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

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: Goodrich Pit	**MINE/PROSPECTING ID#:** M-2019-005	**MINERAL:** Stone, aggregate, and gravel	**COUNTY:** Las Animas
INSPECTION TYPE: Monitoring	**WEATHER:** Cloudy	**INSP. DATE:** March 27, 2025	**INSP. TIME:** 13:15
OPERATOR: Fremont Paving & Redi-Mix, Inc.	**OPERATOR REPRESENTATIVE:** Jodi Schreiber	**TYPE OF OPERATION:** 112c - Construction Regular Operation	
REASON FOR INSPECTION: Normal I&E Program	**BOND CALCULATION TYPE:** Complete Bond	**BOND AMOUNT:** $283,190.00	
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** None	**JOINT INSP. AGENCY:** None	
INSPECTOR(S): Amber M. Gibson	**INSPECTOR'S SIGNATURE:** 	**SIGNATURE DATE:** April 15, 2025	

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

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

OBSERVATIONS

The Goodrich Pit was inspected by Amber Gibson with the Division of Reclamation, Mining and Safety (Division/DRMS). The inspection was completed as part of the Division's routine monitoring inspection program. The site was previously inspected by the Division on November 3, 2020 as a routine monitoring inspection. Jodi Schrieber (representing the Operator), accompanied me during the inspection. The sky was cloudy, and the weather was hot and windy.

The Goodrich Pit is located in Las Animas County approximately 7.75 miles southwest of Kim, Colorado. The entrance to the pit is south of Highway 160, off the west side of County Road 185. The site is an 80-acre 112c Construction Materials Reclamation Permit. The primary commodity being mined at the site is quarry rock. The approved post-mining land use is rangeland.

Availability of Records:
The annual report, map, and fee are paid through May 24, 2025. There are no outstanding infractions. This site was originally operated under a 111 permit application (permit no. M-2017-005) and was re-permitted as the current 112c operation in 2019.

The Division found that the recent **annual report maps were inadequate**.

1. For the 2025 submittal of the annual report map please refer to the Annual Report Form. The Annual Report Form states that as required by the Colorado Land Reclamation Act for the Extraction of Construction Materials (C.R.S. 34-32.5-116), the Permittee shall attach a map to the report that accurately depicts:

   i. the permit boundary,
   ii. the current affected area boundary and;
   iii. the location of the acreages specified in Items no. 8-12 and 15.

   Items 8-12 and 15 on the Annual Report Form are listed below.
   #8. Number of acres currently affected (mining + incomplete and or unreleased reclamation).
   #9. Number of acres that were newly affected during the current report year.
   #10. Number of acres that were reclaimed during the current report year.
   #11. Estimated new acreage to be affected in the next report year.
   #12. Estimated acres to be reclaimed in the next report year.
   #15. Is adequate topsoil reserved for reclamation, based on your approved permit?

2. Please also include the following features:
   - A google earth background image
   - A north arrow and scale
   - A legend indicating the polygons and/or lines for the features identified in items 8-12 and 15 on the form OR include clear labels for each feature.

Explosives:
The Operator stated that blasting has not occurred at this site for a few years. No explosives were stored onsite at the time of the inspection. Blasting is conducted by a contracted entity when it does occur onsite.

Financial Warranty:
The Division currently holds a reclamation bond in the amount of $283,190 for this site. The Division has updated the estimate for the reclamation liability and found it to be $389,869 - a difference of $106,679 from the bond currently held. The Division's cost estimate is enclosed with this report. The Operator will have 14 days (April 29, 2025), from the issuance of this report to submit any questions on the cost estimate. If no questions are received, the Division may issue a surety increase notice for the difference. The Operator will have 60 days from the date of the notice to submit and obtain acceptance of the increase in financial warranty from the Division in accordance with Rule 4.2.1(2).

Hydrologic Balance and Sediment Control:
No standing water was observed onsite during the inspection. The excavated pit area is surrounded by blasted highwalls up to 30 feet high (Photos 1-4). The processing area in the unexcavated western portion of the disturbed area has overburden and topsoil stockpiles lining the south side (Photos 5-6), and low berms lining the north side, ensuring that any run-off runs into the disturbed area and is prevented from leaving the site.

General Compliance with Mine Plan:
The Goodrich Pit is located within the southeastern edge of the Fallas Mesa. Mining at this site is conducted in two phases. The first Phase consisted of the initial 30 acres included in the previous 111 permit. The second Phase includes the remaining 50 acres. During the inspection, the disturbance boundary was collected in Esri FieldMaps, and was reverified post-inspection using Google Earth Pro. It appears that mining has entered into the Phase 2 area (see Map 1 and Figure 1). Currently, there is about 28.5 acres that are disturbed onsite (excluding the haul road).

Although blasting has not occurred onsite within the last few years, the Operator stated that material has been hauled from the site within the last few months. Much of the large, blasted material is sold for use as rip-rap. In the processing area, piles of large stone material and finely crushed material were present during the inspection (Photo 7). When processing is occurring, a portable asphalt plant is brought and used onsite. Stockpiles of gray finely crushed material that are used in the production of asphalt were observed in the processing area, as well as a black recycled asphalt stockpile that is also used for asphalt production (Photo 8). Few pieces of equipment were observed onsite during the inspection, but much of that shown in the September 11, 2024 aerial image on Map 1 was not present during the inspection. The operations conducted onsite appear to be in compliance with the approved mining plan.

Roads:
The Reclamation plan allows for the haul road to remain following reclamation, per the Landowner's request. The road leading up to the pit has been graveled (Photo 9). The road extends through the pit area, splits into ingress and egress routes into the processing area (Photo 10) and extends past the processing area (Photos 11-12). There is also a truck scale located along the entrance haul road (Photo 13). The roads within the permit area have been well maintained.

Signs and Markers:
A mine sign was posted at the entrance to the site in compliance with Rule 3.1.12(1) (Photo 9). The Division verified the location of field markers around the processing area during the inspection using the Esri Field Maps application. The affected area is marked with t-posts (Photos 14-15).

Topsoil:
Topsoil piles were observed along the southern border of the processing area (Photo 15). The piles appeared stable at the time of the inspection. The Operator may consider seeding the piles this year if they will not be used for reclamation within the next 180 days.

Conclusion:
This concludes the Division's Inspection Report; a map and figure displaying topics discussed during the inspection, and a subset of corresponding photographs that were taken during the time of the inspection, are included below. If you need additional information or have any questions, please contact me by email at amber.gibson@state.co.us or by telephone at (720) 836-0967.

Inspection Contact Address
Jodi Schreiber
Fremont Paving & Redi-Mix, Inc.
839 Mackenzie Ave
Canon City, CO 81212

Enclosure: 2025 Reclamation Cost Estimate

CC: Jared Ebert, DRMS

PHOTOGRAPHS

Photo 1: Looking south within the excavated area at the blasted highwalls and blasted material above and below the highwall within the permit boundary.

Photo 2: Looking east within the excavated area.

Photo 3: Looking west at some finely crushed material within the excavated area.

Photo 4: Looking east across the excavated pit from atop the processing area.

Photo 5: Looking west along the product berms with the topsoil berms (arrow) lining the southside.

Photo 6: Looking east along the topsoil berms.

Photo 7: Looking east within the processing area.

Photo 8: Looking east within the processing area. A loader is pictured in the background. The arrow points to the pile of recycled asphalt.

Photo 9: Looking west at the graveled haul road leading into the pit and at the mine sign.

Photo 10: Looking south at the ingress and egress haul road routes within the excavated area leading to the processing area up top.

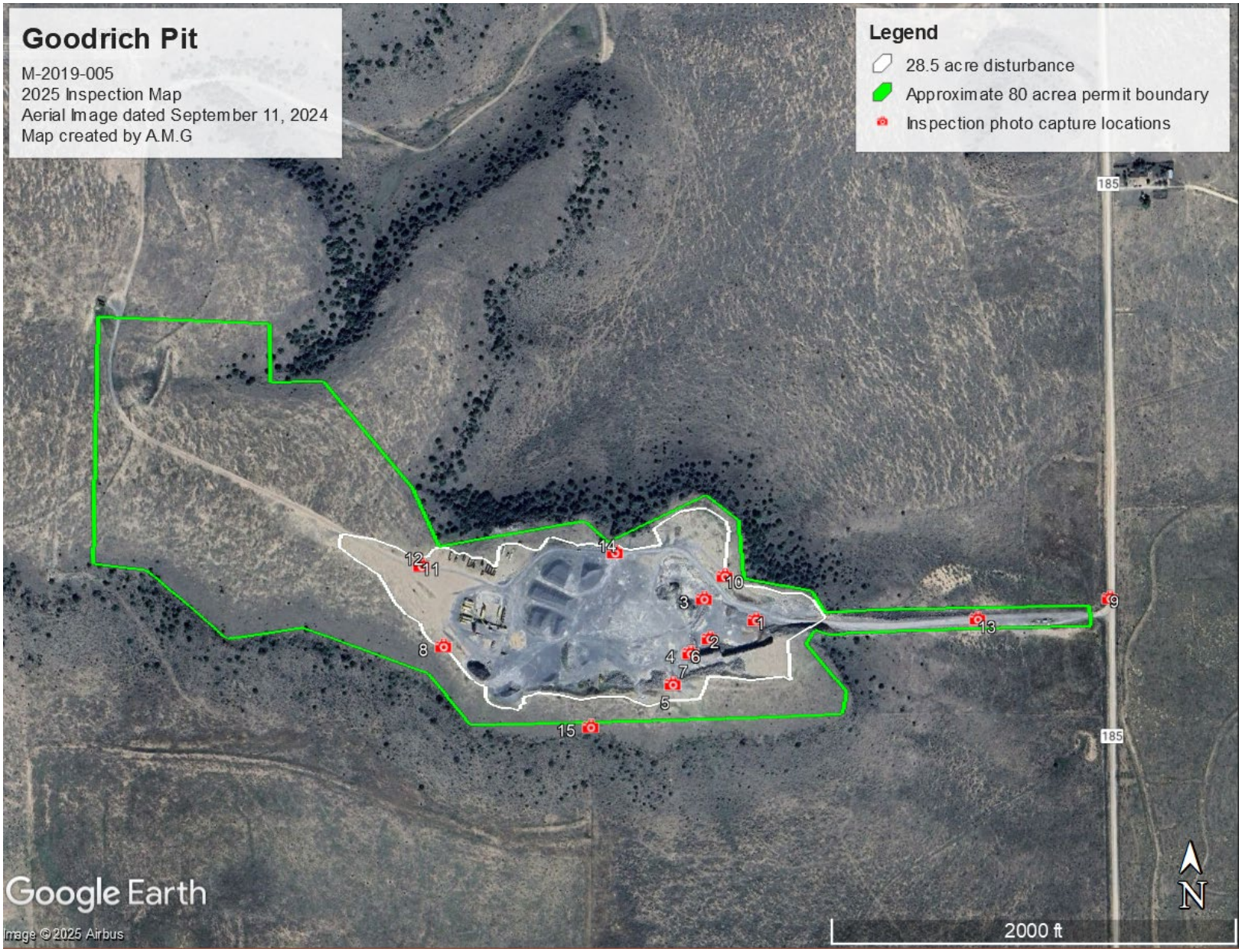
Photo 11: Looking east at where the haul road extends through the processing area.

Photo 12: Looking west at where the haul road extends past the processing area.

Photo 13: Looking east at the truck scale within the entrance haul road.

Photo 14: Looking west along the northern permit boundary at a t-post (circled) and at the berms lining the disturbance on the northside, preventing sediment from leaving the site.

Photo 15: Looking northeast at some of the t-posts marking the south side of the permit boundary.



Map 1: 2025 Inspection Map for the Goodrich Pit generated in Google Earth Pro. The numbers correspond to the inspection report photos.

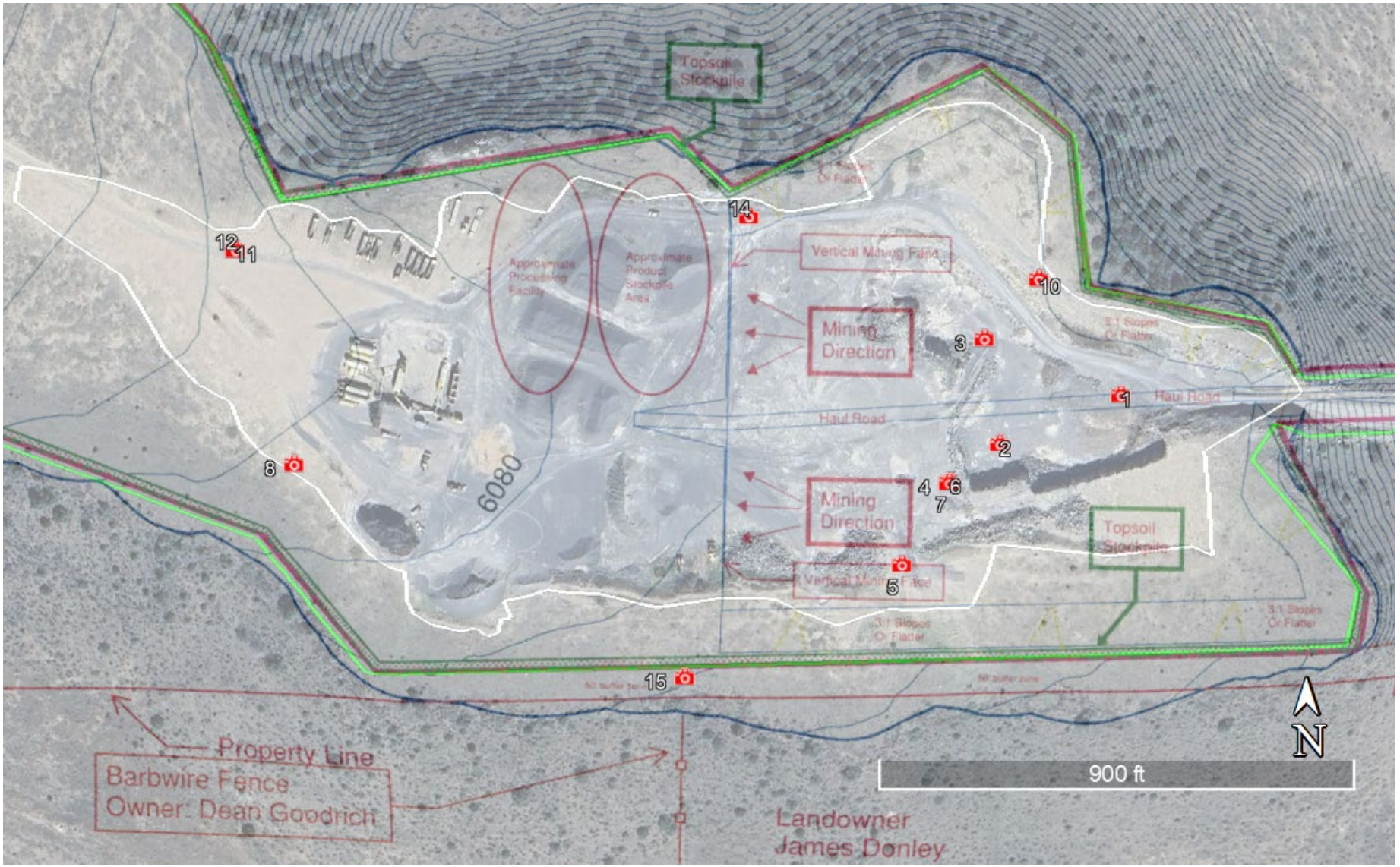


Figure 1: The Permittee's Mining Plan Phase 1 map overlain onto the 2025 inspection report map. The white polygon indicates the disturbance boundary. The vertical blue line in the middle of the figure indicates the Phase 1 boundary. The Operator is now in Phase 2.

COST SUMMARY WORK

Task description: **Reclamation Cost Estimate Summary - 2025**

Site: **Goodrich Pit** Permit Action: 2025 Inspection Permit/Job#: M2019005

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 4/14/2025 County: Las Animas Filename: M005-000
User: AMG

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Drill and Blast Highwall	BLASTING	1	54.54	$41,237
001b	Grade blasted highwall material to 3H:1V slope.	DOZER	1	6.44	$2,174
002	Rip the affected land	RIPPER	2	56.71	$39,031
003	Spread topsoil	LOADER	2	189.27	$53,331
004	Revegetation	REVEGE	1	80.00	$148,426
005	Mobilization	MOBILIZE	1	9.32	$17,114
	SUBTOTALS:			**396.28**	**$301,313**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	$6,087
Performance bond:	1.05	Total =	$3,164
Job superintendent:	198.14	Total =	$15,707
Profit:	10.00	Total =	$30,131
		TOTAL O & P =	$55,088
		CONTRACT AMOUNT (direct + O & P) =	$356,401

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	$500	Total =	$500
Engineering work and/or contract/bid preparation:	4.25	Total =	$15,147
Reclamation management and/or administration:	5.00		$17,820
CONTINGENCY:	0.00	Total =	$0
		TOTAL INDIRECT COST =	$88,555
		TOTAL BOND AMOUNT (direct + indirect) =	**$389,868**

SURFACE BLASTING WORK

Task description: **Drill and Blast Highwall**

Site: **Goodrich Pit** Permit Action: 2025 Inspection Permit/Job#: M2019005

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 4/14/2025 County: Las Animas Filename: 1
User: AMG

Agency or organization name: DRMS

BLAST AREA DIMENSIONS

	QUANTITY	UNIT
Blast Area Configuration:	Wedge-shaped mass (highwall reduction using balanced cut/fill)	
Blasting Method Description:	Cast blast (fragmentation + lateral movement)	
Highwall or Bench Face Angle:	0.75	h:1v
Regraded Slope Angle:	3.00	h:1v
Highwall or Bench Length:	1,200	feet
Highwall or Bench Width:	34	feet
Highwall or Bench Height:	30.0	feet
Depth to Base of Cut at Highwall:	11.3	feet

BLAST AREA VOLUMES

	QUANTITY	UNIT
Total Volume of Dimensional Mass to be Shot:	6,385	cubic yards
Blast Volume to Subdrill Grade and Blast Pattern Lines:	4,635	cubic yards
Blast Volume to Finish Grade and Blast Pattern Lines:	4,635	cubic yards
Remaining Volume Required to be Re-Shot or Ripped:	1,750	cubic yards

BLAST AREA DESIGN

	QUANTITY	UNIT
Recommended Blasthole Diameter:	1.507	inches
Selected Blasthole Diameter:	7.000	inches
Subdrilling Allowance:	0.0	feet
Blasthole Depth:	6.5	feet
Density of Rock:	Cast blasting (ANFO Basis)	rock density
Burden to Charge Diameter Ratio:	20	times diameter
Burden:	12.0	feet
Spacing to Burden Ratio:	1.1	times burden
Spacing:	13.0	feet
Cubic Yards of Rock per Blasthole:	25.19	cubic yards
Powder Factor Description:	Medium	rock strength
Powder Factor:	0.575	pounds/cu. yd.
Density of Blasting Agent:	0.85	grams/cc
Quantity of Explosives per Blasthole:	14.48	POUNDS
Height of Powder Column:	1.02	feet
Height of Stemming per Blasthole:	5.45	feet
Stemming to Burden Ratio:	0.45	times burden
Quantity of Stemming per Blasthole:	0.0540	cubic yards
Number of Rows:	2	rows
Number of Blastholes per Row:	92	holes per row
Total Number of Blastholes:	184	holes
Total Length of all Blastholes:	1,191	feet

BLASTING MATERIALS QUANTITIES

	QUANTITY	UNIT
Total Quantity of Stemming Required:	9.93	cubic yards
Total Quantity of Explosives Required:	2,665	pounds
Total Quantity of det. cord/fuse/wire Required:	3,968	linear feet
Quantity of Blasting Caps per Blasthole:	1	cap(s)
Total Quantity of Blasting Caps Required:	184	caps
Quantity of Primers per Blasthole:	1	primer(s)
Total Quantity of Primers Required:	184	primers
Quantity of Delays per Blasthole:	1	delay(s)
Total Quantity of Delays Required:	186	delays

HOURLY EQUIPMENT COST

Shift basis: 1 per day

	Description
Drilling Equipment - Drill:	SCHRAMM T450WS
-Drill Pad Preparation:	Cat D8T - 8SU
Misc. Drill Support Equipment:	NA
Misc. Explosives Support Equipment:	NA
Explosives Delivery –Bulk Truck:	ANFO Bulk Delivery Truck
-Cap Truck:	Cap Delivery Truck

Cost Breakdown:	Drilling Equipment	Drill Pad Preparation	Misc. Drill Support	Misc. Expl. Support	Explosives Delivery Bulk Truck	Explosives Delivery Cap Truck
	Drilling	Dozer			MiscTruck	MiscTruck
%Utilization-machine:	100	25	NA	NA	25	25
Ownership cost/hour:	$293.57	$173.32	NA	NA	$131.01	$9.32
Operating cost/hour:	$215.68	$27.43	NA	NA	$35.44	$9.47
%Utilization-ripper:	NA	15	NA	NA	NA	NA
Ripper own. cost/hour:	NA	$14.53	NA	NA	$0.00	$0.00
Ripper op. cost/hour:	NA	$1.19	NA	NA	$0.00	$0.00
Operator cost/hour:	$78.71	$38.59	NA	NA	$27.68	$27.68
Unit Subtotals:	$587.96	$255.06	$0.00	$0.00	$194.13	$46.46
Number of Units:	1	1	0	0	1	1
Group Subtotals:	$587.96	$255.06	$0.00	$0.00	$194.13	$46.46

Total work team cost/hour: **$1,083.61**

MATERIALS COST

	Description	Unit	Unit Cost	Quantity	Total Cost
Blasting Agent:	Bulk ANFO nom. density (7,900-15,000 fps)	Pound	$0.800	2665.082	$2,132.07
Primers or Boosters:	Cast primer, 1.0 lb (electric or non-electric system)	Each	$14.810	184.000	$2,725.04
Blasting Caps:	Non-electric cap, delay (non-electric systems)	Each	$6.400	184.000	$1,177.60
Det. Cord, fuse, or wire:	Detonating cord, 45 gr./ft. (non-electric systems)	Linear foot	$0.800	3968.140	$3,174.51
Delays:	1,000 MS delays (non-electric systems)	Each	$21.020	186.000	$3,909.72
Miscellaneous:	NO MISCELLANEOUS MATERIALS REQUIRED	NA	$0.000	0.000	$0.00
Drill bits:	Bit life = 1,750	Linear feet	$1,825.64	0.681	$1,242.90
				Total Materials Cost:	**$14,361.84**

DRILLING AND EXPLOSIVES PREPARATION TIME

Total Drilling Length:	1,191	linear feet
Unadjusted Drilling Rate:	82.00	feet/hour
Drilling Time:	22.83	hours

Job Condition Corrections:

Site Altitude:	6,100	feet
Altitude Adjustment:	0.95	(DRMS est.)
Job Efficiency Factor:	0.67	(CH. Exc. HB)
Adjusted Drilling Rate:	**52.19**	feet/hour
Explosives Prep. Time:	31.72	hours

JOB TIME AND COST

Total Job Time: **54.55** Hours

Unit cost: $8.897 per cu. yd. Total Job Cost: **$41,237**

BULLDOZER WORK

Task description: **Grade blasted highwall material to 3H:1V slope.**

Site: **Goodrich Pit** Permit Action: 2025 Inspection Permit/Job#: M2019005

PROJECT IDENTIFICATION

Task #: 001B State: Colorado Abbreviation: None
Date: 4/14/2025 County: Las Animas Filename: 1b
User: AMG

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU
Horsepower: 310
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$173.32	NA
Operating Cost/Hour:	$109.71	100
Ripper own. Cost/Hour:	$14.53	NA
Ripper op. Cost/Hour:	$1.19	15
Operator Cost/Hour:	$38.59	NA

Total unit Cost/Hour: $337.34
Total Fleet Cost/Hour: **$337.34**

MATERIAL QUANTITIES

Initial Volume: 4,211
Swell factor: 1.000
Loose volume: **4,211** LCY

Source of estimated volume: Blasted Highwall Surface area, 2.61 acres, Push 1 foot depth
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: Rock, avg. ripped or blasted 0.7

Average push gradient: -30 %
Average site altitude: 6,100 feet

Material weight: 3,300 lbs/LCY

Weight description: Basalt

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	0.700	(CAT HB)
Dozing method:	1.200	(SLOT)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4668

Adjusted unit production: 653.52 LCY/hr
Adjusted fleet production: **653.52** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.516/LCY

Total job time: **6.44** Hours
Total job cost: **$2,174**

BULLDOZER RIPPING WORK

Task description: **Rip the affected land**

Site: **Goodrich Pit** Permit Action: 2025 Inspection Permit/Job#: M2019005

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 4/14/2025 County: Las Animas Filename: 2
User: AMG

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$173.32	NA
Operating Cost/Hour:	$109.71	100
Ripper Ownership Cost/Hour:	$14.53	NA
Ripper Operating Cost/Hour:	$7.95	100
Operator Cost/Hour:	$38.59	NA
Total Unit Cost/Hour:	$344.10	

Total Fleet Cost/Hour: **$688.19**

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 77.39 acres Rip Depth (ft): 2.00 Volume: 249,712 BCY or CCY

Source of estimated quantity: 80 acres less 2.61 acres

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	2.56	feet/pass
Average Ripping Width:	7.08	feet/pass
Average Ripping Length:	500.00	feet/pass
Average Dozer Speed:	88.00	feet/minute
Average Maneuver Time:	0.25	minutes/pass
Production per unit area:	0.822	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.822 Acres/hr

Site Altitude:	6,100	feet
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.83	multiplier

Adjusted Hourly Unit Production: 0.68 Acres/hr
Adjusted Hourly Fleet Production: **1.36** Acres/hr

JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: **56.72** Hours

Unit cost: $504.345 Per acre Total job cost: **$39,031**

WHEEL LOADER – LOAD AND CARRY WORK

Task description: **Spread topsoil**

Site: **Goodrich Pit** Permit Action: 2025 Inspection Permit/Job#: M2019005

PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 4/14/2025 County: Las Animas Filename: 3
User: AMG

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 966H Horsepower: 262
Attachment 1: ROPS Cab Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$57.78	NA
Operating Cost/Hour:	$46.25	100
Operator Cost/Hour:	$36.85	NA
Total Unit Cost/Hour:	$140.88	
Total Fleet Cost/Hour:	$281.77	

MATERIAL QUANTITIES

Initial volume: 64,533 CCY Swell factor: 1.000
Loose volume: **64,533** LCY

Source of estimated volume: 80 Acres, 6” deep
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Loader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	0.000	minutes
	Adjusted Basic Cycle Time:	0.500	minutes

Rolling Resistance – Road Conditions

Haul: Rutted dirt, little maintenance, no water, 1” tire penetration 4.0
Return: Rutted dirt, little maintenance, no water, 1” tire penetration 4.0

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	500	0.00	4.00	4.00	0.4222	(Cat HB)
Return Route:	500	0.00	4.00	4.00	0.3923	(Cat HB)

Total Travel Time:	0.8145	minutes
Total Cycle Time:	**1.3145**	minutes

Load Bucket Capacity

Rated Capacity:	5.00	LCY (heaped)
Bucket Fill Factor:	0.900	Other - soil, boulders, roots (80 -100%) 0.900
Adjusted Capacity:	**4.50**	LCY

Job Condition Correction Factors
Site Altitude: 6100 feet

		Source
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.83	multiplier

Unadjusted Hourly Unit Production:	205.40	LCY/Hour
Adjusted Hourly Unit Production:	170.48	LCY/Hour
Adjusted Hourly Fleet Production:	**340.96**	LCY/Hour

JOB TIME AND COST

Fleet size:	2	Loader(s)	Total job time:	**189.27**	Hours
Unit cost:	$0.826	/LCY	Total job cost:	**$53,331**	

REVEGETATION WORK

Task description: **Revegetation**

Site: **Goodrich Pit** Permit Action: 2025 Inspection Permit/Job#: M2019005

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 4/14/2025 County: Las Animas Filename: 4
User: AMG

Agency or organization name: DRMS

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	$117.61
Total Tilling Cost/Acre	**$117.61**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	0.75	12.24	$21.49
Prairie Clover, Purple - Kaneb	0.32	2.19	$14.37
Sideoats Grama - Butte	1.37	4.50	$33.09
Little Bluestem - Pastura	1.01	6.03	$16.03
Western Wheatgrass - Arriba	4.00	10.10	$36.13
Needle and Thread	0.55	1.45	$44.79
Needlegrass, Green - Lodorm	0.48	1.99	$4.15
Winter Fat	0.02	0.05	$0.93
Totals Seed Mix	8.50	38.55	**$170.98**

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	$236.64
Total Seed Application Cost/Acre	**$236.64**

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	$492.78	$985.56
Total Mulch Materials Cost/Acre				**$985.56**

Application

Description	**Cost /Acre**
Crimping, with tractor {DMG survey data}	$85.37
Power mulcher (MEANS 32 91 13.16 0350)	$157.25
Total Mulch Application Cost/Acre	**$242.63**

JOB TIME AND COST

No. of Acres:	80	Cost /Acre:	$1,753.42
Estimated Failure Rate:	25%	Cost /Acre*:	$407.62
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	**$140,273.60**
Reseeding Job Cost:	**$8,152.40**
Total Job Cost:	**$148,426**
Job Hours:	**80.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mobilization**

Site: **Goodrich Pit** Permit Action: 2025 Inspection Permit/Job#: M2019005

PROJECT IDENTIFICATION

Task #: 005 State: Colorado Abbreviation: None
Date: 4/14/2025 County: Las Animas Filename: 5
User: AMG

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:	$10.44	$22.18	$23.94
Operating Cost/Hour:	$26.48	$54.55	$55.65
Operator Cost/Hour:	$22.52	$22.52	$22.52
Helper Cost/Hour:	$0.00	$23.53	$23.53
Total Unit Cost/Hour:	$59.44	$122.78	$125.64

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
SCHRAMM T450WS	0.00	$281.20	$59.44	1	$340.64	$59.44	$250.00
Cat D8T - 8SU	53.08	$187.85	$125.64	2	$626.98	$251.28	$500.00
CAT 966H	25.80	$57.78	$59.44	2	$234.44	$118.88	$500.00
Drill/Broadcast Seeder with Tractor	25.00	$41.02	$59.44	2	$200.92	$118.88	$500.00
Power Mulcher (Bowie LD-90)	6.00	$27.21	$59.44	1	$86.65	$59.44	$250.00
Subtotals:			**$1,489.63**		**$607.92**		**$2,000.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
ANFO Bulk Delivery Truck	$300.44	1	$300.44	$300.44
Cap Delivery Truck	$74.86	1	$74.86	$74.86
Light Duty Pickup, 4x4, 1 T. Crew	$46.67	1	$46.67	$46.67
Fuel Tanker, 6x4, 210 HP	$75.02	1	$75.02	$75.02
Subtotals:			**$496.99**	**$496.99**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	TRINIDAD	
Total one-way travel distance:	65.00	miles
Average Travel Speed:	65.00	mph

Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$16,119.93
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$993.98

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	1.00	1.00
Return Time (Hours):	1.00	1.00
Loading Time (Hours):	1.33	NA
Unloading Time (Hours):	1.33	NA
Subtotals:	4.66	2.00

JOB TIME AND COST

Total job time:	**9.32**	Hours
Total job cost:	**$17,114**	