




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: Carrizo Stone North	MINE/PROSPECTING ID#: M-2005-067	MINERAL: Sandstone (silica, stc quartzite)	COUNTY: Baca
INSPECTION TYPE: Monitoring	WEATHER: Cloudy	INSP. DATE: May 31, 2023	INSP. TIME: 13:00
OPERATOR: Carrizo Stone, LLC	OPERATOR REPRESENTATIVE: Fred Reyes	TYPE OF OPERATION: 112c - Construction Regular Operation	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE:	BOND AMOUNT: \$43,449.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
INSPECTOR(S): Brock Bowles Patrick Lennberg	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: June 9, 2023	

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>N</u>	(FN) FINANCIAL WARRANTY----- <u>N</u>	(RD) ROADS----- <u>N</u>
(HB) HYDROLOGIC BALANCE----- <u>N</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>N</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>N</u>	(FW) FISH & WILDLIFE----- <u>N</u>	(RV) REVEGETATION---- <u>N</u>
(SM) SIGNS AND MARKERS----- <u>N</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>N</u>	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>N</u>	

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

OBSERVATIONS

This was a routine monitoring inspection conducted Brock Bowles and Patrick Lennberg of the Division of Reclamation, Mining and Safety (Division). Fred Reyes (Operator) was present for the inspection. The weather during the inspection was overcast and warm with a light breeze. The ground was damp.

Mr. Russell Freeman recently purchased the land Carrizo North is on. He is in the process of submitting an SO to change the operator for the mine. This inspection was conducted at Mr. Freeman's request to evaluate the cost estimate for the surety bond.

The Carrizo Stone North is a 112c mine permitted for 28.0 acres. It is located about 18 mile east of Kim. The primary commodity is construction sandstone and the post mining land use is pastureland.

The mine entrance sign was in place but will have to be updated after the SO is approved with the new operator information. The permit boundary markers were in place on all four sides of the permit area (photo 1).

Mining was taking place and machinery was on site moving/staging material. Many pallets were staged with product outside the pit area on all sides. Immediately adjacent to the pit were piles of waste rock.

The mining pit area consists of a high wall about 700 feet long and averages 8 feet high (photo 2 & 3). The sandstone is mined using an expansive grout mining technique. This technique involves drilling a series of holes in the sandstone and filing the holes with expansive grout. The grout expands over a short period of time creating a fault along the drill holes without the fractures caused by blasting. The stone is then cut to size for transport.

The pit is situated on top of a knoll and the pit depth is less than the height of the knoll. No ground water was intercepted or anticipate. Several puddles were seen in the pit area from recent rains.

Several topsoil/overburden piles were placed around the perimeter of the pit area (photo 4). No signs of excessive erosion or noxious weeds were noted.

A cost estimate was calculated as part of this inspection and is attached to this report.

PHOTOGRAPHS



Photo 1 – Southeast corner marker



Photo 2 – Main pit area and highwall, facing northwest



Photo 3 – Pit and highwall on east side of pit area.



Photo 4 – Topsoil stockpile northeast of pit area

Inspection Contact Address

Fred Reyes
Carrizo Stone, LLC
38805 MYERS RD
YODER, CO 80864

Enclosure- 2023 RCE

CC:

COST SUMMARY WORK

Task description: _____

Site: Carrizo Stone North

Permit Action: 2023 Cost Estimate

Permit/Job#: M2005067

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 6/9/2023

County: Baca

Filename: M067-000

User: BFB

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill highwall (700'x8') grade to 3h:1v	DOZER	1	19.05	\$5,025
002	Spreading Overburden/Topsoil	DOZER	1	27.13	\$7,155
004	Revegetation of Affected Land	REVEGE	1	12.00	\$24,522
005	Mobilization of Equipment	MOBILIZE	1	10.49	\$3,668
<u>SUBTOTALS:</u>				68.67	\$40,370

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02
Performance bond: 1.05
Job superintendent: 0.00
Profit: 10.00

Total = \$815

Total = \$424

Total = \$0

Total = \$4,037

TOTAL O & P = \$5,276

CONTRACT AMOUNT (direct + O & P) = \$45,646

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500

Total = \$500

Engineering work and/or contract/bid preparation: 0.00

Total = \$0

Reclamation management and/or administration: 5.00

\$2,282

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$8,059

TOTAL BOND AMOUNT (direct + indirect) = \$48,429

BULLDOZER WORKTask description: **Backfill highwall (700'x8') grade to 3h:1v**Site: **Carrizo Stone North**Permit Action: **2023 Cost Estimate**Permit/Job#: **M2005067****PROJECT IDENTIFICATION**Task #: **001**State: **Colorado**Abbreviation: **None**Date: **6/9/2023**County: **Baca**Filename: **M001**User: **BFB**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	50
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$263.78**Total Fleet Cost/Hour: **\$263.78****MATERIAL QUANTITIES**Initial Volume: **2,281**Swell factor: **1.000**Loose volume: **2,281 LCY**Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **200 feet**Unadjusted hourly production: **491.9 LCY/hr**Materials consistency description: **Rock, poorly ripped or blasted 0.6**Average push gradient: **5 %**Average site altitude: **4,930 feet**Material weight: **2,550 lbs/LCY**Weight description: **Sandstone****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.600	(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:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2434

Adjusted unit production: 119.73 LCY/hr

Adjusted fleet production: **119.73** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$2.203/LCY

Total job time: **19.05** Hours

Total job cost: **\$5,025**

BULLDOZER WORKTask description: Spreading Overburden/TopsoilSite: Carrizo Stone NorthPermit Action: 2023 Cost EstimatePermit/Job#: M2005067**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 6/9/2023County: BacaFilename: M002User: BFBAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$124.85</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$97.63</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>10</u>
Operator Cost/Hour:	<u>\$41.30</u>	<u>NA</u>

Total unit Cost/Hour: \$263.78Total Fleet Cost/Hour: **\$263.78****MATERIAL QUANTITIES**Initial Volume: 4,840Swell factor: 1.000Loose volume: **4,840 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 377.8 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 5 %Average site altitude: 4,930 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.100</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.100</u>	<u>(50% SL)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4723

Adjusted unit production: 178.43 LCY/hr

Adjusted fleet production: **178.43** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$1.478/LCY

Total job time: **27.13** Hours

Total job cost: **\$7,155**

REVEGETATION WORKTask description: Revegetation of Affected LandSite: Carrizo Stone NorthPermit Action: 2023 Cost EstimatePermit/Job#: M2005067PROJECT IDENTIFICATIONTask #: 004State: ColoradoAbbreviation: NoneDate: 6/9/2023County: BacaFilename: M004User: BFBAgency 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
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$290.40

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost / Acre
Blue Grama - Native	3.00	48.97	\$41.18
Sand Dropseed	1.00	119.38	\$9.75
Sideoats Grama - Butte	8.00	26.26	\$72.00
Bottlebrush Squirreltail	9.00	39.67	\$146.03
Sorghum, Sudan - Arikaree	30.00	17.22	\$21.75
Western Wheatgrass - Rosanna	15.00	37.88	\$86.25
Totals Seed Mix	66.00	289.37	\$376.95

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$267.22
Total Seed Application Cost/Acre	\$267.22

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$842.72

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$73.00
Total Mulch Application Cost/Acre	\$73.00

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: 12 Cost /Acre: \$1,850.29
 Estimated Failure Rate: 30% Cost /Acre*: \$644.17
 *Selected Replanting Work Items: SEEDING

Initial Job Cost: **\$22,203.48**
 Reseeding Job Cost: **\$2,319.01**
 Total Job Cost: **\$24,522**
 Job Hours: **12.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilization of Equipment**Site: **Carrizo Stone North**Permit Action: **2023 Cost Estimate**Permit/Job#: **M2005067****PROJECT IDENTIFICATION**

Task #: **005** State: **Colorado** Abbreviation: **None**
 Date: **6/9/2023** County: **Baca** Filename: **M005**
 User: **BFB**

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:	\$15.25	\$23.06	\$37.58
Operating Cost/Hour:	\$25.26	\$30.83	\$51.41
Operator Cost/Hour:	\$27.71	\$27.71	\$27.71
Helper Cost/Hour:	\$0.00	\$20.22	\$20.22
Total Unit Cost/Hour:	\$68.22	\$101.82	\$136.92

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 - 8SU	47.71	\$124.85	\$101.82	1	\$226.67	\$101.82	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.25	\$68.22	1	\$74.47	\$68.22	\$250.00

Subtotals: **\$301.14** **\$170.04** **\$500.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
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Subtotals: **\$0.00** **\$0.00**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	TRINIDAD	
Total one-way travel distance:	103.00	miles
Average Travel Speed:	55.00	mph

Total Non-Roadable Mob/Demob Cost *	\$3,668.20
'* 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):	1.87	1.87
Return Time (Hours):	1.87	1.87
Loading Time (Hours):	1.00	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	5.25	3.75

JOB TIME AND COST

Total job time:	10.49	Hours
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Total job cost:	\$3,668
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