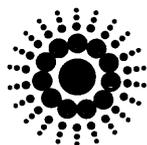


0042



ANDALEX
RESOURCES, INC.

P.O. BOX 902
PRICE, UTAH 84501
PHONE (435) 637-5385
FAX (435) 637-8860

June 23, 2005

Utah Division of Oil, Gas & Mining
Coal program
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

ATTN: Pamela Grubaugh-Littig

Re: C007/019 Centennial GVH 4 Addition

Dear Ms. Littig:

ANDALEX Resources, Inc. herewith submits five copies each of information requested by your staff for the approval of the GVH 4 addition to the MRP. Attached information responds to bonding, sealing, archaeology, soils and vegetation concerns.

Attached are also appropriate C1 and C2 forms. If you have any questions, or need additional information, please let me know.

Sincerely,

Michael W. Glasson, P.G.
Senior Geologist

*Inc. 1
a/007/0019*

RECEIVED

JUN 24 2005

DIV. OF OIL, GAS & MINING

APPLICATION FOR PERMIT PROCESSING

<input checked="" type="checkbox"/> Permit Change X	<input type="checkbox"/> New Permit	<input type="checkbox"/> Renewal	<input type="checkbox"/> Transfer	<input type="checkbox"/> Exploration	<input type="checkbox"/> Bond Release	Permit Number: ACT/007/019
Title of Proposal: GOB GAS VENT HOLE AMENDMENT GVH 4						Mine: Centennial Project
						Permittee: Andalex Resources

Description, include reason for application and timing required to implement: **To enhance mine safety by venting longwall gob gas to the surface.**

Instructions: If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	1. Change in the size of the Permit Area? _____ acres Disturbed Area? _____ acres <input checked="" type="checkbox"/> increase <input type="checkbox"/> decrease.
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	2. Is the application submitted as a result of a Division Order? DO # _____
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	3. Does application include operations outside a previously identified Cumulative Hydrologic Impact Area?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	4. Does application include operations in hydrologic basins other than as currently approved?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	5. Does application result from cancellation, reduction or increase of insurance or reclamation bond?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	6. Does the application require or include public notice/publication?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	7. Does the application require or include ownership, control, right-of-entry, or compliance information?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	9. Is the application submitted as a result of a Violation? NOV # _____
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	10. Is the application submitted as a result of other laws or regulations or policies? Explain: _____
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	11. Does the application affect the surface landowner or change the post mining land use?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2?)
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	13. Does the application require or include collection and reporting of any baseline information?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	15. Does application require or include soil removal, storage or placement?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	16. Does the application require or include vegetation monitoring, removal or revegetation activities?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	17. Does the application require or include construction, modification, or removal of surface facilities?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	18. Does the application require or include water monitoring, sediment or drainage control measures?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	19. Does the application require or include certified designs, maps, or calculations?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	20. Does the application require or include subsidence control or monitoring?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	21. Have reclamation costs for bonding been provided for?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	22. Does application involve a perennial stream, a stream buffer zone or discharges to a stream?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	23. Does the application affect permits issued by other agencies or permits issued to other entities?

X Attach 5 complete copies of the application.

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.

Michael W. Ham S. Gen. 06/22/05
Signed - Name - Position - Date

Subscribed and sworn to before me this 23rd day of June, 19 2005

Linda Kerns
Notary Public
My Commission Expires April 6, 2009
Attest: STATE OF UTAH COUNTY OF CARSON



Notary Public
LINDA KERNS
345 N. 700 E.
Price, UT 84501
My Commission Expires
April 6, 2009
State of Utah

Received by Oil, Gas & Mining

RECEIVED
JUN 24 2005

DIV. OF OIL, GAS & MINING

ASSIGNED TRACKING NUMBER

If settlement or rills occur at the well sites, they will be regraded and revegetated. Refer to Section 244.300.

560 PERFORMANCE STANDARDS

Performance of the well sites will be conducted in accordance with the approved permit and the requirements of R645-301-510 through R645-301-553. **It should be noted that at such time as the wells are no longer in use they will be sealed at the well-head on the surface. This will coincide with the sealing of the respective underground longwall panels which the individual wells serviced.**

Bonding Calculations
Centennial Mine C/007/019

Bond Summary

Direct Costs

Subtotal Demolition and Removal	\$197,591.00
Subtotal Backfilling and Grading	\$358,062.00
Subtotal Revegetation	\$160,025.00
Direct Costs	\$715,678.00

Indirect Costs

Mob/Demob	\$71,568.00	10.0%
Contingency	\$35,784.00	5.0%
Engineering Redesign	\$17,892.00	2.5%
Main Office Expense	\$48,666.00	6.8%
Project Maignement Fee	\$17,892.00	2.5%
Subtotal Indirect Costs	\$191,802.00	26.8%

Total Cost \$907,480.00

Escalation factor		0.0444
Number of years		4
Escalation	\$172,224.00	

Reclamation Cost \$1,079,704.00

Bond Amount (rounded to nearest \$1,000)
2009 Dollars \$1,080,000.00

Bond Posted \$1,080,839.00

Difference Between Cost Estimate and Bond	-\$839.00
Percent Difference	0.08%

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Gob Vent Well 1 2 4 5 6																			
	Structure's Demolition Cost	Mechanical equipment heavy	15055 300 3600	805 /ton								20				tons		20	tons	16100
	Plug Well	Plug Well	AML3	5000 /EA.												5 EA		5	EA	25000
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			41100
	Equipment's Disposal Cost																			
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			41100

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Centennial Mine															
Grading															
Backfill and rough grade pond, canyon and bench areas															
D7R Series II (9-55) (2nd2004)	10565	41.1	0.1	52	163.24	1	163.24	\$/HR	25000	CY	250	CY/HR	100	HR	16324
Subtotal															16324
Haul and spread topsoil															
D7R Series II (9-55) (2nd2004)	13720	53.4	0.1	52	196.49	1	196.49	\$/HR	8000	CY	250	CY/HR	32	HR	6288
Subtotal															6288
Support Personnel															
4,000 gal H2O truck Diesel (20-16) (2N04)	3350	19.85	0.1	42	84.77	1	84.77	\$/HR					32	HR	2713
Subtotal															2713
Total															25325

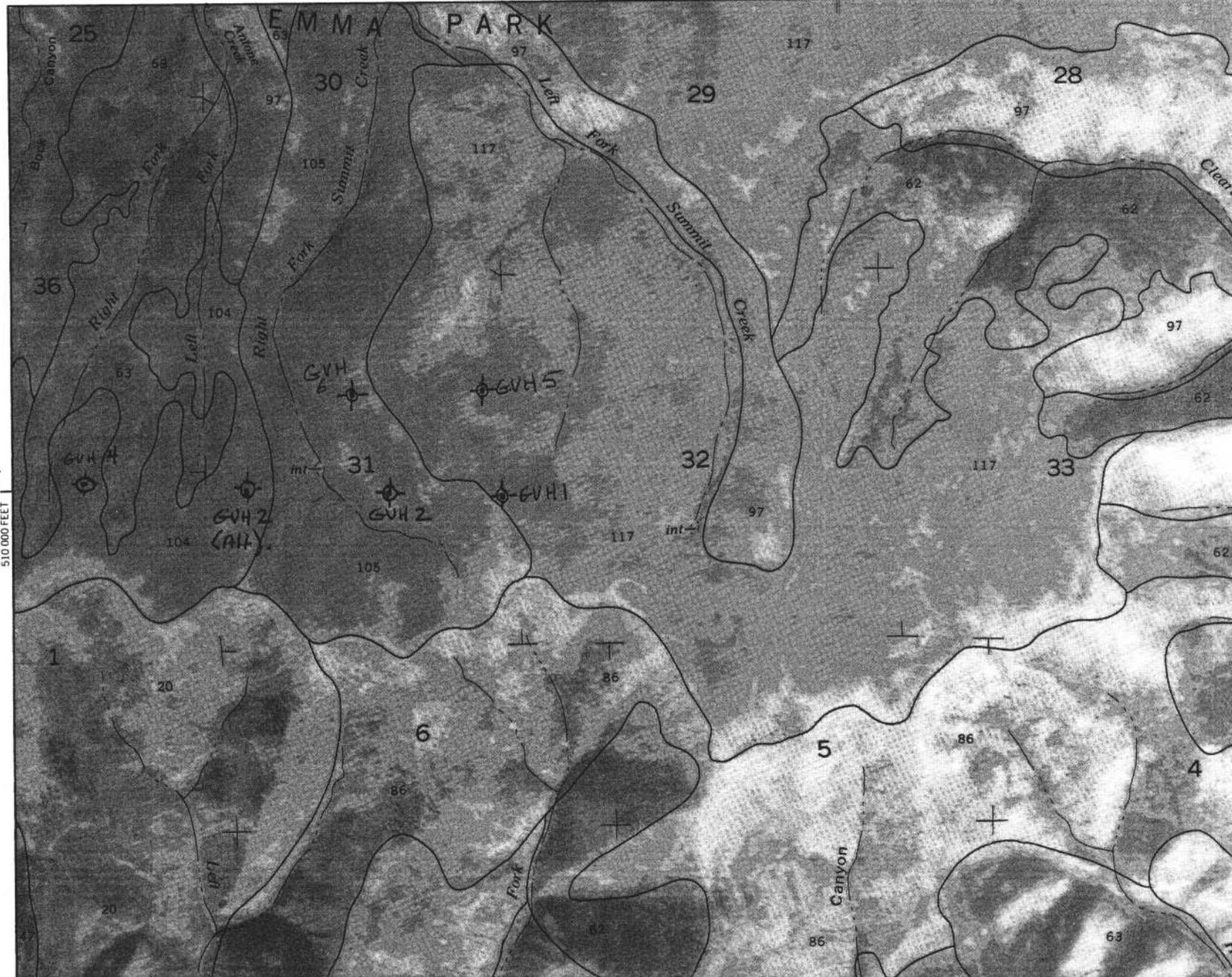
Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Vegetation																			
	Slopes																			
	Ground Preparation																			
	Gouging/Pocking	Excavation Bulk Bank 2 CY (322BL)	M023154240260	1.7	/CY						29201					CY		29201	CY	49642
	Assume vol = area(18.1 AC) x 1 ft.																			
	Seed for hydromulch	Seed Mix for Centennial Drainage	Centennial 001	447.7	\$/AC					18.1						AC		18.1	AC	8103
	Hydroseed application	Hydro Spreader (equip. & labor) B-81 80MS	Reveg002	19.13	/MSF					18.1						AC		788	MSF	15074
	Mulch material	Hay 1" material only 029105000250	Reveg001	68	/MSF					18.1						AC		18.1	AC	1231
	Hydroseed application	Hydro Spreader (equip. & labor) B-81	Reveg005	19.13	/MSF					18.1						AC		788	MSF	15074
	Flat Areas																			
	Ground Preparation																			
	Scarify Area	75 HP Dozerw/scanfiere	M029107103100	3.87	MSF					15.02						AC		654	MSF	2531
	Seed for drilling	Seed Mix for Centennial Slopes	Centennial 002	560.56	\$/AC					15.02						AC		15.02	AC	8419
	Drill seeding	Tractor Spreader (equip. & labor) B-66	Reveg004	10.5	/MSF					15.02						AC		654	MSF	6867
	Drainages																			
	Seedlings material cost	Transplants for Centennial Mine	Centennial 003	2835	\$/AC					2.15						AC		2.15	AC	6095
	Seedlings labor	Common Labor	CLAB	41.55	/HR									16		HR		16	HR	665
	Gob Hole																			
	Ground Preparation																			
	Gouging/Pocking	Excavation Bulk Bank 2 CY (322BL)	M023154240260	1.7	/CY						2000					CY		2000	CY	3400
	Assume vol = area(18.1 AC) x 1 ft.																			
	Seed for hydromulch	Seed Mix for Centennial Drainage	Centennial 001	447.7	\$/AC					5						AC		5	AC	2239
	Hydroseed application	Hydro Spreader (equip. & labor) B-81 80MS	Reveg002	19.13	/MSF					5						AC		218	MSF	4170
	Mulch material	Hay 1" material only 029105000250	Reveg001	68	/MSF					5						AC		5	AC	340
	Hydroseed application	Hydro Spreader (equip. & labor) B-81	Reveg005	19.13	/MSF					5						AC		218	MSF	4170
	Subtotal																			126020
	Reseeding																			32005
	Assume 25% reseeding rate																			
	Subtotal																			32005
	Total																			160025

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

R. 10 E. | R. 11 E. (Joins sheet 4)

1:222,000 FEET

T. 13 S. | T. 12 S.
510,000 FEET



The potential plant community on the Senchert family soil is 60 percent grasses, 25 percent forbs, and 15 percent shrubs. Among the important plants are Thurber fescue, mountain brome, slender wheatgrass, aspen peavine, and mountain big sagebrush.

Management practices that maintain or improve the rangeland vegetation include proper grazing use, a planned grazing system, and proper location of water developments. If the desirable forage plants are mostly depleted, brush management and seeding can be used to improve the rangeland vegetation. Suitable brush management practices include prescribed burning, chemical spraying, and mechanical treatment.

The suitability of the Senchert family soil for rangeland seeding is good. Plants suitable for seeding include adapted native plants and smooth brome, regar brome, alfalfa, and bitterbrush.

This map unit is in capability subclass VIe, nonirrigated. The Senchert soil is in the High Mountain Stony Loam (Engelmann Spruce) woodland site. The Senchert family soil is in the High Mountain Loam (Thurber Fescue) range site.

103—Senchert-Toze family complex. This map unit is on north, east, and west aspects of mountain slopes. It is in the vicinity of the Patmos Head, Mount Bartles, and Jump Creek. Slopes are 15 to 35 percent. The present vegetation is mainly aspen, white fir, and Douglas-fir. Elevation is 7,500 to 9,500 feet. The average annual precipitation is about 20 to 25 inches, the average annual air temperature is 35 to 38 degrees F, and the average freeze-free period is 40 to 60 days.

This unit is 50 percent Senchert loam, clayey substratum, 15 to 30 percent slopes; 30 percent Toze family loam, 15 to 35 percent slopes; and 20 percent other soils. The Senchert soil is in plane areas, and the Toze family soil is in concave areas. The components of this unit are so intricately intermingled that it was not practical to map them separately at the scale used.

Included in this unit are about 5 percent soils that are similar to the Senchert soil but are 40 to 60 inches thick; 5 percent Podo gravelly sandy loam, dry, 8 to 30 percent slopes, on canyon rims; 5 percent Trag clay loam in small sagebrush parks; and 5 percent soils that are similar to the Toze family soil but have slopes of 35 to 50 percent.

The Senchert soil is moderately deep and well drained. It formed in residuum and colluvium derived dominantly from sandstone and shale. Slopes are 300 to 400 feet long and are concave. Typically, the surface is covered with a mat of partially decomposed leaves, twigs, and needles about 1 inch thick. The surface layer is very dark grayish brown loam 4 inches thick. The subsoil is grayish brown clay loam about 14 inches thick. The substratum to a depth of 25 inches is light brownish gray silty clay over calcareous sandstone. Depth to sandstone ranges from 20 to 40 inches.

Permeability of the Senchert soil is moderately slow. Available water capacity is about 3.5 to 5.0 inches. Water supplying capacity is 8.5 to 12.0 inches. Effective rooting depth is 20 to 40 inches. The organic matter content of the surface layer is 5 to 10 percent. Runoff is slow, and the hazard of water erosion is moderate.

The Toze family soil is very deep and well drained. It formed in colluvium derived dominantly from sandstone, siltstone, and shale. Slopes are 200 to 400 feet long and are concave. Typically, the surface is covered with a mat of leaves, twigs, and needles about 1 inch thick. The upper 3 inches of the surface layer is dark grayish brown loam, and the lower 22 inches is dark grayish brown loam and gravelly silt loam. The next layer is grayish brown gravelly silt loam about 8 inches thick. Below this to a depth of 60 inches or more is pale brown very gravelly fine sandy loam. A layer of calcium carbonate accumulation is at a depth of about 24 inches.

Permeability of the Toze family soil is moderate. Available water capacity is about 6 to 9 inches. Water supplying capacity is 11 to 18 inches. The organic matter content of the surface layer is 3 to 5 percent. Effective rooting depth is 60 inches or more. Runoff is medium, and the hazard of water erosion is moderate.

This unit is used as rangeland, woodland, wildlife habitat, and recreation areas.

The potential vegetation on the Senchert and Toze family soils includes an overstory of Douglas-fir with a canopy of 60 percent. The understory vegetation is 10 percent grasses, 5 percent forbs, and 85 percent shrubs. Among the important plants are sedges, mountainlover, snowberry, Oregon-grape, and quaking aspen.

The site index for aspen is 50. Average yield is about 27,200 board feet per acre of trees 12 inches in diameter or more. The unit is moderately limited for producing and harvesting wood products because of the steepness of slope, the hazard of erosion, and plant competition during the regeneration of Douglas-fir.

Management practices that maintain or improve the rangeland vegetation on this unit include proper grazing use, a planned grazing system, and proper location of water developments. The suitability for grazing is poor because of the low forage production. If the Douglas-fir is thinned, the desirable plants present can be expected to increase for a short period before Douglas-fir revegetates the unit.

This map unit is in capability subclass VIIe, nonirrigated, and in the High Mountain Loam (Douglas-fir) range site.

104—Senchert family, 3 to 15 percent slopes. This moderately deep, well drained soil is on rolling ridges and plateaus. It is near Steer Ridge, Bruin Point, and Patmos Head. It is formed in residuum and alluvium derived dominantly from sandstone and shale. Slopes are 3 to 15 percent, 200 to 300 feet long, and slightly concave to convex. The present vegetation is mainly

mountain big sagebrush and Thurber fescue. Elevation is 8,800 to 9,700 feet. The average annual precipitation is about 20 to 30 inches, the average annual air temperature is 36 to 38 degrees F, and the average freeze-free period is 40 to 60 days.

Typically, the surface layer is dark grayish brown loam about 11 inches thick. The subsoil to a depth of 35 inches is dark grayish brown loam and clay loam over sandstone. Depth to sandstone ranges from 20 to 40 inches.

Included in this unit are about 5 percent Beje fine sandy loam intermingled throughout the unit, 5 percent soils that are similar to this Senchert family soil but are more than 40 inches deep to bedrock and are intermingled throughout the unit, 5 percent Senchert loam, 3 to 15 percent slopes, and 5 percent Toze family loam.

Permeability of this Senchert family soil is moderately slow. Available water capacity is about 5 to 7 inches. Water supplying capacity is 12 to 16 inches. Effective rooting depth is 20 to 40 inches. The organic matter content of the surface layer is 5 to 10 percent. Runoff is slow, and the hazard of water erosion is moderate.

This unit is used as rangeland and wildlife habitat.

The potential plant community on the Senchert family soil is 60 percent grasses, 25 percent forbs, and 15 percent shrubs. Among the important plants are Thurber fescue, mountain brome, slender wheatgrass, aspen peavine, and mountain big sagebrush.

Management practices that maintain or improve the rangeland vegetation include proper grazing use, a planned grazing system, and proper location of water developments. If the desirable forage plants are mostly depleted, brush management and seeding can be used to improve the rangeland vegetation. Suitable brush management practices include prescribed burning, chemical spraying, and mechanical treatment.

The suitability of this unit for rangeland seeding is good. Plants suitable for seeding include adapted native plants and smooth brome, regar brome, alfalfa, and bitterbrush.

This map unit is in capability subclass VIe, nonirrigated, and in the High Mountain Loam (Thurber Fescue) range site.

105—Senchert family-Senchert complex. This map unit is on mountain slopes. It is east of Scofield Reservoir. Slopes are 30 to 40 percent, 100 to 200 feet long, and concave to convex. Elevation is 8,000 to 9,100 feet. The average annual precipitation is about 20 to 30 inches, the average annual air temperature is 36 to 38 degrees F, and the average freeze-free period is 40 to 60 days.

This unit is 40 percent Senchert family very fine sandy loam, 30 to 50 percent slopes; 35 percent Senchert loam, 30 to 50 percent slopes; and 25 percent other soils. The components of this unit are so intricately

intermingled that it was not practical to map them separately at the scale used.

Included in this unit are about 15 percent Podo cobbly loam and 10 percent soils that are similar to the Senchert soil but have 35 percent rock fragments and are under oak.

The Senchert family soil is moderately deep and well drained. It formed in alluvium and residuum derived dominantly from calcareous sandstone. The present vegetation is mainly mountain big sagebrush, vetch, and Columbia needlegrass. Typically, the surface layer is brown very fine sandy loam about 8 inches thick. The subsoil is brown clay loam about 16 inches thick. The substratum to a depth of 27 inches is very pale brown clay loam over calcareous sandstone. Depth to sandstone ranges from 20 to 40 inches.

Permeability of the Senchert family soil is moderate. Available water capacity is about 4.0 to 5.5 inches. Water supplying capacity is 9 to 13 inches. Effective rooting depth is 20 to 40 inches. The organic matter content of the surface layer is 5 to 10 percent. Runoff is medium, and the hazard of water erosion is moderate. The hazard of soil blowing is moderate.

The Senchert soil is moderately deep and well drained. It formed in colluvium and residuum derived dominantly from sandstone. The present vegetation is mainly aspen, snowberry, and western coneflower. Typically, the surface layer is very dark grayish brown loam about 4 inches thick. The upper part of the subsoil is brown loam about 12 inches thick, and the lower part to a depth of 35 inches is brown clay loam over sandstone. Depth to sandstone ranges from 20 to 40 inches.

Permeability of the Senchert soil is moderate. Available water capacity is about 5 to 6 inches. Water supplying capacity is 12 to 17 inches. Effective rooting depth is 20 to 40 inches. The organic matter content of the surface layer is 5 to 10 percent. Runoff is medium, and the hazard of water erosion is moderate.

This unit is used as rangeland, woodland, wildlife habitat, recreation areas, and watershed.

The potential vegetation on the Senchert family soil is 60 percent grasses, 25 percent forbs, and 15 percent shrubs. Among the important plants are Thurber fescue, mountain brome, slender wheatgrass, mountain big sagebrush, and aspen peavine.

Management practices that maintain or improve the rangeland vegetation include proper grazing use, a planned grazing system, and proper location of water developments. If the desirable forage plants are mostly depleted, brush management and seeding can be used to improve the rangeland vegetation. Suitable brush management practices include prescribed burning, chemical spraying, and mechanical treatment.

The suitability of this soil for rangeland seeding is good. Plants suitable for seeding include adapted native



SENCO-PHENIX

**An Intensive Cultural Resource Survey and Inventory of the
Gob Vent Hole #4 Well Pad and Access Corridor**

**Carbon County, Utah
(Private Land)**

**PERFORMED FOR
Andalex Resources, Inc.
Tower Division**

**In Accordance with
Utah State Guidelines
Antiquities Permit #U05SC0592p**

**SPUT-503
June 22, 2005**

John A. Senulis

Direct Charge of Fieldwork

UTAH SHPO COVER SHEET

Project Name: An Intensive Cultural Resource Survey and Inventory of the
Gob Vent Hole #4 Well Pad and Access Corridor

Andalex Resources, Inc., Tower Division

State #U05SC0592p

Report Date: June 22, 2005

County (ies): Carbon

Principal Investigator/ Field Supervisor: John A. Senulis/John Senulis

Records Search/Location/Dates: March 17, 2005, Price River Field Office of the BLM

Acres Surveyed: 8 acres

Intensive Acres: 8

Recon/Intuitive Acres: 0

U.S.G.S. 7.5 Quads: Helper, Utah (1972) and Deadman Canyon, Utah (1972)

Sites Reported	Number	Smithsonian Site #(s):
Archeological Sites:	0	
Revisit (No IMACS update)	0	
Revisit (IMACS update attach.)	0	
New Sites (IMACS attached)	0	
Archeological Site Total:	0	
Historic Structures:		
(USHS Site Form Attached)		
Total NRHP Eligible Sites,	0	

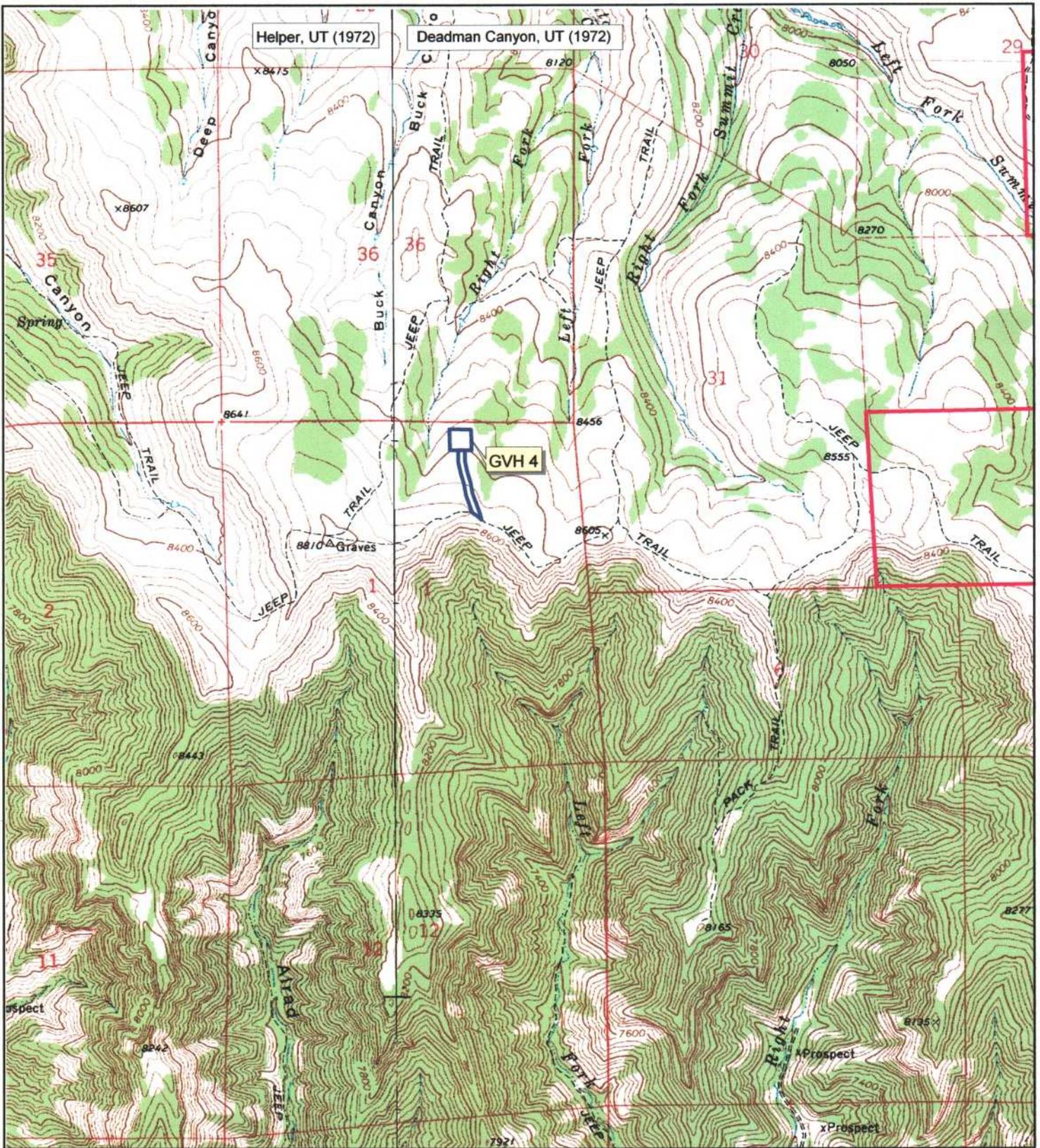
Checklist of Required Items:

1. X 1 Copy of Final Report
2. X Copy of U.S.G.S. 7.5' map showing surveyed/excavated area
3. Completed IMACS Site Inventory Forms Including
 - _____ Parts A and B or C
 - _____ IMACS Encoding Form
 - _____ Site Sketch Map
 - _____ Photographs
 - _____ Copy of USGS 7.5' Quad with Smithsonian site Number
4. X Completed Cover Sheet

Abstract

SESCO-PHENIX performed an intensive cultural resource survey on the Gob Hole Vent (GHV) #4 well pad, five-acre buffer and access corridor. The proposed well location is located on Private land. The purpose of the survey was to identify and evaluate cultural resources that may exist within the project area.

No cultural resources were located and the potential for undetected remains is remote. A finding of No Effect is appropriate and Archeological Clearance is recommended.



SENCO-PHENIX



Scale 1:24,000
1" = 2,000'

- Proposed Drill Holes
- Previous Survey
- Eligible Sites
- Ineligible Sites

Gob Vent Hole GVH #4
Aberdeen Mine
 Andalex Resources, Tower Division
 Carbon County, Utah
 Section 1, T13S, R10E
 June 2005
 SPUT-503

Project Location

The survey area is in the NW/NE ¼ of Section 1, Township 13 South, Range 10 East, Carbon County, Utah. The access corridor begins off an existing two-track road that will not be upgraded in Section 1 and proceeds northerly ca. 1,000 feet to the well pad. The project area is shown on the enclosed copy of U.S.G.S. composite 7.5' Quad: Helper, Utah (1972) and Deadman Canyon, Utah (1972). The well pad was staked and the access corridor was flagged.

Specific Environment

The survey area is on a bench overlooking the Price Basin to the south and Emma Park to the north. Soils are tan alluvium, gravelly clay loams. Vegetation is dense low sagebrush with assorted grasses, forbs and shrubs. There is no permanent water in the project area.

Previous Research

A file search of the SENCO-PHENIX reports and at the BLM Price Field Office on March 17, 2005, indicated that the following projects had been performed:

The file search revealed the following:

- 1977, BYU surveyed drill holes west of the proposed project. No cultural resources were located.
- 1980, Antiquities Section, Utah Division of State History, surveyed the Canyon bottoms south of the current lease expansion. They recorded the Zion, Blue Flame/Sutton and Rio Grande mines. None of the mines were considered eligible for the NRHP.
- 1984, Nickens and Associates surveyed three 160-acre blocks in Sections 29, 32 and 33, northeast of the project area. No cultural resources were located.
- 1986, SENCO-PHENIX surveyed several drill hole locations and access corridors just south of the proposed project. No cultural resources were located.

Methodology

John Senulis of SENCO-PHENIX performed a Class III intensive walkover survey of the proposed GHV #4 100 by 100 foot well pad and five-acre buffer on June 20, 2005. Meandering parallel transects no further spaced than 15 meters were employed. The access corridor was surveyed to a 100-foot width. Special attention was given to areas of subsurface soil exposure from animal burrowing, and erosion. All field notes and digital photographs are on file at the offices of SENCO-PHENIX in Price, Utah.

Findings and Recommendations

No cultural resources were located and the potential for undetected remains is remote. A finding of no effect is appropriate and archeological clearance is recommended.

These recommendations are subject to approval by the Utah SHPO.

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