




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.

MINE NAME: Memphis	MINE/PROSPECTING ID#: M-1997-084	MINERAL: Alluvial Fan	COUNTY: Ouray
INSPECTION TYPE: Multi Person Inspection	INSPECTOR(S): Wallace H. Erickson	INSP. DATE: August 5, 2014	INSP. TIME: 09:30
OPERATOR: Keystone Portfolio Management, LP	OPERATOR REPRESENTATIVE: None present	TYPE OF OPERATION: 110c - Construction Limited Impact	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$1,053.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Cloudy	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: October 17, 2014	

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

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

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

INSPECTION TOPIC: Financial Warranty

PROBLEM: The Division has reviewed the current cost of reclamation totaling \$2,341.23. Therefore, the existing \$1,053 is not adequate to reclaim the site in accordance with the approved reclamation plan and applicable requirements of the Act and Rules. This is a failure to maintain the proper amount of financial warranty as necessary to complete reclamation of the affected lands, pursuant to C.R.S. § 34-32.5-117(4)(b).

CORRECTIVE ACTIONS: Pursuant to Rule 4.2.1(2), the Operator has 60 days from the signature date of this report, due December 16, 2014, to provide \$1,288.23 additional surety, to ensure a total financial warranty not less than \$2,341.23, or complete reclamation of the affected lands and thereby render the existing financial warranty adequate.

CORRECTIVE ACTION DUE DATE: December 16, 2014

OBSERVATIONS

This inspection occurred as part of the Division's routine monitoring of permitted operations. The Memphis Site is approved for 2.4 acres affected land, for the extraction of construction materials. Affected lands will be reclaimed to support rangeland post-mining land use. The Division holds \$1,053 financial warranty. This report is accompanied by two photographs taken during the inspection and an updated reclamation cost estimation totaling \$2,341.23.

As shown in the photographs, mining activities had occurred recently, as evidenced by the advancement of the highwall. The near-vertical highwall was visually estimated at 10 feet in height, extending for approximately 50 linear feet. Previously, the highwall had been maintained at its final configuration, approximately 3H:1V slope and the Division did not required surety to address slope reduction. Therefore, the Division has updated its reclamation cost estimation to include a slope reduction task. Please find enclosed seven pages of summary, work sheets and drawing utilized by the Division to estimate the current cost of reclamation. As noted above, the Operator has 60 days to address the situation, due December 16, 2014.

According to the approved reclamation plan, the Operator is obligated to reduce all slopes, constructed in unconsolidated alluvial material, to nothing steeper than 3H:1V. However, as the excavation activity advances beyond the toe of slope of the alluvial fan the operation will encounter natural slopes steeper than 3H:1V, ultimately making the 3H:1V final configuration impractical. The Division recommends the Operator revise the reclamation plan to address the actual nature of the operation, limitations on final slope configuration, and the potential for slope movement resulting from removing material from the toe of slope of an alluvial fan.

Inspection Contact Address

John M. Clement
Keystone Portfolio Management, LP
13020 FM 1641
Forney, TX 75126

Enclosure: Two photographs and an updated reclamation cost estimation totaling \$2,341.23.

cc w/enclosure: John Clement, jclement@classicusa.com
Bob Larson, bob@mmsouray.com
Russ Means, DRMS GJFO, russ.means@state.co.us

Memphis Pit
M-1997-084
August 5, 2014



Memphis Pit
M-1997-084
August 5, 2014



COST SUMMARY WORK

Task description: Summary of reclamation tasks and costs

Site: Memphis

Permit Action: Bond update
2014

Permit/Job#: M1997084

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 10/17/2014

County: Ouray

Filename: M084-000

User: WHE

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Highwall reduction	EXCAVATE	1	1.76	\$113.00
002	Revegetate 0.5 acres affected land	REVEGE	1	8.00	\$1,122.00
003	Haul reclamation equipment to and from job site	MOBILIZE	1	2.30	\$737.00
<u>SUBTOTALS:</u>				12.06	\$1,972

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02%

Total = \$39.83

Performance bond: 1.05%

Total = \$20.71

Job superintendent: 0.00 hrs

Total = \$0.00

Profit: 10.00%

Total = \$197.20

TOTAL O & P = \$257.74

CONTRACT AMOUNT (direct + O & P) = \$2,229.74

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%

\$111.49

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$369.23

TOTAL BOND AMOUNT (direct + indirect) = \$2,341.23

HYDRAULIC EXCAVATOR WORK

Task description: Highwall reduction

Site: Memphis Permit Action: Bond update 2014 Permit/Job#: M1997084

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 10/17/2014 County: Ouray Filename: M084-001
User: WHE

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat 307D 7'-3" Stick
Attachment 1: ROPS Cab

Horsepower: 56
Weight (MT): 7.23
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$15.43</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$20.67</u>	<u>100</u>
Operator Cost/Hour:	<u>\$28.17</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$64.27</u>	
Total Fleet Cost/Hour:	<u>\$64.27</u>	

MATERIAL QUANTITIES

Initial volume: 56 CCY Swell factor: 1.250
Loose volume: 69 LCY

Source of estimated volume: See attached drawing, "Highwall Reduction..."
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: AVERAGE
Secondary Job Condition within Basic Description: AVERAGE
Cycle Time Value: 0.242 minutes

Load Bucket Capacity

Rated Capacity: 0.20 LCY (heaped) Bucket Size Class: Small
Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity: 0.22 LCY

Job Condition Correction Factors

Site Altitude: 7600 feet

		Source
Altitude Adj:	<u>0.87</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.72</u>	<u>multiplier</u>

Unadjusted Hourly Unit Production: 54.55 LCY/Hour
Adjusted Hourly Unit Production: 39.39 LCY/Hour
Adjusted Hourly Fleet Production: 39.39 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 1.76 Hours
Unit cost: \$1.632 /LCY Total job cost: \$113

Highwall Reduction from 0.5 H:1 V. to 3 H:1 V Balanced Cut & Fill

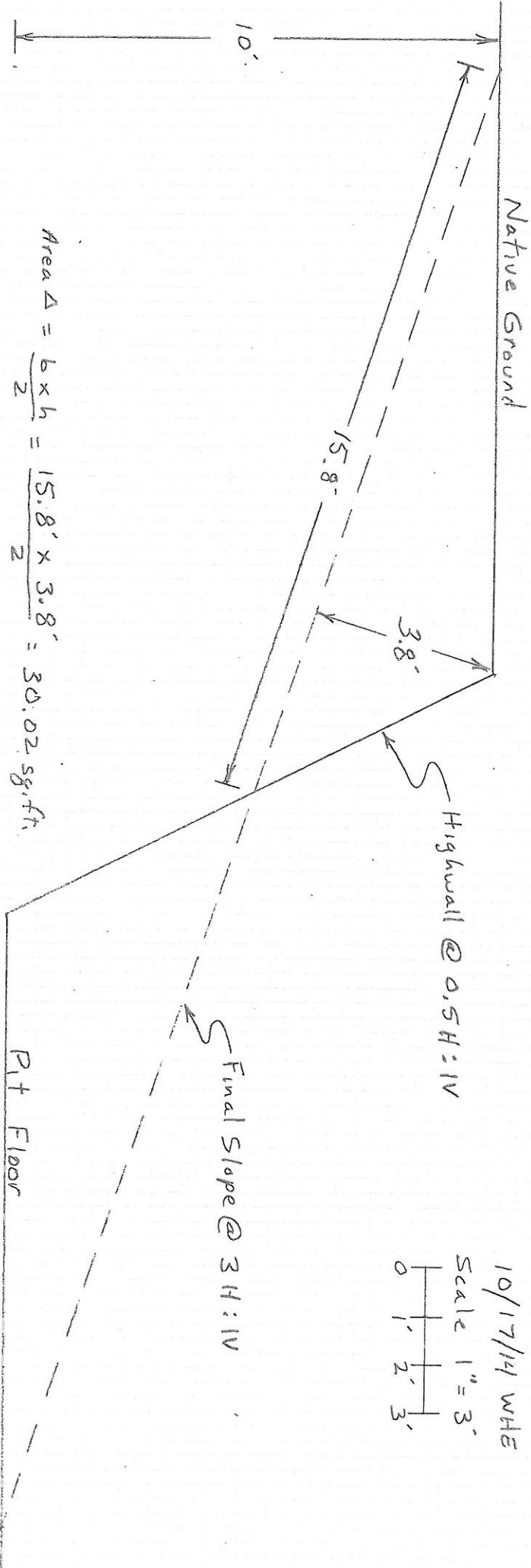
Memphis

M-1997-084

10/17/14 WHE

Scale 1" = 3'

0 1' 2' 3'



$$\text{Area } \Delta = \frac{b \times h}{2} = \frac{15.8' \times 3.8'}{2} = 30.02 \text{ sq. ft.}$$

Assume 50 linear feet of highwall

$$\text{Material Quantity} = 30.02 \text{ sq. ft.} \times 50'$$

$$= 1,501 \text{ cu. ft.}$$

$$= 55.57 \text{ cy}$$

REVEGETATION WORKTask description: Revegetate 0.5 acres affected landSite: MemphisPermit Action: Bond update 2014Permit/Job#: M1997084PROJECT IDENTIFICATIONTask #: 002State: ColoradoAbbreviation: NoneDate: 10/17/2014County: OurayFilename: M084-002User: WHEAgency or organization name: DRMSFERTILIZING**Materials**

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

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
Hand raking (MEANS 32 91 13.23 0250)	\$1,219.68
Total Tilling Cost/Acre	\$1,219.68

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Mountain Brome - Bromar	16.00	25.71	\$54.40
Ryegrass, Perennial - Belramo	3.00	17.01	\$4.14
Slender Wheatgrass - Pryor	4.00	14.60	\$12.36
Sainfoin - Eski	10.00	4.36	\$25.10
Western Wheatgrass - Arriba	6.00	15.15	\$22.08
Totals Seed Mix	39.00	76.84	\$118.08

Application

Description	Cost /Acre
-------------	------------

Broadcast seeding [DMG]	\$261.28
Total Seed Application Cost/Acre	\$261.28

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$16.24	\$16.24
Total Mulch Materials Cost/Acre				\$16.24

Application

Description	Cost /Acre
Weed spray, hand, non-aquatic area, nox. [DMG]	\$179.57
Total Mulch Application Cost/Acre	\$179.57

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres:	<u>0.5</u>	Cost /Acre:	<u>\$1,794.85</u>
Estimated Failure Rate:	<u>25%</u>	Cost /Acre*:	<u>\$1,794.85</u>
*Selected Replanting Work Items:	<u>TILLING,SEEDING,MULCHING</u>		
Initial Job Cost:	<u>\$897.43</u>		
Reseeding Job Cost:	<u>\$224.36</u>		
Total Job Cost:	<u>\$1,122</u>		
Job Hours:	<u>8.00</u>		

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	OURAY	
Total one-way travel distance:	1.50	miles
Average Travel Speed:	20.00	mph

Total Non-Roadable Mob/Demob Cost *	\$737.12
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$0.00
'** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.08	0.08
Return Time (Hours):	0.08	0.08
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.15	0.15

JOB TIME AND COST

Total job time:	2.30	Hours
-----------------	------	-------

Total job cost:	\$737
-----------------	-------