

February 15, 2022

Jodi Shreiber  
All-Rite Paving & Redi-Mix, Inc.  
P.O. Box 165  
Canon City, CO 81215

**RE: Lamar Pit, Permit No. M-1987-079, Technical Revision No. 3 (TR-3), Adequacy Review No. 4**

Ms. Schreiber:

The Division of Reclamation, Mining and Safety (Division) has completed its review of your adequacy response submitted on February 15, 2022 for Technical Revision No. 3 (TR-3). After reviewing the materials submitted, the Division has the following comments:

- 1) The adequacy response did not include an updated Mining Map – Exhibit D. The Exhibit D map submitted appeared to be a previous version which still includes “Spectator Pit” in the title, does not include the disturbance acreages, does not show the well location, has the fuel storage in the wrong location (according to the other Exhibit D maps), and has a 12/1/21 signature date. Please include the revised version of this map which correlates with the other Exhibit D maps signed on 2/10/22.
- 2) The Division has calculated the required financial warranty for the site based on the proposed reclamation plan. Please review the enclosed bond estimate and provide any comments or questions you might have prior to the decision date.

This completes the Division’s 4<sup>th</sup> adequacy review of the materials submitted for TR-3. The decision date for TR-3 is currently set for **February 19, 2022**. If additional time is needed to address the adequacy items, an extension request must be received by our office prior to the decision date.

If you have any questions, you may contact me by telephone at (303) 866-3567, ext. 8129, or by email at [amy.eschberger@state.co.us](mailto:amy.eschberger@state.co.us).

Sincerely,



Amy Eschberger  
Environmental Protection Specialist

Encl: Division’s bond estimate

Cc: Michael Cunningham, DRMS



## COST SUMMARY WORK

Task description: Cost summary

Site: Lamar Pit

Permit Action: TR-3 Bond Estimate  
2022

Permit/Job#: M1987079

### PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None  
Date: 2/15/2022 County: Prowers Filename: M079-000  
User: AME

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Import 5,153 cy of topsoil from Lamar (\$15/cy)	NA	1	1.00	\$77,295
002	Backfill pit (max 3.8 acre) with on-site material	SCRAPER1	1	83.10	\$84,035
006	Rip disturbed area around pits	RIPPER	1	4.32	\$1,130
007	Retopsoil 19 acres	SCRAPER1	1	11.00	\$11,128
008	Revegetate 19 acres	REVEGE	1	19.00	\$42,789
009	Mobilization/demobilization	MOBILIZE	1	6.48	\$11,113
<b><u>SUBTOTALS:</u></b>				<b>124.9</b>	<b>\$227,490</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$4,595
Performance bond:	1.05	Total =	\$2,389
Job superintendent:	60.00	Total =	\$4,322
Profit:	10.00	Total =	\$22,749

TOTAL O & P = \$34,055

CONTRACT AMOUNT (direct + O & P) = \$261,545

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	<u>\$500</u>	Total =	<u>\$500</u>
Engineering work and/or contract/bid preparation:	<u>0.00</u>	Total =	<u>\$0</u>
Reclamation management and/or administration:	<u>5.00</u>		<u>\$13,077</u>

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$47,632

**TOTAL BOND AMOUNT (direct + indirect) = \$275,122**

**SCRAPER TEAM WORK**Task description: **Backfill pit (max 3.8 acre) with on-site material**

Site: **Lamar Pit** Permit Action: **TR-3 Bond Estimate** Permit/Job#: **M1987079**  
2022

**PROJECT IDENTIFICATION**

Task #: **002** State: **Colorado** Abbreviation: **None**  
 Date: **2/15/2022** County: **Prowers** Filename: **M079-002**  
 User: **AME**

Agency or organization name: **DRMS****HOURLY EQUIPMENT**COSTShift basis: **1 per day**

Equipment Description	
-Scraper:	Cat 631G
-Dozer:	NA
Support Equipment -Load Area:	NA
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 3,500 Gal.

**Cost Breakdown:**

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	NA	75	50	50
Ownership cost/hour:	\$147.77	NA	NA	\$97.46	\$70.80	\$17.15
Operating cost/hour:	\$141.36	NA	NA	\$73.22	\$28.16	\$14.60
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	NA	\$41.30	\$28.56	\$0.00
Unit Subtotals:	\$320.03	NA	NA	\$211.98	\$127.51	\$31.75
Number of Units:	2	0	0	1	1	1
Group Subtotals:	Work:	\$640.06	Support:	\$211.98	Maint:	\$159.26

Total work team cost/hour: **\$1,011.30****MATERIAL QUANTITIES**

Initial volume: **91,960** CCY Swell factor: **1.125**  
 Loose volume: **103,455** LCY

Source of estimated volume: **No more than 3.8 ac at any time x 15 ft deep**  
 Source of estimated swell factor: **Cat Handbook**

**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight: **2,650 lbs/LCY** Struck Volume: **24.00** LCY  
 Material description: **Decomposed rock - 25% Rock,** Heaped Volume: **34.00** LCY  
**75% Earth**  
 Rated Payload: **81,600 pounds** Average Volume: **29.00** LCY

Payload Capacity: 30.79 LCYAdjusted Capacity: 29.00 LCYCycle Time:Scraper Loading Time: 0.80 MinutesManeuver and Spread Time: 0.70 MinutesJob Condition Correction:

Site Altitude: 3610 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	500.00	1.00	3.00	4.00	1667	0.46

Haul Time: 0.46 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	-1.00	3.00	2.00	2914	0.36

Return Time: 0.36 minutesTotal Scraper team cycle time: 2.32 minutesAdjusted for job conditions: 622.50 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,245.00 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,245.00 LCY/HourUnadjusted unit production/hour: 750.00 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: 83.10 HoursUnit cost: \$0.812 /LCYTotal job cost: \$84,035

## BULLDOZER RIPPING WORK

Task description: Rip disturbed area around pits

Site: Lamar Pit Permit Action: TR-3 Bond Estimate  
2022 Permit/Job#: M1987079

### PROJECT IDENTIFICATION

Task #: 006 State: Colorado Abbreviation: None  
Date: 2/15/2022 County: Prowers Filename: M079-006  
User: AME

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:	\$97.46	NA
Operating Cost/Hour:	\$97.63	100
Ripper Ownership Cost/Hour:	\$15.19	NA
Ripper Operating Cost/Hour:	\$9.94	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$261.52	
Total Fleet Cost/Hour:	<b>\$261.52</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 3.00 acres Rip Depth (ft): 2.00 Volume: 9,680 BCY or CCY

Source of estimated quantity: 19 ac disturbance - 16 ac backfilled pits

### 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: 850.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.837 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.837 Acres/hr  
Site Altitude: 3,610 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.69 Acres/hr  
Adjusted Hourly Fleet Production: **0.69** Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **4.32** Hours

Unit cost: \$376.656 Per acre Total job cost: **\$1,130**

**SCRAPER TEAM WORK**Task description: **Retopsoil 19 acres**

Site: **Lamar Pit** Permit Action: **TR-3 Bond Estimate 2022** Permit/Job#: **M1987079**

**PROJECT IDENTIFICATION**

Task #: **007** State: **Colorado** Abbreviation: **None**  
 Date: **2/15/2022** County: **Prowers** Filename: **M079-007**  
 User: **AME**

Agency or organization name: **DRMS****HOURLY EQUIPMENT**COSTShift basis: **1 per day**

Equipment Description	
-Scraper:	Cat 631G
-Dozer:	NA
Support Equipment -Load Area:	NA
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 3,500 Gal.

**Cost Breakdown:**

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	NA	75	50	50
Ownership cost/hour:	\$147.77	NA	NA	\$97.46	\$70.80	\$17.15
Operating cost/hour:	\$141.36	NA	NA	\$73.22	\$28.16	\$14.60
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	NA	\$41.30	\$28.56	\$0.00
Unit Subtotals:	\$320.03	NA	NA	\$211.98	\$127.51	\$31.75
Number of Units:	2	0	0	1	1	1
Group Subtotals:	Work: \$640.06		Support: \$211.98		Maint: \$159.26	

Total work team cost/hour: **\$1,011.30****MATERIAL QUANTITIES**

Initial volume: **10,218** CCY Swell factor: **1.215**  
 Loose volume: **12,415** LCY

Source of estimated volume: **19 ac x 4 inch depth**  
 Source of estimated swell factor: **Cat Handbook**

**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

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

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

Site Altitude: 3610 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	800.00	1.00	3.00	4.00	1667	0.59

Haul Time: 0.59 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	800.00	-1.00	3.00	2.00	2914	0.47

Return Time: 0.47 minutesTotal Scraper team cycle time: 2.56 minutesAdjusted for job conditions: 564.14 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,128.28 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,128.28 LCY/HourUnadjusted unit production/hour: 679.69 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: 11.00 HoursUnit cost: \$0.896 /LCYTotal job cost: \$11,128

**REVEGETATION WORK**Task description: Revegetate 19 acresSite: Lamar Pit Permit Action: TR-3 Bond Estimate  
2022Permit/Job#: M1987079**PROJECT IDENTIFICATION**

Task #: 008 State: Colorado Abbreviation: None  
 Date: 2/15/2022 County: Prowers Filename: M079-008  
 User: AME

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

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

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.56
<b>Total Tilling Cost/Acre</b>	<b>\$114.56</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.10	3.90	\$2.85
Switchgrass - Blackwell	1.10	9.82	\$12.65
Blue Grama - Lovington	0.30	4.90	\$4.79
Sand Dropseed	0.10	11.94	\$0.98
Western Wheatgrass - Native	4.00	10.10	\$24.00
<b>Totals Seed Mix</b>	<b>5.60</b>	<b>40.66</b>	<b>\$45.27</b>

**Application**



Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
<b>Total Seed Application Cost/Acre</b>	<b>\$232.00</b>

## MULCHING and MISCELLANEOUS

## Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	5.60	TON	\$307.02	\$1,719.31
<b>Total Mulch Materials Cost/Acre</b>				<b>\$1,719.31</b>

## Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$71.57
<b>Total Mulch Application Cost/Acre</b>	<b>\$71.57</b>

## 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:	19	Cost /Acre:	\$2,182.71
Estimated Failure Rate:	25%	Cost /Acre*:	\$277.27
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	<b>\$41,471.49</b>		
Reseeding Job Cost:	<b>\$1,317.03</b>		
Total Job Cost:	<b>\$42,789</b>		
Job Hours:	<b>19.00</b>		

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: Mobilization/demobilizationSite: Lamar Pit Permit Action: TR-3 Bond Estimate  
2022Permit/Job#: M1987079**PROJECT IDENTIFICATION**

Task #: 009 State: Colorado Abbreviation: None  
 Date: 2/15/2022 County: Prowers Filename: M079-009  
 User: AME

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:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
Ownership Cost/Hour:	\$21.28	\$37.94	\$47.67
Operating Cost/Hour:	\$26.55	\$50.48	\$56.21
Operator Cost/Hour:	\$20.54	\$20.54	\$20.54
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$68.37	\$132.49	\$147.95

**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	47.71	\$97.46	\$132.49	2	\$459.90	\$264.98	\$250.00
CAT 16M	28.73	\$70.80	\$132.49	1	\$203.29	\$132.49	\$250.00
Cat 631G	52.50	\$147.77	\$147.95	2	\$591.44	\$295.90	\$500.00
Drill/Broadcast Seeder with Tractor	25.00	\$7.98	\$68.37	1	\$76.35	\$68.37	\$250.00

Subtotals: **\$1,330.98** **\$761.74** **\$1,250.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 3,500 Gal.	\$46.35	1	\$46.35	\$46.35

Subtotals: **\$46.35** **\$46.35**

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>LAMAR</u>	
Total one-way travel distance:	<u>1.00</u>	miles
Average Travel Speed:	<u>45.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$11,111.28</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$2.06</u>
** one round trip, no haul rig:	

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.02</u>	<u>0.02</u>
Return Time (Hours):	<u>0.02</u>	<u>0.02</u>
Loading Time (Hours):	<u>1.60</u>	<u>NA</u>
Unloading Time (Hours):	<u>1.60</u>	<u>NA</u>
Subtotals:	<u>3.24</u>	<u>0.04</u>

**JOB TIME AND COST**

Total job time:	<u>6.49</u>	Hours
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Total job cost:	<u>\$11,113</u>
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