

Reilley - DNR, Robin <robin.reilley@state.co.us>

#### RCE and worst case PR12

1 message

**Reilley - DNR, Robin** <robin.reilley@state.co.us> To: Graham Roberts <graham.roberts@trappermine.com> Wed, Feb 26, 2025 at 11:58 AM

Good afternoon Graham

Here is the RCE and the Worst case bond numbers.

I have the following questions on the RCE:

Would you be so kind as to take a look at N20, N21 and N21A MR Reveg tasks: N20 and N21 derives from PR11 while N21A derives from MR229. The acreages are different, so I am thinking that MR 229 represents the correct J Pit acreages. I need to update the Pit acreages task N21 I believe and all three are w/o shrubs so there could be duplicates here.....I'm thinking that N21 should be deleted.

Task N20 begins on page 406.

Bottom line is that it appears there would be an increase in required bond of: \$11,674,890

Robin Reilley, M.S. GISP Environmental Protection Specialist II

image.png

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#### 3 attachments

CostEstmate\_PR12\_working.pdf

CostSummary\_PR12.pdf

ReclaimedNot ReleasedPR12.docx
16K

Task description:	Ash Disposal Pit R	egrade (NW sect	tion)		
ite: Trapper Mine	Perm	t Action: PR12		Permit/Job#: <u>C1</u>	981010
PROJECT IDENTI	FICATION				
Task #: 001	State:	Colorado		Abbreviation:	None
Date: $\frac{001}{2/6/202}$		Mineral		Filename:	C010-001
User: RAR	County:			T nonuno.	0010 001
Agency or	organization name:	RMS			
HOURLY EQUIPM	ENT COST				
Basic Machine:	Cat D11T - 11U				
Horsepower:	850				
Blade Type:	Universal				
Attachment:	NA				
Shift Basis:	3 per day				
Data Source:	(CRG)				
Cost Breakdown:					
			Utilization %		
Ownership Cost/Ho		\$496.62	NA		
Operating Cost/Ho		\$324.90	100		
Ripper own. Cost/Ho		\$0.00	NA		
Ripper op. Cost/Ho		\$0.00	0		
Operator Cost/Ho	our:	\$38.84	NA		
Total unit Cost/Hour:	\$860.36				
Total Fleet Cost/Hour					
MATERIAL QUAN	<u>TITIES</u>				
Initial Volume:	43,722				
	1.000				
	43,722 LCY				
			A 4 1 and A 2 9		
Source of estimated ve Source of estimated sy		ppendix A, Table	A.4.1 and A-2.8		
Source of estimated sy	well factor: <u>Cat Hanc</u>	DOOK			
HOURLY PRODUC	<u>CTION</u>				
Average push distance	e: 150 feet				
Unadjusted hourly pro		Y/hr			
Materials consistency	description: Loose	stockpile 1.2			
Average push gradien	t: -30 %				
Average site altitude:	6,800 feet				
Average site annuale.	0,000 1001				
Material weight:	2,475 lbs/LCY				
-	User Provided				
Weight description:	User Provided				

\_

	Source
0.750	(AVG.)
1.200	(CAT HB)
1.200	(S-BY-S)
0.800	(POOR)
0.790	(3 SHIFTS/DAY)
0.900	(SSD-FC)
1.601	(CAT HB)
1.000	(CAT HB)
0.929	(CAT HB)
1.000	(PAT)
0.9137	
	1.200     1.200     0.800     0.790     0.900     1.601     1.000     0.929     1.000

Adjusted unit production:	1,861.02 LCY/hr
Adjusted fleet production:	<b>3722.04</b> LCY/hr

Fleet size:	2 Dozer(s)
Unit cost:	\$0.462/LCY

Total job time:	<b>11.75</b> Hours
Total job cost:	\$20,213

# TRUCK/LOADER TEAM WORK

Task description	: Load/	Haul Section	E1,423,800					
Site: Trapper Mine	e	Permit Action	n: PR12	Perm	it/Job#:	21981010		
PROJECT IDEN	TIFICATIO	<u>DN</u>						
Task #: 0011	B	State: Co	olorado	Abbr	eviation:	None		
Date: 2/18	/2025	County: <u>M</u>	offat	Filen	ame:	001B		
User: RAF	٤							
Agency or organ	ization name	: DRMS	5					
HOURLY EQUI	PMENT CO	<b>)<u>ST</u></b> Shift ba	sis: <u>1 per day</u>					
Equipmen	t Description							
Truck Loader Te	eam -Truck:		KOMATSU 830E	]				
-Loader:			CAT 6090					
Support Equipm	ent -Load Ar		NA					
-Dump Area:			Cat D10T - 10SU					
Road Maintenan	ce –Motor G		CAT 16M	<u> </u>				
-Water Truck:			Water Tanker, 14,	000 Gal.				
<u>Cost Breakdown</u>	: Truck/L	oader Team	Support Equipmer	nt Maintenar	nce Equipme	ent		
	Truck	Shovel	Load Area	Dump Area	Motor Grader	Water Truck		
%Utilization- machine:	100	100	NA	25	25	50		
Ownership cost/hour:	\$209.47	\$302.35	NA	\$257.39	\$179.39	\$130.32		
Operating cost/hour:	\$274.17	\$501.45	NA	\$49.23	\$29.91	\$70.88		
%Utilization-riper:	NA	0	NA	NA	NA	NA		
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00		
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00		
Operator cost/hour:	\$25.24	\$33.87	NA	\$38.59	\$27.76	\$0.00		
Unit Subtotals:	\$508.88	\$837.67	NA	\$345.21	\$237.06	\$201.20		
Number of Units:	11	1	0	1	1	1		
Group Subtotals:	Work:	\$6,435.35	Support:	\$345.21	Maint:	\$438.26		

Total work team cost/hour: <u>\$7,218.82</u>

Net Correction:

0.830

0.830

Initial volume:	128,454	CCY	Swell factor:	1.000				
Loose volume:	128,454	LCY						
Source of estimated	-	Table A-4.1A						
Source of estimated			ndbook					
Material Purchase (	Cost:	\$0.00						
Total Cost:		\$0.00						
HOURLY PRODU	<u>CTION</u>							
Truck Capacity:								
Truck Payload (weig	ht) Basis:							
Material weight:			Pounds/LCY					
Description:	Decompose	ed rock - 75%	6 Rock, 25% Earth	l				
Rated Payload:	492,200		Pounds					
Payload Capacity:	149.15		LCY					
Truels Ded (volume)	Decia							
Truck Bed (volume) Struck Volume:	<u>153.00</u>	LCY						
Heaped Volume:	192.00	LCT						
Average Volume:	192.50	LCT						
Adjusted Volume:	149.15	LCT						
Aujusteu volume.	149.15							
Final Truck Volume	e Based on Numb	er of Loader	Passes:	145.78	LCY			
Looding Tool Coros	·							
Loading Tool Capaci	<u>ity</u>				<b>N</b> T 4			
		Bucke	et Size Class:	_	NA			
Rated Capacity:	58.900	LCY (I	heaped)					
Bucket Fill Factor:	0.825		l rock - avg. blaste	d (75 - 90%) 0.82	25			
Adjusted Capacity:	48.593	LCY	~~~~~	· · · · · · · · · · · · · · · · · · ·				
	· · · · · · · · · · · · · · · · · · ·							
Job Condition Corr	ections: Site Alti	tude (11.): <u>64</u>	<u>00</u> feet					
	Truck	Loader	Source					
Altitude Adj:	1.000	1.000	(CAT H	B)				
Job Efficiency:	0.830	0.830	(CAT H	,				

Loading Tool Cycle Time	e: Number of Loading Tool Fill Truck:			Passes Req	uired to	3		passes
Excavators and Front Show	vels:							
Machine Cycle Time vs. Rating:	Job Condition	n A	BOVE A	VERAGE				
Selected Value within this Basic Rating:			VERAGI	3				
Track Loaders – Material	l Description:							
Cycle Time Elements (mir	n.):							
Load: NA	Maneuver	<u>N</u>	IA	Dump:		0.10	0	
Wheel and Track Loader maneuver):	s - Unadjuste	d Basic Load	ler Cycle	Time (load	, dump,	NA	m	inutes
Cycle Time Factors					Factor (1	nin)	Source	
Material:	NA				NA		(Cat HB)	
Stockpile:	NA				NA		(Cat HB)	
Truck Ownership:	NA				NA		(Cat HB)	
Operation:	NA				NA		(Cat HB)	
Dump Target:	NA				NA		(Cat HB)	
<b>C</b>	Net Cycle	Гіте Adjustr	ment:		NA		minutes	
	•	oader Cycle			0.498		minutes	
		ime per Truc		-	1.494		minutes	
Truck Cycle Time:								
Truck Exchange Time:	0.80	Minutes	Adjust	ed for site a	altitude:		0.800	Minutes
Truck Load Time:	1.494	Minutes	Adjust	ed for site a	ltitude:	-	1.494	Minutes
Truck Maneuver and Dump Time:	1.20	Minutes	5			_	1.200	Minutes
<u>Truck Travel (Haul &amp; Retumaintained 3.0</u> Haul Route:	urn) Time: Ro	oad Conditio	n: <u>Firm, s</u>	mooth, roll	<u>ing, dirt/l</u> t	t. surfac	ced, watered	<u>.</u>

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	11428.00	10.00	3.00	13.00	620	18.513

Haul Time:

18.513

minutes

	Return Re	oute:							
	Seg #	Hau	al Distance	Grade (%)	Roll. Res	Total	Velocity	Travel	
		(Ft)			(%)	Res (%)	(fpm)	Time	
								(min)	
	1	114	28.00	-10.00	3.00	-7.00	3450	3.415	
Return Time: Total Truck Cycle Time:						3.415 25.422		utes utes	
Loadi	ng Tool u	nit							
Produ	0		3,812.84	LCY/Hou	ır Adjust	ed for job ef	fficiency:	3,164.6	66 LCY/Hour
Truck	Unit				U	Ū	•		
Produ	ction		344.06	LCY/Hou	LCY/Hour Adjusted for job ef			285.57	LCY/Hour
Optim Truck	al No. of s:		11	1 Truck(s) Selected Number			of Trucks:	11	Truck(s)
	Adjust	ad ha	untre travels too	mproduction			2 1/1 0	05 I	CY/Hour
			•	m production: der team produ			<u>3,141.2</u> 3,141.2		CY/Hour
			0	oader team produ			3,141.2		CY/Hour
	rujust			ouder team pro	Judenom.				
	JOB TIN	IE Al	ND COST						
	Fleet siz	ze:	1	Team(s)	Total jo	b time:	40.89		Hours
	Unit cos	st:	\$2.298	/LCY	Total jo	b cost:	\$295,196		

Task description:	Asii Disposai I	n Kegi a	de (Section 1)		
Trapper Mine	Permit A	Action:	PR12	Permit/Job#:	C1981010
PROJECT IDEN	TIFICATION				
Task #: 002	State:	Colora	ado	Abbreviation:	None
	2025 County:	Miner	al	Filename:	C010-002
User: RAF	8				
Agency or organ	ization name:	RMS			
HOURLY EQUI	PMENT COST				
Basic Machine:	Cat D11T - 11U				
Horsepower:	850				
Blade Type:	Universal				
Attachment:	NA				
Shift Basis:	<u>3 per day</u>				
Data Source:	(CRG)				
Cost Breakdown:					
<u>Biolit Broundo ((iii</u> )			Utilization %		
Ownership	¢ 40 C CO				
Cost/Hour:	\$496.62		NA		
Operating	\$224.00		100		
Cost/Hour:	\$324.90		100		
Ripper own.	\$0.00		NA		
Cost/Hour:	φυ.υυ				
Ripper op.	\$0.00		0		
Cost/Hour:					
Operator	\$38.84				
Cost/Hour:			NA		
Total unit	\$860.36				
	ψ000.30				
Cost/Hour	Δ1 <b>5</b> 0 <b>5</b> 1				
Cost/Hour: Total Fleet	\$1,720.71				

Initial Volume:	24,907	
Swell factor:	1.000	
Loose volume:	<b>24,907</b> LCY	
	<b>24,</b> 707 LC 1	
Source of estimat Source of estimat factor:		A, Table A.4.1 and A-2.8
HOURLY PROD	<u>UCTION</u>	
Average push dis	stance: 420 feet	
Unadjusted hourl		
production:		
Materials consisted description:	ency Loose stockpile	21.2
Average push	-5 %	
gradient:		
Average site	6,800 feet	
altitude:		
Material weight:	2,475 lbs/LCY	
Weight description	on: User Provided	
Job Condition Cor	rection Factor Source	
Operator Skill:	0.750	(AVG.)
Material consiste		(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	0.800	(POOR)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.6363	
Adjusted unit production:	492.94 LCY/hr	

Adjusted fleet production:

985.88 LCY/hr

Fleet size:	2 Dozer(s)	
Unit cost:	\$1.745/LCY	

Total job time:	25.26 Hours
Total job cost:	\$43,472

Trapper Mine Permit	Action:	PR12	Permit/Job#:	C1981010
PROJECT IDENTIFICATION				
Task #: 002B State:	Colora	ado	Abbreviation:	None
Date: <u>2/6/2025</u> County:	Miner	al	Filename:	C010-002B
User: <u>RAR</u>				
Agency or organization name:	ORMS			
HOURLY EQUIPMENT COST				
Basic Machine: <u>Cat D11T - 11U</u>				
Horsepower: 850				
Blade Type: Universal				
Attachment: NA				
	3 per day			
Data Source: (CRG)				
Cost Breakdown:				
		Utilization %		
Ownership \$406.62				
Cost/Hour: \$496.62		NA		
Operating \$224.00		100		
Cost/Hour: \$324.90		100		
Ripper own. \$0.00		NA		
Cost/Hour:				
Ripper op. \$0.00		0		
Cost/Hour:				
Operator \$38.84				
Cost/Hour:		NA		
Total unit \$860.36				
Cost/Hour:				
Total Fleet     \$1,720.71	\$1 720 71			
Cost/Hour:	ψ <b>1,140.11</b>			

Initial Volume:	35,685
Swell factor:	1.000
Loose volume:	<b>35,685</b> LCY
Source of estima Source of estima factor:	ted volume: Permit Appendix A, Table A.4.1 and A-2.8
HOURLY PROL	DUCTION
Average push di Unadjusted hour production:	
Materials consist description:	Loose stockpile 1.2
Average push gradient:	-10 %
Average site altitude:	6,800 feet
Material weight:	2,475 lbs/LCY
Weight descripti	on: User Provided

Job Condition Correction Operator Skill:	<u>1 Factor Source</u> 0.750	(AVG.)
1	1.200	
Material consistency:		(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	0.800	(POOR)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.6991	
Adjusted unit production:	554.11 LCY/hr	
Adjusted fleet production:	1108.22 LCY/hr	

Fleet size:	2 Dozer(s)		
Unit cost:	\$1.553/LCY		
Total job time:	32.20 Hours		
Total job cost:	\$55,407		
•		-	

Task description	n:Ash Disposal Pit Reg	rade (Section 3-1)		
ite: Trapper Min	ne Permit Action:	PR12	Permit/Job#:	C1981010
PROJECT IDE	NTIFICATION			
	5/2025 County: Min	orado ieral	Abbreviation: Filename:	None C010-003
User: <u>RA</u> Agency or orga				
HOURLY EQU	JIPMENT COST			
Basic Machine Horsepower: Blade Type: Attachment: Shift Basis: Data Source:	: Cat D11T - 11U 850 Universal NA 3 per day (CRG)			
<u>Cost Breakdown</u> Ownership		Utilization %		
Cost/Hour: Operating	\$496.62	NA 100		
Cost/Hour: Ripper own. Cost/Hour:	\$324.90	100 NA		
Ripper op. Cost/Hour:	\$0.00	0		
Operator Cost/Hour:	\$38.84	NA		
Total unit Cost/Hour:	\$860.36			
Total Fleet Cost/Hour:	\$1,720.71			

volume:	333	
Loose volume: <b>7,8</b>	333 LCY	
Source of estimated source of estimated source of estimated states factor:		., Table A.4.1 and A-2.8
HOURLY PRODUC	TION	
Average push distan	ce: 120 feet	
Unadjusted hourly production:	2,467.4 LCY/hr	
Materials consistency description:	y Loose stockpile 1	.2
Average push gradient:	-10 %	
Average site altitude:	6,800 feet	
Material weight:	2,475 lbs/LCY	
Weight description:	User Provided	
Job Condition Correct	ion Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistency		(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	0.800	(POOR)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.6991	
Adjusted unit production:	1,724.96 LCY/hr	

Adjusted fleet production:

3449.92 LCY/hr

#### JOB TIME AND COST

Fleet size:	2 Dozer(s)
Unit cost:	\$0.499/LCY

Total job time:2.27 HoursTotal job cost:\$3,907

Task desc	cription:	Ash	Disposal P	it Regrad	e (Section 3-2)		
Site: Trappe	er Mine		Permit A	Action:	PR12	Permit/Job#:	C1981010
<b>PROJEC</b>	<u>r iden</u>	<b>TIFICAT</b>	<u>ION</u>				
Task #: Date:	003B 2/6/2		State: County:	Colorad Mineral		_ Abbreviation: Filename:	None C010-003B
User:	RAR					_	
Agency of	or organi	zation nan	ne: D	ORMS			
HOURLY	<u>EQUII</u>	<u>PMENT C</u>	COST				
Basic Ma	achine:	Cat D11'	T - 11U				
Horsepov	wer:	850					
Blade Ty	pe:	Universa	ıl				
Attachme		NA					
Shift Bas	sis:	3 per day	V				
Data Sou	rce:	(CRG)	, 				
Cost Break	<u>kdown</u> :						
					Utilization %		
Ownersh Cost/Hou	ır:	\$49	06.62		NA		
Operating Cost/Hou	ır:	\$32	24.90		100		
Ripper ov Cost/Hou	ır:	\$0.0	00		NA		
Ripper of Cost/Hou	ır:	\$0.0	00		0		
Operator Cost/Hou		\$38	8.84		NA		
Total uni Cost/Hou		\$86	0.36				
Total Fle Cost/Hou	et	\$1,7	720.71				

Initial Volume: 64,	64,667					
Swell factor: 1.0	00					
Loose volume: 64,	667 LCY					
Source of estimated y Source of estimated s factor:	/	Table A.4.1 and A-2.8				
HOURLY PRODUC	TION					
Average push distance	ce: 635 feet					
Unadjusted hourly production:	512.4 LCY/hr					
Materials consistency description:	Loose stockpile 1.	2				
Average push gradient:	-20 %					
Average site altitude:	6,800 feet					
Material weight:	2,475 lbs/LCY					
Weight description:	User Provided					
Job Condition Correct	ion Factor Source					
Operator Skill:	0.750	(AVG.)				
Material consistency:	1.200	(CAT HB)				
Dozing method:	1.200	(S-BY-S)				
Visibility:	0.800	(POOR)				
Job efficiency:	0.790	(3 SHIFTS/DAY)				
Spoil pile:	0.900	(SSD-FC)				
Push gradient:	1.426	(CAT HB)				
Altitude:	1.000	(CAT HB)				
Material Weight:	0.929	(CAT HB)				
Blade type:	1.000	(PAT)				
Net correction:	0.8138					
Adjusted unit production:	416.99 LCY/hr					

Adjusted fleet production:

833.98 LCY/hr

Fleet size:	2 Dozer(s)
Unit cost:	\$2.063/LCY

Total job time:	<b>77.54</b> Hours
Total job cost:	\$133,424

Task descri	ption: <b>F</b>	Regrade Johns	on Coal S	Stockpile		
Trapper	Mine	Permit A	Action:	PR12	Permit/Job#:	C1981010
PROJECT	IDENTIFICA	ATION				
Task #:	004	State:	Colora	do	Abbreviation:	None
Date:	2/6/2025	County:	Moffat		Filename:	C010-004
User:	RAR					
Agency or	organization	name: D	RMS			
HOURLY E	QUIPMEN	<u>Г СОЅТ</u>				
Basic Mach	nine: Cat D	911T - 11U				
Horsepowe		111 110				
Blade Type		ersal				
Attachmen	t: NA					
Shift Basis						
Data Sourc	e: (CRG	i)				
Cost Breakd	own:					
	<u> </u>			Utilization %		
Ownership		\$496.62		NA		
Cost/Hour:		p490.02		INA		
Operating	(	\$324.90		100		
Cost/Hour:		+== 1.70		100		
Ripper own		\$0.00		NA		
Cost/Hour:						
Ripper op. Cost/Hour:	S	\$0.00		0		
Operator						
Cost/Hour:	(	\$38.84		NA		
C05411041.				11/1		
Total unit	9	\$860.36				
Cost/Hour:						
Total Fleet		\$860.36				

Swell factor: 1	26,112 .000 <b>26,112</b> LCY	
Source of estimated Source of estimated factor:		ix A, TableA-4.7
HOURLY PRODU	CTION	
Average push dista Unadjusted hourly production:	nnce: 75 feet 3,584.2 LCY/hr	
Materials consister description:	ncy Partly consoli	dated stockpile 1.1
Average push gradient:	0 %	
Average site altitude:	7,000 feet	
Material weight:	2,475 lbs/LCY	
Weight description	: User Provided	
Job Condition Corre	ection Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistence	cy: <u>1.100</u>	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.5449	
Adjusted unit production:	1,953.03 LCY/hr	

Adjusted f production		<b>1953.03</b> LCY	/hr		-		
JOB TIME	E AND COS	<u>ST</u>					
Fleet size:		1 Dozer(s)					
Unit cost:	_	\$0.441/LCY					
Total job	time:	<b>13.37</b> Hours					
Total job	cost:	\$11,503					
	TD WODY						
<u>BULLDOZ</u>	<u>ER WORK</u>						
BULLDOZ Task desci		D/E Pit Regrade	e (Spoil	Side East	)		
Task desci	ription:			Side East PR12	)	Permit/Job#:	C1981010
Task descr ite: <u>Trappe</u>	ription:	D/E Pit Regrade			)	Permit/Job#:	C1981010
Task descr ite: <u>Trappe</u>	ription: <b>r Mine</b>	D/E Pit Regrade		PR12	)	_ Permit/Job#: Abbreviation:	C1981010 None
Task descr ite: <u>Trappe</u> <u>PROJECT</u>	ription: r Mine ' IDENTIFI	D/E Pit Regrad	ction:	PR12 ado	)	_	

Basic Machine:	Cat D11T - 11U
Horsepower:	850
Blade Type:	Universal
Attachment:	NA
Shift Basis:	3 per day
Data Source:	(CRG)

#### Cost Breakdown:

<u>Cost Dieakuowii</u> .		Litilization 0/
Ownership		Utilization %
Ownership Cost/Hour	\$496.62	NA
Cost/Hour:		
Operating	\$324.90	100
Cost/Hour:		
Ripper own.	\$0.00	NA
Cost/Hour:		
Ripper op.	\$0.00	0
Cost/Hour:	40.00	0
Operator	\$38.84	
Cost/Hour:	φ <b>30.04</b>	NA
Total unit	\$860.36	
Cost/Hour:		
Total Fleet	\$6,882.84	
Cost/Hour:		

#### **MATERIAL QUANTITIES**

Initial	528,550	
Volume:	528,550	
Swell factor:	1.000	
Loose volume:	528,550 LCY	
	· · · · ·	

Source of estimated volume:	Permit Appendix A, Table 1.4-2
Source of estimated swell	Cat Handbook
factor:	

#### HOURLY PRODUCTION

Average push distance Unadjusted hourly production:	335 feet 956.8 LCY/hr
Materials consistency description:	Consolidated stockpile 1.0
Average push gradient:	-20 %
Average site altitude:	7,000 feet
Material weight:	2,475 lbs/LCY
Weight description:	User Provided

<u>Iob Condition Correction</u>		
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	0.800	(POOR)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.7535	
Adjusted unit production:	720.95 LCY/hr	
Adjusted fleet production:	<b>5767.6</b> LCY/hr	

Fleet size:	8 Dozer(s)	
Unit cost:	\$1.193/LCY	
Total job time:	91.64 Hours	
Total job cost:	\$630,752	
-		

Task descript	ion: <b>D</b> /	E <b>Pit Regra</b>	de (West	)		
te: Trapper M	line	Permit A	Action:	PR12	Permit/Job#:	C1981010
PROJECT ID	ENTIFICA	<u>FION</u>				
Date: 2	05A /6/2025 AR	_ State: _ County:	Color Moffa		Abbreviation: Filename:	None C010-005A
Agency or or	ganization na	.me: <u> </u>	ORMS			
HOURLY EQ	UIPMENT	<u>COST</u>				
Basic Machir Horsepower: Blade Type: Attachment: Shift Basis: Data Source:	ne: Cat D1 850 Univers NA 3 per da (CRG)					
<u>Cost Breakdow</u> Ownership Cost/Hour:		96.62		<u>Utilization %</u> NA		
Operating Cost/Hour:	\$3	24.90		100		
Ripper own. Cost/Hour:	\$0	.00		NA		
Ripper op. Cost/Hour:	\$0	.00		0		
Operator Cost/Hour:	\$3	8.84		NA		
Total unit Cost/Hour: Total Fleet		60.36 <b>,162.13</b>				
Cost/Hour:	φ <b>υ</b>	,104,13				

Initial 507 Volume:	,233	
Swell factor: 1.00	00	
	,233 LCY	
Loose volume. <u>507</u>	233 LC 1	
Source of estimated v		A, Table 1.4-2
Source of estimated sy	well Cat Handbook	
factor:		
HOURLY PRODUCT	TION	
Average push distance	e: 335 feet	
Unadjusted hourly production:	956.8 LCY/hr	
Materials consistency description:	Consolidated stor	ckpile 1.0
Average push gradient:	-20 %	
Average site	7,000 feet	
altitude:	7,000 leet	
utitude.		
Material weight:	2,475 lbs/LCY	
Weight description:	User Provided	
Job Condition Correction	on Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	0.800	(POOR)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.7535	
Adjusted unit production:	720.95 LCY/hr	

Adjusted fleet production:

4325.7 LCY/hr

Fleet size:	6 Dozer(s)
Unit cost:	\$1.193/LCY

Total job time:	<b>117.26</b> Hours
Total job cost:	\$605,313

Trapper Mine	e Permit Actio	on: PR12	Permit/Job#:	C1981010
ROJECT IDEN	<b>TIFICATION</b>			
Task #: 030		Colorado	Abbreviation:	None
	¥	Ioffat	Filename:	C010-030
User: RAF	<u> </u>			
Agency or organ	ization name: DRM	S		
<u>IOURLY EQUI</u>	PMENT COST			
Basic Machine:	Cat D10T - 10SU			
Horsepower:	574			
Blade Type:	Semi-Universal			
Attachment:	NA			
Shift Basis:	1 per day			
Data Source:	(CRG)			
ost Breakdown:				
		Utilization %	<u>)</u>	
Ownership	\$257.39	NA		
Cost/Hour:	φ231.39	1171		
Operating	\$196.93	100		
Cost/Hour: Ripper own.				
Cost/Hour:	\$0.00	NA		
Ripper op.		100		
Cost/Hour:	\$0.00	100		
Operator	\$38.59			
Cost/Hour:	\$30.3Y	NA		
Total unit	\$492.91			
	<b>Φ</b> <del>4</del> 72.71			
( 'oet/Hour				
Cost/Hour: Total Fleet	\$1,971.62			

Initial Volume:	166,237	
Swell factor:	1.250	

Loose volume:	207,796 LCY

Source of estimated volume:	Appendix A, Table A-6.1
Source of estimated swell	Cat Handbook
factor:	

# HOURLY PRODUCTION

Average push distance	: 80 feet	
Unadjusted hourly production:	2,028.0 LCY/hr	
Materials consistency description:	Consolidate	d stockpile 1.0
Average push gradient:	10 %	
Average site altitude:	6,400 feet	
Material weight:	2,550 lbs/LCY	
Weight description:	Earth - Dry packed	
Job Condition Correctio	n Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	
Adjusted fleet production:	2864.36 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY
Total job time:	72.55 Hours
Total job cost:	\$143,032

	Task description:	Regrade D-Main Roa	d		
Site:	Trapper Mine	Permit Action:	PR12	Permit/Job#:	C1981010
P	PROJECT IDEN	TIFICATION			
	Task #: 031 Date: 2/6/2		orado	_ Abbreviation: Filename:	None C010-O31
	User: RAR		Tat	_ rnename.	010-031
	Agency or organ	ization name: DRMS			
H	IOURLY EQUI	PMENT COST			
	Basic Machine:	<u>Cat D10T - 10SU</u>			
	Horsepower:	574 Semi-Universal			
	Blade Type: Attachment:	NA			
	Shift Basis:	1 per day			
	Data Source:	(CRG)			
	Duiu Source.				
<u>C</u>	Cost Breakdown:				
			<u>Utilization %</u>		
	Ownership Cost/Hour:	\$257.39	NA		
	Operating Cost/Hour:	\$196.93	100		
	Ripper own. Cost/Hour:	\$0.00	NA		
	Ripper op. Cost/Hour:	\$0.00	100		
	Operator Cost/Hour:	\$38.59	NA		
	Total unit Cost/Hour:	\$492.91			
	Total Fleet Cost/Hour:	\$1,971.62			

Initial Volume: Swell factor: Loose volume:	121,593 1.250 <b>151,991</b> LCY	
Source of estimat Source of estimat factor:	/	ble A-6.1
HOURLY PROD	UCTION	
Average push dis Unadjusted hourly production:		
Materials consiste description:	ency Consolidated s	stockpile 1.0
Average push gradient: Average site altitude:	10 % 6,400 feet	
Material weight:	2,550 lbs/LCY	
Weight description	n: Earth - Dry packed	
Job Condition Corr	rection Factor Source	
Operator Skill:	0.750	(AVG.)
Material consister	ncy: <u>1.000</u>	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	

Adjusted fleet production:

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	53.06 Hours
Total job cost:	\$104,620

Trapper Mi	ne	Permit A	Action:	PR12	Permit/Job#:	C1981010
PROJECT ID	ENTIFICAT	<u>FION</u>				
Task #: 03 Date: 2/	2 5/2025	_ State: County:	Color Moffa		_ Abbreviation: Filename:	None C010-O32
	AR					0
Agency or org	anization na	me: <u> </u>	ORMS			
HOURLY EQ	JIPMENT	<u>COST</u>				
Basic Machine		)T - 10SU				
Horsepower:	574					
Blade Type:		Semi-Universal				
Attachment:	-	NA				
Shift Basis: Data Source:	<u> </u>	ly				
Data Source.	(CKU)					
Cost Breakdow	1:					
Sobt Breakao III						
	<u>-</u> '			Utilization %		
	_	<b>57 3</b> 0		Utilization %		
Ownership Cost/Hour:	_	57.39		<u>Utilization %</u> NA		
Ownership	\$2			NA		
Ownership Cost/Hour:	\$2	57.39 96.93				
Ownership Cost/Hour: Operating Cost/Hour: Ripper own.	\$2 	96.93		NA       100		
Ownership Cost/Hour: Operating Cost/Hour: Ripper own. Cost/Hour:	\$2 			NA		
Ownership Cost/Hour: Operating Cost/Hour: Ripper own. Cost/Hour: Ripper op.	\$2 	96.93 .00		NA       100       NA		
Ownership Cost/Hour: Operating Cost/Hour: Ripper own. Cost/Hour: Ripper op. Cost/Hour:	\$2 	96.93		NA       100		
Ownership Cost/Hour: Operating Cost/Hour: Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator	\$2 \$1 \$0 \$0	96.93 .00 .00		NA       100       NA       100       NA       100		
Ownership Cost/Hour: Operating Cost/Hour: Ripper own. Cost/Hour: Ripper op. Cost/Hour:	\$2 \$1 \$0 \$0	96.93 .00		NA       100       NA		
Ownership Cost/Hour: Operating Cost/Hour: Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour:	\$2 \$1 \$0 \$0 \$3	96.93 .00 .00 8.59		NA       100       NA       100       NA       100		
Ownership Cost/Hour: Operating Cost/Hour: Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit	\$2 \$1 \$0 \$0 \$3	96.93 .00 .00		NA       100       NA       100       NA       100		
Ownership Cost/Hour: Operating Cost/Hour: Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour:	\$2 \$1 \$0 \$0 \$3 \$4	96.93 .00 .00 8.59		NA       100       NA       100       NA       100		

Initial Volume: Swell factor: Loose volume:	200,753 1.250 <b>250,941</b> L	CY				
Source of estimation factor:	ted volume:					
HOURLY PROD	UCTION					
Average push dis Unadjusted hourl production:		80 feet 2,028.0 LCY/hr				
Materials consistency   Consolidated stockpile 1.0     description:						
Average push gradient: Average site altitude:	10 %	0 feet				
Material weight: 2,550 lbs/LCY						
Weight description	on: <u>Eart</u> l	h - Dry packed				
Job Condition Cor	rection Fac					
Operator Skill:	-	0.750	(AVG.)			
Material consiste	ency:	1.000	(CAT HB)			
Dozing method:	-	1.000	(GEN.)			
Visibility:	-	1.000	(AVG.)			
Job efficiency:	-	0.830	(1 SHIFT/DAY)			
Spoil pile:	-	0.800	(SSD-AC)			
Push gradient:	-	0.786	(CAT HB)			
Altitude:	-	1.000	(CAT HB)			
Material Weight:	-	0.902	(CAT HB)			
Blade type:	-	1.000	(PAT)			
Net correction:	-	0.3531				
Adjusted unit production:	71	6.09 LCY/hr				
2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	<b>87.61</b> Hours
Total job cost:	\$172,730

Trapper	r Mine		Permit A	Action:	PR12	Permit/Job#:	C1981010
PROJECT	<u>' IDEN</u>	TIFICAT	TION				
Task #:	033		State:	Color	ado	Abbreviation:	None
Date: User:	2/6/2 RAR		County:	Moffa	ıt	Filename:	C010-O33
User.			_				
Agency or	r organi	zation nar	me: <u> </u>	RMS			
IOURLY	EQUII	PMENT (	COST				
Basic Mac Horsepow		<u>Cat D10</u> 574	T - 10SU				
Blade Typ		Semi-Ui	niversal				
Attachme		NA					
Shift Basis		1 per da	v				
Data Sour		(CRG)	J				
		`					
Cost Breake	down:				1		
					Utilization %		
Ownership		\$25	57.39		NA		
Cost/Hour		φ <b>=</b> τ					
Operating		\$19	96.93		100		
Cost/Hour							
Ripper ow		\$0.	00		NA		
Cost/Hour							
Ripper op. Cost/Hour		\$0.	00		100		
	Γ.						
Operator		\$38	8.59		NA		
Cost/Hour	l.				NA		
Total unit		\$40	92.91				
Cost/Hour		φ <b>+</b> ን					
Total Flee		<b>¢1</b>	971.62				
Cost/Hour		φ1,	11.04				
COSTITUT							

Initial 36 Volume:	2,600					
	1.250					
Loose volume:453,250 LC Y						
Source of estimated Source of estimated		A-6.1				
factor:						
HOURLY PRODUC	TION					
Average push distan						
Unadjusted hourly	2,028.0 LCY/hr					
production:						
		1 1 1 0				
Materials consistenc	y Consolidated stoc	kpile 1.0				
description:						
Average push	10 %					
gradient:	10 /0					
Average site	6,400 feet					
altitude:	-,					
Material weight:	2,550 lbs/LCY					
Weight description:	Earth - Dry packed					
Job Condition Correct						
Operator Skill:	0.750	(AVG.)				
Material consistency		(CAT HB)				
Dozing method:	1.000	(GEN.)				
Visibility:	1.000	(AVG.)				
Job efficiency:	0.830	(1 SHIFT/DAY)				
Spoil pile:	0.800	(SSD-AC)				
Push gradient: Altitude:	0.786	(CAT HB)				
	1.000	(CAT HB)				
Material Weight:	0.902	(CAT HB)				
Blade type:	1.000	(PAT)				
Net correction:	0.3531					
Adjusted unit	716.09 LCY/hr					
production:						

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	<b>158.24</b> Hours
Total job cost:	\$311,985

Task descriptio	n: <b>Reg</b>	rade A Roa	ds (Mid	dle A and North A	N pit)	
Trapper Mir	ne	Permit A	Action:	PR12	Permit/Job#:	C1981010
PROJECT IDE	NTIFICAT	ION				
Task #: 034		State:	Colora		Abbreviation:	None
Date: 2/6 User: RA	/2025 P	County:	Moffa	t	Filename:	C010-O34
		-				
Agency or orga	nization nar	ne: D	RMS			
HOURLY EQU	IPMENT (	COST				
Basic Machine		T - 10SU				
Horsepower: Blade Type:	574 Semi-Ur	ivoreal				
Attachment:	NA	liveisai				
Shift Basis:	1 per day					
Data Source:	(CRG)	<u>y</u>				
	_(0110)					
Cost Breakdown	:					
				Utilization %		
Ownership	\$25	57.39		NA		
Cost/Hour:						
Operating	\$19	06.93		100		
Cost/Hour:						
Ripper own. Cost/Hour:	\$0.	00		NA		
Ripper op.						
Cost/Hour:	\$0.	00		100		
Operator						
Cost/Hour:	\$38	3.59		NA		
<b>T</b> (1)	ф <b>4</b> 0	2.01				
Total unit	\$49	2.91				
Cost/Hour:	¢1 4	071 ()				
Total Fleet	\$1, <sup>9</sup>	971.62				
Cost/Hour:						

Initial 133, Volume:		
Swell factor: <u>1.25</u>		
Loose volume: <u>166</u> ,	<b>896</b> LCY	
Source of estimated vo Source of estimated sy factor:		A, Table A-6.1 book
HOURLY PRODUCT	<u>'ION</u>	
Average push distance		
Unadjusted hourly production:	2,028.0 LC	Y/hr
Materials consistency description:	Consoli	dated stockpile 1.0
Average push	10 %	
gradient:		_
Average site	6,400 feet	
altitude:		_
Material weight:	2,550 lbs/LCY	
Weight description:	Earth - Dry packe	d
Job Condition Correction	on Factor Source	<u>e</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	
Adjusted fleet production:	2864.36 LCY/h	r

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\_\_\_\_

# JOB TIME AND COST

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY
Total job time:	58.27 Hours
Total job cost:	\$114,879

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Task description	Regr	ade N Pit	Roads (o	old LOM, cross-ov	er, ash pit)	
Trapper Mine	•	Permit A	Action:	PR12	Permit/Job#:	C1981010
PROJECT IDEN	TIFICATI	ON				
Task #: 035		State:	Colora	ado	Abbreviation:	None
	2025	County:	Moffa	t	Filename:	C010-O35
User: RAF	ξ					
Agency or organ	ization nam	ie: D	RMS			
HOURLY EQUI	PMENT CO	<u>OST</u>				
Basic Machine:	Cat D11T	⁻ - 11U				
Horsepower:	850	110				
Blade Type:	Universal	l				
Attachment:	NA					
Shift Basis:	1 per day					
Data Source:	(CRG)					
Cost Breakdown:						
Cost Dieakuowii.				Utilization %		
Ownership						
Cost/Hour:	\$496	5.62		NA		
Operating		4.00		100		
Cost/Hour:	\$324	1.90		100		
Ripper own.	\$0.0	0		NA		
Cost/Hour:	\$U.U	0		NA		
Ripper op.	\$0.0	0		100		
Cost/Hour:		0		100		
Operator	\$38.	59				
Cost/Hour:				NA		
Total unit	\$860	) 11				
Cost/Hour:	φουυ	,,11				
COSUTION.	\$3,440.42					
Total Fleet	\$3.4	40.42				

Initial Volume: Swell factor:	105,283				
Loose volume:	121,075 LCY				
Source of estimate Source of estimate factor:		: Table A-6.1 Cat Handboo	ok		
HOURLY PROD	UCTION				
Average push dist Unadjusted hourly production:		80 feet 3,441.4 LCY/h	nr		
Materials consiste description:	ency	Compacted	d fill or embankment 0.9		
Average push gradient:	0 %				
Average site altitude:	6,60	0 feet			
Material weight:	2,475 lbs/LCY				
Weight descriptio	n: User	r Provided			
Job Condition Corr	rection Fac	tor Source			
Operator Skill:		0.750	(AVG.)		
Material consister	ncy:	0.900	(CAT HB))		
Dozing method:		1.000	(GEN.)		
Visibility:		1.000	(AVG.)		
Job efficiency:		0.830	(1 SHIFT/DAY)		
Spoil pile:		0.800	(SSD-AC)		
Push gradient:		1.000	(CAT HB)		
Altitude:		1.000	(CAT HB)		
Material Weight:		0.929	(CAT HB)		
Blade type:		1.000	(PAT)		
Net correction:		0.4164			
Adjusted unit production:	1,	433.00 LCY/hr			

5732 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.600/LCY

Total job time:	21.12 Hours
Total job cost:	\$72,671

Task description	Regrade C Pit Haul R	oad		
: Trapper Min	e Permit Action:	PR12	Permit/Job#:	C1981010
PROJECT IDEN	NTIFICATION			
Task #:036	State: Color	rado	Abbreviation:	None
Date: 2/6/ User: RA	2025 County: Moff R	at	Filename:	C010-036
Agency or organ	nization name: DRMS			
HOURLY EQU	IPMENT COST			
Basic Machine:	Cat D10T - 10SU			
Horsepower:	574			
Blade Type:	Semi-Universal			
Attachment:	NA			
Shift Basis:	<u>1 per day</u>			
Data Source:	(CRG)			
Cost Breakdown:				
COSt DICARUOWII.		Utilization %		
Ownership				
Cost/Hour:	\$257.39	NA		
Operating	\$196.93	100		
Cost/Hour:	φ170.75 	100		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	0		
Operator				
Cost/Hour:	\$38.59	NA		
Total unit	\$492.91			
Cost/Hour:				
Total Fleet	\$1,971.62			
Cost/Hour:				
C05011001.				

Initial Volume:	136,400			
Swell factor:	1.250			
Loose volume:	170,500 LCY			
Source of estimat Source of estimat		Appendix A, Ta Cat Handbook	ble a-6.1	
factor:				
HOURLY PROD	<u>UCTION</u>			
Average push dis		) feet		
Unadjusted hourl	y 2,	028.0 LCY/hr		
production:				
Materials consiste description:	ency	Consolidated	stockpile 1.0	
A wara ao much	10 %			
Average push	10 %			
gradient:	6 100 f			
Average site altitude:	6,400 fe	et		
annuue.				
Material weight:	2,550 lt	м/I CV		
Material weight.	<u>_2,330 m</u>	08/LC1		
Weight description	on: Earth -	Dry packed		
Joh Condition Com	nation Easton	Course		
Job Condition Corr Operator Skill:		Source 750	(AVG.)	
Material consister		000	(CAT HB)	
Dozing method:		000	(GEN.)	
Visibility:	-			
~		000 830	(AVG.) (1 SHIFT/DAY)	
Job efficiency:				
Spoil pile:	-	800	(SSD-AC)	
Push gradient:	-	786	(CAT HB)	
Altitude:		000	(CAT HB)	
Material Weight:		902	(CAT HB)	
Blade type:	1.	000	(PAT)	
Net correction:	0.	3531		
Adjusted unit production:	716.0	9 LCY/hr		
r'outeron.				

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	<b>59.52</b> Hours
Total job cost:	\$117,360

Trapper Mine	Permit A	Action:	PR12	Permit/Job#:	C1981010
PROJECT IDEN	<b>TIFICATION</b>				
Task #: 039   Date: 2/6/2   User: RAR		Colora Moffa		Abbreviation: Filename:	None C010-039
Agency or organ	ization name:	ORMS			
HOURLY EQUI	PMENT COST				
Basic Machine: Horsepower: Blade Type: Attachment: Shift Basis: Data Source:	Cat D10T - 10SU 574 Semi-Universal NA 1 per day (CRG)				
Cost Breakdown:					
Ownership Cost/Hour:	\$257.39		Utilization % NA		
Operating Cost/Hour:	\$196.93		100		
Ripper own. Cost/Hour:	\$0.00		NA		
Ripper op. Cost/Hour:	\$0.00		100		
Operator Cost/Hour:	\$38.59		NA		
Total unit Cost/Hour:	\$492.91				
Total Fleet	\$1,971.62				

Initial Volume:	155,400
Swell factor:	1.250

Loose volume:	194,250 LCY

Source of estimated volume:	Appendix A, Table A-6.1
Source of estimated swell	Cat Handbook
factor:	

\_\_\_\_

# HOURLY PRODUCTION

Average push distance	: 80 feet	
Unadjusted hourly production:	2,028.0 LCY/hr	·
Materials consistency description:	Consolidate	d stockpile 1.0
Average push gradient:	10 %	
Average site altitude:	6,400 feet	
Material weight:	2,550 lbs/LCY	
Weight description:	Earth - Dry packed	
Job Condition Correctio	n Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	
Adjusted fleet production:	2864.36 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY
Total job time:	67.82 Hours
Total job cost:	\$133,708

Task description:	Regrade I/J Roa	ads (I/J S	Spoil, I Mid, I West	t)	
Trapper Mine	Permit A	ction:	PR12	_ Permit/Job#:	C1981010
PROJECT IDEN	TIFICATION				
Task #: 040 Date: 2/6/2	State: 2025 County:	Colorad Moffat	lo	_ Abbreviation: Filename:	None C010-040
User: RAR	<u> </u>			_	
Agency or organ	ization name:	RMS			
HOURLY EQUI	PMENT COST				
Basic Machine:	Cat D10T - 10SU				
Horsepower:	574				
Blade Type:	Semi-Universal				
Attachment:	NA				
Shift Basis:	3 per day				
Data Source:	(CRG)				
Cost Breakdown:					
Ownership			<u>Utilization %</u>		
Ownership Cost/Hour:	\$257.39		NA		
Operating Cost/Hour:	\$196.93		100		
Ripper own. Cost/Hour:	\$0.00		NA		
Ripper op. Cost/Hour:	\$0.00		25		
Operator Cost/Hour:	\$38.84		NA		
Total unit Cost/Hour:	\$493.16				
Total Fleet Cost/Hour:	\$1,972.62				

Initial 111, Volume:	.117	
Swell factor: 1.25	$\overline{0}$	
	896 LCY	
10050 volume		
Source of estimated vo	olume: Permit Appendix A,	, Tables A-2.3, A.6.1
Source of estimated sy	1 / 11	
factor:	A Table A-6.1	
HOURLY PRODUCT	<u>'ION</u>	
Average much distance	e: 80 feet	
Average push distance Unadjusted hourly	2,028.0 LCY/hr	
production:	2,028.0 LC 1/III	
production.		
Materials consistency	Consolidated stock	kpile 1.0
description:		-
Average push	-5 %	
gradient:		
Average site	6,725 feet	
altitude:		
NG / 1 1 1 /		
Material weight:	2,475 lbs/LCY	
Weight description:	User Provided	
weight description.	User Hovided	
Job Condition Correction	on Factor Source	
Operator Skill:	1.000	(EXCL.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.6546	
Adjusted unit	1,327.53 LCY/hr	
production:	1,527.55 LC 1/m	

#### 5310.12 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.371/LCY

Total job time:	26.16 Hours
Total job cost:	\$51,598

Task description	n: <b>Reg</b>	grade K Pit	Haul Ro	ads (K1 EPRL K3)		
Trapper Min	e	Permit A	ction:	PR12	Permit/Job#:	C1981010
PROJECT IDE	NTIFICAT	<u>'ION</u>				
Task #: 041		State:	Colora		Abbreviation:	None
Date: 2/6 User: RA	/2025 R	County:	Moffa	t	Filename:	C010-041
	<u>N</u>	_				
Agency or orga	nization nar	me: D	RMS			
HOURLY EQU	IPMENT (	COST				
Basic Machine:	<u>Cat D10</u> 574	T - 10SU				
Horsepower: Blade Type:	Semi-Ur	niversal				
Attachment:	NA	nversai				
Shift Basis:	1 per day	V				
Data Source:	(CRG)	<u>j</u>				
Cost Breakdown	:			1		
				<u>Utilization %</u>		
Ownership	\$25	57.39		NA		
Cost/Hour:	·					
Operating Cost/Hour:	\$19	96.93		100		
Ripper own.						
Cost/Hour:	\$0.	00		NA		
Ripper op.						
Cost/Hour:	\$0.	00		0		
Operator	¢20	2 50				
Cost/Hour:	\$36 	3.59		NA		
Total unit	\$49	2.91				
Cost/Hour:	ψτγ					
Total Fleet	\$1.9	971.62				
Cost/Hour:	+-,-					

Initial Volume:	148,283		
Swell factor:	1.250		
Loose volume:	<b>185,354</b> L	CY	
Source of estima	ted volume	Appendix A, Ta	able A-6 1
Source of estima		Cat Handbook	
factor:			
HOURLY PROD	<b>DUCTION</b>		
Average push di	stance:	80 feet	
Unadjusted hour production:		2,028.0 LCY/hr	
Materials consist description:	tency	Consolidated	stockpile 1.0
Average push gradient:	10 %	, )	
Average site	6,40	0 feet	
altitude:			
Material weight:	2,55	0 lbs/LCY	
Weight descripti	on: Eart	h - Dry packed	
Job Condition Con	rrection Fac		
Operator Skill:		0.750	(AVG.)
Material consiste	ency:	1.000	(CAT HB)
Dozing method:		1.000	(GEN.)
Visibility:		1.000	(AVG.)
Job efficiency:	-	0.830	(1 SHIFT/DAY)
Spoil pile:	-	0.800	(SSD-AC)
Push gradient:	-	0.786	(CAT HB)
Altitude:	-	1.000	(CAT HB)
Material Weight	•	0.902	(CAT HB)
Blade type:		1.000	(PAT)
Net correction:		0.3531	
Adjusted unit production:	71	6.09 LCY/hr	

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	<b>64.71</b> Hours
Total job cost:	\$127,584

Trapper Min	e Dermit	Action:	PR12	Permit/Job#:	C1981010
		Action.	1 K12		C1701010
ROJECT IDEN	NTIFICATION				
Task #: 042	State:	Color	ado	Abbreviation:	None
	<u>2025</u> County:	Moffa	at	Filename:	C010-042
User: RA	R				
Agency or organ	nization name:	DRMS			
OURLY EQU	IPMENT COST				
Basic Machine:	Cat D10T - 10SU				
Horsepower:	574				
Blade Type:	Semi-Universal				
Attachment:	NA				
Shift Basis:	1 per day				
Data Source:	(CRG)				
ost Breakdown:					
<u>ost Dicardowii</u> .			Utilization %		
Ownership					
Cost/Hour:	\$257.39		NA		
Operating	<u></u>		100		
Cost/Hour:	\$196.93		100		
Ripper own.					
Cost/Hour:	\$0.00		NA		
Ripper op.	\$0.00		0		
Cost/Hour:	\$0.00		0		
Operator	\$38.59				
Cost/Hour:	φ30.37		NA		
Total unit	¢402.01				
Total unit	\$492.91				
Cost/Hour:	¢1 071 60				
Total Fleet	\$1,971.62				
Cost/Hour:					

Initial Volume: 54,0 Swell factor: 1.25	50	
Loose volume: 67,5	528 LCY	
Source of estimated ve Source of estimated sy		a-6.1
factor:		
HOURLY PRODUCT	<u>'ION</u>	
Average push distance	e: 80 feet	
Unadjusted hourly	2,028.0 LCY/hr	
production:		
Materials consistency description:	Consolidated stoc	ckpile 1.0
Average push	10 %	
gradient: Average site	6,400 feet	
altitude:	0,1001000	
Material weight:	2,550 lbs/LCY	
Weight description:	Earth - Dry packed	
Job Condition Correction	on Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	<b>23.58</b> Hours
Total job cost:	\$46,481

Task description	: Regrade No Name Acce	ss Roads #2, #4, 5R		
e: Trapper Mine	e Permit Action:	PR12	Permit/Job#:	C1981010
PROJECT IDEN	<b>TIFICATION</b>			
Task #: 044 Date: 2/6/2	2025 State: <u>Colora</u> County: Moffat		Abbreviation: Filename:	None C010-044
User: RAI		-		
Agency or organ	nization name: DRMS			
HOURLY EQUI	PMENT COST			
Basic Machine:	Cat D10T - 10SU			
Horsepower:	574			
Blade Type:	Semi-Universal			
Attachment:	NA			
Shift Basis:	1 per day			
Data Source:	(CRG)			
Cost Breakdown:				
<u></u> .		Utilization %		
Ownership	<b>*257.2</b> 0			
Cost/Hour:	\$257.39	NA		
Operating Cost/Hour:	\$196.93	100		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	0		
Operator Cost/Hour:	\$38.59	NA		
Total unit Cost/Hour:	\$492.91			
Total Fleet Cost/Hour:	\$1,971.62			

Initial Volume: 24,7	719	
Swell factor: 1.25	50	
	<b>399</b> LCY	
100se volume. <u>50,</u>		
Source of estimated v	/	A- 6.2
Source of estimated stractor:	well Cat Handbook	
Tactor.		
HOURLY PRODUCT	<u>[ION</u>	
	00.0	
Average push distance		
Unadjusted hourly	2,028.0 LCY/hr	
production:		
Materials consistency description:	Consolidated stock	xpile 1.0
Average push	10 %	
gradient:		
Average site	6,400 feet	
altitude:		
Mada dialama in ha	2 550 lb - /L CN	
Material weight:	2,550 lbs/LCY	
Weight description:	Earth - Dry packed	
Job Condition Correction	on Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	

2864.36 LCY/hr

Fleet size:	4 Dozer(s)	
Unit cost:	\$0.688/LCY	

Total job time:	<b>10.79</b> Hours
Total job cost:	\$21,268

Task descriptio	n: <b>Regrade Potable Wat</b>	er Well Access Road		
e: Trapper Mir	ne Permit Action:	PR12	Permit/Job#:	C1981010
PROJECT IDE	<b>ENTIFICATION</b>			
Task #: 04:			_ Abbreviation:	None
Date: 2/6 User: RA	5/2025 County: Moff	fat	Filename:	C010-045
Agency or orga	anization name: DRMS			
HOURLY EQU	JIPMENT COST			
Basic Machine	:Cat D10T - 10SU			
Horsepower:	574			
Blade Type:	Semi-Universal			
Attachment:	NA			
Shift Basis:	1 per day			
Data Source:	(CRG)			
Cost Dreakdown				
Cost Breakdown	<u>.</u>	Utilization %		
Ownership		<u>Utilization %</u>		
Cost/Hour:	\$257.39	NA		
Operating				
Cost/Hour:	\$196.93	100		
Ripper own.				
Cost/Hour:	\$0.00	NA		
Ripper op.				
Cost/Hour:	\$0.00	0		
Operator	<b>***</b>			
Cost/Hour:	\$38.59	NA		
Total unit	\$492.91			
Cost/Hour:	φ+72.71			
Total Fleet	\$1,971.62			
Cost/Hour:	φ <b>1,</b> 7/1.04			

Initial Volume: 4,09 Swell factor: 1.25	50	
Loose volume: <u>5,11</u> Source of estimated v Source of estimated s	/	1.4-5
factor: HOURLY PRODUCT		
Average push distanc		
Unadjusted hourly production:	2,028.0 LCY/hr	
Materials consistency description:	Consolidated stoc	ckpile 1.0
Average push gradient:	10 %	
Average site altitude:	6,400 feet	
Material weight:	2,550 lbs/LCY	
Weight description:	Earth - Dry packed	
Job Condition Correction	on Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistency:		(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	<b>1.79</b> Hours
Total job cost:	\$3,522

Task des	cription:	Reş	grade West	Pyeatt A	ccess Road (1 and	2)	
: Trapp	er Mine		Permit A	Action:	PR12	Permit/Job#:	C1981010
<b>PROJEC</b>	T IDEN	TIFICAT	<u>TION</u>				
Task #: Date: User:	046 2/6/2 RAR		_ State: _ County:	Colora Moffa		Abbreviation: Filename:	None C010-046
Agency	or organi	zation na	me: D	RMS			
HOURLY	Y EQUI	PMENT (	<u>COST</u>				
Basic Ma Horsepo Blade Ty Attachm Shift Bas Data Sou	wer: ype: ent: sis:	Cat D10 574 Semi-U NA 1 per da (CRG)					
Cost Brea	<u>kdown</u> :				Utilization %		
Ownersh Cost/Hor	-	\$2:	57.39		NA		
Operatin Cost/Ho	0	\$1	96.93		100		
Ripper o Cost/Ho		\$0.	.00		NA		
Ripper o Cost/Hor		\$0.	.00		0		
Operator Cost/Hot		\$3	8.59		NA		
Total un Cost/Ho		\$49	92.91				
Total Fle Cost/Ho	eet	\$1,	971.62				

Initial Volume: 16,	370	
Swell factor: 1.2	50	
	463 LCY	
Loose volume. <u>20</u>		
Source of estimated source of estimated s	/	A-6.2
factor:		
HOURLY PRODUC	TION	
Average push distance	ce: 80 feet	
Unadjusted hourly production:	2,028.0 LCY/hr	
Materials consistency description:	y Consolidated stoc	kpile 1.0
Average push gradient:	10 %	
Average site altitude:	6,400 feet	
Material weight:	2,550 lbs/LCY	
Weight description:	Earth - Dry packed	
Job Condition Correct	ion Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistency:	: 1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	<b>7.14</b> Hours
Total job cost:	\$14,085

Task description	: Regrade Middl	e Pyeatt A	Access Road (1, 2 a	and 3)	
Trapper Mine	e Permit A	ction:	PR12	Permit/Job#:	C1981010
ROJECT IDEN	<b>NTIFICATION</b>				
Task #: 047	State:	Colorad	lo	Abbreviation:	None
	2025 County:	Moffat		Filename:	C010-047
User: RAI	<u>R</u>				
Agency or organ	nization name: D	RMS			
IOURLY EQUI	IPMENT COST				
Basic Machine:	Cat D10T - 10SU				
Horsepower:	574				
Blade Type:	Semi-Universal				
Attachment:	NA				
Shift Basis:	1 per day				
Data Source:	(CRG)				
Cost Breakdown:					
			Utilization %		
Ownership	\$257.39		NA		
Cost/Hour:	<i>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>				
Operating	\$196.93		100		
Cost/Hour: Ripper own.					
Cost/Hour:	\$0.00		NA		
Ripper op.	\$0.00		0		
Cost/Hour:	ψ0.00		0		
Operator	\$38.59				
Cost/Hour:			NA		
Total unit	\$492.91				
Cost/Hour:	Ψ1/2./1				
Total Fleet	\$1,971.62				
Cost/Hour:	• /				

Initial Volume:	5,142	
	.250	
	8,928 LCY	
	5,720 LC 1	
Source of estimated Source of estimated factor:		e A-6.2
HOURLY PRODU	<u>CTION</u>	
Average push dista	nce: 80 feet	
Unadjusted hourly 2,028.0 LCY/		
production:	2,020.0 201711	
production		
Materials consistency description:Consolidated stockpile 1.0		
Average push	10 %	
gradient:		
Average site	6,400 feet	
altitude:		
Material weight:	2,550 lbs/LCY	
Weight description:	Earth - Dry packed	
Job Condition Correc		
Operator Skill:	0.750	(AVG.)
Material consistenc	-	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient: Altitude:	0.786	(CAT HB)
	<u>1.000</u> 0.902	(CAT HB) (CAT HB)
Material Weight:		
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	
2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	6.61 Hours
Total job cost:	\$13,028

Task description	n: <b>Regra</b>	ide East P	Pyeatt A	ccess Road (1, 2 ar	nd 3)	
Trapper Mir	ie	Permit A	Action:	PR12	Permit/Job#:	C1981010
PROJECT IDE	NTIFICATIC	<u>)N</u>				
Task #: 048	<u> </u>	State:	Color	ado	Abbreviation:	None
Date: 2/6 User: RA		County:	Moffa	ıt	Filename:	<u>C010-048</u>
Agency or orga	nization name	: D	RMS			
HOURLY EQU						
Basic Machine	Cat D10T	- 10SU				
Horsepower:	574					
Blade Type:	Semi-Univ	versal				
Attachment:	NA					
Shift Basis:	1 per day					
Data Source:	(CRG)					
Cost Breakdown	:			I Itilization 0/		
Ownership				Utilization %		
Ownership Cost/Hour:	\$257.	.39		NA		
Operating						
Cost/Hour:	\$196.	.93		100		
Ripper own.						
Cost/Hour:	\$0.00	ļ.		NA		
Ripper op.						
Cost/Hour:	\$0.00	1		0		
Operator	¢20.5					
Cost/Hour:	\$38.5	9		NA		
Total unit	\$492.9	91				
Cost/Hour:						
Total Fleet	\$1,97	1.62				
Cost/Hour:						

Initial Volume: 21,1	59	
Swell factor: 1.25	0	
	<b>49</b> LCY	
20,4		
Source of estimated vo	/	.4-5
Source of estimated sy factor:	vell Cat Handbook	
Tactor.		
HOURLY PRODUCT	ION	
<u>moundi indecoi</u>	1011	
Average push distance	e: 80 feet	
Unadjusted hourly	2,028.0 LCY/hr	
production:		
Materials consistency	Consolidated stock	pile 1.0
description:		
	10.00	
Average push	10 %	
gradient:	<u>( 100 C )</u>	
Average site altitude:	6,400 feet	
annude:		
Material weight:	2,550 lbs/LCY	
Material weight.	2,550 105/1101	
Weight description:	Earth - Dry packed	
Job Condition Correction	on Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786 (CAT HB)	
Altitude:	1.000 (CAT HB)	
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
	0.3331	
Adjusted unit		
production:	716.09 LCY/hr	
r		

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	<b>9.23</b> Hours
Total job cost:	\$18,205

<u>do</u>	_ Abbreviation: _ Filename:	<u>None</u> C010-049
: 	_ Filename:	<u></u> <u>C010-049</u>
<u>Utilization %</u>		
NA		
100		
NA		
0		
NA		
	NA   100   NA   0	NA   100   NA   0

10,477
10,477
1.250

Loose volume:	<b>13,096</b> LCY

Source of estimated volume:	Appendix A, Table 1.4-5
Source of estimated swell	Cat Handbook
factor:	

# HOURLY PRODUCTION

Average push distance	: 80 feet	
Unadjusted hourly production:	2,028.0 LCY/hr	
Materials consistency description:	Consolidate	d stockpile 1.0
Average push gradient:	10 %	
Average site altitude:	6,400 feet	
Material weight:	2,550 lbs/LCY	
Weight description:	Earth - Dry packed	
Job Condition Correctio	n Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	
Adjusted fleet production:	2864.36 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY
Total job time:	<b>4.57</b> Hours
Total job cost:	\$9,015
•	

Task description	n: <b>Regrade West Fl</b>	ume Acc	ess Road		
Trapper Min	e Permit Act	ion: <u>I</u>	PR12	Permit/Job#:	C1981010
ROJECT IDE	<b>NTIFICATION</b>				
Task #:050	) State:	Colorad	0	Abbreviation:	None
Date: $2/6$ User: RA	/2025 County: _	Moffat		Filename:	C010-050
Agency or orga	nization name: DR	MS			
HOURLY EQU	IPMENT COST				
Basic Machine: Horsepower:	Cat D10T - 10SU 574				
Blade Type:	Semi-Universal				
Attachment:	NA				
Shift Basis:	1 per day				
Data Source:	(CRG)				
Duiu Source.	(010)				
Cost Breakdown	•				
			Utilization %		
Ownership	¢257.20				
Cost/Hour:	\$257.39		NA		
Operating	\$106.02		100		
Cost/Hour:	\$196.93		100		
Ripper own.	¢0.00				
Cost/Hour:	\$0.00		NA		
Ripper op.	¢0.00		0		
Cost/Hour:	\$0.00		0		
Operator	¢20.50				
Cost/Hour:	\$38.59		NA		
Total unit	\$492.91				
Cost/Hour:					
Total Fleet	\$1,971.62				
I otul I leet	<i><i><i>q</i>=<i>y</i>-<i>i</i>=<i>i</i>0=</i></i>				

Initial Volume: 6,13 Swell factor: 1.25 Loose volume: 7,67		
Source of estimated v Source of estimated s factor:	olume: Appendix A,Table	A-6.2
HOURLY PRODUCT	<u>FION</u>	
Average push distanc Unadjusted hourly production:	e: 80 feet 2,028.0 LCY/hr	
Materials consistency description:	Consolidated stor	ckpile 1.0
Average push gradient: Average site	10 % 6,400 feet	
altitude:		
Material weight:	2,550 lbs/LCY	
Weight description:	Earth - Dry packed	
Job Condition Correcti		
Operator Skill:	0.750	(AVG.)
Material consistency:		(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	<b>2.68</b> Hours
Total job cost:	\$5,282

Task description	on: <b>Re</b>	grade East ]	Flume A	ccess Road		
Trapper Mi	ne	Permit A	Action:	PR12	Permit/Job#:	C1981010
PROJECT ID	ENTIFICA	<u>FION</u>				
Task #:		State:	Colora		Abbreviation:	None
	6/2025 AR	_ County:	Moffa	ıt	Filename:	_C010-051
Agency or org	anization na	ime: D	ORMS			
HOURLY EQ						
Basic Machine	e: Cat D1	0T - 10SU				
Horsepower:	574					
Blade Type:	Semi-U	Iniversal				
Attachment:	NA					
Shift Basis:	1 per da	ay				
Data Source:	(CRG)					
Cost Breakdow	<u>n</u> :			TT:11 0/		
0 1				<u>Utilization %</u>		
Ownership	\$2	57.39		NA		
Cost/Hour:						
Operating Cost/Hours	\$1	96.93		100		
Cost/Hour:						
Ripper own. Cost/Hour:	\$0	0.00		NA		
Ripper op. Cost/Hour:	\$0	0.00		0		
Operator Cost/Hour:	\$3	8.59		ΝA		
COSt/HOUIT				NA		
Total unit	¢л	92.91				
Cost/Hour:	<b>Φ</b> 4	72.71				
Total Fleet	¢1	,971.62				
	<b>\$</b> 1	,7/1.02				
Cost/Hour:						

Swell factor:	6,139 1.250	
Loose volume:	7,674 LCY	
Source of estimate Source of estimate factor:	/	le A-6.2
HOURLY PRODU	JCTION	
Average push dist	ance: 80 feet	
Unadjusted hourly production:		
Materials consiste description:	ncy Consolidated st	tockpile 1.0
Average push gradient:	10 %	
Average site altitude:	6,400 feet	
Material weight:	2,550 lbs/LCY	
Weight description	n: Earth - Dry packed	
Job Condition Corre	ection Factor Source	
Operator Skill:	0.750	(AVG.)
Material consisten	cy: 1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	2.68 Hours
Total job cost:	\$5,282

Trapper Min	e	Permit A	ction:	PR12	Permit/Job#:	C1981010
ROJECT IDE	NTIFICATIO	<u>DN</u>				
Task #: 052		State:	Colora	ndo	Abbreviation:	None
		County:	Moffa	t	Filename:	C010-052
User: RA	ĸ					
Agency or organ	nization name	: <u>D</u>	RMS			
IOURLY EQU	IPMENT CO	ST				
Basic Machine:		- 10SU				
Horsepower:	574 Semi-Univ					
Blade Type: Attachment:	NA	ersai				
Shift Basis:	1 per day					
Data Source:	(CRG)					
Data Source.	(CRO)					
ost Breakdown:						
				Utilization %		
Ownership	\$257.	20		NA		
Cost/Hour:	\$237.	.59		NA		
Operating	\$196.	93		100		
Cost/Hour:	φ190.	15		100		
Ripper own.	\$0.00			NA		
Cost/Hour:	φ0.00			11/2		
Ripper op.	\$0.00			0		
Cost/Hour:	φ0.00					
Operator	\$38.5	9				
Cost/Hour:		-		NA		
<b>T</b> = 4 = 1 == x <sup>1</sup> 4	¢ 40 <b>2</b> 4	01				
Total unit	\$492.9	91				
Cost/Hour:	¢1 07	1 ()				
Total Fleet	\$1,97	1.02				
Cost/Hour:						

Swell factor:	6,139 1.250	
Source of estimate		le A-6.2
Source of estimate factor:		
HOURLY PRODU	JCTION	
Average push dist	ance: 80 feet	
Unadjusted hourly production:		
Materials consiste description:	ncy Consolidated st	ockpile 1.0
Average push gradient:	10 %	
Average site altitude:	6,400 feet	
Material weight:	2,550 lbs/LCY	
Weight description	n: Earth - Dry packed	
Job Condition Corre	ection Factor Source	
Operator Skill:	0.750	(AVG.)
Material consisten	cy: <u>1.000</u>	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	2.68 Hours
Total job cost:	\$5,282

Task description:	Regrade Horse	Access 1	Roads (Horse and H	lorse1)	
e: Trapper Mine	Permit A	ction:	PR12	_ Permit/Job#:	C1981010
PROJECT IDEN	TIFICATION				
Task #:053	State:	Colora		Abbreviation:	None
Date:2/6/2User:RAR		Moffa	t	Filename:	<u>C010-053</u>
Agency or organ	ization name:D	RMS			
HOURLY EQUI	PMENT COST				
Basic Machine:	Cat D10T - 10SU				
Horsepower:	<u>574</u>				
Blade Type:	Semi-Universal				
Attachment: Shift Basis:	NA 1 non day				
Data Source:	<u>1 per day</u> (CRG)				
Cost Breakdown:			Utilization %		
Ownership Cost/Hour:	\$257.39		NA		
Operating Cost/Hour:	\$196.93		100		
Ripper own. Cost/Hour:	\$0.00		NA		
Ripper op. Cost/Hour:	\$0.00		0		
Operator Cost/Hour:	\$38.59		NA		
Total unit Cost/Hour:	\$492.91				
Total Fleet Cost/Hour:	\$1,971.62				

Initial Volume: 13,	,915		
Swell factor: 1.2	250		
	<b>394</b> LCY		
Source of estimated source of estimated s		A-6.2	
factor:	swell Cat Hallubook		
lactor.			
HOURLY PRODUC	TION		
Average push distance	ce: 80 feet		
Unadjusted hourly	2,028.0 LCY/hr		
production:			
Materials consistency	y Consolidated sto	ckpile 1.0	
description:			
Average push	10 %		
gradient:	10 /0		
Average site	6,400 feet		
altitude:			
Material weight:	2,550 lbs/LCY		
Weight description:	Earth - Dry packed		
Joh Condition Composi	ion Factor Source		
Job Condition Correct	ion Factor <u>Source</u> 0.750	(AVG.)	
Operator Skill: Material consistency		(CAT HB)	
Dozing method:	1.000	(GEN.)	
Visibility:	1.000	(AVG.)	
Job efficiency:	0.830	(1 SHIFT/DAY)	
Spoil pile:	0.800	(SSD-AC)	
Push gradient:	0.786	(CAT HB)	
Altitude:	1.000	(CAT HB)	
Material Weight:	0.902	(CAT HB)	
Blade type:	1.000	(PAT)	
Diade type.	1.000	(111)	
Net correction:	0.3531		
Adjusted unit	716.09 LCY/hr		
production:			

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	<b>6.07</b> Hours
Total job cost:	\$11,973

Trappe	er Mine		Permit A	Action:	PR12	Permit/Job#:	C1981010
ROJECI	<u>r iden</u>	TIFICAT	<u>'ION</u>				
Task #:	054		State:	Color	ado	Abbreviation:	None
Date:	2/6/2		County:	Moffa	ıt	Filename:	C010-054
User:	RAR	<u> </u>	-				
Agency o	or organi	ization nar	ne: D	RMS			
INIRI V	FOUI	PMENT (	COST				
UCKLI	LUUI		2051				
Basic Ma		-	T - 10SU				
Horsepow		574					
Blade Ty		Semi-Ur	niversal				
Attachme		NA					
Shift Basi		1 per day					
Data Sour	rce:	(CRG)					
ost Break	down						
Jobt Dicun	<u>uo wn</u> .				Utilization %		
Ownershi	ip						
Cost/Hou		\$25	57.39		NA		
Operating							
Cost/Hou	-	\$19	96.93		100		
Ripper own.							
Cost/Hou		\$0.	00		NA		
Ripper op			0.0		0		
Cost/Hour:		\$0.	00		0		
Operator							
Cost/Hou	r:	\$38	8.59		NA		
Total unit	t	\$49	2.91				
Cost/Hou							
Total Flee		\$1.	971.62				
Cost/Hou		+ <del>- )</del>					
	-						

Initial 6,1 Volume: 6,1 Swell factor: 1.2 Loose volume: <b>7,6</b>				
Source of estimated v Source of estimated s factor:	/	A-6.2		
HOURLY PRODUC	TION			
Average push distanc Unadjusted hourly production:	2,028.0 LCY/hr			
Materials consistency description:	Consolidated stor	ckpile 1.0		
Average push gradient:	10 %			
Average site altitude:	6,400 feet			
Material weight:	2,550 lbs/LCY			
Weight description:	Earth - Dry packed			
Job Condition Correcti	ion Factor Source			
Operator Skill:	0.750	(AVG.)		
Material consistency:		(CAT HB)		
Dozing method:	1.000	(GEN.)		
Visibility:	1.000	(AVG.)		
Job efficiency:	0.830	(1 SHIFT/DAY)		
Spoil pile:	0.800 (SSD-AC)			
Push gradient:	0.786	(CAT HB)		
Altitude:	1.000	(CAT HB)		
Material Weight:	0.902	(CAT HB)		
Blade type:	1.000	(PAT)		
Net correction:	0.3531			
Adjusted unit production:	716.09 LCY/hr			

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	2.68 Hours
Total job cost:	\$5,282

Task descri	ption:	Re	grade Midd	le Flume	e Access Roads (1	and 3)	
: Trapper	Mine		Permit A	Action:	PR12	Permit/Job#:	C1981010
PROJECT 1	IDEN	TIFICAT	<u> TION</u>				
Task #:	055		State:	Color		Abbreviation:	None
Date: User:	2/6/2 RAR		_ County:	Moffa	nt	Filename:	C010-055
Agency or	organi	zation na	me: D	RMS			
HOURLY H	EQUII	PMENT (	<u>COST</u>				
Basic Mach			)T - 10SU				
Horsepowe		574					
Blade Type		Semi-U	niversal				
Attachmen		NA					
Shift Basis		$\frac{1 \text{ per da}}{(CPC)}$	ıy				
Data Sourc	e:	(CRG)					
Cost Breakd	own						
COSt Dieaku	<u>0 w II</u> .				Utilization %		
Ownership							
Cost/Hour:		\$2:	57.39		NA		
Operating							
Cost/Hour:		\$1	96.93		100		
Ripper owr							
Cost/Hour:		\$0.	.00		NA		
Ripper op.			00		0		
Cost/Hour:		\$0.	.00		0		
Operator		¢2	9.50				
Cost/Hour:		φ3·	8.59		NA		
_							
Total unit		\$49	92.91				
Cost/Hour:		<u> </u>					
Total Fleet		\$1,971.62					
Cost/Hour:							

volume:	10,539	
	<b>13,174</b> LCY	
Source of estimate		ble A-6.2
Source of estimate factor:	ed swell Cat Handbook	
HOURLY PRODU	UCTION	
Average push dist		
Unadjusted hourly production:	2,028.0 LCY/hr	
Materials consiste description:	ncy Consolidated s	tockpile 1.0
Average push gradient:	10 %	
Average site altitude:	6,400 feet	
Material weight:	2,550 lbs/LCY	
Weight description	n: Earth - Dry packed	
Job Condition Corr	ection Factor Source	
Operator Skill:	0.750	(AVG.)
Material consister	ncy: <u>1.000</u>	(CAT HB)
Dozing method:	_1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	4.60 Hours
Total job cost:	\$9,068

Trappe	r Mine		Permit A	Action:	PR12	Permit/Job#:	C1981010
<u>ROJECT</u>	<u>IDEN</u>	TIFICAT	TION				
Task #:	056		State:	Color	ado	Abbreviation:	None
Date: User:	2/6/2 RAR		County:	Moffa	ıt	Filename:	C010-056
User.		L	_				
Agency of	r organi	ization na	me: <u>D</u>	ORMS			
OURLY	EQUI	PMENT (	COST				
Basic Mae Horsepow		<u>Cat D10</u> 574	)T - 10SU				
Blade Typ		Semi-U	niversal				
Attachme		NA	in versu				
Shift Basi		1 per da	v				
Data Sour		(CRG)	5				
		/					
ost Break	down:						
					Utilization %		
Ownershi		\$24	57.39		NA		
Cost/Hou		φ2.	51.57		1111		
Operating		\$19	96.93		100		
Cost/Hou		φ12			100		
Ripper ow		\$0.	.00		NA		
Cost/Hou							
Ripper op		\$0.	.00		0		
Cost/Hou	r:						
Operator		\$38	8.59				
Cost/Hou	r:				NA		
Total		¢ 40	02 01				
Total unit		\$45	92.91				
Cost/Hour:		¢1	071 (2				
Total Fleet		<b>\$1</b> ,	971.62				
Cost/Hou	1.						

volume:	776	
Swell factor: 1.2	270	
Loose volume: 9,8	876 LCY	
Source of estimated Source of estimated factor:		e A-6.2
HOURLY PRODUC	TION	
Average push distan		
Unadjusted hourly production:	2,028.0 LCY/hr	
Materials consistenc description:	y Consolidated sto	ckpile 1.0
Average push gradient:	10 %	
Average site altitude:	6,400 feet	
Material weight:	2,700 lbs/LCY	
Weight description:	Earth - Wet excavated	
Job Condition Correct	ion Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistency	: 1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.852	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3335	
Adjusted unit production:	676.34 LCY/hr	

2705.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.729/LCY

Total job time:	<b>3.65</b> Hours
Total job cost:	\$7,197

PROJECT IDENTIFICATION     Task #:   057   State:   Colorado   Abbreviation:   None     Date:   2/6/2025   County:   Moffat   Filename:   C010     User:   RAR   County:   Moffat   Filename:   C010     Agency or organization name:   DRMS     HOURLY EQUIPMENT COST     Basic Machine:   Cat D10T - 10SU     Horsepower:   574     Blade Type:   Semi-Universal     Attachment:   NA     Shift Basis:   1 per day     Data Source:   (CRG)     Cost Breakdown:   \$196.93     Ownership   \$196.93   100     Cost/Hour:   \$196.93   100     Ripper own.   \$0.00   NA	Task description:	Regrade Sage Access Ro	ads		
Task #:057 $2/6/2025$ State:Colorado MoffatAbbreviation:None ColorDate: $2/6/2025$ $2/6/2025$ County:MoffatFilename:C010User:RARDRMSAgency or organization name:DRMSHOURLY EQUIPMENT COSTBasic Machine:Cat D10T - 10SU $574$ Blade Type:Semi-Universal Attachment:NAShift Basis:1 per day (CRG)Data Source:(CRG)Cost Breakdown:Ownership Cost/Hour:\$257.39NASiper own.\$0.00NA	Trapper Mine	Permit Action:	PR12	Permit/Job#:	C1981010
Date: $2/6/2025$ RARCounty:MoffatFilename:C010User:RAROutry:MoffatFilename:C010Agency or organization name:DRMSHOURLY EQUIPMENT COSTBasic Machine:Cat D10T - 10SUHorsepower: $574$ Blade Type:Semi-UniversalAttachment:NAShift Basis:1 per dayData Source:(CRG)Cost Breakdown: $$257.39$ Ownership Cost/Hour: $$196.93$ NA $$196.93$ Ripper own. $$0.00$ NA	<u>ROJECT IDEN'</u>	<b>TIFICATION</b>			
User:   RAR     Agency or organization name:   DRMS     HOURLY EQUIPMENT COST     Basic Machine:   Cat D10T - 10SU     Horsepower:   574     Blade Type:   Semi-Universal     Attachment:   NA     Shift Basis:   1 per day     Data Source:   (CRG)     Cost Breakdown:   \$257.39     Ownership Cost/Hour:   \$257.39     Operating Cost/Hour:   \$196.93     Ripper own.   \$0,00				Abbreviation:	None
Agency or organization name:   DRMS     HOURLY EQUIPMENT COST     Basic Machine:   Cat D10T - 10SU     Horsepower:   574     Blade Type:   Semi-Universal     Attachment:   NA     Shift Basis:   1 per day     Data Source:   (CRG)     Cost Breakdown:   \$257.39     Ownership   \$257.39     Cost/Hour:   \$196.93     Operating   \$196.93     Kipper own.   \$0.00				Filename:	C010-057
HOURLY EQUIPMENT COSTBasic Machine: $Cat D10T - 10SU$ Horsepower: $574$ Blade Type:Semi-UniversalAttachment:NAShift Basis:1 per dayData Source:(CRG)Cost Breakdown:Utilization %Ownership Cost/Hour: Operating Cost/Hour:\$257.39NANASinger own.\$20.00NA					
Basic Machine:Cat D10T - 10SUHorsepower: $574$ Blade Type:Semi-UniversalAttachment:NAShift Basis:1 per dayData Source:(CRG)Utilization %Cost Breakdown:Ownership Cost/Hour:\$257.39NAOperating Cost/Hour:\$196.93Ripper own.\$0.00NA	Agency or organi	ization name: DRMS			
Horsepower:574Blade Type:Semi-UniversalAttachment:NAShift Basis:1 per dayData Source:(CRG)Utilization %Cost Breakdown:Ownership Cost/Hour:\$257.39NA\$196.93Operating Cost/Hour:\$196.93Sipper own.\$0.00NA	OURLY EQUIE	PMENT COST			
Horsepower:574Blade Type:Semi-UniversalAttachment:NAShift Basis:1 per dayData Source:(CRG)Cost Breakdown:Utilization %Ownership Cost/Hour:\$257.39NA\$196.93Ioo\$196.93Sipper own.\$0.00Source:NA		C ( D10T 1001)			
Blade Type:Semi-UniversalAttachment:NAShift Basis:1 per dayData Source:(CRG)Cost Breakdown:Ownership Cost/Hour:Operating Cost/Hour:\$257.39NAOperating Ripper own.\$196.93100S0.00NA					
Attachment:   NA     Shift Basis:   1 per day     Data Source:   (CRG)     Cost Breakdown:   Utilization %     Ownership   \$257.39     Cost/Hour:   \$196.93     Operating   \$196.93     Ripper own.   \$0.00					
Shift Basis:1 per dayData Source:(CRG)Cost Breakdown:Utilization %Ownership Cost/Hour:\$257.39NANAOperating Cost/Hour:\$196.93I00\$0.00NA					
Data Source:(CRG)Cost Breakdown:Utilization %Ownership Cost/Hour:\$257.39NAOperating \$196.93Cost/Hour:\$196.93Ripper own.\$0.00					
Cost Breakdown:Ownership Cost/Hour:\$257.39NAOperating Cost/Hour:\$196.93100Ripper own.\$0.00NA					
Ownership Cost/Hour:\$257.39NAOperating Cost/Hour:\$196.93100Ripper own.\$0.00NA	ost Breakdown:				
Cost/Hour:\$257.39NAOperating Cost/Hour:\$196.93100Ripper own.\$0.00NA			Utilization %		
Cost/Hour: \$196.93 100   Ripper own. \$0.00 NA	1	\$257.39	NA		
	1 0	\$196.93	100		
Cost/Hour:	Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:\$0.000		\$0.00	0		
Operator Cost/Hour: \$38.59 NA	-	\$38.59	NA		
Total unit \$492.91		\$492.91			
Cost/Hour:Total Fleet\$1,971.62Cost/Hour:	Fotal Fleet	\$1,971.62			

volume:	10,231	
	12,789 LCY	
Source of estimate		ble A-6.2
Source of estimate factor:	d swell Cat Handbook	
HOURLY PRODU	UCTION	
Average push dista		
Unadjusted hourly production:	2,028.0 LCY/hr	
Materials consister description:	ncy Consolidated s	tockpile 1.0
Average push gradient:	10 %	
Average site altitude:	6,400 feet	
Material weight:	2,550 lbs/LCY	
Weight description	n: Earth - Dry packed	
Job Condition Corre	ection Factor Source	
Operator Skill:	0.750	(AVG.)
Material consisten	cy: <u>1.000</u>	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	

2864.36 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.688/LCY

Total job time:	<b>4.46</b> Hours
Total job cost:	\$8,803

Trapper M	line	Permit A	Action:	PR12	Permit/Job#:	C1981010
ROJECT ID	<b>ENTIFICA</b>	<u>TION</u>				
Task #: 0	58	State:	Color	ado	Abbreviation:	None
	/6/2025	County:	Moffa	at	Filename:	C010-058
User: F	RAR					
Agency or or	ganization na	ame: <u> </u>	ORMS			
OURLY EQ	TIDMENT	COST				
<u>UURLI EU</u>						
Basic Machir		0T - 10SU				
Horsepower:	574					
Blade Type:		Jniversal				
Attachment:	NA					
Shift Basis:	1  per  d					
Data Source:	(CRG)					
ost Breakdov	<u>vn</u> :					
				Utilization %		
Ownership	\$2	257.39		NA		
Cost/Hour:	φ <b>2</b>	201.07		1111		
Operating	\$	196.93		100		
Cost/Hour:	φ. 			100		
Ripper own.	\$(	0.00		NA		
Cost/Hour:						
Ripper op.	\$(	0.00		0		
Cost/Hour:						
Operator	\$3	38.59				
Cost/Hour:				NA		
Total unit	¢	102 01				
Total unit Cost/Hour:	\$ <sup>2</sup>	192.91				
	<u></u>	,971.62				
Total Fleet	¢٦	1,7/1.04				
Cost/Hour:						

Initial Volume:	25,374	
Swell factor:	1.250	
Loose volume:	31,718 LCY	
Source of estima Source of estima		able A-6.2
factor:	Cat Handbook	
lactor.		
HOURLY PROD	DUCTION	
Average push dis	stance: 80 feet	
Unadjusted hour		
production:	<b>y</b>	
I		
Materials consist description:	tency Consolidated	stockpile 1.0
Average push	10 %	
gradient:	10 /0	
Average site	6,400 feet	
altitude:	0,1001000	
Material weight:	2,550 lbs/LCY	
Weight descripti	on: Earth - Dry packed	
0 1	¥ k	
Job Condition Con	rrection Factor Source	
Operator Skill:	0.750	(AVG.)
Material consiste	ency: <u>1.000</u>	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight	: 0.902	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3531	
Adjusted unit production:	716.09 LCY/hr	

2864.36 LCY/hr

Fleet size:	4 Dozer(s)		
Unit cost:	\$0.688/LCY		

Total job time:	11.07 Hours
Total job cost:	\$21,832

# BULLDOZER RIPPING WORK

ite:	Trapper Mine		Permit Action: PR12		I	Permit/Job#: <u>C1981010</u>		
<u>P</u> ]	ROJECT	<b>IDENTIFIC</b>	ATION					
r	Task #:	063	State:	Color	ado	1	Abbreviation:	None
]	Date:	2/18/2025	County:	Moffa	ıt	I	Filename:	063
1	User:	RAR						
1	Agency or	organization	name:	DRMS				
<u>H</u>	OURLY I	EQUIPMEN	<u>r cost</u>					
]	Basic Mac	hine:	Cat D10T -	10SU	Horse	power:	574	
]	Ripper Att	achment:	3-Shank Ri	pper	Shift H		1 per c	
					Data S	Source:	(CRG)	)
C	(D 1 1							
<u>C</u>	ost Breakd	<u>own:</u>				Utiliza	tion	
						%	uon	
(	Ownership	Cost/Hour:		\$257.39		NA		
Operating Cost/Hour:			\$196.93		100			
Ripper Ownership Cost/Hour:			\$25.02		NA			
Ripper Operating Cost/Hour:			\$11.73		100			
	Operator C			\$38.59		NA		
<b>-</b>	Total Unit	Cost/Hour:		\$529.66				
r	Total Fleet	Cost/Hour:		\$2,118.	62			
M	IATERIA	L QUANTIT	TIES	Sele	ected estimati	ing method	: Area	
A	lternate M	ethods:						
nic:	NA Bank V			Volume: NA		BCY	X NA	
	7.50	acres	Rip Depth	n (ft):	2.50	Volum e:	30,250	BCY or CCY

#### **HOURLY PRODUCTION**

Seismic:								
Seismic Velocity:			NA	feet/second				
Area:								
Average Rip	ping Depth:		2.50	feet/pass				
Average Rip	ping Width:		8.67	feet/pass				
	ping Length:		500.00 feet/pass					
Average Doz	1		88.00 feet/minute					
-	neuver Time:		0.25	minutes/pass				
Production p	er unit area:		1.007	acres/hour				
	Correction Factor Hourly Unit Prod		1.007	Acres/hr				
Site Altitude	:		6,400	feet				
Altitude Adj	:		1.00	(CAT HB)				
Job Efficien	cy:		0.83	(1 shift/day)				
Net Correcti	on:		0.83	multiplier				
•	ourly Unit Productourly Fleet Productourly Fleet Productor		0.84 Acres/hr 3.34 Acres/hr					
JOB TIME A	ND COST							
Fleet size:	4	Grader(s)	Total job time:	2.24	Hours			
Unit cost:	\$633.949	Per acre	Total job cost:	\$4,755				
PROJEC1	<u>IDENTIFIC</u>	CATION						
--------------------	------------------	-------------	------------	--------------	-----------	----------------	---------	------
Task #:	064	State:	Colorad	0		Abbrevia		None
Date: User:	2/18/2025 RAR	County:	Moffat			Filename	e:	064
User.	КАК							
Agency o	r organization	name:	DRMS					
HOURLY	EQUIPMEN	T COST						
Basic Ma	chine:	Cat D10T -	10SU	Horsep	ower:		574	
	tachment:	3-Shank Ri		Shift B		-	1 per d	ay
				Data So	ource:	-	(CRG)	
Cost Break	down							
<u>Cost Dicar</u>	<u>uown.</u>				Utiliz	ation		
					%			
Ownershi	p Cost/Hour:		\$257.39		NA			
1 0	Cost/Hour:		\$196.93		100			
	wnership Cost		\$25.02		NA			
	perating Cost/	Hour:	\$11.73		100			
Operator	Cost/Hour:		\$38.59		NA			
Total Uni	t Cost/Hour:		\$529.66					
Total Flee	et Cost/Hour:		\$2,118.62					
<u>MATERIA</u>	AL QUANTI	<u>FIES</u>	Select	ed estimatir	ng methoo	d: <u>Area</u>	a	
<u>Alternate N</u>	lethods:							
		Bank V	Volume:	NA	BC	Y NA		
nic: NA								

Seismic:				
Seismic Velocity:		NA	feet/second	
Area:				
Average Ripping Depth:		2.50	feet/pass	
Average Ripping Width:		8.67	feet/pass	
Average Ripping Length:		500.00	feet/pass	
Average Dozer Speed:		88.00	feet/minute	
Average Maneuver Time:		0.25	minutes/pass	
Production per unit area:		1.007	acres/hour	
Job Condition Correction Factor	ors			
Unadjusted Hourly Unit Prod	uction:	1.007	Acres/hr	
Site Altitude:		6,400	feet	
Altitude Adj:		1.00	(CAT HB)	
Job Efficiency:		0.83	(1 shift/day)	
Net Correction:		0.83	multiplier	
Adjusted Hourly Unit Produc	tion:	0.84	Acres/hr	
Adjusted Hourly Fleet Produce	ction:	3.34	Acres/hr	
JOB TIME AND COST				
Fleet size:4	Grader(s)	Total job time:	8.41	Hours
Unit cost:\$633.949	Per acre	Total job cost:	\$17,814	

Site:	Trapper	·Mine	Permi	t Action:	PR12		Permit/Job#	#: <u>(</u>	C1981010
Ē	PROJECT	<u>IDENTIFIC</u>	CATION						
	Task #:	065	State:	Colorad	lo		Abbreviatio	on:	None
	Date:	2/18/2025	County	: Moffat			Filename:		065
	User:	RAR							
	Agency or	organization	name:	DRMS					
H	HOURLY ]	EQUIPMEN	T COST						
	Basic Mac	hine:	Cat D10T	- 10SU	Horse	oower:	57	74	
	Ripper Att	achment:	3-Shank R	ipper	Shift E			per d	ay
				••	Data S	ource:	(0	CRG)	·
		1							
<u>(</u>	Cost Breake	<u>lown:</u>				Utiliz	otion		
						%	auon		
	Ownershir	Cost/Hour:		\$257.39		NA			
	-	Cost/Hour:		\$196.93		100			
		vnership Cost	Hour:	\$25.02		NA			
		erating Cost/		\$11.73		100			
	Operator C	-		\$38.59		NA			
	-	Cost/Hour:		\$529.66					
	Total Fleet	t Cost/Hour:		\$2,118.62	2				
<u> </u>	MATERIA	L QUANTI	<u>LIES</u>	Selec	ted estimati	ng metho	d: Area		
A	Alternate M	ethods:							
mic:	NA		Bank	Volume:	NA	BC	CY NA		
		acre	s Rip Dept	h (ft):	2.50	Volu	n 80,667		BCY o
ı:	20.00		1 1		2.30	e:			CCY

Seismic:				
Seismic Velocity:		NA	feet/second	
<u>Area:</u>				
Average Ripping Depth:		2.50	feet/pass	
Average Ripping Width:		8.67	feet/pass	
Average Ripping Length:		500.00	feet/pass	
Average Dozer Speed:		88.00	feet/minute	
Average Maneuver Time:		0.25	minutes/pass	
Production per unit area:		1.007	acres/hour	
Job Condition Correction Factor	ors			
Unadjusted Hourly Unit Prod	uction:	1.007	Acres/hr	
Site Altitude:		6,400	feet	
Altitude Adj:		1.00	(CAT HB)	
Job Efficiency:		0.83	(1 shift/day)	
Net Correction:		0.83	multiplier	
Adjusted Hourly Unit Produc	tion:	0.84	Acres/hr	
Adjusted Hourly Fleet Produc	ction:	3.34	Acres/hr	
JOB TIME AND COST				
Fleet size: 4	Grader(s)	Total job time:	5.98	Hours
Unit cost: \$633.949	Per acre	Total job cost:	\$12,679	

	<u>IDENTIFIC</u>						
Task #:	066	State:	Colora			Abbreviation:	None
Date: User:	2/18/2025 RAR	County:	Moffa			Filename:	066
Agency o	r organization	name:	DRMS				
HOURLY	EQUIPMEN	<u>T COST</u>					
Basic Ma	chine:	Cat D10T -	10SU	Horse	oower:	574	
Ripper A	tachment:	3-Shank Ri	pper	Shift E		1 per	day
				Data S	ource:	(CRG	i)
	1						
Cost Break	<u>down:</u>				I Itilia	zation	
					%	Lation	
Ownershi	p Cost/Hour:		\$257.39		NA		
	Cost/Hour:		\$196.93		100		
	wnership Cost	/Hour:	\$25.02		NA		
	perating Cost/		\$11.73		100		
	Cost/Hour:		\$38.59		NA		
Total Uni	t Cost/Hour:		\$529.66				
Total Flee	et Cost/Hour:		\$2,118.6	2			
<b>MATERI</b> A	AL QUANTI	<u>ries</u>	Sele	cted estimati	ng metho	d: Area	
<u>Alternate N</u>	<u>Methods:</u>				0		
		Bank V	volume:	NA	BC	CY NA	
ic: NA							

Seismic:					
Seismic Vel	ocity:		NA	feet/second	
Area:					
Average Rip	ping Depth:		2.50	feet/pass	
Average Rip	ping Width:		8.67	feet/pass	
	ping Length:		500.00	feet/pass	
Average Doz	1		88.00	feet/minute	
-	neuver Time:		0.25	minutes/pass	
Production p	er unit area:		1.007	acres/hour	
	Correction Factor		1.007	Acres/hr	
Site Altitude	:		6,400	feet	
Altitude Adj	:		1.00	(CAT HB)	
Job Efficien	cy:		0.83	(1 shift/day)	
Net Correcti	on:		0.83	multiplier	
•	Adjusted Hourly Unit Production: Adjusted Hourly Fleet Production:			_ Acres/hr _ Acres/hr	
JOB TIME A	ND COST				
Fleet size:	4	Grader(s)	Total job time:	8.77	Hours
Unit cost:	\$633.949	Per acre	Total job cost:	\$18,575	

ite:	Trapper	Mine	Permi	t Action:	PR12		Permit/Job#:	C1981010
<u>P</u>	PROJECT	IDENTIFIC	ATION					
	Task #:	067	State:	Colora	do		Abbreviation:	None
	Date:	2/18/2025	County	: Moffa	t		Filename:	067
	User:	RAR						
	Agency or	organization	name:	DRMS				
E	HOURLY I	EQUIPMEN	<u>T COST</u>					
	Basic Mac	hine:	Cat D10T	- 10SU	Horse	power:	574	
	Ripper Att	achment:	3-Shank R	ipper	Shift I	Basis:	1 per	
					Data S	Source:	(CRO	G) (G
C	Cost Breakd	0.000						
<u>c</u>	JUST DIEaKU	<u>.0wii.</u>				Utiliz	ation	
						%		
	Ownership	Cost/Hour:		\$257.39		NA		
	Operating			\$196.93		100		
		nership Cost		\$25.02		NA		
		erating Cost/l	Hour:	\$11.73		100		
	Operator C	Cost/Hour:		\$38.59		NA		
	Total Unit	Cost/Hour:		\$529.66				
	Total Fleet	Cost/Hour:		\$2,118.6	2			
N	ATERIA	L QUANTII	<u>TIES</u>	Sele	cted estimati	ing method	l: Area	
<u>A</u>	Alternate M	ethods:						
ic:	NA		Bank V	Volume:	NA	BC	Y NA	
	21.50	acres	Rip Dept	h (ft):	2.50	Volun	n 86,717	BCY or CCY

Seismic:				
Seismic Velocity:		NA	feet/second	
<u>Area:</u>				
Average Ripping Depth:		2.50	feet/pass	
Average Ripping Width:		8.67	feet/pass	
Average Ripping Length:		500.00	feet/pass	
Average Dozer Speed:		88.00	feet/minute	
Average Maneuver Time:		0.25	minutes/pass	
Production per unit area:		1.007	acres/hour	
Job Condition Correction Factor	ors			
Unadjusted Hourly Unit Prod	uction:	1.007	Acres/hr	
Site Altitude:		6,400	feet	
Altitude Adj:		1.00	(CAT HB)	
Job Efficiency:		0.83	(1 shift/day)	
Net Correction:		0.83	multiplier	
Adjusted Hourly Unit Produc	tion:	0.84	Acres/hr	
Adjusted Hourly Fleet Produc	ction:	3.34	Acres/hr	
			_	
JOB TIME AND COST				
Fleet size:4	Grader(s)	Total job time:	6.43	Hours
Unit cost:\$633.949	Per acre	Total job cost:	\$13,630	

ite:	Trappe	r Mine	Permit	Action:	PR12	· · ·	Permit/J	ob#: (	C1981010
P	PROJECT	<u>IDENTIFIC</u>	ATION						
	Task #:	068	State:	Colora	ado		Abbrevi	ation:	None
	Date:	2/18/2025	County:	Moffa	t		Filenam	e:	068
	User:	RAR							
	Agency of	r organization r	name: _l	DRMS					
E	HOURLY	EQUIPMENT	<u>COST</u>						
	Basic Mad	chine:	Cat D10T -	10SU	Horse	epower:		574	
	Ripper Attachment: 3-Shank Ri					Basis:	-	1 per d	ay
		-	•	•	Data	Source:	-	(CRG)	
<u>C</u>	Cost Break	down:							
						Utiliza	ation		
						%			
	-	p Cost/Hour:		\$257.39		NA			
	1 0	Cost/Hour:	-	\$196.93		100			
		wnership Cost/l		\$25.02		NA			
		perating Cost/H	lour:	\$11.73		100			
	-	Cost/Hour: t Cost/Hour:		\$38.59 \$529.66		NA			
	rotar Onit			φ527.00					
	Total Flee	et Cost/Hour:		\$2,118.6	52				
N	MATERIA	L QUANTIT	IES	Sele	ected estima	ting method	l: Area	ı	
A	Alternate M	lethods:							
nic:	NA		Bank V	olume:	NA	BC	Y NA		
	18.00 acres Rip Depth		(ft):	2.50	Volum		00	BCY or CCY	

Seismic:				
Seismic Velocity:		NA	feet/second	
<u>Area:</u>				
Average Ripping Depth:		2.50	feet/pass	
Average Ripping Width:		8.67	feet/pass	
Average Ripping Length:		500.00	feet/pass	
Average Dozer Speed:		88.00	feet/minute	
Average Maneuver Time:		0.25	minutes/pass	
Production per unit area:		1.007	acres/hour	
Job Condition Correction Fact	<u>ors</u>			
Unadjusted Hourly Unit Proc	luction:	1.007	Acres/hr	
Site Altitude:		6,400	feet	
Altitude Adj:		1.00	(CAT HB)	
Job Efficiency:		0.83	(1 shift/day)	
Net Correction:		0.83	multiplier	
		0.04		
Adjusted Hourly Unit Produc		0.84	_ Acres/hr	
Adjusted Hourly Fleet Produ	ction:	3.34	Acres/hr	
IOD TIME AND COST				
JOB TIME AND COST				
Fleet size: _4	Grader(s)	Total job time:	5.39	Hours
Unit cost: \$633.949	Per acre	Total job cost:	\$11,411	

site:	Trapper	·Mine	Pern	nit Action:	PR12		Permit/Job	#: _	C1981010
<u>P</u>	PROJECT	IDENTIFIC	CATION						
	Task #:	072	State:	Color	ado		Abbreviatio	on:	None
	Date:	2/18/2025	Count	y: Moffa	at		Filename:		072
	User:	RAR							
	Agency or	organization	name:	DRMS					
H	IOURLY	EQUIPMEN	T COST						
	Basic Mac	hine:	Cat D107	C - 10SU	Hor	sepower:	5	74	
Ripper Attachment: 3-Shank R			Ripper	Shi	ft Basis:	1	per o	day	
					Dat	a Source:	(0	CRG	)
C	Ta at Dua alva	1							
<u>c</u>	Cost Breake	<u>iown:</u>				Utili	zation		
						%	Zation		
	Ownershir	Cost/Hour:		\$257.39	)	NA			
	-	Cost/Hour:		\$196.93		100			
		vnership Cost	/Hour:	\$25.02		NA			
		erating Cost/		\$11.73		100			
	Operator C			\$38.59		NA			
	-	Cost/Hour:		\$529.66	)				
	Total Flee	t Cost/Hour:		\$2,118.	62				
			PIEC						
<u> </u>	MATERIA	L QUANTI	<u>TES</u>	Sel	ected estim	ating metho	od: Area		
A	Alternate M	ethods:							
nic:	NA		Bank	Volume:	NA	BC	CY NA		
:	9.90	acres	s Rip Dep	oth (ft):	2.50	Volu	m 39,930		BCY o
	7.70				∠.30	e:			CCY

Seismic:					
Seismic Velo	ocity:		NA	feet/second	
<u>Area:</u>					
Average Rip			2.50	feet/pass	
Average Rip			8.67	feet/pass	
Average Rip			500.00	feet/pass	
Average Doz			88.00	feet/minute	
Average Mar	neuver Time:		0.25	minutes/pass	
Production p	er unit area:		1.007	acres/hour	
Job Condition	Correction Fact	ors			
Unadjusted H	Iourly Unit Pro	duction:	1.007	Acres/hr	
Site Altitude			6,400	feet	
Altitude Adj			1.00	(CAT HB)	
Job Efficienc	•		0.83	(1 shift/day)	
Net Correction	on:		0.83	multiplier	
A 11 / 1 TT	1.11.5.0.1		0.04	A (1	
•	urly Unit Produ		0.84	Acres/hr	
Adjusted Ho	urly Fleet Produ	iction:	3.34	Acres/hr	
JOB TIME A	ND COST				
Fleet size:	4	_ Grader(s)	Total job time:	2.96	Hours
Unit cost:	\$633.949	Per acre	Total job cost:	\$6,276	

<b>PROJECT</b>	IDENTIFIC	ATION						
Task #:	074	State:	Colora	do		Abbreviat	ion:	None
Date: User:	2/18/2025 RAR	County:	Moffat			Filename:		074
0301.	KAK							
Agency of	organization	name:	DRMS					
HOURLY	EQUIPMEN	T COST						
Basic Ma	chine:	Cat D10T -	10SU	Horser	ower:		574	
Ripper At		3-Shank Ri		Shift E		1 per day		ay
				Data S	ource:		(CRG)	
Cost Break	down.							
<u>Cost Dicak</u>	<u>uo wiii.</u>				Utiliz	ation		
					%			
-	p Cost/Hour:		\$257.39		NA			
1 0	Cost/Hour:	~~	\$196.93		100			
	vnership Cost		\$25.02		NA			
	erating Cost/	Hour:	\$11.73		100			
-	Cost/Hour: Cost/Hour:		\$38.59		NA			
Total Uni	Cost/Hour:		\$529.66					
Total Flee	t Cost/Hour:		\$2,118.62	2				
MATERIA	L QUANTI	TIES	Selec	eted estimati	ng metho	d: Area		
Alternate N	lethods:		beice	led estimati	ing metho			
		Bank V	Volume:	NA	BC	Y NA		
nic: NA			01001100					

Seismic:						
Seismic Velo	Seismic Velocity:		NA	feet/second		
Area:						
Average Rip	1 0 1		2.50	feet/pass		
Average Rip			8.67	feet/pass		
	ping Length:		500.00	feet/pass		
Average Doz	1		88.00	feet/minute		
-	neuver Time:		0.25	minutes/pass		
Production p	er unit area:		1.007	acres/hour		
	Correction Factor Hourly Unit Prod		1.007	Acres/hr		
Site Altitude	:		6,400	feet		
Altitude Adj	:		1.00	(CAT HB)		
Job Efficiend	cy:		0.83	(1 shift/day)		
Net Correcti	on:		0.83	multiplier		
Adjusted Hourly Unit Production: Adjusted Hourly Fleet Production:			0.84 <b>3.34</b>	_ Acres/hr _ Acres/hr		
JOB TIME A	ND COST					
Fleet size:	4	Grader(s)	Total job time:	3.11	Hours	
Unit cost:	\$633.949	Per acre	Total job cost:	\$6,593		

Site:	Trapper	Mine	Permit	Action:	PR12		Permit/Job	#: _	C1981010
<u>P</u>	PROJECT	IDENTIFICA	<u>TION</u>						
	Task #:	075	State:	Colora	ıdo		Abbreviatio	on:	None
	Date:	2/18/2025	County:	Moffa	t		Filename:		075
	User:	RAR							
	Agency or	organization na	ime:	DRMS					
E	HOURLY ]	EQUIPMENT	COST						
	Basic Mac	hine:	Cat D10T -	10SU	Horse	epower:	5	74	
	Ripper Att	achment:	3-Shank Rij	oper		Basis:	_1	per o	day
					Data	Source:	(0	CRG	)
C		1							
<u>C</u>	Cost Breakd	<u>lown:</u>				Litilia	ation		
						%	auon		
	Ownershir	Cost/Hour:		\$257.39		NA			
	-	Cost/Hour:		\$196.93		100			
		/nership Cost/H	our:	\$25.02		NA			
		erating Cost/Ho		\$11.73		100			
	Operator C			\$38.59		NA			
	-	Cost/Hour:		\$529.66					
	Total Fleet	t Cost/Hour:		\$2,118.6	52				
<u>N</u>	<u>MATERIA</u>	L QUANTITI	E <u>S</u>	Sele	cted estima	ting metho	d: Area		
<u>A</u>	Alternate M	ethods:							
	NA		Bank V	olume:	NA	BC	CY NA		
mic:	1 1 1								

Seismic:					
Seismic Velo	Seismic Velocity:		NA	feet/second	
Area:					
Average Rip	ping Depth:		2.50	feet/pass	
Average Rip			8.67	feet/pass	
Average Rip	ping Length:		500.00	feet/pass	
Average Doz	-		88.00	feet/minute	
-	neuver Time:		0.25	minutes/pass	
Production p	er unit area:		1.007	acres/hour	
	Correction Fact		1.007	Acres/hr	
Site Altitude	:		6,400	feet	
Altitude Adj	:		1.00	(CAT HB)	
Job Efficiend	cy:		0.83	(1 shift/day)	
Net Correcti	on:		0.83	multiplier	
Adjusted Hourly Unit Production: Adjusted Hourly Fleet Production:			0.84Acres/hr3.34Acres/hr		
JOB TIME A	ND COST				
Fleet size:	4	Grader(s)	Total job time:	2.12	Hours
Unit cost:	\$633.949	Per acre	Total job cost:	\$4,501	

Tas	k description:	Rip I/J Roa	ds (I/J Spoil, I	Mid, I West	)			
Site: <u>T</u>	rapper Mine	Perm	it Action: Pl	R12	Permi	t/Job#:	C1981010	
<u>PRO</u>	)JECT IDENTII	FICATION						
Tas	sk #: 077	State:	Colorado		Abbre	eviation:	None	
Dat	te: 2/18/202	25 County	: Moffat		Filena	ame:	077	
Use	er: RAR							
Age	ency or organizat	ion name:	DRMS					
HOU	URLY EQUIPM	ENT COST						
Bas	Basic Machine: Cat D10T - 10SU			Horsepow	ver:	574		
Rip	oper Attachment:	3-Shank F	Ripper	Shift Basi	s:	1 per d	day	
				Data Source:		(CRG)	)	
Cost	Breakdown:							
<u>cost</u>	<u>Dicakdowii.</u>				Utilization			
					%			
Ow	nership Cost/Hou	ır:	\$257.39		NA			
-	erating Cost/Hour		\$196.93		100			
Rip	oper Ownership C	ost/Hour:	\$25.02		NA			
	oper Operating Co		\$11.73		100			
-	erator Cost/Hour:		\$38.59		NA			
Tot	tal Unit Cost/Hou	r:	\$529.66					
Tot	tal Fleet Cost/Hou	ır:	\$2,118.62					
_	MATERIAL QU		Selecte	ed estimating 1:	Are	ea		
_ Seismic:	NA		ank Volume:	NA	BCY	NA		
Area:		_	Depth (ft):		Volum	61,428	BCY of	
110a.	15.23			2.50	e:	01,420	CCY	
	Source of estima	ted quantity:	Apper	ndix A Table	6.2			

Seismic:					
Seismic Veloci	Seismic Velocity:		NA	feet/second	
Area:					
Average Rippin	ng Depth:		2.50	feet/pass	
Average Rippin			8.67	feet/pass	
Average Rippin	ng Length:		500.00	feet/pass	
Average Dozer	Speed:		88.00	feet/minute	
Average Maner	uver Time:		0.25	minutes/pass	
Production per	unit area:		1.007	acres/hour	
Job Condition C	orrection Fac	<u>ctors</u>			
Unadjusted Ho	urly Unit Pro	oduction:	1.007	Acres/hr	
Site Altitude:			6,400	feet	
Altitude Adj:			1.00	(CAT HB)	
Job Efficiency:			0.83	(1 shift/day)	
Net Correction	:		0.83	multiplier	
Adjusted Hour	ly Unit Prod	uction:	0.84	Acres/hr	
Adjusted Hour	Adjusted Hourly Fleet Production:		3.34	Acres/hr	
JOB TIME AN	<u>D COST</u>				
Fleet size: _4	L	Grader(s)	Total job time:	4.56	Hours
Unit cost: _\$	Unit cost:\$633.949 Per acre		Total job cost:	\$9,655	

#### BULLDOZER WORK

Trapper Mine		Permit Action: PR12		Permit/Job#:01981010		
	<u>f identific</u>					
Task #:	078	State:	Colorado	)	Abbreviation:	None
Date:	2/18/2025	County:	Moffat		Filename:	078
User:	RAR					

# HOURLY EQUIPMENT COST

Basic Machine:	Cat D10T - 10SU
Horsepower:	574
Blade Type:	Semi-Universal
Attachment:	NA
Shift Basis:	1 per day
Data Source:	(CRG)

#### Cost Breakdown:

Cost Breakdown:		
		Utilization %
Ownership Cost/Hour:	\$257.39	NA
Operating Cost/Hour:	\$196.93	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA
Total unit Cost/Hour:	\$492.91	
Total Fleet Cost/Hour:	\$985.81	

#### **MATERIAL QUANTITIES**

Initial Volume:	83,750		
Swell factor:	1.000		
Loose volume:	83,750 LO	CY	
Source of estin volume:	nated	Appendix A T	able A-7.2
	Source of estimated swell factor:		nate
HOURLY PRO	DUCTION	<u>N</u>	
Average push of	distance:	500 feet	
Unadjusted hor production:		410.8 LCY/hr	
Materials consideration:	istency	Consolidated	d stockpile 1.0
Average push 10 gradient:		6	
Average site altitude:			
Material weigh	Material weight: 2,55		
Weight User description:		r Provided	
Job Condition C	orrection E	actor Source	
Operator Skill:		0.750	(AVG.)
1	Material consistency:		(CAT HB)
Dozing method		1.000	(GEN.)
Visibility:		1.000	(AVG.)
Job efficiency:		0.830	(1 SHIFT/DAY)
Spoil pile:		0.800	(FND-RF)
Push gradient:		0.786	(CAT HB)
Altitude:	-	1.000	(CAT HB)
Material Weigl	ht:	0.902	(CAT HB)
Blade type:		1.000	(PAT)

Net correction:

Adjusted unit production: 145.05 LCY/hr

0.3531

Adjusted fleet production:

290.1 LCY/hr

#### JOB TIME AND COST

Fleet size:	2 Dozer(s)
Unit cost:	\$3.398/LCY

Total job time:	<b>288.69</b> Hours
Total job cost:	\$284,597

#### BULLDOZER WORK

: Trapper Mine		Permit Action: PR12		Permit/Job#: C1981010		
PROJEC	T IDENTIFIC	CATION				
Task #:	079	State:	Colorado	)	Abbreviation:	None
Date:	2/18/2025	County:	Moffat		Filename:	079
User:	RAR					

# HOURLY EQUIPMENT COST

Basic Machine:	Cat D10T - 10SU
Horsepower:	574
Blade Type:	Semi-Universal
Attachment:	NA
Shift Basis:	1 per day
Data Source:	(CRG)

#### Cost Breakdown:

	Utilization %
\$257.39	NA
\$196.93	100
\$0.00	NA
\$0.00	0
\$38.59	NA
\$492.91	
\$492.91	
	\$196.93 \$0.00 \$0.00 \$38.59 \$492.91

#### **MATERIAL QUANTITIES**

Initial Volume:	15,381			
Swell factor:	1.000			
Loose volume:	15,381 LO	CY		
Source of estim	ated	Appendix	x A Table A	-7.2
Source of estim factor:	ated swell	Operator	Estimate	_
HOURLY PRO	DUCTION	Ī		
Average push d	listance:	225 feet		
Unadjusted hou production:	-	842.1 LCY	//hr	_
Materials consi description:	stency	Consol	idated stock	pile 1.0
Average push gradient: Average site altitude:	10 % 6,40	0 feet		
Material weigh	t:2,55	0 lbs/LCY		
Weight description:	User	Provided		
Job Condition Co Operator Skill:	orrection Fa	<u>actor So</u> 0.750	ource	(AVG.)
Material consis	tency:	1.000		(CAT HB)
Dozing method		1.000		(GEN.)
Visibility:	-	1.000		(AVG.)
Job efficiency:	-	0.830		(1 SHIFT/DAY)
Spoil pile:	-	0.600		(FND-SF)
Push gradient:	=	0.786		(CAT HB)
Altitude:	=	1.000		(CAT HB)
Material Weigh	nt:	0.902		(CAT HB)
Blade type:	-	1.000		(PAT)

Adjusted unit production: 222.99 LCY/hr

0.2648

Net correction:

Adjusted fleet production:

222.99 LCY/hr

#### JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$2.210/LCY

Total job time:	68.98 Hours
Total job cost:	\$33,999

#### BULLDOZER WORK

: Trapper Mine		Permit Action:		PR12	Permit/Job	#: <u>C1981010</u>
<u>'ROJEC</u>	CT IDENTIFIC	<b>ATION</b>				
Task #:	080	State:	Colorado	)	Abbreviation:	None
Date:	2/18/2025	County:	Moffat		Filename:	080
User:	RAR					

# Basic<br/>Machine:Cat D10T - 10SUHorsepower:574Blade Type:Semi-UniversalAttachment:NAShift Basis:1 per dayData Source:(CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$257.39	NA
Operating Cost/Hour:	\$196.93	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA
Total unit Cost/Hour:	\$492.91	
Total Fleet Cost/Hour:	\$492.91	

# **MATERIAL QUANTITIES**

Initial Volume:	342		
Swell factor:	1.000		
Loose volume:	<b>342</b> LCY		
Source of estin volume:	nated	Appendix A	Table A-7.2
Source of estin factor:	nated swell	Operator Es	timate
HOURLY PRO	DUCTION	<u>N</u>	
Average push o	listance:	100 feet	
Unadjusted hou production:	-	1,718.9 LCY/	hr
Materials consideration:	istency	Consolida	ted stockpile 1.0
Average push gradient:	10 %	6	
Average site altitude:	6,40	0 feet	
Material weigh	t: <u>2,55</u>	0 lbs/LCY	
Weight description:	User	r Provided	
Job Condition C	orrection Fa	actor Source	ce
Operator Skill:		0.750	(AVG.)
Material consis	stency:	1.000	(CAT HB)
Dozing method	l:	1.000	(GEN.)
Visibility:	-	1.000	(AVG.)
Job efficiency:	-	0.830	(1 SHIFT/DAY)
Spoil pile:	-	0.800	(FND-RF)
Push gradient:	-	0.786	(CAT HB)
Altitude:	-	1.000	(CAT HB)
Material Weigh	nt:	0.902	(CAT HB)
Blade type:	-	1.000	(PAT)
Net correction:	-	0.3531	
Adjusted unit production:	60	6.94 LCY/hr	

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Adjusted fleet production:

606.94 LCY/hr

#### JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$0.812/LCY

Total job time:	<b>0.56</b> Hours
Total job cost:	\$278

#### BULLDOZER WORK

: Trapper Mine		Permit Action		PR12	Permit/Job	E: C1981010	
PR	OJECI	<u> IDENTIFI</u>	CATION				
Та	ask #:	081	State:	Colorado	)	Abbreviation:	None
D	ate:	2/18/2025	County:	Moffat		Filename:	081
		RAR					

# HOURLY EQUIPMENT COST

Basic Machine:	Cat D10T - 10SU
Horsepower:	574
Blade Type:	Semi-Universal
Attachment:	NA
Shift Basis:	1 per day
Data Source:	(CRG)

#### Cost Breakdown:

	Utilization %
\$257.39	NA
\$196.93	100
\$0.00	NA
\$0.00	0
\$38.59	NA
\$492.91	
\$492.91	
	\$196.93 \$0.00 \$0.00 \$38.59 \$492.91

#### **MATERIAL QUANTITIES**

Initial Volume:	8,302		
Swell factor:	1.000		
Loose volume:	<b>8,302</b> LC	Y	
Source of estim volume:	nated	Appendix A	A Table 1.4-6
Source of estim factor:	nated swell	Operator Es	stimate
HOURLY PRO	DUCTION	<u>N</u>	
Average push o		150 feet	<u></u>
Unadjusted hou production:	iriy	1,243.2 LCY	/nr
Materials consi description:	stency	Consolida	ated stockpile 1.0
Average push gradient:	10 %	6	
Average site altitude:	6,40	00 feet	
Material weigh	t: <u>2,55</u>	0 lbs/LCY	
Weight description:	Use	r Provided	
Job Condition C	orrection F	actor Sour	<u>ce</u>
Operator Skill:		0.750	(AVG.)
Material consis	•	1.000	(CAT HB)
Dozing method	l:	1.000	(GEN.)
Visibility:		1.000	(AVG.)
Job efficiency:		0.830	(1 SHIFT/DAY)
Spoil pile:		0.800	(FND-RF)
Push gradient:		0.786	(CAT HB)
Altitude:		1.000	(CAT HB)
Material Weigh	nt:	0.902	(CAT HB)
Blade type:		1.000	(PAT)
Net correction:		0.3531	

Adjusted unit production: 438.97 LCY/hr Adjusted fleet production:

438.97 LCY/hr

#### JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$1.123/LCY
T ( 1 · 1 / ·	10.01.11

Total job time:	18.91 Hours
Total job cost:	\$9,322

#### BULLDOZER WORK

Trappe	er Mine	Permi	t Action:	PR12	Permit/Job	#: <u>C1981010</u>
PROJEC	<u>r identific</u>	<u>ATION</u>				
Task #:	082	State:	Colorado	)	Abbreviation:	None
Date:	2/18/2025	County:	Moffat		Filename:	082
User:	RAR					

# HOURLY EQUIPMENT COST

Basic Machine:	Cat D10T - 10SU
Horsepower:	574
Blade Type:	Semi-Universal
Attachment:	NA
Shift Basis:	1 per day
Data Source:	(CRG)

#### Cost Breakdown:

Cost Breakdown:		
		Utilization %
Ownership Cost/Hour:	\$257.39	NA
Operating Cost/Hour:	\$196.93	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA
Total unit Cost/Hour:	\$492.91	
Total Fleet Cost/Hour:	\$492.91	

# **MATERIAL QUANTITIES**

Initial Volume:	3,315			
Swell factor:	1.000			
Loose volume:	<b>3,315</b> LCY	[		
Source of estin volume: Source of estin		Appendix Operator I	A Table A-7.2	
factor:				
HOURLY PRO	DUCTION			
Average push o		55 feet		
Unadjusted hou production:	urly	2,670.0 LC	//hr	
Materials consideration description:	stency	Consolio	lated stockpile 1.0	
Average push gradient: Average site	10 %	) feet		
altitude:				
Material weigh	t: <u>2,550</u>	) lbs/LCY		
Weight description:	User	Provided		
Job Condition C	orrection Fa			
Operator Skill:	_	0.750	(AVG.)	
Material consis		1.000	(CAT H	B)
Dozing method	l: _	1.000	(GEN.)	
Visibility:	_	1.000	(AVG.)	
Job efficiency:	_	0.830	(1 SHIF	
Spoil pile:	_	0.800	(FND-R	· · · · · · · · · · · · · · · · · · ·
Push gradient:	_	0.786	(CAT H	
Altitude:	_	1.000	(CAT H	
Material Weigl	nt:	0.902	(CAT H	B)
Blade type:	_	1.000	(PAT)	
Net correction:	_	0.3531		

Adjusted fleet production:

942.78 LCY/hr

#### JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$0.523/LCY

Total job time:	<b>3.52</b> Hours
Total job cost:	\$1,733

#### BULLDOZER WORK

Trapp	er Mine	Permit A	Action:	PR12	Permit/Job	#: <u>C1981010</u>
PROJEC	T IDENTIFIC	<b>ATION</b>				
Task #:	083	State:	Colorado		Abbreviation:	None
_	2/18/2025	County:	Moffat		Filename:	083
Date:						

# HOURLY EQUIPMENT COST

Basic Machine:	Cat D10T - 10SU
Horsepower:	574
Blade Type:	Semi-Universal
Attachment:	NA
Shift Basis:	1 per day
Data Source:	(CRG)

#### Cost Breakdown:

	Utilization %
\$257.39	NA
\$196.93	100
\$0.00	NA
\$0.00	0
\$38.59	NA
\$492.91	
\$492.91	
	\$196.93 \$0.00 \$0.00 \$38.59 \$492.91

# **MATERIAL QUANTITIES**

Initial Volume:	3,198			
Swell factor:	1.000			
Loose volume:	<b>3,198</b> LCY		_	
Source of estimated volume: Source of estimated swell factor:		Appendix A Table A-7.2		
		Operato	r Estimate	_
IOURLY PRO	DUCTION	<u>N</u>		
Average push		150 feet		
Unadjusted ho production:	urly	1,243.2 L	CY/hr	_
Materials cons description:	istency	Conso	lidated stock	pile 1.0
Average push gradient:	10 %	6		
Average site altitude:	6,40	00 feet		
Material weigh	nt: <u>2,55</u>	50 lbs/LCY		
Weight description:	Use	r Provided		
ob Condition C	Correction F	actor <u>S</u>	<u>ource</u>	
Operator Skill:		0.750		(AVG.)
Material consis	stency:	1.000		(CAT HB)
Dozing method	d:	1.000		(GEN.)
Visibility:		1.000		(AVG.)
Job efficiency:		0.830		(1 SHIFT/DAY)
Spoil pile:		0.800		(FND-RF)
Push gradient:		0.786		(CAT HB)
Altitude:		1.000		(CAT HB)
Material Weig	ht:	0.902		(CAT HB)
Blade type:		1.000		(PAT)
Net correction	:	0.3531		

Adjusted unit	438.97 LCY/hr
production:	430.97 LC 1/III

Adjusted fleet production:

438.97 LCY/hr

#### JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$1.123/LCY

Total job time:	<b>7.29</b> Hours					
Total job cost:	\$3,591					
Trappe	er Mine	Permi	t Action:	PR12	Permit/Job	#: <u>C1981010</u>
---------	--------------------	---------	-----------	------	---------------	--------------------
'ROJEC'	<u>r identific</u>	ATION				
Task #:	084	State:	Colorado	)	Abbreviation:	None
Date:	2/18/2025	County:	Moffat		Filename:	084
	RAR					

# HOURLY EQUIPMENT COST

Basic Machine:	Cat D10T - 10SU
Horsepower:	574
Blade Type:	Semi-Universal
Attachment:	NA
Shift Basis:	1 per day
Data Source:	(CRG)

## Cost Breakdown:

	Utilization %
\$257.39	NA
\$196.93	100
\$0.00	NA
\$0.00	0
\$38.59	NA
\$492.91	
\$492.91	
	\$196.93 \$0.00 \$0.00 \$38.59 \$492.91

Initial Volume:	3,279				
Swell factor: 1.000			_		
Loose volume:	<b>3,279</b> LCY		_		
Source of estimated volume: Source of estimated swell			x A TableA-	7.2	
factor:	actor:			_	
	DUCTION	т			
HOURLY PRO	DUCTION	<u>N</u>			
Average push d	listance:	150 feet			
Unadjusted hou production:	ırly	1,243.2 LO	CY/hr	_	
Materials consi description:	stency	Consol	lidated stock	pile 1.0	
Average push gradient:	10 %	, 0			
Average site altitude:	6,40	0 feet			
Material weigh	t: <u>2,55</u>	0 lbs/LCY			
Weight description:	6				
Job Condition Co	orrection E	actor So	ource		
Operator Skill:		0.750		(AVG.)	
Material consis	tency:	1.000		(CAT HB)	_
Dozing method		1.000		(GEN.)	
Visibility:		1.000		(AVG.)	
Job efficiency:	-	0.830		(1 SHIFT/DAY)	
Spoil pile:	-	0.800		(FND-RF)	
Push gradient:	-	0.786		(CAT HB)	
Altitude:	-	1.000		(CAT HB)	
Material Weigh	nt:	0.902		(CAT HB)	
Blade type:	-	1.000		(PAT)	
Net correction:	-	0.3531			-

438.97 LCY/hr

## JOB TIME AND COST

Fleet size:	1 Dozer(s)		
Unit cost:	\$1.123/LCY		

Total job time:	<b>7.47</b> Hours
Total job cost:	\$3,682

Task de	escription:	Regrade Dea	l 1 and 2			
e: Trapper Mine		Permit Action:		PR12	Permit/Job#: C198101	
<u>PROJE</u>	<u>CT IDENTIF</u>	<b>ICATION</b>				
Task #:	085	State:	Colorado	)	Abbreviation:	None
D	2/18/2025	County:	Moffat		Filename:	085
Date:	2/10/2025					

## HOURLY EQUIPMENT COST

Basic Machine:	Cat D10T - 10SU
Horsepower:	574
Blade Type:	Semi-Universal
Attachment:	3-shank ripper
Shift Basis:	1 per day
Data Source:	(CRG)

## Cost Breakdown:

Cost Breakdown:		
		Utilization %
Ownership Cost/Hour:	\$257.39	NA
Operating Cost/Hour:	\$196.93	100
Ripper own. Cost/Hour:	\$25.02	NA
Ripper op. Cost/Hour:	\$5.87	50
Operator Cost/Hour:	\$38.59	NA
Total unit	\$523.79	
Cost/Hour: Total Fleet Cost/Hour:	\$523.79	

Initial Volume:	9,555		
Swell factor:	1.000		
Loose volume:	9,555 LCY	ζ	
Source of estin volume:	nated	A-7.2	
Source of estin factor:	nated swell	Cat Handbook	
OURLY PRO		-	
Average push o Unadjusted how production:		50 feet 2,748.7 LCY/hr	
Materials considescription:	istency	Compacted fil	l or embankment 0.9
Average push gradient:	0 %		
Average site altitude:	7,500	) feet	
Material weigh	t: <u>2,550</u>	) lbs/LCY	
Weight description:	Earth	1 - Dry packed	
ob Condition C	orrection Fa	ctor Source	
Operator Skill:	_	0.750	(AVG.)
Material consis	stency:	0.900	(CAT HB))
Dozing method	l: _	1.000	(GEN.)
Visibility:	=	1.000	(AVG.)
Job efficiency:	_	0.830	(1 SHIFT/DAY)
Spoil pile:	_	0.700	(FND-MF)
Push gradient:	_	1.000	(CAT HB)
Altitude:	_	1.000	(CAT HB)
Material Weig	nt:	0.902	(CAT HB)
Blade type:	_	1.000	(PAT)
Net correction:	_	0.3537	
Adjusted unit production:	972	2.22 LCY/hr	

972.22 LCY/hr

## JOB TIME AND COST

Fleet size:	1 Dozer(s)		
Unit cost:	\$0.539/LCY		

Total job time:	<b>9.83</b> Hours	
Total job cost:	\$5,148	

				PR12	Permit/Job	#: <u>C1981010</u>
<u>ROJECT</u>	<b>IDENTIFIC</b>	<u>ATION</u>				
Task #:	086	State:	Colorado	)	Abbreviation:	None
Date:	2/18/2025	County:	Moffat		Filename:	086
User:	RAR					

#### HOURLY EQUIPMENT COST

Cat D10T - 10SU
574
Semi-Universal
3-shank ripper
1 per day
(CRG)

## Cost Breakdown:

Cost Breakdown:		
		Utilization %
Ownership Cost/Hour:	\$257.39	NA
Operating Cost/Hour:	\$196.93	100
Ripper own. Cost/Hour:	\$25.02	NA
Ripper op. Cost/Hour:	\$5.87	50
Operator Cost/Hour:	\$38.59	NA
Total unit	\$523.79	
Cost/Hour: Total Fleet Cost/Hour:	\$523.79	

Initial Volume:	92,093		
Swell factor:	1.000		
Loose volume:	<b>92,093</b> LO	CY	
Source of estin	nated	A-7.2	
Source of estin factor:	nated swell	Cat Handbook	
IOURLY PRO	DUCTION	L	
Average push	distance:	50 feet	
Unadjusted hor production:	urly	2,748.7 LCY/hr	
Materials cons description:	istency	Compacted fill	l or embankment 0.9
Average push gradient:	0 %		
Average site altitude:	7,50	0 feet	
Material weigh	nt:	0 lbs/LCY	
Weight description:	Eart	n - Dry packed	
ob Condition C	orrection Fa	ctor Source	
Operator Skill:		0.750	(AVG.)
Material consis	stency:	0.900	(CAT HB))
Dozing method	1:	1.000	(GEN.)
Visibility:	-	1.000	(AVG.)
Job efficiency:	-	0.830	(1 SHIFT/DAY)
Spoil pile:	-	0.700	(FND-MF)
Push gradient:	=	1.000	(CAT HB)
Altitude:	=	1.000	(CAT HB)
Material Weig	ht:	0.902	(CAT HB)
Blade type:	-	1.000	(PAT)
Net correction	: -	0.3537	
Adjusted unit production:	97	2.22 LCY/hr	

972.22 LCY/hr

## JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$0.539/LCY

Total job time:	<b>94.72</b> Hours
Total job cost:	\$49,616

PROJECT IDENTIFICATION         Task #:       087         State:       Colorado         Abbreviation:       None         Date:       2/18/2025         User:       RAR	: Trapper Mine		Permit Action: PR12			Permit/Job	Permit/Job#: C1981010	
Date:2/18/2025County:MoffatFilename:087User:RAR							<u></u>	
User: RAR	Task #:	087	State:	Colorad	D	Abbreviation:	None	
	Date:	2/18/2025	County:	Moffat		Filename:	087	
	User:	RAR						
Agency or organization name: DRMS			n name: D	RMS				
	TOUDIN	Y EQUIPMEN	NT COST					

Machine:	Cat D10T - 10SU
Horsepower:	574
Blade Type:	Semi-Universal
Attachment:	3-shank ripper
Shift Basis:	1 per day
Data Source:	(CRG)

## Cost Breakdown:

Cost Breakdown:		
		Utilization %
Ownership Cost/Hour:	\$257.39	NA
Operating Cost/Hour:	\$196.93	100
Ripper own. Cost/Hour:	\$25.02	NA
Ripper op. Cost/Hour:	\$5.87	50
Operator Cost/Hour:	\$38.59	NA
Total unit Cost/Hour:	\$523.79	
Total Fleet Cost/Hour:	\$523.79	

Initial Volume:	4,923		
Swell factor:1.000Loose4,923 L			
		W	
		. I	
Source of estim volume:		A-7.2	
Source of estime factor:	nated swell	Cat Handbook	
HOURLY PRO	DUCTIO	<u>N</u>	
Average nuch d	listance	80 feet	
Average push of Unadjusted hou production:		2,028.0 LCY/hr	
Materials consi description:	stency	Compacted f	ill or embankment 0.9
Average push gradient:	0 %		
Average site altitude:	7,50	00 feet	
Material weigh	t:2,55	50 lbs/LCY	
Weight Ea description:		th - Dry packed	
Job Condition C	orrection F	actor Source	
Operator Skill:		0.750	(AVG.)
Material consis	tency:	0.900	(CAT HB))
Dozing method	-	1.000	(GEN.)
Visibility:		1.000	(AVG.)
Job efficiency:		0.830	(1 SHIFT/DAY)
Spoil pile:		0.800	(FND-RF)
Push gradient:		1.000	(CAT HB)
Altitude:		1.000	(CAT HB)
Material Weigh	nt:	0.902	(CAT HB)
Blade type:		1.000	(PAT)
Net correction:		0.4043	
Adjusted unit production:	8	19.92 LCY/hr	

819.92 LCY/hr

## JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$0.639/LCY

Total job time:	<b>6.00</b> Hours
Total job cost:	\$3,145

ROJEC'	<u>T IDENTIFIC</u>	ATION			
Task #:	088	State:	Colorado	Abbreviation:	None
Date:	2/18/2025	County:	Moffat	Filename:	088
User:	RAR				

Basic Machine:	Cat D10T - 10SU
Horsepower:	574
Blade Type:	Semi-Universal
Attachment:	3-shank ripper
Shift Basis:	1 per day
Data Source:	(CRG)

## Cost Breakdown:

Cost Breakdown:		
		<b>Utilization %</b>
Ownership	\$257.39	NA
Cost/Hour:		
Operating	\$196.93	100
Cost/Hour:	<i><b>4170.75</b></i>	100
Ripper own.	\$25.02	NA
Cost/Hour:	φ23.02	1171
Ripper op.	\$5.87	50
Cost/Hour:	ψ <b>5.</b> 87	50
Operator	\$38.59	
Cost/Hour:	\$30.37	NA
Total unit	\$523.79	
Cost/Hour:		
Total Fleet	\$523.79	
Cost/Hour:		

Initial Volume:	6,414			
Swell factor:	1.000			
Loose volume:	<b>6,414</b> LCY	7		
Source of estim volume:	nated	A-7.2		
Source of estim factor:	nated swell	Cat Handb	oook	_
IOURLY PRO	DUCTION			
Average push c	listance:	70 feet		
Unadjusted hou production:	urly	2,253.9 LCY	Y/hr	_
Materials consi description:	stency	Compac	ted fill or e	embankment 0.9
Average push gradient:	0 %			
Average site altitude:	7,500	) feet		
Material weigh	t:2,550	) lbs/LCY		
Weight description:	Earth	- Dry packe	ed	
ob Condition C	orrection Fa	ctor Sou	irce	
Operator Skill:		0.750 <u>500</u>		(AVG.)
Material consis		0.900		(CAT HB))
Dozing method	• –	1.000		(GEN.)
Visibility:	_	1.000		(AVG.)
Job efficiency:		0.830		(1 SHIFT/DAY)
Spoil pile:	_	0.800		(FND-RF)
Push gradient:	_	1.000		(CAT HB)
Altitude:	_	1.000		(CAT HB)
Material Weigh	nt:	0.902		(CAT HB)
Blade type:	_	1.000		(PAT)
Net correction:	_	0.4043		
Adjusted unit production:	911	1.25 LCY/hr		

911.25 LCY/hr

## JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$0.575/LCY

Total job time:	<b>7.04</b> Hours
Total job cost:	\$3,687

Task descrip	tion: <b>R</b>	egrade Div	ersions			
ite: Trapper M	Aine	Permi	t Action:	PR12	Permit/Job	#: <u>C1981010</u>
PROJECT I	DENTIFICA	TION				
Date: 2	89 2/18/2025 RAR	State: County:	Colorade Moffat	0	Abbreviation: Filename:	None 089
Agency or o	rganization r	name: D	RMS			
HOURLY E	QUIPMENT	<u>COST</u>				
Basic Machine:	Cat D8'	Γ - 8SU				
Horsepower Blade Type:	Semi-U	niversal				
Attachment: Shift Basis: Data Source	1 per da			_		
Cost Breakdo				_		
Ownership Cost/Hour:	\$1	73.32		<u>Utilization %</u> NA		
Operating Cost/Hour:	\$1	09.71		100		
Ripper own. Cost/Hour:	\$1	4.53		NA		
Ripper op. Cost/Hour:	\$3	.98		50		
Operator Cost/Hour:	\$3	8.59		NA		
Total unit	\$34	40.12				
Cost/Hour: Total Fleet Cost/Hour:	\$34	40.12				

Initial Volume:	33,374		
Swell factor:	1.000		
Loose volume:	<b>33,374</b> LC	Y	
Source of estin volume:	nated	A-8.2	
Source of estin factor:	nated swell	Cat Handboo	k
IOURLY PRO	DUCTION		
Average push	distance:	50 feet	
Unadjusted ho production:	urly	1,400.0 LCY/h	r
Materials cons description:	istency	Compacted	fill or embankment 0.9
Average push gradient:	0 %		
Average site altitude:	7,500	) feet	
Material weigh	nt:2,550	) lbs/LCY	
Weight description:	Earth	n - Dry packed	
ob Condition C	orrection Fa	ctor Source	3
Operator Skill:		0.750	(AVG.)
Material consis		0.900	(CAT HB))
Dozing method	• _	1.200	(S-BY-S)
Visibility:	_	0.800	(POOR)
Job efficiency:	_	0.830	(1 SHIFT/DAY)
Spoil pile:	_	0.800	(SSD-AC)
Push gradient:	_	1.000	(CAT HB)
Altitude:	_	1.000	(CAT HB)
Material Weig	ht:	0.902	(CAT HB)
Blade type:	-	1.000	(PAT)
Net correction	: _	0.3881	
Adjusted unit		3.34 LCY/hr	

543.34 LCY/hr

## JOB TIME AND COST

Fleet size:	1 Dozer(s)	
Unit cost:	\$0.626/LCY	
Total ich time:	61 19 Hours	

Total job time:	<b>61.42</b> Hours
Total job cost:	\$20,891

]	Task description:	<u>Regrade D</u>	<u>iversions</u>					
Site:	Trapper Mine	Per	mit Action:	<u>PR12</u>	Permi	it/Job#:	<u>C1981010</u>	
<u>P</u> ]	PROJECT IDENTIFICATION							
-	Task #:         089M           Date:         2/24/2		<u>Colorado</u> <u>Moffat</u>		Abbreviation: Filename:	<u>None</u> <u>C010-</u> <u>089MR</u>	228	
<u> </u>	User: <u>RAR</u>							
4	Agency or organ	ization name:	<u>DRMS</u>					
		HO	URLY EQU	IPMENT CO	<u>OST</u>			
	Basic Machine: Horsepower: Blade Type: Attachment: Shift Basis: Data Source: ost Breakdown:	Cat D8T - 8SU 310 Semi-Universal 3-shank ripper 1 per day (CRG)		-				
				<u>Utilization</u>	<u>%</u>			
	<u>Ownership</u> Cost/Hour:	<u>\$173.32</u>		<u>NA</u>				
(	<u>Operating</u> Cost/Hour:	<u>\$109.71</u>		<u>100</u>				
_	<u>Ripper own.</u> Cost/Hour:	<u>\$14.53</u>		<u>NA</u>				
(	<u>Ripper op.</u> Cost/Hour:	<u>\$3.98</u>		<u>50</u>				
	<u>Operator</u> Cost/Hour:	<u>\$38.59</u>		<u>NA</u>				
<u>(</u>	<u>Total unit</u> <u>Cost/Hour:</u> <u>Total Fleet</u> <u>Cost/Hour:</u>	<u>\$340.12</u> <u><b>\$340.12</b></u>						

<u>Initial</u> <u>Volume:</u> <u>Swell factor:</u> <u>Loose</u> volume:	<u>532</u> <u>1.000</u> <u>532 LCY</u>	
Source of estim		
Source of estim factor:	ated swell Cat Handbook	
HOURLY PRO	DUCTION	
Average push d Unadjusted hou production:		
Materials consi description:	Stency Compacted fill or embankment 0.9	
<u>Average push</u> gradient:	<u>0 %</u>	
Average site altitude:	<u>7,500 feet</u>	
Material weigh	<u>2,550 lbs/LCY</u>	
Weight description:	Earth - Dry packed	
Job Condition Co	prrection Factor Source	

#### J

too condition contection		
<b>Operator Skill:</b>	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	0.900	<u>(CAT HB))</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>0.800</u>	(POOR)
Job efficiency:	<u>0.830</u>	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	<u>1.000</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.902</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>
Net correction:	0.3234	
<u>Adjusted unit</u> production:	452.76 LCY/hr	

Total job cost:

452.76 LCY/hr

## JOB TIME AND COST

Fleet size:	<u>1 Dozer(s)</u>
Unit cost:	<u>\$0.751/LCY</u>
Total job time:	1.18 Hours

<u>\$400</u>

#### SCRAPER TEAM WORK

Task description:		Replace Tops	soil on Ash Pits (ASH1)		
te: Trapper Mine		Permi	t Action: PR12	Permit/Job	o#: <u>C1981010</u>
PROJECT	<u>r identif</u>	<b>ICATION</b>			
Task #:	090	State:	Colorado	Abbreviation:	None
Date:	2/18/2025	County:	Moffat	Filename:	090
User:	RAR	·			
HOURLY	or organization <b>EQUIPME</b> uipment Des	E <u>NT</u> COSTSI	RMS nift basis: <u>1 per day</u>		
-	-		Cat 627C w/puch pull		
-Scraper:			Cat 637G w/push-pull		
-Dozer:			NA		

Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance – Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown	: Scraper	Work Team S	upport Equipm	ent Mainte	nance Equipm	ent
	Scraper	Dozer	Load Area	Dump	Motor	Water
				Area	Grader	Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

CCY

LCY

Total work team cost/hour: \$6,154.65

#### **MATERIAL QUANTITIES**

 Initial volume:
 11,254

 Loose volume:
 11,254

Swell factor: 1.000

Source of estimated volume: Source of estimated swell factor: Appendix A, Table A-9.1 Cat Handbook

#### **HOURLY PRODUCTION**

## Scraper Bowl (volume) Basis:

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

## Cycle Time:

Scraper Loading Time:	<u>1.00</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction: Site Altitude: 6400 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: <u>Rutted dirt, little maintenance, no water, 1" tire penetration 4.0</u>

Haul Route:

Seg #	Haul Distance	Grade	Roll. Res	Total Res	Velocity	Travel Time
	(Ft)	(%)	(%)	(%)	(fpm)	(min)
1	1978.00	10.00	4.00	14.00	657	3.02

Haul Time: **3.0** 

3.02 minutes

Return Route:

Seg #	Haul Distance	Grade	Roll. Res	Total Res	Velocity	Travel
	(Ft)	(%)	(%)	(%)	(fpm)	Time (min)
1	1978.00	-10.00	4.00	-6.00	2972	0.72

Return Time: 0.72 minutes

Total Scraper te	eam cycle time:		5.34	minutes
Adjusted for jo	b conditions:		540.90	LCY/Hour
Selected Numb	er of Scrapers:		8	Scraper(s)
Adjusted single	scraper team (unit) ho	ourly production:	2,163.60	LCY/Hour
Adjusted multip	ole scraper team (fleet)	hourly production:	2,163.60	LCY/Hour
Unadjusted unit j Optimal Number push dozer:	·	<u>651.69</u> LCY/Hour		
JOB TIME AND	COST			
Fleet size: 1	Team(s)	Total job time:	5.20	Hours

Unit cost:	\$2.845	/LCY	Total job cost:	\$32,014	

#### SCRAPER TEAM WORK

Task des	cription: <b>R</b>	Replace Tops	oil on Ash Pits (ASH2)		
te: Trapp	er Mine	Permit	Action: PR12	Permit/Job	o#: <u>C1981010</u>
<b>PROJEC</b>	T IDENTIFIC	ATION			
Task #:	090A	State:	Colorado	Abbreviation:	None
Date: User:	2/18/2025 RAR	County:	Moffat	Filename:	90A
Agency	or organization	name: D	RMS		
HOURLY	<u> EQUIPMEN'</u>	<u>T</u> COSTSI	ift basis: <u>1 per day</u>		
Eq	uipment Descri	ption			
-Scraper	•		Cat 637G w/push-pull		

-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance – Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment						
	Scraper	Dozer	Load Area	Dump	Motor	Water
				Area	Grader	Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

CCY

LCY

Total work team cost/hour: \$6,154.65

60,000

60,000

#### **MATERIAL QUANTITIES**

Initial volume: Loose volume: Swell factor: 1.000

Source of estimated volume: Source of estimated swell factor: Appendix A, Table A-10.1 Cat Handbook

#### **HOURLY PRODUCTION**

#### Scraper Bowl (volume) Basis:

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

## Cycle Time:

Scraper Loading Time:	<u>1.00</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction: Site Altitude: 6400 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: <u>Rutted dirt</u>, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

Seg #	Haul Distance	Grade	Roll. Res	Total Res	Velocity	Travel Time
	(Ft)	(%)	(%)	(%)	(fpm)	(min)
1	711.00	-12.00	4.00	-8.00	1628	0.56

Haul Time: **0.56** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	711.00	-12.00	4.00	-8.00	2972	0.30

Return Time: **0.30** minutes

Total Scraper team cycle time:	2.46	minutes
Adjusted for job conditions:	1,174.15	LCY/Hour
Selected Number of Scrapers:	8	Scraper(s)
Adjusted single scraper team (unit) hourly production:	4,696.59	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	4,696.59	LCY/Hour
	. <u> </u>	

Unadjusted unit production/hour:	1,414.63	LCY/Hour	
Optimal Number of Scrapers per			
push dozer:			
JOB TIME AND COST			

Fleet size:	1	Team(s)	Total job time:	12.78	Hours
Unit cost:	\$1.310	/LCY	Total job cost:	\$78,627	

## TRUCK/LOADER TEAM WORK

	Task description:Replace Topsoil on Ash Pits (A92-4 to Pit)						
Site:	Site: Trapper Mine		Permi	Permit Action: PR12		Permit/Job	#: <u>C1981010</u>
Ī	PROJECT	<u>r identifi</u>	<b>ICATION</b>				
	Task #: Date: User:	090B 2/18/2025 RAR	State: County:	Colorado Moffat	)	Abbreviation: Filename:	None 090B
	Agency of	or organizatio	on name: D	RMS			
Ī	HOURLY	EQUIPME	ENT COST	Shift basis:	<u>1 per day</u>		
_	1	uipment Des	1				
	Truck Lo	ader Team -	Iruck:	Cat 77'	/F		

-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance – Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.
Road Maintenance – Motor Grader:	CAT 16M

**<u>Cost Breakdown</u>:** Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization- machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization- riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$22.07
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$44.95
Number of Units:	4	1	1	1	1	1
Group Subtotals:	Work:	\$1,894.70	Support:	\$692.32	Maint:	\$282.01

Total work team cost/hour: <u>\$2,869.03</u>

Initial volume:	115,215	CCY	Swell factor:	1.000	
Loose volume:	115,215	LCY			
Source of estimate	ed volume:	TR124	Appendix A Tab	le A-3.1	
Source of estimate			ndbook		
Material Purchase		\$0.00			
Total Cost:		\$0.00			
HOURLY PRODU	JCTION				
Truck Capacity:					
Truck Payload (wei					
Material weigh			Pounds/LCY		
Description:	Top Soil				
Rated Payload:	200,000		Pounds		
Payload Capacity:	125.00		LCY		
Truck Bed (volume	) Basis:				
Struck Volume:	60.60	LCY			
Heaped Volume:	78.80	LCY			
Average Volume:	69.70	LCY			
Adjusted Volume:		LCY			
J		-			
Final Truck Volun	ne Based on Nur	nber of Load	der Passes:	77.72	LCY
			act 1 abses.		Ler
Loading Tool Capa	<u>city</u>				
		Bucke	et Size Class:		Large
Rated Capacity:	7.850	LCY (	heaped)		
Bucket Fill Factor	: 1.100		- rock/dirt mixture	es (100-120%	) 1.100
Adjusted Capacity	<b>8.635</b>	LCY			<u> </u>
		1.1. 1. (0.)			
Job Condition Con	rections: Site A	ltitude (ft.):	<u>6400</u> teet		
	Truck	Loader	Source		
Altitude Adj:	1.000	1.000	(CAT H	B)	
Job Efficiency:	0.830	0.830	(CAT H	B)	
	0.020	0.020			
Net Correction:	0.830	0.830			

Number of Loading Tool Passes Required<br/>to Fill Truck:9passes

## Loading Tool Cycle Time:

Excavators and Front Shovels:

Machine Cycle Time Rating: Selected Value with		A	BOVE A		<u>.</u>			
Track Loaders – Ma	terial Description	on:						
Cycle Time Elements	(min.):							
Load: NA	Maneuver	:: <u>N</u>	JA	_ Dump:	_	0.100	)	
Wheel and Track Lo dump, maneuver):	aders - Unadjus	sted Basic L	Loader Cyc	cle Time	(load,	NA	mi	nutes
Cycle Time Factors					Factor (m	in.)	Source	
Material:	NA				NA	/	(Cat HB)	
Stockpile:	NA				NA		(Cat HB)	
Truck Ownership:	NA				NA		(Cat HB)	
Operation:	NA				NA		(Cat HB)	
Dump Target:	NA				NA		(Cat HB)	
	Net Cycle '	Time Adjus	stment:	-	NA		minutes	
	Adjusted L	oader Cycl	e Time:	-	0.302		minutes	
	Net Load 7	Time per Tr	uck:	-	2.516		minutes	
Truck Cycle Time:								
Truck Exchange Time:	0.80	Minutes	Adjuste	d for site	altitude:	0	.800	Minutes
ruck Load Time:	2.516	Minutes	Adjuste	d for site	altitude:	2	.516	Minutes
	1.20	Minutes	Adjuste	d for site	altitude:	1	.200	Minutes
Truck Maneuver and Dump Time: <u>Truck Travel (Haul &amp;</u> watered, maintained 3	1.20 Return) Time:	Minutes	Adjuste	d for site	altitude:	1	.200	

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time
						(min)
1	5147.00	10.00	3.00	13.00	620	8.345

Haul Time: 8.345 minutes

	Return R	1	ul Distance	Grade	Roll.	Total	Velocity	Travel		
	Seg #	(Ft		(%)	Res (%)	Res (%)	(fpm)	Time (min)		
	1	514	47.00	-10.00	3.00	-7.00	3450	1.538		
				Return Time Total Truck		:	1.538 14.399		ninutes ninutes	
Loadi Produ Truck		unit	1,406.18	LCY/Ho	ur Adjus	ted for job e	officiency:	1,167	.13	LCY/Hour
Produ			323.83	LCY/Ho	ur Adjus	ted for job e	efficiency:	268.7	8	LCY/Hour
Optim Truck	nal No. of s:	Ĩ	4	Truck(s)	Select	ed Number	of Trucks:	4		Truck(s)
	Adjus	ted si	ourly truck te ingle truck/lo nultiple truck	ader team pr	oduction:		1,075. 1,075. <b>1,075.</b>	13	LCY/H LCY/H LCY/H	lour
	JOB TIN	ME A	AND COST							
	Fleet siz	ze:	1	Team(s)	Total jo	ob time:	107.16		Hour	S
	Unit co	st:	\$2.669	/LCY	Total jo	ob cost:	\$307,455		_	

#### TRUCK/LOADER TEAM WORK

Task description: Replace Topsoi	l on D/E Pits (Tru	ck/Excavator)				
Site: <u>Trapper Mine</u> Permit A	Action: <u>PR12</u>	Permit/Job#: <u>C1981010</u>				
<b>PROJECT IDENTIFICATION</b>						
	<u>Colorado</u> Moffat	Abbreviation:NoneFilename:091				
Agency or organization name:       DRMS         HOURLY EQUIPMENT COST       Shift basis: 1 per day						
Equipment Description						
Truck Loader Team -Truck:	<u>Cat 777F</u>					
-Loader:	Cat 385C L 18'-1	1" Stick				
Support Equipment -Load Area:	<u>Cat D10T - 10SU</u>					
-Dump Area:	Cat D10T - 10SU	[				
Road Maintenance – Motor Grader:	<u>CAT 16M</u>					

**Cost Breakdown:** Truck/Loader Team Support Equipment Maintenance Equipment

Water Tanker, 2,500 Gal.

	Excavator	Load Area	<u>Dump</u> Area	<u>Motor</u> Grader	<u>Water</u> Truck
100	<u>100</u>	<u>25</u>	<u>25</u>	25	<u>50</u>
\$199.47	<u>\$220.92</u>	<u>\$257.39</u>	<u>\$257.39</u>	<u>\$179.39</u>	<u>\$11.65</u>
<u>\$152.44</u>	<u>\$131.31</u>	<u>\$49.23</u>	<u>\$49.23</u>	<u>\$29.91</u>	<u>\$11.23</u>
<u>NA</u>	<u>0</u>	<u>15</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
<u>NA</u>	<u>\$0.00</u>	<u>\$20.05</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
NA	<u>\$0.00</u>	<u>\$1.90</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
\$ <u>25.24</u>	<u>\$33.87</u>	<u>\$38.59</u>	<u>\$38.59</u>	<u>\$27.76</u>	<u>\$22.07</u>
<u>\$377.15</u>	<u>\$386.10</u>	<u>\$347.11</u>	<u>\$345.21</u>	<u>\$237.06</u>	<u>\$44.95</u>
<u>3</u> Work:	<u>1</u> \$1 517 55	<u>1</u> Support:	<u>1</u> \$602.32	<u>l</u> Maint:	<u>1</u> \$282.01
	5199.47         5152.44         NA         NA         NA         S25.24         S377.15	5199.47       \$220.92         5152.44       \$131.31         NA       0         NA       \$0.00         NA       \$0.00         S25.24       \$33.87         \$377.15       \$386.10         3       1	\$199.47       \$220.92       \$257.39         \$152.44       \$131.31       \$49.23         NA       0       15         NA       \$0.00       \$20.05         NA       \$0.00       \$1.90         \$257.39       \$38.59         \$377.15       \$386.10       \$347.11         \$1       1       1	$\underline{00}$ $\underline{100}$ $\underline{25}$ $\underline{25}$ $\underline{5199.47}$ $\underline{\$220.92}$ $\underline{\$257.39}$ $\underline{\$257.39}$ $\underline{\$131.31}$ $\underline{\$49.23}$ $\underline{\$49.23}$ $\underline{\$131.31}$ $\underline{\$49.23}$ $\underline{\$49.23}$ $\underline{\$A}$ $\underline{0}$ $\underline{15}$ $\underline{NA}$ $\underline{NA}$ $\underline{90.00}$ $\underline{\$20.05}$ $\underline{\$0.00}$ $\underline{\$A}$ $\underline{\$0.00}$ $\underline{\$1.90}$ $\underline{\$0.00}$ $\underline{\$A}$ $\underline{\$0.00}$ $\underline{\$1.90}$ $\underline{\$0.00}$ $\underline{\$257.39}$ $\underline{\$33.87}$ $\underline{\$38.59}$ $\underline{\$38.59}$ $\underline{\$377.15}$ $\underline{\$386.10}$ $\underline{\$347.11}$ $\underline{\$345.21}$ $\underline{\$$ $\underline{1}$ $\underline{1}$ $\underline{1}$	$\underline{00}$ $\underline{100}$ $\underline{25}$ $\underline{25}$ $\underline{25}$ $\underline{25}$ $\underline{5199.47}$ $\underline{\$220.92}$ $\underline{\$257.39}$ $\underline{\$257.39}$ $\underline{\$179.39}$ $\underline{\$131.31}$ $\underline{\$49.23}$ $\underline{\$49.23}$ $\underline{\$29.91}$ $\underline{\$A}$ $\underline{0}$ $\underline{15}$ $\underline{NA}$ $\underline{NA}$ $\underline{NA}$ $\underline{90.00}$ $\underline{\$20.05}$ $\underline{\$0.00}$ $\underline{\$0.00}$ $\underline{\$A}$ $\underline{\$0.00}$ $\underline{\$1.90}$ $\underline{\$0.00}$ $\underline{\$0.00}$ $\underline{\$A}$ $\underline{\$0.00}$ $\underline{\$1.90}$ $\underline{\$0.00}$ $\underline{\$0.00}$ $\underline{\$A}$ $\underline{\$0.00}$ $\underline{\$1.90}$ $\underline{\$0.00}$ $\underline{\$0.00}$ $\underline{\$25.24}$ $\underline{\$33.87}$ $\underline{\$38.59}$ $\underline{\$38.59}$ $\underline{\$27.76}$ $\underline{\$377.15}$ $\underline{\$386.10}$ $\underline{\$347.11}$ $\underline{\$345.21}$ $\underline{\$237.06}$ $\underline{1}$ $\underline{1}$ $\underline{1}$ $\underline{1}$ $\underline{1}$

Total work team cost/hour: \$2,491.88

-Water Truck:

Initial volume: 470,723	<u>CCY</u> <u>Swell factor:</u> <u>1.000</u>
Loose volume: <b>470,723</b>	LCY
Source of estimated volume:	TR124 Appendix A Table A-3.1
Source of estimated swell factor:	<u>Cat Handbook</u>
Material Purchase Cost:	\$0.00
Total Cost:	<u>\$0.00</u>
HOURLY PRODUCTION	
Truck Capacity:	
Truck Payload (weight) Basis:	

I ruck Payload (weight)	Basis:	
Material weight:	<u>1,600</u>	Pounds/LCY
Description:	<u>Top Soil</u>	
Rated Payload:	200,000	Pounds
Payload Capacity:	<u>125.00</u>	LCY

## Truck Bed (volume) Basis:

Struck Volume:	<u>60.60</u>	LCY
Heaped Volume:	<u>78.80</u>	LCY
Average Volume:	69.70	LCY
Adjusted Volume:	<u>78.80</u>	LCY

Final Truck Volume Based on Number of Loader Passes:	<u>77.72</u>	LCY
--	--------------	-----

Loading Tool Capacity

		Bucket Size Class:	Large
Rated Capacity:	<u>7.850</u>	LCY (heaped)	
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures	(100-120%) 1.100
Adjusted Capacity:	<u>8.635</u>	LCY	

#### Job Condition Corrections: Site Altitude (ft.): 6400 feet

	Truck	Loader	Source
Altitude Adj:	<u>1.000</u>	<u>1.000</u>	(CAT HB)
Job Efficiency:	<u>0.830</u>	0.830	(CAT HB)
Net Correction:	<u>0.830</u>	<u>0.830</u>	

Number of Loading Tool Passes Required to Fill Truck:

<u>9</u> <u>passes</u>

## Loading Tool Cycle Time:

Excavators and Front Shovels:

Machine Cycle Time vs Rating:	Job Condition	AE	BOVE AVE	RAGE				
Selected Value within thi	s Basic Rating:	<u>A</u> V	/ERAGE					
Track Loaders – Material	Description:							
	<u> </u>							
Cycle Time Elements (min	<u>):</u>							
Load: <u>NA</u>	Maneuver:	NA	<u>1</u>	Dump:		0.100		
Wheel and Track Loaders maneuver):	s - Unadjusted B	asic Loade	er Cycle Tir	ne (load	<u>, dump,</u>	<u>NA</u>	<u>]</u>	<u>minutes</u>
Cycle Time Factors					Factor (n	nin.)	Source	
Material:	NA				NA		(Cat HB	)
Stockpile:	NA				NA		(Cat HB	)
Truck Ownership:	NA				<u>NA</u>		(Cat HB	)
Operation:	NA				<u>NA</u>		(Cat HB	)
Dump Target:	NA				<u>NA</u>		<u>(Cat HB</u>	)
	Net Cycle Tim	e Adjustm	ent:		<u>NA</u>		minutes	
	Adjusted Load	ler Cycle T	<u>'ime:</u>		<u>0.302</u>		minutes	
	Net Load Time	e per Truck	<u>&lt;:</u>	-	<u>2.516</u>		minutes	
Truck Cycle Time:								
Truck Exchange Time:	<u>0.80</u>	Minutes 1	Adjusted	for site a	<u>ltitude:</u>	(	0.800	<u>Minutes</u>
Truck Load Time:	2.516	Minutes	Adjusted	for site a	ltitude:		2.516	Minutes
Truck Maneuver and Dump	1.20	Minutes	Adjusted	for site a	ltitude:		1.200	Minutes
Time:						-		
Truck Trougl (Haul & Date	urn) Time: Dead	Condition	· Firm amo	oth roll	ing dirt/lt	aurfood	ad waters	d

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Rou	te:							
Seg #	Haul Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
	<u>(Ft)</u>		<u>(%)</u>	<u>(%)</u>	<u>(fpm)</u>	<u>Time</u>		
						<u>(min)</u>		
1	<u>4788.00</u>	<u>-8.60</u>	3.00	<u>-5.60</u>	<u>1870</u>	<u>2.695</u>		
			<u>Haul Tim</u>	<u>ne:</u> _2	<u>2.695</u>	minutes		
Return Re	T Contraction of the second seco			<b>m</b> 1	<b>TTTTTTTTTTTTT</b>			
<u>Seg #</u>	Haul Distance	<u>Grade (%)</u>	Roll. Res	$\underline{\text{Total}}$	Velocity	Travel		
	<u>(Ft)</u>		<u>(%)</u>	<u>Res (%)</u>	<u>(fpm)</u>	Time (min)		
1	4788.00	8.60	3.00	11.60	1628	3.064		
			<u> </u>	<u> </u>	2.0.4	•		
		Return Time:	1		<u>3.064</u>	minutes		
	<u>1</u>	Otal Truck Cy	cie Time:		<u>10.275</u>	minutes		
Loading Tool u	nit							
Production	<u>1,406.18</u>	LCY/Hou	<u>r Adjust</u>	ed for job eff	ficiency:	<u>1,167.13</u>	LCY/Hour	
Truck Unit								
Production	<u>453.81</u>	LCY/Hou	<u>r Adjust</u>	ed for job ef	ficiency:	376.66	LCY/Hour	
Optimal No. of	3	Truck(s)	Selecte	ed Number o	f Trucks:	<u>3</u>	Truck(s)	
Trucks:								
۸ diust	ed hourly truck tea	m production.			1,129.9	9 LCY/F	Jour	
	ed single truck/load	*			1,129.9			
•	ed multiple truck/lo	-			1,129.9			
<del></del>								
JOB TIN	IE AND COST							
Fleet siz	<u>e: 1</u>	Team(s)	<u>Total jo</u>	<u>b time:</u>	<u>416.57</u>	Hou	<u>rs</u>	
Unit cos	<u>t: \$2.205</u>	/LCY	<u>Total jo</u>	b cost:	<u>\$1,038,052</u>	2		

## SCRAPER TEAM WORK

	Task descr	iption:	Replace Topsoil	on D/E Pits (D97-1)		
Site:	Trapper	·Mine	Permit A	etion: PR12	Permit/Job#:	C1981010
Ē	PROJECT	IDENTIFI	CATION			
	Task #: Date:	091A 2/18/2025	State: County:	Colorado Moffat	Abbreviation: Filename:	None 091A
	User:	RAR	County.	Wollat		0,111
	Agency or	organization	n name: DF	RMS		
Ī	IOURLY	EQUIPMEN	<u>NT</u> COSTShift	basis: <u>1 per day</u>		
_		pment Desc	ription			
	-Scraper:			Cat 637G w/push	-pull	

-Scraper:	Cat 63/G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	OBSOLETE - Cat D10T - 10U
Road Maintenance – Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown:	Scraper V	Vork Team Su	upport Equipr	nent Mainte	enance Equip	ment
	Scraper	Scraper Dozer Load Dump Motor				Water
			Area	Area	Grader	Truck
%Utilization- machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$10.00	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$5.00	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$631.57	NA	\$394.44	\$53.59	\$266.97	\$25.12
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$448.03	Maint:	\$292.09

Total work team cost/hour: \$5,792.68
# **MATERIAL QUANTITIES**

Initial volume: Loose volume:	62,216 62,216	CCY LCY	Swell factor:	1.000	-
Source of estimat Source of estimat		Append Cat Har	lix A, Table 1.4-9 ndbook		
HOURLY PROD	<u>UCTION</u>				
Scraper Bo	wl (volume) Basis:				
Material weight:	1,600 lbs/LCY		Struck Volume:	24.00	LCY
Material description:	Top Soil		Heaped Volume:	34.00	LCY
Rated Payload:	81,600 pounds		Average Volume:	29.00	LCY
Payload Capacity:	51.00 LCY		Adjusted Capacity:	29.00	LCY
Cycle Time:					
Scraper Loading ' Maneuver and Sp			.00 Minutes 0.60 Minutes		
Job Condition Cor	rection: Site Alti	tude: 6400 fee	et		
	Scraper	Push Doze	er Source		

	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, 1" tire penetration 4.0</u>

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1496.00	0.00	4.00	4.00	2394	0.79

Haul Time:

0.79 minutes

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	-3.00	4.00	1.00	2963	0.35
			Return Ti	ime:	0.35	minutes
Adjus Select	Scraper team cycle ti ted for job conditions ed Number of Scrape ted single scraper tea	s: ers:	rly productio	on:	<b>2.74</b> 1,054.16 8 4,216.64	minutes LCY/Hour Scraper(s) LCY/Hour
	ted multiple scraper	team (fleet)	hourly produc	ction:	4,216.64	LCY/Hour
Adjus Unadjus Optima	ted multiple scraper to sted unit production/ l Number of Scrapers	hour:	hourly produc 	ction: LCY/Hour	4,216.64	LCY/Hour
Adjus Unadjus Optima dozer:	sted unit production/	hour:	• •		4,216.64	LCY/Hour
Adjus Unadjus Optima dozer:	sted unit production/ l Number of Scrapers ME AND COST	hour:	• •	LCY/Hour	<u>4,216.64</u> 14.75	LCY/Hour

Site: Trapper Mine	<u> </u>	ermit Action:	<u>PR12</u>	Permit/Jol	<u>b#:</u> <u>C1981</u>	010
PROJECT IDEN	TIFICATION					
<u>Task #:</u> 091E	<u>8 Sta</u>	te: <u>Colora</u>	<u>do</u>	Abbreviat	ion: <u>Nor</u>	ne
$\frac{\text{Date:}}{\text{User:}}  \frac{2/18}{\text{RAR}}$		unty: Moffat	-	Filename:	<u>C01</u>	<u>10-091B</u>
<u>User.</u> KAN	<u> </u>					
Agency or organ	ization name:	<u>DRMS</u>				
		отоь: <u>е</u> на стала 1				
HOURLY EQUI	PMENI CO	SIShift basis: 1	per day			
Equipment	Description					
-Scraper:	<u> </u>	Cat 6	637G w/push-pu	<u>11</u>		
-Dozer:		NA				
Support Equipme	ent -Load Area:	<u>Cat l</u>	<u> D10T - 10SU</u>			
-Dump Area:			OLETE - Cat D	<u> 10T - 10U</u>		
Road Maintenand	ce – Motor Grad	er: <u>CAT</u>	<u>16M</u>			
-Water Truck:		Wate	er Tanker, 2,500	<u>Gal.</u>		
Cost Breakdown:	Scraper W	ork Team Supp	ort Equipment	Maintenance E	<u>quipment</u>	
	Scraper	Dozer	Load Area	Dump Area	Motor	Water
					<u>Grader</u>	<u>Truck</u>
Utilization-machine:	<u>100</u>	<u>NA</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>60</u>
wnership cost/hour:	<u>\$281.32</u>	<u>NA</u>	<u>\$257.39</u>	<u>\$10.00</u>	<u>\$179.39</u>	<u>\$11.65</u>
perating cost/hour:	<u>\$319.35</u>	<u>NA</u>	<u>\$98.47</u>	<u>\$5.00</u>	<u>\$59.82</u>	<u>\$13.47</u>
Utilization-ripper:	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
ipper own. cost/hour:	<u>NA</u>	NA	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
ipper op. cost/hour:	<u>NA</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
perator cost/hour:	<u>\$30.90</u>	NA	<u>\$38.59</u>	<u>\$38.59</u>	<u>\$27.76</u>	<u>\$0.00</u>
nit Subtotals:	<u>\$631.57</u>	NA	<u>\$394.44</u>	<u>\$53.59</u>	\$266.97	\$25.12
umber of Units:	8	<u>0</u>	<u>1</u>	<u>1</u>	1	<u>1</u>
	Work:	\$5,052.56	Support:	\$448.03	Maint:	\$292.09

## **MATERIAL QUANTITIES**

Initial volume:	7,476	CCY	Swell factor:	<u>1.000</u>
Loose volume:	<u>7,476</u>	<u>LCY</u>		

Source of estimated volume:

Appendix A, Table 1.4-9

Source 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
<u>Material</u>	Top Soil	Heaped Volume:	34.00	LCY
description:				_
Rated Payload:	<u>81,600 pounds</u>	<u>Average</u>	<u>29.00</u>	LCY
		Volume:		_
Payload Capacity:	<u>51.00 LCY</u>	Adjusted	<u>29.00</u>	LCY
		Capacity:		_

Cycle Time:

Scraper Loading Time:	<u>1.00 Minutes</u>
Maneuver and Spread Time:	0.60 Minutes

Job Condition Correction: Site Altitude: 6400 feet

	<b>Scraper</b>	Push Dozer	Source
Altitude Adj:	<u>1.000</u>	NA	(CAT HB)
Job Efficiency:	<u>0.830</u>	NA	(CAT HB)
Net Correction:	<u>0.830</u>	NA	

#### Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

<u>Seg #</u>	Haul Distance	Grade	Roll. Res	Total Res	Velocity	<u>Travel Time</u>
	(Ft)	(%)	(%)	(%)	(fpm)	(min)
<u>1</u>	1221.00	3.00	4.00	7.00	1362	0.95

Haul Time:

0.95 minutes

|--|

<u>Seg #</u>	Haul Distance	<u>Grade</u>	<u>Roll. Res</u>	Total Res	<u>Velocity</u>	<u>Travel Time</u>
	(Ft)	(%)	(%)	(%)	(fpm)	(min)
<u>1</u>	<u>1221.00</u>	<u>-3.00</u>	<u>4.00</u>	<u>1.00</u>	<u>2963</u>	<u>0.53</u>

Return Time: 0.53 minutes

Total Scraper team cycle time:	<u>3.08</u>	minutes
Adjusted for job conditions:	<u>937.79</u>	LCY/Hour
Selected Number of Scrapers:	8	Scraper(s)
Adjusted single scraper team (unit) hourly production:	3,751.17	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	<u>3,751.17</u>	LCY/Hour

<u>Unadjusted unit production/hour:</u> Optimal Number of Scrapers per push	<u>1,129.87</u> LCY/Hour	
dozer:		
JOB TIME AND COST		

Fleet size:	<u>1</u>	Team(s)	<u>Total job time:</u>	<u>1.99</u>	Hours
Unit cost:	<u>\$1.544</u>	/LCY	Total job cost:	<u>\$11,545</u>	

Task description:       Replace Topsoil JPE 1 to J East							
Site: <u>Trapper Mine</u> Permit Action:				<u>PR12</u>	Permit/Job	<u>#: C1981010</u>	<u>)</u>
PROJECT IDENT	<b>IFICATION</b>						
$\begin{array}{c} \underline{\text{Task } \#:} \\ \underline{\text{Date:}} \\ \underline{\text{User:}} \\ \hline \\ \underline{\text{RAR}} \end{array} $			<u>Colorado</u> Moffat	<u>)</u>	<u>Abbreviati</u> <u>Filename:</u>	<u>on: None</u> 091 TF	<u>R135</u>
Agency or organiz	ation name:	DRM	<u>IS</u>				
HOURLY EQUIPMENT COSTShift basis: 1 per day Equipment Description							
<u>-Scraper:</u>	esemption		Cat 63	7G w/push-pul	l		
-Dozer:		-	NA	<u> </u>	-		
Support Equipmen	t -Load Area:		Cat D10T - 10SU				
-Dump Area:		-	Cat D10T - 10SU				
Road Maintenance	-Motor Grader		CAT 16M				
-Water Truck:			Water Tanker, 2,500 Gal.				
Cost Breakdown:	Scraper Worl	k Team	Suppor	rt Equipment	Maintenance Ed	uipment	
	<u>Scraper</u>	Dozer		Load Area	Dump Area	<u>Motor</u>	<u>Water</u>
						<u>Grader</u>	Truck
<u>%Utilization-machine:</u>	<u>100</u>	<u>NA</u>		<u>50</u>	<u>50</u>	<u>50</u>	<u>60</u>
Ownership cost/hour:	<u>\$281.32</u>	<u>NA</u>		<u>\$257.39</u>	<u>\$257.39</u>	<u>\$179.39</u>	<u>\$11.65</u>
Operating cost/hour:	<u>\$319.35</u>	<u>NA</u>		<u>\$98.47</u>	<u>\$98.47</u>	<u>\$59.82</u>	<u>\$13.47</u>
<u>%Utilization-ripper:</u>	<u>NA</u>	<u>NA</u>		<u>NA</u>	NA	<u>NA</u>	<u>NA</u>
Ripper own. cost/hour:NA				<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
Ripper op. cost/hour:	NA	<u>NA</u>		<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
Operator cost/hour:	<u>\$30.90</u>	<u>NA</u>		<u>\$38.59</u>	<u>\$38.59</u>	<u>\$27.76</u>	<u>\$21.12</u>
<u>Unit Subtotals:</u>	<u>\$631.57</u>	NA		<u>\$394.44</u>	<u>\$394.44</u>	<u>\$266.97</u>	<u>\$46.24</u>

1

Support:

1

<u>\$788.88</u>

1

Maint:

Total work team cost/hour: \$6,154.65

8

Work:

# **MATERIAL QUANTITIES**

Number of Units:

Group Subtotals:

Initial volume:	74,052	CCY	Swell factor:	1.000
Loose volume:	<u>74,052</u>	LCY		

0

\$5,052.56

1

\$313.21

Source of estimated volume:	<u>Appendix A, Table A-10.7</u>
Source of estimated swell factor:	Cat Handbook

## **HOURLY PRODUCTION**

Scraper Bowl (volume) Basis:

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

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time: 1.00 Minutes 0.60 Minutes

Job Condition Correction: Site Altitude: 6400 feet

	<b>Scraper</b>	Push Dozer	Source
Altitude Adj:	<u>1.000</u>	NA	(CAT HB)
Job Efficiency:	<u>0.830</u>	NA	(CAT HB)
Net Correction:	<u>0.830</u>	NA	

## Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

### Haul Route:

Seg #	Haul Distance	Grade	Roll. Res	<b>Total Res</b>	<b>Velocity</b>	<b>Travel Time</b>
	<u>(Ft)</u>	(%)	(%)	<u>(%)</u>	(fpm)	(min)
<u>2</u>	400.00	<u>6.25</u>	4.00	<u>10.25</u>	<u>922</u>	<u>0.46</u>
<u>3</u>	<u>764.00</u>	-3.90	<u>4.00</u>	0.10	<u>2965</u>	<u>0.36</u>
<u>4</u>	<u>1053.00</u>	<u>-6.70</u>	4.00	<u>-2.70</u>	<u>2972</u>	<u>0.42</u>

Haul Time:

<u>1.24</u> minutes

<u>Return Re</u>	oute:						
Seg #	Haul Distance	<b>Grade</b>	Roll. Res	Total Res	<b>Velocity</b>	<b>Travel Time</b>	
	<u>(Ft)</u>	<u>(%)</u>	<u>(%)</u>	<u>(%)</u>	<u>(fpm)</u>	<u>(min)</u>	
<u>2</u>	400.00	-6.25	4.00	-2.25	<u>2972</u>	0.19	
<u>3</u>	<u>764.00</u>	<u>3.90</u>	4.00	<u>7.90</u>	<u>1931</u>	0.19	
<u>4</u>	<u>1053.00</u>	<u>6.70</u>	4.00	<u>10.70</u>	<u>1434</u>	0.65	
			<u>Return Tii</u>	<u>me:</u>	<u>1.03</u>	<u>minutes</u>	
	Scraper team cycle tin				<u>3.87</u>	minutes	
	ed for job conditions:				746.36	<u>LCY/Hour</u>	
	ed Number of Scraper				8	<u>Scraper(s)</u>	
	ed single scraper tear		• •		2,985.43	<u>LCY/Hour</u>	
<u>Adjust</u>	ed multiple scraper te	am (fleet)	nourly product	<u>10n:</u>	<u>2,985.43</u>	LCY/Hour	
Unadjusted unit production/hour:899.22LCY/HourOptimal Number of Scrapers per push dozer:							
JOB TIME AND COST							
<u>Fleet siz</u>	<u>e: 1</u>	Team(s)	<u>Total job</u>	o time:	24.80	Hours	
Unit cos	<u>\$2.062</u>	/LCY	<u>Total job</u>	o cost:	<u>\$152,663</u>		

Task description:       Replace Topsoil at L Pit K Knob L23-1 to K Knob TR135							
Site: _ <u>Trapper Mine</u>	<u></u> <u>Pe</u>	rmit Acti	on: <u>PR12</u>	Permit/Jol	<u>o#: C198</u>	<u>31010</u>	
PROJECT IDEN	<b>TIFICATION</b>						
$\begin{array}{c} \underline{\text{Task #:}} & \underline{0914} \\ \underline{\text{Date:}} & \underline{2/25} \\ \underline{\text{User:}} & \underline{\text{RAR}} \end{array}$	<u>/2025</u> Cou		<u>Colorado</u> Moffat	<u>Abbreviat</u> <u>Filename</u> :		<u>one</u> 1 <u>A 135TR</u>	
Agency or organization name: DRMS							
HOURLY EQUI	PMENT COS	TShift ba	usis: 1 per day				
Equipment	Description						
-Scraper:			Cat 637G w/push-pu	11			
-Dozer:			NA				
Support Equipme	ent -Load Area:		Cat D10T - 10SU				
-Dump Area:			Cat D10T - 10SU				
Road Maintenan	ce – Motor Grade	<u>er:</u>	<u>CAT 16M</u>				
-Water Truck:			Water Tanker, 2,500 Gal.				
Cost Breakdown:	Scraper Wo	ork Team	Support Equipment	Maintenance E	quipment		
	<u>Scraper</u>	Dozer	Load Area	Dump Area	<u>Motor</u> <u>Grader</u>	Water Truck	
%Utilization-machine:	100	NA	<u>50</u>	<u>50</u>	<u>50</u>	<u>60</u>	
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	<u>\$11.65</u>	
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47	
%Utilization-ripper:	NA	NA	NA	NA	NA	NA	
Ripper own. cost/hour:	NA	NA	\$0.00	<u>\$0.00</u>	\$0.00	\$0.00	
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00	
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12	
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24	
Number of Units:	8	0	1	1	1	1	

\$5,052.56

Support:

Total work team cost/hour: \$6,154.65

Work:

Group Subtotals:

\$313.21

<u>\$788.88</u>

Maint:

# **MATERIAL QUANTITIES**

Initial volume: Loose volume:	7,920 <b>7,920</b>	<u> </u>	Swell factor:	1.000	
Source of estimat Source of estimat			ndix A, Table A-10 andbook	.7	
HOURLY PROD	UCTION				
Scraper Boy	wl (volume) Basis:				
<u>Material weight:</u> <u>Material</u> description:	1,600 lbs/LCY Top Soil		Struck Volume Heaped Volume		LCY LCY
Rated Payload:	81,600 pounds		<u>Average</u> Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>		<u>Adjusted</u> <u>Capacity:</u>	<u>29.00</u>	LCY
Cycle Time:					
Scraper Loading 7 Maneuver and Spr			<u>1.00 Minutes</u> 0.60 Minutes		
Job Condition Corr	rection: Site Altit	tude: 6400 f	eet		
	<u>Scraper</u>	Push Do	zer <u>Source</u>		
Altitude Adj:	1.000	NA	(CAT H	(B)	
Job Efficiency:	<u>0.830</u>	<u>NA</u>	<u>(CAT H</u>	( <u>B)</u>	
Net Correction:	<u>0.830</u>	<u>NA</u>			
Travel Time:					

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

<u>Seg #</u>	Haul Distance	Grade (%)	Roll. Res	Total Res (%)	<u>Velocity</u> (fpm)	Travel Time (min)
2	732.00	<u>-3.40</u>	4.00	0.60	<u>2952</u>	0.41

Haul Time:

**0.41** minutes

Return R	bute.						
Seg #	Haul Distance	Grade	Roll. Res	Total Res	<b>Velocity</b>	<b>Travel Time</b>	
	<u>(Ft)</u>	<u>(%)</u>	<u>(%)</u>	<u>(%)</u>	<u>(fpm)</u>	<u>(min)</u>	
<u>1</u>	<u>732.00</u>	<u>3.40</u>	<u>4.00</u>	<u>7.40</u>	<u>2240</u>	<u>0.46</u>	
<u>Return Time:</u>					<u>0.46</u>	<u>minutes</u>	
Total Scraper team cycle time:2.47							
	ed for job conditions	-			<u>1,169.39</u>	LCY/Hour	
-	ed Number of Scrape				<u>8</u>	Scraper(s)	
	ed single scraper tear				<u>4,677.57</u>	LCY/Hour	
<u>Adjust</u>	ed multiple scraper to	eam (fleet)	hourly produc	tion:	<u>4,677.57</u>	LCY/Hour	
Unadjusted unit production/hour:1,408.91LCY/HourOptimal Number of Scrapers per push dozer:							
JOB TIME AND COST							
Fleet siz	<u>ze: 1</u>	Team(s)	<u>Total jol</u>	b time:	1.69	Hours	
<u>Unit cos</u>	<u>\$1.316</u>	/LCY	<u>Total jol</u>	b cost:	<u>\$10,421</u>		

Task description:       Replace Topsoil at C Pit Future TS Pile TR134								
Site: Trapper Mine	Perr	nit Action	: <u>PR12</u>	Permit/Job	<u>o#: <u>C1981</u></u>	<u>010</u>		
PROJECT IDENT	<b>TIFICATION</b>							
Task #: $092A^{\prime}$ Date: $2/25/2$ User:RAR		·	<u>lorado</u> <u>ffat</u>	<u>Abbreviat</u> <u>Filename:</u>		<u>ne</u> 2 <u>A TR134</u>		
Agency or organization name: <u>DRMS</u>								
HOURLY EQUIPMENT COSTShift basis: 1 per day								
Equipment 1	Description							
-Scraper:		<u>C</u>	Cat 637G w/push-pu	<u>ıll</u>				
-Dozer:		N	NA					
Support Equipmer	nt -Load Area:	<u>C</u>	<u>Cat D10T - 10SU</u>					
-Dump Area:		<u>C</u>	<u>Cat D10T - 10SU</u>					
Road Maintenance	e – Motor Grader		<u>CAT 16M</u>					
-Water Truck:		V	Water Tanker, 2,500 Gal.					
<b>Cost Breakdown:</b> Scraper Work Team Support Equipment Maintenance Equipment								
	Scraper	Dozer	Load Area	Dump Area	Motor	Water		
					Grader	Truck		
%Utilization-machine:	100	NA	<u>50</u>	<u>50</u>	<u>50</u>	<u>60</u>		
Ownership cost/hour:	<u>\$281.32</u>	NA	\$257.39	<u>\$257.39</u>	<u>\$179.39</u>	\$11.65		
Operating cost/hour:	\$319.35	NA	<u>\$98.47</u>	\$98.47	\$59.82	<u>\$13.47</u>		

Total work team cost/hour: \$6,154.65

8

NA

NA

NA

\$30.90

Work:

\$631.57

# **MATERIAL QUANTITIES**

%Utilization-ripper:

Ripper own. cost/hour:

Ripper op. cost/hour:

Operator cost/hour:

Unit Subtotals:

Number of Units:

Group Subtotals:

Initial volume:	<u>122,242</u>	CCY	Swell factor:	<u>1.000</u>
Loose volume:	<u>122,242</u>	<u>LCY</u>		

\$5,052.56

NA

NA

NA

NA

NA

0

Source of estimated volume:

Appendix A, Table A-10.2

NA

\$0.00

\$0.00

<u>\$38.59</u>

1

\$394.44

Support:

NA

\$0.00

\$0.00

<u>\$38.59</u>

1

\$394.44

<u>\$788.88</u>

NA

\$0.00

\$0.00

<u>\$27.76</u>

\$266.97

Maint:

1

NA

\$0.00

\$0.00

\$21.12

\$46.24

\$313.21

1

Source 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
<u>Material</u>	Top Soil	Heaped Volume:	<u>34.00</u>	LCY
description:				_
Rated Payload:	<u>81,600 pounds</u>	Average	<u>29.00</u>	LCY
		Volume:		_
Payload Capacity:	<u>51.00 LCY</u>	<u>Adjusted</u>	<u>29.00</u>	LCY
		Capacity:		_

Cycle Time:

Scraper Loading Time:	<u>1.00 Minutes</u>
Maneuver and Spread Time:	0.60 Minutes

Job Condition Correction: Site Altitude: 6400 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	<u>0.830</u>	NA	(CAT HB)
Net Correction:	<u>0.830</u>	<u>NA</u>	

#### Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

Seg #	Haul Distance	Grade	Roll. Res	<b>Total Res</b>	Velocity	<b>Travel Time</b>
	<u>(Ft)</u>	<u>(%)</u>	<u>(%)</u>	<u>(%)</u>	<u>(fpm)</u>	<u>(min)</u>
<u>1</u>	2000.00	-4.50	<u>4.00</u>	-0.50	<u>2972</u>	0.72

Haul Time:

<u>0.72</u> minutes

Return Route:
---------------

Seg #	Haul Distance	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	<u>Travel Time</u> (min)
1	<u>2000.00</u>	<u>(78)</u> <u>4.50</u>	4.00	<u>8.50</u>	<u>(1911)</u> <u>1931</u>	<u>1.13</u>

Return Time:1.13minutes

Total Scraper team cycle time:	<u>3.45</u>	minutes
Adjusted for job conditions:	837.22	LCY/Hour
Selected Number of Scrapers:	8	Scraper(s)
Adjusted single scraper team (unit) hourly production:	3,348.87	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	<u>3,348.87</u>	LCY/Hour

<u>Unadjusted unit production/hour:</u> Optimal Number of Scrapers per push	<u>1,008.70</u> <u>LCY/Hour</u>	
dozer:		
JOB TIME AND COST		

Fleet size:	<u>1</u>	Team(s)	<u>Total job time:</u>	<u>36.50</u>	Hours
Unit cost:	<u>\$1.838</u>	/LCY	Total job cost:	<u>\$224,660</u>	

Colorado	Abbreviation:	None
	Abbreviation:	Nona
		None
Moffat	Filename:	096
Cat 637G w/push-pull		
NA		
11/1		
Cat D10T - 10SU		
Cat D10T - 10SU Cat D10T - 10SU		
Cat D10T - 10SU		
	RMS t basis: <u>1 per day</u> Cat 637G w/push-pull	RMS t basis: <u>1 per day</u> Cat 637G w/push-pull

	Scraper	Dozer	Load Area	Dump Area	Motor	Water
					Grader	Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
% Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: <u>\$6,154.65</u>

# **MATERIAL QUANTITIES**

Initial volume: Loose volume:	66,713 66,713	CCY LCY	Swell factor:	1.000
Source of estimated	l volume:	A-9.1		

Source of estimated swell factor:

Cat Handbook

# **HOURLY PRODUCTION**

## Scraper Bowl (volume) Basis:

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

### Cycle Time:

Scraper Loading Time:	<u>1.00</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

## Job Condition Correction: Site Altitude: 6400 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: <u>Rutted dirt, little maintenance, no water, 1" tire penetration 4.0</u>

#### Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	498.00	1.00	4.00	5.00	1867	0.37

Haul Time:

0.37 minutes

## Return Route:

Seg #	Haul Distance	Grade	Roll. Res	Total Res	Velocity	Travel Time
	(Ft)	(%)	(%)	(%)	(fpm)	(min)
1	498.00	-1.00	4.00	3.00	2949	0.32

Return Time: 0.32 minutes

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Total Scraper team cycle time:	2.29	minutes
Adjusted for job conditions:	1,261.31	LCY/Hour
Selected Number of Scrapers:	8	Scraper(s)
Adjusted single scraper team (unit) hourly production:	5,045.24	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	5,045.24	LCY/Hour

0	unit production mber of Scrape		1,519.65 LCY/Hou	r	
JOB TIME A	AND COST				
Fleet size:	1	Team(s)	Total job time:	13.22	Hours
Unit cost:	\$1.220	/LCY	Total job cost:	\$81,383	

# TRUCK/LOADER TEAM WORK

Task description	: Replac	e Topsoil a	nt We	st Panel, BC 1	rd, Shop (Ti	ruck/Excavat	tor)
Site: Trapper Mine	<u>e</u>	Permit Act	ion:	PR12	Pe	rmit/Job#:	C1981010
PROJECT IDEN	<b>NTIFICATIO</b>	<u>N</u>					
Task #:096.	A S	tate:	Color	ado	At	breviation:	None
Date: 2/18 User: RAI		County: _	Moffa	at	Fil	ename:	096A
Agency or organ		DR	MS				
HOURLY EQUI	PMENT CO	ST Shift	basis:	<u>1 per day</u>			
Equipmen	t Description						
Truck Loader Te	eam -Truck:		Cat	777F			
-Loader:			Cat	385C L 18'-1	l" Stick		
Support Equipm	ent -Load Are	ea:	Cat	D10T - 10SU			
-Dump Area:			Cat	D10T - 10SU			
Road Maintenan	ce – Motor Gr	ader:	CA	T 16M			
-Water Truck:			Wa	ter Tanker, 2,5	500 Gal.		
<u>Cost Breakdown</u>	: Truck/Lo	ader Team	1	port Equipmer	nt Mainter		Water
%Utilization-						Grader	Truck
machine:	100	100		25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92		\$257.39	\$257.39	\$179.39	9 \$11.65
Deprating cost/hour:	\$152.44	\$131.31		\$49.23	\$49.23	\$29.91	\$11.23
6 Utilization-riper:	NA	0		15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00		\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00		\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87		\$38.59	\$38.59	\$27.76	\$22.07
Unit Subtotals:	\$377.15	\$386.10		\$347.11	\$345.21	\$237.00	6 \$44.95
Number of Units:	3	1		1	1	1	1
Group Subtotals:	Work:	\$1,517.	55	Support:	\$692.32	Maint:	\$282.01

Total work team cost/hour: **<u>\$2,491.88</u>** 

# **MATERIAL QUANTITIES**

Initial volume:	171,625	CCY	Swell factor:	1.000	_
Loose volume:	171,625	LCY			
Source of estimate	ed volume:	TR124	Appendix A Tabl	e A-3.1	
Source of estimate	ed swell factor:		indbook		
Material Purchase	cost:	\$0.00			
Total Cost:		\$0.00			
HOURLY PRODU	UCTION				
Truck Capacity:					
Truck Payload (wei	ight) Basis:				
Material weight:	1,600		Pounds/LCY		
Description:	Top Soil				
Rated Payload:	200,000		Pounds		
Payload Capacity	125.00		LCY		
Truck Bed (volume	e) Basis:				
Struck Volume	e: 60.60	LCY			
Heaped Volume	: 78.80	LCY			
Average Volume	e: 69.70	LCY			
Adjusted Volume	: 78.80	LCY			
Final Truck Volur	ne Based on Numb	er of Loader	Passes:	77.72	LCY
Loading Tool Capa	city				
Louding 1001 Capa	<u>~117</u>	Buck	et Size Class:		Large
					8
Rated Capacity:	7.850	· · · · · · · · · · · · · · · · · · ·	heaped)		
Bucket Fill Factor			<ul> <li>rock/dirt mixtures</li> </ul>	s (100-120%)	1.100
Adjusted Capacity	<b>8.635</b>	LCY			

# Job Condition Corrections: Site Altitude (ft.): 6400 feet

	Truck	Loader	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Loading Tool Cycle Time	Number of Loading Tool Passes Required to Fill Truck:					9		passes
Excavators and Front Show	vels:							
Machine Cycle Time vs. Rating:	Job Condition	n A	BOVE A	VERAGE				
Selected Value within thi	s Basic Ratin	g: A	VERAG	E				
Track Loaders – Material	Description:							
Cycle Time Elements (mir	ı.):							
Load: NA	Maneuver:	N	A	Dump:		0.100	)	
Wheel and Track Loader maneuver):	s - Unadjusted	d Basic Load	er Cycle	Time (load	, dump,	NA	m	inutes
Cycle Time Factors					Factor (n	nin.)	Source	
Material:	NA				NA		(Cat HB)	
Stockpile:	NA				NA		(Cat HB)	
Truck Ownership:	NA				NA		(Cat HB)	
Operation:	NA				NA		(Cat HB)	
Dump Target:	NA				NA		(Cat HB)	
	Net Cycle 7	Time Adjustn	nent:		NA		minutes	
	Adjusted Lo	bader Cycle	Time:		0.302		minutes	
	Net Load T	ime per Truc	k:	-	2.516		minutes	
Truck Cycle Time:								
ruck Exchange Time:	0.80	Minutes	Adjus	ted for site a	ltitude:		0.800	Minutes
Truck Load Time:	2.516	Minutes	5	ted for site a		_	2.516	Minutes
Truck Maneuver and Dump	1.20	Minutes	•	ted for site a			1.200	Minutes
Truck Travel (Haul & Retu maintained 3.0	<u>urn) Time: </u> Ro	ad Condition	n: <u>Firm, 1</u>	smooth, roll	ing, dirt/lt	<u>. surfac</u>	ced, watered	<u>.</u>

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time
						(min)
1	7375.00	-1.00	3.00	2.00	3328	2.961

Haul Time: **2.961** minutes

	Return Ro	oute:							
	Seg #	Hau	l Distance	Grade (%)	Roll. Res	Total	Velocity	Travel	
		(Ft)			(%)	Res (%)	(fpm)	Time	
								(min)	
	1	7375	5.00	1.00	3.00	4.00	3411	2.477	
				eturn Time: Jotal Truck Cy	cle Time:		2.477 9.954	minute	
Loadi	ng Tool ur	nit							
Produ	ction		1,406.18	LCY/Hou	ır Adjust	ed for job ef	ficiency:	1,167.13	LCY/Hour
Truck	Unit								
Produ	ction		468.44	LCY/Hou	ır Adjust	ed for job ef	ficiency:	388.81	LCY/Hour
Optim Truck	al No. of s:		3	Truck(s)	Selecte	ed Number o	of Trucks:	3	Truck(s)
	Adjust	ed hor	irly truck tea	m production:			1,166.4	I CY	//Hour
				ler team produ			1,166.4		/Hour
			0	bader team pro			1,166.4		//Hour
	5		ND COST	1					
	Fleet siz	e: _	1	Team(s)	Total jo	b time:	147.14	Н	ours
	Unit cos	t: _	\$2.136	/LCY	Total jo	b cost:	\$366,648		

Task descri	ption: <u>Rep</u>	at East I	Panel Ponds, A	road (Scraper)					
Site: Trapper	Mine	Permit Ac	tion:	PR12	Permit/Job	#: <u>C19</u>	981010		
<b>PROJECT</b>	IDENTIFICAT	<u>'ION</u>							
Task #:	097	State:	Colorad	0	Abbreviati	on: 1	None		
Date:	2/18/2025	County:	Moffat		Filename:	(	097		
User:	RAR	_							
A constraint	oncontration no.		MC						
Agency or	organization na	ne: DR	SMS				<u></u>		
HOURLY	EQUIPMENT	COSTShift	basis: 1 t	ber dav					
<u> </u>		00010111		<u>, ei aay</u>					
Equi	pment Descripti	on							
-Scraper:			Cat 63	37G w/push-pul	1				
-Dozer:			NA	NA					
	uipment -Load	Area:		Cat D10T - 10SU					
-Dump Are				10T - 10SU					
	tenance – Motor	Grader:	_	CAT 16M					
-Water Tru	ick:		Water	Water Tanker, 2,500 Gal.					
<u>Cost Break</u>	down: Scrap	er Work Tear	n Suppo	rt Equipment	Maintenance Ec	quipment			
	Scrape	r Doze	er	Load Area	Dump Area	Motor	Water		
						Grader	Truck		
%Utilization-machin	ne: 100	NA		50	50	50	60		
Ownership cost/hou	r: \$281.3	2 NA		\$257.39	\$257.39	\$179.39	9 \$11.65		
Operating cost/hour: \$319.35 NA				\$98.47	\$98.47	\$59.82	\$13.47		

Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
% Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: <u>\$6,154.65</u>

## **MATERIAL QUANTITIES**

Initial volume:	114,647	CCY	Swell factor:	1.000
Loose volume:	114,647	LCY		

Source of estimated volume:

Appendix A, Table 1.4-9

Source of estimated swell factor:

Cat Handbook

# **HOURLY PRODUCTION**

## Scraper Bowl (volume) Basis:

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

### Cycle Time:

Scraper Loading Time:	<u>1.00</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

## Job Condition Correction: Site Altitude: 6400 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

#### Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

#### Haul Route:

Seg #	Haul Distance	Grade	Roll. Res	Total Res	Velocity (frm)	Travel Time
	( <b>F</b> t)	(%)	(%)	(%)	(fpm)	(min)
1	390.00	-5.50	3.00	-2.50	2972	0.18

Haul Time:

0.18 minutes

#### Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	390.00	5.50	3.00	8.50	1931	0.30

Return Time: **0.30** minutes

Total Scraper team cycle time:	2.08	minutes
Adjusted for job conditions:	1,388.65	LCY/Hour
Selected Number of Scrapers:	8	Scraper(s)
Adjusted single scraper team (unit) hourly production:	5,554.62	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	5,554.62	LCY/Hour

5	init production/ nber of Scraper		1,673.08 LCY/Ho	ur	
JOB TIME A	ND COST				
Fleet size:	_1	Team(s)	Total job time:	20.64	Hours
Unit cost:	\$1.108	/LCY	Total job cost:	\$127,032	

# TRUCK/LOADER TEAM WORK

Task description	: Replac	e Topsoil at I	East Panel Pond	s, A Rd (Truck	/Excavato	r)			
Site: Trapper Mine	2	Permit Action	e: PR12	Perm	it/Job#:	C1981010			
PROJECT IDEN	TIFICATIO	<u>N</u>							
Task #: 0974	<u>A</u> S		lorado	Abbro	eviation:	None			
Date: 2/18 User: RAF		County: <u>Mo</u>	offat	Filena	ame:	097A			
Usel. KAr	<u> </u>								
Agency or organ	ization name:	DRMS							
HOURLY EQUI	PMENT CO	ST Shift bas	sis: <u>1 per day</u>						
		_							
Truck Loader Te	t Description am -Truck:	(	Cat 777F						
-Loader:	uni muex.		Cat 385C L 18'-1" Stick						
Support Equipm	ent -Load Are		Cat D10T - 10SU						
-Dump Area:			Cat D10T - 10SU	ſ					
Road Maintenan	ce –Motor Gr	ader: (	CAT 16M						
-Water Truck:		V	Water Tanker, 2,5	500 Gal.					
<u>Cost Breakdown</u>	Truck/Lo	eader Team S	Support Equipme	nt Maintenan Dump Area	ce Equipmo	ent Water			
					Grader	Truck			
%Utilization- machine:	100	100	25	25	25	50			
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65			
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23			
%Utilization-riper:	NA	0	15	NA	NA	NA			
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00			
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00			
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$22.07			
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$44.95			
Number of Units:	3	1	1	1	1	1			
Group Subtotals:	Work:	\$1,517.55	Support:	\$692.32	Maint:	\$282.01			

Total work team cost/hour: <u>\$2,491.88</u>

# **MATERIAL QUANTITIES**

Initial volume:	244,270	CCY	Swell	factor:	1.000	
Loose volume:	244,270	LCY				
Course of estimated	volumo	TD 1 <b>2</b> 4	Annondi	w A Table	A 2 1	
Source of estimated Source of estimated			Appendi ndbook	ix A Table	e A-3.1	
Material Purchase C		\$0.00	IIUUUUK			
Total Cost:	.081.	\$0.00				
Total Cost.		<i>φ</i> 0.00				
HOURLY PRODUC	CTION					
Truck Capacity:						
Truck Payload (weight	ht) Basis:					
Material weight:	1,600		Pounds	/LCY		
Description:	Top Soil					
Rated Payload:	200,000		Pounds			
Payload Capacity:	125.00		LCY			
Truck Bed (volume)	Basis					
Struck Volume:	60.60	LCY				
Heaped Volume:	78.80	LCY				
Average Volume:	69.70	LCY				
Adjusted Volume:	78.80	LCY				
5						
Final Truck Volume	e Based on Numb	er of Loader	Passes:		77.72	LCY
Loading Tool Capaci	tv					
<u></u>	<u></u>	Bucke	et Size Cl	ass:		Large
	7.050					
Rated Capacity:	7.850	LCY (l		4	(100, 120	0/) 1 100
Bucket Fill Factor:	1.100		· rock/dir	t mixtures	(100-120	%) 1.100
Adjusted Capacity:	8.635	LCY				
Job Condition Corr	ections: Site Alti	tude (ft.): <u>64</u>	<u>00</u> feet			
				~		
A 1.*. 1 A 1*	Truck	Loader		Source		
Altitude Adj:	1.000	1.000		(CAT H	,	
Job Efficiency:	0.830	0.830		(CAT H	В)	
Net Correction:	0.830	0.830				

Loading Tool Cycle Time:	Number of Loading Tool Passes Required to	0	passes
	Fill Truck:	9	

Excavators and Front Shovels:

Machine Cycle Time vs. Rating:	Job Condition	Al	BOVE AVERAGE	3		
Selected Value within thi	is Basic Rating	g: A'	VERAGE			
Track Loaders – Material	l Description:					
Cycle Time Elements (mir	1.):					
Load: NA	Maneuver:	_N.	A Dump	o: <u>0.</u>	100	-
Wheel and Track Loader maneuver):	s - Unadjusted	Basic Load	er Cycle Time (loa	d, dump, N	A	minutes
Cycle Time Factors				Factor (min.)	Source	
Material:	NA			NA	NA (Cat H	
Stockpile:	NA			NA	(Cat H	B)
Truck Ownership:	NA			NA	(Cat H	B)
Operation:	NA			NA	(Cat H	B)
Dump Target:	NA			NA	(Cat H	B)
	Net Cycle Ti	ime Adjustn	nent:	NA	minute	S
	Adjusted Loa	ader Cycle 7	Time:	0.302	minute	S
	Net Load Ti	me per Truc	k:	2.516	minute	S
Truck Cycle Time:						
Truck Exchange Time:	0.80	Minutes	Adjusted for site	altitude:	0.800	Minutes
Truck Load Time:	2.516	Minutes	Adjusted for site	altitude:	2.516	Minutes
Truck Maneuver and Dump Time:	1.20	Minutes	Adjusted for site	altitude:	1.200	Minutes
Truck Travel (Haul & Retume maintained 3.0	urn) <u>Time:</u> Roa	ad Condition	: <u>Firm, smooth, ro</u>	lling, dirt/lt. sur	faced, water	red,

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time
						(min)
1	4345.00	-1.00	3.00	2.00	3328	2.050

Haul Time: **2.050** minutes

	Return Ro	oute:							
	Seg #	Hau	l Distance	Grade (%)	Roll. Res	Total	Velocity	Travel	
		(Ft)			(%)	Res (%)	(fpm)	Time	
								(min)	_
	1	737:	5.00	1.00	3.00	4.00	3411	2.477	
				Return Time: Fotal Truck Cy	cle Time:		2.477 9.043	minute	
Loadi	ng Tool ui	nit							
Produ	ction		1,406.18	LCY/Hou	r Adjust	ed for job ef	ficiency:	1,167.13	LCY/Hour
Truck	Unit								
Produ	ction		515.64	LCY/Hou	r Adjust	ed for job ef	ficiency:	427.98	LCY/Hour
Optim Truck	al No. of s:		3	Truck(s)	Selecte	ed Number o	of Trucks:	3	Truck(s)
	Δdiust	ed hoi	irly truck tea	m production:			1,283.9	)3 I C	Y/Hour
				der team produ			1,167.1		Y/Hour
			0	bader team produced			1,167.1		Y/Hour
	110,000							20	
	JOB TIM	IE AN	ND COST						
	Fleet siz	e:	1	Team(s)	Total jo	b time:	209.29	H	lours
	Unit cos	:	\$2.135	/LCY	Total jo	b cost:	\$521,528		

Task description	n: <b>Re-tops</b>	oil Johnson Coa	l Stockpile			
Site: _Trapper Min	e P	ermit Action:	PR12	Permit/Jol	o#: <u>C19810</u>	10
PROJECT IDE	NTIFICATION					
Task #:098	3Sta	te: Colora	do	Abbreviat	ion: <u>None</u>	•
Date: 2/1	8/2025 Co	unty: Moffat		Filename:	098	
User: RA	R					
-Scraper:	nt Description		537G w/push-pu	11		
-Dozer:		NA				
	nent -Load Area:		D10T - 10SU			
-Dump Area:	nce – Motor Grad		D10T - 10SU `16M			
-Water Truck:			er Tanker, 2,500	Gal		
Cost Breakdown	<b>n:</b> Scraper W	ork Team Supp		Maintenance E	quipment	
	Scraper	Dozer	Load Area	Dump Area	Motor	Water
					Grader	Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
0/ I Itilization rinner	NΛ	NΛ	NΛ	NIΛ	NΛ	NΛ

operating cost nour.	$\psi J 1 J . J J$	1111	$\psi$	$\psi$	$\psi J J . 0 \Delta$	$\psi_{1,2,+7}$
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: <u>\$6,154.65</u>

# **MATERIAL QUANTITIES**

Initial volume:	20,360	CCY	Swell factor:	1.000
Loose volume:	20,360	LCY		

Source of estimated volume:

**Division Estimate** 

Source of estimated swell factor:

Cat Handbook

# **HOURLY PRODUCTION**

Scraper Bowl (volume) Basis:

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

Cycle Time:

Scraper Loading Time:	<u>1.00</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction: Site Altitude: 6400 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance	Grade	Roll. Res	Total Res	Velocity	Travel Time
	( <b>Ft</b> )	(%)	(%)	(%)	(fpm)	(min)
1	625.00	3.20	3.00	6.20	1477	0.48

Haul Time:

0.48 minutes

**Return Route:** 

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	625.00	-3.20	3.00	-0.20	2972	0.27

Return Time: 0.27 minutes

Total Scraper team cycle time:	2.35	minutes
Adjusted for job conditions:	1,229.11	LCY/Hour
Selected Number of Scrapers:	8	Scraper(s)
Adjusted single scraper team (unit) hourly production:	4,916.43	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	4,916.43	LCY/Hour

5	unit production mber of Scrape		<u>1,480.85</u> LCY/Hou	r	
JOB TIME A	AND COST				
Fleet size:	_1	Team(s)	Total job time:	4.14	Hours
Unit cost:	\$1.252	/LCY	Total job cost:	\$25,488	

Site:	Trapper Mine	P	Permit A	ction: P	R12	Permit/Jol	o#: <u>C1</u>	981010	
<u>P</u> ]	ROJECT IDENTIF	ICATION							
	Task #: 098MR2	229 St	tate: (	Colorado		Abbrev	iation:	None	
	Date: 2/25/202			Moffat			name:	C010-098	8MR229
	User: RAR								
	Agency or o	organization name:	DRM	S					
ш	οιίοι ν εοιίιολι	2017			COSTSLiftha				
<u> </u>	OURLY EQUIPME				COSTShift bas	sis: <u>I per day</u>			
					escription				
			craper:	Cat 637 NA	G w/push-pull				
	Suppo	rt Equipment -Load	Dozer: Area:		T - 10SU				
		-Dump	Area:	Cat D10	T - 10SU				
	Road Ma	intenance – Motor C		CAT 16					
		-Water	I ruck:	water 1	anker, 2,500 Gal.				
<u>C</u>	ost Breakdown:	Scraper Work Te	am	S	Support Equipment	Ma	intenan	ce Equipme	ent
		Scraper	Do	zer	Load Area	Dump Area	Motor	Grader	Water
%	Utilization-machine:	100		NA	50	50		50	
	1	\$281.32		NA	\$257.39	\$257.39		\$179.39	
C	Ownership cost/hour:	\$ <b>2</b> 8110 <b>2</b>							
	Operating cost/hour:	\$319.35		NA	\$98.47	\$98.47		\$59.82	
	_			NA NA	\$98.47 NA	\$98.47 NA		\$59.82 NA	
	Operating cost/hour:	\$319.35							
Rij	Operating cost/hour: %Utilization-ripper:	\$319.35 NA		NA	NA	NA		NA	
Rij	Operating cost/hour: %Utilization-ripper: pper own. cost/hour:	\$319.35 NA NA		NA NA	NA \$0.00	NA \$0.00		NA \$0.00	
Rij	Operating cost/hour: %Utilization-ripper: pper own. cost/hour: Ripper op. cost/hour:	\$319.35 NA NA NA		NA NA NA	NA \$0.00 \$0.00	NA \$0.00 \$0.00		NA \$0.00 \$0.00	
Rij	Operating cost/hour: %Utilization-ripper: pper own. cost/hour: Ripper op. cost/hour: Operator cost/hour:	\$319.35 NA NA NA \$30.90		NA NA NA NA	NA \$0.00 \$0.00 \$38.59	NA \$0.00 \$0.00 \$38.59		NA \$0.00 \$0.00 \$27.76	
Rij	Operating cost/hour: %Utilization-ripper: pper own. cost/hour: Ripper op. cost/hour: Operator cost/hour: Unit Subtotals:	\$319.35 NA NA NA \$30.90 \$631.57	\$5,0	NA NA NA NA	NA \$0.00 \$0.00 \$38.59	NA \$0.00 \$0.00 \$38.59 \$394.44		NA \$0.00 \$0.00 \$27.76	
Rij	Operating cost/hour: %Utilization-ripper: pper own. cost/hour: Ripper op. cost/hour: Operator cost/hour: Unit Subtotals: Number of Units:	\$319.35 NA NA \$30.90 \$631.57 8 Work:	\$5,0:	NA NA NA NA 0	NA \$0.00 \$0.00 \$38.59 \$394.44 1	NA \$0.00 \$0.00 \$38.59 \$394.44 1		NA           \$0.00           \$0.00           \$27.76           \$266.97           1	
Rij	Operating cost/hour: %Utilization-ripper: pper own. cost/hour: Ripper op. cost/hour: Operator cost/hour: Unit Subtotals: Number of Units: Group Subtotals: otal work team cost/hou	\$319.35 NA NA NA \$30.90 \$631.57 8 Work: ur: <b>\$6,154.65</b>	\$5,0	NA NA NA NA 0	NA \$0.00 \$0.00 \$38.59 \$394.44 1	NA \$0.00 \$0.00 \$38.59 \$394.44 1		NA           \$0.00           \$0.00           \$27.76           \$266.97           1	
Rij	Operating cost/hour: %Utilization-ripper: pper own. cost/hour: Ripper op. cost/hour: Operator cost/hour: Unit Subtotals: Number of Units: Group Subtotals:	\$319.35 NA NA NA \$30.90 \$631.57 8 Work: Ir: <b>\$6,154.65</b>	\$5,0:	NA NA NA NA 0	NA \$0.00 \$0.00 \$38.59 \$394.44 1	NA \$0.00 \$38.59 \$394.44 1 \$788.88		NA           \$0.00           \$0.00           \$27.76           \$266.97           1	

Source of estimated volume:Division EstimateSource of estimated swell factor:Cat Handbook

### **HOURLY PRODUCTION**

#### Scraper Bowl (volume) Basis:

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

#### Cycle Time:

Scraper Loading Time: Maneuver and Spread Time: 1.00 Minutes 0.60 Minutes

#### 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: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	950.00	7.80	3.00	10.80	786	1.22

Haul Time: **1.22** minutes

Total job cost: \$50,713

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	) Travel Time (min)
1	950.00	-7.80	3.00	-4.80	2972	0.39
				Return Time:	0.39	minutes
			Total Scra	per team cycle time:	3.21	minutes
			Adjuste	d for job conditions:	899.81	LCY/Hour
			Selected 1	Number of Scrapers:	8	Scraper(s)
	Adjus	sted single sc	raper team (unit	t) hourly production:	3,599.25	LCY/Hour
	Adjusted	l multiple sci	aper team (fleet	t) hourly production:	3,599.25	LCY/Hour
Opti	Unadjusted unit pr mal Number of Scrapers p			LCY/Hour		
OB TIN	IE AND COST					
Flee	et size: 1	Team(s)		Total job time:	8.24	Hours

Unit cost: \$1.710 /LCY

Site Altitude: 6400 feet

# TRUCK/LOADER TEAM WORK

Task description:	Repla	ce Topsoil at	Dragline Walk R	Road (ASH4)			
Site: Trapper Mine Permit Act			on: PR12	Permit	Permit/Job#: C198101		
PROJECT IDEN	TIFICATIO	<u>DN</u>					
Task #:099_		State: C	Colorado	Abbre	viation:	None	
		County: <u>N</u>	Aoffat	Filena	Filename:		
User: RAF	8						
Agency or organ	ization name	: DRM	IS				
HOURLY EQUI	PMENT CO	ST Shift h	asis: <u>1 per day</u>				
<u>HOURLI EQUI</u>			asis. <u>1 per day</u>				
	t Description						
Truck Loader Te	am -Truck:	-	Cat 777F				
-Loader:			Cat 385C L 18'-				
Support Equipment -Load Area:Cat D10T - 10SU							
-Dump Area: Cat D10T - 10SU							
Road Maintenan	ce – Motor G	rader:	CAT 16M				
-Water Truck:			Water Tanker, 2,5	500 Gal.			
Cost Breakdown	• Truck/L	oader Team	Support Equipme	nt Maintenanc	e Equipm	ent	
<u>Cost Di cardo mi</u>	Truck	Excavato		Dump Area	Motor	Water	
					Grader	Truck	
%Utilization-	100	100	25	25	25	50	
machine:	100	100	25	25	25	50	
Ownership	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65	
cost/hour:	\$199.47	\$220.92	\$257.59	\$ <i>231.</i> 39	\$179.39	\$11.05	
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23	
%Utilization-riper:	NA	0	15	NA	NA	NA	
Ripper own.	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00	
cost/hour:	INA	φ <b>0.00</b>	φ20.03	<b>ФО.ОО</b>	<b>ФО.ОО</b>	φ <b>0.</b> 00	
Ripper op.	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00	
cost/hour:	INA	φ <b>0.00</b>	φ1.9U	<b>ΦU</b> . <b>UU</b>	<i>э</i> 0.00	φ0.00	
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$22.07	
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$44.95	
Number of Units:	2	1	1	1	1	1	
Group Subtotals:	Work:	\$1,140.4	0 Support:	\$692.32	Maint:	\$282.01	

Total work team cost/hour: <u>\$2,114.73</u>

# **MATERIAL QUANTITIES**

Initial volume:	8,695	CCY	Swell factor:	1.000	
Loose volume:	8,695	LCY			
Source of estimated	l volume:	TR124	Appendix A Tabl	e A-3.1	
Source of estimated	d swell factor:		ndbook		
Material Purchase	\$0.00				
Total Cost:		\$0.00			
HOURLY PRODU	<u>CTION</u>				
Truck Capacity:					
Truck Payload (weig	<u>sht) Basis:</u>				
Material weight:	1,600		Pounds/LCY		
Description:	Top Soil				
Rated Payload:	200,000		Pounds		
Payload Capacity:	125.00		LCY		
Truck Bed (volume)	Basis.				
Struck Volume:	<u>60.60</u>	LCY			
Heaped Volume:	78.80				
Average Volume:	69.70	LCY			
Adjusted Volume:	78.80	LCY			
Final Truck Volum		per of Loader	Passes:	77.72	LCY
Loading Tool Capac	<u>ity</u>				
		Bucke	et Size Class:		Large
Rated Capacity:	7.850	LCY (I	heaped)		
Bucket Fill Factor:	1.100	Other -	· rock/dirt mixture	s (100-1209	6) 1.100
Adjusted Capacity:	8.635	LCY			
Job Condition Corr	rections: Site Alt	itude (ft.): <u>64</u>	<u>00</u> feet		
	Truck	Loader	Source		
Altitude Adi:	1.000	1.000	(CAT H	(B)	

114		ici	bource
ıde Adj: 1.00	0 1.000	)	(CAT HB)
Efficiency: 0.83	0 0.830	)	(CAT HB)
Correction: 0.83	0 0.830	)	
			(CAT HB)

 Loading Tool Cycle Time:
 Number of Loading Tool Passes Required to
 9
 passes

 Fill Truck:
 9

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating:

Selected Value within this Basic Rating:

ABOVE AVERAGE

is Basic Rating: AVERAGE

Track Loaders – Material Description:

Cycle Time Elements (min.):

Load:	NA	Maneuver:	NA	Dump:	0.100	_
-------	----	-----------	----	-------	-------	---

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, NA minutes maneuver):

Cycle Time Factors		Factor (min.)	Source
Material:	NA	NA	(Cat HB)
Stockpile:	NA	NA	(Cat HB)
Truck Ownership:	NA	NA	(Cat HB)
Operation:	NA	NA	(Cat HB)
Dump Target:	NA	NA	(Cat HB)
	Net Cycle Time Adjustment:	NA	minutes
	Adjusted Loader Cycle Time:	0.302	minutes
	Net Load Time per Truck:	2.516	minutes

## **Truck Cycle Time:**

Truck Exchange Time:	0.80	Minutes	Adjusted for site altitude:	0.800	Minutes
Truck Load Time:	2.516	Minutes	Adjusted for site altitude:	2.516	Minutes
Truck Maneuver and Dump	1.20	Minutes	Adjusted for site altitude:	1.200	Minutes
Time:					

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

#### Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time
						(min)
1	2288.00	2.80	3.00	5.80	1266	1.932

Haul Time: **1.932** minutes
	Seg #	Haul	Distance	Grade (%)	Roll. Res	Total	Velocity	Travel		
		(Ft)			(%)	Res (%)	(fpm)	Time		
								(min)		
	1	2288	.00	-2.80	3.00	0.20	3503	0.826		
				eturn Time:			0.826		inutes	
			Т	otal Truck Cy	cle Time:		7.274	m	inutes	
Loadin Produc Truck		nit -	1,406.18	LCY/Hou	ır Adjust	ed for job ef	fficiency:	_1,167	.13	_ LCY/Hour
Produc		-	641.04	LCY/Hou	ır Adjust	ed for job ef	fficiency:	532.0	6	_ LCY/Hour
Optima Trucks	al No. of :	-	2	Truck(s)	Selecte	ed Number o	of Trucks:	2		Truck(s)
	Adjust	ed sing	le truck/load	m production: der team produ pader team pro	uction:		1,064. 1,064. <b>1,064.</b>	12	LCY/H LCY/H LCY/H	Iour
<u>.</u>	JOB TIM	IE AN	D COST							
	Fleet siz	e: _	1	Team(s)	Total jo	b time:	8.17		Hou	rs
	Unit cos	t:	\$1.987	/LCY	Total jo	b cost:	\$17,280			

## TRUCK/LOADER TEAM WORK

Task description	: Replac	e Topsoil at	Dragline Walk	Road (ASH1)		
Site: Trapper Mine	e	Permit Actio	on: PR12	Perm	nit/Job#: <u>C</u>	21981010
PROJECT IDEN	NTIFICATIO	<u>N</u>				
Task #: 099			Colorado		reviation:	None
		ounty: <u>N</u>	Ioffat	Filer	name:	099A
User: RAI	Χ					
Agency or organ	nization name:	DRM	S			
HOURLY EQUI	PMENT COS	<u>ST</u> Shift ba	asis: <u>1 per day</u>			
Equipmen	t Description					
Truck Loader Te			Cat 777F			_
-Loader:			Cat 385C L 18'-	1" Stick		
Support Equipm	ent -Load Are	a:	Cat D10T - 10SU			
-Dump Area:			Cat D10T - 10SU	J		
Road Maintenar	nce – Motor Gra	ader:	CAT 16M			
-Water Truck:			Water Tanker, 2,	500 Gal.		
Cost Breakdown	: Truck/Lo	ader Team	Support Equipme	ent Maintena	nce Equipme	ent
	Truck	Excavato	r Load Area	Dump Area	Motor Grader	Water Truck
%Utilization- machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization-riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$22.07
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$44.95
Number of Units:	2	1	1	1	1	1
Group Subtotals:	Work:	\$1,140.40	O Support:	\$692.32	Maint:	\$282.01

Total work team cost/hour: <u>\$2,114.73</u>

#### **MATERIAL QUANTITIES**

Net Correction:

0.830

0.830

Initial volume: Loose volume:	38,684 <b>38,684</b>	CCY LCY	Swell factor	: 1.000		
Source of estimate	d volume:	TR124	Appendix A T	able A-3.1		
Source of estimate	d swell factor:	Cat Ha	ndbook			
Material Purchase	Cost:	\$0.00				
Total Cost:		\$0.00				
HOURLY PRODU	CTION					
<u>Truck Capacity:</u>						
Truck Payload (weig	<u>ght) Basis:</u>					
Material weight:	1,600		Pounds/LCY			
Description:	Top Soil					
Rated Payload:	200,000		Pounds			
Payload Capacity:	125.00		LCY			
Truck Bed (volume)	Basis:					
Struck Volume:	60.60	LCY				
Heaped Volume:	78.80	LCY				
Average Volume:	69.70	LCY				
Adjusted Volume:	78.80	LCY				
Final Truck Volum	ne Based on Numb	er of Loader	Passes:	77.7	72	LCY
Loading Tool Capac	city_					
		Bucke	et Size Class:		<u> </u>	Large
Rated Capacity:	7.850	LCY (I	heaped)			
Bucket Fill Factor:	1.100	Other -	rock/dirt mixt	ures (100-1	20%) 1.10	00
Adjusted Capacity	8.635	LCY				
Job Condition Cor	rections: Site Alti	tude (ft.): <u>64</u>	<u>00</u> feet			
	Truck	Loader	Sou	rce		
Altitude Adj:	1.000	1.000		T HB)		
Job Efficiency:	0.830	0.830	(CA)	T HB)		

Loading Tool Cycle Time		ber of Load Truck:	ing Tool I	Passes Requ	ired to	9		passes
Excavators and Front Show	vels:							
Machine Cycle Time vs. Rating:	Job Condition	n A	BOVE A	VERAGE				
Selected Value within thi	is Basic Ratin	g: A	VERAGE	3				
Track Loaders – Materia	l Description:							
Cycle Time Elements (mir	n.):							
Load: NA	Maneuver:	N	ΙA	Dump:		0.100	)	
Wheel and Track Loader maneuver):	s - Unadjusteo	d Basic Loac	ler Cycle '	Time (load,	dump,	NA	1	ninutes
Cycle Time Factors					Factor (1	min.)	Source	
Material:	NA				NA		(Cat HB	)
Stockpile:	NA				NA		(Cat HB	)
Truck Ownership:	NA				NA		(Cat HB	)
Operation:	NA				NA		(Cat HB	)
Dump Target:	NA				NA		(Cat HB	)
	Net Cycle 7	Time Adjusti	ment:		NA		minutes	
	Adjusted Lo	bader Cycle	Time:		0.302		minutes	
	Net Load T	ime per Truc	ck:	_	2.516		minutes	
<u>Truck Cycle Time:</u>								
ruck Exchange Time:	0.80	Minutes	Adjust	ed for site a	ltitude:		0.800	Minutes
Truck Load Time:	2.516	Minutes	Adjust	ed for site a	ltitude:		2.516	Minutes
Truck Maneuver and Dump	1.20	Minutes	Adjust	ed for site a	ltitude:		1.200	Minutes
Truck Travel (Haul & Retu maintained 3.0 Haul Route:	urn) Time: Ro	oad Conditio	n: <u>Firm, s</u>	mooth, rolli	ng, dirt/l	t. surfac	ed, watere	<u>d,</u>

-	1441 11040						
	Seg #	Haul Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel
		(Ft)		(%)	(%)	(fpm)	Time
							(min)
	1	2130.00	-3.80	3.00	-0.80	3503	0.688

Haul Time: **0.688** minutes

	Return Ro	oute:							
	Seg #	Hau	l Distance	Grade (%)	Roll. Res	Total	Velocity	Travel	
		(Ft)			(%)	Res (%)	(fpm)	Time	
								(min)	
	1	213	0.00	3.80	3.00	6.80	2398	1.082	
				Return Time: Fotal Truck Cy	cle Time:		1.082 6.286	minutes	
Loadii	ng Tool ur	nit							
Produ	ction		1,406.18	LCY/Hou	ır Adjust	ed for job ef	ficiency:	1,167.13	LCY/Hour
Truck	Unit								
Produ	ction		741.79	LCY/Hou	ır Adjust	ed for job ef	ficiency:	615.69	LCY/Hour
Optim Truck	al No. of s:		2	Truck(s)	Selecte	ed Number o	of Trucks:	2	Truck(s)
	Δdiust	ed hoi	urly truck tea	m production:			1,231.3	37 LCY/I	Hour
			•	der team produ			1,167.1		
			0	bader team produced			1,167.1		
	1 Iujust	04 1114							1001
	JOB TIM	IE AN	ND COST						
	Fleet siz	e:	1	Team(s)	Total jo	b time:	33.14	Hou	rs
	Unit cos	t:	\$1.812	/LCY	Total jo	b cost:	\$70,092		

Task description:		Facilities Area						
e: Trappo	er Mine	Permit A	ction:	PR12	Permit/Job#:	C1981010		
PROJEC	<u>r identifi</u>	CATION						
Task #:	100	State:	Color	rado	Abbreviation:	None		
Date:	2/18/2025	5 County:	Moff	at	Filename:	100		
User:	RAR							

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

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

No. of Acres:	75	Cost /Acre:	\$360.87
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING,SEEI	DING	

Initial Job Cost:	\$27,065.25
Reseeding Job Cost:	\$4,736.42
Total Job Cost:	\$31,802
Job Hours:	75.00

Task desc	ription:	Seed D Pit Ran	ge A-B			
: <u>Trappe</u>	er Mine	Permit A	ction:	PR12	Permit/Job#:	C1981010
PROJECT	<u>r identifi</u>	<b>CATION</b>				
Task #:	100A	State:	Color	ado	Abbreviation:	None
Date:	2/18/2025	County:	Moffa	ıt	Filename:	100A
User:	RAR					

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre	
Arrowleaf Balsamroot	0.40	0.50	\$39.81	
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29	
Bitterbrush, Antelope	4.40	1.35	\$248.66	
Mountain Brome - Bromar	0.72	1.16	\$4.33	
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75	
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25	
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40	
Chokecherry	3.00	0.21	\$148.37	
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78	
Sheep Fescue - Covar	0.15	2.34	\$0.92	
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94	
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69	
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16	
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28	
Western Wheatgrass - Arriba	0.38	0.96	\$3.43	
Rabbitbrush, Rubber	0.26	3.87	\$21.68	
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07	
Rose, Wood's	0.96	0.00	\$51.24	
Sagebrush, Mountain or Big	0.07	3.70	\$5.79	
Flax, Lewis Blue	0.30	1.99	\$12.69	
Red Top	0.02	2.29	\$0.21	
Sagebrush, Silver	0.10	1.94	\$6.81	
Saltbush, Four Wing	0.62	0.85	\$12.32	
Serviceberry	0.29	0.53	\$31.62	
Snowberry, Mountain	0.58	1.00	\$34.25	
Penstemon, Rocky Mountain	0.14	2.19	\$8.60	

Aster, Pacific	0.02	0.35	\$2.80 \$9.13
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	15.79	44.87	\$684.99

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

## JOB TIME AND COST

No. of Acres:	319.3	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	TILLING, SEE	DING	

Initial Job Cost:	\$294,276.46
Reseeding Job Cost:	\$51,498.38
Total Job Cost:	\$345,775
Job Hours:	319.30

Task description:Roads (including BC road) below 6700'					
Site: Trapp	er Mine	Permit A	ction: PR12	Permit/Job#:	C1981010
<b>PROJEC</b>	<u>T IDENTIFI</u>	CATION			
Task #:	101	State:	Colorado	Abbreviation:	None
	2/18/2025	County:	Moffat	Filename:	101
Date:	2/10/2023	<b>,</b>			

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

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

No. of Acres:	196.3	Cost /Acre:	\$360.87
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING,SEEI	DING	

Initial Job Cost:	\$70,838.78
Reseeding Job Cost:	\$12,396.79
Total Job Cost:	\$83,236
Job Hours:	196.00

#### MOTOR GRADER WORK

Task description:	Finish Gradi	ng I/J Pit				
Trapper Mine	Permit	Action:	PR12		_ Permit/Job#:	C1981010
PROJECT IDENTI	<b>FICATION</b>					
Task #: 102	State:	Colora	ado		Abbreviation:	None
Date:         2/20/20           User:         RAR	County:	Moffa	t		Filename:	102
Agency or organiza	tion name:	DRMS				
HOURLY EQUIPM	IENT COST					
Basic Machine:	CAT 16M		Horsep	ower:	297	
Ripper Attachment:			Shift B	asis:	1 per	day
			Data S	ource:	(CRC	<b>j</b> )
Cost Breakdown:					ization	
Ownership Cost/Ho		\$179.39		% NA		
Operating Cost/Hot		\$179.39		100		
Ripper Ownership		\$0.00		NA		
Ripper Operating C		\$0.00				
Operator Cost/Hour		\$27.76		NA		
Total Unit Cost/Ho		\$326.79				
Total Fleet Cost/Ho	our:	\$653.58				
MATERIAL QUAN	<u>TITIES</u>					
Total Area to be gra	aded or ripped:	79.	.94			acres
Source of estimated	acreage:	Ар	pen. A; Table	A-8.2A	Finish Grading	

#### **HOURLY PRODUCTION**

Average Gra	der Speed:		1.50	mph	
Selected App	lication:		Finish grading (0-2.5 mph) - 1.5		
Selected Blac	le Angle:		30	degrees	
Effective Bla	de Length:		13.90	feet	
Width of blac	de overlap per pa	SS:	2.00	feet	
Net grading of	or ripping width	per pass:	11.90	feet	
Unadjusted H	Iourly Unit Prod	uction:	2.1636	acres/hour	
Job Condition	Correction Facto	o <u>rs</u> Site Alti Sour	tude: <u>7000</u> feet ce		
Altitude Adj:	1.00	(CA	T HB)		
Job Efficienc	y: <u>0.85</u>	(1sh/	/d, mod.)		
Net Correction	on: 0.8500	mult	iplier		
Adjusted Ho	urly Unit Produc urly Fleet Produc		1.8391 <b>3.6782</b>	acres/Hour acres/Hour	
JOB TIME A	ND COST				
Fleet size:	2	Grader(s)	Total job time:	21.73	Hours
Unit cost:	\$177.69	per acre	Total job cost:	\$14,205	_

Task description:		Ponds below 6700' (Coyote, Sage, E Buzzard)			
ite: Trappe	e: Trapper Mine		Action: PR12	Permit/Job#:	C1981010
PROJECT	<u>IDENTIFIC</u>	CATION			
Task #:	103	State:	Colorado	Abbreviation:	None
Date:	2/18/2025	County:	Moffat	Filename:	103
	RAR				

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

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

No. of Acres:	26	Cost /Acre:	\$360.87
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEE	DING	

Initial Job Cost:	\$9,382.62
Reseeding Job Cost:	\$1,641.96
Total Job Cost:	\$11,025
Job Hours:	26.00

Task des	cription:	Johnson Coal S	tockpil	e		
: Trapp	er Mine	Permit A	ction:	PR12	Permit/Job#:	C1981010
PROJEC	<u>T IDENTIFI</u>	CATION				
Task #:	104	State:	Color	ado	Abbreviation:	None
Date:	2/18/2025	County:	Moffa	at	Filename:	104
User:	RAR					

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

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

## **MULCHING and MISCELLANEOUS**

No. of Acres:	12.6	Cost /Acre:	\$360.87
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEE	DING	

Initial Job Cost:	\$4,546.96
Reseeding Job Cost:	\$795.72
Total Job Cost:	\$5,343
Job Hours:	12.00

Trapper MinePermit Action:PR12		PR12	F	ermit/Job#:	C1981010
ROJECT IDENTIE	FICATION				
Гask #: 105	State: Colo	rado	A	Abbreviation	: None
Date: 2/18/202	25 County: Mof	fat	F	Filename:	105
User: RAR					
Agency or organizati E <b>EDING</b>	on name: DRMS				
Seed Mix			Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamr	oot		0.40	0.50	\$39.81
Beardless Wheatgr	ass - Whitmar		0.31	1.01	\$4.29
Mountain Brome -			0.72	1.16	\$4.33
Great Basin Wildrye - Magnar			0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger			0.06	2.96	\$0.25
Alfalfa - Ladak (in			0.10	0.48	\$0.40
Burnett, Small (or	Little) - Delar		0.40	0.51	\$1.78
Sheep Fescue - Cov			0.15	2.34	\$0.92
Milk Vetch, Cicer			0.30	1.00	\$2.94
Slender Wheatgras	s - San Luis		0.28	1.02	\$1.69
Streambank Wheat	grass - Sodar		0.26	0.85	\$2.16
Thickspike Wheatg	grass - Critana		0.28	0.99	\$2.28
Western Wheatgrass - Arriba			0.38	0.96	\$3.43
Needlegrass, Green - Lodorm			0.24	1.00	\$2.07
Flax, Lewis Blue			0.30	1.99	\$12.69
Red Top			0.02	2.29	\$0.21
Penstemon, Rocky Mountain			0.14	2.19	\$8.60
Yarrow, Western			0.07	4.26	\$3.38
Globemallow, Mur	nro		0.08	0.91	\$10.31
Aster, Pacific			0.02	0.35	\$2.80
Goldeneye - Showy	/		0.08	0.92	\$9.13
Totals Seed Mix			5.51	31.41	\$124.23

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

No. of Acres:	27.1	Cost /Acre:	\$360.87
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEE	DING	

Initial Job Cost:	\$9,779.58
Reseeding Job Cost:	\$1,711.43
Total Job Cost:	\$11,491
Job Hours:	27.00

Task desc	cription:	<b>Roads:</b> >6700 ft	Range	eland with Shrubs		
Trappo	er Mine	Permit A	ction:	PR12	Permit/Job#:	C1981010
<u>'ROJEC'</u>	<u>r identifi</u>	CATION				
Task #:	107	State:	Colora	ado	Abbreviation:	None
Date:	2/18/2025	County:	Moffa	t	Filename:	107
Dait.						

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60

Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	15.79	44.87	\$684.99

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

## JOB TIME AND COST

No. of Acres:	54.2	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	TILLING, SEE	DING	

Initial Job Cost:	\$49,952.35
Reseeding Job Cost:	\$8,741.66
Total Job Cost:	\$58,694
Job Hours:	54.00

Task des	cription:	Ash pitRangel	and wit	th Shrubs		
ite: Trapp	er Mine	Permit A	ction:	PR12	Permit/Job#:	C1981010
<u>PROJEC</u>	T IDENTIFI	CATION				
Task #:	108	State:	Color	ado	Abbreviation:	None
Date:	2/19/2025	County:	Moffa	at	Filename:	108
	RAR					

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60

Aster, Pacific Goldeneye - Showy	0.02 0.08	0.92	\$2.80 \$9.13
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	15.79	44.87	\$684.99

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

## JOB TIME AND COST

No. of Acres:	115.6	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$106,540.43
Reseeding Job Cost:	\$18,644.57
Total Job Cost:	\$125,185
Job Hours:	115.00

Trappe	er Mine	Permit A	Action: PR12	Permit/Job#:	C1981010
<b>ROJEC</b>	<u>r identific</u>	ATION			
Task #:	109	State:	Colorado	Abbreviation:	None
D	2/19/2025	County:	Moffat	Filename:	109
Date:					

#### **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Crested Wheatgrass - Ephraim	25.00	114.78	\$137.28
Crested Wheatgrass - Hy-Crest	25.00	114.78	\$126.20
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Slender Wheatgrass - San Luis	25.00	91.25	\$150.92
Totals Seed Mix	76.23	325.57	\$429.45

## Application

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

No. of Acres:	15.7	Cost /Acre:	\$666.09
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$666.09
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$10,457.61
Reseeding Job Cost:	\$1,830.08
Total Job Cost:	\$12,288
Job Hours:	15.00

Task desc	cription: <u>Po</u>	onds above 67	00'(Deal, Deacon, Je	ffways, West Horse)	
te: Trappe	er Mine	Permit A	ction: PR12	Permit/Job#: _C	21981010
PROJECT	<u> IDENTIFICA</u>	TION			
Task #:	111	State:	Colorado	Abbreviation:	None
Date:	2/19/2025	County:	Moffat	Filename:	111
User:	RAR				

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60

Yarrow, Western Globemallow, Munro	0.07	4.26 0.91	\$3.38 \$10.31
Aster, Pacific	0.08	0.31	\$2.80
Goldeneye, Showy	0.02	0.92	\$9.13
Totals Seed Mix	15.79	44.87	<b>\$684.99</b>

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

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#### JOB TIME AND COST

No. of Acres:	18.71	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$17,243.70
Reseeding Job Cost:	\$3,017.65
Total Job Cost:	\$20,261
Job Hours:	19.00

Task description: <b>To</b>		Topsoil piles ab	ove 67(	00'		
Trapper Mine		apper Mine   Permit Action:   PR12		Permit/Job#:	C1981010	
PROJEC	<u>r identifi</u>	CATION				
Task #:	112	State:	Color	ado	Abbreviation:	None
Datas	2/19/2025	County:	Moffa	at	Filename:	112
Date:						

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60

Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye, Showy	0.08	0.92	\$9.13
Totals Seed Mix	15.79	44.87	\$684.99

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

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#### JOB TIME AND COST

No. of Acres:	5.1	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	TILLING, SEE	DING	

Initial Job Cost:	\$4,700.31
Reseeding Job Cost:	\$822.55
Total Job Cost:	\$5,523
Job Hours:	5.00

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#### BOREHOLE SEALING WORK

Task	description:	Seal Land	Slide Monit	toring Stati	ons		
ite: Tra	pper Mine	Mine Permit Action: PR12		Permi	Permit/Job#:		
<u>PROJE</u>	<u>CT IDENTIFI(</u>	CATION					
Task #:	120	State:	Colorado		Abbreviation:	None	
Date: User:	2/19/2025 RAR	County:	Moffat		Filename:	120	

## UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Plug and Seal Station 8	Portland cement grout - 6 in. (labor, equip, materials)	6	172	841.00	LF	\$9.68	\$8,142.90

Job Hours:

4.00 Total Cost:

\$8,143.00

#### BOREHOLE SEALING WORK

description:	Plug and S	Seal Explora	tion Drill	Holes		
apper Mine	Pern	Permit Action: PR1		Permit	t/Job#: <u>C1981010</u>	
<u>CT IDENTIFI</u>	CATION					
121	State:	Colorado		Abbreviation:	None	
2/19/2025 RAR	County:	Moffat		Filename:	121	
	apper Mine <u>CT IDENTIFIC</u> 121 <u>2/19/2025</u>	apper Mine       Perm         CT IDENTIFICATION         121       State:         2/19/2025       County:	apper Mine       Permit Action:         CT IDENTIFICATION       121         121       State:       Colorado         2/19/2025       County:       Moffat	apper Mine     Permit Action:     PR12       CT IDENTIFICATION       121     State:     Colorado       2/19/2025     County:     Moffat	apper Mine       Permit Action:       PR12       Permit         CT IDENTIFICATION       121       State:       Colorado       Abbreviation:         2/19/2025       County:       Moffat       Filename:	apper Mine       Permit Action:       PR12       Permit/Job#:         CT IDENTIFICATION       121       State:       Colorado       Abbreviation:       None         2/19/2025       County:       Moffat       Filename:       121

## UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Plug and Seal Boreholes	Portland cement grout - 6 in. (labor, equip, materials)	6	4000	4,000.00	LF	\$9.68	\$38,729.60

Job Hours:

80.00 Total Cost:

\$38,730.00

## BOREHOLE SEALING WORK

Task	description:	Plug and S	Seal Monito	ring Wells			
e: Tra	pper Mine	Perm	Permit Action: PR12		Permit/Job#:		C1981010
PROJE	<u>CT IDENTIFI(</u>	CATION					
Task #:	122	State:	Colorado		Abbreviation:	None	
Date:	2/19/2025 RAR	County:	Moffat		Filename:	122	

#### **UNIT COSTS**

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
81-03A	Portland cement grout - 2 in. (labor, equip, materials)	2	650	650.00	LF	\$8.57	\$5,571.15
COY-A	Portland cement grout - 2 in. (labor, equip, materials)	2	59	59.00	LF	\$8.57	\$505.69
СОҮ-В	Portland cement grout - 2 in. (labor, equip, materials)	2	49	49.00	LF	\$8.57	\$419.98
COY	Portland cement grout - 4 in. (labor, equip, materials)	4	54	54.00	LF	\$8.71	\$470.51
GC1	Portland cement grout - 4 in. (labor, equip, materials)	2.5	180	180.00	LF	\$8.71	\$1,568.38
GC2	Portland cement grout - 4 in. (labor, equip, materials)	2.5	165	165.00	LF	\$8.71	\$1,437.68
GC3	Portland cement grout - 4 in.	2.5	64	64.00	LF	\$8.71	\$557.64

	(labor, equip, materials)						
GC3A	Portland cement grout - 2 in. (labor, equip, materials)	2	50	50.00	LF	\$8.57	\$428.55
GC3B	Portland cement grout - 2 in. (labor, equip, materials)	2	67	67.00	LF	\$8.57	\$574.26
GD2	Portland cement grout - 4 in. (labor, equip, materials)	4	210	210.00	LF	\$8.71	\$1,829.77
GD3	Portland cement grout - 4 in. (labor, equip, materials)	4	198	198.00	LF	\$8.71	\$1,725.21
GF1	Portland cement grout - 4 in. (labor, equip, materials)	4	640	640.00	LF	\$8.71	\$5,576.45
GF4	Portland cement grout - 4 in. (labor, equip, materials)	4	270	270.00	LF	\$8.71	\$2,352.56
GF5	Portland cement grout - 6 in. (labor, equip, materials)	4.25	153.5	153.50	LF	\$9.68	\$1,486.25
GF6	Portland cement grout - 4 in. (labor, equip, materials)	4	200	200.00	LF	\$8.71	\$1,742.64
GF7	Portland cement grout - 6 in. (labor, equip, materials)	4.25	127	127.00	LF	\$9.68	\$1,229.66
GF8	Portland cement grout - 6 in. (labor, equip, materials)	4.25	220	220.00	LF	\$9.68	\$2,130.13
GP2	Portland cement grout - 4 in. (labor, equip, materials)	4	307	307.00	LF	\$8.71	\$2,674.95

GP3	Portland cement	4	154	154.00	LF	\$8.71	\$1,341.83
	grout - 4 in. (labor, equip, materials)						
GP3A	Portland cement grout - 2 in. (labor, equip,	2	143	143.00	LF	\$8.57	\$1,225.65
	materials)						
GP4	Portland cement grout - 4 in. (labor, equip, materials)	4	281	281.00	LF	\$8.71	\$2,448.41
GP5	Portland cement grout - 4 in. (labor, equip, materials)	4	284	284.00	LF	\$8.71	\$2,474.55
GP7	Portland cement grout - 4 in. (labor, equip, materials)	4	99	99.00	LF	\$8.71	\$862.61
GP8	Portland cement grout - 4 in. (labor, equip, materials)	4	198	198.00	LF	\$8.71	\$1,725.21
GP9	Portland cement grout - 4 in. (labor, equip, materials)	4	202	202.00	LF	\$8.71	\$1,760.07
J1	Portland cement grout - 4 in. (labor, equip, materials)	4	30	30.00	LF	\$8.71	\$261.40
P1	Portland cement grout - 4 in. (labor, equip, materials)	4	21	21.00	LF	\$8.71	\$182.98
P2	Portland cement grout - 4 in. (labor, equip, materials)	4	21	21.00	LF	\$8.71	\$182.98
P4	Portland cement grout - 4 in. (labor, equip, materials)	4	80	80.00	LF	\$8.71	\$697.06
P5	Portland cement grout - 4 in.	4	21	21.00	LF	\$8.71	\$182.98

	(labor, equip, materials)						
P6	Portland cement grout - 4 in. (labor, equip, materials)	4	51	51.00	LF	\$8.71	\$444.37
P7	Portland cement grout - 4 in. (labor, equip, materials)	4	37	37.00	LF	\$8.71	\$322.39
P8	Portland cement grout - 4 in. (labor, equip, materials)	4	33	33.00	LF	\$8.71	\$287.54
GMP-1	Portland cement grout - 4 in. (labor, equip, materials)	4	200	200.00	LF	\$8.71	\$1,742.64
GD1	Portland cement grout - 6 in. (labor, equip, materials)	6	1132	1,132.00	LF	\$9.68	\$10,960.48
GD1(2)	Portland cement grout - 6 in. (labor, equip, materials)	6	1144	1,144.00	LF	\$9.68	\$11,076.67
GLEV-1	Portland cement grout - 6 in. (labor, equip, materials)	4.25	238	238.00	LF	\$9.68	\$2,304.41
GLEV-2	Portland cement grout - 6 in. (labor, equip, materials)	4.25	27	27.00	LF	\$9.68	\$261.42
GLEV-3	Portland cement grout - 6 in. (labor, equip, materials)	4.25	45	45.00	LF	\$9.68	\$435.71
CY-A	Portland cement grout - 6 in. (labor, equip, materials)	4.25	35	35.00	LF	\$9.68	\$338.88
CY-1	Portland cement grout - 6 in. (labor, equip, materials)	4.25	165	165.00	LF	\$9.68	\$1,597.60

CY-2	Portland cement grout - 6 in. (labor, equip, materials)	4.25	285	285.00	LF	\$9.68	\$2,759.48
CY-3	Portland cement grout - 6 in. (labor, equip, materials)	4.25	430	430.00	LF	\$9.68	\$4,163.43
GX1	Portland cement grout - 6 in. (labor, equip, materials)	4.25	318	318.00	LF	\$9.68	\$3,079.00
GW-23	Portland cement grout - 6 in. (labor, equip, materials)	4.25	280	280.00	LF	\$9.68	\$2,711.07
GW-26	Portland cement grout - 6 in. (labor, equip, materials)	4.25	321	321.00	LF	\$9.68	\$3,108.05
GW-29	Portland cement grout - 6 in. (labor, equip, materials)	4.25	320	320.00	LF	\$9.68	\$3,098.37
GW-30	Portland cement grout - 6 in. (labor, equip, materials)	4.25	320	320.00	LF	\$9.68	\$3,098.37
GW-31	Portland cement grout - 6 in. (labor, equip, materials)	4.25	320	320.00	LF	\$9.68	\$3,098.37
Ks_DW-1A	Portland cement grout - 6 in. (labor, equip, materials)	4.25	188	188.00	LF	\$9.68	\$1,820.29
NP-1	Portland cement grout - 6 in. (labor, equip, materials)	4.25	185	185.00	LF	\$9.68	\$1,791.24
NP-2	Portland cement grout - 6 in. (labor, equip, materials)	4.25	135	135.00	LF	\$9.68	\$1,307.12
NP-3	Portland cement grout - 6 in.	4.25	299	299.00	LF	\$9.68	\$2,895.04

	(labor, equip, materials)						
East Pyeatt Well #1	Portland cement grout - 6 in. (labor, equip, materials)	5	700	700.00	LF	\$9.68	\$6,777.68
05-LW-17	Portland cement grout - 4 in. (labor, equip, materials)	2.375	816	816.00	LF	\$8.71	\$7,109.97
05-LW-21	Portland cement grout - 4 in. (labor, equip, materials)	2.375	1325.4	1,325.40	LF	\$8.71	\$11,548.48
05-LW-25	Portland cement grout - 4 in. (labor, equip, materials)	2.375	1358	1,358.00	LF	\$8.71	\$11,832.53
05-LW-27	Portland cement grout - 4 in. (labor, equip, materials)	2.375	1594	1,594.00	LF	\$8.71	\$13,888.84
95-LW-09	Portland cement grout - 4 in. (labor, equip, materials)	4	695	995.00	LF	\$8.71	\$8,669.63

Job Hours:

185.00

Total Cost:

\$168,156.00
## **REVEGETATION WORK**

Task desc	ription:	Reveg for 20 x	.3 acres	drillholes		
e: <u>Trappe</u>	er Mine	Permit A	Action:	PR12	Permit/Job#:	C1981010
PROJECT	<u>r identifi</u>	<b>CATION</b>				
Task #:	128	State:	Colora	ado	Abbreviation:	None
Date:	2/19/2025	County:	Moffa	t	Filename:	128
User:	RAR					

### **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60

Yarrow, Western Globemallow, Munro	0.07 0.08	4.26 0.91	\$3.38 \$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
	15 70	44.07	¢<04.00
Totals Seed Mix	15.79	44.87	\$684.99

# Application

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

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### JOB TIME AND COST

No. of Acres:	6	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$5,529.78
Reseeding Job Cost:	\$967.71
Total Job Cost:	\$6,497
Job Hours:	6.00

-

Task description	n: <b>Regrade .3acres x 20 dr</b>	ill pads		
te: Trapper Min	e Permit Action:	PR12	Permit/Job#:	C1981010
PROJECT IDE	NTIFICATION			
Task #: 129			Abbreviation:	None
Date: 2/19 User: RA	9/2025 County: Moffat R		Filename:	129
Agency or orga	nization name: DRMS			
HOURLY EQU	IPMENT COST			
Basic Machine:	Cat D8T - 8SU			
Horsepower:	310			
Blade Type:	Semi-Universal			
Attachment:	3-shank ripper			
Shift Basis:	1 per day			
Data Source:	(CRG)			
Cost Breakdown:				
Ownership		Utilization %		
Ownership Cost/Hour:	\$173.32	NA		
Operating				
Cost/Hour:	\$109.71	100		
Ripper own.				
Cost/Hour:	\$14.53	NA		
Ripper op.				
Cost/Hour:	\$3.98	50		
Operator Operator	+20 - 20			
Cost/Hour:	\$38.59	NA		
Total unit	\$340.12			
Cost/Hour:	φ340.12			
Total Fleet	\$340.12			
Cost/Hour:	φ340.12			
C05/11001.				

volume:	,000	
	,000 LCY	
	,000 LC 1	
Source of estimated Source of estimated		
factor:		
HOURLY PRODUC	<u>TION</u>	
Average push distan	ce: 50 feet	
Unadjusted hourly	1,400.0 LCY/hr	
production:	1,100.0 20 1/1	
I		
Materials consistenc description:	y Compacted fill o	r embankment 0.9
Average push	0 %	
gradient:	7.500 fact	
Average site altitude:	7,500 feet	
annude.		
Material weight:	2,550 lbs/LCY	
C		
Weight description:	Earth - Dry packed	
	in Frater Comme	
Job Condition Correct Operator Skill:	tion Factor <u>Source</u> 0.750	(AVG.)
Material consistency		(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
Diade type.	1.000	(1111)
Net correction:	0.3537	
Adjusted unit	495.18 LCY/hr	
production:		

495.18 LCY/hr

#### JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$0.687/LCY

 Total job time:
 60.58 Hours

 Total job cost:
 \$20,606

## DEMOLITION WORK

e: Tra	pper Mine	Pern	nit Action:	PR12	Permit	Job#:	C1981010
PROJE	<u>CT IDENTIFIC</u>	CATION					
Task #:	130	State:	Colorado		Abbreviation:	None	
Date:	2/19/2025	County:	Moffat		Filename:	130	
User:	RAR						

## <u>UNIT COSTS</u> <u>Location adjustment: 91.30 %</u>

Structure or		Demolition				
Item	Dimensions	Menu	Quantity	Unit	Unit	<b>Total Cost</b>
Description		Selection			Cost	
Main office	31,7548 CF	Bldg. (MN)	317,548.00	CF	\$0.33	\$104,346.2
		demo./on-				7
		site				
		disposal in				
		existing pit				
		or cut -				
		Max.				
		10,000 ft.				
		haul		~-		
Office bldg.	15,288 SF	Floor,	15,288.00	SF	\$1.84	\$28,094.76
floor		concrete,				
		demolition				
		only,				
		average				
		reinforcing				
		- 10 in. thick				
Reinforced	251 SF	Demo. and	251.00	SF	\$2.31	\$580.59
concrete floor	231 51	on-site	231.00	51	\$2.31	\$380.39
office bldg.		disposal in				
office oldg.		existing pit,				
		12 in. thick				
		- Max.				
		10,000 ft.				
		haul				

Office footers	804 SF	Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 10,000 ft. haul	804.00	LF	\$6.94	\$5,579.12
Remove fencing	700 LF	Fencing, chain link, including posts and fabric - 8 ft. to 10 ft. high	700.00	LF	\$3.53	\$2,471.00
Shop\Warehous e	1,925,700 CF	Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	1,925,700.0 0	CF	\$0.33	\$632,785.0 2
Warehouse concrete floor	9,270 SF	Floor, concrete, demolition only, average reinforcing - 12 in. thick	9,270.00	SF	\$2.21	\$20,442.20
Warehouse 4" Concrete floor	7,925 SF	Floor, concrete, demolition only, average reinforcing - 4 in. thick	7,925.00	SF	\$0.74	\$5,825.67
Warehouse Footers	1,822 LF	Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max.	1,822.00	LF	\$6.94	\$12,643.22

Silver storage trailer	40 X10X10	10,000 ft. haul Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	4,000.00	CF	\$0.24	\$973.60
Ble caterpillar parts trailer	35X10X8	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	2,800.00	CF	\$0.24	\$681.52
Wash/Lube Bay	173,500 CF	Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	173,500.00	CF	\$0.33	\$57,012.10
Wash bay concrete floor	9,275 SF	Floor, concrete, demolition only, average reinforcing - 6 in. thick	9,275.00	SF	\$1.10	\$10,226.62
Wash bay footers	480 LF	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft Max. 10,000 ft. haul	480.00	LF	\$4.63	\$2,220.53

Shop concrete floor	2,400 SF	Floor, concrete, demolition only, average reinforcing - 6 in. thick	2,400.00	SF	\$1.10	\$2,646.24
Shop Footers	290 LF	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft Max. 10,000 ft. haul	290.00	LF	\$4.63	\$1,341.57
Seed Trailer	30X10X8	Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	2,400.00	CF	\$0.33	\$788.64
Pump House	4,840 CF	Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	4,840.00	CF	\$0.33	\$1,590.42
Pump House floor	484 SF	Floor, concrete, demolition only, average reinforcing - 6 in. thick	484.00	SF	\$1.10	\$533.66
Pump House footers	88 LF	Demo. and on-site disposal in existing pit,	88.00	LF	\$4.63	\$407.10

Old cars and equipment at water tanks	120X10X4	1.0 ft. x 2 ft Max. 10,000 ft. haul Bldg. (SC) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	4,800.00	CF	\$0.29	\$1,380.96
Light Duty and Electrical Shop	94,500 CF	Bldg. (SC) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	94,500.00	CF	\$0.29	\$27,187.65
Concrete floor	5,250 SF	Floor, concrete, demolition only, average reinforcing - 6 in. thick	5,250.00	SF	\$1.10	\$5,788.65
Footers	348 LF	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft Max. 10,000 ft. haul	348.00	LF	\$4.63	\$1,609.88
Break Up and Bury Parking Lot Asphalt	2,448 SY	Pavement, bituminous, demolition only - 4 in. to 6 in. thick	2,448.00	SY	\$8.66	\$21,199.68
Water Tank	80,000 Gallons	Bldg. (SN) demo./on-	10,667.00	CF	\$0.24	\$2,596.35

Water Tank	80,000 Gallons	site disposal in existing pit or cut - Max. 10,000 ft. haul Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	10,667.00	CF	\$0.24	\$2,596.35
Diesel Tank	100,000 Gallons	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	13,333.00	CF	\$0.24	\$3,245.25
Diesel Tank	100,000 Gallons	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	13,333.00	CF	\$0.24	\$3,245.25
Diesel Tank	20,000 Gallons	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	2,667.00	CF	\$0.24	\$649.15
Diesel Tank	20,000 Gallons	Bldg. (SN) demo./on- site	2,667.00	CF	\$0.24	\$649.15

Diesel Tank	20,000 Gallons	disposal in existing pit or cut - Max. 10,000 ft. haul Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	2,667.00	CF	\$0.24	\$649.15
Diesel Tank Removed but onsite	20,000 Gallons	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	2,667.00	CF	\$0.24	\$649.15
Diesel Tank Removed but onsite	20,000 Gallons	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	2,667.00	CF	\$0.24	\$649.15
Gasoline Tank	15,000 Gallons	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	2,000.00	CF	\$0.24	\$486.80
Concrete Pads for Storage Tank	6,500 SF	Floor, concrete, demolition only,	6,500.00	SF	\$1.10	\$7,166.90

		average reinforcing - 6 in. thick				
Fuel Tank Sludge Removal - 8 Tanks	6,300 Gallons	Remove sludge, water, and rem. product from tank - 6,000 to 8,000 gal.	1.00	EA	\$324.00	\$324.00
Disposal of Tank Sludge	26 Tons	Hazardous waste removal - Bulk liquids, large quantities (over 2,500 gal.)	6,300.00	GA L	\$1.98	\$12,480.93
Powerlines	75 330 LF	Utility Poles, Wood 35' - 45' high (each pole)	75.00	EA	\$325.00	\$24,375.00
Tire Shed-Skid Mounted	6,000 CF	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	6,000.00	CF	\$0.24	\$1,460.40
Main Substation	6,000 CF	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	6,000.00	CF	\$0.24	\$1,460.40
Concrete Pads	1,200 SF	Floor, concrete,	1,200.00	SF	\$1.10	\$1,323.12

4 Portables	4,200 CF	demolition only, average reinforcing - 6 in. thick Bldg. (SN)	4,200.00	CF	\$0.24	\$1,022.28
		demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	,		<i>•••••</i>	<i>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</i>
ANFO Silos and Emolsion Tank	10,940 CF	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	10,940.00	CF	\$0.24	\$2,662.80
New 2007 Emulsion tank	15,000 gal	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	1,600.00	CF	\$0.24	\$389.44
Concrete Pad	1,642 SF	Floor, concrete, demolition only, average reinforcing - 6 in. thick	1,642.00	SF	\$1.10	\$1,810.47
Footers	52 LF	Demo. and on-site disposal in existing pit, 1.0 ft. x 2	52.00	LF	\$4.63	\$240.56

		ft Mar				
		ft Max. 10,000 ft.				
		haul				
Explosive storage- 2 magazines	2 X 853.3 CF	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	1,707.00	CF	\$0.24	\$415.48
Explosive Storage Trailer	2,560 CF	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	2,560.00	CF	\$0.24	\$623.10
2 Large Explosives Magazines	2 X 22.5. 8X6	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	2,160.00	CF	\$0.24	\$525.74
Tub Pad railroad Track	2 X 312	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	624.00	CF	\$0.24	\$151.88
5 Cargo Containers	5 X 25 and 8x8	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max.	8,000.00	CF	\$0.24	\$1,947.20

		10,000 ft. haul				
Queen Anne Dragline Repair Pad	70'Lx70'wx.067' h	Floor, concrete, demolition only, average reinforcing - 8 in. thick	4,900.00	SF	\$1.47	\$7,203.49
Bury boneyard storage material	84,000 CF	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	84,000.00	CF	\$0.24	\$20,445.60
Waste oil and Anit-Freeze drum disposal	50 used oil, 20 Solvent	Solid pickup - 55 gal. drums	70.00	EA	\$240.00	\$16,800.00
Waterlines and Waste Solvent Lines	Shop to waste oil pad	Pipe, sewer/water - 12 in. diameter pipe	100.00	LF	\$5.24	\$524.00
Transformer Pad	225 SF	Floor, concrete, demolition only, average reinforcing - 4 in. thick	225.00	SF	\$0.74	\$165.40
4 skid mounted substations	4'x10', 8'x20'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	6,400.00	CF	\$0.24	\$1,557.76

East Panel RL Coverall Building	86,400CF	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	86,400.00	CF	\$0.24	\$21,029.76
East Panel RL Concrete Slabs	4,540 SF	Floor, concrete, demolition only, average reinforcing - 10 in. thick	4,540.00	SF	\$1.84	\$8,343.16
East Panel RL Footings	60 LF	Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 10,000 ft. haul	600.00	LF	\$6.94	\$4,163.52
3x50,000 Tanks 2x20,000 Tanks	20,040 CF 5,348 CF	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul Bldg. (SN)	20,040.00 5,348.00	CF	\$0.24 \$0.24	\$4,877.74 \$1,301.70
MgCl Tank @	10,000 gallons	demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul Bldg. (SN)	1,005.00	CF	\$0.24	\$244.62
H Impoundment	-, 8	demo./on- site	-,			,

		disposal in existing pit or cut - Max. 10,000 ft. haul				
Red silo @ used oil storage area	15,000 gallons	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	1,600.00	CF	\$0.24	\$389.44
Blasters Equipment Building	45X85X22	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 200 ft. push	76,021.88	CF	\$0.24	\$17,956.37
-Blasters Equipment Building Foundation	146 CY	Slab on grade, concrete, demolition only - No reinforcing	106.00	CY	\$104.00	\$11,024.00
Radio Tower Skid Mounted	NA	USER PROVIDE D ITEM	1.00	EA	\$1,500.0 0	\$1,500.00

				<b>Total Cost</b>	
Job		Subtotal		(adjusted for	
Hours:	100.00	(unadjusted):	\$1,139,678.68	location):	\$1,040,526.63

## DEMOLITION WORK

Task	description:	Culvert R	emoval and	Disposal			
e: Tra	pper Mine	Perm	nit Action:	PR12	Permi	t/Job#:	C1981010
PROJE	CT IDENTIFI	CATION					
Task #:	131	State:	Colorado		Abbreviation:	None	
Date:	2/19/2025	County:	Moffat		Filename:	131	
User:	RAR						

## <u>UNIT COSTS</u> <u>Location adjustment: 91.30 %</u>

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
A-1	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
A-2	60" Diam	Pipe, corrugated metal (CMP) - 60 in. diameter pipe	240.00	LF	\$33.06	\$7,935.02
ASH-1	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	190.00	LF	\$10.60	\$2,013.07
A-3	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
A-4	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	210.00	LF	\$24.52	\$5,149.75
A-5	2 @ 48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	480.00	LF	\$24.52	\$11,770.85
A-7	36" Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	210.00	LF	\$16.96	\$3,561.66
A9	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	180.00	LF	\$24.52	\$4,414.07

A-10	48" Diam	Pipe, corrugated metal (CMP) - 48	240.00	LF	\$24.52	\$5,885.42
		in. diameter pipe				
A-11	18" Diam	Pipe, corrugated metal (CMP) - 18	180.00	LF	\$8.10	\$1,457.50
A-12	36"Diam	in. diameter pipe Pipe, corrugated	210.00	LF	\$16.96	\$3,561.66
11 12	50 Diam	metal (CMP) - 36 in. diameter pipe	210.00	121	ψ10.90	\$3,501.00
A-14	36" Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	210.00	LF	\$16.96	\$3,561.66
AE-4	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	210.00	LF	\$10.60	\$2,224.97
AE-7	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	300.00	LF	\$10.60	\$3,178.53
AE-10	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
AE-11	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
BC-1	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	540.00	LF	\$10.60	\$5,721.35
BC-2	60" Diam	Pipe, corrugated metal (CMP) - 60 in. diameter pipe	240.00	LF	\$33.06	\$7,935.02
BC-5	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
BC-6	36"Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	210.00	LF	\$16.96	\$3,561.66
*FEB-1	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
D-9	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	210.00	LF	\$10.60	\$2,224.97
D-10	18" Diam	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	180.00	LF	\$8.10	\$1,457.50

D-12	18" Diam	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	180.00	LF	\$8.10	\$1,457.50
D-15	36" Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	180.00	LF	\$16.96	\$3,052.85
D-16	2 @ 24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	360.00	LF	\$10.60	\$3,814.24
D-17	2 @ 24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	360.00	LF	\$10.60	\$3,814.24
FT-1	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	110.00	LF	\$10.60	\$1,165.46
EMF-1	2 @ 36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	120.00	LF	\$16.96	\$2,035.24
GRS-1	24"Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
GRS-2	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
RW-1	12" Diam	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	180.00	LF	\$5.91	\$1,063.55
SA-1	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
SA-7	30" Diam	Pipe, corrugated metal (CMP) - 30 in. diameter pipe	180.00	LF	\$13.98	\$2,516.35
SAH-1	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
AE-8	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
AE-12	36" Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	130.00	LF	\$16.96	\$2,204.84
AX-3	60" Diam	Pipe, corrugated metal (CMP) - 60 in. diameter pipe	240.00	LF	\$33.06	\$7,935.02

					1	
AX-4	36" Diam	Pipe, corrugated metal (CMP) - 36	240.00	LF	\$16.96	\$4,070.47
AX-5	36" Diam	in. diameter pipe Pipe, corrugated metal (CMP) - 36 in. diameter pipe	210.00	LF	\$16.96	\$3,561.66
IH-1	18"Diam	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	180.00	LF	\$8.10	\$1,457.50
IWP-1	6" Diam	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	180.00	LF	\$4.51	\$811.22
Jgag-1	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
JG-2	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
NN-5	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
OH-3	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
OH-5	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
MC-1	15" Diam	Pipe, corrugated metal (CMP) - 15 in. diameter pipe	180.00	LF	\$6.97	\$1,254.15
MC-3	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
MC-5	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	120.00	LF	\$8.10	\$971.66
A-15	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	223.00	LF	\$24.52	\$5,468.54
AE-13A	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	175.00	LF	\$10.60	\$1,854.14
AE-13B	36" Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	170.00	LF	\$16.96	\$2,883.25

BC-7	36"Diam	Pipe, corrugated	192.00	LF	\$16.96	\$3,256.38
		metal (CMP) - 36				
		in. diameter pipe				
OH-6	18" Diam	Pipe, corrugated	78.00	LF	\$8.10	\$631.58
		metal (CMP) - 18				
		in. diameter pipe				
A-13	24" Diam	Pipe, corrugated	210.00	LF	\$10.60	\$2,224.97
		metal (CMP) - 24				
		in. diameter pipe				

				<b>Total Cost</b>	
Job		Subtotal		(adjusted for	
Hours:	60.00	(unadjusted):	\$193,388.61	location):	\$176,563.80

### EQUIPMENT MOBILIZATION/DEMOBILIZATION

	Task description: Mob	ilize and Der	d Demobilize from Hayden, CO					
Site:	Trapper Mine	_ Permit Act	tion:	PR12	Permit/Job#:	C1981010		
Ī	PROJECT IDENTIFICATI	<u>ON</u>						
	Task #: 132	State:	Colora	do	Abbreviation:	None		
	Date: 2/19/2025	County:	Moffa	į	Filename:	132		
	User: RAR							
Ī	Agency or organization nam							
	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					
		TRA	AILER	(25T, 50T, AND 100	T)			

Cost Breakdown:

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$10.44	\$22.18	\$23.94
Operating Cost/Hour:	\$26.48	\$54.55	\$55.65
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$59.44	\$122.78	\$125.64

#### **NON ROADABLE EQUIPMENT:**

Machine	Weight/	Owner	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	ship	Cost/hr/unit	Size	Cost/hr/	Cost/hr/	Cost/ fleet
	(TONS)	Cost/hr/			fleet	fleet	
		unit					
Cat D11T -	134.12	\$496.62	\$125.64	10	\$6,222.60	\$1,256.40	\$2,000.00
11U							
Cat D10T -	84.53	\$257.39	\$125.64	4	\$1,532.12	\$502.56	\$1,000.00
10SU							
Light plant, 30	1.46	\$4.76	\$59.44	4	\$256.80	\$237.76	\$1,000.00
ft. tower, 4							

lights - 13.5 HP							
Cat 637G w/push-pull	59.59	\$281.32	\$125.64	8	\$3,255.68	\$1,005.12	\$2,500.00
Altas Capco DM25SP - 6- 3/4"	0.00	\$394.50	\$59.44	1	\$453.94	\$59.44	\$250.00
KOM45.00U 830E	244.00	\$209.47	\$125.64	4	\$1,340.44	\$502.56	\$1,500.00
CAT 16M	28.73	\$179.39	\$122.78	4	\$1,208.68	\$491.12	\$1,000.00
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	1	\$100.46	\$59.44	\$250.00
CAT 6090	1,078.00	\$302.35	\$125.64	1	\$427.99	\$125.64	\$250.00
Water Tanker, 5,000 Gal.	15.00	\$51.70	\$59.44	1	\$111.14	\$59.44	\$250.00

Subtotals:

\$14,909.85 \$4,299.48 \$10,000.00

#### **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/	Return Trip Cost/hr/
			fleet	fleet
Water Tanker, 2,500 Gal.	\$55.22	2	\$110.44	\$110.44
Fuel Tanker, 6x4, 210 HP	\$75.02	1	\$75.02	\$75.02
Lube Truck, 6x4, 250 HP	\$75.02	1	\$75.02	\$75.02

Subtotals:

\$260.48 \$260.48

### **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	HAYDEN	
Total one-way travel distance:	25.00	miles
Average Travel Speed:	45.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig: Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$87,862.43 \$289.42	

### Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.56	0.56
Return Time (Hours):	0.56	0.56
Loading Time (Hours):	1.00	NA
Unloading Time (Hours):	0.56	NA
Subtotals:	2.67	1.11

### JOB TIME AND COST

Total job time:	5.34	Hours
rotar job time.	5.54	nouis

Total job cost:

\$88,152

Task descrip	ption:	Regi	rade L Pit 2	X-sec:4(	07,200				
Site: <b>Trapper</b>	Mine		Permit A	ction:	PR12		Permit/Job#:	C1981010	
PROJECT I	DENT	<b>IFICAT</b>	<u>ION</u>						
	L01	0.0.7	State:	Color			Abbreviation:	None	
Date: User:	2/19/2 RAR	025	County:	Moffa	it		Filename:	L01	
Agency or o	organiz	ation nam	ne: D	RMS					_
HOURLY E	QUIP	MENT C	<u>OST</u>						
Basic Mach		Cat D117	<u>Γ - 11U</u>						
Horsepower		850							
Blade Type		Universa	1						
Attachment Shift Basis:		NA 2 man day							
Data Source	_	3 per day (CRG)	1						
Data Source	-	(CKU)							
Cost Breakdo	wn.								
COSt Dicaka	<u>, , , , , , , , , , , , , , , , , , , </u>				Utilizat	tion %			
Ownership		+ / -				<u></u>			
Cost/Hour:		\$490	6.62		NA				
Operating		\$22	4.90		100				
Cost/Hour:		\$32 <sup>2</sup>	4.90		100				
Ripper own	•	\$0.0	)()		NA				
Cost/Hour:		ψ0.0			1121				
Ripper op.		\$0.0	)0		10				
Cost/Hour:									
Operator Cost/Hour:		\$38.	.84		NA				
					INA				
Total unit		\$860	0.36						
Cost/Hour:		<b>400</b>							
Total Fleet		\$3,4	41.42						
Cost/Hour:		i - j -							

Initial 93, Volume:	302	
Swell factor: 1.0	00	
	<b>302</b> LCY	
Loose voluille. <u>93</u> ,	302 LC 1	
Source of estimated v	volume: Table A-4.3	
Source of estimated s factor:	Swell Cat Handbook	
HOURLY PRODUC	TION	
Average push distance		
Unadjusted hourly production:	810.5 LCY/hr	
Materials consistency description:	Consolidated st	ockpile 1.0
Average push gradient:	-20 %	
Average site	6,950 feet	
altitude:		
Material weight:	2,475 lbs/LCY	
Waterial weight.	2,473 108/LC 1	
Weight description:	User Provided	
Job Condition Correct	ion Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistency	: 1.000	(CAT HB)
Dozing method:	1.200	(SLOT)
Visibility:	0.800	(POOR)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.7535	
Adjusted unit production:	610.71 LCY/hr	

#### 2442.84 LCY/hr

#### JOB TIME AND COST

Fleet size:	4 Dozer(s)	
Unit cost:	\$1.409/LCY	

Total job time:	<b>38.19</b> Hours
Total job cost:	\$131,442

Task descriptio	n: <u>Re</u> g	grade L Pit	X-sec:4(	06,700		
: <u>Trapper Mi</u>	ne	Permit A	Action:	PR12	Permit/Job#:	C1981010
PROJECT IDE	NTIFICAT	<u> TION</u>				
Task #: $L0$		_ State:	Color		Abbreviation:	None
Date: $2/1$ User: $RA$	9/2025 R	County:	Moffa		Filename:	L02
Agency or orga	nization na	me: D	ORMS			
HOURLY EQU	IPMENT (	<u>COST</u>				
Basic Machine	-	T - 11U				
Horsepower:	850					
Blade Type:	Univers	al				
Attachment:	NA					
Shift Basis:	$\frac{3 \text{ per da}}{(3 \text{ per da})}$	У				
Data Source:	(CRG)					
Cost Breakdown						
COST DIEAKUOWI	·			Utilization %		
Ownership						
Cost/Hour:	\$49	96.62		NA		
Operating						
Cost/Hour:	\$32	24.90		100		
Ripper own.						
Cost/Hour:	\$0.	.00		NA		
Ripper op.		00		10		
Cost/Hour:	\$0.	.00		10		
Operator	ф <b>Э</b> (	0.04				
Cost/Hour:	\$30	8.84		NA		
Total	ሰባ	<0.2C				
Total unit	\$80	50.36				
Cost/Hour:	¢ <b>7</b>	111 10				
Total Fleet	\$3,	441.42				
Cost/Hour:						

Initial Volume: 2	22,222	
	.000	
	22,222 LCY	
Source of estimated		
Source of estimated	d swell Cat Handbook	
factor:		
HOURLY PRODU	CTION	
HOUKLI FRODU	CHON	
Average push dista	nce: 425 feet	
Unadjusted hourly	765.7 LCY/hr	
production:		
Materials consisten	cy Consolidated s	stockpile 1.0
description:		
Average push	-20 %	
gradient:	20 /0	
Average site	7,050 feet	
altitude:		
Material weight:	2,475 lbs/LCY	
Weight description	: User Provided	
Joh Condition Come	ation Foston Course	
Job Condition Correct Operator Skill:	ction Factor Source 0.750	(AVG.)
Material consistence		(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	0.800	(POOR)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)
Diade type.	1.000	(****)
Net correction:	0.7535	
Adjusted unit		
production:	576.95 LCY/hr	

2307.8 LCY/hr

### JOB TIME AND COST

Fleet size:	4 Dozer(s)
Unit cost:	\$1.491/LCY

Total job time:	96.29 Hours
Total job cost:	\$331,380

PROJECT IDENTIFICATION         Task #:       L03       State:       Colorado       Able	rmit/Job#: obreviation: ename:	<u>None</u> L03
Task #:L03State:ColoradoAblDate:2/19/2025County:MoffatFileUser:RAR		
Date: 2/19/2025 County: Moffat File User: RAR		
User: RAR		
Agency or organization name: DRMS		
HOURLY EQUIPMENT COST		
Basic Machine: Cat D11T - 11U		
Horsepower: 850		
Blade Type: Universal		
Attachment: NA		
Shift Basis: <u>3 per day</u>		
Data Source: (CRG)		
Cost Breschdower		
Cost Breakdown: Utilization %		
Ownership Cost/Hour: \$496.62 NA		
Operating #224.00 100		
Operating         \$324.90         100		
Ripper own.		
Cost/Hour: \$0.00 NA		
Ripper on		
Kipper op.         \$0.00         10           Cost/Hour:         \$0.00         10		
Operator		
Sperator \$38.84 NA		
Total unit \$860.36		
Cost/Hour:		
Total Fleet \$3,441.42		
Cost/Hour:		

Initial Volume:	141,481	
Swell factor: 1.000		
Loose volume:	141,481 LCY	
Source of estimat	ed volume: Table A-4.3	
Source of estimat	ed swell Cat Handbo	ok
factor:		
HOURLY PROD	<u>UCTION</u>	
Average push dist		
Unadjusted hourly	y 810.5 LCY/hr	
production:		
Materials consiste	nov Consolida	ted stockpile 1.0
description:	consolida	ted stockpile 1.0
description.		
Average push	-25 %	
gradient:	//	
Average site	7,050 feet	
altitude:	.,	
Material weight:	2,475 lbs/LCY	
-		
Weight descriptio	n: User Provided	
Job Condition Corr		
Operator Skill:	0.750	(AVG.)
Material consister	•	(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	0.800	(POOR)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.516	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)
	0.0011	
Net correction:	0.8011	
A diveted unit		
Adjusted unit production:	649.29 LCY/hr	
production.		

#### 2597.16 LCY/hr

### JOB TIME AND COST

Fleet size:	4 Dozer(s)
Unit cost:	\$1.325/LCY

Total job time:	<b>54.48</b> Hours
Total job cost:	\$187,472

Task description	: Regrade L Pit X-sec:40	)5700		
e: Trapper Mine	e Permit Action:	PR12	_ Permit/Job#: _	C1981010
PROJECT IDEN	<b>NTIFICATION</b>			
Task #: <u>L04</u>			Abbreviation:	None
Date: 2/19 User: RAI	0/2025 County: Moffa	at	Filename:	L04
Agency or organ	nization name: DRMS			
HOURLY EQUI	IPMENT COST			
Basic Machine:	Cat D11T - 11U			
Horsepower:	<u>850</u>			
Blade Type: Attachment:	Universal NA			
Shift Basis:	3 per day			
Data Source:	(CRG)			
Cost Breakdown:				
		Utilization %		
Ownership Cost/Hour:	\$496.62	NA		
Operating Cost/Hour:	\$324.90	100		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	10		
Operator Cost/Hour:	\$38.84	NA		
Total unit Cost/Hour:	\$860.36			
Total Fleet Cost/Hour:	\$3,441.42			
Initial Volume: 148,57	74			
------------------------------------	------------------	----------------		
Swell factor: 1.000				
	4 LCY			
<u></u>				
Source of estimated volu				
Source of estimated swe	ll Cat Handbook			
factor:				
HOURLY PRODUCTIO				
Average push distance:	500 feet			
Unadjusted hourly production:	650.0 LCY/hr			
Materials consistency description:	Consolidated sto	ockpile 1.0		
Average push - gradient:	-25 %			
<u> </u>	7,000 feet			
altitude:	,			
Material weight:	2,475 lbs/LCY			
Weight description:	User Provided			
Job Condition Correction	Factor Source			
Operator Skill:	0.750	(AVG.)		
Material consistency:	1.000	(CAT HB)		
Dozing method:	1.200	(S-BY-S)		
Visibility:	0.800	(POOR)		
Job efficiency:	0.790	(3 SHIFTS/DAY)		
Spoil pile:	1.000	(DOZ-OC)		
Push gradient:	1.516	(CAT HB)		
Altitude:	1.000	(CAT HB)		
Material Weight:	0.929	(CAT HB)		
Blade type:	1.000	(PAT)		
Net correction:	0.8011			
Adjusted unit production:	520.72 LCY/hr			
Adjusted fleet production:	2082.88 LCY/hr			

Fleet size:	4 Dozer(s)
Unit cost:	\$1.652/LCY
Total job time:	71.33 Hours
Total job cost:	\$245,480

te: Trapper Mine          PROJECT IDEN'         Task #:       L05         Date:       2/19/2         User:       RAR	TIFICATION State: 2025 County:	ction: _] _Colorad	PR12	_ Permit/Job#: _	C1981010
Task #:       L05         Date:       2/19/2         User:       RAR	State: 2025 County:	Colorad			
Date: 2/19/2 User: RAR	County:	Colorad			
		Moffat	0	Abbreviation: Filename:	None L05
Agency or organi		RMS			
HOURLY EQUIP	PMENT COST				
Basic Machine: Horsepower: Blade Type: Attachment: Shift Basis: Data Source:	Cat D11T - 11U 850 Universal NA 3 per day (CRG)				
Cost Breakdown: Ownership	\$496.62		<u>Utilization %</u> NA		
Cost/Hour: Operating Cost/Hour:	\$324.90		100		
Ripper own. Cost/Hour:	\$0.00		NA		
Ripper op. Cost/Hour:	\$0.00		10		
Operator Cost/Hour:	\$38.84		NA		
Total unit Cost/Hour: Total Fleet Cost/Hour:	\$860.36 <b>\$3,441.42</b>				

Initial Volume:	402,666		
	1.000		
Source of estimate	d volume:	Table A-4.3	
Source of estimate factor:	d swell	Cat Handboo	k
HOURLY PRODU	UCTION		
Average push dista	ance:	520 feet	
Unadjusted hourly production:		627.8 LCY/hr	
Materials consister description:	ncy	Consolidat	ed stockpile 1.0
Average push gradient:	10 %		
Average site altitude:	7,150	feet	
Material weight:	_2,475	lbs/LCY	
Weight description	n: User I	Provided	
Job Condition Corre	ection Facto	<u>r</u> <u>Source</u>	
Operator Skill:		0.750	(AVG.)
Material consisten		1.000	(CAT HB)
Dozing method:	•	1.200	(S-BY-S)
Visibility:		0.800	(POOR)
Job efficiency:		0.790	(3 SHIFTS/DAY)
Spoil pile:		1.000	(DOZ-OC)
Push gradient:	0.786		(CAT HB)
Altitude:	1.000		(CAT HB)
Material Weight:	0.929		(CAT HB)
Blade type:		1.000	(PAT)
Net correction:		0.4153	
Adjusted unit production:	260	.73 LCY/hr	

1042.92 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$3.300/LCY

Total job time:	<b>386.09</b> Hours
Total job cost:	\$1,328,715

Task description:	Regrade L Pit X-sec:404	,700		
Site: Trapper Mine	Permit Action:	PR12	_ Permit/Job#:	C1981010
PROJECT IDEN	TIFICATION			
Task #: <u>L06</u> Date: <u>2/19</u>	/2025 State: Colorad	lo	Abbreviation: Filename:	None L06
User: RAF			I fiendine.	100
Agency or organ	ization name: DRMS			
HOURLY EQUI	PMENT COST			
Basic Machine:	Cat D11T - 11U			
Horsepower: Blade Type:	850 Universal			
Attachment:	NA			
Shift Basis:	3 per day			
Data Source:	(CRG)			
Cost Breakdown:				
		Utilization %		
Ownership Cost/Hour:	\$496.62	NA		
Operating Cost/Hour:	\$324.90	100		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	10		
Operator Cost/Hour:	\$38.84	NA		
Total unit Cost/Hour:	\$860.36			
Total Fleet Cost/Hour:	\$3,441.42			

Initial Volume:	718,834	
Swell factor:	1.000	_
Loose volume:	718,834 LCY	_
Loose volume.	710,034 LC 1	_
Source of estima Source of estima factor:		
HOURLY PROD	UCTION	
Average push dis	stance: _590 feet	
Unadjusted hour production:	ly 556.8 LCY	Z/hr
Materials consist description:	ency Conso	lidated stockpile 1.0
Average push gradient:	-20 %	
Average site altitude:	7,050 feet	
Material weight:	2,475 lbs/LCY	
Weight description	on: User Provided	
Job Condition Cor	rection Factor Sou	<u>rce</u>
Operator Skill:	0.750	(AVG.)
Material consiste	ency: <u>1.000</u>	(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	0.800	(POOR)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.7535	
Adjusted unit production:	419.55 LCY/ł	ır

1678.2 LCY/hr

#### JOB TIME AND COST

Fleet size:	4 Dozer(s)
Unit cost:	\$2.051/LCY

 Total job time:
 428.34 Hours

 Total job cost:
 \$1,474,086

Task descriptio	n: <u>Reş</u>	grade L Pit	X-sec:4(	04,200		
: Trapper Mir	ne	Permit A	Action:	PR12	Permit/Job#:	C1981010
PROJECT IDE	NTIFICAT	<u>FION</u>				
Task #: <u>L0</u> Date: <u>2/1</u>	7 9/2025	_ State: County:	Color Moffa		Abbreviation: Filename:	None L07
User: RA	R	_				
Agency or orga	nization na	me: D	RMS			
HOURLY EQU	IPMENT (	COST				
Basic Machine	: <u>Cat D11</u>	T - 11U				
Horsepower:	850					
Blade Type:	Univers	al				
Attachment:	NA					
Shift Basis:	3 per da	У				
Data Source:	(CRG)					
Cost Breakdown	•					
<u>COSt Diedkuown</u>	•			Utilization %		
Ownership						
Cost/Hour:	\$49	96.62		NA		
Operating		24.00		100		
Cost/Hour:	\$3.	24.90		100		
Ripper own.	\$0	.00		NA		
Cost/Hour:	φ0.	.00				
Ripper op. Cost/Hour:	\$0.	.00		10		
Operator Cost/Hour:	\$3	8.84		NA		
		(1) 2 (				
Total unit	\$80	50.36				
Cost/Hour:	¢ 7	111 12				
Total Fleet	<b>\$</b> 3,	,441.42				
Cost/Hour:						

Swell factor:       1.000         Loose volume:       475,815 LCY         Source of estimated swell factor:       Cat Handbook         HOURLY PRODUCTION       Average push distance:       560 feet         Hourdjusted hourly       585.9 LCY/hr         production:	Initial Volume:	475,815				
Loose volume: $\overline{475,815 \text{ LCY}}$ Source of estimated volume: $\overline{\text{Table A-4.5}}$ Source of estimated swell factor: $\overline{\text{Cat Handbook}}$ HOURLY PRODUCTIONAverage push distance: $560 \text{ feet}$ Unadjusted hourly production: $585.9 \text{ LCY/hr}$ Materials consistency description:Consolidated stockpile 1.0Average push 		1.000				
Source of estimated volume:       Table A-4.5         Source of estimated swell factor:       Cat Handbook         HOURLY PRODUCTION       Average push distance:       560 feet         Average push distance:       560 feet						
Source of estimated swell factor:       Cat Handbook         HOURLY PRODUCTION       Average push distance: 560 feet         Unadjusted hourly production:       585.9 LCY/hr         Materials consistency description:       Consolidated stockpile 1.0         Average push gradient:       -20 %         Average site altitude:       7,200 feet         Material weight:       2,475 lbs/LCY         Weight description:       User Provided         Job Condition Correction Factor       Source         Operator Skill:       0.750       (AVG.)         Material weight:       1.200       (S-BY-S)         Visibility:       0.800       (POOR)         Job efficiency:       0.790       (3 SHIFTS/DAY)         Spoil pile:       1.000       (CAT HB)         Material Weight:       0.929       (CAT HB) </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
factor:	Source of estimate	d volume:	Table A-4.5	5		
Average push distance: $560 \text{ feet}$ Unadjusted hourly $585.9 \text{ LCY/hr}$ production:		d swell	Cat Handbo	ook		
Unadjusted hourly production:       585.9 LCY/hr         Materials consistency description:       Consolidated stockpile 1.0         Average push gradient:       -20 %         Average site altitude:       7,200 feet         Material weight:       2,475 lbs/LCY         Weight description:       User Provided         Job Condition Correction Factor       Source         Operator Skill:       0.750       (AVG.)         Material consistency:       1.000       (CAT HB)         Dozing method:       1.200       (S-BY-S)         Visibility:       0.800       (POOR)         Job efficiency:       0.790       (3 SHIFTS/DAY)         Spoil pile:       1.000       (CAT HB)         Altitude:       1.426       (CAT HB)         Altitude:       1.000       (POOR)         Job efficiency:       0.7535       (Atl 48 LCY/hr	HOURLY PRODU	CTION				
description: $-20 \%$ gradient: Average site altitude: $-20 \%$ gradient: Average site altitude:Material weight: $7,200$ feetMaterial weight: $2,475$ lbs/LCYWeight description:User ProvidedJob Condition Correction Factor Operator Skill:0.750(AVG.) (CAT HB)Material consistency: $1.000$ 1.000(CAT HB)Dozing method: $1.200$ 1.200(S-BY-S)Visibility: $0.800$ Job efficiency: $0.790$ 3 SHIFTS/DAY)Spoil pile: $1.000$ Haterial Weight: $0.929$ CAT HB)Material Weight: $0.929$ CAT HB)Material Weight: $0.929$ CAT HB)Material Weight: $0.929$ CAT HB)Material Weight: $0.7535$ Adjusted unit $441.48$ L CY/hr	Unadjusted hourly			r		
gradient: Average site altitude:7,200 feetMaterial weight:2,475 lbs/LCYWeight description:User ProvidedJob Condition Correction Factor Operator Skill:Source 0.750Operator Skill:0.750Material consistency:1.000I.000(CAT HB)Dozing method:1.200Job efficiency:0.790Job efficiency:0.790Job efficiency:0.790Job efficiency:0.790Job efficiency:0.790Job efficiency:1.000Material Weight:0.929I.000(CAT HB)Material Weight:0.929I.000(PAT)Net correction:0.7535Adjusted unit441.48 L CX/hr		ncy	Consolida	ated stockpile 1	.0	
altitude:		-20 9	%			
Weight description:User ProvidedJob Condition Correction FactorSourceOperator Skill:0.750Material consistency:1.000I.000(CAT HB)Dozing method:1.200Visibility:0.800Job efficiency:0.790Job efficiency:0.790Job efficiency:1.000Material Weight:1.426Material Weight:0.929Material Weight:0.929Net correction:0.7535Adjusted unit441.48 L CY/hr	e	7,20	0 feet			
Job Condition Correction FactorSourceOperator Skill:0.750(AVG.)Material consistency:1.000(CAT HB)Dozing method:1.200(S-BY-S)Visibility:0.800(POOR)Job efficiency:0.790(3 SHIFTS/DAY)Spoil pile:1.000(DOZ-OC)Push gradient:1.426(CAT HB)Altitude:1.000(CAT HB)Blade type:1.000(PAT)Net correction:0.7535Adjusted unit441.48 L CY/br	Material weight:	2,47	5 lbs/LCY			
Operator Skill:         0.750         (AVG.)           Material consistency:         1.000         (CAT HB)           Dozing method:         1.200         (S-BY-S)           Visibility:         0.800         (POOR)           Job efficiency:         0.790         (3 SHIFTS/DAY)           Spoil pile:         1.000         (DZ-OC)           Push gradient:         1.426         (CAT HB)           Altitude:         1.000         (CAT HB)           Material Weight:         0.929         (CAT HB)           Blade type:         1.000         (PAT)	Weight description	n: User	Provided			
Operator Skill:         0.750         (AVG.)           Material consistency:         1.000         (CAT HB)           Dozing method:         1.200         (S-BY-S)           Visibility:         0.800         (POOR)           Job efficiency:         0.790         (3 SHIFTS/DAY)           Spoil pile:         1.000         (DZ-OC)           Push gradient:         1.426         (CAT HB)           Altitude:         1.000         (CAT HB)           Material Weight:         0.929         (CAT HB)           Blade type:         1.000         (PAT)	Job Condition Corre	ection Fac	tor Source			
Material consistency:1.000(CAT HB)Dozing method:1.200(S-BY-S)Visibility:0.800(POOR)Job efficiency:0.790(3 SHIFTS/DAY)Spoil pile:1.000(DOZ-OC)Push gradient:1.426(CAT HB)Altitude:1.000(CAT HB)Material Weight:0.929(CAT HB)Blade type:1.000(PAT)Net correction:0.7535Adjusted unit441.48 LCY/br				1	VG.)	
Visibility:0.800(POOR)Job efficiency:0.790(3 SHIFTS/DAY)Spoil pile:1.000(DOZ-OC)Push gradient:1.426(CAT HB)Altitude:1.000(CAT HB)Material Weight:0.929(CAT HB)Blade type:1.000(PAT)Net correction:0.7535Adjusted unit441.48 LCY/br	1	cy:	1.000	(C.	AT HB)	
Visibility:0.800(POOR)Job efficiency:0.790(3 SHIFTS/DAY)Spoil pile:1.000(DOZ-OC)Push gradient:1.426(CAT HB)Altitude:1.000(CAT HB)Material Weight:0.929(CAT HB)Blade type:1.000(PAT)Net correction:0.7535Adjusted unit441.48 LCY/br	Dozing method:	•	1.200	(S-	BY-S)	
Spoil pile:1.000(DOZ-OC)Push gradient:1.426(CAT HB)Altitude:1.000(CAT HB)Material Weight:0.929(CAT HB)Blade type:1.000(PAT)Net correction:0.7535Adjusted unit441.48 L CX/br	Visibility:		0.800	(PC	DOR)	
Spoil pile:1.000(DOZ-OC)Push gradient:1.426(CAT HB)Altitude:1.000(CAT HB)Material Weight:0.929(CAT HB)Blade type:1.000(PAT)Net correction:0.7535Adjusted unit441.48 L CX/br	Job efficiency:		0.790	(3	SHIFTS/DAY)	
Push gradient:1.426(CAT HB)Altitude:1.000(CAT HB)Material Weight:0.929(CAT HB)Blade type:1.000(PAT)Net correction:0.7535Adjusted unit441.48 L CY/br	-		1.000			
Altitude:1.000(CAT HB)Material Weight:0.929(CAT HB)Blade type:1.000(PAT)Net correction:0.7535Adjusted unit441.48 L CX/br			1.426	(C.	AT HB)	
Material Weight:0.929(CAT HB)Blade type:1.000(PAT)Net correction:0.7535Adjusted unit441.48 L CX/br	6		1.000	(C.	AT HB)	
Blade type:     1.000     (PAT)       Net correction:     0.7535       Adjusted unit     441.48 L CV/br	Material Weight:		0.929	``	/	
Adjusted unit 441.48 LCV/br				``	,	
$\sqrt{1/1}$	Net correction:		0.7535		-	
		44	1.48 LCY/hr		-	

1765.92 LCY/hr

#### JOB TIME AND COST

Fleet size:	4 Dozer(s)
Unit cost:	\$1.949/LCY

 Total job time:
 269.44 Hours

 Total job cost:
 \$927,267

Task description:	Regrade L Pit X-sec	c:403,700		
te: Trapper Mine	Permit Action	n: PR12	Permit/Job#:	C1981010
PROJECT IDEN	TIFICATION			
Task #:		olorado	Abbreviation:	None
Date: 2/19 User: RAF		offat	Filename:	_L08
Agency or organ	ization name: DRMS	8		
HOURLY EQUI	PMENT COST			
Basic Machine:	Cat D11T - 11U			
Horsepower:	<u>850</u>			
Blade Type: Attachment:	Universal NA			
Shift Basis:	3 per day			
Data Source:	(CRG)			
Cost Breakdown:		Utilization %		
Ownership Cost/Hour:	\$496.62	NA		
Operating Cost/Hour:	\$324.90	100		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	10		
Operator Cost/Hour:	\$38.84	NA		
Total unit Cost/Hour:	\$860.36			
Total Fleet Cost/Hour:	\$3,441.42			

Initial Volume:	102,185		
Swell factor:	1.000		
Loose volume:	102,185 L	CY	
Source of estima	ted volume:	Table A-4.3	
Source of estima	ted swell	Cat Handboo	ok
factor:			
HOURLY PROD	<b>DUCTION</b>		
Average push dis	stance:	600 feet	
Unadjusted hour	ly	546.0 LCY/hr	
production:	•		
Materials consist description:	tency	Consolidat	ed stockpile 1.0
Average push	-25 9	%	
gradient:			
Average site	7,25	0 feet	
altitude:			
Material weight:	2,47	5 lbs/LCY	
Weight descripti	on: User	Provided	
Job Condition Con	mastion Eas	ton Course	
Job Condition Con Operator Skill:	rection Fac	tor <u>Source</u> 0.750	(AVG.)
Material consiste	nou	1.000	(CAT HB)
Dozing method:	incy.	1.200	(S-BY-S)
Visibility:		0.800	(POOR)
Job efficiency:		0.790	(3 SHIFTS/DAY)
Spoil pile:		1.000	(DOZ-OC)
Push gradient:		1.516	(CAT HB)
Altitude:		1.000	(CAT HB)
Material Weight	•	0.929	(CAT HB)
Blade type:	•	1.000	(PAT)
Diade (jpe.		1.000	(****)
Net correction:		0.8011	
Adjusted unit	43	7.40 LCY/hr	
production:			

1749.6 LCY/hr

#### JOB TIME AND COST

Fleet size:	4 Dozer(s)
Unit cost:	\$1.967/LCY

 Total job time:
 58.40 Hours

 Total job cost:
 \$200,995

	Task description:	Regrade L Pit X-se	c:403,200		
Site:	Trapper Mine	Permit Actio	n: <u>PR12</u>	Permit/Job#:	C1981010
	PROJECT IDEN	TIFICATION			
	Task #: <u>L09</u>		olorado	Abbreviation:	None
	Date: 2/19 User: RAF		offat	Filename:	L09
	Agency or organ	ization name: DRMS	5		
	HOURLY EQUI	PMENT COST			
	Basic Machine:	Cat D11T - 11U			
	Horsepower:	850			
	Blade Type:	Universal			
	Attachment: Shift Basis:	NA 2 non day			
	Data Source:	<u>3 per day</u> (CRG)			
	Data Source.	(CKU)			
	Cost Breakdown:				
	<u>Cost Dieukdowii</u> .		Utilization %		
	Ownership				
	Cost/Hour:	\$496.62	NA		
	Operating	\$324.90	100		
	Cost/Hour:				
	Ripper own. Cost/Hour:	\$0.00	NA		
	Ripper op. Cost/Hour:	\$0.00	10		
	Operator Cost/Hour:	\$38.84	NA		
	Total unit	\$860.36			
	Cost/Hour: Total Fleet Cost/Hour:	\$3,441.42			

Initial Volume:	101,945		
Swell factor:	1.000	<u> </u>	
Loose volume:	101,945 L	CY	
	101,9 10 1		
Source of estimat	ed volume	: Table A-4.3	
Source of estimat	ed swell	Cat Handboo	ok
factor:			
HOURLY PROD	<b>UCTION</b>		
A 1 1'			
Average push dis		550 feet	
Unadjusted hourly	У	594.6 LCY/hr	
production:			
Materials consiste	encv	Consolidat	ed stockpile 1.0
description:	J	0011501100	
1			
Average push	-15	%	
gradient:			
Average site	7,25	0 feet	
altitude:			
Material weight:	2,47	5 lbs/LCY	
Waight description	n Haa	Duraridad	
Weight description	on: User	Provided	
Job Condition Corr	rection Fac	tor Source	
Operator Skill:		0.750	(AVG.)
Material consister	ncy:	1.000	(CAT HB)
Dozing method:	5	1.000	(GEN.)
Visibility:		1.000	(AVG.)
Job efficiency:		0.790	(3 SHIFTS/DAY)
Spoil pile:		1.000	(DOZ-OC)
Push gradient:		1.329	(CAT HB)
Altitude:		1.000	(CAT HB)
Material Weight:		0.929	(CAT HB)
Blade type:		1.000	(PAT)
Net correction:		0.7315	
A directed unit			
Adjusted unit production:	43	84.95 LCY/hr	
production.			

1739.8 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$1.978/LCY

Total job time:	<b>58.60</b> Hours
Total job cost:	\$201,653

Task description	Regrade L Pit X-sec:402	,700		
Site: Trapper Mine	e Permit Action:	PR12	_ Permit/Job#:	C1981010
PROJECT IDEN	<b>TIFICATION</b>			
Task #: <u>L10</u> Date: <u>2/19</u>	State: Colorad 0/2025 County: Moffat	0	Abbreviation: Filename:	None L10
User: RAF				
Agency or organ	nization name: DRMS			
HOURLY EQUI	PMENT COST			
Basic Machine:	Cat D11T - 11U			
Horsepower:	850 Universal			
Blade Type: Attachment:	NA			
Shift Basis:	3 per day			
Data Source:	(CRG)			
Cost Breakdown:		Utilization %		
Ownership Cost/Hour:	\$496.62	NA		
Operating Cost/Hour:	\$324.90	100		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	10		
Operator Cost/Hour:	\$38.84	NA		
Total unit Cost/Hour:	\$860.36			
Total Fleet Cost/Hour:	\$3,441.42			

Initial Volume:	430,259				
Swell factor:	1.000				
Loose volume:	<b>430,259</b> L	CY			
Loose volume.					
Source of estima Source of estima factor:		: <u>Table A-4.</u> Cat Handb			
HOURLY PROL	DUCTION				
Average push di	stance:	405 feet			
Unadjusted hour production:	ly	801.6 LCY/h	ır		
Materials consist description:	tency	Consolid	ated stockpile	e 1.0	
Average push gradient:	-20	%	_		
Average site altitude:	7,35	50 feet	-		
Material weight:	2,47	/5 lbs/LCY			
Weight descripti	on: Use	r Provided			
Job Condition Con	rrection Fac	tor Source	2		
Operator Skill:		0.750		(AVG.)	
Material consiste	ency:	1.000		(CAT HB)	-
Dozing method:	-	1.200		(S-BY-S)	_
Visibility:		0.800		(POOR)	-
Job efficiency:		0.790		(3 SHIFTS/DAY)	-
Spoil pile:		1.000		(DOZ-OC)	-
Push gradient:		1.426		(CAT HB)	-
Altitude:		1.000		(CAT HB)	_
Material Weight		0.929		(CAT HB)	-
Blade type:		1.000		(PAT)	_
Net correction:		0.7535			
Adjusted unit production:	60	04.01 LCY/hr			

2416.04 LCY/hr

Fleet size:	4 Dozer(s)			
Unit cost:	\$1.424/LCY			
Total ich time.	170 A0 Harris			

Total job time:	<b>178.08</b> Hours
Total job cost:	\$612,863

Task description	n: <b>Regrade L Pi</b>	t X-sec:4	02,200		
te: Trapper Min	e Permit	Action:	PR12	Permit/Job#:	C1981010
PROJECT IDE	<b>NTIFICATION</b>				
Task #:       L11         Date:       2/1	1 State: 9/2025 County:	Color Moffa		_ Abbreviation: Filename:	None L11
User: RA	V	MOII	at		
Agency or orga	nization name:	DRMS			
HOURLY EQU	IPMENT COST				
Basic Machine:					
Horsepower:	850				
Blade Type: Attachment:	Universal				
Shift Basis:	NA 2 por dev				
Data Source:	3 per day (CRG)				
Data Source.	(CKU)				
Cost Breakdown	:				
<u></u>			Utilization %		
Ownership	¢ 10 c c <b>0</b>				
Cost/Hour:	\$496.62		NA		
Operating	\$324.90		100		
Cost/Hour:	<i><b>4</b>52</i> <b>1</b> .70		100		
Ripper own.	\$0.00		NA		
Cost/Hour:	·				
Ripper op. Cost/Hour:	\$0.00		10		
Operator					
Cost/Hour:	\$38.84		NA		
	¢950.25		1		
Total unit Cost/Hour:	\$860.36				
Total Fleet	\$3,441.42				
Cost/Hour:	Ψ3,771.72				
CO5411041.					

Initial Volume:	572,536			
Swell factor:	1.000			
Loose volume:	572,536 LCY			
Loose volume.	572,550 LC I			
Source of estima Source of estima		Table A-4.3 Cat Handbook		
factor:				
HOURLY PROI	DUCTION			
Average push di	stance: 52	25 feet		
Unadjusted hour production:		22.2 LCY/hr		
Materials consis description:	tency	Compacted fil	l or embankment	0.9
Average push gradient:	-20 %			
Average site altitude:	7,400 fe	eet		
Material weight:	2,475 1	os/LCY		
Weight descripti	on: User Pr	ovided		
Job Condition Con	rrection Factor	Source		
Operator Skill:		750	(AVG.)	
Material consiste		900	(CAT HB	))
Dozing method:		200	(S-BY-S)	
Visibility:		800	(POOR)	
Job efficiency:	0.	790	(3 SHIFT	S/DAY)
Spoil pile:	1.	000	(DOZ-OC	
Push gradient:	1.	426	(CAT HB	)
Altitude:	1.	000	(CAT HB	)
Material Weight	: 0.	929	(CAT HB	)
Blade type:		000	(PAT)	<u>.</u>
Net correction:	0.	6782		
Adjusted unit production:	421.9	98 LCY/hr		
Adjusted fleet production:	1687.	<b>92</b> LCY/hr		

Fleet size:	4 Dozer(s)
Unit cost:	\$2.039/LCY
Total job time:	339.20 Hours
Total job cost:	\$1,167,317

Task description	Regrade L Pit X-sec:401	,700		
Site: Trapper Mine	e Permit Action:	PR12	_ Permit/Job#:	C1981010
PROJECT IDEN	<b>TIFICATION</b>			
Task #: <u>L12</u> Date: 2/19	State:Colorad0/2025County:Moffat	lo	Abbreviation: Filename:	None L12
User: RAF			Thename.	L12
Agency or organ	nization name: DRMS			
HOURLY EQUI	PMENT COST			
Basic Machine:	Cat D11T - 11U			
Horsepower:	850			
Blade Type: Attachment:	Universal NA			
Shift Basis:				
Data Source:	3 per day (CRG)			
Data Source.	(CKO)			
Cost Breakdown:				
		Utilization %		
Ownership	¢406.62			
Cost/Hour:	\$496.62	NA		
Operating Cost/Hour:	\$324.90	100		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	10		
Operator Cost/Hour:	\$38.84	NA		
Total unit Cost/Hour:	\$860.36			
Total Fleet Cost/Hour:	\$3,441.42			

Initial Volume: 1	73,389	
	.000	
	73,389 LCY	
Source of estimated	d volume: <u>Table A-4.3</u>	
Source of estimated factor:	d swell Cat Handbook	
HOURLY PRODU	<u>CTION</u>	
Average push dista	nce: 450 feet	
Unadjusted hourly production:	725.7 LCY/hr	
Materials consister description:	Compacted t	fill or embankment 0.9
Average push gradient:	-20 %	
Average site altitude:	7,400 feet	
Material weight:	2,475 lbs/LCY	
Weight description	: User Provided	
Job Condition Corre	ction Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistence	cy: 0.900	(CAT HB))
Dozing method:	1.200	(S-BY-S)
Visibility:	0.800	(POOR)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.6782	
Adjusted unit production:	492.17 LCY/hr	

1968.68 LCY/hr

#### JOB TIME AND COST

Fleet size:	4 Dozer(s)
Unit cost:	\$1.748/LCY

 Total job time:
 88.07 Hours

 Total job cost:
 \$303,099

Task description	Regrade L Pit X-sec:401	,200		
Site: Trapper Mine	e Permit Action:	PR12	Permit/Job#:	C1981010
PROJECT IDEN	<b>TIFICATION</b>			
Task #: <u>L13</u> Date: <u>2/19</u>	State: Colorad V/2025 County: Moffat	lo	Abbreviation: Filename:	None L13
User: RAF			Filename.	<u>L15</u>
Agency or organ	ization name: DRMS			
HOURLY EQUI	PMENT COST			
Basic Machine:	Cat D11T - 11U			
Horsepower: Blade Type:	850 Universal			
Attachment:	NA			
Shift Basis:	3 per day			
Data Source:	(CRG)			
Cost Breakdown:				
		Utilization %		
Ownership Cost/Hour:	\$496.62	NA		
Operating Cost/Hour:	\$324.90	100		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	10		
Operator Cost/Hour:	\$38.84	NA		
Total unit Cost/Hour:	\$860.36			
Total Fleet Cost/Hour:	\$3,441.42			

Initial Volume:	273,425		
Swell factor:	1.000		
Loose volume:	273,425 L	СҮ	
Source of estima	ted volume:	Table A-4.5	
Source of estima	ted swell	Cat Handboo	k
factor:			
HOURLY PROD	<b>UCTION</b>		
Average push di	-	205 feet	
Unadjusted hour	ly	1,529.1 LCY/h	r
production:			
Matariala agraia		Commonted	fill or each only and 0.0
Materials consist	lency	Compacted	fill or embankment 0.9
description:		. <u></u>	
Average push	-25 9	<i>V</i> 6	
gradient:	-20	0	
Average site	7 50	0 feet	
altitude:	7,50	0 1001	
Material weight:	2.47	5 lbs/LCY	
Weight descripti	on: User	Provided	
0 1			
Job Condition Con	rection Fact	tor Source	
Operator Skill:	_	0.750	(AVG.)
Material consiste	ency:	0.900	(CAT HB))
Dozing method:	-	1.200	(S-BY-S)
Visibility:	-	0.800	(POOR)
Job efficiency:	-	0.790	(3 SHIFTS/DAY)
Spoil pile:	-	1.000	(DOZ-OC)
Push gradient:	-	1.516	(CAT HB)
Altitude:	-	1.000	(CAT HB)
Material Weight		0.929	(CAT HB)
Blade type:	-	1.000	(PAT)
Net correction:		0.7210	
	-	0.7210	
Adjusted unit			
production:	1,1	102.48 LCY/hr	
r			

4409.92 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.780/LCY

Total job time:	<b>62.00</b> Hours
Total job cost:	\$213,376

Site: <u>Trapper Mine</u> <u>PROJECT IDENTI</u>	Permit Actio	on: PR12		
PROJECT IDENTI		MI. <u>FK12</u>	Permit/Job#:	C1981010
	FICATION			
Task #:     L14       Date:     2/19/20		olorado Ioffat	Abbreviation: Filename:	None L14
User: <u>RAR</u> Agency or organiza	tion name: DRM	S		
HOURLY EQUIPM	<u>IENT COST</u>			
Horsepower: 8 Blade Type: 1 Attachment: 1 Shift Basis: 3	Cat D11T - 11U 350 Universal NA 3 per day (CRG)			
<u>Cost Breakdown</u> : Ownership		Utilization %		
Cost/Hour:	\$496.62	NA		
Operating Cost/Hour:	\$324.90	100		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	10		
Operator Cost/Hour:	\$38.84	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour:	\$860.36 <b>\$3,441.42</b>			

volume:	271,815	
	1.000	
Loose volume:	271,815 LCY	
Source of estimate		
Source of estimate factor:	ed swell Cat Handbook	
HOURLY PRODU	UCTION	
Average push dist	ance: 150 feet	
Unadjusted hourly production:		
Materials consiste description:	compacted f	ill or embankment 0.9
Average push gradient:	-30 %	
Average site altitude:	7,550 feet	
Material weight:	2,475 lbs/LCY	
Weight descriptio	n: User Provided	
Job Condition Corr	ection Factor Source	
Operator Skill:	0.750	(AVG.)
Material consister	ncy: 0.900	(CAT HB))
Dozing method:	_1.200	(S-BY-S)
Visibility:	0.800	(POOR)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.601	(CAT HB)
Altitude:	0.930	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.7081	
Adjusted unit production:	1,442.26 LCY/hr	

5769.04 LCY/hr

Fleet size:	4 Dozer(s)	
Unit cost:	\$0.597/LCY	

Total job time:	<b>47.12</b> Hours
Total job cost:	\$162,147

#### TRUCK/LOADER TEAM WORK

Task description:	Regrae	de L PIt (Ti	ruck/	Excavator)					
Site: Trapper Mine	<u>)</u>	Permit Acti	on:	PR12	Pe	ermit/Job#:	C1981010		
PROJECT IDEN	TIFICATIO	<u>N</u>							
Task #:L15	S	tate:	Color	ado	A	bbreviation:	None		
Date: 2/19	/2025 0	County: _ ]	Moffa	at	Fi	lename:	L15		
User: RAF	<u> </u>								
Agency or organ	ization name:	DRM	4S						
HOURLY EQUI	PMENT CO	<u>ST</u> Shift b	oasis:	<u>1 per day</u>					
Equipment	t Description								
Truck Loader Te	am -Truck:		-	MATSU 830E	3				
-Loader:				T 6090					
Support Equipm	ent -Load Are	a:		D10T - 10SU					
-Dump Area:				D10T - 10SU					
Road Maintenan -Water Truck:	ce –Motor Gr	ader:	-	T 16M ter Tanker, 14					
<u>Cost Breakdown</u>	Truck/Lo	ader Team	Sup	port Equipmer	nt Mainte	nance Equipm rea Motor	nent Water		
						Grader	Truck		
%Utilization- machine:	100	100		25	25	25	50		
Ownership cost/hour:	t/hour: \$274.17 \$501.45 \$49.23					\$257.39	\$257.39	\$179.39	9 \$130.32
Operating cost/hour:						\$49.23	\$49.23	\$29.91	\$70.88
%Utilization-riper:			15	NA	NA	NA			
Ripper own. cost/hour:	NA	\$0.00	\$20.05 \$0.0	\$0.00	\$0.00	\$0.00			
Ripper op. cost/hour:	NA	\$0.00		\$1.90	\$0.00	\$0.00	\$0.00		
Operator cost/hour:	\$25.24	\$33.87		\$38.59	\$38.59	\$27.76	\$0.00		
Unit Subtotals:	\$508.88	\$837.67		\$347.11	\$345.21	\$237.00	6 \$201.20		
Number of Units:	3	1		1	1	1	1		
Group Subtotals:	Work:	\$2,364.3	1	Support:	\$692.32	Maint:	\$438.26		

Total work team cost/hour: **<u>\$3,494.89</u>** 

Initial volume: Loose volume:	1,647 <b>1,647</b>	,		CCY LCY	Swell factor:	_	1.000		
Source of estimated					Appendix A Tab	ble A	-3.1		
Source of estimated swell factor:				Cat Han	ldbook				
Material Purchase	Cost:			\$0.00					
Total Cost:				\$0.00					
HOURLY PRO <u>Truck Capacity</u> <u>Truck Payload (v</u>	<u>:</u> weight)	Basis:							
Material weight	t:	3,300			Pounds/LCY				
Description:			sed ro	ock - 75	% Rock, 25% E	arth			
Rated Payload:		492,200			Pounds				
Payload Capaci	ity:	149.15			LCY				
Truck Bed (volu	me) Bas	<u>sis:</u>							
Struck Volume	:	153.00	LC	Y					
Heaped Volum	e:	192.00	LC	Y					
Average Volum	ne:	172.50	LC	Y					
Adjusted Volur	ne:	149.15	LC	Y					
Final Truck Vo	lume B	ased on Nur	mber	of Load	ler Passes:	_	129.58		LCY
Loading Tool Ca	pacity								
-	-			Bucke	et Size Class:			NA	
Rated Capacity	-	58.900		LCY (ł	- · · ·				
Bucket Fill Fac	tor:	1.100		Other -	rock/dirt mixtu	res	(100-120	%) 1.10	0
Adjusted Capac	city:	64.790		LCY					

#### Job Condition Corrections: Site Altitude (ft.): 6400 feet

	Truck	Loader	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Loading Tool Cycle Time:	Number of Loading Tool Passes Required	2	passes
	to Fill Truck:		

#### Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating:			ion A	BOVE AV	ERAGI	Ξ			
Selected Valu	e within the	his Basic Rat	ing: A	VERAGE					
Track Loader	s – Materi	al Descriptio	n:						
Cycle Time Ele	ements (m	in.):							
Load: NA Maneuver:			N	A	Dump	:	0.100	)	
Wheel and Tr dump, maneu		ers - Unadjus	ted Basic L	oader Cycl	e Time	(load,	NA	mi	nutes
Cycle Time F	actors					Factor (	min.)	Source	
Material:		NA				NA		(Cat HB)	
Stockpile:		NA				NA		(Cat HB)	
Truck Owners	ship:	NA				NA		(Cat HB)	
Operation:		NA				NA		(Cat HB)	
Dump Target		NA				NA		(Cat HB)	
		Net Cycle 7	Time Adjus	stment:		NA		minutes	
		Adjusted Lo	oader Cycle	e Time:		0.498		minutes	
Net Load Time pe			ime per Tr	uck:	-	0.996		minutes	
Truck Cycle T	<u>`ime:</u>								
Truck Exchang	e Time:	0.80	Minutes	tes Adjusted for site altit			0	.800	Minutes
Truck Load Tir	ne:	0.996	Minutes	Adjusted	for site	altitude:	0	.996	Minutes
Truck Maneuver and 1.20 Minutes Adjusted a Dump Time:			for site	altitude:	1	.200	Minutes		

<u>Truck Travel (Haul & Return) Time:</u> Road Condition: <u>Firm, smooth, rolling, dirt/lt. surfaced,</u> <u>watered, maintained 3.0</u>

Haul Route:

Seg #	Haul Distance	Grade	Roll.	Total	Velocity	Travel
	(Ft)	(%)	Res (%)	Res (%)	(fpm)	Time
						(min)
1	1841.00	-8.00	3.00	-5.00	1870	1.139

Haul Time: **1.139** minutes

	Return R	oute:								
	Seg #	Haul Distance		Grade	Roll.	Total	Velocity	Trave	1	
		(Ft) (%)		Res (%)	Res (%)	(fpm)	Time			
								(min)		
	1	150	02.00	8.00	3.00	11.00	1734	1.269		
	Return Time:						1.269		minute	
				Total Truck	Cycle Time		5.404		minute	S
	ng Tool u	init	4 220 0 5					<b>2 5</b> 0		
Produ			4,328.95	LCY/Ho	_ LCY/Hour Adjusted for job			3,593	3.03	LCY/Hour
	Truck UnitProduction1,438.71LCY/Hour			ur Adjus	Adjusted for job efficiency:			4.13	LCY/Hour	
Optin Truck	nal No. of s:	-	3	Truck(s)	Select	ed Number	of Trucks:	3		Truck(s)
	Adjust	ted ho	ourly truck te	eam producti	on:		3,582.	39	LCY/I	Hour
			•	ader team pr			3,582.		LCY/I	
			0	/loader team			3,582.		LCY/I	Hour
	JOB TIME AND COST									
	Fleet siz	ze:	1	Team(s)	Total jo	ob time:	459.83		Hou	rs
	Unit cost:         \$0.976         /LCY         Total job cost:         \$1,607,039									
#### TRUCK/LOADER TEAM WORK

Task description: <u>Re</u>	egrade Jennings Pit (Truck/Exc	avator) TR 135
Site: Trapper Mine	Permit Action: PR12	Permit/Job#: <u>C1981010</u>
PROJECT IDENTIFICA	ATION	
$\begin{array}{c} \underline{\text{Task #:}} \\ \underline{\text{Date:}} \\ \underline{\text{User:}} \\ \hline \\ \underline{\text{RAR}} \end{array} $	State:ColoradoCounty:Moffat	Abbreviation:NoneFilename:L15A TR135
Agency or organization n	ame: <u>DRMS</u>	
HOURLY EQUIPMENT	<b>COST</b> Shift basis: 1 per day	
Equipment Descrip	tion	
Truck Loader Team -Truck	ck: KOMATSU 830E	
-Loader:	<u>CAT 6090</u>	
Support Equipment -Load	d Area: Cat D10T - 10SU	

Cat D10T - 10SU

-Water Truck:	Water Tanker, 14,000 Gal.

### Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

CAT 16M

	<u>Truck</u>	Shovel	Load Area	Dump Area	Motor Grader	Water Truck
<u>%Utilization-</u> machine:	<u>100</u>	<u>100</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>50</u>
Ownership cost/hour:	<u>\$209.47</u>	<u>\$302.35</u>	<u>\$257.39</u>	<u>\$257.39</u>	<u>\$179.39</u>	<u>\$130.32</u>
Operating cost/hour:	<u>\$274.17</u>	<u>\$501.45</u>	<u>\$49.23</u>	<u>\$49.23</u>	<u>\$29.91</u>	<u>\$70.88</u>
<u>%Utilization-</u> riper:	NA	<u>0</u>	<u>15</u>	NA	NA	NA
Ripper own. cost/hour:	NA	<u>\$0.00</u>	<u>\$20.05</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
Ripper op. cost/hour:	NA	<u>\$0.00</u>	<u>\$1.90</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
Operator cost/hour:	<u>\$25.24</u>	<u>\$33.87</u>	<u>\$38.59</u>	<u>\$38.59</u>	<u>\$27.76</u>	<u>\$0.00</u>
Unit Subtotals:	<u>\$508.88</u>	<u>\$837.67</u>	<u>\$347.11</u>	<u>\$345.21</u>	\$237.06	<u>\$201.20</u>
Number of Units:	<u>12</u>	<u>4</u>	1	1	1	1
Group Subtotals:	Work:	<u>\$9,457.24</u>	Support:	<u>\$692.32</u>	Maint:	<u>\$438.26</u>

Total work team cost/hour: \$10,587.82

-Dump Area:

Road Maintenance – Motor Grader:

	<u>1,227,754</u>	$-\frac{CCY}{LCY}$	Swell factor:	<u>1.000</u>	-
Loose volume:	<u>1,227,754</u>	<u>LCY</u>			
Source of estimated	<u>l volume:</u>	<u>TR135</u>	Appendix A Tab	le A-1.1	
Source of estimated	d swell factor:	Cat Ha	ndbook		
Material Purchase	<u>Cost:</u>	<u>\$0.00</u>			
<u>Total Cost:</u>		<u>\$0.00</u>			
HOURLY PRODU	CTION				
Truck Consoitze					
Truck Capacity: Truck Payload (weig	t) Basis				
Material weight:	<u>3,300</u>		Pounds/LCY		
Description:		ed rock - 75	% Rock, 25% Ea	rth	
Rated Payload:	492,200		Pounds		
Payload Capacity:	<u>149.15</u>		<u>LCY</u>		
Truck Bed (volume)	Basis <sup>.</sup>				
Struck Volume:	153.00	LCY			
Heaped Volume:	192.00	LCY			
Average Volume:	172.50	LCY			
Adjusted Volume:	<u>149.15</u>	<u>LCY</u>			
Final Truck Volum	e Based on Num	iber of Load	ler Passes:	<u>129.58</u>	<u>LCY</u>
Loading Tool Capac	ity				
<u> </u>		Bucke	et Size Class:		NA
Rated Capacity:	58.900		neaped)		
Bucket Fill Factor:	1.100		rock/dirt mixture	es (100-1209	6) 1 100
Adjusted Capacity:		LCY		(100 1207	0) 1.100
Job Condition Corr	rections: Site Al	titude (ft.):	<u>6400 feet</u>		
	Truck	Loader	Source		
Altitude Adj:	1.000	1.000	(CAT H	<u>B)</u>	
Job Efficiency:	0.830	0.830	<u>(CAT H</u>	<u>B)</u>	

<u>too Lintelenej.</u>	0.000	0.000	<u>(emmb)</u>
Net Correction:	<u>0.830</u>	0.830	

Loading Tool Cycle Tin	ne: <u>Number of Lo</u> to Fill Truck:	bading [	<u>Fool Passes R</u>	Required	<u>2</u>		<u>passes</u>
Excavators and Front							
Shovels:							
Machine Cycle Time vs	s. Job Condition			קר			
Rating:		ADU	VE AVERAC	JE			
Selected Value within the	<u>his Basic Rating:</u>	<u>AVEI</u>	RAGE				
Track Loaders – Materi	al Description:						
Cycle Time Elements (m	<u>in.):</u>						
Load: <u>NA</u>	Maneuver:	<u>NA</u>	Dum	<u>p:</u>	<u>0.100</u>	<u>)</u>	
Wheel and Track Loade	ers - Unadiusted Basi	ic Load	er Cycle Tim	e (load		mi	nutes
dump, maneuver):		- 2000		<u>    (10 000;</u>	<u>NA</u>	<u></u>	
<u>.</u>							
Cycle Time Factors				Factor (n	nin.)	Source	
Material:	NA			NA		(Cat HB)	
Stockpile:	NA			<u>NA</u>		(Cat HB)	
Truck Ownership:	<u>NA</u>			<u>NA</u>		(Cat HB)	
Operation:	<u>NA</u>			<u>NA</u>		(Cat HB)	
Dump Target:	<u>NA</u>			<u>NA</u>		(Cat HB)	
	Net Cycle Time Ac	ljustme	<u>nt:</u>	<u>NA</u>		minutes	
	Adjusted Loader C	ycle Ti	me:	<u>0.498</u>		minutes	
	Net Load Time per	Truck:		<u>0.996</u>		minutes	
<u>Truck Cycle Time:</u>							
Truck Exchange Time:	<u>0.80</u> <u>Minut</u>	es <u>A</u>	ljusted for sit	e altitude:	<u>0</u>	.800	Minutes
Truck Load Time:	0.996 Minut	es A	ljusted for sit	e altitude:	0	.996	Minutes
Truck Maneuver and	1.20 Minut		ljusted for sit			.200	Minutes
Dump Time:	<u></u>	<u></u>		<u></u>			<u></u>

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Hau	il Rout	te:								
Se	e <u>g #</u>		l Distance	Grade	$\frac{\text{Roll.}}{\text{Ros}}$	$\frac{\text{Total}}{\text{Reg}(0)}$	<u>Velocity</u>	Trave	<u>l</u>	
		<u>(Ft)</u>		<u>(%)</u>	<u>Res (%)</u>	<u>Res (%)</u>	<u>(fpm)</u>	Time (min)		
1		3448	8.00	-1.80	3.00	1.20	3503	1.633		
1		<u>9110</u>	<u></u>		<u>3.00</u>	1.20	<u>5505</u>	1.000		
					Haul	Time:	<u>1.633</u>	<u>n</u>	ninutes	<u>}</u>
Ret	urn Ro			1	I		1	I		
<u>Se</u>	e <u>g #</u>		l Distance	Grade	<u>Roll.</u>	<u>Total</u>	<u>Velocity</u>	Trave	<u>l</u>	
		<u>(Ft)</u>		<u>(%)</u>	<u>Res (%)</u>	<u>Res (%)</u>	<u>(fpm)</u>	Time		
1		3448	2.00	1.80	3.00	4.80	3296	(min) 1.636		
<u>1</u>		<u>3440</u>	<u>5.00</u>	1.00	<u>3.00</u>	4.00	<u>3290</u>	1.030		
				Return Time	2:		1.636		minute	S
				Total Truck			6.265		minute	
Loading 7		<u>nit</u>								
Productio			<u>4,328.95</u>	LCY/Hot	<u>ur Adjus</u>	ted for job e	efficiency:	<u>3,593</u>	<u>3.03</u>	LCY/Hour
<u>Truck Un</u> Productio			<u>1,240.99</u>	LCY/Ho	u <u>r Adjus</u>	ted for job e	efficiency:	<u>1,03(</u>	<u>).02</u>	LCY/Hour
<u>Optimal N</u>	<u>No. of</u>		<u>3</u>	Truck(s)	Select	ed Number	of Trucks:	<u>3</u>		Truck(s)
Trucks:										-
-				eam production ader team production			<u>3,090.0</u> 3,090.0		LCY/	
	•		-	/loader team			<u> </u>		LCY/	
-			1							
JO	B TIM	IE Al	ND COST							
<u>Fl</u>	eet siz	<u>e:</u>	<u>4</u>	Team(s)	<u>Total jo</u>	ob time:	<u>99.33</u>		Hou	<u>irs</u>
<u>U</u> 1	nit cos	<u>t:</u>	<u>\$0.857</u>	/LCY	<u>Total je</u>	ob cost:	<u>\$1,051,69</u>	<u>6</u>		

#### TRUCK/LOADER TEAM WORK

Task descripti	on: <u>Regr</u>	ade L Pit l	K Kno	ob (Truck/Ex	xcavato	<b>r) TR</b> 1	<u>135</u>		
Site: <u>Trapper M</u>	ine	Permit A	Action	: <u>PR12</u>		<u> </u>	ermit/Job	<u>#: C</u>	<u>1981010</u>
PROJECT ID	ENTIFICATI	<u>ON</u>							
<u>Date:</u> 2/	<u>25/2025</u> C		<u>Colora</u> Moffa			<u>Abbre</u> Filena	<u>viation:</u> me:	<u>None</u> <u>C010</u> <u>L15</u> T	-
<u>User:</u> <u>R</u>	<u>AR</u>								
Agency or or	ganization nam	e: <u>DRN</u>	<u> </u>						
<u>HOURLY EQ</u>	UIPMENT CO	O <b>ST</b> Shi	ft bas	is: 1 per day					
Equipm	ent Description	<u>1</u>							
Truck Loader	<u>Team -Truck:</u>			MATSU 8301	<u> </u>				
-Loader:				<u>Г 6090</u>					
<u>Support Equi</u>	Support Equipment -Load Area:			<u>D10T - 10SU</u>	<u>r</u>				
-Dump Area:			<u>Cat D10T - 10SU</u>						
	nance – Motor C	<u>Grader:</u>	<u>CAT 16M</u>						
-Water Truck: Water Tanker, 14,000 Gal.									
Cost Breakdo	wn: Truck/I	Loader Tea	<u>m S</u>	upport Equip	ment	Mainte	enance Eq	uipme	<u>nt</u>
	Truck	Shovel		Load Area	Dump Area	<u> </u>	<u>Motor</u> <u>Grader</u>		<u>Vater</u> <u>Fruck</u>
<u>%Utilization-</u> machine:	<u>100</u>	<u>100</u>		<u>25</u>	<u>25</u>		<u>25</u>	2	50
Ownership cost/hour:	<u>\$209.47</u>	<u>\$302.35</u>	-	<u>\$257.39</u>	<u>\$257.</u>	<u>39</u>	<u>\$179.39</u>	4	<u>5130.32</u>
<u>Operating</u> <u>cost/hour:</u>	<u>\$274.17</u>	<u>\$501.45</u>	-	<u>\$49.23</u>	<u>\$49.2</u>	<u>3</u>	<u>\$29.91</u>	4	<u> 570.88</u>
<u>%Utilization-</u> riper:	NA	<u>0</u>		<u>15</u>	<u>NA</u>		<u>NA</u>	1	<u>NA</u>
Ripper own. cost/hour:	NA	<u>\$0.00</u>		<u>\$20.05</u>	<u>\$0.00</u>		<u>\$0.00</u>	4	<u>60.00</u>
Ripper op. cost/hour:	NA	<u>\$0.00</u>		<u>\$1.90</u>	<u>\$0.00</u>		<u>\$0.00</u>	4	<u>60.00</u>
Operator cost/hour:	<u>\$25.24</u>	<u>\$33.87</u>		<u>\$38.59</u>	<u>\$38.5</u>	<u>)</u>	<u>\$27.76</u>	4	<u>60.00</u>
Unit Subtotals:	\$508.88	\$837.67	,	\$347.11	\$345.	21	\$237.06	5	5201.20
Number of Units:	12	4	•	1	1		1	1	
Group Subtotals:	Work:	\$9,457.2	24	Support:	\$692.	32	Maint:		6438.26

Total work team cost/hour: \$10,587.82

Initial volume: 6,083,510	<u>CCY</u> <u>Swell factor:</u> <u>1.000</u>
Loose volume: 6,083,510	LCY
Source of estimated volume:	TR135 Appendix A Table A-1.1
Source of estimated swell fac	tor: <u>Cat Handbook</u>
Material Purchase Cost:	<u>\$0.00</u>
<u>Total Cost:</u>	<u>\$0.00</u>

#### **HOURLY PRODUCTION**

## Truck Capacity:

Truck Payload (weight) E	<u>Basis:</u>		
Material weight:	<u>3,300</u>		Pounds/LCY
Description:	Decompose	ed rock - 75%	<u>6 Rock, 25% Earth</u>
Rated Payload:	<u>492,200</u>		Pounds
Payload Capacity:	<u>149.15</u>		<u>LCY</u>
Truck Bed (volume) Basi	<u>s:</u>		
Struck Volume:	<u>153.00</u>	LCY	
Heaped Volume:	<u>192.00</u>	LCY	
Average Volume:	<u>172.50</u>	LCY	
Adjusted Volume:	<u>149.15</u>	LCY	

Final Truck Volume Based on Number of Loader Passes:	<u>129.58</u>	LCY
--	---------------	-----

Loading Tool Capacity

	Bucket	Size	Class:	
--	--------	------	--------	--

NA

Rated Capacity:	<u>58.900</u>	LCY (heaped)
Bucket Fill Factor:	<u>1.100</u>	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	<u>64.790</u>	LCY

#### Job Condition Corrections: Site Altitude (ft.): 6400 feet

	Truck	Loader	Source
<u>Altitude Adj:</u>	<u>1.000</u>	<u>1.000</u>	<u>(CAT HB)</u>
Job Efficiency:	0.830	0.830	<u>(CAT HB)</u>
Net Correction:	<u>0.830</u>	<u>0.830</u>	

Loading Tool Cycle Time:	Number of Loading Tool Passes Required to	2	passes
	Fill Truck:	<u>2</u>	-

Excavators and Front Shovels:

Machine Cycle Time vs. <u>Rating:</u> Selected Value within thi Track Loaders – Material	s Basic Rating:		BOVE AVE /ERAGE	ERAGE				
TIACK LOADERS - Material	Description.							
Cycle Time Elements (min	<u>.):</u>							
Load: <u>NA</u>	Maneuver:	NA	<u>\</u>	<u>Dump:</u>		<u>0.100</u>		
Wheel and Track Loaders maneuver):	s - Unadjusted Basic	Loade	er Cycle Tii	me (load	<u>, dump,</u>	<u>NA</u>	<u>mi</u>	<u>nutes</u>
Cycle Time Factors					Factor (n	nin )	Source	
Material:	NA				NA	<u></u>	(Cat HB)	
Stockpile:	NA				NA		(Cat HB)	
Truck Ownership:	NA				NA		(Cat HB)	
Operation:	NA				NA		(Cat HB)	
Dump Target:	NA				NA		(Cat HB)	
	Net Cycle Time Ac	ljustm	ent:		NA		minutes	
	Adjusted Loader C	ycle T	'ime:	-	0.498		minutes	
	Net Load Time per	Truck	<u></u>	-	0.996		minutes	
<u>Truck Cycle Time:</u>								
Truck Exchange Time:	<u>0.80</u> <u>Min</u>	utes	Adjusted	for site a	altitude:	(	0.800	<b>Minutes</b>
Truck Load Time:	0.996 Min	utes	Adjusted	for site a	altitude:		0.996	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u> <u>Min</u>		Adjusted				1.200	Minutes
Truck Travel (Haul & Retu	ırn) Time: Road Con	dition	· Firm, smo	oth roll	ing dirt/lt	surface	ed. watered	

#### maintained 3.0 min, smooth, formig, unt/ft. surraceu, watere u,

Haul Route:

<u>Seg #</u>	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	<u>Velocity</u> (fpm)	Travel Time
	<u>(1't)</u>		(70)	(70)	<u>(1pm)</u>	(min)
1	3711.00	-3.15	3.00	-0.15	3503	1.144

Return Ro	oute.		<u>Haul Tim</u>	<u>e: 1</u>	l <u>.144</u>	minutes
Seg #	Haul Distance (Ft)	<u>Grade (%)</u>	<u>Roll. Res</u> (%)	Total Res (%)	<u>Velocity</u> (fpm)	Travel Time (min)

<u>1</u> <u>371</u>	1.00	<u>3.15</u> <u>3.</u>	.00 6.15	2853	<u>1.901</u>	
		<u>urn Time:</u> al Truck Cycle	<u>Time:</u>	<u>1.901</u> <u>6.041</u>	minutes minutes	
<u>Loading Tool unit</u> <u>Production</u> Truck Unit	<u>4,328.95</u>	LCY/Hour	Adjusted for job e	fficiency:	<u>3,593.03</u>	LCY/Hour
Production	<u>1,287.01</u>	LCY/Hour	Adjusted for job e	fficiency:	<u>1,068.21</u>	LCY/Hour
<u>Optimal No. of</u> <u>Trucks:</u>	<u>3</u>	Truck(s)	Selected Number	of Trucks:	<u>3</u>	Truck(s)
Adjusted hourly truck team production:3,204.64LCY/HourAdjusted single truck/loader team production:3,204.64LCY/HourAdjusted multiple truck/loader team production:12,818.57LCY/Hour						<u>Hour</u>
JOB TIME AN	ND COST					
Fleet size:	4	Team(s)	Total job time:	<u>474.59</u>	Hou	<u>rs</u>
Unit cost:	<u>\$0.826</u>	/LCY	<u>Total job cost:</u>	<u>\$5,024,826</u>		

## **REVEGETATION WORK**

Task des	cription:	Seed L Pit: Ran	geland with Shrubs	8	
Site: Trapp	er Mine	Permit A	ction: PR12	Permit/Job#:	C1981010
<b>PROJEC</b>	<u>T IDENTIFI</u>	CATION			
Task #:	L16	State:	Colorado	Abbreviation:	None
Date:	2/20/2025	County:	Moffat	Filename:	L16
	RAR				

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60

Aster, Pacific	0.02 0.08	0.35	\$2.80
Goldeneye, Showy		0.92	\$9.13
Totals Seed Mix	15.79	44.87	\$684.99

## Application

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

## JOB TIME AND COST

No. of Acres:	803.9	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$740,898.36
Reseeding Job Cost:	\$129,657.21
Total Job Cost:	\$870,556
Job Hours:	804.00

## **REVEGETATION WORK**

Task d	lescription:	Seed L Pit dive	rsion: Rangeland with	h Shrubs MR228	
Site: Traj	pper Mine	Permit A	Action: PR12	Permit/Job#:	C1981010
<u>PROJE</u>	ECT IDENTIFI	CATION			
Task #	#: L16MR22	28 State:	Colorado	Abbreviation:	None
Date:	2/24/2025	5 County:	Moffat	Filename:	C010-L16MR228
User:	RAR				
Agenc	y or organizatio	on name: D	RMS		

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60

Yarrow, Western Globemallow, Munro	0.07 0.08	4.26 0.91	\$3.38 \$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
	15 70	44.07	¢<04.00
Totals Seed Mix	15.79	44.87	\$684.99

## Application

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

## JOB TIME AND COST

No. of Acres:	2.3	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	TILLING, SEE	DING	

Initial Job Cost:	\$2,119.75
Reseeding Job Cost:	\$370.96
Total Job Cost:	\$2,491
Job Hours:	2.30

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## BULLDOZER WORK

Task description	: Regrade L Pit North l	Haul road.6.5 ac X 9	ft th.	
: Trapper Mine	e Permit Action:	PR12	Permit/Job#:	C1981010
PROJECT IDEN	<b>NTIFICATION</b>			
Task #:			Abbreviation:	None
	0/2025 County: Moff	at	Filename:	L17
User: RAI	<u> </u>			
Agency or organ	nization name: DRMS			
HOURLY EQUI	PMENT COST			
Basic Machine:	Cat D11T - 11U			
Horsepower:	850			
Blade Type:	Universal			
Attachment:	NA			
Shift Basis:	1 per day			
Data Source:	(CRG)			
Cost Breakdown:				
<u>Cost Dicardo vii</u> .		Utilization %		
Ownership	¢ 10 < < <b>2</b>			
Cost/Hour:	\$496.62	NA		
Operating	\$224.00	100		
Cost/Hour:	\$324.90	100		
Ripper own.	\$0.00	NA		
Cost/Hour:	φ <b>υ.υυ</b>			
Ripper op.	\$0.00	10		
Cost/Hour:		10		
Operator	\$38.59			
Cost/Hour:		NA		
Total unit	\$860.11			
Cost/Hour:	+ • • • • • • •			
Total Fleet	\$1,720.21			

Initial	94,772				
Volume: Swell factor:	1.150	<u> </u>			
Loose volume:	1.150 108,988 L	CY			
Loose volume.	100,700 L				
Source of estima Source of estima factor:		: <u>Map M9 s</u> Cat Handb		_	
HOURLY PROD	<b>UCTION</b>				
Average push dis	stance	75 feet			
Unadjusted hour production:		3,584.2 LCY	//hr	_	
Materials consist description:	tency	Compac	ted fill or en	nbankment 0.9	
Average push gradient:	5 %				
Average site altitude:	7,00	0 feet	_		
Material weight:	2,47	5 lbs/LCY			
Weight description	on: User	Provided			
Job Condition Cor	rection Fac	tor Source	e		
Operator Skill:		0.750		(AVG.)	
Material consiste	ency:	0.900		(CAT HB))	
Dozing method:		1.000		(GEN.)	
Visibility:		1.000		(AVG.)	
Job efficiency:		0.830		(1 SHIFT/DAY)	
Spoil pile:		1.000		(DOZ-OC)	
Push gradient:		0.903		(CAT HB)	
Altitude:		1.000		(CAT HB)	
Material Weight	:	0.929		(CAT HB)	
Blade type:		1.000		(PAT)	
Net correction:		0.4700			
Adjusted unit production:	1,	684.57 LCY/h	ır		

Adjusted fleet production:	3369.14 LCY/hr
JOB TIME AND COST	

#### Fleet size: 2 Dozer(s) \$0.511/LCY Unit cost:

Total job time:	32.35 Hours
Total job cost:	\$55,647

Total job cost:

#### SCRAPER TEAM WORK

Trappe	er Mine	Permit A	ction:	L18PR12	Permit/Job#:	C1981010
OJEC	<u> IDENTIFICA</u>	TION				
`ask #:	L18	State:	Color	ado	Abbreviation:	None
ate:	2/20/2025	County:	Moffa	nt	Filename:	L18
Jser:	RAR					

-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance – Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

<u>Cost Breakdown</u> :	Scraper Work Team Support Equipment		Maintenance E			
	Scraper	Dozer	Load Area	Dump Area	Motor	Water
					Grader	Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
% Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: **<u>\$6,154.65</u>** 

#### **MATERIAL QUANTITIES**

Initial volume:	470,247 <b>470,247</b>	CCY LCY	Swell factor:	1.000	
Source of estimated	volume:	A-9.1			

Source of estimated swell factor:

Cat Handbook

#### **HOURLY PRODUCTION**

#### Scraper Bowl (volume) Basis:

Material weight: Material	2,550 lbs/LCY Earth - Dry packed	_ Struck Volume: Heaped Volume:	24.00 34.00	LCY LCY
description:				
Rated Payload:	81,600 pounds	Average	29.00	LCY
Payload Capacity:	32.00 LCY	Volume: Adjusted Capacity:	29.00	LCY

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time: 1.00 Minutes 0.60 Minutes

Job Condition Correction: Site Altitude: 6400 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: Hard, smooth, stabilized, surfaced, watered, maintained 2.0

#### Haul Route:

Seg #	Haul Distance	Grade	Roll. Res	Total Res	Velocity	Travel Time
	(Ft)	(%)	(%)	(%)	(fpm)	(min)
1	2334.00	4.20	2.00	6.20	1477	1.66

Haul Time:

**1.66** minutes

4.09 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2334.00	-4.20	2.00	-2.20	2972	0.83
			Return Time:		0.83	minutes

Total Scraper team cycle time:

Selected N Adjusted s	or job condition lumber of Scrap ingle scraper te nultiple scraper	706.21 8 2,824.84 <b>2,824.84</b>	LCY/Hour Scraper(s) LCY/Hour LCY/Hour			
5	unit production mber of Scrape	-	850.86	LCY/Hour 		
JOB TIME A	AND COST					
Fleet size:	1	Team(s)	Total	job time:	166.47	Hours
Unit cost:	\$2.179	/LCY	Total	job cost:	\$1,024,555	

#### TRUCK/LOADER TEAM WORK

Task description:   Replace Topsoil on L Pit (Truck/Excavator)										
Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010										
PROJECT IDENTIFICATION										
Task #: L19	Sta	ate: Color	rado	Abbre	viation:	None				
Date: 2/19/	/2025 Co	ounty: Moff	at	Filena	me:	L19				
User: RAR	<u> </u>									
Agency or organ	ization name:	DRMS								
HOURLY EQUI	PMENT COS	<u>Γ</u> Shift basis:	<u>1 per day</u>							
Equipment	Description									
Truck Loader Te		Cat	: 777F							
-Loader:		Cat	t 385C L 18'-1'	" Stick						
Support Equipme	ent -Load Area		t D10T - 10SU							
-Dump Area:			t D10T - 10SU							
Road Maintenan	ce – Motor Grad		T 16M							
-Water Truck:		Wa	ter Tanker, 2,50	00 Gal.						
Cost Breakdown	: Truck/Loa	der Team Sup	port Equipmen	t Maintenanc	e Equipm	nent				
	Truck	Excavator	Load Area	Dump Area	Motor	Water				
					Grader	Truck				
%Utilization- machine:	100	100	25	25	25	50				
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.3	9 \$11.65				
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23				
%Utilization-riper:	NA	0	15	NA	NA	NA				
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00				
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00				
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$22.07				
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.0	6 \$44.95				
Number of Units:	4	1	1	1	1	1				
Group Subtotals:	Work:	\$1,894.70	Support:	\$692.32	Maint:	\$282.01				

Total work team cost/hour: **\$2,869.03** 

Initial volume:	826,774	CCY	Swell	factor:	1.000				
Loose volume:	826,774	LCY							
Source of estimate	d volume:	TR124	Appendi	x A Tabl	e A-3.1				
Source of estimate			Cat Handbook						
Material Purchase	Cost:	\$0.00							
Total Cost:		\$0.00							
		<u>.</u>					_		
HOURLY PRODU	CTION								
Truck Capacity:									
Truck Payload (weig	ght) Basis:								
Material weight:	1,600		Pounds	/LCY					
Description:	Top Soil		-						
Rated Payload:	200,000		Pounds						
Payload Capacity:	125.00		LCY						
	D '								
Truck Bed (volume)		LOV							
Struck Volume:	60.60	LCY							
Heaped Volume:	78.80	LCY							
Average Volume:	69.70	LCY							
Adjusted Volume:	78.80	LCY							
Final Truck Volum	e Based on Numb	er of Loader	Passes:		77.7	72	LCY		
Loading Tool Capac									
Loading 1001 Capac	<u>ny</u>					T			
		Buck	et Size Cl	ass:			arge		
Rated Capacity:	7.850	LCY (	heaped)						
Bucket Fill Factor:	1.100	Other -	- rock/dirt	t mixtures	s (100-1	120%) 1.10	0		
Adjusted Capacity	8.635	LCY							
Job Condition Cor	rections: Site Alti	tude (ft ) <sup>,</sup> 64	00 feet						
		(11.). <u>01</u>	<u>00</u> 1001						
	Truck	Loader		Source					
Altitude Adj:	1.000	1.000		(CAT H	B)				
Job Efficiency:	0.830	0.830		(CAT H	B)				
Not Come diam	0.920	0.020							
Net Correction:	0.830	0.830							

Loading Tool Cycle Time:	ading Tool Cycle Time: Number of Loading Tool Passes Required to			
	Fill Truck:	9		

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating:			ABOVE AVERAGE					
Selected Value within thi	Selected Value within this Basic Rating:			AVERAGE				
Track Loaders – Material	Description:							
Cycle Time Elements (min	ı.):							
Load: NA	Maneuver:	NA	A	Dump:		0.100		
Wheel and Track Loaders maneuver):	s - Unadjusted I	Basic Loade	er Cycle T	ime (load	, dump,	NA	I	ninutes
Cycle Time Factors					Factor (m	nin.)	Source	
Material:	NA				NA		(Cat HB	)
Stockpile:	NA				NA		(Cat HB	)
Truck Ownership:	NA				NA		(Cat HB	)
Operation:	NA				NA		(Cat HB	)
Dump Target:	NA				NA		(Cat HB	)
	Net Cycle Tir	ne Adjustm	nent:		NA		minutes	
	Adjusted Loa	der Cycle T	Time:		0.302		minutes	
	Net Load Tin	ne per Truck	k:	-	2.516		minutes	
Truck Cycle Time:								
Truck Exchange Time:	0.80	Minutes	Adjusted	d for site a	ltitude:	(	).800	Minutes
Truck Load Time:	2.516	Minutes	Adjusted	d for site a	altitude:	2	2.516	Minutes
Truck Maneuver and Dump Time:	1.20	Minutes	•	l for site a		1	1.200	Minutes

# <u>Truck Travel (Haul & Return) Time:</u> Road Condition: <u>Firm, smooth, rolling, dirt/lt. surfaced, watered,</u> <u>maintained 3.0</u>

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time
						(min)
1	5925.00	4.40	3.00	7.40	1160	5.267

Haul Time: **5.267** 

minutes

	Return Ro	oute:							
	Seg #	Hau	l Distance	Grade (%)	Roll. Res	Total	Velocity	Travel	
		(Ft)			(%)	Res (%)	(fpm)	Time	
								(min)	
	1	4788	8.00	8.60	3.00	11.60	1628	3.064	
				Return Time: Fotal Truck Cy	cle Time:		<u>3.064</u> <u>12.847</u>	minutes minutes	
Loadi	ng Tool ui	nit							
Produ	ction		1,406.18	LCY/Hou	ır Adjust	ed for job ef	ficiency:	1,167.13	LCY/Hour
Truck									
Produ	ction		362.96	LCY/Hou	ır Adjust	ed for job ef	ficiency:	301.25	LCY/Hour
Optim Truck	al No. of s:		4	Truck(s)	Selecte	ed Number o	of Trucks:	4	Truck(s)
	Adjust	ed hou	irly truck too	m production:			1,205.0	)2 LCY/	Hour
			•	der team produ			1,167.1		
			0	bader team produ			1,167.1		
	Ū		<u>ND COST</u>						
	Fleet siz	ze: _	1	Team(s)	Total jo	b time:	708.38	Hou	Irs
	Unit cos	st:	\$2.458	/LCY	Total jo	b cost:	\$2,032,367	7	

#### SITE MAINTENANCE

Task description:   Site Maintenance; Rill and Gully Repair and Pone						d Cleani	ng
te: Tra	pper Mine	Perm	nit Action:	PR12	Permi	t/Job#:	C1981010
PROJE	<u>CT IDENTIFI(</u>	CATION					
Task #:	LN20	State:	Colorado		Abbreviation:	None	
Date:	2/20/2025	County:	Moffat		Filename:	LN20	

## UNIT COSTS

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Rill/Gully Repair 32hrs/year for 1st	32.00	Cat D7R DS Series II LGP	160.00	EA	\$207.78	\$33,244.80
5 years						
Rill/Gully Repair32hrs/year for 1st 5 years	32.00	Cat 324D L 9'-8" Stick	160.00	EA	\$517.75	\$82,840.00
Rill/Gully Repair 16hrs/year for last 5 years	15.00	Cat D3K XL - 3P	80.00	EA	\$84.69	\$6,775.20
Pond Cleaning 1st Year, 8 Weeks	320.00	Cat 324D L 9'-8" Stick	320.00	EA	\$517.75	\$165,680.00
Pond Cleaning 2nd Year, 3 Weeks	120.00	Cat 324D L 9'-8" Stick	120.00	EA	\$517.75	\$62,130.00
Haul Truck Cleaning 1st Year	320.00	Cat 725	320.00	EA	\$217.29	\$69,532.80
Haul Truck Cleaning 2nd Year	320.00	Cat 725	120.00	EA	\$217.29	\$26,074.80

**Job Hours: 600.00** 

Total Cost:

\$446,277.60

#### SITE MAINTENANCE

Та	Task description:    Site Maintenance; Drainage Stabilization TR134								
Site: <u>T</u>	rapper Mine	Per	mit Action:	PR12	Permit/J	Job#: <u>C1981010</u>			
<u>'ROJEC</u>	T IDENTIFICAT	<u>'ION</u>							
Task #:	LN20ATR	State:	Colorado		Abbreviation:	None			
Date:	2/25/2025	County:	Moffat		Filename:	LN20A TR134			
User:	RAR								
Agency	or organization nar	ne: _	DRMS						

## UNIT COSTS

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Rill/Gully Repair32hrs/year for 1st 5 years	24.00	Cat 324D L 9'-8" Stick	105.00	EA	\$517.75	\$54,363.75

Job

Hours: 600.00

Total Cost: \$54,363.75

#### BULLDOZER WORK

Trapper Min	ne Permi	t Action:	PR12	Permit/Job	o#: <u>C198101</u>
PROJECT IDE	<b>NTIFICATION</b>				
Task #: N01	State:	Colorado	0	Abbreviation:	None
	0/2025 County:	Moffat		Filename:	N01
User: RAI	R				
Agency or orga	nization name:	RMS			
HOURLY EQU	IPMENT COST				
Basic	Cat D11T - 11U				
Machine:	850		_		
Horsepower: Blade Type:	Universal		_		
Attachment:	NA		_		
Shift Basis:	3 per day		_		
Data Source:	(CRG)		_		
Cost Breakdown	:				
			Utilization %		
Ownership	\$496.62		NA		
Cost/Hour:					
Operating Cost/Hour:	\$324.90		100		
Ripper own.					
Cost/Hour:	\$0.00		NA		
Ripper op.	\$0.00		10		
Cost/Hour:			10		
Operator Cost/Hour:	\$38.84		NA		
Cost/Hour.			1471		
Total unit	\$860.36				
Cost/Hour:					
Total Fleet	\$1,720.71				
Cost/Hour:					

## Initial 1,364,789 Volume: 1.000 Loose 1,364,789 LCY volume:

Source of estimated	Table A-4.5
volume:	
Source of estimated swell	Cat Handbook
factor:	

## HOURLY PRODUCTION

Average push distand Unadjusted hourly production:	ce: <u>325 feet</u> 984.2 LCY/hr	
Materials consistency description:	y Consolidated s	tockpile 1.0
Average push gradient: Average site altitude:	-10 % 6,700 feet	
Material weight:	2,475 lbs/LCY	
Weight description:	User Provided	
Job Condition Correct	ion Factor Source	
Operator Skill:	0.750	(AVG.)
Material consistency:		(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	0.800	(POOR)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.6473	
Adjusted unit production:	637.07 LCY/hr	
Adjusted fleet production:	1274.14 LCY/hr	

#### JOB TIME AND COST

Fleet size:	2 Dozer(s)
Unit cost:	\$1.350/LCY

Total job time Total job cost:		31	ADER TEAM	<u>WORK</u>		
Task description	on: Backf	ill and Gradi	ng N Pit			
Site: Trapper Mi	ne	Permit Actio	on: PR12		Permit/Job#	#: <u>C1981010</u>
PROJECT IDI	ENTIFICATI	<u>0N</u>				
Task #:N0Date: $2/1$ User:RA	9/2025 C	ate: Colo ounty: Mof	prado fat		reviation:	None N02
	anization name		asis: 1 par day			
HOURLY EQU Equipme	ent Description		asis: <u>1 per day</u>			
Truck Loader		K	OMATSU 830	E		
-Loader:			AT 6090			
	ment -Load A		at D10T - 10SU			
-Dump Area:			at D10T - 10SU	J		
	ance –Motor G		AT 16M			
-Water Truck: Cost Breakdow		oader Team	ater Tanker, 14 Support Equip		ntenance Eq Motor	uipment Water
	Truck	Shover	Loud Theu	Area	Grader	Truck
%Utilization- machine:	100	100	25	25	25	50
Ownership cost/hour:	\$209.47	\$302.35	\$257.39	\$257.39	\$179.39	\$130.32
Operating cost/hour:	\$274.17	\$501.45	\$49.23	\$49.23	\$29.91	\$70.88
%Utilization- riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals: Number of Units:	\$508.88 4	\$837.67 1	\$347.11 1	\$345.21 1	\$237.06 1	\$201.20 1

Support:

\$692.32

\$2,873.19

Total work team cost/hour: \$4,003.77

Work:

Group Subtotals:

\$438.26

Maint:

	Truck	Loader	Source		
Job Condition Co	rrections: Site A	ltitude (ft.):	<u>6400</u> feet		
Adjusted Capacit	y: 04./90				
Bucket Fill Facto		LCY	<ul> <li>rock/dirt mixture</li> </ul>	es (100-120%)	1.100
Rated Capacity:	58.900	· · · · ·	heaped)	(100 1200/)	1 100
	50.000	1		-	NA
Loading Tool Capa	acity	Duch	et Size Class:		NI A
Loading Tool Con	aity				
Final Truck Volu	me Based on Nur	nber of Load	der Passes:	194.37	LCY
-					
Adjusted Volume		LCY			
Average Volume		LCY			
Heaped Volume:	192.00	LCY			
Struck Volume:	153.00	LCY			
Truck Bed (volume	e) Basis:				
Payload Capacity	492,200.00	J	LCY		
Rated Payload:	492,200	<u> </u>	Pounds		
Description:	User Provi	ded	D 1		
Material weight:	1		Pounds/LCY		
Truck Payload (we					
Truck Capacity:					
HOURLY PROD	<b>UCTION</b>				
Total Cost:		\$0.00			
Material Purchase	e Cost:	\$0.00			
Source of estimat			ndbook		
Source of estimat			Appendix A Tab	le A-3.1	
Loose volume.		101			
Loose volume:	2,519,470	- LCY	Swell lactor.	1.000	
Initial volume:	2,519,470	CCY	Swell factor:	1.000	

	Truck	Loader	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Machine Cycle Time v Rating: Selected Value within Track Loaders – Mater		AB	BOVE AV					
Selected Value within	this Basic Rating:			VERAGE				
Track Loaders – Mater	e	AV	/ERAGE					
	rial Description:							
Cycle Time Elements (n	nin.):							
Load: NA	Maneuver:	NA	4	_ Dump:	-	0.100	)	
Wheel and Track Load dump, maneuver):	lers - Unadjusted Bas	sic Lo	oader Cyc	cle Time (	load,	NA	mi	nutes
Cycle Time Factors					Factor (n	nin.)	Source	
Material:	NA				NA		(Cat HB)	
Stockpile:	NA				NA		(Cat HB)	
Truck Ownership:	NA				NA		(Cat HB)	
Operation:	NA				NA		(Cat HB)	
Dump Target:	NA Na Cala Triant	1.			NA		(Cat HB)	
	Net Cycle Time A			_	NA		minutes	
	Adjusted Loader C	-		_	0.498		minutes	
	Net Load Time pe	r Truc	CK:	_	<u>1.494</u>		minutes	
Truck Cycle Time:								
ruck Exchange Time:	0.80 Minu	tes	Adjusted	d for site a	ltitude:	0	.800	Minutes
ruck Load Time:	1.494 Minu			d for site a		1	.494	Minutes
ruck Maneuver and	1.20 Minu		•	d for site a			.200	Minutes
ump Time:								-

watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time
						(min)
1	4737.00	-8.00	3.00	-5.00	1870	2.666

Haul Time: **2.666** minutes

	Return R	1		Caralla	D - 11	T-4-1	X7-1	<b>T</b>	1	
	Seg #	(Ft)	ul Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time	I	
		(1)	,	(70)	KC5 (70)	Res (70)	(ipiii)	(min)		
	1	473	37.00	8.00	3.00	11.00	1734	3.135		
				Return Time Total Truck		2:	3.135 9.295		minute minute	
Produ		init	5,083.78	LCY/Ho	ur Adjus	ted for job e	efficiency:	4,219	9.54	LCY/Hour
Truck Produ			1,254.67	LCY/Ho	ur Adjus	ted for job e	efficiency:	1,041	1.38	LCY/Hour
Optin Truck	nal No. of s:	2	4	Truck(s)	Select	ed Number	of Trucks:	4		Truck(s)
	Adjus	ted si	ngle truck/lo	eam producti ader team pr /loader team	oduction:		4,165. 4,165. <b>4,165.</b>	52	LCY/I LCY/I LCY/I	Hour
	JOB TIN	ME A	ND COST							
	Fleet siz	ze:	1	Team(s)	Total j	ob time:	604.84		_ Hou	rs
	Unit co	st:	\$0.961	/LCY	Total j	ob cost:	\$2,421,63	8		

## TRUCK/LOADER TEAM WORK

	Task desc	cription:	Backfill and G	rading I	Pit		
Site:	ite: Trapper Mine		Permit Action:		PR12	Permit/Job	o#: <u>C1981010</u>
P	PROJEC	<u>I IDENTIFI</u>	CATION				
	Task #:	N02A	State:	Colorado	)	Abbreviation:	None
	Date:	2/19/2025	County:	Moffat		Filename:	N02A
	User:	RAR					
	HOURLY	or organizatio <u> <b>EQUIPME</b></u> uipment Desc	NT COST Sh		<u>1 per day</u>		
	Truck Lo	ader Team -7	Fruck:	KOMA	ATSU 830E		
	-Loader:			CAT 6	6090		
	Support I	Equipment -L	Load Area:	Cat D	0T - 10SU		
	Dump A	root		Cot D1	OT LOSI		

Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance – Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 14,000 Gal.

Cost Breakdow	<b><u>n</u>:</b> Truck/I	Loader Team	Support Equip	ment Mair	itenance Equip	oment
	Truck	Shovel	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization- machine:	100	100	25	25	25	50
Ownership cost/hour:	\$209.47	\$302.35	\$257.39	\$257.39	\$179.39	\$130.32
Operating cost/hour:	\$274.17	\$501.45	\$49.23	\$49.23	\$29.91	\$70.88
%Utilization- riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$508.88	\$837.67	\$347.11	\$345.21	\$237.06	\$201.20
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	\$2,364.31	Support:	\$692.32	Maint:	\$438.26

Total work team cost/hour: \$3,494.89

Initial volume:	477,772	CCY	Swell fact	or: <u>1.000</u>	)	
Loose volume:	477,772	LCY				
Source of estimate	d volume:	Annen	dix A Tables	s Δ_3 1		
Source of estimate			indbook	5 A-3.1		
Material Purchase		\$0.00	indoook			
Total Cost:	0050	\$0.00				
		φ0.00				
HOURLY PRODU	UCTION					
Truck Capacity: Truck Payload (wei	abt) Pasis					
Material weight:	<u>3,300</u>		Pounds/LC	٧V		
Description:	· · · · · ·	ad rock 75	$\sqrt{6}$ Rock, 25			
Rated Payload:	492,200	eu 10ck - 73	Pounds			
Payload Capacity:	149.15		LCY			
Fayloau Capacity.	149.13		LUI			
Truck Bed (volume)	) Basis:					
Struck Volume:	153.00	LCY				
Heaped Volume:	192.00	LCY				
Average Volume:	172.50	LCY				
Adjusted Volume:	149.15	LCY				
Final Truck Volum	ne Based on Nun	nber of Load	der Passes:	14	5.78	LCY
Loading Tool Capac	<u>city</u>					
		Bucke	et Size Class	:	N	А
Rated Capacity:	58.900	LCY (I	heaped)			
Bucket Fill Factor	: 0.825	Blastec	d rock - avg.	blasted (75	5 - 90%) 0.8	25
Adjusted Capacity	: 48.593	LCY			· · · ·	
Job Condition Cor	rections: Site A	ltitude (ft.):	<u>6400</u> feet			
	Truck	Loader	So	urce	]	
Altitude Adj:	1.000	1.000		AT HB)		
Job Efficiency:	0.830	0.830	,	AT HB)		
<b>`</b>				· · · ·	=	
Net Correction:	0.830	0.830				

Number of Loading Tool Passes Required 3 passes

## Loading Tool Cycle Time:

Excavators and Front Shovels:

Rating: Selected Value within	this Basic Ra		BOVE A'					
Track Loaders – Mater	ial Description	on:						
Cycle Time Elements (n	nin.):							
Load: NA	Maneuve	r: <u>N</u>	IA	_ Dump:	_0	.100		
Wheel and Track Load dump, maneuver):	ers - Unadju	sted Basic L	loader Cyc	cle Time (	load, N	IA	mir	nutes
Cycle Time Factors					Factor (min	.)	Source	
Material:	NA	NA			NA (C		(Cat HB)	
Stockpile:	NA				NA (Cat		(Cat HB)	
Truck Ownership:	NA				NA		(Cat HB)	
Operation:	NA				NA		(Cat HB)	
Dump Target:	NA	NA			NA (		(Cat HB)	
	Net Cycle	Net Cycle Time Adjustment:					minutes	
	Adjusted I	Loader Cycle	Cycle Time: <b>0.49</b>		0.498	minute		
	Net Load	Гіme per Tr	uck:	_	1.494		minutes	
<u>Truck Cycle Time:</u>								
ruck Exchange Time:	0.80	Minutes	Adjusted	d for site a	ltitude:	0.8	300	Minutes
ruck Load Time:	1.494	Minutes	Adjusted	d for site a	ltitude:	1.4	194	Minutes
ruck Maneuver and	1.20	Minutes	Adjusted	d for site a	ltitude:	1.2	200	Minutes

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time
						(min)
1	4063.00	-2.00	3.00	1.00	3503	1.751

Haul Time: 1.751 minutes
Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time
						(min)
1	4063.00	2.00	3.00	5.00	3296	1.884

		Return Time: Fotal Truck Cyc	1.884 7.129		minutes minutes		
Loading Tool unit Production Truck Unit	3,812.84	_ LCY/Hour	Adjusted for job e	efficiency:	3,16	64.66	LCY/Hour
Production	1,226.91	LCY/Hour	Adjusted for job e	efficiency:	1,01	8.34	LCY/Hour
Optimal No. of Trucks:	3	3 Truck(s) Selected Number					Truck(s)
Adjusted ho Adjusted sin Adjusted m		3,055.0 3,055.0 <b>3,055.0</b>	1	LCY/H LCY/H LCY/H	Iour		
JOB TIME AND COST							
Fleet size: <u>1</u> Team(s) Total job time:				156.39		Hour	S

Unit cost:	\$1.144	/LCY	Total job cost:	\$546,565	
Onit Cost.	$\psi$ 1.177	/LCI	10tul j00 00st.	ψυτυ,υυυ	

## BULLDOZER WORK

	er Mine		t Action: PR12	Permit/Job	#: <u>C1981010</u>
	<u>T IDENTIFIC</u>	AHON			
Task #:	N02B	State:	Colorado	Abbreviation:	None
Date:	2/19/2025	County:	Moffat	Filename:	C010-N02B
User:	RAR				

# Basic<br/>Machine:Cat D11T - 11UHorsepower:850Blade Type:UniversalAttachment:NAShift Basis:3 per dayData Source:(CRG)

## Cost Breakdown:

<u>Cost Dieakuowii</u> .		
		Utilization %
Ownership	\$496.62	NA
Cost/Hour:	φτ90.02	1111
Operating	\$324.90	100
Cost/Hour:	φ32 <b>4</b> .90	100
Ripper own.	¢0.00	
Cost/Hour:	\$0.00	NA
Ripper op.	¢0.00	10
Cost/Hour:	\$0.00	10
Operator	Φ <b>2</b> 0.04	
Cost/Hour:	\$38.84	NA
Total unit	\$860.36	
Cost/Hour:		
Total Fleet	\$1,720.71	
Cost/Hour:		

## **MATERIAL QUANTITIES**

Initial	668,037
Volume:	008,037
Swell factor:	1.000
Loose	668,037 LCY
volume:	008,037 LC I

Source of estimated	Table A-4.5	
volume:		
Source of estimated swell	Cat Handbook	
factor:		
-		

# HOURLY PRODUCTION

Average push distance Unadjusted hourly production:		25 feet 84.2 LCY/hr	
Materials consistency description:		Consolidated st	tockpile 1.0
Average push gradient:	-20 %		
Average site	6,700 f	leet	
Material weight:	2,475 1	bs/LCY	
Weight description:	User P	rovided	
Job Condition Correction	on Fact	or Source	
Operator Skill:		.750	(AVG.)
Material consistency:	1	.000	(CAT HB)
Dozing method:	1	.200	(S-BY-S)
Visibility:	0	.800	(POOR)
Job efficiency:	0	.790	(3 SHIFTS/DAY)
Spoil pile:	1	.000	(DOZ-OC)
Push gradient:	1	.426	(CAT HB)
Altitude:	1	.000	(CAT HB)
Material Weight:	0	.929	(CAT HB)
Blade type:	1	.000	(PAT)
Net correction:	0	.7535	
Adjusted unit production:	741.	59 LCY/hr	
Adjusted fleet production:	1483	.18 LCY/hr	

# JOB TIME AND COST

Fleet size:	2 Dozer(s)
Unit cost:	\$1.160/LCY

 Total job time:
 450.41 Hours

 Total job cost:
 \$775,023

### SCRAPER TEAM WORK

Site: Trapper Mi	ne	Permit	Action:	PR12	Pe	ermit/Job	#: <u>C</u>	1981010
PROJECT IDI	ENTIFICATIO	<u>DN</u>						
Task #: N1	3 St	ate:	Colora	do	Abbrev	viation:	None	
		ounty:	Moffat		Filenar	ne:	N13	
User: RA	R							
Agency or org	anization name	: DR	MS					
HOURLY EQU	<u>UIPMENT</u> (	COSTShi	ft basis:	<u>1 per day</u>				
Equipme	ent Description							
-Scraper:			Cat 6	37G w/push-p	oull			
-Dozer:			NA	1 1				
Support Equip	ment -Load Ar	ea:	Cat I	D10T - 10SU				
-Dump Area:			Cat I	D10T - 10SU				
Road Mainten	ance –Motor G	rader:	CAT	16M				
-Water Truck:			Wate	r Tanker, 2,50	0 Gal.			
Cost Breakdow	vn• Scraper	Work Te	eam Su	pport Equipm	ent Mainte	nance Eq	minmer	nt
COSt DI Cakuov	Scraper	Dozei		Load Area	Dump	Moto		Water
	Seruper	2020	-	Loud Theu	Area	Grade		Truck
Utilization-machine:	100	NA		50	50	50		60
wnership cost/hour:	\$281.32	NA		\$257.39	\$257.39	\$179.	.39	\$11.65
perating cost/hour:	\$319.35	NA		\$98.47	\$98.47	\$59.8	2	\$13.47
Utilization-ripper:	NA	NA		NA	NA	NA		NA
ipper own. cost/hour:	NA	NA		\$0.00	\$0.00	\$0.00	)	\$0.00
ipper op. cost/hour:	NA	NA		\$0.00	\$0.00	\$0.00		\$0.00
perator cost/hour:	\$30.90	NA		\$38.59	\$38.59	\$27.7	6	\$21.12
nit Subtotals:	\$631.57	NA		\$394.44	\$394.44	\$266.		\$46.24
	8	0		1	1	1		1
umber of Units:	U				1	Main		\$313.21

# **MATERIAL QUANTITIES**

Initial volume:	304,436
Loose volume:	304,436

Swell factor: 1

1.000

Source of estimated volume: Source of estimated swell factor:

A-10.2	
Cat Handbook	

CCY

LCY

# **HOURLY PRODUCTION**

Scraper Bowl (volume) Basis:

Material weight: Material	2,550 lbs/LCY Earth - Dry packed	Struck Volume: Heaped Volume:	24.00 34.00	LCY LCY
description: Rated Payload:	81,600 pounds	Average Volume:	29.00	LCY
Payload Capacity:	32.00 LCY	Adjusted Capacity:	29.00	LCY

# Cycle Time:

Scraper Loading Time:	<u>1.00</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction: Site Altitude: 6400 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

## Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	-4.50	3.00	-1.50	2972	0.72

Haul Time:

**0.72** minutes

Return Route:

Seg #	Haul Distance	Grade	Roll. Res	Total Res	Velocity	Travel
	(Ft)	(%)	(%)	(%)	(fpm)	Time (min)
1	2000.00	4.50	3.00	7.50	1931	1.12

Return Time: 1.12 minutes

Total Scraper team cycle time:	3.44	minutes
Adjusted for job conditions:	839.65	LCY/Hour
Selected Number of Scrapers:	8	Scraper(s)
Adjusted single scraper team (unit) hourly production:	3,358.60	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	3,358.60	LCY/Hour

5	unit production/l mber of Scrapers	nour:	011.63 LCY/Ho	ur	
JOB TIME A	AND COST				
Fleet size:		Team(s)	Total job time:	90.64	Hours
Unit cost:	\$1.833	/LCY	Total job cost:	\$557,880	

# SCRAPER TEAM WORK

Trappo	er Mine	Permi	t Action:	PR12	Permit/Job	o#: <u>C1981010</u>
PROJEC'	<u>r identific</u>	CATION				
Task #:	N14	State:	Colorado	)	Abbreviation:	None
Date:	2/20/2025	County:	Moffat		Filename:	N14
User:	RAR					
Agency of	or organization	name: D	RMS			
	<b>EQUIPMEN</b>			1 per day		

-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance – Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

**<u>Cost Breakdown</u>**: Scraper Work Team Support Equipment Maintenance Equipment

	Scraper	Dozer	Load Area	Dump	Motor	Water
				Area	Grader	Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: <u>\$6,154.65</u>

Initial volume:	329,830	CCY	Swell factor:	1.000	
Loose volume:	329,830	LCY			
Source of estimate	ed volume:	A-9.1			
Source of estimated volume.					
Source of estimated swell factor:		Cat Hai	ndbook		

## **HOURLY PRODUCTION**

Scraper Bowl (volume) Basis:

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

### Cycle Time:

Scraper Loading Time:	<u>1.00</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

<u>Job Condition Correction:</u> Site Altitude: 6400 feet

	Scraper	<b>Push Dozer</b>	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

## Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance	Grade	Roll. Res	Total Res	Velocity	Travel Time
	(Ft)	(%)	(%)	(%)	(fpm)	(min)
1	2667.00	8.00	3.00	11.00	786	3.41

Haul Time: **3.41** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2667.00	-8.00	3.00	-5.00	2972	0.94
			Retur	n Time:	0.94	_ minutes
Total	Scraper team cycle	time:			5.95	minutes
Adjus	ted for job conditio	ns:			485.45	LCY/Hour
Select	ed Number of Scra	pers:			8	Scraper(s)
Adjus	ted single scraper to	eam (unit) h	ourly produ	ction:	1,941.78	LCY/Hour
Adjus	ted multiple scrape	r team (flee	t) hourly pro	oduction:	1,941.78	LCY/Hour
Unadju Optima push dc	sted unit production l Number of Scrape ozer: <u>ME AND COST</u>	n/hour: ers per		LCY/Hour		
Unadju Optima push do	sted unit production l Number of Scrape ozer: <u>ME AND COST</u>	n/hour:		LCY/Hour	<u>1,941.78</u> 169.86	LCY/Hour

# TRUCK/LOADER TEAM WORK

Task des	scription: <b>R</b>	eplace Tops	soil on N P	Pit (Truck/Ex	cavator)	
ite: Trapp	per Mine	Permi	t Action:	PR12	Permit/Job	#: <u>C1981010</u>
<u>PROJEC</u>	CT IDENTIFIC	ATION				
Task #: Date: User:	N14A 2/20/2025 RAR	_ State: _ County:	Colorado Moffat	)	Abbreviation: Filename:	None C010-N14A
Agency	or organization	name: D	RMS			
HOURL	Y EQUIPMEN	<u>r cost</u> es	Shift basis:	<u>1 per day</u>		
E	quipment Descri	ption				
Truck L	oader Team -Tru	ick:	Cat 77	7F		
T 1				COT 101 111	a.: 1	

-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance – Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

**<u>Cost Breakdown</u>:** Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization- machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization- riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$22.88
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	\$1,517.55	Support:	\$692.32	Maint:	\$259.94

Total work team cost/hour: <u>\$2,469.81</u>

	.35,503 . <b>35,503</b>	CCY LCY	Swell factor:	1.000	_
Source of estimated volume:		Appen	dix A Tables A-1	0.8	
Source of estimated	swell factor:	Cat Ha	undbook		
Material Purchase C	ost:	\$0.00			
Total Cost:	Total Cost:				
HOURLY PRODUC	CTION				
Truck Capacity:					
Truck Payload (weigh	nt) Basis:				
Material weight:	1,600		Pounds/LCY		
Description:	Top Soil				
Rated Payload:	200,000		Pounds		
Payload Capacity:	125.00		LCY		
Truck Bed (volume) I	Basis:				
Struck Volume:	60.60	LCY			
Heaped Volume:	78.80	LCY			
Average Volume:	69.70	LCY			
Adjusted Volume:	78.80	LCY			
Final Truck Volume		nber of Loa	der Passes:	77.72	LCY
<u></u>	<u></u>	Buck	et Size Class:		Large
Rated Capacity:	7.850	LCY (	heaped)		
Bucket Fill Factor:	0.825		d rock - avg. blas	ted (75 - 90%	b) 0.825
Adjusted Capacity:	6.476	LCY			
Job Condition Corre	ections: Site A	ltitude (ft.):	<u>6400</u> feet		
	Truck	Loader	Source		
Altitude Adj:	1.000	1.000	(CAT H	IB)	
Job Efficiency:	0.830	0.830	(CAT H		
Net Correction:	0.830	0.830			
Loading Tool Cycle		nber of Load ill Truck:	ding Tool Passes	Required	12 pass

Excavators and Front Shovels:

Machine Cycle Time v Rating: Selected Value within		A	BOVE A				
Track Loaders – Mate	rial Descripti	on:					
Cycle Time Elements (r	nin.):						
Load: NA	Maneuve	r: N	IA	Dump:	0.10	0	
Wheel and Track Load dump, maneuver):	lers - Unadju	sted Basic L	Loader Cy	cle Time (loa	d, NA	mi	nutes
Cycle Time Factors				Fa	ctor (min.)	Source	
Material:	NA			NA	Ą	(Cat HB)	
Stockpile:	NA			NA	4	(Cat HB)	
Truck Ownership:	NA			NA	A	(Cat HB)	
Operation:	NA			NA	A	(Cat HB)	
Dump Target:	NA			NA	4	(Cat HB)	
	Net Cycle	Time Adjus	stment:	NA	4	minutes	
	Adjusted I	Loader Cycle	e Time:	0.3	302	minutes	
	Net Load	Time per Tr	uck:	3.4	422	minutes	
<u>Truck Cycle Time:</u>							
Truck Exchange Time:	0.80	Minutes	Adjuste	d for site alti	tude:	0.800	Minutes
Truck Load Time:	3.422	Minutes	Adjuste	d for site altit	ude:	3.422	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced,	
watered, maintained 3.0	

Haul Route:

Truck Maneuver and

Dump Time:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time
						(min)
1	4114.00	7.00	3.00	10.00	795	5.237

1.20

## Haul Time:

Minutes Adjusted for site altitude:

Return Route: Seg # Roll. Velocity Haul Distance Grade Total Travel Res (%) Res (%) (Ft) (%) (fpm) Time (min) 4114.00 -7.00 3.00 -4.00 1.229 1 3450

1.229 minutes

5.237

1.200

minutes

Minutes

		eturn Time: otal Truck Cyc	le Time: <b>11.888</b>	minute	es
Loading Tool unit Production Truck Unit	1,104.43	LCY/Hour	Adjusted for job efficiency:	916.68	_ LCY/Hour
Production	392.24	LCY/Hour	Adjusted for job efficiency:	325.56	LCY/Hour
Optimal No. of Trucks:	3	Truck(s)	Selected Number of Trucks:	3	Truck(s)
Adjusted hourly truck team production:			976.67	LCY/	Hour

Adjusted hourly truck team production:	976.67	LCY/Hour
Adjusted single truck/loader team production:	916.68	LCY/Hour
Adjusted multiple truck/loader team production:	916.68	LCY/Hour

# JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	147.82	Hours
Unit cost:	\$2.694	_ /LCY	Total job cost:	\$365,087	

# SCRAPER TEAM WORK

Task desc	cription:	Replace Tops	soil in I Pit		
Site: Trappe	ite: Trapper Mine		Permit Action: PR12		#: <u>C1981010</u>
<b>PROJEC</b>	<u>r identif</u> i	<b>ICATION</b>			
Task #: Date: User:	N15 2/20/2025 RAR	State: County:	Colorado Moffat	Abbreviation: Filename:	None N15
	or organizatio Z <b>EQUIPME</b>		RMS nift basis: <u>1 per day</u>		
Eq	uipment Des	cription			

-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance – Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

**<u>Cost Breakdown</u>:** Scraper Work Team Support Equipment Maintenance Equipment

	Scraper	Dozer	Load Area	Dump	Motor	Water
				Area	Grader	Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: \$6,154.65

Initial volume:	56,983	CCY	Swell factor:	1.000
Loose volume:	56,983	LCY		
Source of estima	ted volume:	PR10 T	ables A-9.1, A-	10.4and TALPACS
		Summa	ry (TMI)	
Source of estima	ted swell factor:	Cat Har	ndbook	
	TIOTTONI			

#### HOURLY PRODUCTION

## Scraper Bowl (volume) Basis:

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

### Cycle Time:

Scraper Loading Time:	<u>1.00</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction: Site Altitude: 6400 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

#### Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance	Grade	Roll. Res	<b>Total Res</b>	Velocity	Travel Time
	( <b>Ft</b> )	(%)	(%)	(%)	(fpm)	(min)
1	958.00	2.70	3.00	5.70	1477	0.70

Haul Time: **0.70** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	958.00	-2.70	3.00	0.30	2965	0.43
			Retur	n Time:	0.43	minutes
Total	Scraper team cycle	time:			2.73	minutes
	Scraper team cycle ted for job conditio				<b>2.73</b> 1,058.02	
Adjus	1 2	ns:				
Adjus Select	ted for job conditio	ns: pers:	hourly produ	ction:	1,058.02	LCY/Hour

Unadjusted unit production/hour: <u>1,274.73</u> LCY/Hour Optimal Number of Scrapers per push dozer: \_\_\_\_\_\_

# JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	13.46	Hours
Unit cost:	\$1.454	/LCY	Total job cost:	\$82,869	

# TRUCK/LOADER TEAM WORK

Task desc	cription: <b>R</b>	Replace Tops	oil on J P	it (Truck/Exca	vator)	
Site: Trappe	er Mine	Permit	Action:	PR12	Permit/Job	#: <u>C1981010</u>
PROJECT	<u> FIDENTIFIC</u>	ATION				
Task #:	N16	State:	Colorado	)	Abbreviation:	None
Date: User:	2/20/2025 RAR	County:	Moffat		Filename:	N16
Δ gency c	or organization	name: DI	RMS			
0.	C					
<u>HOURLY</u>	<u>'EQUIPMEN'</u>	<u>T COST</u> S	hift basis:	<u>1 per day</u>		
Equ	uipment Descri	ption				
Truck Lo	ader Team -Tr	uck:	Cat 77	7F		
-Loader:			Cat 38	5C L 18'-1" St	ick	
Truck Lo		uck:			ick	

Truck Loader Team -Truck:	Cat 777F
-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance – Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

**<u>Cost Breakdown</u>:** Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization- machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization- riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$22.88
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	\$1,517.55	Support:	\$692.32	Maint:	\$259.94

Total work team cost/hour: <u>\$2,469.81</u>

Initial volume:	94,623	CCY	Swell factor:	1.000	)	
Loose volume:	94,623	LCY				
Source of estimation	ted volume.	Annen	dix A Tables A-1	0.5A		
Source of estimat			andbook	0.011		
Material Purchas		\$0.00				
Total Cost:		\$0.00				
Total Cost.		φ0.00				
HOURLY PROD	UCTION					
Truck Capacity:	vicht) Design					
Truck Payload (we	-		Pounds/LCY			
Material weight:	<u>1,600</u>		Pounds/LC I			
Description:	Top Soil		Pounds			
Rated Payload:	200,000		LCY			
Payload Capacity	/: 125.00		LUI			
Truck Bed (volum	e) Basis:					
Struck Volume:	60.60	LCY				
Heaped Volume:	78.80	LCY				
A T7 1	: 69.70	LCY				
Average Volume	. 09.70	LUI				
Average Volume Adjusted Volume		LCY				
0						
0	e: 78.80	LCY	der Passes:	77.	72	LCY
Adjusted Volume	e: 78.80	LCY	der Passes:	_77.	72	_ LCY
Adjusted Volume	e: 78.80	LCY nber of Loa		77.		
Adjusted Volume Final Truck Volu Loading Tool Cap	e: 78.80 me Based on Nur acity	LCY nber of Loa Buck	et Size Class:	_ 77.		LCY
Adjusted Volume Final Truck Volu Loading Tool Cap Rated Capacity:	e: 78.80 me Based on Nur acity 7.850	LCY nber of Loa Buck	et Size Class: heaped)		L	arge
Adjusted Volume Final Truck Volu Loading Tool Cap Rated Capacity: Bucket Fill Facto	e: 78.80 me Based on Nur acity or: 7.850 0.825	LCY nber of Loa Buck LCY ( Blaste	et Size Class:			arge
Adjusted Volume Final Truck Volu Loading Tool Cap Rated Capacity:	e: 78.80 me Based on Nur acity or: 7.850 0.825	LCY nber of Loa Buck	et Size Class: heaped)		L	arge
Adjusted Volume Final Truck Volu Loading Tool Cap Rated Capacity: Bucket Fill Facto Adjusted Capacit	e: 78.80 me Based on Nur acity or: 7.850 or: 0.825 cy: <b>6.476</b>	LCY nber of Loa Buck LCY ( Blaste LCY	et Size Class: heaped) d rock - avg. blas		L	arge
Adjusted Volume Final Truck Volu Loading Tool Cap Rated Capacity: Bucket Fill Facto	e: 78.80 me Based on Nur acity or: 7.850 or: 0.825 cy: <b>6.476</b>	LCY nber of Loa Buck LCY ( Blaste LCY	et Size Class: heaped) d rock - avg. blas		L	arge
Adjusted Volume Final Truck Volu Loading Tool Cap Rated Capacity: Bucket Fill Facto Adjusted Capacit	e: 78.80 me Based on Nur acity or: 7.850 or: 0.825 cy: <b>6.476</b>	LCY nber of Loa Buck LCY ( Blaste LCY	et Size Class: heaped) d rock - avg. blas		L	arge
Adjusted Volume Final Truck Volu Loading Tool Cap Rated Capacity: Bucket Fill Facto Adjusted Capacit	e: 78.80 me Based on Nur acity or: 7.850 or: 0.825 cy: <b>6.476</b>	LCY nber of Loa Buck LCY ( Blaste LCY ltitude (ft.):	et Size Class: heaped) d rock - avg. blas 6400 feet	ted (75	L	arge
Adjusted Volume Final Truck Volu Loading Tool Cap Rated Capacity: Bucket Fill Facto Adjusted Capacit	e: 78.80 me Based on Nur acity or: 7.850 or: 0.825 cy: 6.476 orrections: Site A	LCY mber of Loa Buck LCY ( Blaste LCY ltitude (ft.): Loader	et Size Class: heaped) d rock - avg. blas <u>6400</u> feet <b>Source</b>	ted (75 B)	L	arge
Adjusted Volume Final Truck Volu Loading Tool Cap Rated Capacity: Bucket Fill Facto Adjusted Capacit Job Condition Co Altitude Adj:	e: 78.80 me Based on Nur acity or: 7.850 or: 0.825 cy: 6.476 orrections: Site A Truck 1.000	LCY nber of Loa Buck LCY ( Blaste LCY ltitude (ft.): Loader 1.000	et Size Class: heaped) d rock - avg. blas 6400 feet Source (CAT H	ted (75 B)	L	arge

Loading Tool Cycle Time:Number of Loading Tool Passes Required<br/>to Fill Truck:12passes

# Excavators and Front Shovels:

•	Machine Cycle Time vs. Job Condition Rating: Selected Value within this Basic Rating:			ABOVE AVERAGE					
U				VERAGE	3				
Track Loader	rs – Materi	al Descripti	on:						
Cycle Time Ele	ements (m	in.):							
Load:	NA	Maneuve	r: <u>N</u>	NA	_ Dump	: _(	0.100	)	
Wheel and Tr dump, maneu		ers - Unadju	sted Basic I	Loader Cy	cle Time	(load,	NA	mi	nutes
Cycle Time F	factors					Factor (mi	n.)	Source	
Material:		NA				NA	,	(Cat HB)	_
Stockpile:		NA				NA		(Cat HB)	—
Truck Owner	ship:	NA				NA		(Cat HB)	
Operation:		NA				NA		(Cat HB)	
Dump Target	:	NA				NA		(Cat HB)	_
		Net Cycle	Time Adjus	stment:		NA		minutes	
		Adjusted I	Loader Cycl	e Time:		0.302		minutes	
		Net Load	Time per Tr	uck:		3.422		minutes	
<u>Truck Cycle 1</u>	Time:								
Truck Exchange	Гime:	0.80	Minutes	Adjuste	d for site	altitude:	0	0.800	Minutes
Truck Load Time	:	3.422	Minutes	Adjuste	d for site	altitude:	3	.422	Minutes
Truck Maneuver a	and	1.20	Minutes	Adjuste	d for site	altitude:	1	.200	Minutes
Dump Time:			_	U					-
<u>Truck Travel (1</u> watered, maint Haul Route:		eturn) Time:	_Road Cond	lition: <u>Firr</u>	n, smootl	h, rolling, di	rt/lt.	surfaced,	
Seg # Hau	1 Distance	Grade	Roll.	Total	Ve	elocity   Tra	ivel		

Seg #	Haul Distance	Grade	Koll.	Total	Velocity	Travel
	(Ft)	(%)	Res (%)	Res (%)	(fpm)	Time
						(min)
1	7866.00	-3.30	3.00	-0.30	3503	2.364

Haul Time:

2.364 minutes

Return Route:

Return Route.								
Seg #	Haul Distance	Grade	Roll.	Total	Velocity	Travel		
	(Ft)	(%)	Res (%)	Res (%)	(fpm)	Time		
						(min)		
1	7866.00	3.30	3.00	6.30	2853	3.080		

Return Time:	3.080	minutes
Total Truck Cycle Time:	10.866	minutes

Loading Tool unit					
Production	1,104.43	LCY/Hour	Adjusted for job efficiency:	916.68	LCY/Hour
Truck Unit					
Production	429.13	LCY/Hour	Adjusted for job efficiency:	356.18	LCY/Hour
Optimal No. of Trucks:	3	Truck(s)	Selected Number of Trucks:	3	Truck(s)
		-			-

1,068.53

916.68

916.68

LCY/Hour

LCY/Hour

LCY/Hour

Adjusted hourly truck team production: Adjusted single truck/loader team production: Adjusted multiple truck/loader team production:

### JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	103.22	Hours
Unit cost:	\$2.694	/LCY	Total job cost:	\$254,944	_

#### SCRAPER TEAM WORK

Task description:		Replace Tops	oil in J Pit (Scraper)		
te: <b>Trapp</b>	e:		Action: PR12	Permit/Job	o#: <u>C1981010</u>
PROJEC'	<u>T IDENTIFI</u>	<u>CATION</u>			
Task #:	N16A	State:	Colorado	Abbreviation:	None
Date:	2/20/2025	County:	Moffat	Filename:	C010-N16A
User:	RAR				
HOURLY	or organizatio 7 <b>EQUIPME</b> uipment Desc	<u>NT</u> COSTSP	RMS ift basis: <u>1 per day</u>		
-Scraper:	:		Cat 637G w/push-pull		
_					
-Dozer:			NA		
	Equipment -L	load Area:	NA Cat D10T - 10SU		

Road Maintenance – Motor Grader:<br/>-Water Truck:CAT 16MWater Tanker, 2,500 Gal.

**<u>Cost Breakdown</u>**: Scraper Work Team Support Equipment Maintenance Equipment

	Scraper	Dozer	Load Area	Dump	Motor	Water
				Area	Grader	Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: \$6,154.65

Initial volume:	11,260	CCY	Swell factor:	1.000
Loose volume:	11,260	LCY		
Source of estimat	ed volume:	PR107	Tables A-9.1, A-	-10.4and TALPACS
		Summa	ary (TMI)	
Source of estimat	ed swell factor:	Cat Ha	ndbook	
	LOTION			

#### HOURLY PRODUCTION

## Scraper Bowl (volume) Basis:

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

### Cycle Time:

Scraper Loading Time:	<u>1.00</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction: Site Altitude: 6400 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

#### Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance	Grade	Roll. Res	<b>Total Res</b>	Velocity	Travel Time
	( <b>Ft</b> )	(%)	(%)	(%)	(fpm)	(min)
1	2938.00	-1.50	3.00	1.50	2939	1.18

Haul Time: **1.18** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)	
1	2938.00	1.50	3.00	4.50	2910	1.19	
			Retur	n Time:	1.19	_ minutes	
Total	Scraper team cycle	time:			3.97	minutes	
Adjus	sted for job conditio	ns:			727.56 LCY/Hour		
Select	ted Number of Scra	pers:			8	Scraper(s)	
Adjus	sted single scraper to	eam (unit) h	nourly produ	ction:	2,910.23	LCY/Hour	
Adjus	sted multiple scrape	r team (flee	t) hourly pro	duction:	2,910.23	LCY/Hour	
	sted unit production I Number of Scrape ozer:		876.57 I	LCY/Hour			
OR TH	ME AND COST						
	ME AND COST						

Unit cost:	\$2.115	/LCY	Total job cost:	\$23,813	
	· ·		3	. ,	

# TRUCK/LOADER TEAM WORK

Task description:Replace Topsoil on J Pit A91-8 to J Pit TR134							
ite: <b>Trapp</b>	e: Trapper Mine		Permit Action: PR12		Permit/Job	#: <u>C1981010</u>	
<b>PROJEC</b>	T IDENTIFIC	ATION					
Task #: Date: User:	N16ATR 2/25/2025 RAR	_ State: _ County:	Colorado Moffat	)	Abbreviation: Filename:	None N16A TR134	
Agency	or organization	name: D	RMS				
HOURLY	Y EQUIPMEN	<u>r cost</u> s	Shift basis:	<u>1 per day</u>			
Eq	uipment Descri	otion					
Truck Lo	oader Team -Tru	ıck:	Cat 77	7F			

TTUCK LUAUET TEATH - TTUCK.	
-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance – Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

**<u>Cost Breakdown</u>:** Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization- machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization- riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$22.88
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	\$1,517.55	Support:	\$692.32	Maint:	\$259.94

Total work team cost/hour: <u>\$2,469.81</u>

	21,038 21,038	CCY LCY	Swell factor:	1.000		
Source of estimated Source of estimated Material Purchase C Total Cost:	swell factor:		dix A Tables A-1 ndbook	10.5A		 
HOURLY PRODUC	CTION					
Truck Capacity:						
Truck Payload (weight	nt) Basis:					
Material weight:	1,600		Pounds/LCY			
Description:	Top Soil					
Rated Payload:	200,000		Pounds			
Payload Capacity:	125.00		LCY			
<u>Truck Bed (volume)</u> Struck Volume: Heaped Volume: Average Volume: Adjusted Volume: Final Truck Volume	60.60 78.80 69.70 78.80 Based on Nur	LCY LCY LCY LCY nber of Load	der Passes:	77.72	LCY	
		Bucke	et Size Class:		Large	
Rated Capacity:	7.850		heaped)			
Bucket Fill Factor:	0.825		d rock - avg. blas	ted $(75 - 90)$	)%) 0.825	
Adjusted Capacity:	6.476	LCY				
Job Condition Corr	ections: Site A	ltitude (ft.):	<u>6400</u> feet			
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT H	IB)		
Job Efficiency:	0.830	0.830	(CAT H			
JOU Linclency.	0.830	0.850	(CAT I)	ID)		
Net Correction:	0.830	0.830				
		nber of Load ill Truck:	ling Tool Passes	Required	12	passes

# Loading Tool Cycle Time:

Excavators and Front Shovels:

•	Machine Cycle Time vs. Job Condition Rating: Selected Value within this Basic Rating:		ABOVE AVERAGE AVERAGE					
0								
Track Loaders – Mat	erial Description	:						
Cycle Time Elements (	(min.):							
Load: NA	Maneuver:	N	JA	Dump	-	0.10	)	
Wheel and Track Loa dump, maneuver):	iders - Unadjuste	d Basic L	Loader Cyc	ele Time	(load,	NA	mi	nutes
Cycle Time Factors					Factor (n	nin.)	Source	
Material:	NA				NA		(Cat HB)	
Stockpile:	NA				NA		(Cat HB)	
Truck Ownership:	NA				NA		(Cat HB)	
Operation:	NA				NA		(Cat HB)	
Dump Target:	NA				NA		(Cat HB)	
<b>x</b>	Net Cycle Ti	me Adjus	stment:		NA		minutes	
	Adjusted Loa	ader Cycl	e Time:	-	0.302		minutes	
	Net Load Tir	ne per Tr	uck:	-	3.422		minutes	
Truck Cycle Time:		-		-			-	
Truck Exchange Time:	0.80	Minutes	Adjusted	l for site	altitude:	C	0.800	Minutes
Fruck Load Time:	3.422	Minutes	Adjusted	l for site	altitude:	3	5.422	Minutes
Truck Maneuver and	1.20	Minutes	Ð	l for site		1	.200	Minutes
Dump Time:			1 10 00 000					1,111,000
Truck Travel (Haul & watered, maintained 3.		oad Cond	lition: <u>Firn</u>	1, smooth	a, rolling, d	<u>dirt/lt.</u>	<u>surfaced,</u>	

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time
						(min)
1	7749.00	-2.60	3.00	0.40	3503	2.639

Haul Time:

**2.639** minutes

Return Route:							
Seg #	Haul Distance	Grade	Roll.	Total	Velocity	Travel	
	(Ft)	(%)	Res (%)	Res (%)	(fpm)	Time	
						(min)	
1	7749.00	2.60	3.00	5.60	2853	2.981	

		eturn Time: otal Truck Cyc	ele Time:	2.981 11.042	minute minute	
Loading Tool unit Production	1,104.43	LCY/Hour	Adjusted for job eff	iciency:	916.68	LCY/Hour
Truck Unit Production	422.29	LCY/Hour	Adjusted for job eff	iciency:	350.50	LCY/Hour
Optimal No. of Trucks:	3	Truck(s)	Selected Number of	f Trucks:	3	Truck(s)

Adjusted hourly truck team production:	1,051.50	LCY/Hour
Adjusted single truck/loader team production:	916.68	LCY/Hour
Adjusted multiple truck/loader team production:	916.68	LCY/Hour

# JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	22.95	Hours
Unit cost:	\$2.694	/LCY	Total job cost:	\$56,683	

# TRUCK/LOADER TEAM WORK

Task des	cription: <b>R</b>	eplace Tops	soil on J Pit ASH-1 to	J Pit TR134	
e: Trapp	er Mine	Permi	t Action: PR12	Permit/Job	o#: <u>C1981010</u>
<u>PROJEC</u>	T IDENTIFICA	ATION			
Task #:	N16AATR	State:	Colorado	Abbreviation:	None
Date:	2/25/2025	County:	Moffat	Filename:	N16AA TR134
User:	RAR				
	or organization		RMS Shift basis: 1 per day		
	quipment Descrip		_ <u>_</u>		
Truck L	oader Team -Tru	ick:	Cat 777F		
-Loader			Cat 385C L 18'-1"	Stick	

-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance – Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown:	Truck/Lo	oader Team	Support Equip	ment Main	tenance Equipt	nent
				_		

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization- machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization- riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$22.88
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	\$1,517.55	Support:	\$692.32	Maint:	\$259.94

Total work team cost/hour: <u>\$2,469.81</u>

Initial volume:	34,913	CCY Swell factor: 1.000
Loose volume:	34,913	LCY
		—
Source of estimat	ed volume:	Appendix A Tables A-10.5A
Source of estimat	ed swell factor:	Cat Handbook
Material Purchas	e Cost:	\$0.00
Total Cost:		\$0.00

## **HOURLY PRODUCTION**

## **Truck Capacity:**

Truck Payload (weight) Basis:						
Material weight:	1,600	Pounds/LCY				
Description:	Top Soil					
Rated Payload:	200,000	Pounds				
Payload Capacity:	125.00	LCY				

#### Truck Bed (volume) Basis:

50.60	LCY
78.80	LCY
59.70	LCY
78.80	LCY
	78.80 59.70

Final Truck Volume Based on Number of Loader Passes:77.72LCY

## Loading Tool Capacity

		Bucket Size Class:	Large
Rated Capacity:	7.850	LCY (heaped)	
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%	6) 0.825
Adjusted Capacity:	6.476	LCY	

## Job Condition Corrections: Site Altitude (ft.): 6400 feet

	Truck	Loader	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

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Loading Tool Cycle Time	<u>:</u> Number o Fill Truck		ng Tool Pa	asses Requ	ired to	12		passes
Excavators and Front Shov	els:							_
Machine Cycle Time vs Rating:	Job Condition	AE	BOVE AV	ERAGE				
Selected Value within thi	s Basic Rating:	AV	/ERAGE					
Track Loaders – Material	Description:							
Cycle Time Elements (min	.):							
Load: NA	Maneuver:	NA	A	Dump:		0.100	)	
Wheel and Track Loaders maneuver):	s - Unadjusted Basi	ic Loade	er Cycle T	ime (load,	dump,	NA	mi	nutes
Cycle Time Factors					Factor (n	nin.)	Source	
Material:	NA				NA		(Cat HB)	
Stockpile:	NA				NA		(Cat HB)	
Truck Ownership:	NA				NA		(Cat HB)	
Operation: Dump Target:	NA NA				NA NA		(Cat HB) (Cat HB)	
Dump Target.	Net Cycle Time A	Adjustm	ont		NA		minutes	
	Adjusted Loader	5		_	0.302		minutes	
	Net Load Time p	-				minutes		
Truck Cycle Time:							_	
		•		1.6			0.000	
Truck Exchange Time:		inutes	5	l for site al			0.800	Minutes
Truck Load Time:		inutes	5	l for site al			3.422	Minutes
Truck Maneuver and Dump Time:	1.20 M	inutes	Adjustec	l for site al	titude:		1.200	Minutes

<u>Truck Travel (Haul & Return) Time:</u> Road Condition: <u>Firm, smooth, rolling, dirt/lt. surfaced, watered,</u> <u>maintained 3.0</u>

Haul Rou	te:								
Seg #	Haul Dis	stance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
	(Ft)			(%)	(%)	(fpm)	Time		
							(min)		
1	7908.00		-3.50	3.00	-0.50	3503	2.376		
				Haul Tin	ne: 2	2.376	minu	tes	
Return Re	oute:								
Seg #	Haul Dis	stance	Grade (%)	Roll. Res	Total	Velocity	Travel		
U	(Ft)		. ,	(%)	Res (%)	(fpm)	Time		
							(min)		
1	7908.00		3.50	3.00	6.50	2853	3.115		
			eturn Time:			3.115		nutes	
		Т	otal Truck Cy	cle Time:		10.913	mi	nutes	
Loading Tool un Production Truck Unit	1,	104.43	LCY/Hou	5	ted for job eff	•	916.68		LCY/Hour
Production	42	27.28	LCY/Hou	r Adjusi	ted for job ef	ficiency:	354.64	+	LCY/Hour
Optimal No. of Trucks:	3		Truck(s)	Selecte	ed Number o	f Trucks:	3		Truck(s)
Adjust	ed hourly	truck tea	m production:			1,063.9	93	LCY/Ho	our
	•		ler team produ			916.68		LCY/Ho	our
Adjust	ed multipl	e truck/le	bader team pro	oduction:		916.68	]	LCY/Ho	our
JOB TIN	IE AND C	COST							
JOB TIN Fleet siz		<u>COST</u>	Team(s)	Total jo	b time:	38.09		Hours	5

# **REVEGETATION WORK**

Task description:	Seed L Pit, K Nob: >6700 ftRangel	and with Shrubs TR135
Site: Trapper Mine	Permit Action: PR12	<u>Permit/Job#:</u> <u>C1981010</u>
PROJECT IDENTIF	ICATION	
Task #:       N16TR12         Date:       2/25/202         User:       RAR		Abbreviation:NoneFilename:C010-N16TR135
Agency or organization	on name: DRMS	

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	<u>Seeds</u> per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	<u>\$4.29</u>
Bitterbrush, Antelope	<u>4.40</u>	<u>1.35</u>	<u>\$248.66</u>
Mountain Brome - Bromar	0.72	<u>1.16</u>	<u>\$4.33</u>
Great Basin Wildrye - Magnar	0.92	3.74	<u>\$10.75</u>
Kentucky Bluegrass - Ginger	0.06	2.96	<u>\$0.25</u>
Alfalfa - Ladak (inoculated)	0.10	0.48	<u>\$0.40</u>
Chokecherry	3.00	0.21	<u>\$148.37</u>
Burnett, Small (or Little) - Delar	0.40	0.51	<u>\$1.78</u>
Sheep Fescue - Covar	<u>0.15</u>	<u>2.34</u>	<u>\$0.92</u>
Milk Vetch, Cicer - Lutana	<u>0.30</u>	1.00	<u>\$2.94</u>
Slender Wheatgrass - San Luis	<u>0.28</u>	<u>1.02</u>	<u>\$1.69</u>
Streambank Wheatgrass - Sodar	0.26	<u>0.85</u>	<u>\$2.16</u>
Thickspike Wheatgrass - Critana	<u>0.28</u>	<u>0.99</u>	<u>\$2.28</u>
Western Wheatgrass - Arriba	<u>0.38</u>	<u>0.96</u>	<u>\$3.43</u>
Rabbitbrush, Rubber	<u>0.26</u>	<u>3.87</u>	<u>\$21.68</u>
Needlegrass, Green - Lodorm	<u>0.24</u>	<u>1.00</u>	<u>\$2.07</u>
Rose, Wood's	<u>0.96</u>	<u>0.00</u>	<u>\$51.24</u>
Sagebrush, Mountain or Big	<u>0.07</u>	<u>3.70</u>	<u>\$5.79</u>
Flax, Lewis Blue	<u>0.30</u>	<u>1.99</u>	<u>\$12.69</u>
Red Top	<u>0.02</u>	<u>2.29</u>	<u>\$0.21</u>
Sagebrush, Silver	<u>0.10</u>	<u>1.94</u>	<u>\$6.81</u>
Saltbush, Four Wing	<u>0.62</u>	<u>0.85</u>	<u>\$12.32</u>
Serviceberry	<u>0.29</u>	<u>0.53</u>	<u>\$31.62</u>
Snowberry, Mountain	<u>0.58</u>	<u>1.00</u>	<u>\$34.25</u>
Penstemon, Rocky Mountain	<u>0.14</u>	<u>2.19</u>	<u>\$8.60</u>

Yarrow, Western	0.07	4.26	<u>\$3.38</u>
Globemallow, Munro	0.08	<u>0.91</u>	<u>\$10.31</u>
Aster, Pacific	0.02	0.35	<u>\$2.80</u>
Goldeneye - Showy	0.08	0.92	<u>\$9.13</u>
Totals Seed Mix	<u>15.79</u>	<u>44.87</u>	<u>\$684.99</u>

# **Application**

<b>Description</b>	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	<u>\$236.64</u>

# JOB TIME AND COST

No. of Acres:	<u>4.9</u>	Cost /Acre:	<u>\$921.63</u>
Estimated Failure Rate:	<u>17.5%</u>	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	<u>SEEDING</u>		

Initial Job Cost:	<u>\$4,515.99</u>
Reseeding Job Cost:	<u>\$790.30</u>
Total Job Cost:	<u>\$5,306</u>
Job Hours:	3.50

# TRUCK/LOADER TEAM WORK

Task description	: Replac	e Topsoil on I/.	J Pit			
Site: Trapper Mine	2	Permit Action:	PR12	Permi	t/Job#: <u>C1</u>	981010
PROJECT IDEN	TIFICATIO	<u>N</u>				
Task #: N17	S	tate: Colo	orado	Abbre	eviation:	None
		county: Mof	fat	Filena	ame:	N17
User: RAI	R					
Agency or organ	nization name:	DRMS				
HOURLY EQUI	PMENT COS	ST Shift basis	: <u>1 per day</u>			
	t Description					
Truck Loader Te	eam -Truck:		ıt 777F			
-Loader:			tt 385C L 18'-1			
Support Equipm	ent -Load Are		tt D10T - 10SU			
-Dump Area:			<u>tt D10T - 10SU</u>			
Road Maintenan	ice – Motor Gra		AT 16M			
-Water Truck:		VV	ater Tanker, 2,5	00 Gal.		
<u>Cost Breakdown</u>	: Truck/Lo	ader Team Su	pport Equipmer	nt Maintenan	ce Equipmen	t
	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization- machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization-riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$22.88
Number of Units:	2	1	1	1	1	1
Group Subtotals:	Work:	\$1,140.40	Support:	\$692.32	Maint:	\$259.94

Total work team cost/hour: **<u>\$2,092.66</u>** 

Initial volume:	49,788 <b>49,788</b>	CCY LCY	Swell factor:	1.000	_	
Source of estimated	,		ndix A Tables A-10	.6		
Source of estimated			andbook			-
Material Purchase C		\$0.00				-
Total Cost:		\$0.00				-
HOURLY PRODUC	CTION					
Truck Capacity:						
Truck Payload (weig	<u>ht) Basis:</u>					
Material weight:	1,600		Pounds/LCY			
Description:	Top Soil					_
Rated Payload:	200,000		Pounds			
Payload Capacity:	125.00		_ LCY			
Truck Bed (volume)		LOV				
Struck Volume:	60.60	LCY				
Heaped Volume:	78.80	LCY				
Average Volume:	<u>69.70</u>	LCY				
Adjusted Volume:	78.80	LCY				
Final Truck Volume	e Based on Numb	per of Loader	r Passes:	77.72	LCY	
Loading Tool Capaci	<u>ty</u>					
		Buck	et Size Class:		Large	
Rated Capacity:	7.850	LCY (	(heaped)		0	
Bucket Fill Factor:	0.825		d rock - avg. blaste	d (75 - 90%)	0.825	
Adjusted Capacity:	6.476	LCY		. (		
Job Condition Corr	ections: Site Alt	itude (ft.): <u>64</u>	<u>400</u> feet			
	Tmuck	Loader	Source			
Altitudo Adie	Truck		Source	<b>P</b> )		
Altitude Adj:	1.000	1.000	(CAT H	/		
Job Efficiency:	0.830	0.830	(CAT H	D)		
Net Correction:	0.830	0.830				
Loading Tool Cycle	Time: N	umber of Loz	ading Tool Passes F	Required to		passe
		ll Truck:	6	1	12	r
Excavators and Front Shovels:						
--	---------------					
Machine Cycle Time vs. Job Condition Rating:	ABOVE AVERAGE					
Selected Value within this Basic Rating:	AVERAGE					
Track Loaders – Material Description:						
Cycle Time Elements (min.):						

Load:	NA	Maneuver:	NA	Dump:	0.100	

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, NA minutes maneuver):

Cycle Time Factors		Factor (min.)	Source
Material:	NA	NA	(Cat HB)
Stockpile:	NA	NA	(Cat HB)
Truck Ownership:	NA	NA	(Cat HB)
Operation:	NA	NA	(Cat HB)
Dump Target:	NA	NA	(Cat HB)
	Net Cycle Time Adjustment:	NA	minutes
	Adjusted Loader Cycle Time:	0.302	minutes
	Net Load Time per Truck:	3.422	minutes

### **Truck Cycle Time:**

Truck Exchange Time:	0.80	Minutes	Adjusted for site altitude:	0.800	Minutes
Truck Load Time:	3.422	Minutes	Adjusted for site altitude:	3.422	Minutes
Truck Maneuver and Dump	1.20	Minutes	Adjusted for site altitude:	1.200	Minutes
Time:					-

<u>Truck Travel (Haul & Return) Time:</u> Road Condition: <u>Firm, smooth, rolling, dirt/lt. surfaced, watered,</u> <u>maintained 3.0</u>

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time
						(min)
1	3851.00	-4.00	3.00	-1.00	3503	1.180

Haul Time: **1.180** minutes

Seg #	Haul Distance	Grade (%)	Roll. Res	Total	Velocity	Travel	
	(Ft)		(%)	Res (%)	(fpm)	Time	
	2051.00	4.00	2.00		2200	(min)	
1	3851.00	4.00	3.00	7.00	2398	1.809	
	ŀ	Return Time:			1.809	minutes	
	]	Total Truck Cy	cle Time:		8.411	minutes	
Loading Tool uni	t						
Production	1,104.43	LCY/Hou	ır Adjust	ed for job ef	ficiency:	916.68	LCY/Hour
Truck Unit			5	5	5		
Production	554.38	LCY/Hou	ır Adjust	ed for job ef	ficiency:	460.14	LCY/Hour
Optimal No. of	2	Truck(s)	Selecte	ed Number o	of Trucks:	2	Truck(s)
Trucks:							_
Adiuste	d hourly truck tea	m production:			920.27	LCY/	Hour
-	d single truck/loa	-			916.68	LCY/I	
Adjuste	d multiple truck/l	oader team pro	oduction:		916.68	LCY/	Hour
IOD TIM							
JOD IIM.	E AND COST						
Fleet size	: 1	Team(s)	Total jo	b time:	54.31	Hou	ırs
Unit cost	\$2.283	/LCY	Total jo	b cost:	\$113,660		

Task description:		Seed N Pit Rar	geland w/o shrubs (<6	700 ft.)	
Site: Tra	pper Mine	Permit A	Action: PR12	Permit/Job#:	C1981010
<u>PROJ</u>	<u>ECT IDENTIFI</u>	<b>CATION</b>			
Task	#: N18	State:	Colorado	Abbreviation:	None
Date:	2/20/2025	County:	Moffat	Filename:	C010-N18
User:	RAR				

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

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

No. of Acres:	44.1	Cost /Acre:	\$360.87
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEE	DING	

Initial Job Cost:	\$15,914.37
Reseeding Job Cost:	\$2,785.01
Total Job Cost:	\$18,699
Job Hours:	44.00

Task description:		Seed N Pit: >6700 ftRangeland with Shrubs					
ite: _]	Trapper	Mine	Permit A	Action:	PR12	Permit/Job#:	C1981010
<u>PR(</u>	OJECT 1	IDENTIFI	<b>CATION</b>				
Ta	ask #:	N18A	State:	Color	ado	Abbreviation:	None
Da	ate:	2/20/2025	County:	Moffa	at	Filename:	C010-N18A
		RAR					

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60

Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	15.79	44.87	\$684.99

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

No. of Acres:	244.4	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	TILLING, SEE	DING	

Initial Job Cost:	\$225,246.37
Reseeding Job Cost:	\$39,418.12
Total Job Cost:	\$264,664
Job Hours:	244.00

Task des	cription:	Seed J Pit with	out shru	ubs (Range C)		
Trapp	er Mine	Permit A	ction:	PR12	Permit/Job#:	C1981010
PROJEC	<u>T IDENTIFI</u>	CATION				
Task #:	N19	State:	Color	ado	Abbreviation:	None
Date:	2/20/2025	County:	Moffa	at	Filename:	N19
Date.						

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

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

No. of Acres:	65.8	Cost /Acre:	\$360.87
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEE	DING	

Initial Job Cost:	\$23,745.25
Reseeding Job Cost:	\$4,155.42
Total Job Cost:	\$27,901
Job Hours:	66.00

Task description:	Seed J Pit without shrubs (Range C)	<u>TR135</u>
Site: <u>Trapper Mine</u>	Permit Action: PR12	Permit/Job#: <u>C1981010</u>
PROJECT IDENTIF	<b>ICATION</b>	
Task #: N19TR12   Date: 2/25/202   User: RAR		Abbreviation:NoneFilename:N19 TR134
Agency or organization	on name: DRMS	

Seed Mix	<u>Rate –</u> <u>PLS</u> <u>LBS /</u>	<u>Seeds</u> per SQ.	Cost /Acre
	<u>Acre</u>	<u>FT</u>	
Arrowleaf Balsamroot	<u>0.40</u>	<u>0.50</u>	<u>\$39.81</u>
Beardless Wheatgrass - Whitmar	<u>0.31</u>	<u>1.01</u>	<u>\$4.29</u>
Mountain Brome - Bromar	<u>0.72</u>	<u>1.16</u>	<u>\$4.33</u>
<u>Great Basin Wildrye - Magnar</u>	<u>0.92</u>	<u>3.74</u>	<u>\$10.75</u>
Kentucky Bluegrass - Ginger	<u>0.06</u>	<u>2.96</u>	<u>\$0.25</u>
<u>Alfalfa - Ladak (inoculated)</u>	<u>0.10</u>	<u>0.48</u>	<u>\$0.40</u>
Burnett, Small (or Little) - Delar	<u>0.40</u>	<u>0.51</u>	<u>\$1.78</u>
Sheep Fescue - Covar	<u>0.15</u>	<u>2.34</u>	<u>\$0.92</u>
Milk Vetch, Cicer - Lutana	<u>0.30</u>	<u>1.00</u>	<u>\$2.94</u>
Slender Wheatgrass - San Luis	<u>0.28</u>	<u>1.02</u>	<u>\$1.69</u>
Streambank Wheatgrass - Sodar	<u>0.26</u>	<u>0.85</u>	<u>\$2.16</u>
Thickspike Wheatgrass - Critana	<u>0.28</u>	<u>0.99</u>	<u>\$2.28</u>
Western Wheatgrass - Arriba	<u>0.38</u>	<u>0.96</u>	<u>\$3.43</u>
Needlegrass, Green - Lodorm	<u>0.24</u>	<u>1.00</u>	<u>\$2.07</u>
Flax, Lewis Blue	<u>0.30</u>	<u>1.99</u>	<u>\$12.69</u>
Red Top	<u>0.02</u>	<u>2.29</u>	<u>\$0.21</u>
Penstemon, Rocky Mountain	<u>0.14</u>	<u>2.19</u>	<u>\$8.60</u>
Yarrow, Western	<u>0.07</u>	4.26	<u>\$3.38</u>
Globemallow, Munro	<u>0.08</u>	<u>0.91</u>	<u>\$10.31</u>
Aster, Pacific	<u>0.02</u>	<u>0.35</u>	<u>\$2.80</u>
Goldeneye - Showy	<u>0.08</u>	<u>0.92</u>	<u>\$9.13</u>
Totals Seed Mix	<u>5.51</u>	<u>31.41</u>	<u>\$124.23</u>

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

No. of Acres:	<u>34.7</u>	Cost /Acre:	<u>\$360.87</u>
Estimated Failure Rate:	<u>17.5%</u>	Cost /Acre*:	<u>\$360.87</u>
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	<u>\$12,522.19</u>
Reseeding Job Cost:	\$2,191.38
Total Job Cost:	\$14,714
Job Hours:	<u>66.00</u>

Task desc	cription:	Seed I Pit witho	ut Shru	ıbs		
: <u>Trapp</u>	er Mine	Permit A	ction:	PR12	Permit/Job#:	C1981010
PROJEC <sup>®</sup>	<u>r identifi</u>	<b>CATION</b>				
	NOO	State:	Color	ado	Abbreviation:	None
Task #:	N20	State.	COIOI	aao		
Task #: Date:	2/20/2025		Moffa		Filename:	N20

# <u>SEEDING</u>

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

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

No. of Acres:	35.3	Cost /Acre:	\$360.87
Estimated Failure Rate:	17%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEE	DING	

Initial Job Cost:	\$12,738.71
Reseeding Job Cost:	\$2,165.58
Total Job Cost:	\$14,904
Job Hours:	35.00

Task des	cription:	Seed I/J Pits no	shrubs (Range	e C)	
Trapp	er Mine	Permit A	ction: PR12	Permit/Job#:	C1981010
PROJEC	T IDENTIFI	CATION			
Task #:	N21	State:	Colorado	Abbreviation:	None
Date:	2/20/2025	6 County:	Moffat	Filename:	N21
	RAR				

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye, Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

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

No. of Acres:	30.9	Cost /Acre:	\$360.87
Estimated Failure Rate:	17%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEE	DING	

Initial Job Cost:	\$11,150.88
Reseeding Job Cost:	\$1,895.65
Total Job Cost:	\$13,047
Job Hours:	31.00

Task description: See		Seed J Pits no s	J Pits no shrubs (Range C) MR229			
: <u>Trapp</u>	er Mine	Permit A	ction:	PR12	Permit/Job#:	C1981010
<b>PROJEC</b>	<u>T IDENTIFI</u>	CATION				
Task #:	N21AMR	State:	Color	ado	Abbreviation:	None
Date:	2/24/2025	County:	Moffa	at	Filename:	MR229
	RAR					

### **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

# Application

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

No. of Acres:		12.3	Cost /Acre:	\$360.87
Estimated Failure Rate:		17%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:		TILLING,	, SEEDING	_
Initial Job Cost:	\$4.438.70			

Reseeding Job Cost:	\$754.58
Total Job Cost:	\$5,193
Job Hours:	31.00

Task description:		Seed C Pit No S	Shrubs			
e: <u>Trapp</u>	er Mine	Permit A	ction:	PR12	Permit/Job#:	C1981010
PROJEC	<u>T IDENTIFI</u>	CATION				
Task #:	N22	State:	Colora	ido	Abbreviation:	None
Task #: Date:	N22 2/20/2025		Colora Moffat		Abbreviation: Filename:	None N22

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

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

No. of Acres:	188.7	Cost /Acre:	\$360.87
Estimated Failure Rate:	17%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEE	DING	

Initial Job Cost:	\$68,096.17
Reseeding Job Cost:	\$11,576.35
Total Job Cost:	\$79,673
Job Hours:	189.00

## COST SUMMARY WORK

Task description: <b>PR</b>		PR 12 Reclamati	ion Cost Est	imate			
ite: <u>T</u>	te: <b>Trapper Mine</b>		Per	Permit Action: PR12		Permit/Job#: <u>C1981010</u>	
<u>PRO</u>	JECT	IDENTIFI	<u>CATION</u>				
Т	Task #:	000	State:	Colorado		Abbreviation:	None
	Date:	2/6/2025	County:	Moffat		Filename:	C010-000
	User:	RAR					

### TASK LIST (DIRECT COSTS)

Task		Form	Fleet	Task	
	Description	Used	Size	Hours	Cost
001	Ash Disposal Pit Regrade (NW section)	DOZER	2	11.75	\$20,213
001B	Load/Haul Section E1,423,800	TRUCK1	1	40.89	\$295,196
002	Ash Disposal Pit Regrade (Section 1)	DOZER	2	25.26	\$43,472
002B	Ash Disposal Pit Regrade (Section 2)	DOZER	2	32.20	\$55,407
003	Ash Disposal Pit Regrade (Section 3-1)	DOZER	2	2.27	\$3,907
003B	Ash Disposal Pit Regrade (Section 3-2)	DOZER	2	77.54	\$133,424
004	Regrade Johnson Coal Stockpile	DOZER	1	13.37	\$11,503
004A	D/E Pit Regrade (Spoil Side East)	DOZER	8	91.64	\$630,752
005A	D/E Pit Regrade (West)	DOZER	6	117.26	\$605,313
030	Regrade BC Road	DOZER	4	72.55	\$143,032
031	Regrade D-Main Road	DOZER	4	53.06	\$104,620
032	Regrade East and West Ash Roads	DOZER	4	87.61	\$172,730
033	Regrade LOM Roads	DOZER	4	158.24	\$311,985
034	Regrade A Roads (Middle A and North A N pit)	DOZER	4	58.27	\$114,879
035	Regrade N Pit Roads (old LOM, cross-over, ash	DOZER	4	21.12	\$72,671
	pit)				
036	Regrade C Pit Haul Road	DOZER	4	59.52	\$117,360
039	Regrade East A Haul Roads (East A and East	DOZER	4	56.52	\$111,429
0.40	ASplit, BridgeRd)	DOTED		2515	<b>.</b>
040	Regrade I/J Roads (I/J Spoil, I Mid, I West)	DOZER	4	26.16	\$51,598
041	Regrade K Pit Haul Roads (K1 EPRL K3)	DOZER	4	64.71	\$127,584
042	Regrade Mine Access Road	DOZER	4	23.58	\$46,481
044	Regrade No Name Access Roads #2, #4, 5R	DOZER	4	10.79	\$21,268
045	Regrade Potable Water Well Access Road	DOZER	4	1.79	\$3,522
046	Regrade West Pyeatt Access Road (1 and 2)	DOZER	4	7.14	\$14,085
047	Regrade Middle Pyeatt Access Road (1, 2 and 3)	DOZER	4	6.61	\$13,028
048	Regrade East Pyeatt Access Road (1, 2 and 3)	DOZER	4	9.23	\$18,205
049	Regrade Grouse Access Road	DOZER	4	4.57	\$9,015
050	Regrade West Flume Access Road	DOZER	4	2.68	\$5,282
051	Regrade East Flume Access Road	DOZER	4	2.68	\$5,282
052	Regrade Deal Access Road	DOZER	4	2.68	\$5,282
053	Regrade Horse Access Roads (Horse and Horse1)	DOZER	4	6.07	\$11,973
054	Regrade West Horse Access Road	DOZER	4	2.68	\$5,282
055	Regrade Middle Flume Access Roads (1 and 3)	DOZER	4	4.60	\$9,068
056	Regrade Oak Access Roads	DOZER	4	3.65	\$7,197
057	Regrade Sage Access Roads	DOZER	4	4.46	\$8,803
058	Regrade Johnson Access Road	DOZER	4	11.07	\$21,832
063	Rip BC Walk Road	RIPPER	4	2.24	\$4,755
064	Rip D-main Pit Haul Roads	RIPPER	4	8.40	\$17,814

065	Rip West Ash Haulroads (West Ash, West Ash1 and West Ash 2)	RIPPER	4	5.98	\$12,679
066	Rip LOM Haul Roads (F2 and F2-G5)	RIPPER	4	8.76	\$18,575
067	Rip A Pit Haul Roads (Middle A and North A)	RIPPER	4	6.43	\$13,630
068	Rip N Pit Haul Roads	RIPPER	4	5.38	\$11,411
072	Rip East A Haul Roads (East A and East A Split)	RIPPER	4	2.96	\$6,276
072	Rip Access Road (Tasks 042-059)	RIPPER	4	3.11	\$6,593
075	Rip K Pit Haul Roads (KMain, K1, K2, K3)	RIPPER	4	2.12	\$4,501
075	Rip I/J Roads (I/J Spoil, I Mid, I West)	RIPPER	4	4.55	\$9,655
078	Regrade Coyote Impoundment	DOZER	2	288.69	\$284,597
078	Regrade Middle Pyeatt Impoundments	DOZER	_	68.98	\$33,999
079	Impoundment (1,2, 3)	DOZEK	1	00.90	\$33,999
080	Regrade Far East Buzzard Impoundment	DOZER	1	0.56	\$278
081	Regrade Sage Impoundments (1 and 2)	DOZER	1	18.91	\$9,322
082	Regrade West Horse Impoundment	DOZER	1	3.52	\$1,733
083	Regrade Impoundment H	DOZER	1	7.29	\$3,591
084	Regrade Industrial Waste Pond	DOZER	1	7.47	\$3,682
085	Regrade Deal 1 and 2	DOZER	1	9.83	\$5,148
086	Regrade Deacon 1,2 and Jeffway 1,2	DOZER	1	94.72	\$49,616
	impoundments		_		+ ,
087	Regrade W. Buzzard #4 Impoundment	DOZER	1	6.00	\$3,145
088	Regrade E. Buzzard #3 Impoundment	DOZER	1	7.04	\$3,687
089	Regrade Diversions	DOZER	1	61.42	\$20,891
089M R228	Regrade Diversions	DOZER	1	1.18	\$400
090	Replace Topsoil on Ash Pits (ASH1)	SCRAPER1	1	5.20	\$32,014
090A	Replace Topsoil on Ash Pits (ASH2)	SCRAPER1	1	12.78	\$78,627
090B	Replace Topsoil on Ash Pits (A92-4 to Pit)	TRUCK1	1	107.16	\$307,455
091	Replace Topsoil on D/E Pits (Truck/Excavator)	TRUCK1	1	416.57	\$1,038,052
091A	Replace Topsoil on D/E Pits (D97-1)	SCRAPER1	1	14.75	\$85,470
091A	Replace Topsoil at L Pit K Knob L23-1 to K Knob	SCRAPER1	1	1.69	\$10,421
TR	$\mathbf{D} = \{1, \dots, \mathbf{T}\} = \mathbf{D} = D$		1	1.00	¢11 545
091B	Replace Topsoil on D/E Pits (D1-07)	SCRAPER1	1	1.99	\$11,545
091T R135	Replace Topsoil JPE 1 to J East	SCRAPER1	1	24.80	\$152,663
092A TR	Replace Topsoil at C Pit Future TS Pile TR134	SCRAPER1	1	36.50	\$224,660
096	Replace Topsoil at West Panel, BC rd, Shop (Scraper)	SCRAPER1	1	13.22	\$81,383
096A	Replace Topsoil at West Panel, BC rd, Shop (Truck/Excavator)	TRUCK1	1	147.14	\$366,648
097	Replace Topsoil at East Panel Ponds, A road (Scraper)	SCRAPER1	1	20.64	\$127,032
097A	Replace Topsoil at East Panel Ponds, A Rd (Truck/Excavator)	TRUCK1	1	209.29	\$521,528
098	Re-topsoil Johnson Coal Stockpile	SCRAPER1	1	4.14	\$25,488
098M R229	Re-topsoil aJ23-1 to J Pit	SCRAPER1	1	8.24	\$50,713
099	Replace Topsoil at Dragline Walk Road (ASH4)	TRUCK1	1	8.17	\$17,280
099 099A	Replace Topsoil at Dragline Walk Road (ASH1)	TRUCK1	1	33.14	\$70,092
100	Facilities Area	REVEGE	1	75.00	\$31,802
100 100A	Seed D Pit Range A-B	REVEGE	<b>-</b> .	319.30	\$31,802 \$345,775
100A 101			1		
	Roads (including BC road) below 6700'	REVEGE		196.00	\$83,236
102	Finish Grading I/J Pit	GRADER	2	21.73	\$14,205
103	Ponds below 6700' (Coyote, Sage, E Buzzard)	REVEGE	1	26.00	\$11,025

104	Johnson Coal Stockpile	REVEGE	1	12.00	\$5,343
104	topsoil piles below 6700'	REVEGE	1	27.00	\$11,491
105	Roads: >6700 ftRangeland with Shrubs	REVEGE	1	54.00	\$58,694
107	Ash pitRangeland with Shrubs	REVEGE	1	115.00	\$125,185
100	Seed D/E Pit Range B	REVEGE	1	15.00	\$12,288
111	Ponds above 6700'(Deal, Deacon, Jeffways, West	REVEGE	1	19.00	\$20,261
	Horse)		-	19.00	<i>\\\\</i>
112	topsoil piles above 6700'	REVEGE	1	5.00	\$5,523
113	Shrub Transplants as per operator	NA	1	40.00	\$155,204
120	Seal Land Slide Monitoring Stations	BOREHOLE	1	4.00	\$8,143
121	Plug and Seal Exploration Drill Holes	BOREHOLE	1	80.00	\$38,730
122	Plug and Seal Monitoring Wells	BOREHOLE	1	185.00	\$168,156
128	Reveg for 20 x .3 acres drillholes	REVEGE	1	6.00	\$6,497
129	Regrade .3acres x 20 drill pads	DOZER	1	60.58	\$20,606
130	Demolish structures, remove materials and debris	DEMOLISH	1	100.00	\$1,040,527
131	Culvert Removal and Disposal	DEMOLISH	1	60.00	\$176,564
132	Mobilize and Demobilize from Hayden, CO	MOBILIZE	1	5.34	\$88,152
133	Drill and Blast L Pit 1,776,482 BCY	NA	3	407.00	\$640,555
134	Drill and Blast Ash Pit 106,474 BCY	NA	3	37.75	\$43,232
135	Drill and Blast J Pit 513,911 BCY	NA	3	142.00	\$193,985
91AT	Replace Topsoil at L Pit K Knob L23-1 to K Knob	SCRAPER1	1	1.69	\$10,421
R					
EC	Erosion Control Ditches 3 Acres TR134	NA	1	1.00	\$931
L01	Regrade L Pit X-sec:407,200	DOZER	4	38.19	\$131,442
L02	Regrade L Pit X-sec:406,700	DOZER	4	96.29	\$331,380
L03	Regrade L Pit X-sec:406,200	DOZER	4	54.48	\$187,472
L04	Regrade L Pit X-sec:405700	DOZER	4	71.33	\$245,480
L05	Regrade L Pit X-sec:405,200	DOZER	4	386.09	\$1,328,715
L06	Regrade L Pit X-sec:404,700	DOZER	4	428.34	\$1,474,086
L07	Regrade L Pit X-sec:404,200	DOZER	4	269.44	\$927,267
L08	Regrade L Pit X-sec:403,700	DOZER	4	58.40	\$200,995
L09	Regrade L Pit X-sec:403,200	DOZER	4	58.60	\$201,653
L10	Regrade L Pit X-sec:402,700	DOZER	4	178.08	\$612,863
L11	Regrade L Pit X-sec:402,200	DOZER	4	339.20	\$1,167,317
L12	Regrade L Pit X-sec:401,700	DOZER	4	88.07	\$303,099
L13	Regrade L Pit X-sec:401,200	DOZER	4	62.00	\$213,376
L14	Regrade L Pit X-secs:400,700 and 400,200	DOZER	4	47.12	\$162,147
L15	Regrade L PIt (Truck/Excavator)	TRUCK1	1	459.83	\$1,607,039
L15A	Regrade Jennings Pit (Truck/Excavator)	TRUCK1	4	99.33	\$1,051,696
TR			4.		<b>**</b> • • • • • • • • • • • • • • • • • • •
L15T	Regrade L PIt K Knob (Truck/Excavator)	TRUCK1	4	474.59	\$5,024,826
R135		DEVECE	-	004.00	<b>0070</b> 555
L16	Seed L Pit: Rangeland with Shrubs	REVEGE	1	804.00	\$870,556
L16M	Seed L Pit diversion: Rangeland with Shrubs	REVEGE	1	2.30	\$2,491
R228	Degrade L Dit North Haul road ( 5 V 0 ft th	DOZED	2	22.25	\$55 617
L17	Regrade L Pit North Haul road.6.5 ac X 9 ft th.	DOZER	2	32.35	\$55,647
L18	Replace Topsoil on L Pit (Scrapper)	SCRAPER1	1	166.47	\$1,024,555
L19 1 N20	Replace Topsoil on L Pit (Truck/Excavator)	TRUCK1	1	708.38	\$2,032,367
LN20	Site Maintenance; Rill and Gully Repair and Pond Cleaning	SITEMAINT ENANCE	1	600.00	\$446,278
LN20	Site Maintenance; Drainage Stabilization	SITEMAINT	1	600.00	\$54,364
ATR		ENANCE			
N01	Regrade N Pit	DOZER	2	1,071.15	\$1,843,131
N02	Backfill and Grading N Pit	TRUCK1	1	604.84	\$2,421,638

N02A	Backfill and Grading I Pit	TRUCK1	1	156.39	\$546,565
N02B	Backfill and Grading J Pit	DOZER	2	450.41	\$775,023
N13	Replace Topsoil on C Pit	SCRAPER1	1	90.64	\$557,880
N14	Replace Topsoil on N Pit (Scraper)	SCRAPER1	1	169.86	\$1,045,426
N14A	Replace Topsoil on N Pit (Truck/Excavator)	TRUCK1	1	147.82	\$365,087
N15	Replace Topsoil in I Pit	SCRAPER1	1	13.46	\$82,869
N16	Replace Topsoil on J Pit (Truck/Excavator)	TRUCK1	1	103.22	\$254,944
N16A	Replace Topsoil in J Pit (Scraper)	SCRAPER1	1	3.87	\$23,813
N16A ATR	Replace Topsoil on J Pit ASH-1 to J Pit	TRUCK1	1	38.09	\$94,066
N16A TR	Replace Topsoil on J Pit A91-8 to J Pit	TRUCK1	1	22.95	\$56,683
N16T R135	Seed L Pit, K Nob: >6700 ftRangeland with Shrubs	REVEGE	1	3.50	\$5,306
N17	Replace Topsoil on I/J Pit	TRUCK1	1	54.31	\$113,660
n18	Seed N PitRangeland w/o shrubs (<6700 ft.)	REVEGE	1	44.00	\$18,699
N18A	Seed N Pit: >6700 ftRangeland with Shrubs	REVEGE	1	244.00	\$264,664
N19	Seed J Pit without shrubs (Range C)	REVEGE	1	66.00	\$27,901
N19T R134	Seed J Pit without shrubs (Range C)	REVEGE	1	66.00	\$14,714
N20	Seed I Pit without Shrubs	REVEGE	1	35.00	\$14,904
N21	Seed I/J Pits no shrubs (Range C)	REVEGE	1	31.00	\$13,047
N21A MR	Seed J Pits no shrubs (Range C) MR229	REVEGE	1	31.00	\$5,193
MR N22	Seed C Pit No Shrubs	REVEGE	1	189.00	\$79,673
RCN	Reclamation Not Bond Released	NA	1	305.04	\$213,391
BR	Relamation Not Donu Released		1	505.04	φ213,371
		14945	\$38,871,648		

### **INDIRECT COSTS**

### OVERHEAD AND PROFIT:

Liability insurance:	2.02		Total =	\$785,207
Performance bond:	1.05		Total =	\$408,152
Job superintendent:	540.76		Total =	\$42,866
Profit:	10.00		Total =	\$3,887,165
			TOTAL O & P =	\$5,123,390
	CONT	RACT	AMOUNT (direct + O & P) = $($	\$43,995,038
LEGAL - ENGINEERING - PRO	DJECT MANAGEMENT	:		
Financial warranty processi	ng (legal/related costs):	\$0	Total =	\$0
Engineering work and/or contract/bid preparation:			Total =	\$1,869,789
Reclamation management and/or administration:				\$1,099,876
	CONTINGENCY:	0.00	Total =	\$0
			TOTAL INDIRECT COST =	\$8,093,056

Phase Bond Release Area Cost							Phase Bond	
Accounting			Liability	Acres	Cost /Acre	%	Release	Acreage
	Worst Case Bond		\$46,964,704.00	2636.60	\$17,812.60	100%	Phase 1	4585.9
	Phase I Bond Release		\$ 2,288,562.99	321.20	\$7,125.04	40%	Phase 2	4264.7
	Phase II Bond Release		\$ 1,921,623.40	719.20	\$2,671.89	15%	Phase 3	3545.5
<u>Total</u>		<u>TOTAL</u>	\$51,174,890	3677.0				