

# 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:	MINE/PROSPECTING ID#:	MINERAL:	COUNTY:
Florence South Pit	M-1988-093	Sand and gravel	Fremont
INSPECTION TYPE:	INSPECTOR(S):	INSP. DATE:	INSP. TIME:
Monitoring	Timothy Cazier, P.E.	January 28, 2022	11:45
OPERATOR:	<b>OPERATOR REPRESENTATIVE:</b>	<b>TYPE OF OPERAT</b>	TION:
Fremont Paving & Redi-Mix, Inc.	John Young	112c - Construction I	Regular Operation
<b>REASON FOR INSPECTION:</b>	BOND CALCULATION TYPE:	<b>BOND AMOUNT:</b>	
Normal I&E Program		\$45,100.00	
DATE OF COMPLAINT:	POST INSP. CONTACTS:	JOINT INSP. AGE	NCY:
NA	None	None	
WEATHER:	INSPECTOR'S SIGNATURE:	SIGNATURE DAT	E:
Clear	Thing alf-	March 9, 2022	

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

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

# **OBSERVATIONS**

This inspection was conducted as part of the regular monitoring program. The Permittee (Fremont Paving & Redi-Mix, Inc.) was represented by Mr. John Young during the inspection. The Florence South Pit is accessed from County Road 79, approximately a mile east of Florence, on the north side of County Road 79. This is a 112c sand and gravel mine. It was operating at the time of the inspection. Mr. Young indicated the saleable material is very suitable for horse arena base, which is what the material being loaded (see **Photo 1**) during the inspection was to be used.

<u>Availability of Records:</u> Annual reports are current, having been filed through March 2022, stating the last mining activity was February 2, 2022. The previous inspection was on June 14, 2018. The approved post-mine land use is rangeland. There are no open infractions. Both the surface and minerals are owned by the Permittee.

Acid And Toxic Materials: No acid or toxic materials are involved in this operation.

<u>Backfilling and Grading</u>: Sufficient backfill material appeared to be available in the overburden stockpile northeast of the powerline near the crest of the highwall (see **Photos 2** and **3**). The approved permit requires the highwalls be sloped to 2.5H:1V for final reclamation.

<u>Financial Warranty:</u> The \$45,100 bond held by the DRMS was last updated in 2014. As it has been over five years and the disturbed area is effectively the same as the 11.5 acre phased bonding maximum, the DRMS has updated the bond with current unit costs to \$58,950 (see **attached 2022 Update**). <u>Please review this cost</u> estimate and notify the DRMS if you find any errors or wish to dispute any tasks. Please provide comment or acceptance by **March 25, 2022**. The <u>DRMS will issue a surety increase shortly thereafter</u> requesting the additional bond.

Fish and Wildlife: No impact to wildlife was observed.

Hydrologic Balance: No standing water was observed in the pit and no exposed groundwater was observed.

<u>Gen. Compliance with Mine Plan:</u> The operation appeared to be in compliance with the approved mine plan. The maximum allowed disturbed area is 22.5 acres with no more than 11.5 acres disturbed at one time. Google Earth was used to measure the disturbed area, which was approximately 13.2 acres, based on 2019 imagery. Roughly 1.9 acres (north of the overburden stockpile and towards the east end of the pit, see **attached post inspection map**) were disturbed quite some time ago and have been graded and support adequate vegetation. As these areas will not as this time, require re-disturbance for final reclamation, no bond is currently required for reclamation of these areas. Highwalls were estimated to vary between 20 and 25 feet in height (see **Photo 3**) and have not raveled significantly since the previous inspection.

<u>Off-site Damage</u>: The operation appeared to be confined to the permit boundary as no change in the mining extents were observed with respect to the 2018 inspection.

<u>Processing Waste</u>: No processing waste was observed. All stockpiled material on the pit floor was considered saleable product by Mr. Young.

<u>Roads:</u> The access road from FC79 is roughly 80 feet long and of similar gravel material to the county road. It is not considered a significant source of sediment.

Right of Entry: Fremont Paving owns the site.

Reclamation Success: No reclamation has been initiated.

<u>Revegetation:</u> Some tamarisk were observed (**Photo 4**). This is a noxious weed List B species, however, a noxious weed control plan was approved by the DRMS as part of TR-2 in 2014 and Mr. Young indicated Fremont Paving has been implementing the plan. The number of tamarisk were not observed to be problematic at the time of the inspection, so it was not cited as a problem. However, <u>the Operator should continue to implement</u> the approved weed control program to control the tamarisk on site.

<u>Sediment Control</u>: No significant erosion problems were observed and no BMPs were needed at the time of the inspection.

Support Facilities On-site: A loader and dump truck were observed on site (see Photo 1).

<u>Signs and Markers</u>: The permit sign was properly posted (see **Photo 5**) and boundary markers were observed to delineate the phased affected area boundary.

<u>Permit Stipulations:</u> There are no permit stipulations.

Storm Water MGT Plan: No oil or fuel spills observed. Stormwater drains to the pit and infiltrates.

<u>Topsoil</u>: Mr. Young indicated there was no distinction made between overburden and topsoil when the material was stripped and stockpiled. A topsoil/overburden stockpile mentioned above was observed to be vegetated and stable.

<u>Structures:</u> No new structures were observed within 200 feet of the affected area.

Please contact Tim Cazier (303)328-5229 or email at <u>tim.cazier@state.co.us</u> if you have any questions regarding this report.

# **PHOTOGRAPHS**



Photo 1. Loading material in haul truck during inspection.

# PHOTOGRAPHS (cont.)



Photo 2. West end of highwall, product stockpile & overburden/topsoil (looking NE).



Photo 3. East end of highwall & overburden/topsoil (looking ENE).

# **PHOTOGRAPHS** (cont.)



Photo 4. Tamarisk on pit floor (looking NW).



Photo 5. Permit sign at entrance.

### **Inspection Contact Address**

John Young Fremont Paving & Redi-Mix, Inc. P O Box 165 Cañon City, CO 81215

- Enclosures: 2022 Update Estimate to Reclamation Cost Post Inspection Map
- ec: DRMS file Jodi Schreiber, Freemont Paving

# COST SUMMARY WORK

Florence	South Pit	Pe	rmit Action:	2022 Update	Permit/Jol	o#: <u>M1988093</u>
ROJECT	IDENTIFICA	TION				
Task #:	000	State:	Colorado		Abbreviation:	None
Date:	3/4/2022	County:	Fremont		Filename:	M093-000
User:	TC1				-	

### TASK LIST (DIRECT COSTS)

Tack		Form	Fleet	Task	
1 45K	Description	Used	Size	Hours	Cost
010	Final Grading of Backslopes	DOZER	1	54.27	\$16,755
021	Replace Topsoil - > 200 ft haul	SCRAPER1	1	13.92	\$4,453
022	Replace Topsoil - < 200 ft push	DOZER	1	6.83	\$2,107
030	Reveg	REVEGE	1	35.00	\$18,152
040	Mob/Demob	MOBILIZE	1	2.06	\$2,685
		<u>SUBTO</u>	TALS:	112.08	\$44,152

### **INDIRECT COSTS**

#### OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$892
Performance bond:	1.05	Total =	\$464
Job superintendent:	56.04	Total =	\$4,037
Profit:	10.00	Total =	\$4,415
		TOTAL O & P =	\$9,807
		CONTRACT AMOUNT (direct + O & P) = $($	\$53,959

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$0	Total =	\$0
Engineering work and/or contract/bid preparation:	4.25	Total =	\$2,293
Reclamation management and/or administration:	5.00		\$2,698
CONTINGENCY:	0.00	Total =	\$0
	TOTAL	INDIRECT COST =	\$14,798

TOTAL BOND AMOUNT (direct + indirect) = \_\_\_\_\_\$58,950

# BULLDOZER WORK

Premont Paving & Redi-Mix     Permit Action:       Pdi     2022 Update     Permit/Job#: [M198809]       ROJECT IDENTIFICATION       Task #:     00     Abbreviation:     None       Date:     3/4/2022     County:     Fremont     Filename:     M093-010       Use:      TC1     County:     Fremont     Filename:     M093-010       Agency or organization name:     DRMS     Filename:     M093-010       OURLY EQUIPMENT COST       Basic Machine:     Cat D97 - 95U       Horsepower:     405       Attachment:     NA       Shift Basi:     1 per day       Data Source:     C(CRG)       Source Status     Status       Ownership Cost/Hour:     \$126.01     NA       Operating Cost/Hour:     \$126.01     NA       Operating Cost/Hour:     \$126.01     NA       Operating Cost/Hour:     \$30.00     NA       Ripper opn.     \$0.00     NA       Ripper opn.     \$0.00     NA       Ripper opn.     \$30.872       Total Fiet CostHour:     \$308.72       Total Fiet CostHour:     \$308.72       Loos volume:     40.818 LCY       Source of estimated volume:     Orginal Exh. L       Sourc	Fask description:	Final Gra	ding o	f Backslopes	3		
ROJECT IDENTIFICATION         Task #:       010       State:       Colorado       Abbreviation:       None       M093-010         Dist:       TC1       County:       Fremont       Filename:       M093-010         User:       TC1       County:       Fremont       Filename:       M093-010         Agency or organization name:       DRMS         OURLY EQUIPMENT COST         Basic Machine:       Cat D9T - 9SU       Horscower:       405         Horscower:       405       Bidae Type:       Semi-Universal       Attachment:       NA         Shift Basis:       1 per day       Data Source:       (CRG)       Sourceship Cost/Hour:       \$126.01       NA         Operating Cost/Hour:       \$126.00       NA       NA       NA       NA         Operating Cost/Hour:       \$308.00       NA       NA       NA       NA         Operator Cost/Hour:       \$308.72       Source Cost/Hour:       \$308.72       Source of estimated volume:       Original Exh. L       Source of estimated swell       Cat Handbook       Cat Handbook       Source       Source of estimated swell       Cat Handbook       Source       Source       Source       Source       Source       Source       Source	Fremont Paving & F Pit	Redi-Mix	Pe	rmit Action:	2022 Update	Permit/Jo	b#: <u>M1988093</u>
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Approprion for cost Hour: \$41.30 NA   Operator Cost/Hour: \$308.72   Fotal unit Cost/Hour: \$308.72   Total Fleet Cost/Hour: \$308.72     Initial Volume: 39,350   Swell factor: 1.250   Loose volume: 49,188 LCY   Source of estimated volume:    Original Exh. L    Source of estimated volume: Original Exh. L   Source of estimated swell Cat Handbook   factor: Cat Handbook   OURLY PRODUCTION  Average push distance:    Average push distance: 100 feet   Unadjusted hourly 1,243.2 LCY/hr   Vareage site altitude:    5,300 feet   Vaterials consistency description: Partly consolidated stockpile 1.1   Average site altitude:    5,300 feet   Vaterial weight: 2,650 lbs/LCY   Weight description: Decomposed rock - 25% Rock, 75% Earth b Condition Correction Factor	Ripper on Cost/Hour:			\$0.00	0		
Operator Cost Hour:       3308.72         Total unit Cost/Hour:       \$308.72         Total Fleet Cost/Hour:       \$308.72         Initial Volume:       39.350         Swell factor:       1.250         Loose volume:       49.188 LCY         Source of estimated volume:       Original Exh. L         Source of estimated swell       Cat Handbook         factor:       Cat Handbook         Source of estimated swell       Cat Handbook         factor:       100 feet         Unadjusted hourly       1,243.2 LCY/hr         worduction:       Partly consolidated stockpile 1.1         Average push       -5 %         gradient:       5,300 feet         Vaterial weight:       2,650 lbs/LCY         Weight description:       Decomposed rock - 25% Rock, 75% Earth         b Condition Correction Factor       Source	Operator Cost/Hour:			\$41.30	NA		
Fotal unit Cost/Hour:       \$308.72         Fotal Fleet Cost/Hour:       \$308.72         Source of estimated volume:       1.250         Loose volume:       49,188 LCY         Source of estimated volume:       Original Exh. L         Source of estimated swell       Cat Handbook         factor:       Cat Handbook         OURLY PRODUCTION       1,243.2 LCY/hr         Average push distance:       100 feet         Unadjusted hourly       1,243.2 LCY/hr         orduction:       Partly consolidated stockpile 1.1         Average push       -5 %         gradient:       5,300 feet         Vaterial weight:       2,650 lbs/LCY         Weight description:       Decomposed rock - 25% Rock, 75% Earth         b Condition Correction Factor       Source	- I · · · · · · · · · · · · · · · · · ·				1111		
Total Fleet Cost/Hour:       \$308.72         Initial Volume:         39,350         Swell factor:       1.250         Loose volume:       49,188 LCY         Source of estimated volume:       Original Exh. L         Source of estimated swell       Cat Handbook         Source of estimated swell       Cat Handbook         Source of estimated swell       Cat Handbook         Average push distance:       100 feet         Jnadjusted hourly       1,243.2 LCY/hr         voduction:       Partly consolidated stockpile 1.1         Average push       -5 %         gradient:       -5,300 feet         Vaterial weight:       2,650 lbs/LCY         Weight description:       Decomposed rock - 25% Rock, 75% Earth         b Condition Correction Factor       Source	Total unit Cost/Hour:	\$308.72					
ATERIAL QUANTITIES         Initial Volume:       39,350         Swell factor:       1.250         Loose volume:       49,188 LCY         Source of estimated volume:       Original Exh. L         Source of estimated swell       Cat Handbook         Source of estimated swell       Cat Handbook         Actor:       Cat Handbook         Materials consistency description:       100 feet         Unadjusted hourly       1,243.2 LCY/hr         Yroduction:       Partly consolidated stockpile 1.1         Average push       -5 %         gradient:       -         Average site altitude:       5,300 feet         Material weight:       2,650 lbs/LCY         Weight description:       Decomposed rock - 25% Rock, 75% Earth         b Condition Correction Factor       Source	Total Fleet Cost/Hour:	\$308.72					
ATERIAL QUANTITIES         Initial Volume:       39,350         Swell factor:       1.250         Loose volume:       49,188 LCY         Source of estimated volume:       Original Exh. L         Source of estimated swell       Cat Handbook         factor:       Cat Handbook         OURLY PRODUCTION       Average push distance:         Average push distance:       100 feet         Unadjusted hourly       1,243.2 LCY/hr         production:       Partly consolidated stockpile 1.1         Average push       -5 %         gradient:       -5,300 feet         Material weight:       2,650 lbs/LCY         Weight description:       Decomposed rock - 25% Rock, 75% Earth         b Condition Correction Factor       Source							
Initial Volume:       39,350         Swell factor:       1.250         Loose volume:       49,188 LCY         Source of estimated volume:       Original Exh. L         Source of estimated swell       Cat Handbook         factor:       Cat Handbook         OURLY PRODUCTION       Cat Handbook         Average push distance:       100 feet         Unadjusted hourly       1,243.2 LCY/hr         orduction:       Partly consolidated stockpile 1.1         Average push       -5 %         gradient:       5,300 feet         Average site altitude:       5,300 feet         Material weight:       2,650 lbs/LCY         Weight description:       Decomposed rock - 25% Rock, 75% Earth         b Condition Correction Factor       Source	<u>IATERIAL QUANT</u>	<u>ITIES</u>					
Swell factor:       1.250         Loose volume:       49,188 LCY         Source of estimated volume:       Original Exh. L         Source of estimated swell       Cat Handbook         factor:       Cat Handbook         Materials consistency description:       100 feet         Varage push       -5 %         gradient:       -5,300 feet         Vaterial weight:       2,650 lbs/LCY         Weight description:       Decomposed rock - 25% Rock, 75% Earth         b Condition Correction Factor       Source	Initial Volume: 39,	350					
Loose volume:       49,188 LCY         Source of estimated volume:       Original Exh. L         Source of estimated swell       Cat Handbook         factor:       Cat Handbook         OURLY PRODUCTION         Average push distance:       100 feet         Unadjusted hourly       1,243.2 LCY/hr         production:       Partly consolidated stockpile 1.1         Average push       -5 %         gradient:       -5 %         Average site altitude:       5,300 feet         Material weight:       2,650 lbs/LCY         Weight description:       Decomposed rock - 25% Rock, 75% Earth         b Condition Correction Factor       Source	Swell factor: 1.2	50					
Source of estimated volume:       Original Exh. L         Source of estimated swell       Cat Handbook         factor:       Cat Handbook         OURLY PRODUCTION	Loose volume: <b>49</b> ,	188 LCY					
OURLY PRODUCTION         Average push distance:       100 feet         Unadjusted hourly       1,243.2 LCY/hr         production:	Source of estimated vol Source of estimated swe factor:	ume: Or ell Ca	riginal at Hanc	Exh. L lbook			
Average push distance:       100 feet         Unadjusted hourly       1,243.2 LCY/hr         production:       Partly consolidated stockpile 1.1         Materials consistency description:       Partly consolidated stockpile 1.1         Average push       -5 %         gradient:       4verage site altitude:         5,300 feet       4verage         Material weight:       2,650 lbs/LCY         Weight description:       Decomposed rock - 25% Rock, 75% Earth         b Condition Correction Factor       Source	OURLY PRODUCT	<u>FION</u>					
Invertige push distance.       100 rect         Unadjusted hourly       1,243.2 LCY/hr         production:	Average nuch distance:	100 -	feet				
Inadjusted nourry       1,243.2 EC 1/m         production:	Unadjusted hourly	1.24	$\frac{1}{3}$	'V/hr			
Materials consistency description:       Partly consolidated stockpile 1.1         Average push       -5 %         gradient:       -5,300 feet         Average site altitude:       5,300 feet         Material weight:       2,650 lbs/LCY         Weight description:       Decomposed rock - 25% Rock, 75% Earth         b Condition Correction Factor       Source	production:	1,24	5.2 LC	. <b>1</b> / <b>ПГ</b>			
Average push       -5 %         gradient:       -5 %         Average site altitude:       5,300 feet         Material weight:       2,650 lbs/LCY         Weight description:       Decomposed rock - 25% Rock, 75% Earth         b Condition Correction Factor       Source	Materials consistency d	escription:	Partly	consolidated	stockpile 1.1		
Average site altitude:       5,300 feet         Material weight:       2,650 lbs/LCY         Weight description:       Decomposed rock - 25% Rock, 75% Earth         b Condition Correction Factor       Source	Average push	-5 %					
Material weight:       2,650 lbs/LCY         Weight description:       Decomposed rock - 25% Rock, 75% Earth         b Condition Correction Factor       Source	Average site altitude:	5,300 feet					
Weight description:       Decomposed rock - 25% Rock, 75% Earth         b Condition Correction Factor       Source	Material weight:	2,650 lbs/L	CY				
b Condition Correction Factor Source	Weight description:	Decompose	ed rock	x - 25% Rock	, 75% Earth		
	b Condition Correction	Factor			Source		

Task # 010

Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.100	(50% SL)
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: 0.7290

Adjusted unit production:	906.29 LCY/hr
Adjusted fleet production:	906.29 LCY/hr

### JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$0.341/LCY

Total job time:	<b>54.27</b> Hours
Total job cost:	\$16,755

# SCRAPER TEAM WORK

Fremont Paving Site: <u>Pit</u>	& Redi-Mix	Perm	nit Action:	2022 Update	P	ermit/Job#: <u>M1</u>	988093
PROJECT IDENT	<b>TIFICATION</b>						
Teels # 021		Stata	Colomdo		Abbaa	vistion. None	
Date: $\frac{021}{3/4/20}$	22 C	ounty:	Fremont		Abble Fil	ename: M093-	021
User: TC1							
Agency or o	organization nam	e: DRM	1S				
HOURLY EQUIP	MENT			COSTS	Shift basis: <u>1 per</u>	day	
			Equipmer	nt Description			
	-	-Scraper:	Cat 631	G			
	t Equipment Le	-Dozer:	NA				
Suppo	rt Equipment -Lo -Dui	np Area:	NA				
Road Ma	intenance – Motor	r Grader:	NA				
	-Wate	er Truck:	NA				
Cost Breakdown:	Scraper W	ork Team		Support Equi	pment	Maintenanc	e Equipi
	Scraper	Doz	zer	Load Area	Dump Area	Motor Grader	Water
%Utilization-machine:	100		NA	NA	NA	NA	
Ownership cost/hour:	\$147.77		NA	NA	NA	NA	
Operating cost/hour:	\$141.36		NA	NA	NA	NA	
%Utilization-ripper:	NA		NA	NA	NA	NA	
Ripper own. cost/hour:	NA		NA	NA	NA	NA	
Ripper op. cost/hour:	NA		NA	NA	NA	NA	
Operator cost/hour:	\$30.90		NA	NA	NA	NA	
Unit Subtotals:	\$320.03		NA	NA	NA	NA	
Number of Units:	1		0	0	0	0	
Group Subtotals:	Work:	\$320	0.03	Support:	\$0.00	Maint:	\$0
Total work team cost/	hour: <u><b>\$320.03</b></u>						
MATERIAL QUA	<u>NTITIES</u>						
Initial volume:	5,520		CCY	Swell fact	tor: <u>1.230</u>		
Loose volume:	6,790		LCY				
Sou: Source o	rce of estimated v of estimated swell	volume:	Original Cat Hand	Application, Exl book	nibit L		
HOURLY PRODU	JCTION						
				Scraper B	owl (volume) Ba	<u>isis:</u>	
Material weight:	2,100 lbs/LCY			Struck	Volume: 24.00	L	CY
Material description:	Earth - Loam			Heaped	Volume: 34.00		CY
Rated Payload:	81,600 pounds			Average	Volume: 29.00	L	CY

#### Cycle Time:

Scraper Loading Time: Maneuver and Spread Time:

Job Condition Correction:

	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: <u>Rutted dirt, little maintenance, no water, 2" tire penetration 5.0</u>

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	-5.00	5.00	0.00	2937	0.57

Haul Time: 0.57 minutes

Site Altitude: 5300 feet

#### Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	5.00	5.00	10.00	1183	0.89

Return Time:	0.89	minutes
Total Scraper team cycle time:	2.96	minutes
Adjusted for job conditions:	487.91	LCY/Hour
Selected Number of Scrapers:	1	Scraper(s)
Adjusted single scraper team (unit) hourly production:	487.91	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	487.91	LCY/Hour
Unadjusted unit production/hour: 587.84 I CY/Hour		

Unadjusted unit production/hour: 587.84 LCY/Hour Optimal Number of Scrapers per push dozer:

#### JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	13.92	Hours
Unit cost:	\$0.656	/LCY	Total job cost:	\$4,453	

<u>0.80</u> Minutes

0.70 Minutes

# BULLDOZER WORK

		*			
Fremont Paving & R Pit	edi-Mix	Permit Action:	2022 Update	Permit/Job	#: <u>M1988093</u>
ROJECT IDENTIFI	CATION				
Task #: 022	St	ate: Colorado		Abbreviation:	None
Date: $3/4/2022$	Cour	nty: Fremont		Filename:	M093-022
User: TC1					
Agency or organ	nization name:	DRMS			
IOURLY EQUIPME	NT COST				
Basic Machine: Cat	t D9T - 9SU				
Horsepower: 405	5		_		
Blade Type: Ser	mi-Universal		_		
Attachment: NA	ł		_		
Shift Basis: 1 p	ber day		_		
Data Source: (CH	RG)		_		
'ost Breakdown:			-		
ost Divardowii.			Utilization %		
Ownershin Cost/Hour		\$126.01	NA		
Operating Cost/Hour		\$141.41	100		
Ripper own		ψιτιτι	100		
Cost/Hour:		\$0.00	NA		
Ripper op. Cost/Hour:		\$0.00	0		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour:	\$308.72 <b>\$308.72</b>	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>IATERIAL QUANT</u>	\$308.72 \$308.72 ITIES	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>IATERIAL QUANTI</u> Initial Volume: <u>3,68</u>	\$308.72 <b>\$308.72</b> <b>ITIES</b> 30	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>IATERIAL QUANTI</b> Initial Volume: 3,68 Swell factor: 1.23	\$308.72 <b>\$308.72</b> <b>ITIES</b> 30 50	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>IATERIAL QUANTI</b> Initial Volume: 3,68 Swell factor: 1.23 Loose volume: 4,52	\$308.72 \$308.72 \$308.72 ITIES 30 30 26 LCY	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>IATERIAL QUANTI</b> Initial Volume: 3,68 Swell factor: 1.23 Loose volume: 4,52 Source of estimated volu Source of estimated swel factor:	<u>\$308.72</u> <b>\$308.72</b> <b>ITIES</b> 30 26 LCY 1me: Orig 11 Cat	\$41.30 	  Exhibit L		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: 3,68 Swell factor: 1.23 Loose volume: 4,52 Source of estimated volu Source of estimated swel factor: IOURLY PRODUCT	<u>\$308.72</u> <b>\$308.72</b> <b>ITIES</b> 30 30 26 LCY 111 Cat 11 Cat	\$41.30			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: 3,68 Swell factor: 1.23 Loose volume: 4,52 Source of estimated volu Source of estimated volu Source of estimated swel factor: IOURLY PRODUCT Average push distance:	<u>\$308.72</u> <b>\$308.72</b> <b>ITIES</b> 30 30 26 LCY 1me: Orig 11 Cat 2 <b>'ION</b> 195 fe	\$41.30 	 Exhibit L		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>IATERIAL QUANTI</b> Initial Volume: 3,68 Swell factor: 1.23 Loose volume: 4,52 Source of estimated volu Source of estimated swelfactor: <b>IOURLY PRODUCT</b> Average push distance: Unadjusted hourly production:	<u>\$308.72</u> <b>\$308.72</b> <b>ITIES</b> 30 30 26 LCY ume: Orig 11 Cat <u>'ION</u> <u>195 fe</u> 721.11	\$41.30 \$41.30 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>IATERIAL QUANTI</b> Initial Volume: <u>3,68</u> Swell factor: <u>1.23</u> Loose volume: <u>4,52</u> Source of estimated volu Source of estimated volu Source of estimated swelfactor: <b>IOURLY PRODUCT</b> Average push distance: Unadjusted hourly production: Materials consistency de	<u>\$308.72</u> <b>\$308.72</b> <b>ITIES</b> 30 26 LCY ume: Orig 11 Cat 2 <b>YION</b> <u>195 fee</u> 721.1 2 escription: Pa	\$41.30 \$41.30 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	 Exhibit L    		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>IATERIAL QUANTI</b> Initial Volume: <u>3,68</u> Swell factor: <u>1.23</u> Loose volume: <u>4,52</u> Source of estimated volu Source of estimated volu Source of estimated swelf factor: <b>IOURLY PRODUCT</b> Average push distance: Unadjusted hourly production: Materials consistency de Average push gradient:	<u>\$308.72</u> <b>\$308.72</b> <b>ITIES</b> 30 26 LCY ume: Orig 211 Cat <u>'ION</u> <u>195 fe</u> 721.1 scription: Pa -5 %	\$41.30 \$41.30 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	 Exhibit L 		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>IATERIAL QUANTI</b> Initial Volume: 3,68 Swell factor: 1.23 Loose volume: 4,52 Source of estimated volu Source of estimated volu Source of estimated swelf factor: <b>IOURLY PRODUCT</b> Average push distance: Unadjusted hourly production: Materials consistency de Average push gradient: Average site altitude:	<u>\$308.72</u> <b>\$308.72</b> <b>ITIES</b> 30 26 LCY ume: Orig 21 Cat 210N <u>195 fea</u> 721.1 escription: Pa -5 % <u>5,300 feet</u>	\$41.30 \$41.30 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>IATERIAL QUANTI</b> Initial Volume: <u>3,68</u> Swell factor: <u>1.23</u> Loose volume: <u>4,52</u> Source of estimated volu Source of estimated volu Source of estimated swelfactor: <b>IOURLY PRODUCT</b> Average push distance: Unadjusted hourly production: Materials consistency de Average push gradient: Average site altitude: Material weight:	<u>\$308.72</u> <b>\$308.72</b> <b>ITIES</b> 30 26 LCY ume: Orig 21 Cat 210 <u>195 fee</u> 721.1 escription: Pa -5 % 5,300 feet 2,100 lbs/LC	\$41.30 state="background-color: gradient;">\$41.30 \$\$41.30 \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>IATERIAL QUANTI</b> Initial Volume: <u>3,68</u> Swell factor: <u>1.23</u> Loose volume: <u>4,52</u> Source of estimated volu Source of estimated volu Source of estimated swelfactor: <b>IOURLY PRODUCT</b> Average push distance: Unadjusted hourly production: Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description:	<u>\$308.72</u> <b>\$308.72</b> <b>ITIES</b> 30 26 LCY ume: Orig 21 Cat 195 fe 721.1 25 % 5,300 feet 2,100 lbs/LC Earth - Loam	\$41.30 state of the second state of the seco			

Task # 022

Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.100	(50% SL)
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:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9196

Adjusted unit production:	663.12 LCY/hr
Adjusted fleet production:	663.12 LCY/hr

### JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$0.466/LCY

Total job time:	<b>6.83</b> Hours	
Total job cost:	\$2,107	

# **REVEGETATION WORK**

ite:	Fremont Pit	Paving & Red	li-Mix P	ermit Action:	2022 Update	Permit/Job	o#: <u>M1988093</u>
<u>PF</u>	ROJECT	IDENTIFIC	ATION				N
<u>PF</u>	ROJECT Task #:	IDENTIFIC 030	ATION State:	Colorado		Abbreviation:	None
<u>PF</u>	ROJECT Task #: Date:	IDENTIFIC           030           3/4/2022	ATION State: County:	Colorado Fremont		Abbreviation: Filename:	None M093-030

# **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Sodium nitrate, 16-0-0	40.00	pound	\$0.76	\$30.40
Superphosphate, 0-20-0 with 12% S	40.00	pound	\$0.26	\$10.40
			Total Fertilizer Materials Cost/Acre	\$40.80

# Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$38.77
	Total Fertilizer Application Cost/Acre	\$38.77

# **TILLING**

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

### **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Switchgrass - Blackwell	1.40	12.50	\$16.10
Blue Grama - Native	1.00	16.32	\$13.73
Indian Ricegrass - Native	5.00	16.18	\$32.50
Sideoats Grama - Vaughn	3.50	11.49	\$29.31
Yellow Sweet Clover - Madrid	0.60	3.58	\$1.70
Western Wheatgrass - Native	6.40	16.16	\$38.40
Totals Seed Mix	17.90	76.24	\$131.73

#### 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
Hay, 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:	11.5	Cost /Acre:	\$1,278.69
Estimated Failure Rate:	25%	Cost /Acre*:	\$1,199.12
*Selected Replanting Work Items:	TILLING, SEEDING, MULC	HING	

Initial Job Cost:	\$14,704.94
Reseeding Job Cost:	\$3,447.47
Total Job Cost:	\$18,152
Job Hours:	35.00

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Fremont Pavin	a & Dadi Min						
		Permit	Action:2022	Update		Permit/Job#: <u>M</u>	1988093
PROJECT IDEN	TIFICATIO	<u>N</u>					
Task #: 040		State: Co	lorado		Abbre	eviation: None	
Date: 3/4/2 User: TC1	2022	County: Fre	emont		Fi	ilename: M093	-040
Agency of	corganization r	name: DRMS					
EQUIPMENT T	RANSPORT	RIG COST					
					Shift ba	sis 1 per da	v
					Cost Data Sou	rce: CRG Da	ta
Truck	Tractor Descrip	ption: GENE	RIC ON-HIGH	WAY TR	UCK TRACTO	DR, 6X4, DIESEL	POWERED,
				400 HF	<sup>o</sup> (2ND HALF,	2006)	
Truck	Trailer Descrip	ption: Gl	ENERIC FOLD	DING GOO	DSENECK, DE	ROP DECK EQU	IPMENT
				TRAILER	(251, 501, AI	ND 1001)	
Cost Breakdown:							
Available Rig Ca	nacities	0-25 Tons	26-50 Tons	51	+ Tons		
<u>Available Rig Ca</u> Ownership	Cost/Hour	\$21.28	\$37.94		47.67		
Operating	Cost/Hour:	\$26.55	\$50.48	\$	56 21		
Operator	Cost/Hour:	\$20.55	\$20.54	\$	20.54		
Helper	Cost/Hour:	\$0.00	\$23.53	\$	23.53		
Total Unit	Cost/Hour:	\$68.37	\$132.49	\$1	47 95		
Total Olit	cost flour.	<i>ф00.51</i>	¢152.17	φ.			
NON ROADABI	<u>LE EQUIPMI</u>	ENT:					
M. 1	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Machine	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
Description			4		fleet		1
Description	(TONS)		l				
Machine Description Cat D9T - 9SU	(TONS) 60.01	\$126.01	1 \$147.95	1	\$273.96	\$147.95	\$250.00
Machine Description Cat D9T - 9SU Cat 631G	(TONS) 60.01 52.50	\$126.01 \$147.77	\$147.95 \$147.95	1	\$273.96 \$295.72	\$147.95 \$147.95	\$250.00 \$250.00

Subtotals: \$646.03 \$364.27 \$750.00

# **ROADABLE EQUIPMENT:**

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

# **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	CAÑON CITY	
Total one-way travel distance:	8.00	miles
Average Travel Speed:	30.00	mph
Total Non-Roadable Mob/Demob Cost *	\$2,684.86	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$0.00	

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.27	0.27
Return Time (Hours):	0.27	0.27
Loading Time (Hours):	0.25	NA
Unloading Time (Hours):	0.25	NA
Subtotals:	1.03	0.53

### JOB TIME AND COST

Total job time: **2.07** Hours

Total job cost: **\$2,685** 

# M-1988-093 / Florence Souoth Pit - 2022 Post Inspection Map

500 ft

Satellite imagery from 10/6/2019

# Legend

- M-88-93 Disturbed Area (13.2 Ac.)
- M-88-93 No Redisturbance (-0.7 Ac.)
- M-88-93 No Redisturbance (-1.2 Ac.)
- M-88-93 Phase 1
- M-88-93 Phase 2

