



October 13, 2021

John Paul Ary
Fremont Paving and Redi Mix
839 Mackenzie Ave.
Cañon City, CO 81212

Re: Penrose Pit, Permit No. M-1987-131; Third Adequacy Review for 112 Construction Materials Reclamation Permit Amendment Application (AM-03)

Dear Mr. Ary:

The Division of Reclamation, Mining and Safety (DRMS) has completed its review of your responses (received August 24, 2021) to our August 17, 2021 second adequacy review (SAR) of your 112 Construction Materials Reclamation Permit Amendment Application (AM-03) for the Penrose Pit, Permit No. M-1987-131. **The current decision date for this application is October 26, 2021.**

The following comments must be addressed by the applicant in order to satisfy the requirements of C.R.S. 34-32.5-101 et seq. and the Mineral Rules and Regulations of the Mined Land Reclamation Board. The original comment numbers have been retained for tracking purposes. Comments for which adequate responses were previously provided have been removed. Please provide a response letter addressing the remaining six adequacy issues.

6.4 SPECIFIC EXHIBIT REQUIREMENTS – REGULAR 112 OPERATIONS

6.4.1 & 2 EXHIBITS A and B - Legal Description and Index Map

4. Exhibits A and B: The response is adequate.

6.4.3 EXHIBIT C - Pre-mining and Mining Plan Map(s) of Affected Lands

6. Exhibit Map Requirements: The response is adequate.
7. Exhibit C Maps: The response related to Item g below requires additional information.
- a. Exhibit C Map. The response is adequate.
 - b. Exhibit C.1 Map. The response is adequate.
 - c. Exhibit D Map. The response is adequate.
 - d. Penrose Pit Phase Map. The response is adequate.
 - f. Rule 6.4.3(f) requires water resources information. The response is adequate.



- g. Rule 6.4.3(g) requires all structures within 200 feet of the affected land be identified in Exhibit C. Based on your revised Exhibits C and C.1 the DRMS has identified several structures within 200 feet of the proposed affected area boundary that will require structure damage compensation agreements. As some have neither a name nor owner identified, please see the enclosed markup of your Exhibit C.1 showing the five locations which have one or more structures requiring a structure damage compensation agreement. Comment 34 below specifically requires these agreements.

6.4.4 EXHIBIT D – Mining Plan

9. Mining Slopes: The response is adequate.

6.4.5 EXHIBIT E – Reclamation Plan

16. Topsoil Thickness: The response is adequate.

6.4.6 EXHIBIT F – Reclamation Plan Map

19. Exhibit F Proposed topography: This comment was partially addressed on the revised Exhibit F map. Rule 6.4.6(a) requires topography and contours of the reclaimed areas. The revised map only shows final grading contours in the existing mining area and Phase 1. Please either show final grading contours for all mining phases or commit in writing to submit a Technical Revision (TR) along with the requisite fee to show final grading contours for each Mining phase at least 30 days prior to initiating mining in Phase 2 and subsequent phases.
20. Exhibit F Final Land Use: *This comment did not appear to be addressed on the revised Exhibit F map.* Rule 6.4.6(b) requires showing the proposed final land use. Based on information in the application the DRMS understands the entire site is intended to be rangeland. If this is the case, please confirm as much in your adequacy response letter. If there are exceptions, please indicate what those are and where they are on revised Exhibit F map.

6.4.6 EXHIBIT G – Water Information

24. Contradictions: Please provide the following:
- a. The response is adequate.

6.4.12 EXHIBIT L – Reclamation Costs

28. DRMS Estimate: The DRMS generated a reclamation cost estimate based on this amendment application and responses received to date. Please review the enclosed reclamation cost estimate. If you find errors, or disagree with some specific task, please contact me.

6.4.19 EXHIBIT S – Permanent Man-Made Structures

34. Eligible Structures: As discussed in Comment 7.g above, based on your revised Exhibits C and C.1 the DRMS has identified several structures within 200 feet of the proposed affected area boundary that will require structure damage compensation agreements. Please provide damage compensation agreements; or provide documents demonstrating the attempt to obtain

damage compensation agreements, along with appropriate engineering analyses showing those structures will not be damaged for the following:

- c. i) the well owned by Castle Concrete; ii) the diversion structure just west of Hwy 115 on the north side of the Arkansas River owned by the Grisentis and the Bureau of Land Management; and iii) the building, chain-link fence, access road, process pond and concrete apron associated with the Fremont Sanitary District Processing Facility; and iv) the "Active Structure" south of Phase 6 shown on the enclosed Exhibit C.1 markup.
- d. As the affected area boundaries were not adjusted near the powerlines, damage compensation agreements are required for Black Hills Energy powerline.

6.5 GEOTECHNICAL STABILITY EXHIBIT

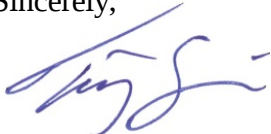
35. Geotechnical Stability Exhibit: This exhibit has not yet been provided. The DRMS cannot approve this amendment without reviewing this exhibit.

NOTICE TO MINERAL/SURFACE & OWNERS OF STRUCTURES WITHIN 200 FEET

36. Rule 1.6.2(1)(e) Notices: The response is adequate.

The decision date for this application is October 26, 2021. Please be advised that if you are unable to satisfactorily address any concerns identified in this review before the decision date, it will be your responsibility to request an extension of the review period. If there are outstanding issues that have not been adequately addressed prior to the decision date, and no extension has been requested, the DRMS may deny this application. If you have any questions, please contact me at (303) 328-5229.

Sincerely,



Timothy A. Cazier, P.E.
Environmental Protection Specialist

Enclosures: 1) Exhibit C.1 markup
2) Reclamation Cost Estimate

ec: Michael Cunningham, DRMS
DRMS file
Jodi Schreiber, Fremont Paving & Redi-Mix
Stephanie Carter, BLM

Structures identified requiring structure damage compensation agreements

Penrose Pit Existing Conditions Exhibit C.1

Scale
600'-0"

Distance:
1.03 in

N

Structure Agreement needed for Active Structure

No Structure Found

No Structure Found

Structure Agreement needed for:
Fence, Building, Process Pond, Concrete Pad & Access Road

Structure Agreement needed for Black Hills Power Line

Structure Agreement needed for Active Well (Castle?)

Distance:
0.25 in

Distance:
0.18 in

Legend

- Pit Boundaries
- Active Wells
- Active Structure

Structure Ditch DOOLEY DITCH
Name = DOOLEY DITCH
WDID = 1200592
Current-in-Use = Inactive structure which physically exist, but no diversion records are maintained (I)
Water Source = EIGHTMILE CREEK [00191318]
Assoc Permit =
Assoc Case No = 84CW0125, CA3035

Structure Reach PENROSE (PLEASANT VALLEY) PUEBLO RES EXCH
Name = PENROSE (PLEASANT VALLEY) PUEBLO RES EXCH
WDID = 1202814
Current-in-Use = Inactive structure which physically exist, but no diversion records are maintained (I)
Water Source = ARKANSAS RIVER [00078956]
Assoc Permit =
Assoc Case No = 06CW0012

Structure Pump FREMONT PAVNG/REDI-MIX PUMP
Name = FREMONT PAVNG/REDI-MIX PUMP
WDID = 1201149
Current-in-Use = Active Structure with contemporary diversion records (A)
Water Source = ARKANSAS RIVER [00078956]
Assoc Permit =
Assoc Case No =

Structure Ditch BRAGG DITCH
Name = BRAGG DITCH
WDID = 1200995
Current-in-Use = Historical structure only - no longer exists or has records, but has historical data (H)
Water Source = ARKANSAS RIVER [00078956]
Assoc Permit =
Assoc Case No = CA2622, CA4669

Structure Ditch BRUSH HOLLOW DITCH NO 1
Name = BRUSH HOLLOW DITCH NO 1
WDID = 1200910
Current-in-Use = Historical structure only - no longer exists or has records, but has historical data (H)
Water Source = BRUSH HOLLOW CREEK [00192032]
Assoc Permit =
Assoc Case No = CA2557

Structure Ditch BRUSH HOLLOW DITCH NO 2
Name = BRUSH HOLLOW DITCH NO 2
WDID = 1200587
Current-in-Use = Historical structure only - no longer exists or has records, but has historical data (H)
Water Source = BRUSH HOLLOW CREEK [00192032]
Assoc Permit =
Assoc Case No = CA2622, CA5036

Map By James Higgs
Fremont Paving and Redi Mix 5/17/21

Structure Agreement needed for BLM/Grisenti Diversion Structure

COST SUMMARY WORK

Task description: Cost Summary

Site: Penrose Pit

Permit Action: AM-03

Permit/Job#: M1987131

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 10/12/2021

County: Fremont

Filename: M131-000

User: TC1

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill 1,000ft of 40-ft HW to 3H:1V	SCRAPER1	1	91.96	\$96,540
002	Place 3 inches overburden on 100 acres	SCRAPER1	1	41.72	\$43,118
003	Place 3 inches topsoil on 100 acres	SCRAPER1	1	36.91	\$36,470
004	Reveg - 100 acres	REVEGE	1	200.00	\$117,028
005	Mob/Demob Equipment	MOBILIZE	1	4.70	\$7,576
<u>SUBTOTALS:</u>				375.29	\$300,732

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$6,075

Performance bond: 1.05

Total = \$3,158

Job superintendent: 187.64

Total = \$13,516

Profit: 10.00

Total = \$30,073

TOTAL O & P = \$52,821

CONTRACT AMOUNT (direct + O & P) = \$353,553

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$0

Total = \$0

Engineering work and/or contract/bid preparation: 4.25

Total = \$15,026

Reclamation management and/or administration: 5.00

\$17,678

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$85,525

TOTAL BOND AMOUNT (direct + indirect) = \$386,257

SCRAPER TEAM WORKTask description: Backfill 1,000ft of 40-ft HW to 3H:1VSite: Penrose PitPermit Action: AM-03Permit/Job#: M1987131**PROJECT IDENTIFICATION**Task #: 001State: ColoradoAbbreviation: NoneDate: 10/12/2021County: FremontFilename: M131-001User: TC1Agency 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 14M
-Water Truck:	Water Tanker, 5,000 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	100	25	25
Ownership cost/hour:	\$147.77	NA	NA	\$97.46	\$85.80	\$33.45
Operating cost/hour:	\$141.36	NA	NA	\$97.63	\$15.10	\$10.49
%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	\$236.39	\$129.46	\$43.94
Number of Units:	2	0	0	1	1	1
Group Subtotals:	Work:	\$640.06	Support:	\$236.39	Maint:	\$173.40

Total work team cost/hour: \$1,049.85**MATERIAL QUANTITIES**Initial volume: 88,900

CCY

Swell factor: 1.124Loose volume: 99,888

LCY

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

Material weight: 2,900 lbs/LCY
 Material description: Sand and gravel - Dry
 Rated Payload: 81,600 pounds
 Payload Capacity: 28.14 LCY

Struck Volume: 24.00 LCY
 Heaped Volume: 34.00 LCY
 Average Volume: 29.00 LCY
 Adjusted Capacity: 28.14 LCY

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

Site Altitude: 5200 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: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	375.00	0.00	4.00	4.00	1667	0.40
2	250.00	-7.00	4.00	-3.00	2920	0.13
3	375.00	0.00	4.00	4.00	1667	-0.15

Haul Time: 0.38 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	375.00	0.00	4.00	4.00	2744	0.38
2	250.00	7.00	4.00	11.00	1060	-0.01
3	375.00	0.00	4.00	4.00	2744	0.33

Return Time: 0.70 minutesTotal Scraper team cycle time: 2.58 minutesAdjusted for job conditions: 543.13 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,086.26 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,086.26 LCY/HourUnadjusted unit production/hour: 654.37 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 91.96 HoursUnit cost: \$0.966 /LCYTotal job cost: \$96,540

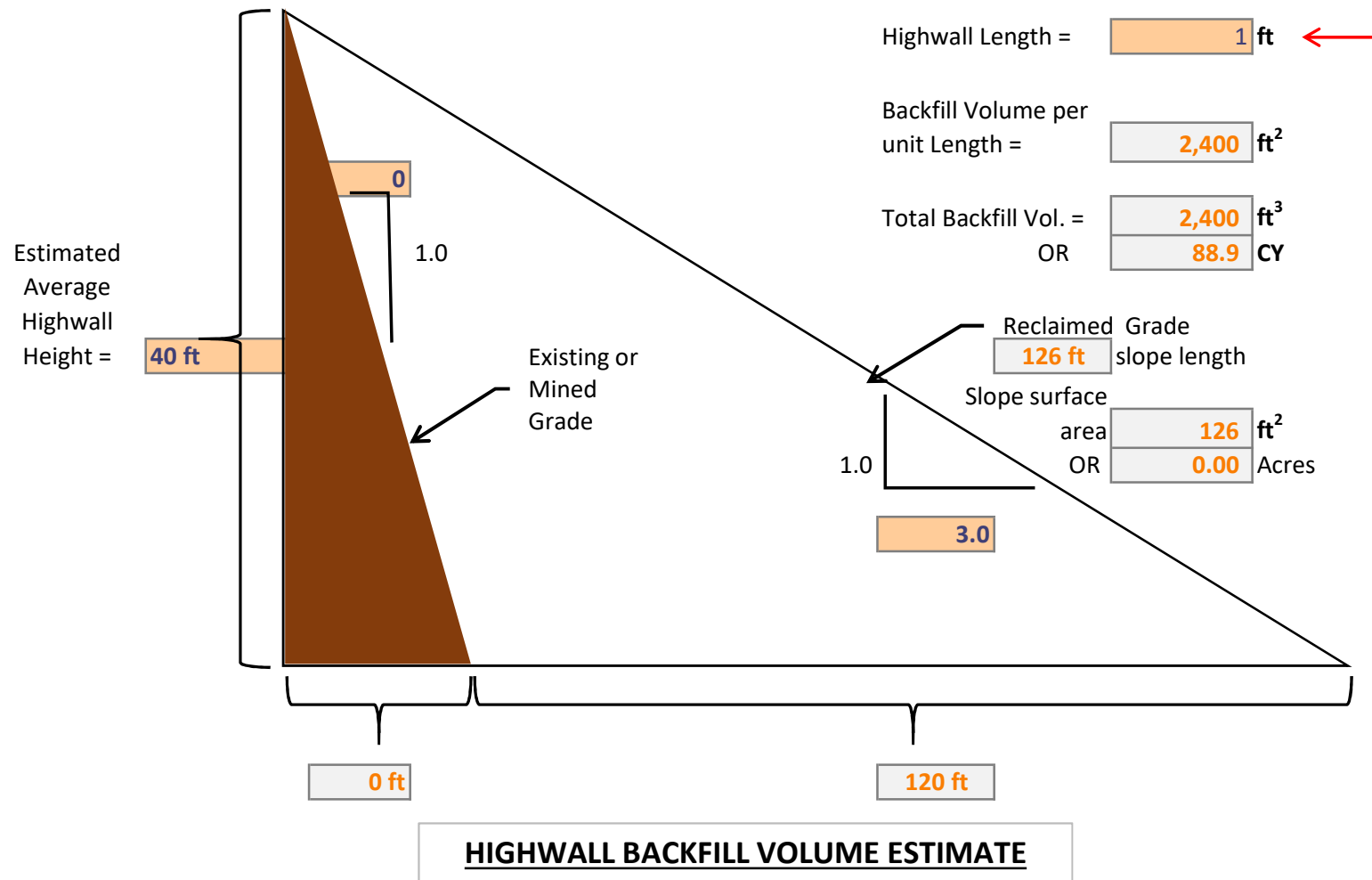
Task # 001.1 Highwall Backfill Volume Estimate (per foot of highwall)

PROJECT: Penrose Pit
PERMIT No.: M-1987-131
HIGHWALL LOCATION: Generic Highwalls

DATE: 10/13/2021

LEGEND

Input
Result



SCRAPER TEAM WORKTask description: Place 3 inches overburden on 100 acresSite: Penrose PitPermit Action: AM-03Permit/Job#: M1987131**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 10/12/2021County: FremontFilename: M131-002User: TC1Agency 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 14M
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 5,000 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	100	100	25
Ownership cost/hour:	\$147.77	NA	NA	\$85.80	\$85.80	\$33.45
Operating cost/hour:	\$141.36	NA	NA	\$60.40	\$60.40	\$10.49
%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	\$28.56	\$28.56	\$0.00
Unit Subtotals:	\$320.03	NA	NA	\$174.76	\$174.76	\$43.94
Number of Units:	2	0	0	1	1	1
Group Subtotals:	Work:	\$640.06	Support:	\$174.76	Maint:	\$218.70

Total work team cost/hour: \$1,033.52**MATERIAL QUANTITIES**Initial volume: 40,333

CCY

Swell factor: 1.124Loose volume: 45,318

LCY

Source of estimated volume: 3 inches over 100 acres = 40,333 CYSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight: 2,900 lbs/LCY
 Material description: Sand and gravel - Dry
 Rated Payload: 81,600 pounds
 Payload Capacity: 28.14 LCY

Struck Volume: 24.00 LCY
 Heaped Volume: 34.00 LCY
 Average Volume: 29.00 LCY
 Adjusted Capacity: 28.14 LCY

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

Site Altitude: 5200 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: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	375.00	0.00	4.00	4.00	1667	0.40
2	250.00	-7.00	4.00	-3.00	2920	0.13
3	375.00	0.00	4.00	4.00	1667	-0.15

Haul Time: 0.38 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	375.00	0.00	4.00	4.00	2744	0.38
2	250.00	7.00	4.00	11.00	1060	-0.01
3	375.00	0.00	4.00	4.00	2744	0.33

Return Time: 0.70 minutesTotal Scraper team cycle time: 2.58 minutesAdjusted for job conditions: 543.13 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,086.26 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,086.26 LCY/HourUnadjusted unit production/hour: 654.37 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 41.72 HoursUnit cost: \$0.951 /LCYTotal job cost: \$43,118

SCRAPER TEAM WORKTask description: Place 3 inches topsoil on 100 acresSite: Penrose PitPermit Action: AM-03Permit/Job#: M1987131**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 10/13/2021County: FremontFilename: M131-003User: TC1Agency 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 14M
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 5,000 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	100	25	25
Ownership cost/hour:	\$147.77	NA	NA	\$85.80	\$85.80	\$33.45
Operating cost/hour:	\$141.36	NA	NA	\$60.40	\$15.10	\$10.49
%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	\$28.56	\$28.56	\$0.00
Unit Subtotals:	\$320.03	NA	NA	\$174.76	\$129.46	\$43.94
Number of Units:	2	0	0	1	1	1
Group Subtotals:	Work:	\$640.06	Support:	\$174.76	Maint:	\$173.40

Total work team cost/hour: **\$988.22****MATERIAL QUANTITIES**Initial volume: 40,333

CCY

Swell factor: 1.429Loose volume: 57,620

LCY

Source of estimated volume: 3 inches over 100 acres = 40,333 CYSource 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: 5200 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: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	375.00	0.00	4.00	4.00	1667	0.34
2	250.00	-7.00	4.00	-3.00	2920	0.13
3	375.00	0.00	4.00	4.00	1667	-0.82

Haul Time: -0.35 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	375.00	0.00	4.00	4.00	2744	0.38
2	250.00	7.00	4.00	11.00	1060	-0.01
3	375.00	0.00	4.00	4.00	2744	0.33

Return Time: 0.70 minutesTotal Scraper team cycle time: 1.85 minutesAdjusted for job conditions: 780.65 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,561.30 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,561.30 LCY/HourUnadjusted unit production/hour: 940.54 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 36.91 HoursUnit cost: \$0.633 /LCYTotal job cost: \$36,470

REVEGETATION WORKTask description: Reveg - 100 acresSite: Penrose PitPermit Action: AM-03Permit/Job#: M1987131PROJECT IDENTIFICATIONTask #: 004State: ColoradoAbbreviation: NoneDate: 10/13/2021County: FremontFilename: M131-004User: TC1Agency 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
Chisel plowing {DMG}	\$96.50
Total Tilling Cost/Acre	\$96.50

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Little Bluestem - Pastura	0.70	4.18	\$9.44
Sideoats Grama - Vaughn	0.90	2.95	\$7.54
Pubescent Wheatgrass - Luna	2.80	5.79	\$9.52
Streambank Wheatgrass - Sodar	2.20	7.17	\$12.54
Tall Wheatgrass - Jose	2.00	3.63	\$6.75
Western Wheatgrass - Arriba	3.20	8.08	\$20.80
Totals Seed Mix	11.80	31.80	\$66.59

Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

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

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: 100 Cost /Acre: \$1,080.70
 Estimated Failure Rate: 30% Cost /Acre*: \$298.59
 *Selected Replanting Work Items: SEEDING

Initial Job Cost: **\$108,070.00**
 Reseeding Job Cost: **\$8,957.70**
 Total Job Cost: **\$117,028**
 Job Hours: **200.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/Demob Equipment**Site: **Penrose Pit**Permit Action: **AM-03**Permit/Job#: **M1987131****PROJECT IDENTIFICATION**Task #: **005**State: **Colorado**Abbreviation: **None**Date: **10/13/2021**County: **Fremont**Filename: **M131-005**User: **TC1**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:	\$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 631G	52.50	\$147.77	\$147.95	2	\$591.44	\$295.90	\$500.00
Cat D8T - 8SU	53.08	\$112.65	\$147.95	1	\$260.60	\$147.95	\$250.00
CAT 14M	23.57	\$85.80	\$68.37	1	\$154.17	\$68.37	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$7.98	\$68.37	1	\$76.35	\$68.37	\$250.00
Water Tanker, 5,000 Gal.	15.00	\$33.45	\$68.37	1	\$101.82	\$68.37	\$250.00

Subtotals: **\$1,184.38** **\$648.96** **\$1,500.00****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:	<u>COLORADO SPRINGS</u>	
Total one-way travel distance:	<u>37.00</u>	miles
Average Travel Speed:	<u>40.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$7,576.06</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$0.00</u>
'** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.93</u>	<u>0.93</u>
Return Time (Hours):	<u>0.93</u>	<u>0.93</u>
Loading Time (Hours):	<u>0.25</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.25</u>	<u>NA</u>
Subtotals:	<u>2.35</u>	<u>1.85</u>

JOB TIME AND COST

Total job time:	<u>4.70</u>	Hours
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Total job cost:	<u>\$7,576</u>
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