

2004 ANNUAL REPORT

ANDALEX RESOURCES, INC.
CENTENNIAL MINESITE
C/007/019

File in:

- Confidential
- Shelf
- Expandable

Refer to Record No. 0021 Date 03/31/2005

In C 0070019 Accounting
For additional information

GENERAL INFORMATION

| | |
|---|--|
| 1. Permit Number | C/007/019 |
| 2. Mine Name | Centennial Minesite |
| 3. Permittee Name | Andalex Resources, Inc |
| 4. Operator Name (if other than Permittee) | |
| 5. Permit Expiration Date | January 6, 2007 |
| 6. Permit Number | C/007/033 |
| 7. Company Representative, Title | Michael W. Glasson, Senior Geologist |
| 8. Phone Number | (435) 637-5385 |
| 9. Fax Number | (435) 637-8860 |
| 10. E-mail Address | |
| 11. Mailing Address | Andalex Resources, Inc. P.O. Box 902 Price, Utah 84501 |
| 12. Resident Agent, Title | Michael W. Glasson |
| 13. Mailing Address | Andalex Resources, Inc. P.O. Box 902 Price, Utah 84501 |
| 14. Number of Binders Submitted | (2) 1- Salt Lake Office and 1- Price Field Office |

IDENTIFICATION OF OTHER PERMITS

Identify other permits which are required in conjunction with mining and reclamation activities.

| Permit Type | ID Number | Description | Expires on |
|------------------------|-----------|-------------|------------|
| 1. MSHA Mine ID(s) | 42-01474 | Pinnacle | N/A |
| | 42-01750 | Apex | N/A |
| | 42-02028 | Aberdeen | N/A |
| 2. MSHA Impoundment(s) | N/A | | |
| | | | |

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|-------------------------------------|---------------------|-------------------------|----------|
| 3. NPDES/UPDES Permit(s) (water) | UTG-040008 | Deadman Canyon, 001-004 | 04/30/08 |
| 4. PSD (Air) Permit(s) | DAQE-997-96 | Centennial | N/A |
| 5. | | | |
| 6. | | | |

CERTIFIED REPORTS

List the certified inspection reports as required by the rules and under the approved plan which must be periodically submitted to the Division. Specify whether the information is included as APPENDIX A to this Annual Report or currently ON FILE with the Division.

| Certified Reports: | Reports Required? | | INCLUDED or ON FILE w/DOGM? | | Comments |
|-----------------------|-------------------|----|-----------------------------|---------|------------|
| | YES | NO | Included | ON FILE | |
| 1. Excess Spoil Piles | | X | | | |
| 2. Refuse Piles | | X | | | |
| 3. Impoundments | X | | X | | Appendix A |
| 4. | | | | | |
| 5. | | | | | |

REPORTING OF OTHER TECHNICAL DATA

List other technical data and information as required under the approved plan which must be periodically submitted to the Division. Specify whether the information is included as APPENDIX B to this Annual Report or currently ON FILE with the Division.

| Technical Data: | Reports Required? | | INCLUDED or ON FILE w/DOGM? | | Comments |
|-------------------------------|-------------------|----|-----------------------------|---------|------------|
| | YES | NO | Included | ON FILE | |
| 1. Climatological Data | | X | | | |
| 2. Subsidence Monitoring Data | X | | X | | Appendix B |
| 3. Vegetation Monitoring Data | X | | X | | Appendix B |
| 4. Raptor Survey | | X | | | |
| 5. Soils Monitoring Data | | X | | | |
| 6. Water Monitoring Data | X | | | X | |
| First Quarter Report | X | | | X | |

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|--|-----|---------------------|--|---|-----------|--------|
| Second Quarter Report | X | | | X | | |
| Third Quarter Report | X | | | X | | |
| Fourth Quarter Report | X | | | X | | |
| 7. Geological/Geophysical Data | | X | | | | |
| 8. Engineering Data | | X | | | | |
| 9. Other Data | N/A | | | | | |
| 10. Non Coal Waste/Abandoned Underground Equipment | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

Changes in administration or corporate structure can often bring about necessary changes to information found in the mining and reclamation plan. The Division is requesting that each permittee review and update the legal, financial, compliance and related information in the plan as part of the Annual Report. Provide the Department of Commerce, Annual Report of Officers, or other equivalent information as necessary to ensure that the information provided in the plan is current. Provide any other changes as necessary regarding land ownership, lease acquisitions, legal results from appeals of violations, or other changes as necessary to update information required in the mining and reclamation plan. Include any certified financial statements, audits or worksheets which may be required to meet bonding requirements. Specify whether the information is currently ON FILE with the Division or included as APPENDIX C to this Annual Report.

| Legal/Financial Data: | Report Required? | | INCLUDED or ON FILE w/DOGM? | | Comments |
|--|------------------|----|-----------------------------|---------|----------|
| | YES | NO | Included | ON FILE | |
| 1. Department of Commerce, Annual Report of Officers | X | | | X | |
| 2. Other | | | | | |
| | | | | | |
| | | | | | |

MINE MAPS

Copies of mine maps, current and up-to-date through at least December 31, 1998, are to be provided to the Division as APPENDIX D to this Annual Report in accordance with the requirements of R645-301-525.270. These map copies shall be made in accordance with 30 CFR 75.1200, as required by MSHA. Upon request, mine maps shall be kept confidential by the Division.

| Map Number(s) | Map Title / Description | Confidential? |
|---------------|-------------------------|---------------|
| Appendix D | Aberdeen Mine | Y |
| Appendix D | Pinnacle Mine | Y |

APPENDIX A

Certified Reports

Excess Spoil Piles
Refuse Piles
Impoundments

as required under R645-301-514

CONTENTS

Annual Impoundment Inspections

**ANDALEX RESOURCES, INC.
2004 ANNUAL POND INSPECTION REPORT**

POND: Sed. Pond "C"

LOCATION: Centennial

IMPOUNDMENT:

| | |
|---------------------------------|------------------------------------|
| (1) Stability | Slopes Stable. |
| (2) Structural Weakness/Erosion | None Noted. |
| (3) Potential Safety Hazards | None Noted. |
| (4) Depth of Impounded Water | Dry - 4" Snow. |
| (5) Existing Storage Capacity | 2.53 acre feet. |
| (6) Monitoring Procedures | U.P.D.E.S Quarterly Inspection. |

SEDIMENT PONDS ONLY:

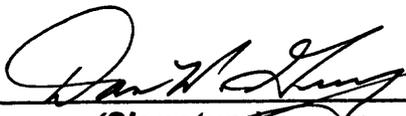
| | |
|--|------------------|
| (7) Sediment Accumulation (Elevation) | 7046.1 |
| (8) Sediment Cleanout Level (Elevation) | 7046.9 |
| (9) Principle Spillway (Elevation) | 7053.1 |
| (10) Emergency Spillway (Elevation) | 7055.0 |
| (11) Existing Sediment Capacity (To Cleanout) | 0.200 acre feet. |

GENERAL:

| | |
|-------------------------------|--|
| (12) Comments/Recommendations | Interior Partially Vegetated. No Discharge. Inlets O.K. |
|-------------------------------|--|

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.



(Signature)

12/22/04

(Date)



**ANDALEX RESOURCES, INC.
2004 ANNUAL POND INSPECTION REPORT**

POND: Sed. Pond "E" **LOCATION:** Centennial

| IMPOUNDMENT | |
|---------------------------------|-------------------------------------|
| (1) Stability | Slopes Stable. |
| (2) Structural Weakness/Erosion | None Noted. |
| (3) Potential Safety Hazards | None Noted. |
| (4) Depth of Impounded Water | 12" Frozen. |
| (5) Existing Storage Capacity | 2.283 acre feet. |
| (6) Monitoring Procedures | U.P.D.E.S. Quarterly Inspection. |

| SEDIMENT PONDS ONLY | |
|--|------------------|
| (7) Sediment Accumulation (Elevation) | 6942.0 |
| (8) Sediment Cleanout Level (Elevation) | 6946.5 |
| (9) Principle Spillway (Elevation) | 6957.6 |
| (10) Emergency Spillway (Elevation) | 6958.6 |
| (11) Existing Sediment Capacity (To Cleanout) | 0.382 acre feet. |

| GENERAL | |
|-------------------------------|--|
| (12) Comments/Recommendations | No Discharge. Inlets O.K. Outlets O.K. |

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.



 (Signature)

 12/22/04
 (Date)



APPENDIX B

Reporting of Technical Data

including monitoring data, reports, maps, and other information
as required under the approved plan
or as required by the Division

in accordance with the requirements of R645-301-130 and R645-301-140.

CONTENTS

Subsidence Monitoring
Vegetation Monitoring

Bruce Ware



WARE SURVEYING & ENGINEERING



G.P.S. & CONVENTIONAL SURVEYING - AUTOCAD MAPPING - CIVIL ENGINEERING

2223 North 1200 West - Helper, UT 84626

Office: 435-637-2020

Email: waresurveying@ameritelcom.net

October 18, 2004

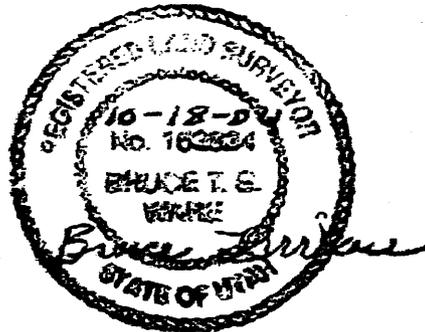
Andalex Resources, Inc.
Attn: Mike Glasson
P.O. Box 902
Price, UT 84501

Dear Mr. Glasson,

As you requested I have completed a survey of your company's Subsidence Monitoring Points. I have calculated the survey and have found 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.S. Ware



| | | | |
|------------------------|----------|----------|------------|
| Post-It® Fax Note 7871 | | Date | # of pages |
| | | 10-18-04 | 2 |
| To | From | | |
| Andalex | B. Ware | | |
| Co./Dept | Co. | | |
| M. Glasson | | | |
| Phone # | Phone # | | |
| 637-5385 | 637-2620 | | |
| Fax # | Fax # | | |
| 637-8960 | | | |

ANDALEX RESOURCES, INC.
2004 SUBSIDENCE SURVEY

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

10/18/2004

| STATION | NORTHING (FEET) | EASTING (FEET) | 2003 ELEVATION | 2004 ELEVATION | NOTES |
|----------------|--------------------|-------------------|-------------------|-------------------|---------|
| Rebar on ridge | 505,141.92 | 2,217,281.07 | 8,241.62 | 8,241.62 | CONTROL |
| Yellow Rebar | 507,073.59 | 2,223,128.18 | 8,534.80 | 8,534.90 | CONTROL |
| S-10 | 507,824.28 | 2,217,196.61 | 8,594.59 | 8,594.59 | CONTROL |
| 1A | 504,067.58 | 2,216,580.88 | 8,147.07 | 8,147.01 | -- |
| 1 | 502,840.83 | 2,218,278.88 | 8,178.03 | 8,177.98 | -- |
| 4 | 503,238.22 | 2,221,322.25 | 8,285.02 | 8,284.77 | -- |
| 11 | 498,938.93 | 2,218,688.78 | 7,671.20 | 7,671.22 | -- |
| 8 | 506,252.80 | 2,221,863.53 | 8,544.02 | 8,544.05 | -- |
| 5 | 604,194.85 | 2,224,746.94 | 8,001.82 | 8,001.90 | -- |
| 7 | 602,013.34 | 2,225,884.02 | 8,102.98 | 8,102.98 | -- |
| 13 | 500,747.06 | 2,228,007.88 | 7,854.72 | 7,854.87 | -- |
| S31 | 608,352.97 | 2,217,376.82 | 8,386.64 | 8,386.51 | -- |
| S30 | 608,015.07 | 2,215,357.70 | 8,118.02 | 8,117.88 | -- |
| S18 | 608,850.48 | 2,210,725.70 | 8,802.52 | 8,802.52 | -- |
| S17 | 608,190.63 | 2,213,802.51 | 8,624.48 | 8,624.50 | -- |
| S1 | 508,842.12 | 2,218,083.80 | 8,572.35 | 8,572.32 | -- |
| 98-2 | 509,023.29 | 2,218,624.20 | 8,551.12 | 8,551.01 | -- |
| S20 | 610,334.20 | 2,217,882.68 | 8,574.28 | 8,574.07 | -- |
| S21 | 610,581.75 | 2,214,966.87 | 8,489.80 | 8,490.02 | -- |
| S22 | 509,738.02 | 2,218,933.12 | 8,548.83 | 8,548.88 | -- |



WARE SURVEYING & ENGINEERING

G.P.S. & CONVENTIONAL SURVEYING - AUTOCAD MAPPING - CIVIL ENGINEERING



**VEGETATION MONITORING
ON THE
SUBSTITUTE TOPSOIL TEST PLOTS**

**AT THE
CENTENNIAL MINE**



Prepared by

MT. NEBO SCIENTIFIC, INC.
330 East 400 South, Suite 6
Springville, Utah 84663
(801) 489-6937

Patrick D. Collins, Ph.D.

for

ANDALEX RESOURCES
Post Office Box 902
Price, Utah 84501

January 2005

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VEGETATION MONITORING ON THE SUBSTITUTE TOPSOIL TEST PLOTS

INTRODUCTION

During mine construction in 1982, a pad was created to accommodate the construction of a shop and warehouse to support mining activities. There was some onsite material that had previously been designated as substitute topsoil to be used for future reclamation activities. This material was placed on outcrops of the pad area. According to Andalex's MRP, subsequent to placement of the substitute topsoil material, the slopes were "*groomed with heavy equipment and graded prior to being hydroseeded with the interim seed mixture and then hydromulched*". Later in 1990, the "*approved seed mixture was hand broadcasted onto these same slopes which were already fairly heavily vegetated*".

A commitment was then made by Andalex to monitor these slopes as test plots by sampling the vegetation on them as a means to evaluate the potential use for future reclamation and revegetation activities. This document was prepared to report the findings of quantitative sampling the slopes in the growing season of 2004.

METHODS

Quantitative sampling on the substitute topsoil test plot areas was conducted September 14, 2004. Cover estimates were made using ocular methods with meter square quadrats. Species composition and relative frequencies were also assessed from the quadrats. Plant nomenclature follows "A Utah Flora" (Welsh et al., 2003).

Cover data have been summarized on tables in this report and spreadsheets of the raw data have also been included. Color photographs of the sample areas were taken at the time of sampling and have been submitted with this report.

RESULTS

For the purpose of this document the sample areas were named based on their locations relative to the warehouse facilities; they are called the **North Warehouse Slope** and the **South Warehouse Slope**.

North Warehouse Slope

Total living cover of the North Warehouse Slope at the time of sampling was 30.50% (Table 1-

A). Shrub species were not present in the quadrats, whereas forbs represented 40.61% of the total cover and grasses 59.39% (Table 1-B).

As shown on Table 2, the most common plant species on the North Warehouse Slope was a forb, Cicer milkvetch

(*Astragalus cicer*), and a grass called smooth

brome (*Bromus inermis*). Each of these species comprised

6.50% of the total living cover; the sum of the two contained almost half of the total living

TABLE 1: Total Cover (A) and Composition (B) of the North Warehouse Slope at the Centennial Mine

| A. COVER | | |
|-----------------------|----------|-----------|
| | Mean (%) | Std. Dev. |
| Total Living Cover | 30.50 | 14.91 |
| Litter | 10.50 | 3.50 |
| Bareground | 41.00 | 12.41 |
| Rock | 18.00 | 8.12 |
| B. COMPOSITION | | |
| Shrubs | 0.00 | 0.00 |
| Forbs | 40.61 | 36.30 |
| Grasses | 59.39 | 36.30 |

TABLE 2: Cover and Frequency by Species of the North Warehouse Slope at the Centennial Mine

| | Mean (%) | SDev | Freq |
|---------------------------------|----------|-------|-------|
| SHRUBS | | | |
| FORBS | | | |
| <i>Astragalus cicer</i> | 6.50 | 13.61 | 30.00 |
| <i>Chenopodium fremontii</i> | 0.50 | 1.50 | 10.00 |
| <i>Lappula occidentalis</i> | 0.30 | 0.90 | 10.00 |
| <i>Machaeranthera canescens</i> | 1.20 | 1.99 | 30.00 |
| <i>Malcomia africana</i> | 2.00 | 3.32 | 30.00 |
| GRASSES | | | |
| <i>Agropyron cristatum</i> | 5.00 | 10.25 | 40.00 |
| <i>Bromus inermis</i> | 6.50 | 6.34 | 70.00 |
| <i>Bromus tectorum</i> | 2.50 | 4.03 | 30.00 |
| <i>Elymus lanceolatus</i> | 6.00 | 6.63 | 60.00 |

cover of the slope. The next most common species were two grasses, thickspike wheatgrass (*Elymus lanceolatus*) and crested wheatgrass (*Agropyron cristatum*), resulting in 6.50% and 5.00% of the cover, respectively. When the cover of these two species were added to the previous two, the combined total of them made up nearly 80% of the total living cover.

South Warehouse Slope

The total living cover of the South Warehouse Slope was estimated at 37.00% (Table 3-A). Grasses made up 66.78%, forbs 23.22% and shrubs 10.00% of the living cover (Table 3-B).

TABLE 3: Total Cover (A) and Composition (B) of the South Warehouse Slope at the Centennial Mine

| A. COVER | | |
|-----------------------|----------|-----------|
| | Mean (%) | Std. Dev. |
| Total Living Cover | 37.00 | 10.46 |
| Litter | 13.33 | 7.67 |
| Bareground | 32.33 | 11.53 |
| Rock | 17.33 | 7.04 |
| B. COMPOSITION | | |
| Shrubs | 10.00 | 19.35 |
| Forbs | 23.22 | 15.59 |
| Grasses | 66.78 | 20.04 |

The dominant plant species by cover and frequency by quite a wide margin in this study area was crested wheatgrass which had 17.33% of the living cover (Table 4). The next most important species were summer-cyprus (*Bassia scoparia*), rubber rabbitbrush (*Chrysothammus nauseosus*), intermediate wheatgrass (*Elymus hispidus*) and smooth brome.

TABLE 4: Cover and Frequency by Species of the South Warehouse Slope at the Centennial Mine

| | Mean (%) | Std. Dev. | Freq. |
|------------------------------------|----------|-----------|-------|
| SHRUBS | | | |
| <i>Chrysothamnus nauseosus</i> | 4.67 | 10.72 | 20.00 |
| <i>Purshia tridentata</i> | 0.33 | 1.25 | 6.67 |
| FORBS | | | |
| <i>Grindelia squarrosa</i> | 1.00 | 2.00 | 20.00 |
| <i>Bassia scoparia</i> | 5.33 | 5.91 | 60.00 |
| <i>Machaeranthera canescens</i> | 0.67 | 1.70 | 13.33 |
| <i>Machaeranthera grindeioides</i> | 0.67 | 1.70 | 13.33 |
| <i>Malcomia africana</i> | 0.67 | 2.49 | 6.67 |
| GRASSES | | | |
| <i>Agropyron cristatum</i> | 17.33 | 9.98 | 93.33 |
| <i>Bromus inermis</i> | 2.00 | 4.40 | 20.00 |
| <i>Bromus tectorum</i> | 0.33 | 1.25 | 6.67 |
| <i>Elymus hispidus</i> | 2.67 | 6.29 | 26.67 |
| <i>Elymus lanceolatus</i> | 1.33 | 4.99 | 6.67 |

DISCUSSION

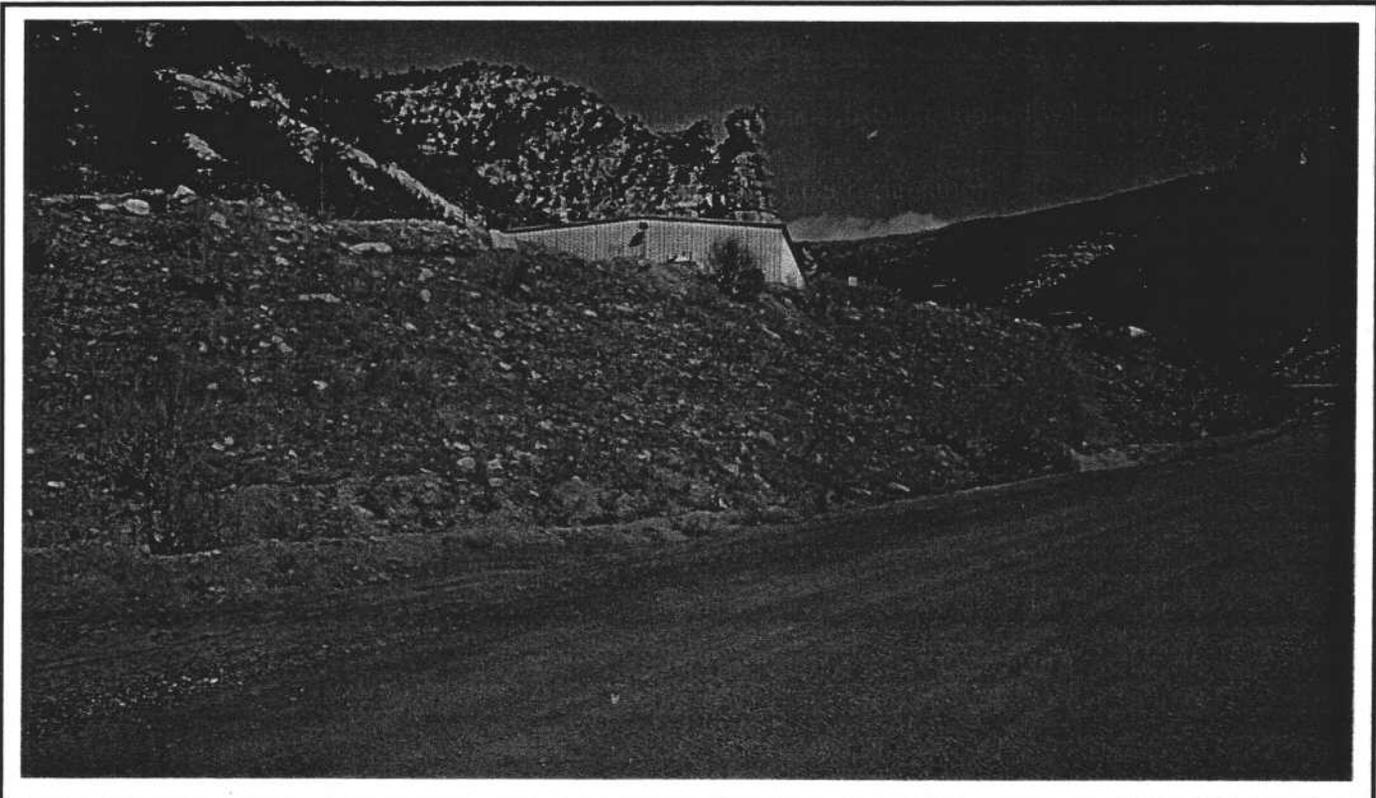
Both study areas were dominated by “*desirable*” species (or approximately 80% of the total living cover) as opposed to “*weedy*” or undesirable species (or approximately 20% of the total living cover). The North Warehouse Slope had greater species diversity, or at least the cover values were more equally represented. In the South Warehouse Slope, crested wheatgrass dominated the cover, and with its known history of competitive behavior, it may be the reason the other species did not have greater cover values.

As mentioned in the Introduction of this report, it was suggested by the verbiage in Andalex's MRP that the areas were seeding twice – the first seeding utilized an *interim* seed mixture and the second used a *final* seed mixture. Interim seed mixtures are generally comprised of fewer species, the species on the list are generally more aggressive, and have been chosen to provide a rapid-establishing, albeit temporary, cover for protection of the resource from wind and water erosion. Final seed mixtures are generally designed to provide greater species diversity which more closely simulates the natural or undisturbed species composition of the native plant communities in the area. Crested wheatgrass is probably not included on the final seed mixture in Andalex's revegetation plan. Therefore, at the time of final reclamation other more desirable plant species should have a better opportunity to become established. Moreover, at the time of sampling there was evidence of moderate to extensive impact to the study areas from grazing by cattle and big game.

In conclusion, based on results from this sample period, the substitute topsoil will probably be suitable to supplement other growth media at the time of final reclamation.



North Warehouse Slope



South Warehouse Slope

APPENDIX

Raw Data

ANDALEX

Centennial Mine

South Warehouse Slope

Substitute Topsoil

Slope: 23 deg.

Exposure: ESE

Sample Date: 14 Sept 2004

| | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 |
|-------------------------------------|-------|-------|--------|-------|-------|-------|
| SHRUBS | | | | | | |
| <i>Chrysothamnus nauseosus</i> | 0.00 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Purshia tridentata</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FORBS | | | | | | |
| <i>Grindelia squarrosa</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Kochia scoparia</i> | 0.00 | 0.00 | 0.00 | 5.00 | 5.00 | 0.00 |
| <i>Machaeranthera canescens</i> | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Machaeranthera grindelioides</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| <i>Malcomia africana</i> | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| GRASSES | | | | | | |
| <i>Agropyron cristatum</i> | 15.00 | 15.00 | 20.00 | 10.00 | 15.00 | 40.00 |
| <i>Bromus inermis</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Bromus tectorum</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Elymus hispidus</i> | 25.00 | 0.00 | 0.00 | 5.00 | 5.00 | 0.00 |
| <i>Elymus lanceolatus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| COVER | | | | | | |
| Total Living Cover | 45.00 | 40.00 | 20.00 | 20.00 | 25.00 | 45.00 |
| Litter | 15.00 | 25.00 | 35.00 | 15.00 | 10.00 | 10.00 |
| Bareground | 30.00 | 30.00 | 30.00 | 35.00 | 50.00 | 25.00 |
| Rock | 10.00 | 5.00 | 15.00 | 30.00 | 15.00 | 20.00 |
| % COMPOSITION | | | | | | |
| Shrubs | 0.00 | 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forbs | 11.11 | 25.00 | 0.00 | 25.00 | 20.00 | 11.11 |
| Grasses | 88.89 | 37.50 | 100.00 | 75.00 | 80.00 | 88.89 |

| | 7.00 | 8.00 | 9.00 | 10.00 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 40.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 |
| 5.00 | 0.00 | 5.00 | 5.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 20.00 | 10.00 | 10.00 | 5.00 | 5.00 | 15.00 | 10.00 | 0.00 | 5.00 |
| 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 | 0.00 | 5.00 | 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 |
| 5.00 | 25.00 | 25.00 | 25.00 | 0.00 | 20.00 | 20.00 | 15.00 | 30.00 | 5.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 10.00 |
| 5.00 | 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 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 20.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 45.00 | 40.00 | 35.00 | 30.00 | 30.00 | 35.00 | 30.00 | 40.00 | 60.00 |
| 10.00 | 10.00 | 15.00 | 10.00 | 5.00 | 5.00 | 5.00 | 5.00 | 15.00 | 15.00 |
| 25.00 | 35.00 | 20.00 | 35.00 | 50.00 | 30.00 | 30.00 | 55.00 | 25.00 | 10.00 |
| 20.00 | 10.00 | 25.00 | 20.00 | 15.00 | 30.00 | 30.00 | 10.00 | 20.00 | 15.00 |
| 33.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.50 | 66.67 |
| 11.11 | 44.44 | 37.50 | 28.57 | 33.33 | 42.86 | 50.00 | 50.00 | 0.00 | 8.33 |
| 55.56 | 55.56 | 62.50 | 71.43 | 66.67 | 57.14 | 50.00 | 87.50 | 25.00 | |

ANDALEX
 Centennial Mine
 South Warehouse Slope
 Substitute Topsoil
 Slope: 23 deg.
 Exposure: ESE
 Sample Date: 14 Sept 2004

| Mean | SDev | Freq | |
|---------------|-------|-------|-------------------------------------|
| <hr/> | | | |
| SHRUBS | | | |
| 4.67 | 10.72 | 20.00 | <i>Chrysothamnus nauseosus</i> |
| 0.33 | 1.25 | 6.67 | <i>Purshia tridentata</i> |
| FORBS | | | |
| 1.00 | 2.00 | 20.00 | <i>Grindelia squarrosa</i> |
| 5.33 | 5.91 | 60.00 | <i>Kochia scoparia</i> |
| 0.67 | 1.70 | 13.33 | <i>Machaeranthera canescens</i> |
| 0.67 | 1.70 | 13.33 | <i>Machaeranthera grindelioides</i> |
| 0.67 | 2.49 | 6.67 | <i>Malcomia africana</i> |
| GRASSES | | | |
| 17.33 | 9.98 | 93.33 | <i>Agropyron cristatum</i> |
| 2.00 | 4.40 | 20.00 | <i>Bromus inermis</i> |
| 0.33 | 1.25 | 6.67 | <i>Bromus tectorum</i> |
| 2.67 | 6.29 | 26.67 | <i>Elymus hispidus</i> |
| 1.33 | 4.99 | 6.67 | <i>Elymus lanceolatus</i> |
| <hr/> | | | |
| COVER | | | |
| 37.00 | 10.46 | | Total Living Cover |
| 13.33 | 7.67 | | Litter |
| 32.33 | 11.53 | | Bareground |
| 17.33 | 7.04 | | Rock |
| <hr/> | | | |
| % COMPOSITION | | | |
| 10.00 | 19.35 | | Shrubs |
| 23.22 | 15.59 | | Forbs |
| 66.78 | 20.04 | | Grasses |
| <hr/> | | | |

ANDALEX

Centennial Mine

North Warehouse Slope

Substitute Topsoil

Slope: 22 deg.

1 thru 8 Old Disturbance

Exposure: S

Sample Date: 14 Sept 2004

1.00

2.00

3.00

4.00

5.00

6.00

7.00

SHRUBS

FORBS

| | | | | | | | |
|---------------------------------|------|------|------|-------|-------|------|------|
| <i>Astragalus cicer</i> | 5.00 | 0.00 | 0.00 | 45.00 | 15.00 | 0.00 | 0.00 |
| <i>Chenopodium fremontii</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Lappula occidentalis</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Machaeranthera canescens</i> | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 5.00 | 0.00 |
| <i>Malcomia africana</i> | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

GRASSES

| | | | | | | | |
|----------------------------|-------|-------|-------|------|-------|-------|-------|
| <i>Agropyron cristatum</i> | 0.00 | 0.00 | 35.00 | 5.00 | 0.00 | 5.00 | 0.00 |
| <i>Bromus inermis</i> | 20.00 | 15.00 | 0.00 | 5.00 | 5.00 | 10.00 | 5.00 |
| <i>Bromus tectorum</i> | 0.00 | 10.00 | 0.00 | 0.00 | 5.00 | 0.00 | 10.00 |
| <i>Elymus lanceolatus</i> | 5.00 | 0.00 | 0.00 | 5.00 | 15.00 | 5.00 | 20.00 |

COVER

| | | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|-------|
| Total Living Cover | 30.00 | 30.00 | 35.00 | 60.00 | 45.00 | 25.00 | 35.00 |
| Litter | 10.00 | 15.00 | 10.00 | 15.00 | 10.00 | 10.00 | 15.00 |
| Bareground | 45.00 | 35.00 | 45.00 | 20.00 | 30.00 | 55.00 | 30.00 |
| Rock | 15.00 | 20.00 | 10.00 | 5.00 | 15.00 | 10.00 | 20.00 |

% COMPOSITION

| | | | | | | | |
|---------|-------|-------|--------|-------|-------|-------|--------|
| Shrubs | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forbs | 16.67 | 16.67 | 0.00 | 75.00 | 44.44 | 20.00 | 0.00 |
| Grasses | 83.33 | 83.33 | 100.00 | 25.00 | 55.56 | 80.00 | 100.00 |

ANDALEX
 Centennial Mine
 North Warehouse Slope
 Substitute Topsoil
 Slope: 22 deg.
 Exposure: S
 Sample Date: 14 Sept 200

9 and 10 New Disturbance

| 8.00 | 9.00 | 10.00 | Mean | SDev | Freq | |
|-------|--------|--------|-------|-------|-------|---------------------------------|
| <hr/> | | | | | | SHRUBS |
| <hr/> | | | | | | FORBS |
| 0.00 | 0.00 | 0.00 | 6.50 | 13.61 | 30.00 | <i>Astragalus cicer</i> |
| 5.00 | 0.00 | 0.00 | 0.50 | 1.50 | 10.00 | <i>Chenopodium fremontii</i> |
| 3.00 | 0.00 | 0.00 | 0.30 | 0.90 | 10.00 | <i>Lappula occidentalis</i> |
| 2.00 | 0.00 | 0.00 | 1.20 | 1.99 | 30.00 | <i>Machaeranthera canescen.</i> |
| 0.00 | 10.00 | 5.00 | 2.00 | 3.32 | 30.00 | <i>Malcomia africana</i> |
| <hr/> | | | | | | GRASSES |
| 5.00 | 0.00 | 0.00 | 5.00 | 10.25 | 40.00 | <i>Agropyron cristatum</i> |
| 5.00 | 0.00 | 0.00 | 6.50 | 6.34 | 70.00 | <i>Bromus inermis</i> |
| 0.00 | 0.00 | 0.00 | 2.50 | 4.03 | 30.00 | <i>Bromus tectorum</i> |
| 10.00 | 0.00 | 0.00 | 6.00 | 6.63 | 60.00 | <i>Elymus lanceolatus</i> |
| <hr/> | | | | | | COVER |
| 30.00 | 10.00 | 5.00 | 30.50 | 14.91 | | Total Living Cover |
| 10.00 | 5.00 | 5.00 | 10.50 | 3.50 | | Litter |
| 35.00 | 55.00 | 60.00 | 41.00 | 12.41 | | Bareground |
| 25.00 | 30.00 | 30.00 | 18.00 | 8.12 | | Rock |
| <hr/> | | | | | | % COMPOSITION |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | Shrubs |
| 33.33 | 100.00 | 100.00 | 40.61 | 36.30 | | Forbs |
| 66.67 | 0.00 | 0.00 | 59.39 | 36.30 | | Grasses |

APPENDIX C

Legal, Financial, Compliance and Related Information

Annual Report of Officers
as submitted to the Utah Department of Commerce

and other changes in ownership and control information
as required under R645-301-110.

CONTENTS

On File

APPENDIX D

Mine Maps

as required under R645-301-525.270.

CONTENTS

Aberdeen Mine
Pinnacle Mine

APPENDIX E

Other Information

in accordance with the requirements of R645-301 and R645-302.

CONTENTS

N/A