

ANDALEX
RESOURCES, INC.
Tower Division

P.O. BOX 902
PRICE, UTAH 84501
PHONE (801) 637-5385
TELEX 381 530 ANDALEX PRIC

File ACT/007/019 #6

December 27, 1988

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

RECEIVED
MAR 01 1989

DIVISION OF
OIL, GAS & MINING

Attn.: Susan Linner

Re.: ACT 007/019-1

Dear Ms. Linner:

Attached is information requested by your office for Andalex Resources, Inc.'s annual report for the Centennial Mines.

Please call if there are any questions.

Thank you.

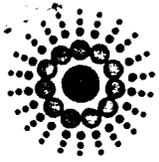
Sincerely,

Michael W. Glasson
Senior Geologist

MWG/as

Attachment

cc: File



ANDALEX
RESOURCES, INC.
Tower Division

P.O. BOX 902
PRICE, UTAH 84501
PHONE (801) 637-5385
TELEX 381 530 ANDALEX PRIC

CC: Rick [unclear]
DOEM

January 3, 1989

Mr. Steven R. McNiel
State of Utah
Bureau of Water Pollution Control
Post Office Box 16690
Salt Lake City, Utah 84116-0690

Dear Mr. McNiel:

Enclosed please find Andalex Resource's EPA Form 3320-1 for the 4th quarter of 1988 for NPDES Ut-0023507.

I would like to add that there has been no discharge in the previous 12 month period. I hasten to add that these point sources have never had a discharge.

Sincerely,

Michael W. Glasson
Senior Geologist

MWG/dg

Enclosure

PERMITTEE NAME/ADDRESS (Include City Name/Location if different)
ANDALEX RESOURCES, INC.
 ADDRESS **P.O. BOX 902**
PRICE, UTAH 84501
 CITY **PINNACLE**
 COUNTY **CARBON COUNTY, UTAH**

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

(2-16) **UT 0023507**
 PERMIT NUMBER
 (17-19) **All**
 DISCHARGE NUMBER

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
88	10	1	88	12	30
(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) QUANTITY OR LOADING (46-53)			(4 Card Only) 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			
	SAMPLE MEASUREMENT	NO DISCHARGE									
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT	NO DISCHARGE									
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT	NO DISCHARGE									
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT	NO DISCHARGE									
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT	NO DISCHARGE									
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT	NO DISCHARGE									
	PERMIT REQUIREMENT										

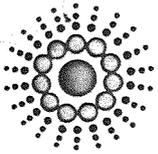
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
MICHAEL W. GLASSON
 Senior Geologist

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.)

Michael W. Glasson
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE **801 637-5385**
 DATE **88 10 3**

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



ANDALEX
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Tower Division

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PRICE, UTAH 84501
PHONE (801) 637-5385
TELEX 381 530 ANDALEX PRIC

M E M O R A N D U M

TO: DUGM, General Inspection File
FROM: Michael W. Glasson *MWG*
DATE: December 27, 1988
SUBJECT: 1988 4th Quarter Water Monitoring

WATER MONITORING 4th QUARTER, 1988

7-1	No Flow
8-1	No Flow
S18-1	No Flow
18-2	No Flow
18-3	No Flow
18-4	No Flow
S25-1	No Flow
25-2	No Flow
Well #1	Analysis attached

MWG/dg



COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • (312) 953-9300

SINCE 1908

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

February 10, 1989

Job No.: 9529
Date Rec'd: January 20, 1989
Date Sampled: December 23, 1988
Sampled By:

Sample ID:
WELL #1
Level 110'
Temperature 13 degrees C
pH 7.1
Conductivity 1510
Rec'd 800 hr.
No Sampling Time
Amended (Analysis Added)

ANDALEX RESOURCES, INC.
P.O. Box 902
Price, UT 84501

WATER ANALYSIS

Acidity	97 mg/l	CaCO ₃	Fluoride	0.39 mg/l
01/23/89			01/26/89	
Alk., Bicarbonate	728 mg/l	HCO ₃	Hardness, Total	2089 mg/l CaCO ₃
01/23/89				
Alk., Carbonate	1< mg/l	CaCO ₃	Iron	0.01< mg/l
01/23/89			01/23/89	
Alk., Total	597 mg/l	CaCO ₃	Iron, Dissolved	0.01< mg/l
01/23/89			01/23/89	
Arsenic	0.002< mg/l		Lead	0.080 mg/l
01/31/89			01/24/89	
Anions, Total	45.66 meq/l		Magnesium	361.00 mg/l
			01/23/89	
Barium	0.10< mg/l		Manganese	0.16 mg/l
01/24/89			01/23/89	
Boron	0.57 mg/l		Mercury	0.002< mg/l
01/26/89			01/30/89	
Cadmium	0.005< mg/l		Molybdenum	0.10< mg/l
01/24/89			01/24/89	
Calcium	241.2 mg/l		Nitrogen, Ammonia	1.49 mg/l
01/20/89			01/31/89	
Cations, Total	45.98 meq/l		Nitrogen, Nitrate	0.01< mg/l
			01/24/89	
Chloride	165.0 mg/l		Nitrogen, Kjeldahl	1.63 mg/l
01/23/89			01/31/89	
Chromium	0.01< mg/l		Oil and Grease	1.0< mg/l
01/24/89			01/26/89	
Copper	0.010< mg/l		Phosphorus, Total	0.01< mg/l
01/24/89				

Respectfully submitted, 2/7/89
COMMERCIAL TESTING & ENGINEERING CO.

ANALYST: D. J. J. J.

Manager, Huntington Laboratory

Original Copy Watermarked
For Your Protection

OVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS,
TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIES



COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • (312) 953-9300

SINCE 1908

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

February 10, 1989

Job No.: 9529

Sample ID:

Date Rec'd: January 20, 1989

WELL #1

Date Sampled: December 23, 1988

Level 110'

Sampled By:

Temperature 13 degrees C
pH 7.1

Conductivity 1510

Rec'd 800 hr.

No Sampling Time

Amended (Analysis Added)

ANDALEX RESOURCES, INC.

P.O. Box 902

Price, UT 84501

WATER ANALYSIS

Potassium	17.60 mg/l	Solids, Dissolved	2520.0 mg/l
01/20/89		01/24/89	
Selenium	0.002< mg/l	Solids, Suspended	14.0 mg/l
01/31/89		01/24/89	
Silver	0.010< mg/l	Sulfate	1400.0 mg/l
01/24/89		01/23/89	
Sodium	89.70 mg/l	Zinc	0.01< mg/l
01/20/89		01/24/89	

ANALYST: D. Lopez

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

W W
Manager, Huntington Laboratory

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TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIES



ANDALEX
RESOURCES, INC.
Tower Division

M E M O R A N D U M

TO: DOGM, General Inspection File
FROM: Michael W. Glasson
DATE: October 5, 1988
SUBJECT: 1988 3rd Quarter Water Monitoring

WATER MONITORING 3RD QUARTER, 1988

7-1	No Flow
8-1	No Flow
S18-1	No Flow
18-2	No Flow
18-3	No Flow
18-4	No Flow
S25-1	Analysis attached
25-2	No Flow
Well #1	Analysis attached

MWG/amr



COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • (312) 953-9300

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

October 10, 1988

Job No.: 9425
Date Rec'd: September 28, 1988
Date Sampled: September 27, 1988
Sampled By: ANDALEX

Sample ID:
US 1680
103'
11 Degrees C
Well #1
Field PH = 7.0
Rec'd in Price 092788 at 1730
Rec'd in Huntington 830 hr.
No sampling time given

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

WATER ANALYSIS

Acidity	84	mg/l CaCO ₃	Copper	0.010<	mg/l
10/03/88			09/28/88		
Alk., Bicarbonate	683	mg/l HCO ₃	Fluoride	0.56	mg/l
10/03/88			09/28/88		
Alk., Carbonate	1<	mg/l CaCO ₃	Hardness, Total	1992	mg/l CaCO ₃
10/03/88					
Alk., Total	560	mg/l CaCO ₃	Iron	0.66	mg/l
10/03/88			09/28/88		
Arsenic	0.002<	mg/l	Iron, Dissolved	0.66	mg/l
10/03/88			09/28/88		
Anions, Total	46.83	meq/l	Lead	0.100	mg/l
			09/28/88		
Barium	0.03<	mg/l	Magnesium	298.60	mg/l
10/04/88			09/29/88		
Boron	0.48	mg/l	Manganese	0.19	mg/l
10/04/88			09/29/88		
Cadmium	0.009	mg/l	Mercury	0.001<	mg/l
09/28/88			10/04/88		
Calcium	305.2	mg/l	Molybdenum	0.10	mg/l
09/29/88			10/04/88		
Cations, Total	44.55	meq/l	Nitrogen, Ammonia	3.29	mg/l
			10/07/88		
Chloride	270.0	mg/l	Nitrogen, Nitrate	0.17	mg/l
10/04/88			09/29/88		
Chromium	0.01<	mg/l	Nitrogen, Kjeldahl	3.43	mg/l
10/04/88			10/07/88		
Conductivity	3150	umhos/cm	Oil and Grease	1.0<	mg/l
09/30/88					

Respectfully submitted, /88
COMMERCIAL TESTING & ENGINEERING CO.

ANALYST: D. Tyson

U U

Manager, Huntington Laboratory

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OVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS,
TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIES



COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • (312) 953-9300

SINCE 1908

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

October 10, 1988

Job No.: 9425
Date Rec'd: September 28, 1988
Date Sampled: September 27, 1988
Sampled By: ANDALEX

Sample ID:
US 1680
103'
11 Degrees C
Well #1
Field PH = 7.0
Rec'd in Price 092788 at 1730
Rec'd in Huntington 830 hr.
No sampling time given

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

WATER ANALYSIS

Phosphorus, Total	0.01< mg/l	Solids, Dissolved	2723.0 mg/l
09/29/88		10/03/88	
Potassium	20.20 mg/l	Solids, Suspended	1.0< mg/l
09/29/88		10/03/88	
Selenium	0.002< mg/l	Sulfate	1350.0 mg/l
10/03/88		10/03/88	
Silver	0.010< mg/l	T K N	3.43 mg/l
09/28/88		10/07/88	
Sodium	99.60 mg/l	Zinc	0.03 mg/l
09/29/88		09/28/88	

ANALYST: D. Tyson

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

M U
Manager, Huntington Laboratory

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OVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS,
TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIES

**COMMERCIAL TESTING & ENGINEERING CO.**

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • (312) 953-9300

SINCE 1908

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

October 10, 1988

Job No.: 9425

Sample ID:

Date Rec'd: September 28, 1988

US 1680

Date Sampled: September 27, 1988

103'

Sampled By: ANDALEX

11 Degrees C

Well #1

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

Field PH = 7.0

Rec'd in Price 092788 at 1730

Rec'd in Huntington 830 hr.

No sampling time given

WATER ANALYSIS

Phosphorus, Total	0.01< mg/l	Solids, Dissolved	2723.0 mg/l
09/29/88		10/03/88	
Potassium	20.20 mg/l	Solids, Suspended	1.0< mg/l
09/29/88		10/03/88	
Selenium	0.002< mg/l	Sulfate	1350.0 mg/l
10/03/88		10/03/88	
Silver	0.010< mg/l	T K N	3.43 mg/l
09/28/88		10/07/88	
Sodium	99.60 mg/l	Zinc	0.03 mg/l
09/29/88		09/28/88	

ANALYST: D. TysonRespectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.
Manager, Huntington LaboratoryOriginal Copy Watermarked
For Your ProtectionOVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS,
TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIES



ANDALEX

RESOURCES, INC.

Tower Division

M E M O R A N D U M

TO: DOGM, General Inspection File

FROM: Michael W. Glasson

DATE: June 31, 1988

SUBJECT: 1988 2nd Quarter Water Monitoring

WATER MONITORING 2ND QUARTER, 1988

7-1	Sampled 5-30-88
8-1	No Flow
S18-1	Overflowed by 18-4
18-2	No Flow
18-3	No Flow
18-4	Sampled 5-30-88
S25-1	No Access
25-2	No Access
Well #1	Sampled 6-31-88

MWG/amr

H₂O Temp

Well 1 19°

7-1 11°

18-4 12°



ANDALEX
RESOURCES, INC.
Tower Division

M E M O R A N D U M

TO: DOGM, General Inspection File
FROM: Michael W. Glasson *MWG*
DATE: June 24, 1988
SUBJECT: 1988 1st Quarter Water Monitoring

WATER MONITORING 1ST QUARTER, 1988

7-1	No Flow
8-1	No Flow
S18-1	Analysis Attached
18-2	No Flow
18-3	No Flow
18-4	No Flow
S25-1	No Flow
25-2	No Flow
Well #1	Analysis Attached

MWG/amr



COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • (312) 953-9300

SINCE 1908

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

February 24, 1988

Job No.: 9122
Date Rec'd: February 11, 1988
Date Sampled: February 9, 1988
Sampled By: ANDALEX

Sample ID:
ANDALEX WELL #1
No Time Sampled
Rec'd at 8:30 a.m. hr.
pH ran at 12:30 p.m. hr.

Andalex
P.O. Box 902
Price, Utah 84501

COMMERCIAL TESTING & ENGINEERING CO.
1919 SOUTH HIGHLAND AVE.
LOMBARD, ILLINOIS 60148

TEL: 312-953-9300
FAX: 312-953-9301

LABORATORY REPORT

WATER ANALYSIS

Phosphorus, Total	0.02	mg/l	Solids, Dissolved	2980.0	mg/l
02/18/88			02/12/88		
Potassium	27.30	mg/l	Solids, Suspended	1.04	mg/l
02/15/88			02/12/88		
Selenium	0.008	mg/l	Sulfate	1110.0	mg/l
02/18/88			02/16/88		
Silver	0.016	mg/l	T K N	2.28	mg/l
02/17/88			02/23/88		
Sodium	98.60	mg/l	Zinc	0.05	mg/l
02/15/88			02/17/88		

ANALYSE

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

OVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS,
TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIES

COMMERCIAL TESTING & ENGINEERING CO.

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

February 24, 1988

Job No.: 9124

Sample ID:

Date Rec'd: February 17, 1988

S18-1

Date Sampled: February 12, 1988

No Time Sampled

Rec'd at 8:00 a.m. hr.

Sampled By: ANDALEX

pH ran at 9:15 a.m. hr.

Andalex
P.O. Box 902
Price, Utah 84501

WATER ANALYSIS

Acidity	199	mg/l	CaCO ₃	Copper	0.010<	mg/l
02/17/88				02/17/88		
Alk., Bicarbonate	567	mg/l	HCO ₃	Fluoride	0.31	mg/l
02/17/88				02/18/88		
Alk., Carbonate	1<	mg/l	CaCO ₃	Hardness, Total	1743	mg/l CaCO ₃
02/17/88						
Alk., Total	465	mg/l	CaCO ₃	Iron	0.46	mg/l
02/17/88				02/18/88		
Arsenic	0.002<	mg/l		Iron, Dissolved	0.46	mg/l
02/18/88				02/18/88		
Anions, Total	41.83	meq/l		Lead	0.050<	mg/l
				02/17/88		
Barium	0.02<	mg/l		Magnesium	268.40	mg/l
02/18/88				02/18/88		
Boron	0.47	mg/l		Manganese	0.08	mg/l
02/20/88				02/17/88		
Cadmium	0.005	mg/l		Mercury	0.002<	mg/l
02/17/88				02/19/88		
Calcium	255.5	mg/l		Molybdenum	0.01 <	mg/l
02/17/88				02/19/88		
Cations, Total	41.03	meq/l		Nitrogen, Ammonia	0.00	mg/l
				02/23/88		
Chloride	270.0	mg/l		Nitrogen, Nitrate	0.93	mg/l
02/18/88				02/18/88		
Chromium	0.05	mg/l		Oil and Grease	7.0	mg/l
02/18/88				02/17/88		
Conductivity	2090	umhos/cm		pH	7.47	Units
02/17/88				02/17/88		

ANALYST: *R. T. Jordan*

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

[Signature]
Manager, Huntington Laboratory

OVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS,
TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIES

COMMERCIAL TESTING & ENGINEERING CO.

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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

February 24, 1988

Job No.: 9124
Date Rec'd: February 17, 1988
Date Sampled: February 12, 1988
Sampled By: ANDALEX

Sample ID:
S18-1
No Time Sampled
Rec'd at 8:00 a.m. hr.
pH ran at 9:15 a.m. hr.

Andalex
P.O. Box 902
Price, Utah 84501

ANDALEX RESOURCE, INC.

WATER ANALYSIS

Phosphorus, Total	0.01 <	mg/l	Solids, Dissolved	1056.0	mg/l
02/18/88			02/17/88		
Potassium	16.10	mg/l	Solids, Suspended	1.0 <	mg/l
02/18/88			02/17/88		
Selenium	0.006	mg/l	Sulfate	1200.0	mg/l
02/18/88			02/18/88		
Silver	0.029	mg/l	T K N	2.40	mg/l
02/17/88			02/23/88		
Sodium	134.30	mg/l	Zinc	0.02	mg/l
02/18/88			02/17/88		

ANALYST:

D. Tyson

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

OVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS,
TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIES

Bruce T. S. Ware

REGISTERED LAND SURVEYOR
RT. 1, BOX 146 H-2 HELPER, UTAH 84526
Phone 637-2620 May 24, 1988

Andalex Resources Inc.
Attn: Mile Glason
P. O. Box 902
Price, Utah 84501

Dear Mr. Glason,

As you requested I surveyed to your Companie's Subsidence Monitoring Points on May 21, 1988. I have calculated the survey and find that there has been no movement (horizontal or vertical) of the points since they were established.

RECEIVED

JUN - 2 1988

ANDALEX RESOURCES, INC.

Sincerely

Bruce T. S. Ware

SEDIMENTATION POND A

Inspection Report

DATE	COMMENTS
Feb. 20 1985	Very small amount of water standing
March 31	all OK No Problems
April 25	Water in Pond from runoff - no prob (very little water)
May 23	No water, no problems
9-1-30-86	Small amount of water
12-30-86	No water, No Problems (Quarterly Inspection approved)
4-1-87	Small amount of snowmelt from winter snow storage. Approval pending to use Pond A dike as topsoil substitute material
7/27/87	Dike approved, as topsoil straw dike placed around it for protection, inlet to pond a diverted to lower cell of pond B via concrete lined ditch
9/15/87	Heavy rain Aug 31 - 1.25" / 3hr + 0.5" same 24 hr. Pond A has water in it, breached straw slightly, improved diversion below bathhouse Need to put berm by straw dike when pond dries out.
12/30/87	Some ice in bottom - Topsoil berm is OK Stacking some snow on north end
3/31/88	Still some dirty ice at north end. New topsoil dike is stable

SEDIMENTATION POND C

Inspection Report

DATE	COMMENTS
Feb 20 1985	Runoff water in Pond - Snowmelt.
March 31	Pushed in some snow from dike & at the request of DOBM, Holland Shepherd, Sue Linner, some runoff south inlet functioning
April 25	Water standing in pond, no problems
May 23	Worked on south inlet, made it larger, runoff in pond
9-30-86	Water in pond - dirtwork needed around stand pipe - small amount of settling
12-30-86	South inlet functioning fine with new road - Small layers of ice in bottom of pond. (Quarterly inspections started.
4-1-87	Small amount of water standing in bottom - no problems.
2/27/87	Handled heavy storm on 2/17 - south inlet now concrete lined
9/15/87	South inlet ditch concrete lined to top of Pond B. Handled heavy rain on 8-31. Fixed settling around stand pipe
12/30/87	Ice in bottom. Inlets snow covered but functioning
3/31/88	All functioning properly. All stable, no water
6/30/88	New bed level installed. No obvious problems



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

Norman H. Bangertter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

January 31, 1989

Mr. Sam Quigley, General Manager
Western Operations
Andalex Resources, Inc.
P. O. Box 902
Price, Utah 84501

Dear Mr. Quigley:

Re: Submittal of Annual Report for 1988, Andalex Resources, Inc., Wildcat Loadout Facility, ACT/007/033, and Centennial Project, ACT/007/019, Folder #6, Carbon County, Utah

Enclosed you will find the 1988 annual report form which must have a copy for each mine submitted to the Division by March 31, 1989. Please submit the attached one-page sheet with reports for all applicable categories appended.

We appreciate your timely consideration of this reporting.

Sincerely,

Lowell P. Braxton

Lowell P. Braxton
Administrator
Mineral Resource Development
and Reclamation Program

djh
Enclosure(s)
AT57/1

COAL MINING AND RECLAMATION OPERATIONS FOR 1988
(Authority UMC 784)

(Must be submitted to the Division by March 31, 1989)

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

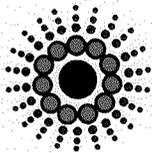
Operator: _____
Mine Name: _____
Mailing Address: _____
Company Representative: _____
Permit Number: _____
Date of Most Recent Permanent Program Permit: _____
Quantity of Coal Mined (tonnage) 1988: _____

Attach Updated Mine Sequence Map.

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

- A. Summarized Water Monitoring Data
- B. Precipitation or Other Climatological Data
- C. Subsidence Monitoring Report
- D. Vegetation Data (test plots) or Revegetation Success Monitoring (includes interim and final)
- E. Permit Stipulation Status

ACT/007/019 #6



ANDALEX

RESOURCES, INC.

Tower Division

P.O. BOX 902
PRICE, UTAH 84501
PHONE (801) 637-5385
TELEX 381 530 ANDALEX PRIC

March 30, 1988

RECEIVED

MAR 31 1988

Mr. Lowell Braxton
Administrator
Mineral Resource Development
and Reclamation Program
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 DIVISION OF OIL
GAS & MINING
APR 04 1988

DIVISION OF
OIL, GAS & MINING

Dear Mr. Braxton:

Enclosed please find Andalex Resource's 1987 annual reports. Attached is the one page report along with appendicies which include updated mine sequence maps for all three mines, water monitoring data, precipitation data (our rain guage was down prior to August, 1987), subsidence monitoring and the permit stipulation status for ACT 007-019.

Since PRO 007/033 is not a mine, and to date no monitoring has taken place, I have simply returned the one page form with the permit stipulation status.

*See
is this OR?*

Sincerely,

Michael W. Glasson
Senior Geologist

MWG/dg

Enclosures

cc: File

[Revised January 1988]



COAL MINING AND RECLAMATION OPERATIONS FOR 1987
(Authority UMC 784)

OIL GAS & MINING

(Must be submitted to the Division by March 31, 1988)

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, UT 84180-1203
(801) 538-5340

Operator: Andalex Resources, Inc.

Mine Name: Centennial Mines (Pinnacle)

Mailing Address: P.O. Box 902, Price, Utah 84501

Company Representative: Michael W. Glasson

Permit Number: ACT 007/019-1

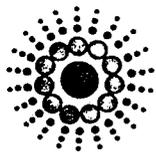
Date of Most Recent Permanent Program Permit: March 3, 1987

Quantity of Coal Mined (tonnage) 1987: 401,000

Attach Updated Mine Sequence Map.

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

- A. Summarized Water Monitoring Data
- B. Precipitation or Other Climatological Data
- C. Subsidence Monitoring Report
- D. Vegetation Data (test plots) or Revegetation Success Monitoring (includes interim and final)
- E. Permit Stipulation Status



ANDALEX
RESOURCES, INC.
Tower Division

M E M O R A N D U M

TO: DOGM, General Inspection, File
FROM: - Michael W. Glasson
SUBJECT: 1987 1st Quarter Water Monitoring

WATER MONITORING 1ST QUARTER, 1987

7-1	No Flow
8-1	No Flow
S18-1	No Flow
18-2	No Flow
18-3	No Flow
18-4	No Flow
S25-1	No Flow
25-2	No Flow
Well #1	Analysis Attached



RECEIVED

3-10-87

ANDELEX RESOURCES, INC.

ANALYTICAL REPORT

CLIENT: Andelex Resources
P.O. Box 902
Price, Utah 84501

JOB NO: 1416
DATE REC'D: 3-10-87
DATE SAMPLED: 3-06-87
P.O. #:

ATTN: Mike Glasson

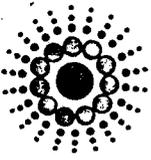
SAMPLE ID: Well #1

Acidity	0	mg/lCaCO ₃	Arsenic	<0.002	mg/l
Alkalinity, Total	643	mg/lCaCO ₃	Barium	<0.10	mg/l
Alkalinity, Carbonate	784	mg/HCO ₃	Boron	0.75	mg/l
Chloride	250.0	mg/l	Cadmium	<0.002	mg/l
Conductivity	3,500	mg/l	Calcium	272.0	mg/l
Fluoride	0.41	mg/l	Chromium	<0.05	mg/l
Nitrogen, Ammonia	<0.50	mg/l	Copper	<0.03	mg/l
Nitrogen, Nitrate	<0.05	mg/l	Iron	0.06	mg/l
Oil & Grease	2.1	mg/l	Lead	<0.05	mg/l
pH	6.85	mg/l	Magnesium	347.8	mg/l
Phosphorus, Ortho	<0.05	mg/l	Manganese	0.15	mg/l
Phosphorus, Total	<0.05	mg/l	Mercury	<0.50	ug/l
Solids, Total Dissolved	2,808	mg/l	Potassium	17.9	mg/l
Solids, Total Suspended	<5.0	mg/l	Selenium	<0.005	mg/l
Sulfate	1,350	mg/l	Sodium	114.0	mg/l
TKN	<1.0	mg/l	Zinc	0.02	mg/l
Total Cations	47.66	meq/l	Diss. Iron	<0.05	mg/l
Total Anions	48.04	meq/l	Molybdenum	<0.20	mg/l
			Silver	<0.01	mg/l

Supervisor: Mike Glasson
Reviewed and approved: 4-02-87

Respectfully submitted,

Ray A. Sim, Director



ANDALEX
RESOURCES, INC.
Tower Division

M E M O R A N D U M

TO: DOGM, General Inspection, File
FROM: Michael W. Glasson
DATE: July 9, 1987
SUBJECT: 1987 2nd Quarter Water Monitoring

WATER MONITORING 2ND QUARTER, 1987

7-1	No Flow
8-1	No Flow
S18-1	No Flow
18-2	No Flow
18-3	No Flow
18-4	No Flow
S25-1	No Flow
25-2	No Flow
Well #1	Analysis Attached

MWG/amr



ANALYTICAL REPORT

JUN 0 1987

ANALYTICAL TECHNOLOGIES, INC.

CLIENT: Andalex Resources
P.O. Box 902
Price, Utah 84501

LAB NO: 2073
DATE REC'D: 6-19-87
DATE SAMPLED: 6-18-87

ATTN: Mr. Mike Glasson

SAMPLE ID: Well #1

<u>ANALYSIS</u>	<u>RESULT AS RECEIVED</u>	<u>METALS:</u>	<u>RESULT AS RECEIVED</u>
Acidity	0 mg/lCaCO ₃	Arsenic	<0.002 mg/l
Alkalinity, Total	630 mg/lCaCO ₃	Barium	<0.10 mg/l
Alkalinity, Bicarbonate	769 mg/lHCO ₃	Boron	0.63 mg/l
Alkalinity, Carbonate	0 mg/lCaCO ₃	Cadmium	<0.002 mg/l
Chloride	578.7 mg/l	Calcium	376 mg/l
Conductivity	3,875 umhos/cm	Chromium	<0.05 mg/l
Nitrogen, Ammonia	<0.50 mg/l	Copper	<0.03 mg/l
Nitrogen, Nitrate	<0.05 mg/l	Iron	0.07 mg/l
Oil & Grease	<2.0 mg/l	Lead	<0.05 mg/l
pH	6.94 Units	Magnesium	341.7 mg/l
Phosphorus, Ortho	<0.05 mg/l	Manganese	0.18 mg/l
Phosphorus, Total	<0.05 mg/l	Mercury	<0.50 ug/l
Solids, Total Dissolved	3,110 mg/l	Potassium	18.6 mg/l
Solids, Total Suspended	<5.0 mg/l	Selenium	<0.005 mg/l
Sulfate	52.26 mg/l	Sodium	113.0 mg/l
Cyanide, Total	<0.05 mg/l	Zinc	0.01 mg/l
TKN	<1.0 mg/l	Diss. Iron	0.05 mg/l
Fluoride	0.40 mg/l	Silver	<0.01 mg/l
		Molybdenum	<0.10 mg/l

Supervisor: [Signature]
Reviewed and approved: 06/30/87

Respectfully submitted,

Ray A. Sim, Director



ANDALEX
RESOURCES, INC.
Tower Division

M E M O R A N D U M

TO: DOGM, General Inspection, File
FROM: Michael W. Glasson
DATE: October 5, 1987
SUBJECT: 1987 3rd Quarter Water Monitoring

WATER MONITORING 3RD QUARTER, 1987

7-1	No Flow
801	No Flow
S18-1	No Flow
18-2	No Flow
18-3	No Flow
18-4	No Flow
S25-1	Analysis Attached
25-2	No Flow
Well #1	Analysis Attached

MWG/amr



**MOUNTAIN
STATES
ANALYTICAL**

ANALYTICAL REPORT

CLIENT: Andalex Resources
P.O. Box 902
Price, Utah 84501

LAB NO: 2748
DATE REC'D: 09/09/87
DATE SAMPLED: 09/03/87

ATTN: Mr. Mike Glasson

SAMPLE ID: Well #1

<u>CHEMICALS:</u>	<u>RESULT</u> <u>AS RECEIVED</u>	<u>METALS:</u>	<u>RESULT</u> <u>AS RECEIVED</u>
Acidity	0 mg/lCaCO3	Arsenic	<0.002 mg/l
Alkalinity, Total	618 mg/lCaCO3	Barium	<0.10 mg/l
Alkalinity, Carbonate	0 mg/lCaCO3	Boron	0.65 mg/l
Chloride	663.5 mg/l	Cadmium	<0.002 mg/l
Conductivity	4,040 umhos/cm	Calcium	296.0 mg/l
Fluoride	0.40 mg/l	Chromium	<0.05 mg/l
Nitrogen, Ammonia	<0.50 mg/l	Copper	<0.03 mg/l
Nitrogen, Nitrate	<0.05 mg/l	Iron	0.58 mg/l
Oil & Grease	<2.0 mg/l	Lead	<0.05 mg/l
pH	7.05 Units	Magnesium	407.4 mg/l
Phosphorus, Ortho	<0.05 mg/l	Manganese	0.17 mg/l
Phosphorus, Total	<0.05 mg/l	Mercury	<0.50 ug/l
Solids, Total Dissolved	3,360 mg/l	Potassium	17.9 mg/l
Solids, Total Suspended	<5.0 mg/l	Selenium	<0.005 mg/l
Sulfate	1,000 mg/l	Sodium	113.2 mg/l
TKN	<1.0 mg/l	Diss. Iron	0.31 mg/l
		Molybdenum	<0.10 mg/l
		Silver	<0.01 mg/l
		Zinc	<0.01 mg/l
Total Anions	53.68 meq/l		
Total Cations	52.32 meq/l		

Supervisor: *Dave Glasson*
Reviewed and approved: 09/30/87

Respectfully submitted,

Ray A. Sim, Director



MOUNTAIN
STATES
ANALYTICAL

ANALYTICAL REPORT

CLIENT: Andalex Resources
P.O. Box 902
Price, Utah 84501

LAB NO: 2747
DATE REC'D: 09/09/87
DATE SAMPLED: 09/03/87

ATTN: Mr. Mike Glasson

SAMPLE ID: ~~525-1~~
S25-1

<u>CHEMICALS:</u>	<u>RESULT</u> <u>AS RECEIVED</u>	<u>METALS:</u>	<u>RESULT</u> <u>AS RECEIVED</u>
Acidity	0 mg/lCaCO3	Arsenic	<0.002 mg/l
Alkalinity, Total	480 mg/lCaCO3	Barium	<0.10 mg/l
Alkalinity, Carbonate	0 mg/lCaCO3	Boron	0.30 mg/l
Chloride	35.0 mg/l	Cadmium	<0.002 mg/l
Conductivity	1,870 umhos/cm	Calcium	166.0 mg/l
Fluoride	0.46 mg/l	Chromium	<0.05 mg/l
Nitrogen, Ammonia	<0.50 mg/l	Copper	<0.03 mg/l
Nitrogen, Nitrate	0.06 mg/l	Iron	0.11 mg/l
Oil & Grease	<2.0 mg/l	Lead	<0.05 mg/l
pH	7.82 Units	Magnesium	183.6 mg/l
Phosphorus, Ortho	<0.05 mg/l	Manganese	0.04 mg/l
Phosphorus, Total	<0.05 mg/l	Mercury	<0.50 ug/l
Solids, Total Dissolved	1,604 mg/l	Potassium	12.7 mg/l
Solids, Total Suspended	<5.0 mg/l	Selenium	<0.005 mg/l
Sulfate	711 mg/l	Sodium	49.3 mg/l
TKN	<1.0 mg/l	Diss. Iron	<0.05 mg/l
		Molybdenum	<0.10 mg/l
		Silver	<0.01 mg/l
		Zinc	0.01 mg/l
Total Anions	25.87 meq/l		
Total Cations	25.40 meq/l		

Supervisor: Dawn Jensen
Reviewed and approved: / 09/30/87

Respectfully submitted,

Ray A. Sim, Director



ANDALEX

RESOURCES, INC.

Tower Division

M E M O R A N D U M

TO: DOGM. General Inspection File

FROM: Michael W. Glasson

DATE: February 8, 1988

SUBJECT: 1987 4th Quarter Water Monitoring

WATER MONITORING 4TH QUARTER, 1987

7-1	No Flow
801 8-1	No Flow
S18-1	No Flow
18-2	Analysis Attached
18-3	No Flow
18-4	No Flow
S25-1	Inaccessible on Sample dates attempted
25-2	" " " " "
Well #1	Analysis Attached

MWG/amr



**MOUNTAIN
STATES
ANALYTICAL**

ANALYTICAL REPORT

CLIENT: Andalex Resources
P.O. Box 902
Price, Utah 84501

LAB NO: 4330
DATE REC'D: 01/19/88
DATE SAMPLED: Unknown
DATE REPORTED: 01/28/88

ATTN: Mike Glasson

SAMPLE ID: S-18-1

<u>CHEMICAL</u>	<u>RESULT AS RECEIVED</u>	<u>METAL</u>	<u>RESULT AS RECEIVED</u>
Acidity	0 mg/lCaCO ₃	Arsenic	<0.002 mg/l
Alkalinity, Total	516 mg/lCaCO ₃	Barium	<0.10 mg/l
Alkalinity, Bicarbonate	630 mg/lHCO ₃	Boron	0.35 mg/l
Alkalinity, Carbonate	0 mg/lCaCO ₃	Cadmium	<0.002 mg/l
Chloride	312 mg/l	Calcium	194 mg/l
Conductivity	3,020 umhos/cm	Chromium	<0.05 mg/l
Fluoride	0.41 mg/l	Copper	0.02 mg/l
Nitrogen, Ammonia	<0.50 mg/l	Iron	0.29 mg/l
Nitrogen, Nitrate	<0.05 mg/l	Lead	<0.05 mg/l
Oil & Grease	<2.0 mg/l	Magnesium	282 mg/l
pH	7.81 Units	Manganese	0.17 mg/l
Phosphorus, Ortho	<0.05 mg/l	Mercury	<0.50 ug/l
Phosphorus, Total	<0.05 mg/l	Potassium	17.8 mg/l
Solids, Total Diss.	2,200 mg/l	Selenium	<0.005 mg/l
Solids, Total Susp.	<5.0 mg/l	Sodium	133.8 mg/l
Sulfate	900 mg/l	Zinc	<0.01 mg/l
TKN	<1.0 mg/l	Diss. Iron	<0.05 mg/l
		Molybdenum	<0.10 mg/l
Total Cations	39.13 meq/l	Silver	<0.01 mg/l
Total Anions	37.88 meq/l		

Reviewed and approved by,

David A. Janusz, Supervisor
Inorganic Division

Respectfully submitted,


William O. Moellmer, Ph.D.
Technical Manager



ANALYTICAL REPORT

CLIENT: Andalex Resources
P.O. Box 902
Price, Utah 84501

LAB NO: 4329
DATE REC'D: 01/19/88
DATE SAMPLED: 12/07/87
DATE REPORTED: 01/28/88

ATTN: Mike Glasson

SAMPLE ID: Well #1

Table with 4 columns: CHEMICAL, RESULT AS RECEIVED, METAL, RESULT AS RECEIVED. Lists various chemical and metal concentrations such as Acidity, Alkalinity, Chloride, and Arsenic.

*No Oil & Grease bottle was submitted

Reviewed and approved by,

David A. Janusz, Supervisor
Inorganic Division

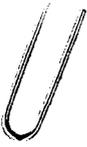
Respectfully submitted,

Signature of William O. Moellmer, Ph.D.
Technical Manager

1987 Precipitation

ACT 007/019-1

<u>Date</u>	<u>Rainfall</u>	<u>Comments</u>
08-24	1.75"	1.25" in 3 hours
09-14	0.17	
09-16	0.03	
10-13	1.45	
10-21	0.66	
10-24	0.19	
10-31 thru 11-01	3.20	Weekend
11-03	0.09	
11-05	0.48	
11-07 thru 11-08	0.16	
11-14	0.36	



Bruce T. S. Ware

REGISTERED LAND SURVEYOR
RT. 1, BOX 146 H-2 HELPER, UTAH 84526
Phone 637-2620 May 27, 1987

Andalex Resources Inc.
Attn; Mike Glasson
P. O. Box 902
Price, Utah 84501

Dear Mr. Glasson,

As you requested I surveyed to your Companies Subsidence Monitoring Points on May 22, 1987. I have calculated the survey and find that there has been no movement(horizontal or vertical) of the points since they were established.

Sincerely

Bruce T. S. Ware

Permit Stipulation Status

ACT 007/019-1

Our complete MRP was last submitted on March 10, 1988. This was in response to the Division's permit stipulation review received by Andalex in December, 1987. This submittal is for Andalex's 5 year renewal which was issued in March of 1987. It is currently being reviewed by the Division staff.