLE MEASUREMENT	*****	*****		*****						
FREON EXTR-GRAV METH	SAMPLE MEASUREMENT	*****	*****		*****						
00556 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***	*****	*****	10			ONCE/MONTH	GRAB
IRON, TOTAL (AS FE)	SAMPLE MEASUREMENT	*****	*****		*****						
01045 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***	*****	*****	2.0			ONCE/MONTH	GRAB
FLOATING SOLIDS OR VISIBLE FOAM-VISUAL	SAMPLE MEASUREMENT	*****			*****						
45613 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****		SS=1 NO=0	*****	*****	*****			ONCE/MONTH	ISUAL

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  <i>Michael W. Glaston</i>	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	TELEPHONE		DATE		
		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		AREA CODE	NUMBER	YEAR

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)  
 TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE BOX.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME ANDALEX RESOURCES--PINNACLE

ADDRESS P.O. BOX 122

PRICE UT 84501

FACILITY \_\_\_\_\_

LOCATION \_\_\_\_\_

ATTN: MICHAEL W. GLASSON

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

(2-16)

(17-19)

HTG040000  
PERMIT NUMBER

001 A  
DISCHARGE NUMBER

F - FINAL  
RED AND DISCHG TO DEADMAN CR

MONITORING PERIOD

FROM 

YEAR	MO	DAY	TO	YEAR	MO	DAY
<u>91</u>	<u>01</u>	<u>01</u>		<u>91</u>	<u>01</u>	<u>31</u>
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

MINOR

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	X	(3 Card Only) (46-53) QUANTITY OR LOADING (54-61)			(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) (54-61)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
SANITARY WASTE DISCHARGE-ASSESSMNT 45614 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****			*****	*****	*****				
	PERMIT REQUIREMENT	*****		YES=1 NO=0	*****	*****	*****	***	ONCE/	WEEK	
SOLIDS, TOTAL DISSOLVED 70295 0 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	*****			*****	*****					
	PERMIT REQUIREMENT	*****	2000	DAILY BY LBS/DY	*****	*****	REPORT DAILY BY MG/L	***	ONCE/	MONTH	
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE		DATE		
			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME ANDALEX RESOURCES--PINNACLE  
 ADDRESS P.O. BOX 302  
PRICE 01 04501

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16)

(17-19)

HTG040008  
 PERMIT NUMBER

001 A  
 DISCHARGE NUMBER

F - FINAL  
 SEND END DISCHRG TO DEADMAN CR

FACILITY \_\_\_\_\_  
 LOCATION \_\_\_\_\_  
 ATTN: MICHAEL A. GLASSON

MONITORING PERIOD							
FROM	YEAR	MO	DAY	TO	YEAR	MO	DAY
	<u>91</u>	<u>02</u>	<u>01</u>		<u>91</u>	<u>02</u>	<u>28</u>
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

MINOR

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	QUANTITY OR LOADING (46-53)			QUALITY OR CONCENTRATION (46-53)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
FLOW RATE											
00056 1 0 0 EFFLUENT GROSS VALUE	REPORT 30 DA AV	REPORT DAILY MX	GPD							ONCE/MONTH	
PH											
00400 1 0 0 EFFLUENT GROSS VALUE										ONCE/MONTH	
SOLIDS, TOTAL SUSPENDED											
00530 0 0 0 SEE COMMENTS BELOW						25	70			ONCE/MONTH	
SOLIDS, SETTLEABLE											
00545 0 0 0 SEE COMMENTS BELOW							0.5			ONCE/MONTH	
OIL AND GREASE											
00556 1 0 0 EFFLUENT GROSS VALUE							10			ONCE/MONTH	
IRON, TOTAL (AS FE)											
01045 1 0 0 EFFLUENT GROSS VALUE							2.0			ONCE/MONTH	
FLOATING SOLIDS OR VISIBLE FOAM-VISUAL											
45613 1 0 0 EFFLUENT GROSS VALUE				ES=1 NO=0						ONCE/MONTH	
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years.)							TELEPHONE		DATE	
TYPED OR PRINTED								SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		AREA CODE	NUMBER

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE NAME/ADDRESS (Include

Facility Name/Location if different)

NAME ANDALEX RESOURCES--PINNACLE

ADDRESS P.O. BOX 302

PRICE

UP 84501

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16)

(17-19)

UTC040000

001 1

PERMIT NUMBER

DISCHARGE NUMBER

F - FINAL

SEE AND DISCUSS TO USADMAN 001

FACILITY

LOCATION

ATTN: MICHAEL W. GLASSON

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
91	02	01	TO	91	02	29
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

MINOR

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	X	(3 Card Only) (46-53) QUANTITY OR LOADING (54-61)			(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) (54-61)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
SANITARY WASTE DISCHARGED-ASSESSMENT 45614 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****			*****	*****	*****				
	PERMIT REQUIREMENT	*****	0	DAILY MX YES=1 NO=0	*****	*****	*****	***	ONCE/ MONTH	ISUAL	
SOLIDS, TOTAL DISSOLVED 70295 2 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	*****			*****	*****					
	PERMIT REQUIREMENT	*****	2000	DAILY MX LBS/DY	*****	*****	REPORT DAILY MX	MG/L	ONCE/ MONTH	GRAB	
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE		DATE		
			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

TDS IS LIMITED TO ONE PPM PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME ANNALEX RESOURCES -- PINNACLE

ADDRESS P.O. BOX 902

PRICE UT 84501

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)

(2-16) (17-19)

UTG040004 PERMIT NUMBER

001 A DISCHARGE NUMBER

P - FINAL SED PND DISCHRG TO DEADMAN CR

FACILITY

LOCATION

ATTN: MICHAEL W. GLASSON

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
91	03	01	TO	91	03	31
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

MINOP

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUALITY OR CONCENTRATION (38-45)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
FLOW RATE											
00055 1 0 0											
EFFLUENT GROSS VALUE	REPORT	REPORT								ONCE/	YEAR
		30 DA AV	DAILY MX	GPD						MONTH	
PH											
00400 1 0 0											
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT				6.5		9.0			TWICE/	YEAR
					DAILY MX		DAILY MX			MONTH	
SOLIDS, TOTAL SUSPENDED											
00530 P 0 0						25	70			ONCE/	YEAR
SEE COMMENTS BELOW	PERMIT REQUIREMENT					30 DA AV	DAILY MX			MONTH	
SOLIDS, SETTLEABLE											
00545 R 0 0							0.5			ONCE/	YEAR
SEE COMMENTS BELOW	PERMIT REQUIREMENT						DAILY MX			MONTH	
OIL AND GREASE											
PREON EXTR-GRAV MET											
00556 1 0 0							10			ONCE/	YEAR
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT						DAILY MX			MONTH	
IRON, TOTAL (AS FE)											
01045 1 0 0							2.0			ONCE/	YEAR
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT						DAILY MX			MONTH	
FLOATING SOLIDS OR VISIBLE FOAM-VISUAL											
45613 1 0 0											
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT			ES=1						ONCE/	YEAR
				NO=0						MONTH	

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	TELEPHONE		DATE		
		TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME ANDALEK RESOURCES--PINNACLE  
 ADDRESS P.O. BOX 902  
PRICE UT 84501

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

(2-16) (17-19)

UTG040309  
 PERMIT NUMBER

001 A  
 DISCHARGE NUMBER

P - FINAL  
 520 PND DISCHG TO DEADMAN CREEK

FACILITY \_\_\_\_\_  
 LOCATION \_\_\_\_\_

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
91	03	01	TO	91	03	31
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

MINOR

NOTE: Read instructions before completing this form.

ATTN: MICHAEL W. BLASSON

PARAMETER (32-37)	SAMPLE MEASUREMENT	QUANTITY OR LOADING (3 Card Only) (46-53)			QUALITY OR CONCENTRATION (4 Card Only) (38-45)			NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM			
SANITARY WASTE DISCHARGED-ASSESSMNT		*****			*****	*****	*****			
45614 1 0 0	PERMIT REQUIREMENT	*****	0	YES=1 NO=0	*****	*****	*****	***	ONCE/MONTH	VISUAL
EFFLUENT GROSS VALUE		*****			*****	*****				
SOLIDS, TOTAL DISSOLVED		*****	2000	LBS/DY	*****	*****	REPORT		ONCE/MONTH	GRAB
70295 0 0 0	PERMIT REQUIREMENT	*****	DAILY MX		*****	*****	DAILY MX MG/L			
SEE COMMENTS BELOW	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	TELEPHONE	DATE		
			AREA CODE	NUMBER	YEAR
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT				

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

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PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME ANDALEX RESOURCES--PINNACLE

ADDRESS P.O. BOX 902

PRICE UT 84501

FACILITY \_\_\_\_\_

LOCATION \_\_\_\_\_

ATTN: MICHAEL W. GLASSON

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

(2-16) (17-19)

UT0040009  
PERMIT NUMBER

001 A  
DISCHARGE NUMBER

F - FINAL  
SEE PND DISCHRG TO DEADMAN CRK

MONITORING PERIOD

FROM YEAR 91 MO 04 DAY 01 TO YEAR 91 MO 04 DAY 30  
(20-21) (22-23) (24-25) (26-27) (28-29) (30-31)

MINOR

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUALITY OR CONCENTRATION (38-45)			NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM			
FLOW RATE										
00056 1 0 0 EFFLUENT GROSS VALUE	REPORT 30 DA AV	REPORT DAILY	EX GPD						ONCE/MONTH	GRAB
PH										
00400 1 0 0 EFFLUENT GROSS VALUE									ONCE/MONTH	GRAB
SOLIDS, TOTAL SUSPENDED										
00530 P 0 0 SEE COMMENTS BELOW									ONCE/MONTH	GRAB
SOLIDS, SETTLEABLE										
00545 R 0 0 SEE COMMENTS BELOW									ONCE/MONTH	GRAB
OIL AND GREASE FROM EXTR-GRAV METH										
00556 1 0 0 EFFLUENT GROSS VALUE									ONCE/MONTH	GRAB
IRON, TOTAL (AS FE)										
01045 1 0 0 EFFLUENT GROSS VALUE									ONCE/MONTH	GRAB
FLOATING SOLIDS OR VISIBLE FOAM-VISUAL										
45613 1 0 0 EFFLUENT GROSS VALUE				ES=1 NO=0					ONCE/MONTH	VISUAL

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	TELEPHONE		DATE		
		TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME ANDALEX RESOURCES--PINNACLE  
 ADDRESS P.O. BOX 902  
PRICE OF 84501

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

UT0040000 (2-16) PERMIT NUMBER  
 001 A (17-19) DISCHARGE NUMBER

F - FINAL  
 SEE DMR DISCHG TO DEADMAN CREEK

FACILITY \_\_\_\_\_  
 LOCATION \_\_\_\_\_  
 ATTN: MICHAEL W. GLASSON

MONITORING PERIOD  
 FROM YEAR MO DAY TO YEAR MO DAY  
 71 04 31 TO 71 04 30  
 (20-21) (22-23) (24-25) (26-27) (28-29) (30-31)

MEMORANDUM  
 NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT / PERMIT REQUIREMENT	QUANTITY OR LOADING (3 Card Only) (46-53) (54-61)			QUALITY OR CONCENTRATION (4 Card Only) (38-45) (46-53) (54-61)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
SANITARY WASTE DISCHARGED-ASSESSMNT	SAMPLE MEASUREMENT	*****			*****	*****	*****				
45614 1 0 0	PERMIT REQUIREMENT	*****	0	DAILY MX TSS=1 NO=0	*****	*****	*****	***	ONCE/	VISUAL	
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****			*****	*****	*****	***	MONTH		
SOLIDS, TOTAL DISSOLVED	SAMPLE MEASUREMENT	*****			*****	*****					
70295 0 0 0	PERMIT REQUIREMENT	*****	2000	DAILY MX LBS/DY	*****	*****	REPORT DAILY MX	MG/L	ONCE/	GRAB	
SEE COMMENTS BELOW	PERMIT REQUIREMENT	*****			*****	*****	*****	MG/L	MONTH		
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	TELEPHONE		DATE		
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)  
 TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE NAME/ADDRESS (Include

Facility Name/Location if different)

NAME ANOALEX RESOURCES--PINALACIE

ADDRESS P.O. BOX 902

PRICE OF \$4501

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16)

(17-19)

UTG040000

PERMIT NUMBER

001 A

DISCHARGE NUMBER

F - FINAL

SEE PND DISCHRG TO DEADMAN CRK

FACILITY

LOCATION

ATTN: MICHAEL A. GLASSON

FROM

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
91	05	01	TO	91	05	31
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

MINOR

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	X	(3 Card Only) (46-53) QUANTITY OR LOADING (54-61)			(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) (54-61)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
FLOW RATE					*****	*****	*****				
00056 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT		REPORT	REPORT							
	PERMIT REQUIREMENT		30 DA AV	DAILY MX GPD				***		ONCE/MONTH	
PH	SAMPLE MEASUREMENT	*****	*****			*****					
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***	0.5	*****	0.5			ONCE/MONTH	
				*****	DAILY MX		DAILY MX	SU			
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	*****	*****		*****						
00530 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	*****	*****	***	*****	25	70			ONCE/MONTH	
				*****		30 DA AV	DAILY MX	MG/L			
SOLIDS, SETTLEABLE	SAMPLE MEASUREMENT	*****	*****		*****						
00545 R 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	*****	*****	***	*****	*****	0.5			ONCE/MONTH	
				*****			DAILY MX	ML/L			
OIL AND GREASE	SAMPLE MEASUREMENT	*****	*****		*****						
FREON EXTR-GRAV METH	PERMIT REQUIREMENT	*****	*****	***	*****	*****	10			ONCE/MONTH	
00556 1 0 0 EFFLUENT GROSS VALUE				*****			DAILY MX	MG/L			
IRON, TOTAL (AS FE)	SAMPLE MEASUREMENT	*****	*****		*****						
01045 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***	*****	*****	2.0			ONCE/MONTH	
				*****			DAILY MX	MG/L			
FLOATING SOLIDS OR VISIBLE FOAM-VISUAL	SAMPLE MEASUREMENT	*****			*****		*****				
45613 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****		YES=1 NO=0	*****	*****	*****	***		ONCE/MONTH	VISUAL

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME ANDALEX RESOURCES--PINNACLE  
 ADDRESS P.O. BOX 902  
PRICE UT 84501

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16)

(17-19)

HTC040000  
 PERMIT NUMBER

001 A  
 DISCHARGE NUMBER

F - FINAL  
 SEE END DISCHG TO DEAGMAN OFF

FACILITY \_\_\_\_\_  
 LOCATION \_\_\_\_\_

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
91	05	01	TO	91	07	31
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

MINOR

NOTE: Read instructions before completing this form.

ATTN: MICHAEL W. GLASSON

PARAMETER (32-37)	X	(3 Card Only) (46-53) QUANTITY OR LOADING (54-61)			(4 Card Only) (38-45) QUALITY OR CONCENTRATION (54-61)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
SANITARY WASTE DISCHARGED-ASSESSMNT 45614 1 0 0	SAMPLE MEASUREMENT	*****			*****	*****	*****				
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	0	ES=1 DAILY MX NO=0	*****	*****	*****	**	ONCE/	TSSA	
SOLIDS, TOTAL DISSOLVED 70295 0 0 0	SAMPLE MEASUREMENT	*****			*****	*****					
SEE COMMENTS BELOW	PERMIT REQUIREMENT	*****	2000	DAILY MX LBS/DY	*****	*****	REPORT DAILY MX	MG/L	ONCE/	GRAN	
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	TELEPHONE		DATE		
		TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME ANDREX RESOURCES--PINNACLE  
 ADDRESS P.O. BOX 902  
 PRICE UT 84501

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

UTG040000  
 PERMIT NUMBER

001 A  
 DISCHARGE NUMBER

PINNACLE  
 SED AND DISCHRG TO DEADMAN CR

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
91	06	01		91	06	30
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

FACILITY  
 LOCATION  
 ATTN: MICHAEL E. GLASSON

MINOR  
 NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	QUANTITY OR LOADING (3 Card Only) (46-53)			QUALITY OR CONCENTRATION (4 Card Only) (38-45) (46-53) (54-61)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
FLOW RATE					*****	*****	*****				
00056 1 0 0 EFFLUENT GROSS VALUE	REPORT	30 DA AV	REPORT	DAILY MX GPD				***	ONCE/MONTH	BASIC	
PH		*****	*****			*****					
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***	4.5	*****	9.0	***	ONCE/MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED		*****	*****		*****						
00530 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	*****	*****	***	*****	25	70	***	ONCE/MONTH	GRAB	
SOLIDS, SETTLEABLE		*****	*****		*****						
00545 R 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	*****	*****	***	*****		0.5	***	ONCE/MONTH	GRAB	
OIL AND GREASE		*****	*****		*****						
PHEN EXTR-GRAV METH		*****	*****		*****						
00556 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***	*****		10	***	ONCE/MONTH	GRAB	
IRON, TOTAL (AS FE)		*****	*****		*****						
01045 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***	*****		2.0	***	ONCE/MONTH	GRAB	
FLOATING SOLIDS OR VISIBLE FOAM-VISUAL		*****	*****		*****		*****				
45613 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	ES=1 NO=0	*****		*****	***	ONCE/MONTH	VISUAL	

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	TELEPHONE		DATE		
		TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)  
 TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME ANDALEX RESOURCES--PINNACLE

ADDRESS P.O. BOX 302

PRICE

OR 84501

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)

(2-16)

(17-19)

HTG080000

001 A

PERMIT NUMBER

DISCHARGE NUMBER

F. - FINAL

SEE PERM DISCHRG TO DEADMAN CREEK

FACILITY

LOCATION

ATTN: MICHAEL W. GLASSON

MONITORING PERIOD							
FROM	YEAR	MO	DAY	TO	YEAR	MO	DAY
	<u>71</u>	<u>06</u>	<u>01</u>		<u>71</u>	<u>06</u>	<u>10</u>
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

MINOR

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	QUANTITY OR LOADING (46-53)			QUALITY OR CONCENTRATION (46-53)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
SANITARY WASTE DISCHARGED-ASSESSMNT 45614 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****			*****	*****	*****				
	PERMIT REQUIREMENT	*****	0	YES=1 NO=0	*****	*****	*****	***		ONCE/ MONTH	VISUA
SOLIDS, TOTAL DISSOLVED 70295 0 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	*****			*****	*****					
	PERMIT REQUIREMENT	*****	2000	DAILY MX LBS/DY	*****	*****	REPORT DAILY MX MG/L			ONCE/ MONTH	GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	TELEPHONE		DATE		
		AREA CODE	NUMBER	YEAR	MO	DAY
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT					

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE BOX.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME ARDALIX RESOURCES--PINNACLE

ADDRESS P.O. BOX 202

PRICE WT 04501

FACILITY \_\_\_\_\_

LOCATION \_\_\_\_\_

ATTN: MICHAEL W. GLASSON

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) (17-19)

00040000  
PERMIT NUMBER

001  
DISCHARGE NUMBER

P - FINAL  
SEE PWD DISCHG TO DEADMAN CR

MONITORING PERIOD

FROM	YEAR	MO	DAY	TO	YEAR	MO	DAY
	91	07	31		91	07	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read Instructions before completing this form.

PARAMETER (32-37)	X	(3 Card Only) (46-53) QUANTITY OR LOADING (54-61)			(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) (54-61)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
FLOW RATE 00056 1 0 0	SAMPLE MEASUREMENT	NO DISCHARGE			*****	*****	*****				
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT 30 DA AV	REPORT DAILY MX	GPD	*****	*****	*****	**	ONCE/	MONTH	
PH 00400 1 0 0	SAMPLE MEASUREMENT	*****	*****			*****					
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	**	6.5 DAILY MX	*****	9.0 DAILY MX	SU	ONCE/	MONTH	
SOLIDS, TOTAL SUSPENDED 00530 P 0 0	SAMPLE MEASUREMENT	*****	*****		*****						
SEE COMMENTS BELOW	PERMIT REQUIREMENT	*****	*****	**	*****	25 30 DA AV	70 DAILY MX	MG/L	ONCE/	MONTH	
SOLIDS, SETTLEABLE 00545 R 0 0	SAMPLE MEASUREMENT	*****	*****		*****	*****					
SEE COMMENTS BELOW	PERMIT REQUIREMENT	*****	*****	**	*****	*****	0.5 DAILY MX	ML/L	ONCE/	MONTH	
OIL AND GREASE 00555 1 0 0	SAMPLE MEASUREMENT	*****	*****		*****	*****					
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	**	*****	*****	10 DAILY MX	MG/L	ONCE/	MONTH	
IRON, TOTAL (AS FE) 01045 1 0 0	SAMPLE MEASUREMENT	*****	*****		*****	*****					
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	**	*****	*****	3.0 DAILY MX	MG/L	ONCE/	MONTH	
FLOATING SOLIDS OR VISIBLE FOAM-VISUAL 45013 1 0 0	SAMPLE MEASUREMENT	*****		ES=1	*****	*****	*****	**	ONCE/	MONTH	
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****		NO=)	*****	*****	*****	**	ONCE/	MONTH	

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  
\_\_\_\_\_  
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT  
\_\_\_\_\_

TELEPHONE \_\_\_\_\_ DATE \_\_\_\_\_  
AREA CODE \_\_\_\_\_ NUMBER \_\_\_\_\_ YEAR \_\_\_\_\_ MO \_\_\_\_\_ DAY \_\_\_\_\_

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME ANDALEX RESOURCES--PINNACLE  
 ADDRESS P.O. BOX 302  
PRICE UT 04501

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

UTG040008  
 PERMIT NUMBER

COL A  
 DISCHARGE NUMBER

F - FINAL  
 SED AND DISCHG TO DEADMAN CREEK

FACILITY \_\_\_\_\_  
 LOCATION \_\_\_\_\_  
 ATTN: MICHAEL J. GLASSON

MONITORING PERIOD

FROM	YEAR	MO	DAY	TO	YEAR	MO	DAY
	91	07	01		91	07	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

MINOR  
 NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT / PERMIT REQUIREMENT	QUANTITY OR LOADING (3 Card Only) (46-53)			QUALITY OR CONCENTRATION (4 Card Only) (38-45)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE (54-55)	MAXIMUM (54-56)	UNITS (54-57)	MINIMUM (38-39)	AVERAGE (46-47)	MAXIMUM (46-48)	UNITS (46-49)			
SANITARY WASTE DISCHARGED-ASSESSMENT	SAMPLE MEASUREMENT	*****			*****	*****	*****				
45614 1 0 0	PERMIT REQUIREMENT	*****	0	DAILY RX YES=1 NO=0	*****	*****	*****	***	ONCE/MONTH	VISUAL	
EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****			*****	*****					
SOLIDS, TOTAL DISSOLVED	PERMIT REQUIREMENT	*****	2000	DAILY RX LBS/DY	*****	*****	REPORT DAILY RX MG/L		ONCE/MONTH	GRAB	
70295 0 0 0	SAMPLE MEASUREMENT										
SEE COMMENTS BELOW	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	TELEPHONE		DATE		
		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		AREA CODE	NUMBER	YEAR

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

NAME ANDALET RESOURCE--PINNACLE  
 ADDRESS P.O. BOX 902  
PRICE UT 34501  
 FACILITY \_\_\_\_\_  
 LOCATION \_\_\_\_\_  
 ATTN: MICHAEL W. GLASSON

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)  
 (2-16) (17-19)

UTC040008 001 A  
 PERMIT NUMBER DISCHARGE NUMBER

F - FINAL  
 SED PND DSCRG TO: DEADMAN CR

MONITORING PERIOD  
 FROM YEAR 91 MO 07 DAY 01 TO YEAR 91 MO 08 DAY 31  
 (20-21) (22-23) (24-25) (26-27) (28-29) (30-31)

MINOR  
 NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUALITY OR CONCENTRATION (38-45)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE (54-61)	MAXIMUM (54-61)	UNITS (54-61)	MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (46-53)	UNITS (46-53)			
FLOW RATE											
00056 1 0 0 EFFLUENT GROSS VALUE	REPORT	NO DISCHARGE									
PH											
00400 1 0 0 EFFLUENT GROSS VALUE	REPORT	30 DA AV DAILY MX GPD									ONCE/MONTH
SOLIDS, TOTAL SUSPENDED											
00530 P 0 0 SEE COMMENTS BELOW	REPORT	***									ONCE/MONTH
SOLIDS, SETTLEABLE											
00545 R 0 0 SEE COMMENTS BELOW	REPORT	***									ONCE/MONTH
OIL AND GREASE											
00556 1 0 0 EFFLUENT GROSS VALUE	REPORT	***									ONCE/MONTH
IRON, TOTAL (AS FE)											
01045 1 0 0 EFFLUENT GROSS VALUE	REPORT	***									ONCE/MONTH
FLOATING SOLIDS OR VISIBLE FOAM-VISUAL											
45513 1 0 0 EFFLUENT GROSS VALUE	REPORT	***									ONCE/MONTH

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	TELEPHONE		DATE		
		TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)  
 TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME ANDALEX RESOURCES--PINNACLE  
 ADDRESS P.O. BOX 222  
PRICE UT 24501

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16)

(17-19)

UTG040008  
 PERMIT NUMBER

001 A  
 DISCHARGE NUMBER

F - FINAL  
 SEE END DISCHRG TO DEADMAN CR

FACILITY \_\_\_\_\_  
 LOCATION \_\_\_\_\_  
 ATTN: MICHAEL W. GLASSON

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
91	00	31		91	00	31
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

MINOR

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	X	(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUALITY OR CONCENTRATION (38-45)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
SANITARY WASTE DISCHARGED-ASSESSMNT 45614 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****			*****	*****	*****				
	PERMIT REQUIREMENT	*****		YES=1 NO=0	*****	*****	*****	***		ONCE/ MONTH	VISUA
SOLIDS, TOTAL DISSOLVED 70295 0 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	*****			*****	*****					
	PERMIT REQUIREMENT	*****	2000	DAILY MX LBS/DY	*****	*****	REPORT DAILY MX	MG/L		ONCE/ MONTH	LAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE		DATE		
			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

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