FORM MR-AR
(Revised 2/2001)

M/023/053
HOGS BACK PROJECT

W

Tm
8/2/04

RECEIVED
JAN 23 2004
DIV OF OIL GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1594 West North Temple Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
Telephone: (801) 538-5291
Fax: (801) 359-3940

ANNUAL REPORT OF MINING OPERATIONS

The informational requirements of this form are based on provisions of the Mined Land Reclamation Act, Title 40-8, Utah Code Annotated 1953, as amended, and the General Rules as promulgated under the Utah Minerals Regulatory Program. An operator conducting mining operations under a Notice of Intention must file an annual operations and progress report (FORM MR-AR) with the Division.

I. *General Information*

1. Report Time Period: From (mo./yr.) Jan / 2003 To (mo./yr.) Dec / 2003
2. DOGM File Number (Mine No.): M / 023 / 053
3. Mine Name: Hogs Back Project
4. Mineral(s) Mined: (or permitted to mine): Beryllium (bertrandite)
5. Type of mine ☒ Surface Mine or ☐ Underground Mine
6. Legal Description (Location of Lands Affected):

   All 1/4, All 1/4, SW 1/4, Section 35, Township 12 S, Range 12 W

   All 1/4, All 1/4, SE 1/4, Section 35, Township 12 S, Range 12 W

   Lot 2 1/4, & 1/4, Lot 3 1/4, Section 2, Township 13 S, Range 12 W

7. Name of Operator or Company: Brush Resources Inc.
8. Permanent Street Address: P.O. Box 815

   City, State, Zip: Delta, Utah 84624

   Phone: (435) 864-2701 Fax: (435) 864-4004
9. Company Representative (or designated operator):

   Name: Alex Boulton

   Title: President

   Business Address: P.O. Box 815

   City, State, Zip: Delta, Utah 84624

   Phone: (435) 864-2701 Fax: (435) 864-4004

   ☒ Please check if any of the above information has changed since previous year.

II. *Mining and Reclamation*

1. Was the mine active during the past year? Yes ☒ No ☐
2. If no - what was the last year of activity? _____
3. If yes - how much ore or mineral was mined? 9,148 wet tons (delivered)

4. Briefly describe the type of work performed, volume of material moved, and any new or additional surface disturbances that occurred during the past year.

Shipped remaining ore stockpile from the property

Maintained the access road and haul road to the ore stockpile.

5. How much **additional acreage** was disturbed during the past year? None

6. How much acreage was **reclaimed** during the past year? All 18 acres are reclaimed

7. Briefly describe the reclamation work performed during the past year. This description should include methods employed, and an evaluation of the results.

The mine site on the patented claims was reclaimed

The SITLA Easement road access was reclaimed

See attached "Final Reclamation Report"

8. What is the **total disturbed acreage of entire project** at year's end? 18 Acres

9. Briefly summarize any mining and/or reclamation plans for the upcoming year.

Monitoring of reclamation according to schedule in attached report

Request inspection of reclamation & release of surety

NOTE: Section III., "Additional Information" applies only to **large mining operations.**

III. *Additional Information – R647-4-121.2 and .3*

1. **The operator shall include an updated map depicting surface disturbance and reclamation performed during the year,** prepared in accordance with R647-4-105

2. The operator shall keep and maintain timely records relating to his performance under the Act, and shall make these records available to the Division upon request.

IV. *Signature Requirement*

I hereby certify that the foregoing is true and correct.

Name (Typed or Print): Alex Boulton

Title of Operator: President

Signature of Operator: Alex Boulton

Date: 1/22/04

HOGS BACK PROJECT – FINAL RECLAMATION REPORT

INTRODUCTION

The Hogs Back Project included the mining of beryllium ore from under a remnant dome using bench-mining methods. The operation also included the upgrading of an existing access road, construction of a haul ramp, and establishment of waste rock dump and run of mine ore stockpile sites. Ore was transported for beneficiation at the Brush Resources Inc. (BRI) existing Delta Mill. The total disturbed area at the mine site was approximately 18 acres.

There is a history of exploration and development activity associated with this property prior to BRI's purchase in August 1995. Numerous companies other than BRI have disturbed the area by building access for drilling and trenching sample sites. The last operating partner of the previous owner conducted mining operations on the northwest side of the deposit. During reclamation of the Hogs Back mine, BRI voluntarily reclaimed most of the pre-existing disturbances created by previous operators at the mine site.

Upon completion of overburden stripping, initial reclamation treatments on the dump outslope were begun in 1997. After ore lifting was finished, the mining bench (a.k.a. "pit") area was treated in 1999. Final reclamation treatments on the dump top, haul ramp, access road, and topsoil storage areas were completed on December 1, 2003.

LOCATION AND ACCESS

The Hogs Back Project is located near the Thomas Range, Juab County, northwest of the town of Delta, Millard County, Utah. The mining project is accessed by traveling northwest of Delta (off U.S. Highway 6), on State Road 174 (the Brush Wellman Road) for approximately 52 miles. The mining operation is situated in the SE¼ SW¼ and the SW¼SE¼ of Section 35, T12S, R12W SLBM and in Lot 2 and Lot 3 of Section 2, T13S, R12W, SLBM.

SURFACE AND MINERAL OWNERSHIP

Brush Resources Inc. is the surface and minerals owner of the area that was mined. Two patented lode claims and a Utah State Trust Land Easement were acquired and leased, respectively, by Brush Resources Inc. All mining activity was confined within the patented claims. The state land easement was used only for the access road. Owners of the mining claims and easement are listed in Table 1.

Table 1- Surface and Mineral Ownership

Owner	Type of Ownership	Identity
Brush Resources, Inc. P.O. Box 815 Delta, UT 84624	Patented Lode Claims	Hogs Back Nos. 1 & 2 Mineral Survey No. 7347 Patent No. 43-78-0013
State of Utah School & Institutional Trust Land Administration (801) 538-5100 675 E 500 S, Suite 500 Salt Lake City, UT 84102	Easement	ESMT No. 417 Sec 2, T13S, R12W, SLB&M

RECLAMATION TREATMENTS

General Overview

Approximately 18 acres were disturbed at the mine site during the life of the operation. Of this acreage, all but approximately 5 acres in the final mine bench was originally planned to be reclaimed. Table 2 lists the sites disturbed and reclaimed. Roads and other compacted surfaces (such as the dump top and incidental areas) were ripped. Topsoil and composted manure were spread and then the areas were seeded with the prescribed seed mix. These areas were then trodden with a sheepsfoot compactor.

Final reclamation took place on the dump, haul ramp and access road following completion of mining and transport of stockpiled ore from the site. Post reclamation contours for the mine site are shown on Drawing 1. The mine site consists of a regraded highwall on the southeast margin and the daylighted final bench on the north margin blends with the natural terrain.

Table 2 - Disturbance and Reclaimed Areas

Hogs Back Project:	Area Disturbed (Acres)	Area Reclaimed (Acres)
Access Road	2	2
Haul Ramp	*3	*3
Final Bench Area	*5	*5
Ore Stockpile	Dump top	Dump top
Waste Dump Top & Outslope	*6	*6
Topsoil Stockpile	*2	*2
Total:	18	18

* Private Ground

Post-mining Land Use

The objectives of the reclamation plan include minimizing or eliminating public safety hazards, stabilization of disturbed areas, and provisions for post-mining surface conditions that are consistent with the long-term land use. The primary long-term land uses are expected to be for wildlife habitat and livestock grazing. Reclamation and revegetation would provide limited livestock forage and wildlife habitat, maintain the present water quality, and restore the scenic quality in the long-term.

Demolition and Disposal

All scrap and refuse were disposed of off-site in a permitted landfill.

Earthwork

Regrading of the disturbed areas consisted of rounding the north margin of the dump top, blending the haul ramp fill with adjacent, natural topography and the regrading necessary to control drainage on the dump surface. In addition, the dump outslope was regraded as necessary to achieve a 2h:1v outslope and some regrading was done in the final mine bench.

Bench Mine

The bench mine was not left in the final mining configuration as originally planned in the 1997 NOI and approved by the Division. Instead, because sufficient salvaged topsoil was available, the pit area was treated in 1999 by regrading and smoothing the surface, selectively spreading approximately 6 inches of topsoil (amended with approximately 8% composted manure by weight), broadcasting seed mix, and sheepsfoot compacting. As called for in DOGM's Final Review, the soil was *"...placed in islands to provide cover and corridors for wildlife movement to the bottom of the pit where water may collect."* In addition, wildlife shelters constructed from rocks were placed in the area. A small high wall with an average height of ten feet remains around a short segment on the east margin of the mine and was regraded to a single, rounded bench. There will be no surface discharge from the mine bench. The relatively small amount of runoff from the surrounding land will drain and collect in a small depression created during mining and reclamation on the east side of the pit.

Roads and Compacted Surfaces

Road fills were generally regraded to a natural shape and gradient. The fill segment of the haul ramp was left in a crowned and slightly elevated condition to prevent concentration of drainage.

Compacted surface roads and the dump-top/ore pads were ripped. The ripping procedure relieves compaction, inhibits soil loss from run-off, and provides a proper bed for topsoil placement and seeding.

Waste Rock Dump

The waste rock dump was constructed by dumping along its length in successive increments or lifts. The final overall dump slope is less than the angle of repose, approximately 2h:1v, and in 1997 was regraded as necessary in one long slope from the top to the bottom of the dump. The dump outslope was treated in 1997 by spreading 6-12 inches of topsoil (amended with ≈10% composted manure by volume), applying ammonium nitrate fertilizer (≈150 lbs./acre), ripping and seeding with the standard seed mix. Final reclamation treatments applied on the top surfaces of the waste dump in 2003 included recontouring the northeast corner, rounding the outslope margin, spreading 6-12 inches of topsoil (amended with ≈13% composted manure by volume), ripping the entire top area, and seeding with the standard seed mix. Last of all, the area was trodden with the sheepsfoot compactor.

Drainage and Sediment Control

When the haul ramp was regraded in 2003, the roadside ditch was removed. Rock check dams were left in place following reclamation. These devices provide ongoing sediment control and may be beneficial to wildlife.

Topsoil Replacement

Prior to mining, topsoil was stripped from the proposed area of disturbance and stored in a one-acre-plus stockpile located immediately north of the bench mine on an area previously disturbed by exploration drilling. The originally proposed topsoil stockpile site, located west of the bench mine and south of the dump site, was not used and did not require reclamation. The topsoil plan took into account the actual salvageable topsoil materials available and the revegetation requirements for critical sites to provide adequate rooting depth and water holding capacity.

Where terrain allowed, topsoil was replaced by wheel-tractor scraper. An excavator spread topsoil over less accessible areas. The topsoil arranged in windrows along the access road margins was spread back across the roads with a road grader. Topsoil was also placed on the final mine bench as discussed above. Topsoil placement is shown in Table 3.

Table 3 - Topsoil Placement

Hogs Back Project:	Placement Depth	Acreage * (acres)
Access Road/Haul Ramp	6 inches	5
Dump Top & Outslope	6-12 inches	6
Final Mine Bench	6 inches**	5
Topsoil Stockpile	+ 6 inches	2***
* Acreages include adjustment for slopes vs. plan view increase.	**Project Total**	**18**

** Topsoil was placed selectively on the final mine bench, as described above.
*** The area of the topsoil stockpile was left with topsoil in place.

Seedbed Preparation

After topsoil placement all compacted surfaces were ripped to an approximate depth of 18 inches with the rip path spaced approximately 36 inches apart. This creates a deep seedbed and causes the topsoil to filter into the underlying, ripped material .

Seeding and Planting

After topsoiling, the disturbed acreage was seeded with the seed mix listed in Table 4. The mine bench was initially seeded in 1999 and was seeded again during final reclamation treatments of the other areas in 2003. All areas were seeded by hand broadcasting.

Table 4 - Reclamation Seed Mix for the Dell

Scientific Name	Common Name	lbs./acre used
Agropyron cristatum	crested wheatgrass	3.0
Sitanion hystrix	squirreltail	2.0
Oryzopsis hymenoides	Indian ricegrass	2.0
Melilotus officinalis	yellow sweetclover	1.0
Penstemon palmeri	Palmer's penstemon	1.0
Atriplex canescens	four-wing saltbush	1.0
Atriplex confertifolia	shadscale	1.0
Chrysothamnus viscidiflorus	green rabbitbrush	1.0
nauseosus, albicaulis	**Total**	**12.5**

Reclamation Schedule

The regrading operations took place just prior to seeding. The seeding of regraded and topsoiled sites took place in the late fall to insure the seed would be able to over winter prior to germination. Reclamation of the bench mine surface took place in fall of 1997 and the remaining reclamation, including reseeding of the bench mine area, was completed in the fall of 2003.

MONITORING

The reclaimed site will be monitored on the following schedule to check on progress of the seeding, soil stability and drainage control:

<u>1st Year after Reclamation (2004):</u>	
March - June	Monthly
July - October	Bimonthly
<u>2nd Year after Reclamation (2005):</u>	
March - June	Bimonthly
July - October	Quarterly
<u>3rd Year after Reclamation (2006):</u>	
April - September	Quarterly
November -	Reclamation release

VARIANCES

Variance Granted from Rule R647-4-111.9

Meteoric water will be temporarily impounded on the final sloping bench along the east margin adjacent to the regraded highwall. This water is of beneficial use to wildlife. Therefore, a variance from Rule R647-4-111-9 was requested to allow this area to impound water. This variance was granted in the Division's Final Review dated June 6, 1997.

Variances Granted from Rules 111.12 and 111.13

Sufficient topsoil was not anticipated to be available to cover the entire mine bench floor; therefore, the Division granted a variance from Rule R647-4-111.12 in its Final Review dated June 6, 1997. As expected, topsoil was available to cover portions of the bench surface and the bench surface was partially covered with topsoil in 1999.

The bottom of the final bench in the mine area consisted of tuff which, based on BRI's experience at the Topaz Mine, inhibits plant growth. Accordingly a variance from Rule R647-4-111.13 for non-topsoiled portions of the bench floor was also granted in the Division's 1997 Final Review.

SUMMARY OF RECLAMATION WORK AND REQUEST FOR RELEASE OF SURETY

The Hogs Back project has received final reclamation treatments in all areas. Treatments applied to the dump outslope in 1997 and to the mining bench in 1999 have passed three years in time. The status of all reclamation treatments is summarized in Table 5.

Table 5 – Status of Reclamation Treatments

	Regrade	Topsoil / Manure	Ripping	Seeding	Sheepsfoot	Date Completed
Dump Outslope	X	X	X	X	X	Nov 1997
Dump Top	X	X	X	X	X	Nov 2003
Mine Bench	X	X	X	X	X	Nov 1999
Haul Ramp	X	X	X	X	Limited	Nov 2003
Access Road	X	X	X	X	X	Nov 2003
Topsoil Pad	X	X	X	X	Limited	Nov 2003

The Division determined in 1997 that the four-year escalated bond amount (in 2001 dollars) required to reclaim the site was $40,000. The dump outslope was granted a release from further reclamation liability on June 30, 2000. No surety was released at that time. In 2001, the bond was escalated to $47,600 (in 2006 dollars). The mining bench was granted a variance from topsoil redistribution and the vegetative success standard on June 6, 1997. The final reclamation treatments on the remainder of the project have been completed. Release from liability is requested for the amounts shown in Table 6 for regrading, ripping, and topsoiling, as well as portions of the mobilization/demobilization, supervision and contingency amounts. The sheepsfoot compacting activity was not contemplated in the NOI nor was it included in the surety calculations. Release from the revegetation standard will be requested following three growing seasons (in 2006).

Table 6 – Surety Release & Remaining Amounts per Category

Activity	Surety Amount 1997*	Surety Amount 2001**	Requested Release	Remaining Surety
Regrading	$ 5,700	$ 6,800	$ 6,800	$ -
Ripping	$ 12,100	$ 14,400	$ 14,400	$ -
Topsoiling	$ 12,000	$ 14,300	$ 14,300	$ -
Revegetation	$ 1,300	$ 1,500	$ -	$ 1,500
Mob/DeMob	$ 4,400	$ 5,200	$ 3,900	$ 1,300
Supervision	$ 900	$ 1,100	$ 800	$ 300
Subtotal	$ 36,400	$ 43,300	$ 40,200	$ 3,100
Contingency	$ 3,700	$ 4,400	$ 3,300	$ 1,100
Total	$ 40,000	$ 47,600	$ 43,500	$ 4,200

* escalated to 2001 dollars

** escalated to 2006 dollars

Photo 1 : November, 2003; looking southwest
Regrading northeast corner of dump outslope

Photo 2: November, 2003; looking southwest
Rounding dump top margin & regraded northeast outslope

Photo 3: November, 2003; looking south
Topsoil being moved from stockpile

Photo 4: November, 2003; looking southwest
Composted manure stockpile for amending topsoil

Photo 5: November, 2003; looking southwest
Topsoil replacement on dump top

Photo 6: November 17, 2003; looking west
Topsoil stacking for hual ramp regrading and blending

Photo 7: November, 2003; looking west
Spreading manure & ripping dumptop/topsoil/manure

Photo 8: November, 2003; looking north
Sheepfoot dump top after broadcasting seed mix

Photo 9: November, 2003; looking northwest
Regrading/blending haul ramp

Photo 10: December, 2003; looking northwest
Regraded & blended haul ramp

Photo 11: December, 2003; looking southeast
Sheepsfoot on lower haul ramp after broadcasting seed mix

Photo 12: December, 2003; looking south
Topsoil replaced, ripped, seeded & sheepsfoot on access road