




**COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY  
MINERALS PROGRAM INSPECTION REPORT  
PHONE: (303) 866-3567**

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

<b>MINE NAME:</b> Prince Albert Mine	<b>MINE/PROSPECTING ID#:</b> M-2011-040	<b>MINERAL:</b> Uranium and vanadium	<b>COUNTY:</b> Montrose
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Dustin M. Czapla	<b>INSP. DATE:</b> September 25, 2013	<b>INSP. TIME:</b> 11:00
<b>OPERATOR:</b> Rimrock Exploration & Development, Inc.	<b>OPERATOR REPRESENTATIVE:</b> Allen Chiles, Wesley Chiles	<b>TYPE OF OPERATION:</b> 110d - Designated Limited Impact	

<b>REASON FOR INSPECTION:</b> Normal I&E Program	<b>BOND CALCULATION TYPE:</b> Complete Bond	<b>BOND AMOUNT:</b> \$46,130.00
<b>DATE OF COMPLAINT:</b> NA	<b>POST INSP. CONTACTS:</b> None	<b>JOINT INSP. AGENCY:</b> None
<b>WEATHER:</b> Clear	<b>INSPECTOR'S SIGNATURE:</b> 	<b>SIGNATURE DATE:</b> September 26, 2013

**GENERAL INSPECTION TOPICS**

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

(AR) RECORDS----- <u>Y</u>	(FN) FINANCIAL WARRANTY----- <u>Y</u>	(RD) ROADS----- <u>N</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>N</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>N</u>	(SF) PROCESSING FACILITIES----- <u>N</u>	(TS) TOPSOIL----- <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- <u>N</u>	(RV) REVEGETATION---- <u>N</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(SB) COMPLETE INSP---- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>N</u>	(ST) STIPULATIONS----- <u>N</u>

Y = Inspected and found in compliance / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

## **OBSERVATIONS**

This inspection was conducted as part of the Division of Reclamation, Mining and Safety's (Division) normal monitoring program. Allen and Wesley Chiles, representing the Operator, were present during this inspection. Photographs are included with this report in order to illustrate some of the conditions observed.

The Prince Albert Mine is located approximately 2.5 miles west of Uravan and accessed from U16 Road. The site is a 110d operation that includes a total of 8.3 permitted acres. The Division currently holds a financial warranty amount of \$46,130.00 for this site. The Division has reviewed the reclamation costs based on the observed site conditions, in order to ensure the financial warranty reflects the actual current cost of fulfilling the requirements of the Reclamation Plan, and determined that the current financial warranty amount is sufficient.

Adequate mine identification signage was not noted at the entrance to the site. However, the notice for the 110d application was still posted on the entrance gate.

The affected area was marked by t-posts that were clearly visible and adequate to delineate the affected area boundary.

Little activity has occurred at the site since the Division's last inspection. There was no ore stockpiled on the ore pad. Sediment control features appeared effective. The mine entrance was secured by a locked gate. No problems or violations were noted during this inspection.

Responses to this inspection report should be directed to Dustin Czapla at the Division of Reclamation, Mining and Safety, Grand Junction Field Office, 101 South 3<sup>rd</sup> Street, Room 301, Grand Junction, Colorado 81501, phone number (970) 243-6299.

## **PHOTOGRAPHS**



Figure 1: Ore pad location.



Figure 2: Sediment retention pond.



Figure 3: Growth medium stockpile.



Figure 4: Mine entrance.

### **Inspection Contact Address**

Allen Chiles  
Rimrock Exploration & Development, Inc.  
P.O. Box 430  
Nucla, CO 81424

Enclosure: Reclamation Cost Estimate

CC:

## COST SUMMARY WORK

Task description: Estimate reclamation costs based on observed site conditions

Site: Prince Albert Mine

Permit Action: 2013-09-25

Inspection

Permit/Job#: M2011040

### PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 9/26/2013

County: Montrose

Filename: M040-000

User: DMC

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Backfill adit	MINESEAL	1	8.00	\$1,415.48
02a	Backfill trench	DOZER	1	2.80	\$387.91
03a	Finish grade site	DOZER	1	13.87	\$1,920.27
04a	Distribute growth medium	DOZER	1	0.26	\$36.24
05a	seal monitor well and utility drop	BOREHOLE	1	8.00	\$250.72
06a	Revegetate affected areas	REVEGE	1	8.00	\$5,540.51
07a	Mobilize reclamation crew and equipment	MOBILIZE	1	3.80	\$1,863.51
<b><u>SUBTOTALS:</u></b>				<b>44.73</b>	<b>\$11,414.64</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02%

Total = \$230.58

Performance bond: 1.05%

Total = \$119.85

Job superintendent: 22.36 hrs

Total = \$1,462.57

Profit: 10.00%

Total = \$1,141.46

TOTAL O & P = \$2,954.46

CONTRACT AMOUNT (direct + O & P) = \$14,369.10

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 0.00

Total = 0.00

Engineering work and/or contract/bid preparation: 0.00%

Total = \$0.00

Reclamation management and/or administration: 5.00%

\$718.46

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$3,672.92

**TOTAL BOND AMOUNT (direct + indirect) = \$15,087.56**

## SAFEGUARDING UNDERGROUND OPENINGS

Task description: Backfill adit

Site: Prince Albert Mine

Permit Action: 2013-09-25 Inspection

Permit/Job#: M2011040

### PROJECT IDENTIFICATION

Task #: 01A

State: Colorado

Abbreviation: None

Date: 9/26/2013

County: Montrose

Filename: M040-01a

User: DMC

Agency or organization name: DRMS

### UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Adit	10' x 10'	Adit closure - backfilling (per opening)	1.00	EA	\$1,415.48	\$1,415.48

Job Hours: 8.00

Total Cost: \$1,415.48



**BULLDOZER WORK**Task description: **Backfill trench**Site: **Prince Albert Mine**Permit Action: **2013-09-25 Inspection**Permit/Job#: **M2011040****PROJECT IDENTIFICATION**Task #: **02A**State: **Colorado**Abbreviation: **None**Date: **9/26/2013**County: **Montrose**Filename: **M040-02a**User: **DMC**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D6T LGP**Horsepower: **200**Blade Type: **Straight**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$35.09	NA
Operating Cost/Hour:	\$65.97	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$37.41	NA

Total unit Cost/Hour: **\$138.47**Total Fleet Cost/Hour: **\$138.47****MATERIAL QUANTITIES**Initial Volume: **267**Swell factor: **1.215**Loose volume: **324 LCY**Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **100 feet**Unadjusted hourly production: **303.3 LCY/hr**Materials consistency description: **Partly consolidated stockpile 1.1**Average push gradient: **0 %**Average site altitude: **5,900 feet**Material weight: **3,300 lbs/LCY**Weight description: **Decomposed rock - 75% Rock, 25% Earth****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3818

Adjusted unit production: 115.80 LCY/hr

Adjusted fleet production: 115.8 LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.196/LCY

Total job time: 2.80 Hours

Total job cost: \$387.91

**BULLDOZER WORK**Task description: Finish grade siteSite: Prince Albert MinePermit Action: 2013-09-25 InspectionPermit/Job#: M2011040**PROJECT IDENTIFICATION**Task #: 03AState: ColoradoAbbreviation: NoneDate: 9/26/2013County: MontroseFilename: M040-03aUser: DMCAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D6T LGPHorsepower: 200Blade Type: StraightAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$35.09	NA
Operating Cost/Hour:	\$65.97	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$37.41	NA

Total unit Cost/Hour: \$138.47Total Fleet Cost/Hour: \$138.47**MATERIAL QUANTITIES**Initial Volume: 2,000Swell factor: 1.000Loose volume: 2,000 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 303.3 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %Average site altitude: 5,900 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)



Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4755

Adjusted unit production: 144.22 LCY/hr

Adjusted fleet production: **144.22 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.960/LCY

Total job time: **13.87 Hours**

Total job cost: **\$1,920.27**

**BULLDOZER WORK**Task description: Distribute growth mediumSite: Prince Albert MinePermit Action: 2013-09-25 InspectionPermit/Job#: M2011040**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 9/26/2013County: MontroseFilename: M040-04aUser: DMCAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D6T LGPHorsepower: 200Blade Type: StraightAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$35.09	NA
Operating Cost/Hour:	\$65.97	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$37.41	NA

Total unit Cost/Hour: \$138.47Total Fleet Cost/Hour: \$138.47**MATERIAL QUANTITIES**Initial Volume: 100Swell factor: 1.000Loose volume: 100 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 444.6 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 5,900 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 382.04 LCY/hr

Adjusted fleet production: **382.04** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.362/LCY

Total job time: **0.26** Hours

Total job cost: **\$36.24**

## BOREHOLE SEALING WORK

Task description: Seal monitor well and utility drop

Site: Prince Albert Mine

Permit Action: 2013-09-25 Inspection

Permit/Job#: M2011040

### PROJECT IDENTIFICATION

Task #: 05A

State: Colorado

Abbreviation: None

Date: 9/26/2013

County: Montrose

Filename: M040-05a

User: DMC

Agency or organization name: DRMS

### UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
monitor well	Bentonite seal - 6 in. (labor, equip, materials)	6	435	1.00	EA	\$185.20	\$185.20
cement plug	Portland cement grout - 6 in. (labor, equip, materials)	6	6	6.00	LF	\$10.92	\$65.52

Job Hours: 8.00

Total Cost: \$250.72

REVEGETATION WORKTask description: Revegetate affected areasSite: Prince Albert MinePermit Action: 2013-09-25 InspectionPermit/Job#: M2011040PROJECT IDENTIFICATIONTask #: 06AState: ColoradoAbbreviation: NoneDate: 9/26/2013County: MontroseFilename: M040-06aUser: DMCAgency or organization name: DRMSFERTILIZING**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
<b>Total Fertilizer Materials Cost/Acre</b>				<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$88.58
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$98.01
<b>Total Tilling Cost/Acre</b>	<b>\$186.59</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	0.60	9.79	\$6.39
Indian Ricegrass - Paloma	2.80	9.06	\$24.39
Crested Wheatgrass - Nordan	2.00	9.18	\$4.66
Pubescent Wheatgrass - Luna	4.00	8.26	\$8.96
Slender Wheatgrass - Pryor	2.60	9.49	\$8.03
Milk Vetch, Cicer - Lutana	0.40	1.33	\$2.03
Western Wheatgrass - Arriba	3.60	9.09	\$13.25
Needle and Thread	3.20	8.45	\$150.37
Flax, Lewis Blue	1.00	6.63	\$16.52
Saltbush, Four Wing	4.00	5.51	\$42.92
Penstemon, Palmer	0.20	4.42	\$6.20

<b>Totals Seed Mix</b>	24.40	81.23	<b>\$283.72</b>
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**Application**

<b>Description</b>	<b>Cost /Acre</b>
Broadcast seeding [DMG]	\$261.28
<b>Total Seed Application Cost/Acre</b>	<b>\$261.28</b>

**MULCHING and MISCELLANEOUS****Materials**

<b>Description</b>	<b>Units / Acre</b>	<b>Unit</b>	<b>Cost / Unit</b>	<b>Cost /Acre</b>
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$16.24	\$16.24
Straw, delivered {MEANS 31 25 14.16 1200}	1.50	TON	\$265.00	\$397.50
<b>Total Mulch Materials Cost/Acre</b>				<b>\$413.74</b>

**Application**

<b>Description</b>	<b>Cost /Acre</b>
Crimping, with tractor {DMG survey data}	\$65.89
Power mulcher (MEANS 32 91 13.16 0250)	\$86.68
Weed spray, hand, non-aquatic area, nox. [DMG]	\$179.57
<b>Total Mulch Application Cost/Acre</b>	<b>\$332.14</b>

**NURSERY STOCK PLANTING**

<b>Common Name</b>	<b>No / Acre</b>	<b>Type and Size</b>	<b>Planting Cost</b>	<b>Fertilizer Pellet Cost</b>	<b>Cost /Acre</b>
					\$
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$0.00</b>

**JOB TIME AND COST**

No. of Acres: 3 Cost /Acre: \$1,477.47  
 Estimated Failure Rate: 25% Cost /Acre\*: \$1,477.47  
 \*Selected Replanting Work Items: TILLING, SEEDING, MULCHING

Initial Job Cost: \$4,432.41  
 Reseeding Job Cost: \$1,108.10  
 Total Job Cost: \$5,540.51  
 Job Hours: 8.00

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Mobilize reclamation crew and equipment**Site: **Prince Albert Mine**Permit Action: **2013-09-25 Inspection**Permit/Job#: **M2011040****PROJECT IDENTIFICATION**Task #: **07A**State: **Colorado**Abbreviation: **None**Date: **9/26/2013**County: **Montrose**Filename: **M040-07a**User: **DMC**Agency or organization name: **DRMS****EQUIPMENT TRANSPORT RIG COST**Shift basis: **1 per day**Cost Data Source: **CRG Data**Truck Tractor Description: **GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,  
400 HP (2ND HALF, 2006)**Truck Trailer Description: **GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER  
(25T, 50T, AND 100T)****Cost Breakdown:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
Ownership Cost/Hour:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

**NON ROADABLE EQUIPMENT:**

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
CAT 446D	9.80	\$17.31	\$88.67	1	\$105.98	\$88.67	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$39.59	\$88.67	1	\$128.26	\$88.67	\$0.00
Power Mulcher (Reinco M90)	6.00	\$7.03	\$88.67	1	\$95.70	\$88.67	\$0.00

Subtotals: **\$329.94** **\$266.01** **\$250.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 3,500 Gal.	\$69.00	1	\$69.00	\$69.00
Light Duty Pickup, 4x4, 3/4 T.	\$54.12	1	\$54.12	\$54.12
Flatbed Truck, 4x2, 30K GVW	\$62.73	1	\$62.73	\$62.73

Subtotals: **\$185.85** **\$185.85**



**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	NUCLA	
Total one-way travel distance:	18.00	miles
Average Travel Speed:	40.00	mph

Total Non-Roadable Mob/Demob Cost *	\$1,696.24
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$167.27
** one round trip, no haul rig:	

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.45	0.45
Return Time (Hours):	0.45	0.45
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.90	0.90

**JOB TIME AND COST**

Total job time:	3.80	Hours
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Total job cost:	\$1,863.51
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