




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: Main Pit	MINE/PROSPECTING ID#: M-1977-197	MINERAL: Sand and gravel	COUNTY: Chaffee
INSPECTION TYPE: Monitoring	INSPECTOR(S): Dustin M. Czaplá	INSP. DATE: May 23, 2013	INSP. TIME: 09:00
OPERATOR: Hard Rock Paving and Redi-Mix, Inc.	OPERATOR REPRESENTATIVE: Brian Sack	TYPE OF OPERATION: 112c - Construction Regular Operation	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$55,000.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: June 19, 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>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>N</u>	(SF) PROCESSING FACILITIES----- <u>Y</u>	(TS) TOPSOIL----- <u>Y</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>N</u>	(SB) COMPLETE INSP---- <u>Y</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>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. Brian Sack, representing the Operator, was present during this inspection. Photographs are included with this report in order to illustrate some of the conditions observed.

The Main Pit is located approximately one mile south of Salida and accessed from CR 107. The site is a 112c operation that includes a total of 37.17 permitted acres. The permit was converted to a 112c in 1999. The Division currently holds a financial warranty amount of \$55,000.00 for this site. The Division has reviewed the reclamation costs, 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 based on the current site conditions.

Adequate mine identification signage was noted at the entrance to the site.

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

The site is active. Materials stockpiles and processing equipment were located in the pit. Reclamation grading has commenced on the west and south slopes of the pit. Native vegetation is establishing itself on areas of the slopes that have not been disturbed for quite some time. Pit slopes located on the BLM property are to be graded no steeper than 3H:1V, and slopes on the deeded property are to be graded no steeper than 2H:1V upon final reclamation. The highwall in the northern part of the BLM property was near vertical and approximately 20 feet high. The remainder of the highwall around the pit was graded to 2H:1V – 3H:1V. The plant and office areas are not included in the permit area.

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 3rd Street, Room 301, Grand Junction, Colorado 81501, phone number (970) 243-6299.

PHOTOGRAPHS



Figure 1: View of the southeast highwall.



Figure 2: View of the south highwall.



Figure 3: View of the southwest highwall.



Figure 4: View of the pit floor, facing west.

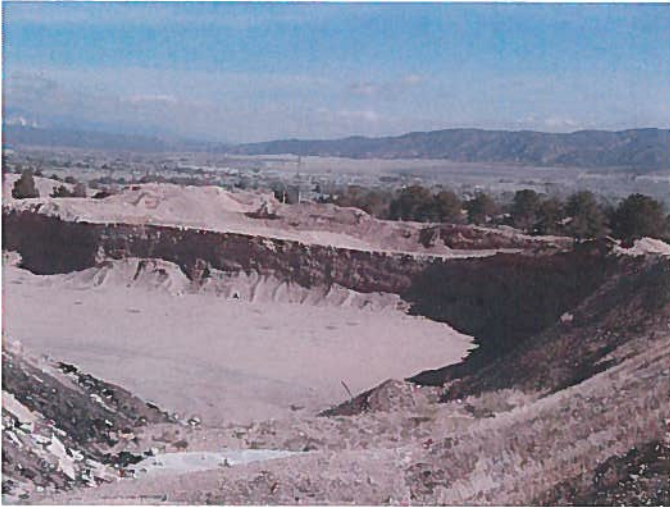


Figure 5: View of the pit in the north part of the BLM property.



Figure 6: View of the pit in the north part of the BLM property.



Figure 7: View of the pit in the north part of the BLM property.



Figure 8: View of the pit in the north part of the BLM property.

Inspection Contact Address

Denise Gonzales
Hard Rock Paving and Redi-Mix, Inc.
P.O. Box 37
Salida, CO 81201

COST SUMMARY WORK

Task description: _____

Site: Main Pit

Permit Action: 2013-05-23

Inspection Permit/Job#: M1977197

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 6/19/2013

County: Chaffee

Filename: M197-000

User: DMC

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Backfill slopes	DOZER	2	17.79	\$7,048.65
02a	Rip BLM pit floor	RIPPER	2	5.99	\$2,530.00
03a	6" topsoil over 17 ac.	DOZER	2	8.57	\$3,394.53
04a	Vegetate BLM ac. and deeded pit floor	REVEGE	1	14.25	\$20,275.63
04b	Vegetate deeded slopes	REVEGE	1	14.25	\$4,274.28
05a	Mobilize reclamation crew and equipment	MOBILIZE	1	2.22	\$4,158.26
<u>SUBTOTALS:</u>				63.07	\$41,681.35

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02%	Total =	\$841.96
Performance bond:	1.05%	Total =	\$437.65
Job superintendent:	37.86 hrs	Total =	\$2,476.42
Profit:	10.00%	Total =	\$4,168.14
		TOTAL O & P =	\$7,924.17
		CONTRACT AMOUNT (direct + O & P) =	\$49,605.52

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	500.00	Total =	500.00
Engineering work and/or contract/bid preparation:	0.00%	Total =	\$0.00
Reclamation management and/or administration:	5.00%		\$2,480.28

CONTINGENCY: 0.00 Total = \$0.00

TOTAL INDIRECT COST = \$10,904.45

TOTAL BOND AMOUNT (direct + indirect) = \$52,585.80

BULLDOZER WORKTask description: **Backfill slopes**Site: **Main Pit** Permit Action: **2013-05-23 Inspection** Permit/Job#: **M1977197****PROJECT IDENTIFICATION**

Task #: **01A** State: **Colorado** Abbreviation: **None**
 Date: **6/19/2013** County: **Chaffee** Filename: **M197-01a**
 User: **DMC**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D8T - 8U**
 Horsepower: **310**
 Blade Type: **Universal**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$56.69	NA
Operating Cost/Hour:	\$104.06	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$37.41	NA

Total unit Cost/Hour: **\$198.16**
 Total Fleet Cost/Hour: **\$396.32**

MATERIAL QUANTITIES

Initial Volume: **14,815**
 Swell factor: **1.060**
 Loose volume: **15,704 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: **931.6 LCY/hr**

Materials consistency description: **Loose stockpile 1.2**

Average push gradient: **0 %**
 Average site altitude: **7,450 feet**

Material weight: **2,900 lbs/LCY**Weight description: **Sand and gravel - Dry****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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4739

Adjusted unit production: 441.49 LCY/hr

Adjusted fleet production: 882.98 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.449/LCY

Total job time: 17.79 Hours

Total job cost: \$7,048.65

BULLDOZER RIPPING WORK

Task description: Rip BLM pit floor

Site: Main Pit Permit Action: 2013-05-23 Inspection Permit/Job#: M1977197

PROJECT IDENTIFICATION

Task #: 02A State: Colorado Abbreviation: None
Date: 6/19/2013 County: Chaffee Filename: M197-02a
User: DMC

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8U Horsepower: 310
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$63.00	NA
Operating Cost/Hour:	\$104.06	100
Ripper Operating Cost/Hour:	\$6.53	100
Operator Cost/Hour:	\$37.41	NA
Total Unit Cost/Hour:	\$211.01	
Total Fleet Cost/Hour:	\$422.03	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 7.00 acres Rip Depth (ft): 2.00 Volume: 22,587 BCY or CCY

Source of estimated quantity: BLM acreage minus slopes

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.56 mph
Average Ripping Width: 7.08 degrees
Average Ripping Length: 100.00 feet
Average Dozer Speed: 88.00 feet
Average Maneuver Time: 0.25 feet
Production per unit area: 0.703 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.703 Acres/hr
Site Altitude: 7,450 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.58 Acres/hr
Adjusted Hourly Fleet Production: 1.17 Acres/hr

JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: 5.99 Hours

Unit cost: \$361.414 Per acre Total job cost: \$2,530.00

BULLDOZER WORKTask description: 6" topsoil over 17 ac.Site: Main PitPermit Action: 2013-05-23 InspectionPermit/Job#: M1977197**PROJECT IDENTIFICATION**Task #: 03AState: ColoradoAbbreviation: NoneDate: 6/19/2013County: ChaffeeFilename: M197-03aUser: DMCAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8UHorsepower: 310Blade Type: UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$56.69	NA
Operating Cost/Hour:	\$104.06	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$37.41	NA

Total unit Cost/Hour: \$198.16Total Fleet Cost/Hour: \$396.32**MATERIAL QUANTITIES**Initial Volume: 13,713Swell factor: 1.000Loose volume: 13,713 LCYSource of estimated volume: 6" topsoil over 17 ac.Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 931.6 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 7,450 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: 800.52 LCY/hr

Adjusted fleet production: 1601.04 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.248/LCY

Total job time: 8.57 Hours

Total job cost: \$3,394.53

REVEGETATION WORKTask description: Vegetate BLM ac. and deeded pit floorSite: Main Pit Permit Action: 2013-05-23 Inspection Permit/Job#: M1977197PROJECT IDENTIFICATION

Task #: 04A State: Colorado Abbreviation: None
 Date: 6/19/2013 County: Chaffee Filename: M197-04a
 User: DMC

Agency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Muriate of potash, 0-0-60	40.00	pound	\$0.33	\$13.08
			Total Fertilizer Materials Cost/Acre	\$13.08

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$52.71
Total Fertilizer Application Cost/Acre	\$52.71

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$88.58
Weed control spraying (MEANS 31 31 16.13 3100)	\$145.20
Total Tilling Cost/Acre	\$233.78

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arizona Fescue - Redondo	1.35	15.50	\$14.89
Slender Wheatgrass - San Luis	3.30	12.05	\$12.24
Western Wheatgrass - Arriba	4.80	12.12	\$17.66
Flax, Lewis Blue	0.40	2.65	\$6.61
Totals Seed Mix	9.85	42.32	\$51.41

Application

Description	Cost /Acre
Drill seeding (DRMS Cost Data)	\$88.20

Total Seed Application Cost/Acre	\$88.20
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MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$265.00	\$530.00
Total Mulch Materials Cost/Acre				\$530.00

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$65.89
Power mulcher (MEANS 32 91 13.16 0250)	\$86.68
Total Mulch Application Cost/Acre	\$152.57

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:	14.46	Cost /Acre:	\$1,121.75
Estimated Failure Rate:	25%	Cost /Acre*:	\$1,121.75
*Selected Replanting Work Items:	FERTILIZING,TILLING,SEEDING,MU LCHING		
Initial Job Cost:	\$16,220.51		
Reseeding Job Cost:	\$4,055.13		
Total Job Cost:	\$20,275.63		
Job Hours:	14.25		

REVEGETATION WORKTask description: Vegetate deeded slopesSite: Main Pit Permit Action: 2013-05-23 Inspection Permit/Job#: M1977197**PROJECT IDENTIFICATION**

Task #: 04B State: Colorado Abbreviation: None
 Date: 6/19/2013 County: Chaffee Filename: M197-04b
 User: DMC

Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Muriate of potash, 0-0-60	40.00	pound	\$0.33	\$13.08
			Total Fertilizer Materials Cost/Acre	\$13.08

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$52.71
Total Fertilizer Application Cost/Acre	\$52.71

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$88.58
Weed control spraying (MEANS 31 31 16.13 3100)	\$145.20
Total Tilling Cost/Acre	\$233.78

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arizona Fescue - Redondo	2.70	30.99	\$29.78
Slender Wheatgrass - San Luis	6.60	24.09	\$24.49
Western Wheatgrass - Arriba	9.60	24.24	\$35.33
Flax, Lewis Blue	0.80	5.31	\$13.22
Totals Seed Mix	19.70	84.63	\$102.81

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$261.28

Total Seed Application Cost/Acre	\$261.28
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MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$265.00	\$530.00
Total Mulch Materials Cost/Acre				\$530.00

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$65.89
Power mulcher (MEANS 32 91 13.16 0250)	\$86.68
Total Mulch Application Cost/Acre	\$152.57

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: 2.54 Cost /Acre: \$1,346.23
 Estimated Failure Rate: 25% Cost /Acre*: \$1,346.23
 *Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,MULCHING

Initial Job Cost: \$3,419.42
 Reseeding Job Cost: \$854.86
 Total Job Cost: \$4,274.28
 Job Hours: 14.25

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Mobilize reclamation crew and equipmentSite: Main Pit Permit Action: 2013-05-23 Inspection Permit/Job#: M1977197**PROJECT IDENTIFICATION**

Task #: 05A State: Colorado Abbreviation: None
 Date: 6/19/2013 County: Chaffee Filename: M197-05a
 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:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
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 D8T - 8U	53.70	\$63.00	\$125.45	2	\$376.91	\$250.90	\$500.00
CAT 972H	28.00	\$35.56	\$117.55	1	\$153.11	\$117.55	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$39.59	\$88.67	1	\$128.26	\$88.67	\$250.00
Power Mulcher (Reinco M90)	6.00	\$7.03	\$88.67	1	\$95.70	\$88.67	\$250.00

Subtotals: **\$753.98** **\$545.79** **\$1,250.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$15.34	1	\$15.34	\$15.34

Subtotals: **\$15.34** **\$15.34**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	SALIDA	
Total one-way travel distance:	2.00	miles
Average Travel Speed:	35.00	mph

Total Non-Roadable Mob/Demob Cost *	\$4,156.51
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$1.75
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.06	0.06
Return Time (Hours):	0.06	0.06
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.11	0.11

JOB TIME AND COST

Total job time:	2.23	Hours
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Total job cost:	\$4,158.26
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