PERMIT CHANGE TRACKING FORM

- ☐ Significant Permit Revision
- ☐ Permit Amendment
- ☐ Incidental Boundary Change

DATE RECEIVED 9-5-95	By: SO (Mail)	PERMIT NUMBER	ACT/007/033
Title of Proposal: Stockpile Culvert Installation		PERMIT CHANGE #	95B
Description: Install 12" CMP to carry runoff from the stockpile pad to the drainage ditch below.		PERMITTEE	ANDALEX RESOURCES, INC.
		MINE NAME	WILDCAT LOADOUT

	DATE DUE	DATE DONE	RESULT	
☐ 15 DAY INITIAL RESPONSE TO PERMIT CHANGE APPLICATION		✓	☐ ACCEPTED	☐ REJECTED
☐ Notice of Review Status of proposed permit change sent to the Permittee.			COMMENTS	
☐ Responses Received.				
☐ Notice of Affidavit of Publication. (If change is a Significant Revision.)				

REVIEW TRACKING	INITIAL REVIEW		MODIFIED REVIEW		FINAL REVIEW AND FINDINGS	
DOGM REVIEWER	DUE	DONE	DUE	DONE	DUE	DONE
☐ Lead ____						
☐ TA (See Attached) ____						
☐ Reviewers ____						
☐ Administrative (AVS) ____						
☐ Biology ____						
☐ Engineering ____						
☐ Geology ____						
☐ Soils ____						
☐ Hydrology ____						

COORDINATED REVIEWS	SENT	DUE	RECEIVED	SENT	DUE	DONE
☐ OSMRE						
☐ US Forest Service						
☐ Bureau of Land Management						
☐ US Fish and Wildlife Service						
☐ US National Parks Service						
☐ UT Environmental Quality						
☐ UT Water Resources						
☐ UT Water Rights						
☐ UT Wildlife Resources						
☐ UT State History (SHPO)						
☐ State Trust Lands						

☐ Public Notice / Comment / Hearing Complete. (If the permit change is a Significant Revision)		☒ Permit Change Approval Form signed and approved effective as of this date. ☐ Permit Change Denied.	9-11-95
☐ Copies of permit change marked and ready for MRP.		☒ Notice of ☒ Approval ☐ Denial to Permittee.	9-11-95
☐ Special Conditions/Stipulations written for approval.		☒ Copy of Approved Permit Change to File.	9-11-95
☐ TA and CHIA modified as required.		☒ Copy of Approved Permit Change to Permittee.	9-11-95
☐ Permit Change Approval Form ready for approval.		☒ Copies to Other Agencies and ~~Price Field Office~~ SLO.	9-11-95

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

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
801-359-3940 (Fax)
801-538-5319 (TDD)

September 11, 1995

TO: Joe Helfrich, Permit Supervisor

FROM: Stephen Demczak, Reclamation Specialist III

RE: Installation of Two 12" Culverts from Pad Area Runoff, Wildcat Loadout, Andalex Resources, Inc., ACT/007/033-95B, Folder #3, Carbon County, Utah

Andalex Resources, Inc. has addressed and met the requirements of the R645 regulations and ACT/007/033-95B is therefore approved effective September 11, 1995.

FINDINGS DOCUMENT

1) The permittee has submitted all the necessary designs and calculations for installing two 12" inch culverts from the pad area to the disturb diversion ditch. The drainage ditch which accepts water flow from the pad area has been designed for this drainage area, and therefore does not need to be re-designed. The calculations and maps are P.E. certified as required in the R645 regulations.

2) Installing two additional culverts within the disturb area does not need to reviewed by any other agencies, since it does not change any existing environmental concerns.

3) The bonding amount will not need to be changed since there is a contingence to the bond greater than the costs of removing the two culverts.

4) This amendment will not have any impact on the hydrologic balance of this area.

5) The Technical Analysis document does not need to be updated with this amendment.

sd
Enclosure
cc: J. Fulton, OSM, Denver
M. Bailey, BLM, Price
M. Page, State Eng, Price
B. Bradford, DEQ, SLC
R. Valentine, DWR, SLC

DIV OIL GAS & MINING

Form DOGM - C1 (Last Revised 6/93) File Folder # 3

APPLICATION FOR PERMIT CHANGE

Title of Change:

STOCKPILE CULVERT INSTALLATION

Permit Number: ACT/007/033

Mine: Wildcat Loadout

Permittee: Andalex Resources, Inc.

Description, Include reason for change and timing required to implement: INSTALL 12" CMP TO CARRY RUN-OFF FROM THE COAL STOCKPILE PAD TO THE DRAINAGE DITCH BELOW. THIS WILL ELIMINATE EROSION PROBLEMS IN THESE LOCATIONS. TIME TO IMPLEMENT IS IMMEDIATELY.

☐ Yes	☒ No	1. Change in the size of the Permit Area? ____ acres ☐ increase ☐ decrease.
☐ Yes	☒ No	2. Change in the size of the Disturbed Area? ____ acres ☐ increase ☐ decrease.
☐ Yes	☒ No	3. Will permit change include operations outside the Cumulative Hydrologic Impact Area?
☐ Yes	☒ No	4. Will permit change include operations in hydrologic basins other than currently approved?
☐ Yes	☒ No	5. Does permit change result from incidental boundary movement of increase of insurance or reclamation bond?
☐ Yes	☒ No	6. Does the permit change require or include public notice/hearings?
☐ Yes	☒ No	7. Does the permit change qualify as Technical Revision, requiring Fast-track review?
☐ Yes	☒ No	8. Permit change as a result of a Violation? Violation #
☐ Yes	☒ No	9. Permit change as a result of Division Order? D.O. #
☐ Yes	☒ No	10. Permit change as a result of other laws or regulations or policies? Explain:
☐ Yes	☒ No	11. Does the permit change affect the surface landowner or change the post mining land use?
☐ Yes	☒ No	12. Does permit change require or include collection and reporting of any baseline information?
☐ Yes	☒ No	13. Could the permit change have any effect on wildlife or vegetation outside the current disturbed area?
☐ Yes	☒ No	14. Does permit change require or include soil removal, storage or placement?
☐ Yes	☒ No	15. Does permit change require or include vegetation monitoring, removal or revegetation activities?
☒ Yes	☐ No	16. Does permit change require or include construction, modification, or removal of surface facilities?
☒ Yes	☐ No	17. Does permit change require or include water monitoring, sediment or drainage control measures?
☒ Yes	☐ No	18. Does permit change require or include certified designs, maps, or calculations?
☐ Yes	☒ No	19. Does permit change require or include underground design or mine sequence and timing?
☐ Yes	☒ No	20. Does permit change require or include subsidence control or monitoring?
☐ Yes	☒ No	21. Have reclamation costs for bonding been provided for any change in the reclamation plan?
☐ Yes	☒ No	22. Is permit change within 100 feet of a public road or perennial stream or 500 feet of an occupied dwelling?
☐ Yes	☒ No	23. Is this coal exploration activity?

SEP - 5 1995

DIV OF OIL, GAS & MINING

XX Attach 11 complete copies of proposed permit change as it would be incorporated into the Mining and Reclamation Plan.

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Signed - Name - Position - Date

Subscribed and sworn to before me this 30 day of Aug, 19 95.

Notary Public

My Commission Expires: July 22, 19 97

Attest: STATE OF Utah
COUNTY OF Carbon

Notary Public
JANA K. O'LEARON
833 North 100 East
Price, Utah 84501
My Commission Expires
July 22, 1997
State of Utah

Received by Oil, Gas & Mining

ASSIGNED PERMIT CHANGE NUMBER

Form DOGM - C2 (Last Revised 6/93) File Folder #3

Application for Permit Change
Detailed Schedule of Changes to the Permit

Title of Change: STOCKPILE CULVERT INSTALLATION	**Permit Number:** ACT / 007 / 033
	Mine: WILDCAT LOADOUT
	Permittee: ANDALEX RESORUCES, INC.

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed permit change. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the exiting mining and reclamation plan. Include page, section and drawing numbers as part of the description.

			DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED
☐ ADD	☒ REPLACE	☐ REMOVE	SURFACE FACILITIES PLATE
☒ ADD	☐ REPLACE	☐ REMOVE	CULVERT SIZING CALCULATIONS TO APP.
☐ ADD	☐ REPLACE	☐ REMOVE	
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☐ ADD	☐ REPLACE	☐ REMOVE	

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GAS & MINING PRICE UTAH

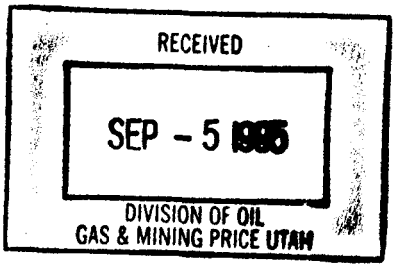
Any other specific or special instructions required for insertion of this proposal into the Mining and Reclamation Plan?

BLACKHAWK ENGINEERING, CO.

Rt. 1, Box 146-H5 - Helper, Utah 84526 - Telephone (801) 637-2422

August 24, 1995

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



Re: Proposed Pad Culverts
Wildcat Loadout

Dear Mr. Glasson:

Per your request, I have calculated the projected flows and proposed culvert sizing for the recently enlarged stockpile pad area. I have estimated the total pad area to be 8.0 acres, with approximately 1/2 (4.0 acres) draining to each of the proposed culverts at the Northeast and Southeast corners. I have also used a conservative estimate of 2% slope on the pad with a hydraulic length of 500'. The rainfall is 1.85 inches for a 10 year-24 hour precipitation event at the Wildcat Loadout. Based on these parameters, the total expected flow to each culvert is 3.81 cfs. The above calculations were performed using the OSM "Storm 6.0" Computer Program.

The expected flow was then routed through a circular channel using the Haestad "Flowmaster" Program, to determine the minimum acceptable culvert diameter. Culvert sizing and velocities were calculated using 25% (1v:4h) and 50% (1v:2h) slopes. Required culvert diameter is 0.72' with a 9.45 fps velocity for the 25% slope, and 0.63' with a 12.25 fps velocity for the 50% slope; therefore, a 12" diameter culvert is adequate to carry the expected flow from 1/2 of the pad area. Exit velocities will be erosive and should be controlled with rip-rap or culvert elbows.

Conclusion:

The expected flow from a 10 year-24 hour event from each 1/2 of the expanded stockpile pad area is 3.81 cfs. This flow can be carried by 12" cmp culverts located at the northeast and southeast corners of the pad. Larger culverts can be used if desired.

If you have any questions, or need any further information, please let me know.

Respectfully,

Dan W. Guy, P.E.
President

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DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD7
roject Title       = WILDCAT PAD 10/24                                            :
ATERSHED HYDROGRAPH                                                               :
     Inflow into structure #  1                                                   :
     Structure type:          Null                                                :
                                                                                  :
                                                                                  :
- Watershed data for watershed # 1                                                :
    Curve number           =     90.0                                             :
    Area                   =      4.0 acres                                       :
    Hydraulic length       =   500.00 feet                                        :
    Elevation change       =     10.0 feet.                                       :
    Concentration time     =     0.10 hours                                       :
    Unit hydrograph type = Disturbed                                              :
                                                                                  :
 - Total Area            =      4.0 acres                                         :
                                                                                  :
 - Storm data                                                                     :
    Total precipitation  =      1.9 inches                                        :
    Storm type           = SCS Type 2 storm, 24 hour storm                        :
    Peak Discharge       =     3.81 cfs                                           :
    Discharge volume     =     0.32 acre ft                                       :
                                                                                  :
<press return to continue or {esc} to skip detail printout>                       :
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD=
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Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: WILDCAT PAD

Comment: PROPOSED S.E. CULVERT

Solve For Full Flow Diameter

Given Input Data:

Slope.....	0.2500 ft/ft
Manning's n.....	0.025
Discharge.....	3.81 cfs

Computed Results:

Full Flow Diameter.....	0.72 ft
Full Flow Depth.....	0.72 ft
Velocity.....	9.45 fps
Flow Area.....	0.40 sf
Critical Depth.....	0.71 ft
Critical Slope.....	0.2300 ft/ft
Percent Full.....	100.00 %
Full Capacity.....	3.81 cfs
QMAX @.94D.....	4.10 cfs
Froude Number.....	FULL

Open Channel Flow Module, Version 3.43 (c) 1991
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: WILDCAT PAD

Comment: PROPOSED N.E. CULVERT

Solve For Full Flow Diameter

Given Input Data:

Slope.....	0.5000 ft/ft
Manning's n.....	0.025
Discharge.....	3.81 cfs

Computed Results:

Full Flow Diameter.....	0.63 ft
Full Flow Depth.....	0.63 ft
Velocity.....	12.25 fps
Flow Area.....	0.31 sf
Critical Depth.....	0.63 ft
Critical Slope.....	0.4780 ft/ft
Percent Full.....	100.00 %
Full Capacity.....	3.81 cfs
QMAX @.94D.....	4.10 cfs
Froude Number.....	FULL

Open Channel Flow Module, Version 3.43 (c) 1991
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708

2,164,000 E

481,000 N

Upper Cell

Permanent Impoundment

Lower Cell

Top Soil Pile E

NEW TOP SOIL STORAGE AREA

Coal Preparation Waste Coal Storage

Coal Storage

Coal Storage

Coal Spray Tank

Power Line

Loadout Conveyor 72"

Coal Stockpile

Radial Stacker

Screen

Truck Dump

Haul Road

West-side Control Bldg.

Loadout Conveyor

D

Reveg. Test Plot

65,000 ton Coal Stockpile

Office

Water Tank

Lump Coal Stockpile

Radial Stacker

36" Conveyor

Sub Station

Power Line

Reveg. Test Plot B

Staker Coal Stockpile

Fuel

Crusher & Screen Bldg.

Water Tank

Control Bldg.

Haul Road

Haul Road

Storage Pad

Haul Road

Draw Down Port E1

Reclaim Tunnel

Draw Down Port E2

80,000 TON COAL STOCKPILE

Drift Fence

Sediment Pond B

Radial Stacker

Yard Conveyor

Shop

Truck Dump

Truck Dump Dozer Trap

Mine Run Coal Storage

Lump Coal Storage

Lump Coal Storage

Top Soil Pile F

Pad Area

Sediment Pond C

Revegetation Reference Area 350' x 125'

Drift Fence

12" CMP x 30'

Sediment Pond E

Sediment Pond D

Haul Road

Fence line

Power Line

MODIFIED DISTURBED AREA BOUNDARY

B.L.M. Right of Way U-48027
Permit Boundary PRO 007-033

2,166,000 E

800,000 N

Haul Road

State Highway (13

Consumers Road

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Wildcat Loadout Drainage Control Proposed Location

SCALE:

50' 0' 100' 200'

August 30, 1995

ACAD REF: WC7

ANDALEX
RESOURCES, INC.
Tower Division