

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

Walstrum Quarry M1983033 Inspection Report and Cost Estimate

1 message

Gagnon - DNR, Nikie <nikie.gagnon@state.co.us> To: phillip.courtney@martinmarietta.com Cc: julie.mikulas@martinmarietta.com Sun, Jan 12, 2025 at 8:21 PM

Hi Phil.

Please see the attached inspection report for the November 2024 inspection of the Walstrum Quarry. No problems requiring abatement were observed during the inspection.

As part of our routine monitoring and review of permits, the Division recalculated the bond for the site. Please see the attached bond estimate which shows the estimated reclamation liability for the site is \$1,533,035.00, which is an increase of \$433,035.00. Please review the estimate and reach out to me if you have any questions or concerns on the new amount. A notice of surety increase will be sent after January 27, 2025.

Kind regards,

Nikie Gagnon Environmental Protection Specialist



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

Cell: 720.527.1640 Physical: 1313 Sherman Street, Room 215, Denver, CO 80203 Address for FedEx, UPS, or hand delivery: DRMS Room 215, 1001 E 62nd Ave, Denver, CO 80216 nikie.gagnon@state.co.us | https://www.drms.colorado.gov

2 attachments

B Walstrum Quarry_M1983033_2024 Insp Rpt.pdf 8313K

M1983033_Walstrum Quarry_2024 Cost Estimate.pdf 393K



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:
Walstrum Quarry		M-1983-033	Granite, granite gneis	Clear Creek
INSPECTION TYPE:		WEATHER: Clear	INSP. DATE:	INSP. TIME:
Monitoring			November 14, 2024	09:00
OPERATOR:		OPERATOR REPRESENTATIVE:	TYPE OF OPERA	TION:
Albert Frei & Sons Inc.		Phil Courtney, Brian Scott	112c - Construction Regular Operation	
REASON FOR INSPECTION:		BOND CALCULATION TYPE:	BOND AMOUNT:	
Normal I&E Program		Complete Bond	\$1,100,000.00	
DATE OF COMPLAINT:		POST INSP. CONTACTS:	JOINT INSP. AGE	NCY:
NA		None	None	
INSPECTOR(S):	INSPE	CTOR'S SIGNATURE:	SIGNATURE DAT	E:
Nikie Gagnon			January 12, 2025	
Jared Ebert	Air	cie Gagnon		

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

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

OBSERVATIONS

The Walstrum Quarry was inspected by Nikie Gagnon and Jared Ebert, representing the Division of Reclamation, Mining and Safety (Division/DRMS) as part of the Division's normal monitoring inspection program. Brian Scott and Phil Courtney, representing Martin Marietta (Operator), accompanied the Division during the inspection. Martin Marietta acquired Albert Frei and Sons, the permittee, in January 2024.

The site accessed from US Hwy 6 near the intersection with I-70 about five miles east of Idaho Springs. The operation is a 112c granite/aggregate mine permitted for 749.30 acres with an affected area of 493.80 acres. The approved post-mining land uses include four reclamation types; wildlife habitat (undisturbed area), privately-owned natural resource area, industrial/commercial and developed water resources. The mine was operating during the inspection. A mine sign was posted on the mine office on the south side of Hwy 6.

General Compliance with the Mine Plan:

The Division observed the process area and wash plant. A new truck scale was recently installed in this area. The Operator stated that they perform daily inspection of the stormwater channels around the plant (Photo 3). During the inspection, the Division observed the stormwater detention basin near the entrance to the site which had small amount of water in it (Photo 4).

The Division observed active processing on the first level of the east side of the quarry. The crusher was operating during the inspection and conveyors moved material to stockpiles around the processing area. Numerous haul trucks were observed taking material out of the mine site. The Division observed appropriate containment of fuels in double walled tanks and lubricants and other hazardous materials are stored in Conex boxes.

Active mining was occurring during the inspection in the northern end of the quarry. Haul trucks were observed moving mined material from a bench.

<u>Revegetation</u>: The top benches around the quarry have reached final configuration and the Operator is conducting concurrent reclamation on the upper most of these benches. According to the 2024 annual report, reclamation work is complete on approximately 35 acres and the operator reclaimed 7.57 acres over the last year. The Division observed established vegetation on the top benches around the active quarry (Photos 11-13).

During the inspection, the Operator informed the Division that development in the Spur Amendment is underway. The Spur Amendment was approved under Amendment 9 in 2022 and added 464.17 acres to the permit area, east of the existing quarry. The Division observed new roads, a large topsoil storage area, and machinery moving material around the spur area. (Photos 14-16). The original quarry was mined from the bottom up, but the Spur will be mined from the top down.

<u>Blasting</u>: Mr. Scott stated that the blasting is contracted out to a contractor. The blasts are small and designed to minimize vibration and overbreak. The blasting events are monitored electronically with two seismographs on site. Alerts are sent out when there is an event above the internal limit set by the Operator. Strong winds occasionally trigger alerts at the monitors when blasting is not occurring. During the inspection, the Division observed equipment drilling holes on the top level of the Spur area (Photo 17). A seismograph was observed adjacent to the mining area (Photo 18).

<u>Fish and Wildlife</u>: No impact to wildlife was observed. A bighorn sheep was observed on the 4th level on a slope above the new employee building (Photo 9)

<u>Hydrologic Balance</u>: Water used for dust suppressant and the aggregate plant is pumped from Clear Creek under a court decree and augmentation plan. The Division observed the inlet and pipeline adjacent to the mine office on the south side of Hwy 6.

<u>Storm Water MGT Plan</u>: No oil or fuel spills observed. The operator is properly storing lubricants and chemicals in Conex boxes around the mine. Six five-gallon buckets containing fluids were noted in the equipment storage area at the top of the quarry (Photo 18). The Operator stated they would move the buckets to the adjacent storage box.

Financial Warranty:

The Division currently holds a financial warranty in the amount of \$1,100,000.00 for reclamation. The reclamation cost was last calculated in September 2019 for Amendment 9. After this inspection, the Division estimated the reclamation liability at the site to be \$1,533,035.00 which is \$433,035.00 more than the currently held financial warranty. The Division's reclamation cost estimate is enclosed with this report for the Operator's review. The Division requests that any questions or concerns regarding the estimated liability level be forwarded to the Division by January 27, 2025. The Division may issue a surety increase revision after January 27, 2025. In accordance with Rule 4.2.1(2), Martin Marietta will have sixty (60) days from the date of the notice of surety increase to provide the additional financial warranty.

This concludes the Division's Inspection Report; a subset of photographs taken during the time of the inspection are included below. If you need additional information or have any questions, please contact me at Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at 720-527-1640, or by email at nikie.gagnon@state.co.us.

PHOTOGRAPHS



Photo 1: Looking north at the processing facility from the mine office.



Photo 2: Looking at the newly installed truck scale in the loading area.



Photo 3: Stormwater channels adjacent to the processing plant.



Photo 4: Stormwater rentention pond near the entrance to the mine, adjacent to the processing plant.



Photo 5: Pipeline and inlet on Clear Creek adjacent to the mine office.



Photo 6: Mine office on the south side of Hwy 6, across from the entrance to the quarry.



Photo 7: Processing equipment on the floor of the quarry.



Photo 8: Diesel containment and lubricant storage adjacent to the employee building on level 4 of the quarry.



Photo 9: New employee building on level 4 of the quarry.



Photo 10: Active mining area on the north side of the original quarry.



Photo 11: Looking at the reclaimed benches on the northwest end of the permit area. Vegetation is establishing on the slopes.



Photo 12: Mining in the northwest side of the permit area. Active mining is ongoing on this level. Slopes above have been reclaimed and an armored stormwater channel is noted by the arrow.



Photo 13: Looking at established vegetation on a reclaimed sloped above the quarry.



Photo 14: Looking at recently constructed haul road and topsoil storage area in the Spur Amendment Area, on the east side of the permit area.



Photo 15: Equipment moving topsoil and overburden within the Spur Amendment Area.



Photo 16: Looking at recent earthwork in the Spur Amendment Area, east of the existing quarry.





Photo 18: Seismograph adjacent to the Spur Amendment area.



Photo 18: Storage area at the top of the quarry. Buckets containing fluids were observed here.



Photo 19: Equipment storage area at the top of the quarry.



Photo 20:

Inspection Contact Address

Phillip Courtney Albert Frei & Sons Inc. 1627 Cole Boulevard, Suite 200 Lakewood, CO 80401

Enclosure: 2024 Reclamation Cost Estimate

CC: Jared Ebert, Senior EPS, DRMS

COST SUMMARY WORK

Т	Task descrip	otion:	2024 Bond Estin	nate				
Site:	Walstrun	n Quarry	Per	mit Action:	2024 Inspection	Permit/Job	o#: <u>M1983033</u>	
Pl	ROJECT	IDENTIFIC	CATION					
	Task #:	000	State:	Colorado		Abbreviation:	None	
	Date:	1/12/2025	County:	Clear Creek		Filename:	M033-000	
	User:	NCG						
	Age	ency or organiz	zation name:	RMS				

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet	Task Hours	Cost
IY1	Stages I & Y Revegetation	REVEGE	1	80.00	\$755,516
IY2	Stages I & Y Replace Topsoil	LOADER	1	368.08	\$98,730
IY3	Stages I & Y Bench Construction	DOZER	2	77.01	\$74,607
IY4	Stages I & Y Talus Sloping	DOZER	2	176.62	\$171,095
IY5	Stages I & Y Grading and Shaping	GRADER] 1	81.55	\$13,205
JM1	Stage J & Misc. Revegetation	REVEGE] 1	80.00	\$43,826
JM2	Stage J & Misc. Replace Topsoil	LOADER] 1	43.86	\$11,766
JM5	Stage J & Misc. Grading and Shaping	GRADER	1	50.63	\$8,199
JM6	Concrete Demo	SITEMAINT	1	40.00	\$29,145
		ENANCE			
JM7	Scrap Removal	SITEMAINT	1	40.00	\$9,450
		ENANCE			
		TALS:	1037.75	\$1,215,539	

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$24,554
Performance bond:	0.00	Total =	\$0
Job superintendent:	518.87	Total =	\$41,131
Profit:	10.00	Total =	\$121,554
		TOTAL O & P =	\$187,239
		CONTRACT AMOUNT (direct + O & P) = $($	\$1,402,778

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	4.25	Total =	\$59,618
Reclamation management and/or administration:	5.00		\$70,139
CONTINGENCY:	0.00	Total =	\$0
		TOTAL INDIRECT COST =	\$317,496

REVEGETATION WORK

Task descrip	otion:	Stages I & Y Revegetation	
Site: Walstru	n Quarry	Permit Action: 2024 Inspection	n Permit/Job#: M1983033
PROJECT	IDENTIFIC	CATION State: Colorado	Abbraviation: None
Date:	1/12/2025 NCC	County: Clear Creek	Filename: M033-IY1

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
0-20-20, 4-8-12, 10-10-10	1.00	pound	\$0.64	\$0.64
			Total Fertilizer Materials Cost/Acre	\$0.64

Application

Description	Cost /Acre
Hydro spreader (MEANS 32 01 90.13 0180)	\$278.78
Total Fertilizer Application Cost/Acre	\$278.78

TILLING

Description	Cost /Acre
Weed control spraying (MEANS 31 31 16.13 3100)	\$338.80
Total Tilling Cost/Acre	\$338.80

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Native	11.90	194.24	\$253.77
Indian Ricegrass - Native	4.08	13.21	\$70.55
Sand Dropseed	6.60	787.88	\$85.86
Canada Wildrye	3.30	8.71	\$33.76
Sandberg Bluegrass - VNS	9.90	210.23	\$143.02
Currant, Wax	1.30	4.48	\$90.17
Slender Wheatgrass - Native	6.60	24.09	\$46.63
Mahogany, Mountain	1.30	1.76	\$131.23
Western Wheatgrass - Barton	9.90	25.00	\$93.02
Rose, Wood's	1.30	0.00	\$69.39
Sage, Fringed	0.70	58.50	\$69.46

Prairie Junegrass	3.30	175.41	\$160.85
Flax, Lewis Blue	1.30	8.62	\$54.99
Penstemon, Rocky Mountain	1.30	20.38	\$79.84
Yarrow, Western	0.70	42.56	\$33.77
Totals Seed Mix	63.48	1,575.06	\$1,416.29

Application

Description		Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)		\$1,359.07
	Total Seed Application Cost/Acre	\$1,359.07

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - Tordon 22K @ 1.0 pt/ac	1.00	ACRE	\$11.80	\$11.80
Jute mesh #2, stapled (MEANS 31 25 14.16	1.00	ACRE	\$2,758.80	\$2,758.80
0300)				
Total Mulch Materials Cost/Acre				\$2,770.60

Application

Description		Cost /Acre
Jute mesh #2 (MEANS 31 25 14.16 0300)		\$2,323.20
Weed spray, hand, non-aquatic area, nox. [DMG]		\$209.61
Weed spray, hand, non-aquatic areas, ann. [DMG]		\$136.48
	Total Mulch Application Cost/Acre	\$2,669.29

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:	79.3	Cost /Acre:	\$8,833.47
Estimated Failure Rate:	25%	Cost /Acre*:	\$2,775.36
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$700,494.17
Reseeding Job Cost:	\$55,021.51
Total Job Cost:	\$755,516
Job Hours:	80.00

REVEGETATION WORK

Task	descripti	on:	Stage J & Misc.	Revegetation	n		
Site: W	alstrum	Quarry	Pe	rmit Action:	2024 Inspection	Permit/Jol	o#: <u>M1983033</u>
<u>PRO.</u>	JECT II	DENTIFIC	ATION				
Τ	ask #:	JM1	State:	Colorado		Abbreviation:	None
	Date:	1/12/2025	County:	Clear Creel	k	Filename:	M033-JM1
	User:	NCG					

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
0-20-20, 4-8-12, 10-10-10	1.00	pound	\$0.64	\$0.64
			Total Fertilizer Materials Cost/Acre	\$0.64

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0300)				
Total Mulch Materials Cost/Acre				\$2,770.60

Application

Description		Cost /Acre
Jute mesh #2 (MEANS 31 25 14.16 0300)		\$2,323.20
Weed spray, hand, non-aquatic area, nox. [DMG]		\$209.61
Weed spray, hand, non-aquatic areas, ann. [DMG]		\$136.48
	Total Mulch Application Cost/Acre	\$2,669.29

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:	4.6	Cost /Acre:	\$8,833.47
Estimated Failure Rate:	25%	Cost /Acre*:	\$2,775.36
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$40,633.96
Reseeding Job Cost:	\$3,191.66
Total Job Cost:	\$43,826
Job Hours:	80.00

WHEEL LOADER - LOAD AND CARRY WORK

Walstrum Quarry	Permit Action:	2024 Inspection	P	ermit/Job#:	M1983033
		`			
PROJECT IDENTIFIC	<u>CATION</u>				
Task #: IY2	State: Colorado)	Abb	reviation:	None
Date: $1/12/2025$	County: Clear Cre	eek		Filename:	M033-IY2
User: NCG					
Agency or organi	zation name: DRMS				
HOURLY EQUIPMEN	NT COST				
Basic Machine: 0	CAT 988H	F	Iorsepower:	2	475
Attachment 1:	ROPS Cab	-	Shift Basis:	1 p	er day
		Γ	Data Source:	(0	CRG)
Cost Breakdown:					
COSt DIeakuowii.		Utilization %			
Ownership Cost/He	our: \$131.26	NA			
Operating Cost/He	our: \$100.12	100			
Operator Cost/He	our: \$36.85	NA			
Total Unit Cost/He	our: \$268.23				
Total Elect Cost/H					
	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)				
	lour: \$268.23	-			
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MATERIAL QUANTI Initial volume:	Substraint Substraint TIES 412 CCY 93,412 LCY estimated volume: Division mated swell factor: Cat Har ION Unadjusted Basic Cycle Time S	Swell factor n of Reclamation, Mi idbook e (load, dump, maner ter 0.02 0 ft. high and up 0.00 cks and loaders -0.04 ycle Time Adjustmer	: <u>1.000</u>	y 0.575 r (min.) 020 000 .040 .040 .040 .040	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
MATERIAL QUANTI Initial volume: 93, Loose volume:	Substrain Substrain A12 CCY 93,412 LCY estimated volume: Division mated swell factor: Cat Har ION Constant up to 1/8" diameter Conveyor or dozer piled 1 Constant operation -0.04 Nominal target 0.00 Net Cy	Swell factor n of Reclamation, Mi ndbook e (load, dump, maner ter 0.02 0 ft. high and up 0.00 cks and loaders -0.0- cks and loaders -0.0- ycle Time Adjustmen sted Basic Cycle Tim	: <u>1.000</u> ining & Safet uver): Facto 0 0 0 4 -C -C 0 0 1:C e: 0	y 0.575 r (min.) 020 000 .040 .040 .040 .060 515	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes
MATERIAL QUANTI Initial volume: 93, Loose volume:	tour: \$268.23 TIES CCY 412 CCY 93,412 LCY estimated volume: Division mated swell factor: Cat Har ION Conditions Unadjusted Basic Cycle Time S S : Material up to 1/8" diamet : Conveyor or dozer piled 1 : Constant operation -0.04 : Nominal target 0.00 Net Cy Adjus Conditions Conditions	Swell factor n of Reclamation, Mi adbook e (load, dump, maner ter 0.02 0 ft. high and up 0.00 cks and loaders -0.00 cks and loaders -0.00 cycle Time Adjustmen sted Basic Cycle Tim	: <u>1.000</u>	y 0.575 r (min.) 020 .000 .040 .040 .040 .060 .515	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes
MATERIAL QUANTI Initial volume: 93, Loose volume:	Substrain Substrain 100111 \$268.23 TIES CCY 412 CCY 93,412 LCY restimated volume: Division mated swell factor: Cat Har ION Unadjusted Basic Cycle Time unadjusted Basic Cycle Time Substrain Conveyor or dozer piled 1 Conveyor or dozer piled 1 Constant operation -0.04 Nominal target 0.00 Net Cycle Adjust Net Cycle Adjust Conditions Hard, smooth stabilized sur	Swell factor n of Reclamation, Mi adbook e (load, dump, maner ter 0.02 0 ft. high and up 0.00 cks and loaders -0.00 ycle Time Adjustmen sted Basic Cycle Time	: <u>1.000</u> ining & Safet uver): <u></u> Factor 0 0 0 4 -0 1 0 4 -0 0 0 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1 1 1	y 0.575 r (min.) 020 000 .040 .040 .060 .515	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	900	5.00	2.00	7.00	0.9002	(Cat HB)
Return Route:	900	-5.00	2.00	-3.00	0.4804	(Cat HB)

		1	Fotal Travel Tin Total Cycle Tin	ne: 1.3806 ne: 1.8956	minutes minutes	
Load Bucket Capacity						
Rated Capac Bucket Fill Fact Adjusted Capac	ity: 9.20 for: 1.050 ity: 9.66	LCY (heaped Other - mois LCY	l) t loam (19	00-110%) 1.050		
Job Condition Correction Site Altitude: 7220 feet	on Factors					
		Source				
Altitude Adj:	1.00	(CAT HB)				
Job Efficiency:	0.83	(1 shift/day)				
Net Correction:	0.83	multiplier				
U	nadjusted Hourly Uni	it Production:	305.76	LCY/Hour		
	Adjusted Hourly Uni	it Production:	253.78	LCY/Hour		
	Adjusted Hourly Flee	et Production:	253.78	LCY/Hour		
JOB TIME AND COST						
Fleet size:	1 Loader(s	s) To	otal job time:	368.08	Hours	

 Unit cost:
 \$1.057
 /LCY
 Total job cost:
 \$98,730

WHEEL LOADER - LOAD AND CARRY WORK

~ /	Pern	nit Action:	2024 Inspection	Р	ermit/Job#:	M1983033
PROJECT IDENTIF	ICATION					
Task #: JM2	State:	Colorado		Abb	reviation:	None
Date: 1/12/2025	County:	Clear Cree	ek		Filename:	M033-JM2
User: NCG						
Agency or organ	nization name: DR	MS				
HOURLY FOUIPME	ENT COST					
Basic Machine:	CAT 988H			Horsenower:		475
Attachment 1	ROPS Cab			Shift Basis	1 r	er dav
	KOI 5 Cub			Data Source:	<u>_</u>	RG
				2 au 550100.	(
<u>Cost Breakdown:</u>		I				
	· • • • •		Utilization %			
Ownership Cost/I	Hour: $\$131.2$	26	NA	_		
Operating Cost/I	Hour: $\$100.$	12 5	100	_		
Uperator Cost/I	Hour: $$36.8$	<u> </u>	NA	_		
Total Unit Cost/H	Hour: \$268.2	23				
Total Fleet Cost/	Hour: \$268.	23				
MATERIAL QUANT	<u>TITIES</u>					
MATERIAL QUANT	<u>TTIES</u>	CCV	Swall facto			
Initial volume: <u>1</u>	<u>TTIES</u> 1,132 11 132		Swell facto	or: <u>1.000</u>		
Initial volume:	<u>TITIES</u> 1,132 11,132	CCY LCY	Swell facto	or: <u>1.000</u>		
Initial volume: <u>1</u> Loose volume: <u>1</u> Source of	TITIES 1,132 11,132 of estimated volume:	_ CCY _ LCY _ Division	Swell facto	or: <u>1.000</u> fining & Safet	у	
MATERIAL QUANT Initial volume: <u>1</u> Loose volume: <u></u> Source of Source of es	TTIES 1,132 11,132 of estimated volume: timated swell factor:	CCY LCY Division Cat Hand	Swell facto of Reclamation, N lbook	or: <u>1.000</u> 1ining & Safet	у	
MATERIAL QUANT Initial volume: 1 Loose volume: Source of est	TTIES 1,132 11,132 of estimated volume: timated swell factor:	CCY LCY Division Cat Hanc	Swell facto of Reclamation, M lbook	or: <u>1.000</u> fining & Safet		
Initial volume: <u>1</u> Loose volume: <u>1</u> Source of es IOURLY PRODUCT	TITIES 1,132 11,132 of estimated volume: timated swell factor: TION	CCY LCY Division Cat Hance	Swell facto of Reclamation, N lbook	or: <u>1.000</u> fining & Safet	у	
Initial volume: <u>1</u> Loose volume: <u>1</u> Source of es HOURLY PRODUCT	TITIES 1,132 11,132 of estimated volume: timated swell factor: FION Unadjusted Basic (CCY LCY Division Cat Hand	Swell facto of Reclamation, N lbook (load, dump, mane	or: <u>1.000</u> fining & Safet	y 0.575	minutes
Initial volume: <u>1</u> Loose volume: <u>1</u> Source of Source of es HOURLY PRODUCT .oader Cycle Time: Cycle Time Facto	TTTIES 1,132 11,132 of estimated volume: timated swell factor: FION Unadjusted Basic O ors	CCY LCY <u>Division</u> Cat Hanc	Swell facto of Reclamation, M lbook (load, dump, mane	or: <u>1.000</u> fining & Safet euver): Facto	y 0.575 r (min.)	minutes
Initial volume: Loose volume: Source of Source of es HOURLY PRODUCT .oader Cycle Time: Cycle Time Facto Materia	TTIES 1,132 11,132 of estimated volume: timated swell factor: FION Unadjusted Basic Opric al: Material up to 1	Cycle Time	Swell facto of Reclamation, M lbook (load, dump, mane er 0.02	or: <u>1.000</u> <u>fining & Safet</u> euver): Factor 0	y 0.575 r (min.) 020	minutes Source (Cat HB)
MATERIAL QUANT Initial volume: 1 Loose volume: Source of es Source of es HOURLY PRODUCT	TTIES 1,132 11,132 of estimated volume: timated swell factor: FION Unadjusted Basic Ors al: Material up to 1 le: Conveyor or do	CYCY LCY <u>Division</u> Cat Hanc Cycle Time /8" diameted zer piled 10	Swell facto of Reclamation, N lbook (load, dump, mane er 0.02 oft. high and up 0.0	or: <u>1.000</u> <u>fining & Safet</u> euver): Factor 0 00 0	<u>y</u> 0.575 r (min.) 020 000	minutes Source (Cat HB) (Cat HB)
MATERIAL QUANT Initial volume: Loose volume: Source of Source of es HOURLY PRODUCT Loader Cycle Time: Cycle Time Facto Materia Stockpil Truck Ownershi	TTIES 1,132 11,132 of estimated volume: timated swell factor: TION Unadjusted Basic Cors al: Material up to 1 le: Conveyor or do up: Common owner	Cycle Time	Swell facto of Reclamation, N lbook (load, dump, mane er 0.02 oft. high and up 0.0 cks and loaders -0.0	or: <u>1.000</u> fining & Safet euver): Facto 00 0 04 -0	y 0.575 r (min.) .020 .000 .040	minutes Source (Cat HB) (Cat HB) (Cat HB)
MATERIAL QUANT Initial volume: 1 Loose volume: Source of es HOURLY PRODUCT Loader Cycle Time: Cycle Time Facto Materia Stockpil Truck Ownershi Operatio	TTIES 1,132 11,132 of estimated volume: timated swell factor: TION Unadjusted Basic Ors al: Material up to 1 le: Conveyor or do ip: Common owner on: Constant operation	Cycle Time /8" diamete zer piled 10 /ship of truc ion -0.04	Swell facto of Reclamation, M lbook (load, dump, mane er 0.02) ft. high and up 0.0 cks and loaders -0.0	or: <u>1.000</u> fining & Safet euver): Factor 00 0 04 -0 -0 -0	<u>y</u> 0.575 <u>r (min.)</u> 020 .000 .040 .040	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)
MATERIAL QUANT Initial volume: 1 Loose volume: Source of es BOURLY PRODUCT Loader Cycle Time: Cycle Time Facto Materia Stockpil Truck Ownershi Operatio Dump Targe	Initial State 1,132 11,132 of estimated volume: timated swell factor: Image: State Unadjusted Basic Cors al: Material up to 1 le: Conveyor or do ip: Common owner on: Constant operate et: Nominal target	Cycle Time /8" diameted zer piled 10 /ship of truction -0.04 0.00	Swell facto of Reclamation, M dbook (load, dump, mane er 0.02 oft. high and up 0.0 eks and loaders -0.0	or: <u>1.000</u> fining & Safet euver): Factor 00 0 00 0 04 -0 00 0 0 0 0 0 0 0 0 0 0 0 0 0	0.575 r (min.) 020 000 .040 .040 .040 000	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)
Initial volume: 1 Loose volume:	TTIES 1,132 11,132 of estimated volume: timated swell factor: FION Unadjusted Basic Cors al: Material up to 1 le: Conveyor or do ip: Common owner on: Constant operation	Cycle Time /8" diamete zer piled 10 /800 /800 /800 /800 /800 /800 /800 /8	Swell facto of Reclamation, M lbook (load, dump, mane er 0.02) ft. high and up 0.0 ks and loaders -0.0	or: <u>1.000</u> fining & Safet euver): Factor 00 00 04 -00 04 -00 00 ent:0	0.575 r (min.) .020 .000 .040 .040 .000 .060	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
IATERIAL QUANT Initial volume: 1 Loose volume: Source of es Ource Of es IOURLY PRODUCT Loader Cycle Time: Cycle Time Facto Materia Stockpil Truck Ownershi Operatio Dump Targe	TTIES 1,132 11,132 of estimated volume: timated swell factor: TION Unadjusted Basic Cors al: Material up to 1 le: Conveyor or do ip: Common owner in: Constant operat et: Nominal target	Cycle Time /8" diamete zer piled 10 /8hip of truction -0.04 0.00 Net Cycle Adjust	Swell facto of Reclamation, N lbook (load, dump, mane er 0.02 oft. high and up 0.0 eks and loaders -0.0 cle Time Adjustme ed Basic Cycle Tin	euver): Factor 00 00 04 -00 04 -00 04 -00 00 00 04 -00 00 00 04 -00 00 00 04 -00 00 00 04 -00 00 00 04 -00 00 00	0.575 r (min.) .020 .000 .040 .040 .040 .060 .515	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes
Initial volume: 1 Loose volume:	TTIES 1,132 11,132 of estimated volume: timated swell factor: TION Unadjusted Basic (ors) al: Material up to 1 le: Conveyor or do ip: Common owner on: Constant operate et: Nominal target	Cycle Time /8" diamete zer piled 10 /ship of truction -0.04 0.00 Net Cy- Adjust	Swell facto of Reclamation, M lbook (load, dump, mane er 0.02) ft. high and up 0.0 ks and loaders -0.0 cle Time Adjustme ed Basic Cycle Tin	euver): Factor 00 0 04 -00 04 -00 00 0 04 -00 00 0 04 -00 00 0 04 -00 00 0 00	y 0.575 r (min.) 020 000 .040 .040 .040 .060 .515	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes
IATERIAL QUANT Initial volume: 1 Loose volume: Source of es OURLY PRODUCT Loader Cycle Time: Cycle Time Factor Materia Stockpil Truck Ownershi Operatio Dump Targe Colling Resistance – Roa	TTIES 1,132 11,132 of estimated volume: timated swell factor: Image: Conveyor or do p: Conveyor or do p: Constant operation et: Nominal target	Cycle Time /8" diamete zer piled 10 /ship of truc ion -0.04 0.00 Net Cyc Adjust	Swell facto of Reclamation, M lbook (load, dump, mane er 0.02) ft. high and up 0.0 cks and loaders -0.0 cle Time Adjustme red Basic Cycle Tin	euver): Factor 00 0 00 0 04 -0 00 -0 00 0 00 0	<u>y</u> 0.575 r (min.) 020 000 .040 .040 .040 .060 .515	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes
Initial volume: 1 Loose volume: Source of es Source of es IOURLY PRODUCT Initial volume: Loose volume: IOURLY PRODUCT Initial volume: Loader Cycle Time: Cycle Time Factor Materia Stockpil Truck Ownershi Operation Dump Targe	Material up to 1 Image: Conveyor or do org Image: Conveyor or do org Image: Conveyor or do org Constant operation Constant operation Image: Constant operation Image: Constant operation Image: Conditions Hard, smooth, stal	Cycle Time /8" diamete zer piled 10 /8" diamete zer piled 10 /8" diamete zer piled 10 /8" diamete zer piled 10 /8" diamete zer piled 10	Swell facto of Reclamation, M dbook (load, dump, mane er 0.02 oft. high and up 0.0 cks and loaders -0.0 cle Time Adjustme red Basic Cycle Time faced, watered, mai	or: 1.000 fining & Safet euver):	0.575 r (min.) 020 000 .040 .040 .040 .060 .515	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes

	Length	Grade Res.	Rolling	Total Res.	Travel Time	Source
	(feet)	(%)	Res. (%)	(%)	(minutes)	Source
Haul Route:	900	5.00	2.00	7.00	0.9002	(Cat HB)
Return Route:	900	-5.00	2.00	-3.00	0.4804	(Cat HB)
				•		•

			Total Travel Total Cycle	Time: 1.3806 Time: 1.8956	minutes minutes
Load Bucket Capacity					
Rated Capacit Bucket Fill Facto Adjusted Capacit	y: 9.20 pr: 1.050	LCY (hea Other - m	ped) oist loam	(100-110%) 1.050	
<u>Job Condition Correction</u> Site Altitude: <u>7220</u> feet	n Factors				
Altitude Adj: Job Efficiency: Net Correction: Un	1.00 0.83 0.83 adjusted Hourly Unit P Adjusted Hourly Elect P	Source (CAT HB (1 shift/day multiplier roduction: roduction:	$\frac{305.76}{253.78}$	LCY/Hour LCY/Hour	
JOB TIME AND CO Fleet size:	<u>ST</u> 1 Loader(s)	iouucuon.	Total job time:	43.86	Hours
Unit cost: \$1.	.057 /LCY		Total job cost:	\$11,766	

BULLDOZER WORK

- ash accomption.	Stages I & Y Bench Constru			
Walstrum Quarry	Permit Action:	2024 Inspection	Permit/Job#:	M1983033
PROJECT IDENTIF	ICATION			
Task #: IY3	State: Colorado		Abbreviation:	None
Date: 1/12/2025	County: Clear Cre	ek	Filename:	M033-IY3
User: NCG				
Agency or orga	nization name: DRMS			
HOURLY EQUIPME	ENT COST			
Basic Machine: Cat	t D9T - 9SU			
Horsepower: 405	5			
Blade Type: Ser	ni-Universal			
Attachment: <u>3-s</u>	hank ripper			
Shift Basis: <u>1 p</u>	er day			
Data Source: (CH	RG)			
Cost Breakdown:				
Orrenandhin Carat/II	\$050 1 C	Utilization %		
Ownership Cost/Hour:	\$253.16	NA 100		
Pipper own Cost/Hour:	<u> </u>	IUU NIA		
Ripper on Cost/Hour:	 ¢۵ /۹	1NA 100		
Operator Cost/Hour:	\$38.50	NA		
Total Fleet Cost/Hour:	<u>\$484.37</u> \$968.73			
Total Fleet Cost/Hour:	<u>\$484.37</u> \$968.73			
Total Fleet Cost/Hour:	<u>\$484.37</u> \$968.73 <u>TTIES</u> 062			
Total unit Cost/Hour: MATERIAL QUANT Initial Volume: 155, Small factors 100	<u>\$484.37</u> \$968.73 TTIES 063 0			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: Loose volume: 155	\$484.37 \$968.73 TTIES 063 0 063 L CY			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: 1.00 Loose volume: 155,	\$484.37 \$968.73 TTIES 063 0 063 LCY			
Total fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: 1.00 Loose volume: 155, Source of estimated volum	<u>\$484.37</u> \$968.73 TTIES 063 0 063 LCY me: <u>Division of Reclamat</u>	tion, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: 1.00 Loose volume: 155, Source of estimated volu Source of estimated swell	\$484.37 \$968.73 TTIES 063 0 063 LCY me: Division of Reclamate 1 factor: Cat Handbook	tion, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: 1.00 Loose volume: 155, Source of estimated volum Source of estimated swell HOURLY PRODUCT	\$484.37 \$968.73 CITIES 063 0 063 LCY me: Division of Reclamat 1 factor: Cat Handbook	tion, Mining & Safety		
Total fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: 1.00 Loose volume: 155, Source of estimated volu Source of estimated swel HOURLY PRODUCT	<u>\$484.37</u> \$968.73 TTIES 063 0 063 LCY me: <u>Division of Reclamat</u> 1 factor: <u>Cat Handbook</u> FION	tion, Mining & Safety		
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: 1.00 Loose volume: 155, Source of estimated volu Source of estimated swell HOURLY PRODUCT Average push distance:	<u>\$484.37</u> \$968.73 TTIES 063 0 063 LCY me: Division of Reclamat 1 factor: Cat Handbook FION 50 feet	tion, Mining & Safety		
Initial Volume: 155, Swell factor: 100 Loose volume: 155, Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product	\$484.37 \$968.73 CITIES 063 0 063 LCY me: Division of Reclamat 1 factor: Cat Handbook FION 50 feet ction: 2,110.5 LCY/hr	tion, Mining & Safety		
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: 1.00 Loose volume: 155, Source of estimated volu: Source of estimated volu: Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency destinated construction State	\$484.37 \$968.73 TTIES 063 0 063 LCY me: Division of Reclamate 1 factor: Cat Handbook FION 50 feet ction: 2,110.5 LCY/hr scription: Rock, avg. ripped of	tion, Mining & Safety		
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: 1.00 Loose volume: 155, Source of estimated volu: Source of estimated volu: Source of estimated volu: Source of estimated volu: MOURLY PRODUCT 155, Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average site altitude: 100	\$484.37 \$968.73 TTIES 063 0 063 LCY me: Division of Reclamat 1 factor: Cat Handbook FION ction: 50 feet ction: 2,110.5 LCY/hr scription: Rock, avg. ripped of 0 % 7,220 feet	tion, Mining & Safety		
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: 1.00 Loose volume: 155, Source of estimated volu: Source of estimated volu: Source of estimated volu: Source of estimated volu: Materials consistency des Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average site altitude: Material weight: Material weight:	\$484.37 \$968.73 TTIES 063 0 063 LCY me: Division of Reclamate 1 factor: Cat Handbook FION scription: 2,110.5 LCY/hr scription: Rock, avg. ripped of 0 % 7,220 feet 2,800 lbs/LCY	tion, Mining & Safety		
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: 1.00 Loose volume: 155, Source of estimated volu: Source of estimated volu: Source of estimated swel HOURLY PRODUC'. Average push distance: Unadjusted hourly product Materials consistency des Average site altitude: Material weight: Weight description:	<u>\$484.37</u> \$968.73 TTIES 063 0 063 LCY me: Division of Reclamat 1 factor: Cat Handbook TION <u>50 feet</u> ction: 2,110.5 LCY/hr scription: Rock, avg. ripped of <u>0 %</u> 7,220 feet 2,800 lbs/LCY Granite - Broken	tion, Mining & Safety		
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: 1.00 Loose volume: 155, Source of estimated volu: Source of estimated volu: Source of estimated volu: Source of estimated volu: Materials consistency des Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Source	$ \frac{$484.37}{$968.73} $ TTIES $ \frac{063}{0} \\ 063 LCY $ me: Division of Reclamat I factor: Cat Handbook TION $ \frac{50 \text{ feet}}{2,110.5 LCY/hr} $ scription: Rock, avg. ripped of $ \frac{0 \%}{7,220 \text{ feet}} $ 2,800 lbs/LCY Granite - Broken Factor	tion, Mining & Safety		
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: 1.00 Loose volume: 155, Source of estimated volu: Source of estimated volu: Source of estimated volu: Source of estimated swel HOURLY PRODUC? Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator	\$484.37 \$968.73 TTIES 063 0 063 LCY me: Division of Reclamat 1 factor: Cat Handbook EION ction: 50 feet ction: 2,110.5 LCY/hr scription: Rock, avg. ripped of 0% 7,220 feet 2,800 lbs/LCY Granite - Broken Factor Skill: 1.000	tion, Mining & Safety		
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: 1.00 Loose volume: 155, Source of estimated volu: Source of estimated volu: Source of estimated swel HOURLY PRODUC'. Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist	<u>\$484.37</u> \$968.73 TTIES 063 0 063 LCY me: Division of Reclamat 1 factor: Cat Handbook FION ction: 50 feet 2,110.5 LCY/hr scription: Rock, avg. ripped of 0% 7,220 feet 2,800 lbs/LCY Granite - Broken <u>Factor</u> Skill: 1.000 ency: 0.700	tion, Mining & Safety		
Total Fleet Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155, Swell factor: 1.00 Loose volume: 155, Source of estimated volu: Source of estimated volu: Source of estimated swel HOURLY PRODUC'. Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist Dozing me Dozing me	\$484.37 \$968.73 CTTIES 063 0 063 LCY me: Division of Reclamat 1 factor: Cat Handbook FION ction: 2,110.5 LCY/hr scription: Rock, avg. ripped of 0% 7,220 feet 2,800 lbs/LCY Granite - Broken Factor Skill: 1.000 ency: 0.700	tion, Mining & Safety		

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.821	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.4770	
Adjusted unit production: 1,0	006.71 LCY/hr	
Adjusted fleet production: 20	13.42 LCY/hr	

JOB TIME AND COST

Fleet size:	2 Dozer(s)
Unit cost:	\$0.481/LCY

Total job time:	77.01 Hours
Total job cost:	\$74,607

BULLDOZER WORK

Task description:	Stages I & Y Talus S	Sloping			
Walstrum Quarry	Permit	Action:	2024 Inspection	Permit/Job#:	M1983033
PROJECT IDENTIFI	CATION				
Task #: IY4	State: C	olorado		Abbreviation:	None
Date: 1/12/2025	County: C	lear Cree	k	Filename:	M033-IY4
User: NCG				-	
Agency or organ	ization name: DRMS	5			
HOURLY EQUIPME	NT COST				
Basic Machine: <u>Cat</u>	D9T - 9SU				
Horsepower: 405	.'				
Attachmont: 3 sh	ni-Universal		_		
Shift Basis: 1 pe	r dav				
Data Source: (CR	G)				
Cost Breakdown:			Litilization %		
Ownership Cost/Hour:	\$	253.16	NA		
Operating Cost/Hour:	\$	5164.35	100		
Ripper own. Cost/Hour:		\$18.79	NA		
Ripper op. Cost/Hour:		\$9.48	100		
Operator Cost/Hour		¢20 50	37.4		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL OLIANT	\$484.37 \$968.73	\$38.39	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155,0	\$484.37 \$968.73 ITIES 063	\$38.39	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155,0 Swell factor: 1.000 Loose volume: 155,0	\$484.37 \$968.73 ITIES 063 0 063 LCY	\$36.37	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155,0 Swell factor: 1.000 Loose volume: 155,0 Source of estimated volur	\$484.37 \$968.73 ITIES 063 0 063 LCY ne: Division of F	Reclamati	 on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155,0 Swell factor: 1.000 Loose volume: 155,0 Source of estimated volur Source of estimated swell	\$484.37 \$968.73 ITIES 063 0 063 LCY ne: Division of F factor: Cat Handboor	Reclamation	Dn, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155,(Swell factor: 1.000 Loose volume: 155,(Source of estimated volur Source of estimated swell HOURLY PRODUCT	\$484.37 \$968.73 ITIES 063 0 063 LCY ne: Division of F factor: Cat Handboo TION	Reclamation	 on, Mining & Safety 		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155,0 Swell factor: 1.000 Loose volume: 155,0 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc	\$484.37 \$968.73 ITIES 063 0 063 LCY ne: Division of F factor: Cat Handboo Construction: 50 feet ction: 2,110.5 LCY/h	Reclamationsk	 on, Mining & Safety 		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155,0 Swell factor: 1.000 Loose volume: 155,0 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc	\$484.37 \$968.73 ITIES 063 0 063 LCY ne: Division of F factor: Cat Handboo TON Store 50 feet etion: 2,110.5 LCY/h cription: Rock, avg.	Reclamationsk	 on, Mining & Safety blasted 0.7		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155,0 Swell factor: 1.000 Loose volume: 155,0 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency des Average push gradient:	\$484.37 \$968.73 ITIES)63)063 LCY ne: Division of F factor: Cat Handboo YON stion: 50 feet cription: Rock, avg. 20 %	Reclamation	on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155,(Swell factor: 1.000 Loose volume: 155,(Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency des Average push gradient: Average site altitude:	\$484.37 \$968.73 ITIES 063 0 063 LCY ne: Division of F factor: Cat Handboo YION etion: 20 feet 20 % 7,220 feet	Reclamation			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155,(Swell factor: 1.000 Loose volume: 155,(Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency dest Average push gradient: Average site altitude: Material weight:	\$484.37 \$968.73 ITIES 063 0 063 LCY ne: Division of F factor: Cat Handboo Y tion: 20 feet 20 % 7,220 feet 2,800 lbs/LCY	Reclamation k	on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155,0 Swell factor: Loose volume: 155,0 Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency dest Average site altitude: Material weight: Weight description:	\$484.37 \$968.73 ITIES 063 0 063 LCY ne: Division of F factor: Cat Handboo Yournet State 20 % Rock, avg. 20 % 7,220 feet 2,800 lbs/LCY Granite - Broken	Reclamation k			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155,0 Swell factor: 1.000 Loose volume: 155,1 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency destance: Average site altitude: Material weight: Weight description: Job Condition Correction	\$484.37 \$968.73 ITIES 063 0 063 LCY ne: Division of F factor: Cat Handboo CION etion: 50 feet 2,110.5 LCY/h cription: Rock, avg. 20 % 7,220 feet 2,800 lbs/LCY Granite - Broken Factor	Reclamationsk	on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155,0 Swell factor: 1.000 Loose volume: 155,0 Source of estimated volum Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency dest Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator S	\$484.37 \$968.73 ITIES)63)063 LCY ne: Division of F factor: Cat Handboo TON 50 feet tion: 2,110.5 LCY/h cription: Rock, avg. 20 % 7,220 feet 2,800 lbs/LCY Granite - Broken Factor Skill: 1.000 000000000000000000000000000000000000	Reclamationsk	NA on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 155,0 Swell factor: 1.000 Loose volume: 155,0 Source of estimated volur Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency destance: Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator S Material consiste Dozing met	\$484.37 \$968.73 ITIES 063 0 063 LCY ne: Division of F factor: Cat Handboo YION stion: 20 feet 20 % 7,220 feet 2,800 lbs/LCY Granite - Broken Factor Skill: 1.000 ency: 0.700 hod: 1.000	sso.39 Reclamation r ripped on))	on, Mining & Safety on, Mining & Safety on		

Job efficient	cy:	0.830	(1 SHIFT/DAY)
Spoil pi	le:	1.000	(DOZ-OC)
Push gradie	nt:	0.545	(CAT HB)
Altitud	de:	1.000	(CAT HB)
Material Weig	ht:	0.821	(CAT HB)
Blade typ	pe:	1.000	(PAT)
Net correction	on: 0.208	30	
Adjusted unit production:	438.98 L	CY/hr	
Adjusted fleet production:	877.96 L	CY/hr	

JOB TIME AND COST

Fleet size:	2 Dozer(s)
Unit cost:	\$1.103/LCY

Total job time:	176.62 Hours
Total job cost:	\$171,095

SITE MAINTENANCE

	Task description:	Concrete Demo	
Site:	Walstrum Quarry	Permit Action: 2024 Inspection Permit/Job#:	M1983033
<u>PROJE</u>	CCT IDENTIFICATION	<u>1</u>	
Task # Date User	: JM6 : 1/12/2025 : NCG	State:ColoradoAbbreviation:NoneCounty:Clear CreekFilename:M03	<u>3</u> -JM6
	Agency or organizat	ion name: DRMS	
<u>UNIT C</u>	<u>COSTS</u>		

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Concrete Footer	40.00	Demo. and on-site	2,800.00	LF	\$10.41	\$29,144.64
Demolition		disposal in existing pit,				
		1.5 ft. x 3 ft Max.				
		10,000 ft. haul				

Job Hours: 40.00

Total Cost: \$29,144.64

SITE MAINTENANCE

JECT IDENTIFICATI	<u>ON</u>	
k #: _ JM7	State: Colorado	Abbreviation: None
ate: <u>1/12/2025</u>	County: Clear Creek	Filename: M033-JM7
ser: NCG		
Agency or organ	ization name: DRMS	

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Scrap Removal	40.00	USER PROVIDED ITEM	35.00		\$270.00	\$9,450.00

Job Hours: 40.00

Total Cost: \$9,450.00

MOTOR GRADER WORK

Task description:	Stages I & Y Grading a	and Shaping			
Walstrum Quarry	Permit Act	tion: 2024 Inspection	on P	ermit/Job#:	M1983033
PROJECT IDENTI	FICATION				
Task #· IY5	State: Colo	rado	Abb	reviation	None
Date: $1/12/2025$	County: Clear	r Creek	1100	Filename:	M033-IY5
User: NCG	000000000 <u>00000</u>				11000 110
Agency or orga	anization name: DRMS				
HOURLY EQUIPM	ENT COST				
Basic Machin	e: CAT 140M		Horsepower:		183
Ripper Attachmer	nt:		Shift Basis:	1 p	er day
			Data Source:	(0	CRG)
Cost Presidown					
COSt Dieakuowii.			Utilization %		
Own	ership Cost/Hour	\$77.29	NA		
One	erating Cost/Hour:	\$56.87	100	=	
Ripper Own	ership Cost/Hour:	\$0.00	NA	-	
Ripper Ope	erating Cost/Hour:	\$0.00		-	
Öp	erator Cost/Hour:	\$27.76	NA	=	
Tota	ll Unit Cost/Hour:	\$161.92			
Tata		\$1(1.02			
Total Area Sour	a to be graded or ripped: 1	12.10 ermit Application			acres
HOUDI V PRODUC	'TION				
	Average Grader Speed:		mph	1) 15	
	Selected Application:	20 F1N1SN	grading (0-2.5 m	pn) - 1.5	
	Effective Blade Length	10.40	uegrees	•	
Width of blade overlap per pass:		2.00	feet		
Net grading or ripping width per pass:		8.40	feet		
Unadjuste	d Hourly Unit Production:	1.5273	acres/h	our	
Job Condition Correctio	n Factors	Si	te Altitude: 7220	feet	
	S	ource			
Altitude Adj:	1.00 (CA	AT HB)			
Job Efficiency:	0.90 (1sh	/d, fav.)			
Net Correction:	0.9000 mult	tiplier			
	Adjusted Hourly Unit Produc	tion: 1.3745	acres/Hour		
Ĩ	Adjusted Hourly Fleet Produc	ction: 1.3745	acres/Hour		
JOB TIME AND CC	<u>OST</u>				
Fleet size:	1 Grader(s)	Total job time	e: 81.5	5	Hours
Unit cost \$11	7.80 ner acre	Total job cost	t. \$13 1	205	
	per delle	1000 008			

MOTOR GRADER WORK

Task description:	Stage J & Misc. Gra	nding and	d Shaping			
Walstrum Quarry	Permit	Action:	2024 Inspectio	on]	Permit/Job#:	M1983033
PROJECT IDENT	IFICATION					
Task #· IM5	State: C	olorado		Ab	breviation.	None
Date: $1/12/202$	k		Filename:	M033-IM5		
User: NCG	<u></u> county: <u> </u>	iour cree			T nonuno.	11000 0110
Agency or or	ganization name: DRMS	5				
HOURLY EQUIP	MENT COST					
Basic Mach	ine: CAT 140M	e: <u>CAT 140M</u>		Horsepower:		183
Ripper Attachm	ent:			Shift Basis:	1 p	er day
11				Data Source:	(0	CRG)
G . D 11					`	,
Cost Breakdown:			1			
^	manshin Cast/II.		¢77.00	Utilization %		
Ov	/nersnip Cost/Hour:		\$11.29	<u>INA</u>		
D:0	merating Cost/Hour:		\$30.87	100		
Ripper Ov	nership Cost/Hour:		\$0.00 \$0.00	INA		
Kipper O	perature Cost/Hour:		\$0.00 \$27.76	NA	_	
ע יד-	stal Unit Cost/Hour		ψ27.70 \$161.02	11/21		
10			\$101.92			
То	tal Fleet Cost/Hour:	\$16	1.92			
Total Aı So	ea to be graded or ripped: urce of estimated acreage:	69.60 Permit	Application			acres
	CTION					
HOURLY PRODU		_				
	Average Grader Speed	l:	1.50	mph		
	Selected Application:		Finish grading (0-2.5 m		nph) - 1.5	
	Selected Blade Angle	»:	<u> </u>	degree	s	
W 7: 4	th of blade overlap per per	ı	2.00	feet		
Net grading or rinning width per pass:		<u>2.00</u> <u>8</u> /0	feet			
Inet graun	ted Hourly Unit Production	» n'	1 5273		nour	
Job Condition Correct	ion Factors		Si	te Altitude: 722	0 feet	
		Source	51		<u> </u>	
Altitude Adj	1.00	(CAT HE	3)			
Job Efficiency	0.90 (1sh/d, fa	v.)			
Net Correction	0.9000 r	nultiplier	. —			
	Adjusted Hourly Unit Pro	duction:	1.3745	acres/Hou	r	
	Adjusted Hourly Fleet Pro	duction:	1.3745	acres/Hou	r	
JOB TIME AND C	OST					
Fleet size:	1 Grader(s)		Total job time	:50.	63	Hours
Unit cost:	117.80 per acre		Total job cost	• \$2 1	199	
φ	per acre		10111 100 0081	. φθ,	.,,	