

**STATE OF
COLORADO****Gagnon - DNR, Nikie** <nikie.gagnon@state.co.us>

Rother Pit No. 1 Inspection Report and Cost Estimate

1 message

Gagnon - DNR, Nikie <nikie.gagnon@state.co.us>

Wed, Aug 2, 2023 at 4:51 PM

To: PFM Consulting <pfmconsultingcompany@gmail.com>, ron@rocktran.com

Hi Jodi.

Attached is the inspection report and cost estimate for the Rother Pit No. 1 Succession of Operator application. Please review the report and cost estimate and reach out to me by August 11 if you have any questions about the financial warranty. The Division will send out a separate notification letter and Colorado Gravel will have 60 days from the date of the letter to submit the required financial warranty.

Kind regards,

--

Nikie Gagnon
Environmental Protection Specialist



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

P 303.866.3567 x8126 | C 720.527.1640 | F 303.832.8106
Physical: 1313 Sherman Street, Room 215, Denver, CO 80203
Mailing: DRMS Room 215, 1001 E 62nd Ave, Denver, CO 80216
nikie.gagnon@state.co.us | <https://www.drms.colorado.gov>

2 attachments

**M1999083_Rother Pit #1 SO Financial Warranty Estimate.pdf**

173K


**M1999083_Rother Pit No 1_ Inspection Report and Cost Estimate.pdf**

3715K



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: Rother Pit No. 1	MINE/PROSPECTING ID#: M-1999-083	MINERAL: Gravel	COUNTY: Cheyenne
INSPECTION TYPE: Monitoring	WEATHER: Cloudy	INSP. DATE: July 10, 2023	INSP. TIME: 10:00
OPERATOR: Cheyenne County	OPERATOR REPRESENTATIVE: N/A	TYPE OF OPERATION: 110c - Construction Limited Impact	
REASON FOR INSPECTION: Succession of Operator from Cheyenne Co To Colorado Gravel LLC	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$0.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
INSPECTOR(S): Nikie Gagnon	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: August 2, 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>Y</u>	(RD) ROADS----- <u>Y</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>	(RS) RECL PLAN/COMP-- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</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 inspection was conducted by Nikie Gagnon of the Division of Reclamation, Mining and Safety (Division). This was a routine succession of operator inspection for the Rother Pit No. 1. Ron Peterson of Colorado Gravel (Successor) met with the Division at the site but did not stay to conduct the inspection. Cheyenne County (Operator) was aware of the inspection but elected not to attend.

The Rother Pit is located 15 miles northeast of the town of Kit Carson. The site is a 110c operation with 9.90 acres permitted and a maximum allowed disturbance of 9.90 acres. The post-mining land use is rangeland.

The site was not active during the inspection. Cheyenne County lost right-of-access due to the sale of the property in 2022. No mining or processing equipment was observed at the site. The ground was dry. No problems or violations were observed during the inspection.

Signs and Markers:

A mine sign was posted at the entrance to the site in compliance with Rule 3.1.12(1). Permit boundary markers (t-posts) were observed around the perimeter of the site. Note, the mine sign shows the pit name as Rother Pit #2. This is incorrect. The name of this site is Rother Pit No 1. The Rother Pit #2 is a different site operated by Cheyenne County. Once the permit is transferred, Colorado Gravel should correct the sign name to avoid confusion.

Gen. Compliance With Mine Plan:

Cheyenne County mined road maintenance material intermittently since the site was permitted in 1999. The site consists of a single pit, hillside excavation. The pit walls have been mined closed to 3H:1V. The approved mine plan allows for processing/screening gravel; however, no washing of gravel is approved to occur on site. According to the mining application, the thickness of the deposit was estimated to be 12 feet. Mined material is stockpiled in the southwestern corner of the pit floor.

Topsoil:

Salvaged topsoil and overburden is stored in vegetated berms above the eastern and northern sides of the pit. The berms appear stable, and no evidence of erosion was noted during this inspection.

Reclamation Plan:

The approved reclamation plan calls for grading to 3H:1V and placing 6 inches of topsoil and overburden across the disturbed area. The site will be drill seeded with the recommended NRCS seed mix and straw mulch will be crimped into the soil.

Access Road:

The access road from C.R. 28 to the pit is in good condition. According to the approved reclamation plan, the road will remain after reclamation per landowner request. Since the land has been sold since originally permitted, Colorado Gravel may need to address this with the new landowner and submit a technical revision if there are any changes to the approved plan for the road.

Hydrologic Balance:

The pit slopes to the west. An unnamed ephemeral drainage is adjacent to the western permit boundary. The gully was dry during this inspection. A rock stormwater berm is constructed on the western side of the pit to slow the velocity of surface water and reduce sediment runoff from the site into the gully.

Financial Warranty:

The Division calculated the financial warranty to complete reclamation of the Rother Pit No. 1. The cost estimate is attached to this report. Please review the estimate of \$66,131.00 and reach out to the Division by **August 11, 2023** to address any questions. The Division will send out a separate notification letter and the Successor Operator will have 60 days from the date of the letter to submit the required financial warranty.

This concludes the Division's inspection report. Photographs taken during the time of the inspection are included below. If you need additional information or have any questions, please contact me at Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at 303-866-3567 x8126, or by email at nikie.gagnon@state.co.us.

PHOTOGRAPHS



Photo 1: Looking south across the pit from the access road.



Photo 2: Looking west across the southern mine face carved into the hillside.



Photo 3: Stormwater berm on the west side of the pit. Arrow points to western boundary marker.



Photo 4: Looking north along the western permit boundary. Arrow points to location of rock stormwater berm controlling stormwater runoff into gully outside the permit area.



Photo 5: Looking west across the pit floor. Stockpiles of mined material stored on the pit floor.



Photo 6: Topsoil/overburden pile stored above the eastern pit wall.



Photo 7: Looking southeast at the eastern edge of the pit wall.



Photo 8: Looking south along the permit boundary from the northwestern corner marker.



Photo 9: Approximate permit boundary location. Google imagery dated 10/2019.

Inspection Contact Address

Colorado Gravel LLC
P.O. Box 732
Lamar, CO 80810

Enclosure: Cost Estimate

CC: Jodi Schreiber, PFM Consulting
Amy Eschberger, DRMS

COST SUMMARY WORK

Task description: _____

Site: Rother Pit No. 1

Permit Action: July 2023 SO

Permit/Job#: M1999083

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 7/6/2023

County: Cheyenne

Filename: M083-000

User: NCG

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Highwall grading	DOZER	1	2.57	\$1,097
002	Replace topsoil 9.9 acres	SCRAPER1	1	7.29	\$15,231
003	Revegetate 9.9 acres	REVEGE	1	4.50	\$20,136
004	Mob/Demob Equipment	MOBILIZE	1	8.21	\$16,017
<u>SUBTOTALS:</u>				22.57	\$52,481

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02
Performance bond: 1.05
Job superintendent: 11.28
Profit: 10.00

Total = \$1,060

Total = \$551

Total = \$734

Total = \$5,248

TOTAL O & P = \$7,593

CONTRACT AMOUNT (direct + O & P) = \$60,074

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$2,553

Reclamation management and/or administration: 5.00

\$3,004

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$13,650

TOTAL BOND AMOUNT (direct + indirect) = \$66,131

BULLDOZER WORKTask description: **Highwall grading**Site: **Rother Pit No. 1**Permit Action: **July 2023 SO**Permit/Job#: **M1999083****PROJECT IDENTIFICATION**Task #: **001**State: **Colorado**Abbreviation: **None**Date: **7/6/2023**County: **Cheyenne**Filename: **M083-001**User: **NCG**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:	\$241.38	NA
Operating Cost/Hour:	\$143.92	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	25
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$426.60**Total Fleet Cost/Hour: **\$426.60****MATERIAL QUANTITIES**Initial Volume: **2,083**Swell factor: **1.250**Loose volume: **2,604 LCY**Source of estimated volume: **1000' x 15' highwall**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **50 feet**Unadjusted hourly production: **1,400.0 LCY/hr**Materials consistency description: **Consolidated stockpile 1.0**Average push gradient: **-5 %**Average site altitude: **4,580 feet**Material weight: **2,650 lbs/LCY**Weight description: **Decomposed rock - 25% Rock, 75% Earth****Job Condition Correction Factor**

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

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.7230

Adjusted unit production: 1,012.20 LCY/hr

Adjusted fleet production: **1012.2** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.421/LCY

Total job time: **2.57** Hours

Total job cost: **\$1,097**

SCRAPER TEAM WORKTask description: **Replace topsoil 9.9 acres**Site: **Rother Pit No. 1**Permit Action: July 2023 SOPermit/Job#: M1999083**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 8/2/2023County: CheyenneFilename: M083-002User: NCGAgency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 631G
-Dozer:	NA
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown:

Scraper Work Team

Support Equipment

Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	100	NA	50	50
Ownership cost/hour:	\$341.67	NA	\$241.38	NA	\$212.21	\$11.35
Operating cost/hour:	\$285.26	NA	\$143.92	NA	\$62.44	\$11.46
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$41.30	NA	\$28.56	\$0.00
Unit Subtotals:	\$657.83	NA	\$426.60	NA	\$303.21	\$22.81
Number of Units:	2	0	1	0	1	1
Group Subtotals:	Work: \$1,315.66		Support: \$426.60		Maint: \$326.02	

Total work team cost/hour: **\$2,068.28****MATERIAL QUANTITIES**Initial volume: 7,986

CCY

Swell factor: 1.215Loose volume: **9,703**

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:Scraper Loading Time: 0.80 MinutesManeuver and Spread Time: 0.70 MinutesJob Condition Correction:

Site Altitude: 4580 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

Travel Time:Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	400.00	2.00	3.00	5.00	1343	0.37

Haul Time: 0.37 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	400.00	-2.00	3.00	1.00	2937	0.30

Return Time: 0.30 minutesTotal Scraper team cycle time: 2.17 minutesAdjusted for job conditions: 665.53 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,331.06 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,331.06 LCY/HourUnadjusted unit production/hour: 801.84 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 7.29 HoursUnit cost: \$1.554 /LCYTotal job cost: \$15,077

REVEGETATION WORKTask description: Revegetate 9.9 acresSite: Rother Pit No. 1Permit Action: July 2023 SOPermit/Job#: M1999083**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 7/6/2023County: CheyenneFilename: M083-003User: NCGAgency or organization name: DRMS**FERTILIZING****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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$112.82
Total Tilling Cost/Acre	\$112.82

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Lovington	3.00	48.97	\$47.93
Little Bluestem - Pastura	7.00	41.78	\$94.38
Sideoats Grama - Vaughn	9.00	29.55	\$75.38
Western Wheatgrass - Arriba	16.00	40.40	\$104.00
Totals Seed Mix	35.00	160.70	\$321.68

Application

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

Drill seeding (MEANS 32 92 19.13 0020)	\$468.00
Total Seed Application Cost/Acre	\$468.00

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$429.79	\$859.57
Total Mulch Materials Cost/Acre				\$859.57

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$74.46
Total Mulch Application Cost/Acre	\$74.46

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: 9.9 Cost /Acre: \$1,836.53
 Estimated Failure Rate: 25% Cost /Acre*: \$789.68
 *Selected Replanting Work Items: SEEDING

Initial Job Cost: **\$18,181.65**
 Reseeding Job Cost: **\$1,954.46**
 Total Job Cost: **\$20,136**
 Job Hours: **4.50**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/Demob Equipment**Site: **Rother Pit No. 1**Permit Action: July 2023 SOPermit/Job#: M1999083**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 7/6/2023County: CheyenneFilename: M083-004User: NCGAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck 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:	\$20.26	\$36.04	\$47.05
Operating Cost/Hour:	\$39.51	\$76.08	\$82.85
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$82.29	\$158.17	\$175.95

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	53.08	\$255.49	\$175.95	1	\$431.44	\$175.95	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.73	\$82.29	1	\$89.02	\$82.29	\$250.00
Cat 631G	52.50	\$341.67	\$175.95	2	\$1,035.24	\$351.90	\$500.00
CAT 16M	28.73	\$212.21	\$158.17	1	\$370.38	\$158.17	\$250.00

Subtotals: **\$1,926.08** **\$768.31** **\$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, 1 T. Crew	\$27.44	1	\$27.44	\$27.44
Water Tanker, 2,500 Gal.	\$34.27	1	\$34.27	\$34.27

Subtotals: **\$61.71** **\$61.71**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>LAMAR</u>	
Total one-way travel distance:	<u>58.00</u>	miles
Average Travel Speed:	<u>55.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$15,887.03</u>
-------------------------------------	--------------------

 ** two round trips with haul rig:

Total Roadable Mob/Demob Cost **	<u>\$130.15</u>
----------------------------------	-----------------

 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>1.05</u>	<u>1.05</u>
Return Time (Hours):	<u>1.05</u>	<u>1.05</u>
Loading Time (Hours):	<u>1.00</u>	<u>NA</u>
Unloading Time (Hours):	<u>1.00</u>	<u>NA</u>
Subtotals:	<u>4.11</u>	<u>2.11</u>

JOB TIME AND COST

Total job time:	<u>8.22</u>	Hours
-----------------	-------------	-------

Total job cost:	<u>\$16,017</u>
-----------------	-----------------