COST SUMMARY WORK

1	ask description:	Cost Summary			
~.					
Sita.	Dowa Flate Mina	Parmit Action	TR 0/1 Rond Estimate	Parmit/Ioh#:	M19930//1

PROJECT IDENTIFICATION

Task #:000State:ColoradoAbbreviation:NoneDate:Rev 9/1/2020County:BoulderFilename:M041-000

User: AME

Agency or organization name: _ DRMS

TASK LIST (DIRECT COSTS)

Task		Form	Fleet	Task	
	Description	Used	Size	Hours	Cost
001	Demolition of structures	DEMOLISH	1	40.00	\$75,941
002	Demolition of conveyor supports 6x2x6(457), on-	NA	1	30.00	\$14,214
	site disposal				
003	Demolition of conveyor system 9,718x4x4, off-site	NA	1	20.00	\$144,781
00.4	disposal	NYA	4	20.00	Φ20, 502
004	Demolition of conveyor walkways 2,558x3x4, off-	NA	1	20.00	\$28,582
005	site disposal Demolition of conveyor structures 6-20(44), off-	NA	- 1	20.00	\$52.202
005	site disposa	NA	1	20.00	\$53,203
006	Demolition of conveyor buried section 160', off-	NA	1	10.00	\$1,663
000	site disposa	11/17	1	10.00	Ψ1,003
007	Backfill Hi-Cal/2nd Ridge pit with in-pit stockpiles	SCRAPER1	1	950.73	\$1,292,036
008	Backfill Hi-Cal/2nd Ridge pit with crusher	TRUCK1	1	2,109.13	\$3,960,546
	stockpiles	11100111	1	2,107.13	ψ5,200,210
009	Backfill Hi-Cal/2nd Ridge pit with Mt. George	TRUCK1	1	1,023.53	\$1,921,997
	stockpile			,	. ,- ,- ,-
010	Backfill 3rd Ridge pit with in-pit stockpiles	SCRAPER1	1	83.70	\$113,743
011	Backfill 3rd Ridge pit with Mt. George stockpile	TRUCK1	1	430.07	\$807,598
012	3rd Ridge pit wetland excavation	SCRAPER1	1	500.17	\$679,726
013	Backfill 4th Ridge pit with in-pit stockpiles	DOZER	2	0.25	\$160
014	Wetland topsoil stripping	SCRAPER1	1	10.47	\$14,226
015	Crusher area topsoil stripping	SCRAPER1	1	8.75	\$11,888
016	Hi-Cal/2nd Ridge pit rough grade	GRADER	2	12.71	\$4,139
017	Hi-Cal/2nd Ridge pit final grade	GRADER	2	27.55	\$8,968
018	3rd Ridge pit rough grade	GRADER	2	3.53	\$1,149
019	3rd Ridge pit final grade	GRADER	2	7.65	\$2,491
020	4th Ridge pit rough grade	GRADER	1	1.65	\$270
021	4th Ridge pit final grade	GRADER	1	3.59	\$585
022	Rip office/maintenance/equipment/fuel areas	GRADER	1	1.65	\$285
023	Rip roads and other disturbances	GRADER	2	13.83	\$4,759
024	Retopsoil Hi-Cal/2nd Ridge pit with NE/N	SCRAPER1	1	20.51	\$27,875
	stockpile				_
025	Retopsoil Hi-Cal/2nd Ridge pit with NE/middle	SCRAPER1	1	45.65	\$62,041
	stockpile				
026	Retopsoil Hi-Cal/2nd Ridge pit with NW stockpile	SCRAPER1	1	4.18	\$5,678
027	Retopsoil Hi-Cal/2nd Ridge pit with High-Cal	SCRAPER1	1	6.38	\$8,667
0.26	stockpile	000 1000	_	0.51	40.54
028	Retopsoil 3rd Ridge pit with NE/middle stockpile	SCRAPER1	1	0.64	\$864
029	Retopsoil 3rd Ridge pit with NE/S stockpile	SCRAPER1	1	10.46	\$14,218

030	3rd Ridge wetland area excavation	SCRAPER1	1	8.18	\$11,120
031	Retopsoil 4th Ridge pit wetland area excavation	SCRAPER1	1	3.66	\$4,970
032	Retopsoil wetland area excavation	SCRAPER1	1	5.49	\$7,457
033	Retopsoil crusher area with reclaimed area	SCRAPER1	1	9.17	\$12,462
024	stripping	CCD ADED1	_ 1	24.02	\$22.9 <i>CE</i>
034	Retopsoil crusher area with SE stockpile	SCRAPER1	1	24.92	\$33,865
035	Retopsoil office/maint/equip/fuel areas with SE stockpile	SCRAPER1	1	4.68	\$6,356
036	Retopsoil roads and other disturbances with NE/S stockpile	SCRAPER1	1	25.51	\$34,664
037	Retopsoil roads and other disturbances with SE stockpile	SCRAPER1	1	27.11	\$36,843
038	Retopsoil roads and other disturbances with wetland excav	SCRAPER1	1	0.34	\$456
039	Revegetate Hi-Cal/2nd Ridge pit (107.3 ac)	REVEGE	1	107.30	\$148,183
040	Revegetate 3rd Ridge pit minus wetland (25 ac)	REVEGE	1	25.00	\$34,525
041	Revegetate 4th Ridge pit (2.3 ac)	REVEGE	1	2.30	\$3,176
042	Revegetate wetland area (20 ac)	REVEGE	1	20.00	\$20,212
043	Revegetate crusher area (47.4 ac)	REVEGE	1	47.40	\$65,460
044	Revegetate Mt. George stockpile area (22.9 ac)	REVEGE	1	22.90	\$31,625
045	Revegetate topsoil stockpile areas (27.7 ac)	REVEGE	1	27.70	\$38,254
046	Revegetate office/maint/equip/fuel areas (3.8 ac)	REVEGE	1	3.80	\$5,248
047	Revegetate conveyor corridor (4.6 ac)	REVEGE	1	4.60	\$6,353
048	Revegetate roads and other disturbances (63.4 ac)	REVEGE	1	63.40	\$87,556
049	Mobilization/Demobilization	MOBILIZE	1	56.88	\$393,841
		OTALS:	5907.12	\$10,244,920	

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:2.02Total =\$206,947Performance bond:1.05Total =\$107,572Job superintendent:360.00Total =\$25,038

Profit: 10.00 Total = \$1,024,492

TOTAL O & $P = \frac{1,364,049}{}$

CONTRACT AMOUNT (direct + O & P) = \$11,608,969

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500 Total = \$500

Engineering work and/or contract/bid preparation: 4.25 Total = \$493,381

Reclamation management and/or administration: 5.00 \$580,448

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$2,438,379

TOTAL BOND AMOUNT (direct + indirect) = \$12,683,299

DEMOLITION WORK

Site:	Dowe Flats Mine		Permit Action:	TR-04 Bond Estimate	Permit/Jo	b#: <u>M1993041</u>
ROJEC	T IDENTIFICATION	<u>N</u>				
Task #:	001	State:	Colorado	Ab	breviation:	None
Date:	Rev 9/1/2020	County:	Boulder		Filename:	M041-001
User:	AME				_	

<u>UNIT COSTS</u> <u>Location adjustment: 103.60 %</u>

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Demolish Crusher Slab	35 x 31 x 1	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 200 ft. push	1,085.00	SF	\$1.70	\$1,845.59
Demolish Crusher Metal Roof	23 x 35 x 30	Bldg. (MC) demo./off- site disposal in approved landfill - Max. 5 mile haul	24,150.00	CF	\$0.58	\$14,007.00
Demolish Office Trailer	50 x 12 x 9	Bldg. (SN) demo./off- site disposal in approved landfill - Max. 5 mile haul	5,400.00	CF	\$0.30	\$1,614.60
Demolish Break Room Trailer	50 x 12 x 9	Bldg. (SN) demo./off- site disposal in approved landfill - Max. 5 mile haul	5,400.00	CF	\$0.30	\$1,614.60
Demolish Trailer Steps (2)	10 x 14 x 1 (2x)	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 200 ft. push	280.00	SF	\$1.70	\$476.28
Demolish Office & Breakroom Slabs (2)	51 x 13 x 1 (2x)	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 200 ft. push	1,326.00	SF	\$1.70	\$2,255.53
Demolish Maintenance Buildings (2)	40 x 68 / 25 x 13	Bldg. (MC) demo./off- site disposal in approved landfill - Max. 5 mile haul	84,850.00	CF	\$0.58	\$49,213.00
Demolish Maintenance Building Slab	25 x 13	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 200 ft. push	325.00	SF	\$1.70	\$552.83
Demolish/Remove Fuel Island (2)	40 x 52 / 20 x 30	Bldg. (SC) demo./on-site disposal in existing pit or cut - Max. 200 ft. push	2,680.00	CF	\$0.25	\$672.68
Remove Fuel Tank	28 x 16 x 16	Haul tank to certified salvage dump - 9,000 to 12,000 gal. tank	1.00	EA	\$1,050.00	\$1,050.00

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	40.00	(unadjusted):	\$73,302.11	location):	\$75,940.99

SCRAPER TEAM WORK

Site: Dowe Flats Mine Permit Action: TR-04 Bond Estimate Permit/Job#: M199	02041							
Site: Dowe Flats Mine Permit Action: TR-04 Bond Estimate Permit/Job#: M199304 I								
PROJECT IDENTIFICATION								
	Abbreviation: None M041-007							
	<u> </u>							
User: AME Boulder Filename: M041-00) /							
Agency or organization name: DRMS								
HOURLY EQUIPMENT COSTShift basis: 1 per day								
Equipment Description -Scraper: Cat 637G w/push-pull								
-Dozer: Cat D9T - 9SU								
11 11								
-Water Truck: Water Tanker, 3,500 Gal.								
<u>Cost Breakdown</u> : Scraper Work Team Support Equipment Maintenance	Equipment							
Scraper Dozer Load Area Dump Area Motor Grader	Water Truck							
%Utilization-machine: 100 100 NA NA 50	50							
Ownership cost/hour: \$181.30 \$156.88 NA NA \$55.79	\$14.71							
Operating cost/hour: \$203.87 \$127.87 NA NA \$30.04	\$15.29							
%Utilization-ripper: NA NA NA NA 50	NA							
Ripper own. cost/hour: NA \$0.00 NA NA \$4.83	\$0.00							
Ripper op. cost/hour: NA \$0.00 NA NA \$2.20	\$0.00							
Operator cost/hour: \$47.07 \$40.04 NA NA \$46.87	\$0.00							
Unit Subtotals: \$432.24 \$324.78 NA NA \$139.73	\$30.00							
Number of Units: 2 1 0 0 1	1							
Group Subtotals: Work: \$1,189.26 Support: \$0.00 Maint:	\$169.73							
Total work team cost/hour: \$1,358.99								
MATERIAL QUANTITIES								
Initial volume: 894,130 CCY Swell factor: 1.125 Loose volume: 1,005,896 LCY								
Task #:								
HOURLY PRODUCTION								
	Y							
Material description: Decomposed rock - 25% Rock, Heaped Volume: 34.00 LC								
Rated Payload: 81,600 pounds Average Volume: 29.00 LC								

Site Altitude: 5350 feet

\sim	- 1			•	
C_{3}	701	ρ		111	10.
\sim	<i>/</i> U 1	•	1	111	ı.

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

Job Condition Correction:

1.000 0.830	(CAT HB) (CAT HB)
0.830	(CAT HB)
0.050	(CAT IID)
0.920	
	0.830

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	1000.00	0.00	3.00	3.00	2800	0.64

Haul Time: **0.64** minutes

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	3.00	3.00	2949	0.49

Return Time: **0.49** minutes

Total Scraper team cycle time:2.73minutesAdjusted for job conditions:1,058.02LCY/HourSelected Number of Scrapers:2Scraper(s)

Adjusted single scraper team (unit) hourly production: 1,058.02 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,058.02 LCY/Hour

Unadjusted unit production/hour: 1,274.73 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 950.73
 Hours

 Unit cost:
 \$1.284
 /LCY
 Total job cost:
 \$1,292,036

TRUCK/LOADER TEAM WORK

7	Task descrip	otion:	Backfi	ill Hi-Cal/2	nd Ridge	e pit with cru	usher stockpil	es		
Site:	Site: Dowe Flats Mine Perm		mit Actio	n: <u>TR-04 F</u>	Bond Estimate	Permit/Jo	b#: M1993041			
<u>P</u>	ROJECT :	<u>IDEN</u>	TIFICATION	<u> </u>						
	Task #: Date: User:	008 Rev AMI	9/1/2020 E	State: County:	Colorad Boulder			Abbreviation: Filename:	None M041-008	
<u>H</u>		•	r organization na		MS	i annual Davi		ift basis: 1 per da	<u>uy</u>	
_	Truck Loader Team -Truck:					uipment Des	cription			
			Tuck Louder Te	-Loader:		992K				
-		Supp	ort Equipment -	Load Area:	Cat D	9T - 9SU				
			-Γ	Oump Area:						
	Road Maintenance – Motor Grader:									
=			-W	ater Truck:	Water	Tanker, 3,50	00 Gal.			
<u>C</u>	ost Breakd	own:	Truck/Lo	ader Team		Suppo	rt Equipment	Mai	ntenance Equipme	
			Truck	Loader		Load Area	Dump Are	a Motor	Water Truc	ΣK

Cost Breakdown:	Truck/Loader Team		Support	Equipment	Maintenance Equipment		
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck	
					Grader		
%Utilization-machine:	100	100	50	NA	50	50	
Ownership cost/hour:	\$168.61	\$238.62	\$156.88	NA	\$55.79	\$14.71	
Operating cost/hour:	\$139.68	\$180.34	\$63.93	NA	\$30.04	\$15.29	
%Utilization-riper:	NA	0	NA	NA	NA	NA	
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00	
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00	
Operator cost/hour:	\$24.82	\$35.97	\$40.04	NA	\$46.87	\$0.00	
Unit Subtotals:	\$333.11	\$454.93	\$260.85	NA	\$132.70	\$30.00	
Number of Units:	3	1	1	0	1	1	
Group Subtotals:	Work:	\$1,454.26	Support:	\$260.85	Maint:	\$162.70	

Total work team cost/hour: \$1,877.81

MATERIAL QUANTITIES

Initial volume: 2,444,646 CCY Swell factor: 1.125 Lose volume: 2,750,227 LCY

Source of estimated volume: Operator bond estimate

Source of estimated swell factor: Cat Handbook
Material Purchase Cost: \$0.00

Total Cost: \$0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,650 Pounds/LCY
Description: Decomposed rock - 25% Rock, 75% Earth

Rated Payload: 200,000 Pounds

Truck/Loader Worksheet Con	t'd	Task # 008	3		Page 2 of	4
Payload Capacity:	75.47	LCY	7			
Truck Bed (volume) Basis:	50.50					
Struck Volume:		LCY LCY				
Heaped Volume: Average Volume:		LCY				
Adjusted Volume:		LCY				
Final T	ruck Volume E	ased on Number of	of Loader Passes:	70.40	LCY	
Loading Tool Capacity						
			Buck	et Size Class: N	ΙA	
Rated Capacity:	16.000	LCY (heaped)			_
Bucket Fill Factor:	1.100	Other - rock/d	lirt mixtures (10	0-120%) 1.100		- -
Adjusted Capacity: _	17.600	LCY				
Job Condition Corrections:		:	Site Altitude (ft.):	5350 feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HE	3)		
Job Efficiency:	0.830	0.830	(CAT HE	3)		
Net Correction:	0.830	0.830				
Loading Tool Cycle Time:	N	Jumber of Loading	Tool Passes Regi	uired to Fill		passes
Excavators and Front Shovels		difficer of Loading	, 10011 usses frequ	Truck:	4	passes
	_	Dating: NA				
Machine Cycle Time vs Selected Value w						
Track Loaders – N	Material Descri	ption:				
Cycle Time Elements (min.):						
Load: NA	M	aneuver: NA		Dump: 0.10	0	
Wheel and Track	Loaders - Una	djusted Basic Load	•	oad, dump, naneuver):	.625 min	utes
Cycle Time Factors				Factor (min.)	Source	
Material:	Mixed materi	al 0.02		0.020	(Cat HB)	
Stockpile:	Dumped by t			0.020	(Cat HB)	
Truck Ownership:	Common ow: 0.04	nership of trucks a	nd loaders -	-0.040	(Cat HB)	
Operation:	Constant ope	ration -0.04		-0.040	(Cat HB)	_
Dump Target:	Nominal targ			0.000	(Cat HB)	_
			me Adjustment:	-0.040	minutes	
		•	der Cycle Time:	0.585	minutes	
		Net Load	Fime per Truck: _	1.855	_ minutes	
Truck Cycle Time:						
Truck Exchange Time:	0.80	Minutes	Adjusted	for site altitude:	0.800	Minutes
Truck Load Time:	1.855	Minutes	Adjusted	for site altitude:	1.855	Minutes
Truck Maneuver and Dump Time:		Minutes	Adjusted	for site altitude:	1.200	Minutes

<u>Truck Travel (Haul & Return) Time:</u> maintained 3.0

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

Haul	Route:

	• •					
Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5000.00	0.00	3.00	3.00	2409	2.512

Haul Time: 2.512 minutes

Return Route:

rectarii reo	itetain iteate.								
Seg#	Haul Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel			
	(Ft)		(%)	(%)	(fpm)	Time			
						(min)			
1	5000.00	0.00	3.00	3.00	3503	1.699			

Return Time: 1.699 minutes
Total Truck Cycle Time: 8.066 minutes

Loading Tool unit

Production 1,590.96 LCY/Hour Adjusted for job efficiency: 1,320.50 LCY/Hour Truck Unit Production

523.68 LCY/Hour Adjusted for job efficiency: 434.65 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 1,303.96 LCY/Hour Adjusted single truck/loader team production: 1,303.96 LCY/Hour Adjusted multiple truck/loader team production: 1,303.96 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 2,109.13 Hours

Unit cost: \$1.440 /LCY Total job cost: **\$3,960,546**

TRUCK/LOADER TEAM WORK

Site:	Dowe Flats Min	ne	Pern	nit Actio	n: <u>TR-04 Bo</u>	nd Estimate	Permit/Job#: M19930		
PI	ROJECT IDEN	TIFICATION							
	Task #: 009		State:	Colorad	0		Abbreviation:	None	
	Date: Rev 9 User: AME		county:	Boulder			Filename:	M041	-009
	Agency or	organization nam	e: DRM	MS					
<u>H</u>	OURLY EQUI	PMENT COST				Shift	basis: 1 per da	<u>y</u>	
				Eq	uipment Descri	ption			
	Т	ruck Loader Tean	n -Truck:	Cat 7	77F				
			-Loader:	CAT	992K				
	Supp	ort Equipment -Lo	ad Area:	Cat D	9T - 9SU				
			mp Area:	NA					
	Road Ma	aintenance –Moto	r Grader:	CAT	16M				
		-Wat	er Truck:	Water	Tanker, 3,500	Gal.			
~		m 1 m			a				
<u>Ca</u>	ost Breakdown:	Truck/Load		Ι,		Equipment			e Equipment
		Truck	Loader		Load Area	Dump Area	Motor	'	Water Truck
							Grader		
	action mochine.	100		100	50	N.	Λ	50	50
Utili	zation-machine:	100		100	50	IN.	Α.	50	30

Cost Breakdown:	Truck/Loader Team		Support	Equipment	Maintenance Equipment		
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck	
					Grader		
%Utilization-machine:	100	100	50	NA	50	50	
Ownership cost/hour:	\$168.61	\$238.62	\$156.88	NA	\$55.79	\$14.71	
Operating cost/hour:	\$139.68	\$180.34	\$63.93	NA	\$30.04	\$15.29	
%Utilization-riper:	NA	0	NA	NA	NA	NA	
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00	
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00	
Operator cost/hour:	\$24.82	\$35.97	\$40.04	NA	\$46.87	\$0.00	
Unit Subtotals:	\$333.11	\$454.93	\$260.85	NA	\$132.70	\$30.00	
Number of Units:	3	1	1	0	1	1	
Group Subtotals:	Work:	\$1,454.26	Support:	\$260.85	Maint:	\$162.70	

Total work team cost/hour: \$1,877.81

Initial volume: 1,059,491

MATERIAL QUANTITIES

Swell factor: 1.125 LCY Loose volume: 1,191,927 Source of estimated volume: Operator bond estimate Source of estimated swell factor: Cat Handbook

CCY

\$0.00 Material Purchase Cost: Total Cost: \$0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,650 Pounds/LCY Description: Decomposed rock - 25% Rock, 75% Earth

Rated Payload: 200,000 Pounds

Truck/ Louder Worksheet Con	it d	Tusk # 007			1 uge 2 of	•
Payload Capacity:	75.47	LCY				
Truck Bed (volume) Basis:						
Struck Volume:	60.60	LCY				
Heaped Volume:		LCY				
Average Volume:		LCY				
Adjusted Volume:	75.47	LCY				
Final T	ruck Volume B	ased on Number of	Loader Passes:	65.60	LCY	
Loading Tool Capacity			Buck	et Size Class:	NA	
Rated Capacity:	16.000	LCY (heaped)				
Bucket Fill Factor:	1.025		lixture (100%-10	05%) 1.025		_
Adjusted Capacity:	16.400	LCY				_
Job Condition Corrections:	<u>.</u>	S	ite Altitude (ft.):	<u>5350</u> feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HE	3)		
Job Efficiency:	0.830	0.830	(CAT HE	3)		
Net Correction:	0.830	0.830				
Loading Tool Cycle Time:	N	umber of Loading	Tool Passes Regi	iired to Fill		passes
Excavators and Front Shovel		C	1	Truck:	4	1
Machine Cycle Time vs Selected Value w						
Track Loaders – 1						
Cycle Time Elements (min.):						
Load: NA	Ma	aneuver: NA		Dump: 0.10	00	
Wheel and Track	Loaders - Unac	ljusted Basic Loade	•	oad, dump, naneuver):	0.625 min	nutes
Cycle Time Factors				Factor (min.)	Source	
Material:	Mixed materi	al 0.02		0.020	(Cat HB)	
Stockpile:	Dumped by tr			0.020	(Cat HB)	_
Truck Ownership:	Common owr 0.04	nership of trucks an	d loaders -	-0.040	(Cat HB)	
Operation:	Constant oper			-0.040	(Cat HB)	
Dump Target:	Nominal targe			0.000	(Cat HB)	_
		•	ne Adjustment:	-0.040	minutes	
		Adjusted Load	-	0.585	minutes	
		Net Load T	ime per Truck:	1.855	minutes	
Truck Cycle Time:						
Truck Exchange Time	: 0.80	Minutes	Adjusted	for site altitude:	0.800	Minutes
Truck Load Time	: 1.855	Minutes	Adjusted	for site altitude:	1.855	Minutes
Truck Maneuver and Dump Time		Minutes	Adjusted	for site altitude:	1.200	Minutes

<u>Truck Travel (Haul & Return) Time:</u> maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5500.00	0.00	3.00	3.00	2409	2.719

Haul Time: 2.719 minutes

Return Route:

Seg#	Haul Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)		(%)	(%)	(fpm)	Time	
						(min)	
1	5500.00	0.00	3.00	3.00	3503	1.842	

Return Time: 1.842 minutes
Total Truck Cycle Time: 8.416 minutes

Loading Tool unit

Production 1,482.49 LCY/Hour Adjusted for job efficiency: 1,230.46 LCY/Hour Truck Unit Production

467.68 LCY/Hour Adjusted for job efficiency: 388.17 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

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

1,164.52
LCY/Hour
LCY/Hour
LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 1,023.53 Hours

Unit cost: \$1.613 /LCY Total job cost: **\$1,921,997**

SCRAPER TEAM WORK

Task description: Backfill 3rd Ridge pit with in-pit stockpiles						
Site: Dowe Flats Mine		Permit Action	: TR-04 Bond l	Estimate P	ermit/Job#: M	1993041
PROJECT IDENT	<u>IFICATION</u>					
Task #: 010 Date: Rev 9/ User: AME		State: Colorado unty: Boulder	,		viation: None mame: M041	-010
Agency or o	rganization name	DRMS				
HOURLY EQUIP			COSTS	Shift basis: 1 per	<u>day</u>	
	t Equipment -Loa	Scraper: Cat 63' -Dozer: Cat D9 d Area: NA p Area: NA	ent Description 7G w/push-pull VT - 9SU			
			Tanker, 3,500 Ga	1.		
Cost Breakdown:	Scraper Wor	rk Team Dozer	Support Equi Load Area	ipment Dump Area	Maintenand Motor Grader	ce Equipment Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA	NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
Total work team cost/	hour: \$1,358.99					
MATERIAL QUA	<u>NTITIES</u>					
Initial volume: Loose volume:	78,714 88,553	CCY LCY	Swell fact	tor: 1.125		
	ce of estimated vo f estimated swell		r bond estimate			
HOURLY PRODU	CTION					
			Scraper B	Bowl (volume) Ba	sis:	
Material weight:	2,650 lbs/LCY		_	Volume: 24.00		LCY
Material description:	Decomposed roo 75% Earth	ck - 25% Rock,	Heaped	Volume: 34.00	I	LCY
Rated Payload: Payload Capacity:	81,600 pounds 30.79 LCY		Average Adjusted (LCY LCY

Site Altitude: 5350 feet

\sim	- 1			•	
C_{3}	701	ρ		111	10.
\sim	<i>/</i> U 1	•	1	111	ı.

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

Job Condition Correction:

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

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	1000.00	0.00	3.00	3.00	2800	0.64

Haul Time: **0.64** minutes

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	3.00	3.00	2949	0.49

Return Time: **0.49** minutes

Total Scraper team cycle time:2.73minutesAdjusted for job conditions:1,058.02LCY/HourSelected Number of Scrapers:2Scraper(s)

Adjusted single scraper team (unit) hourly production: 1,058.02 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,058.02 LCY/Hour

Unadjusted unit production/hour: 1,274.73 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 83.70
 Hours

 Unit cost:
 \$1.284
 /LCY
 Total job cost:
 \$113,743

TRUCK/LOADER TEAM WORK

Т	Task description: Backfill 3rd Rid				At. George	stockpile			
Site: Dowe Flats Mine Perr		mit Action:	it Action: TR-04 Bond Estimate Permit/Job#:		ob#: _	M1993041			
<u>PI</u>	ROJECT IDI	ENTIFICA'	<u> FION</u>						
	Task #: 01	1	State:	Colorado			Abbreviation:	No	ne
	Date: Re	ev 9/1/2020	County:	Boulder			Filename:	M0	41-011
	User: A	ME							
Agency or organization name: DRMS HOURLY EQUIPMENT COST Shift basis: 1 per day									
		Tmust Look	ler Team -Truck:	Cat 7771	ment Descr	iption			
		Truck Loac	Loader:						
	Su	pport Equipn	nent -Load Area:	Cat D9T	- 9SU				
			-Dump Area:	NA					
Road Maintenance – Motor Grader:			CAT 16	M					
			-Water Truck:	Water T	anker, 3,500	Gal.			
<u>C</u> c	ost Breakdown	<u>ı:</u> Tru	ck/Loader Team		Support	Equipment	M	aintena	nce Equipment

<u>Cost Breakdown:</u>	Truck/Loa	der Team	Support Equipment Mainter		Maintena	ance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck	
					Grader		
%Utilization-machine:	100	100	50	NA	50	50	
Ownership cost/hour:	\$168.61	\$238.62	\$156.88	NA	\$55.79	\$14.71	
Operating cost/hour:	\$139.68	\$180.34	\$63.93	NA	\$30.04	\$15.29	
%Utilization-riper:	NA	0	NA	NA	NA	NA	
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00	
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00	
Operator cost/hour:	\$24.82	\$35.97	\$40.04	NA	\$46.87	\$0.00	
Unit Subtotals:	\$333.11	\$454.93	\$260.85	NA	\$132.70	\$30.00	
Number of Units:	3	1	1	0	1	1	
Group Subtotals:	Work:	\$1,454.26	Support:	\$260.85	Maint:	\$162.70	

Total work team cost/hour: \$1,877.81

MATERIAL QUANTITIES

Initial volume: 470,392 **CCY** Swell factor: 1.125 LCY Loose volume: 529,191

Source of estimated volume: Operator bond estimate Source of estimated swell factor: Cat Handbook \$0.00 Material Purchase Cost:

Total Cost: \$0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,650 Pounds/LCY Decomposed rock - 25% Rock, 75% Earth Description:

Rated Payload: 200,000 Pounds

Payload Capacity:	75.47	LCY				
Truck Bed (volume) Basis: Struck Volume: Heaped Volume: Average Volume: Adjusted Volume:	78.80 I 69.70 I	LCY LCY LCY LCY				
	uck Volume B	ased on Number of	Loader Passes:	65.60	LCY	
Loading Tool Capacity			Bucke	et Size Class: N	A	
Rated Capacity: Bucket Fill Factor: Adjusted Capacity:	16.000 1.025 16.400	LCY (heaped) Rock - Earth M LCY	fixture (100%-10	5%) 1.025		_
Job Condition Corrections:		Si	te Altitude (ft.):	5350 feet		
	Truck	Loader	Source			
Altitude Adj: Job Efficiency:	1.000 0.830	1.000 0.830	(CAT HB			
Net Correction:	0.830	0.830				
Loading Tool Cycle Time:	N	umber of Loading	Γool Passes Requ		4	passes
Excavators and Front Shovels:	-			Truck:		
Machine Cycle Time vs. Selected Value wi						
Track Loaders – M	Iaterial Descrip	otion:				
Cycle Time Elements (min.):						
Load: NA	Ma	aneuver: NA		Dump: 0.100)	
Wheel and Track	Loaders - Unac	ljusted Basic Loade	•	ad, dump, aneuver):	.625 mir	nutes
Cycle Time Factors				Factor (min.)	Source	
Material:	Mixed materia			0.020	(Cat HB)	
Stockpile:	Dumped by tr			0.020	(Cat HB)	
Truck Ownership:	Common owr 0.04	nership of trucks and	d loaders -	-0.040	(Cat HB)	
Operation:	Constant oper			-0.040	(Cat HB)	
Dump Target:	Nominal targe		A 1:	0.000	(Cat HB)	
		Net Cycle Tim Adjusted Loade		-0.040 0.585	_ minutes minutes	
		•	me per Truck:	1.855	minutes	
m 10 1 m			• -		-	
Truck Cycle Time:	0.80	Minutes	A dinate d 4	for site altitudes	0.800	Minutes
Truck Exchange Time:			9	for site altitude:		_
Truck Load Time:	1.855	Minutes	9	for site altitude:	1.855	Minutes
Truck Maneuver and Dump Time:	1.20	Minutes	Adjusted f	for site altitude:	1.200	Minutes

<u>Truck Travel (Haul & Return) Time:</u> maintained 3.0

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

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4000.00	0.00	3.00	3.00	2409	2.096

Haul Time: **2.096** minutes Return Route: Haul Distance Grade (%) Roll. Res Total Res Velocity Travel Seg# Time (Ft) (%) (%) (fpm) (min) 4000.00 3.00 3.00 3503 0.00 1.414

Return Time: 1.414 minutes
Total Truck Cycle Time: 7.365 minutes

Loading Tool unit

Production 1,482.49 LCY/Hour Adjusted for job efficiency: 1,230.46 LCY/Hour Truck Unit Production 534.42 LCY/Hour Adjusted for job efficiency: 443.57 LCY/Hour

Optimal No. of Trucks: _____ 3 ___ Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 1,330.70 LCY/Hour Adjusted single truck/loader team production: 1,230.46 LCY/Hour Adjusted multiple truck/loader team production: 1,230.46 LCY/Hour

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 430.07
 Hours

 Unit cost:
 \$1.526
 /LCY
 Total job cost:
 \$807,598

SCRAPER TEAM WORK

Task description:	3rd Ridge	pit wetland exca	vation			
Site: Dowe Flats Mine		Permit Action	: TR-04 Bond	Estimate P	Permit/Job#: M	1993041
PROJECT IDENT	<u>IFICATION</u>					
Task #: 012		State: Colorado)		viation: None	
Date: Rev 9/ User: AME	<u>1/2020</u> Co	unty: Boulder		Fil	ename: M041	-012
Agency or o	organization name:	DRMS				
HOURLY EQUIP	MENT_		COSTS	Shift basis: 1 per	<u>day</u>	
	-S	Scraper: Cat 63	ent Description 7G w/push-pull			
Suppor	t Equipment -Loa		OT - 9SU			
	-Dum	p Area: NA				
Road Mai	ntenance – Motor			1		
	-water	Truck: Water	Tanker, 3,500 Ga	11.		
Cost Breakdown:	Scraper Wor	rk Team	Support Equi	ipment		ce Equipment
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA	NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
Total work team cost/	hour: \$1,358.99					
MATERIAL QUA	NTITIES					
Initial volume: Loose volume:	470,392 529,191	CCY LCY	Swell face	tor: 1.125		
	ce of estimated vo f estimated swell		or bond estimate			
HOURLY PRODU	ICTION					
			<u>Scrape</u> r B	Bowl (volume) Ba	ısis:	
Material weight:	2,650 lbs/LCY		-	Volume: 24.00		.CY
Material description:	Decomposed roo 75% Earth	ck - 25% Rock,		Volume: 34.00		CY
Rated Payload:	81,600 pounds		Average			LCY .
Payload Capacity:	30.79 LCY		Adjusted (Capacity: 29.00	I	.CY

Site Altitude: 5350 feet

\sim	- 1			•	
C_{3}	701	ρ		111	10.
\sim	<i>/</i> U 1	•	1	111	ı.

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

Job Condition Correction:

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

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	1000.00	0.00	3.00	3.00	2800	0.64

Haul Time: **0.64** minutes

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	3.00	3.00	2949	0.49

Return Time: **0.49** minutes

Total Scraper team cycle time:2.73minutesAdjusted for job conditions:1,058.02LCY/HourSelected Number of Scrapers:2Scraper(s)

Adjusted single scraper team (unit) hourly production: 1,058.02 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,058.02 LCY/Hour

Unadjusted unit production/hour: 1,274.73 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size:	1	_ Team(s)	Total job time:	500.17	Hours
Unit cost:	\$1.284	_ /LCY	Total job cost:	\$679,726	

BULLDOZER WORK

Task description:	Backfill 4th Ridge pit with	in-pit stockpiles		
e: Dowe Flats Mine	Permit Action:	TR-04 Bond Estimate	Permit/Jol	o#: <u>M1993041</u>
PROJECT IDENTIFIC	CATION			
Task #: 013 Date: Rev 9/1/202 User: AME	State: Colorado		Abbreviation: Filename:	None M041-013
Agency or organ	ization name: DRMS			
HOURLY EQUIPMEN	NT COST			
Horsepower: 405 Blade Type: Sen Attachment: NA	ni-Universal er day			
Cost Breakdown: Ownership Cost/Hour: Operating Cost/Hour:	\$156.88 \$127.87	Utilization % NA 100		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	0		
Operator Cost/Hour:	\$40.04	NA		
Initial Volume: 185 Swell factor: 1.12 Loose volume: 208 Source of estimated volu Source of estimated swel factor:	5 LCY me: Operator bond estimates	ate		
HOURLY PRODUCT	ION			
Average push distance: Unadjusted hourly production:	300 feet 437.8 LCY/hr			
Materials consistency de	scription: Consolidated stock	xpile 1.0		
Average push gradient: Average site altitude:	-5 % 5,350 feet			
Material weight:	2,650 lbs/LCY			
Weight description:	Decomposed rock - 25% Roc	k, 75% Earth	=	
Job Condition Correction I Operator S	Factor	Source (EXCL.)		

Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9639

Adjusted unit production:

Adjusted fleet production:

422.00 LCY/hr

844 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.770/LCY

Total job time: 0.25 Hours
Total job cost: \$160

SCRAPER TEAM WORK

Task description:	Wetland t	opsoil stripping				
Site: Dowe Flats Mine		Permit Action:	TR-04 Bond	Estimate P	Permit/Job#: M1	993041
PROJECT IDENT	<u>IFICATION</u>					
Task #: 014 Date: Rev 9/ User: AME	Permit Action: TR-04 Bond Estimate Permit/Job#: M1993041					
Agency or o	rganization name:	DRMS				
HOURLY EQUIP	MENT_		COSTS	Shift basis: 1 per	day	
	_					
Suppor		-Dozer: Cat D9'				
Road Mai	ntenance –Motor	Grader: CAT 10		1		
Cost Breakdown:	Scraper Wor	rk Team	Support Equ	ipment		
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA	NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
MATERIAL QUA	<u>NTITIES</u>					
Initial volume: Loose volume:			Swell fac	tor: 1.125		
HOURLY PRODU	ICTION					
			Scraper E	Bowl (volume) Ba		
Material weight:	2,650 lbs/LCY	1 050/ B :		Volume: 24.00		.CY
Material description:	Decomposed roo 75% Earth	ck - 25% Rock,	Heaped	Volume: 34.00	L	CY
Rated Payload:	81,600 pounds		Average	Volume: 29.00	L	.CY
Payload Capacity:	30.79 LCY		Adjusted (CY

Site Altitude: 5350 feet

\sim	1			٠.		
C١	10	Α	- 1	11	നമ	•
\mathbf{c}	/ U			11	\mathbf{n}	٠

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

Job Condition Correction:

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

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	500.00	0.00	3.00	3.00	2800	0.46

Haul Time: **0.46** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	0.00	3.00	3.00	2949	0.32

Return Time: **0.32** minutes

Total Scraper team cycle time:

Adjusted for job conditions:
Selected Number of Scrapers:

2.38 minutes
1,213.61 LCY/Hour
Scraper(s)

Adjusted single scraper team (unit) hourly production:

Adjusted multiple scraper team (fleet) hourly production:

1,213.61

LCY/Hour

LCY/Hour

Unadjusted unit production/hour: 1,462.18 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 10.47
 Hours

 Unit cost:
 \$1.120
 /LCY
 Total job cost:
 \$14,226

SCRAPER TEAM WORK

Task description:	Crusher a	rea topsoil stripp	ing			
Site: Dowe Flats Mine		Permit Action:	TR-04 Bond	Estimate P	Permit/Job#: M1	993041
PROJECT IDENT	<u>IFICATION</u>					
Task #: 015 Date: Rev 9/ User: AME		State: Colorado unty: Boulder			viation: None ename: M041-	015
Agency or o	organization name:	DRMS				
HOURLY EQUIP	MENT_		COSTS	Shift basis: 1 per	<u>day</u>	
			ent Description			
		craper: Cat 637 Dozer: Cat D9	G w/push-pull			
Suppor	t Equipment -Loa		1 - 750			
	-Dumj	p Area: NA				
Road Mai	ntenance – Motor (1		
	-Water	Truck: water	Γanker, 3,500 Ga	и.		
Cost Breakdown:	Scraper Wor	k Team	Support Equi	ipment	Maintenanc	e Equipment
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA	NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
Total work team cost/	hour: \$1,358.99					
MATERIAL QUA	<u>NTITIES</u>					
Initial volume:	9,437	CCY	Swell fact	tor: <u>1.125</u>		
Loose volume:	10,617	LCY				
	ce of estimated vo		bond estimate			
Source o	f estimated swell f	Cat Hand	dbook			
HOURLY PRODU	<u>ICTION</u>					
			Scraper B	Bowl (volume) Ba	sis:	
Material weight:	2,650 lbs/LCY		Struck	Volume: 24.00	L	CY
Material description:	Decomposed roo 75% Earth	ek - 25% Rock,	Heaped	Volume: 34.00	L	CY
Rated Payload:	81,600 pounds		Average			CY
Payload Capacity:	30.79 LCY		Adjusted (Capacity: 29.00	L	CY

Site Altitude: 5350 feet

	Time:

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

Job Condition Correction:

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

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	500.00	0.00	3.00	3.00	2800	0.46

Haul Time: **0.46** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	0.00	3.00	3.00	2949	0.32

Return Time: 0.32 minutes

Total Scraper team cycle time:2.38minutesAdjusted for job conditions:1,213.61LCY/HourSelected Number of Scrapers:2Scraper(s)

Adjusted single scraper team (unit) hourly production:

Adjusted multiple scraper team (fleet) hourly production:

1,213.61

LCY/Hour

LCY/Hour

Unadjusted unit production/hour: 1,462.18 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size: _	1	Team(s)	Total job time:	8.75	Hours
Unit cost:	\$1.120	/LCY	Total job cost:	\$11,888	

Task description:	Hi-Cal/2nd Ridge pit rou	gh grade		
Site: Dowe Flats Mine	Permit Action	on: TR-04 Bond	Estimate Pe	ermit/Job#: <u>M1993041</u>
PROJECT IDENTIFIC	<u>CATION</u>			
Task #: 016 Date: Rev 9/1/20 User: AME	State: Colorad 20 County: Boulder		Abbrev File	riation: None M041-016
Agency or organ	ization name: DRMS			
HOURLY EQUIPMEN	NT COST			
Basic Machine Ripper Attachment	·		Horsepower: Shift Basis: Data Source:	297 1 per day (CRG)
Cost Breakdown:		1	Utilization %	
Owner	ship Cost/Hour:	\$55.79	NA NA	
	ting Cost/Hour:	\$60.08	100	
	ship Cost/Hour: ting Cost/Hour:	\$0.00 \$0.00	NA	
	rator Cost/Hour:	\$46.87	NA	
<u>-</u>	Unit Cost/Hour:	\$162.74		
Total I	Fleet Cost/Hour: \$3	325.48		
MATERIAL QUANTI	TIES			
Total Area t	o be graded or ripped: 107.	.30		acres
		rator bond estimat	e	
HOURLY PRODUCT	ION			_
	Average Grader Speed:	3.25	mph	
	Selected Application:		blading (0-6 mph)	- 3.25
	Selected Blade Angle:	30	degrees	_
	Effective Blade Length: f blade overlap per pass:	13.90 2.00	feet feet	
	r ripping width per pass:	11.90	feet	
	Hourly Unit Production:	4.6879	acres/hour	r
Job Condition Correction I	Factors	Si	te Altitude: <u>5350</u> f	eet
Altitude Adj:	Sour 1.00 (CAT			
Job Efficiency:	0.90 (1sh/d,	fav.)		
Net Correction: _	0.9000 multipl	ier		
	justed Hourly Unit Production justed Hourly Fleet Production		acres/Hour acres/Hour	
JOB TIME AND COS	<u>r</u>			
Fleet size: 2		Total job time:	12.72	Hours
Unit cost: \$38	.57 per acre	Total job cost:	\$4,139	
		3	. ,	

Task description:	Hi-Cal/2nd Ridge pit fin	al grade		
e: Dowe Flats Mine	Permit Acti	on: TR-04 Bond	Estimate Pe	rmit/Job#: <u>M1993041</u>
PROJECT IDENTII	FICATION			
Task #: 017	State: Colora	do	Abbrevi	ation: None
Date: Rev 9/1/ User: AME	2020 County: Boulde	er	File	name: <u>M041-017</u>
Agency or org	anization name: DRMS			
HOURLY EQUIPM	ENT COST			
Basic Machi	ne: CAT 16M		Horsepower:	297
Ripper Attachme	ent:		Shift Basis:	1 per day
			Data Source:	(CRG)
Cost Breakdown:				
_			Utilization %	
	nership Cost/Hour:	\$55.79	NA 100	
	erating Cost/Hour: ership Cost/Hour:	\$60.08 \$0.00	100 NA	
	erating Cost/Hour:	\$0.00	11/1	
	perator Cost/Hour:	\$46.87	NA	
	al Unit Cost/Hour:	\$162.74		
Tota	al Fleet Cost/Hour:	6325.48		
15. mmp. 1. 1. 0. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.				
MATERIAL QUAN	<u>ITTIES</u>			
Total Are	a to be graded or ripped:107	7.30		acres
Sour	ce of estimated acreage: Ope	erator bond estimat	e	
HOURLY PRODUC	TION			
	Average Grader Speed:	1.50	mnh	
	Selected Application:		mph rading (0-2.5 mph)	- 1.5
	Selected Pipplication: Selected Blade Angle:	30	degrees	1.0
	Effective Blade Length:	13.90	feet	
	of blade overlap per pass:	2.00	feet	
0 0	or ripping width per pass:	11.90	feet	
Unadjuste	d Hourly Unit Production:	2.1636	acres/hour	
Job Condition Correction	n Factors	Sit	te Altitude: 5350 fe	et
	Sou			
Altitude Adj:	1.00 (CAT			
Job Efficiency: Net Correction:	0.90 (1sh/d, 0.9000 multip			
	Adjusted Hourly Unit Production		acres/Hour	
F	Adjusted Hourly Fleet Production	on: 3.8945	acres/Hour	
JOB TIME AND CO	<u>OST</u>			
Fleet size:	2 Grader(s)	Total job time:	27.55	Hours
Unit cost: \$	83.57 per acre	Total job cost:	\$8.968	

Task description:	3rd Ridge pit rough grade	2		
ite: Dowe Flats Mine	Permit Action	n: TR-04 Bond	Estimate P	Permit/Job#: <u>M1993041</u>
PROJECT IDENTIFIC	<u>CATION</u>			
Task #: 018 Date: Rev 9/1/20 User: AME	State: Colorado 20 County: Boulder			viation: None M041-018
Agency or organ	ization name: DRMS			
HOURLY EQUIPMEN	NT COST			
Basic Machine Ripper Attachment	· _ · · · · · · · · · · · · · · · · · ·		Horsepower: Shift Basis: Data Source:	297 1 per day (CRG)
Cost Breakdown:			Utilization %	
	ship Cost/Hour:	\$55.79	NA NA	
	ating Cost/Hour:	\$60.08 \$0.00	100 NA	
	ship Cost/Hour:ating Cost/Hour:	\$0.00	NA	
	rator Cost/Hour:	\$46.87	NA	
Total	Unit Cost/Hour:	\$162.74		
Total I	Fleet Cost/Hour: \$3	25.48		
MATERIAL QUANTI	TIES			
	o be graded or ripped: 29.80)		acres
		rator bond estima	te.	
	-	ator bond estima		
HOURLY PRODUCT	<u>ION</u>			
	Average Grader Speed:	3.25	mph	2.25
	Selected Application: Selected Blade Angle:	Heavy 30	blading (0-6 mph) degrees	- 3.25
	Effective Blade Length:	13.90	feet	
	f blade overlap per pass:	2.00	feet	
	r ripping width per pass: Hourly Unit Production:	11.90 4.6879	feet acres/hou	ır
· ·	<u> </u>			
Job Condition Correction	<u></u>		te Altitude: 5350	reet
Altitude Adj:	Source 1.00 (CAT I	HB)		
Job Efficiency: _ Net Correction:	0.90 (1sh/d, f 0.9000 multipli			
-			oores/Herr	
	ljusted Hourly Unit Production justed Hourly Fleet Production		acres/Hour acres/Hour	
JOB TIME AND COS	<u>T</u>			
Fleet size: 2		Total job time	3.53	Hours
Unit cost: \$38	.57 per acre	Total job cost	: \$1,149	<u> </u>

Task description:	3rd Ridge pit final grade			
te: Dowe Flats Mine	Permit Action	: TR-04 Bond	Estimate Pe	ermit/Job#: <u>M1993041</u>
PROJECT IDENTIFIC	<u>CATION</u>			
Task #: 019 Date: Rev 9/1/20 User: AME	State: Colorado 20 County: Boulder)	Abbrev File	iation: None M041-019
Agency or organ	ization name: DRMS			
HOURLY EQUIPMEN	NT COST			
Basic Machine Ripper Attachment	·		Horsepower: Shift Basis: Data Source:	297 1 per day (CRG)
Cost Breakdown:			Utilization %	
Owner	rship Cost/Hour:	\$55.79	NA	
	ating Cost/Hour:	\$60.08	100	
	ship Cost/Hour:ating Cost/Hour:	\$0.00 \$0.00	NA	
	rator Cost/Hour:	\$46.87	NA	
Total	Unit Cost/Hour:	\$162.74		
Total I	Fleet Cost/Hour: \$3:	25.48		
MATERIAL QUANTI	TIES			
	o be graded or ripped: 29.80	•		acres
		ator bond estimat	70	
Source	of estimated acreage. Open	ator bond estimat	.c	
HOURLY PRODUCT	ION			
	Average Grader Speed:	1.50	mph	
	Selected Application:		grading (0-2.5 mph) - 1.5
	Selected Blade Angle: Effective Blade Length:	30 13.90	degrees feet	
Width o	f blade overlap per pass:	2.00	feet	
	r ripping width per pass:	11.90	feet	
v	Hourly Unit Production:	2.1636	acres/hour	
Job Condition Correction 1			te Altitude: <u>5350</u> f	eet
Altitude Adj:	Sourc 1.00 (CAT F	IB)		
Job Efficiency:	0.90 (1sh/d, f			
Net Correction:	0.9000 multiplie			
	ljusted Hourly Unit Production justed Hourly Fleet Production		acres/Hour acres/Hour	
JOB TIME AND COS	${f T}$			
JOB TIME AND COS Fleet size: 2		Total job time:	7.65	Hours

Task description:	4th Ridge pit rough grade	!		
te: Dowe Flats Mine	Permit Action	n: TR-04 Bond	Estimate Pe	ermit/Job#: <u>M1993041</u>
PROJECT IDENTIFIC	<u>CATION</u>			
Task #: 020	State: Colorado	0	Abbrev	iation: None
Date: Rev 9/1/202	20 County: Boulder		File	ename: M041-020
User: AME				
Agency or organ	ization name: DRMS			
HOURLY EQUIPMEN	NT COST			
Basic Machine	: CAT 16M		Horsepower:	297
Ripper Attachment	:		Shift Basis:	1 per day
• •			Data Source:	(CRG)
Cost Breakdown:				
Cost Dicardowii.			Utilization %	
Owner	ship Cost/Hour:	\$55.79	NA	
	ting Cost/Hour:	\$60.08	100	
Ripper Owner	ship Cost/Hour:	\$0.00	NA	
	ting Cost/Hour:	\$0.00		
<u> </u>	rator Cost/Hour:	\$46.87	NA	
Total	Unit Cost/Hour:	\$162.74		
Total F	Fleet Cost/Hour: \$1	62.74		
MATERIAL QUANTI	<u>TIES</u>			
Total Area to	o be graded or ripped: 7.00			acres
		. 1 1 .:		
Source	of estimated acreage: Oper	ator bond estimat	e	
HOURLY PRODUCT	ION			
	Average Grader Speed:	3.25	mph	
	Selected Application:		blading (0-6 mph)	- 3.25
	Selected Blade Angle:	30	degrees	
	Effective Blade Length:	13.90	feet	
	f blade overlap per pass:	2.00	feet	
2 2	r ripping width per pass:	11.90	feet	
Unadjusted 1	Hourly Unit Production:	4.6879	acres/hour	•
Job Condition Correction I	<u>actors</u>	Si	te Altitude: 5350 fe	eet
	Source			
Altitude Adj:	1.00 (CAT I			
Job Efficiency:	0.90 (1sh/d, f			
Net Correction: _	0.9000 multipli	er		
Ad	justed Hourly Unit Production	n: 4.2191	acres/Hour	
	usted Hourly Fleet Production		acres/Hour	
•	•			
JOB TIME AND COST	<u>r</u>			
Fleet size: 1	Grader(s)	Total job time:	1.66	Hours
Unit cost: \$38.	.57 per acre	Total job cost	\$270	
	r	, , 55 2 550	Ψ=10	

Task description:	4th Ridge pit final grade			
ite: Dowe Flats Mine	Permit Action	n: TR-04 Bond	Estimate Po	ermit/Job#: <u>M1993041</u>
PROJECT IDENTIFIC	<u>CATION</u>			
Task #: 021 Date: Rev 9/1/20 User: AME	State: Colorad 20 County: Boulder		Abbrev File	viation: None M041-021
Agency or organ	ization name: DRMS			_
HOURLY EQUIPMEN	NT COST			
Basic Machine Ripper Attachment			Horsepower: Shift Basis: Data Source:	297 1 per day (CRG)
Cost Breakdown:		1	Utilization %	
Owner	ship Cost/Hour:	\$55.79	NA	
Opera	ting Cost/Hour:	\$60.08	100	
	ship Cost/Hour:	\$0.00	NA	
	ting Cost/Hour: rator Cost/Hour:	\$0.00 \$46.87	NA	
<u> -</u>	Unit Cost/Hour:	\$162.74	1171	
Total I	Fleet Cost/Hour: \$1	62.74		
MATERIAL QUANTI	TIFS			
				0.040.0
	o be graded or ripped: 7.00			acres
Source	of estimated acreage: Open	rator bond estima	te	
HOURLY PRODUCT	<u>ION</u>			
	Average Grader Speed:	1.50	mph	
	Selected Application:		grading (0-2.5 mph) - 1.5
	Selected Blade Angle: Effective Blade Length:	30 13.90	degrees feet	
Width o	f blade overlap per pass:	2.00	feet	
	r ripping width per pass:	11.90	feet	
Unadjusted	Hourly Unit Production:	2.1636	acres/hou	r
Job Condition Correction	Factors	Si	ite Altitude: 5350 f	eet
	Source			
Altitude Adj:	1.00 (CAT I			
Job Efficiency: _ Net Correction:	0.90 (1sh/d, 1 0.9000 multipli			
-				
	justed Hourly Unit Productior justed Hourly Fleet Production		acres/Hour acres/Hour	
JOB TIME AND COS	Γ			
Fleet size: 1		Total job time	:3.59	Hours
Unit cost: \$83	.57 per acre	Total job cost	: \$585	
		-	-	

Task description:	Rip office/maintenar	nce/equipment/fuel a	reas	
e: Dowe Flats Mine	Permit	Action: TR-04 Bor	nd Estimate Pe	ermit/Job#: <u>M1993041</u>
PROJECT IDENTIF	<u>ICATION</u>			
Task #: 022	State: Co	olorado	Abbrev	viation: None
Date: Rev 9/1/20	O20 County: Bo	oulder	File	ename: M041-022
User: AME				
Agency or orga	nization name:DRMS			
HOURLY EQUIPME	ENT COST			
Basic Machin	e: CAT 16M		Horsepower:	297
Ripper Attachmen	t: Multi-Shank Ripper	•	Shift Basis:	1 per day
			Data Source:	(CRG)
Cost Breakdown:				
Cost Breaker Him			Utilization %	
Owne	ership Cost/Hour:	\$55.79	NA	
	rating Cost/Hour:	\$60.08	100	
1.1	ership Cost/Hour:	\$4.83	NA	
	rating Cost/Hour:	\$4.40	100	
-	erator Cost/Hour:	\$46.87	NA	
Total	Unit Cost/Hour:	\$171.97	=	
Total	Fleet Cost/Hour:	\$171.97		
MATERIAL QUANT Total Area	to be graded or ripped:	3.80		acres
Sourc	e of estimated acreage:	Operator bond estim	nate	
HOURLY PRODUCT	<u> TION</u>			
	Average Grader Speed:	1.50	mph	
	Selected Application:	Ri	pping (0-3 mph) - 1.	50
	Selected Blade Angle:		degrees	
*****	Effective Blade Length:		feet	
	of blade overlap per pass:		feet	
	or ripping width per pass: Hourly Unit Production:		feet acres/hour	•
Job Condition Correction	•		Site Altitude: 5350 f	
				
Altitude Adj:	1.00	Source CAT HB)		
Job Efficiency:		sh/d, fav.)		
Net Correction:	,	ultiplier		
•	djusted Hourly Unit Prod	-	paras/Haur	
	djusted Hourly Unit Prod ljusted Hourly Fleet Prod			
A	ajusticu Hourry Hicet Hill	<u> </u>	acres/110ul	
JOB TIME AND COS	<u>ST</u>			
Fleet size:	1 Grader(s)	Total job tim	ne: 1.66	Hours
Unit cost: \$7:	5.07 per acre	Total job co	st: \$285	

Task description:	Rip roads and other distu	ırbances		
Site: Dowe Flats Mine	Permit Actio	on: TR-04 Bond	Estimate Pe	ermit/Job#: <u>M1993041</u>
PROJECT IDENTIFIC	<u>CATION</u>			
Task #: 023 Date: Rev 9/1/20 User: AME	State: Colorad 20 County: Boulder		Abbrev File	iation: None M041-023
Agency or organ	ization name: DRMS			
HOURLY EQUIPMEN	NT COST			
Basic Machine Ripper Attachment	· 		Horsepower: Shift Basis: Data Source:	297 1 per day (CRG)
Cost Breakdown:		1	Utilization %	
Owner	ship Cost/Hour:	\$55.79	NA NA	
	ating Cost/Hour:	\$60.08	100	
	ship Cost/Hour:ating Cost/Hour:	\$4.83 \$4.40	NA 100	
	rator Cost/Hour:	\$46.87	NA	
-	Unit Cost/Hour:	\$171.97		
Total I	Fleet Cost/Hour: \$3	343.94		
MATERIAL QUANTI	TIES			
•	o be graded or ripped: 63.4	.0		acres
		rator bond estima	te	
HOURLY PRODUCT	ION			
<u> </u>	Average Grader Speed:	1.50	mph	
	Selected Application:		ping (0-3 mph) - 1.	50
	Selected Blade Angle:	0	degrees	
	Effective Blade Length: f blade overlap per pass:	16.00 2.00	feet feet	
	r ripping width per pass:	14.00	feet	
	Hourly Unit Production:	2.5455	acres/hour	•
Job Condition Correction I	Factors	Si	te Altitude: 5350 fo	eet
Altitude Adj: Job Efficiency:	Sour- 1.00 (CAT 1 0.90 (1sh/d,	HB) fav.)		
Net Correction:	0.9000 multipli			
	ljusted Hourly Unit Production justed Hourly Fleet Production		acres/Hour acres/Hour	
JOB TIME AND COS	<u>T</u>			
Fleet size: 2		Total job time	13.84	Hours
Unit cost: \$75	.07 per acre	Total job cost	: \$4,759	
Ψ,υ	1 ' '' '' '	J = = = 550	+ -,,	

SCRAPER TEAM WORK

Task description:	Retopsoil 1	Retopsoil Hi-Cal/2nd Ridge pit with NE/N stockpile					
Site: Dowe Flats Mine		Permit Action:	TR-04 Bond l	Estimate P	Permit/Job#: M1	993041	
PROJECT IDENT	<u>TIFICATION</u>						
Task #: 024 Date: Rev 9/ User: AME		tate: Colorado unty: Boulder			viation: None M041-	024	
Agency or o	organization name:	DRMS					
HOURLY EQUIP	MENT_		COSTS	Shift basis: 1 per	day		
			ent Description				
Suppor		Dozer: Cat D9	G w/push-pull T - 9SU				
Road Mai	-Dump ntenance –Motor (-Water		5M Γanker, 3,500 Ga	1.			
Cost Breakdown:	Scraper Wor	k Taam	Support Equi	nment	Maintanana	e Equipment	
Cost Breakdown.	Scraper Wol	Dozer	Load Area	Dump Area	Motor Grader	Water Truck	
%Utilization-machine:	100	100	NA	NA	50	50	
Ownership cost/hour:	\$181.30	\$156.88	NA	NA	\$55.79	\$14.71	
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29	
%Utilization-ripper:	NA	NA	NA	NA	50	NA	
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00	
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00	
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00	
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00	
Number of Units:	2	1	0	0	1	1	
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73	
Total work team cost/	hour: \$1,358.99						
MATERIAL QUA	<u>NTITIES</u>						
Initial volume: Loose volume:	16,200 19,683	CCY LCY	Swell fact	tor: 1.215			
	ce of estimated vo f estimated swell f		bond estimate dbook				
HOURLY PRODU	<u>ICTION</u>						
			Scraper B	owl (volume) Ba	sis:		
Material weight:	1,600 lbs/LCY		Struck	Volume: 24.00	L	CY	
Material description:	Top Soil			Volume: 34.00	L	CY	
Rated Payload:	81,600 pounds		Average	Volume: 29.00		.CY	
Payload Capacity:	51.00 LCY		Adjusted C	Capacity: 29.00	L	.CY	

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

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

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	1500.00	0.00	3.00	3.00	2800	0.75

Haul Time: **0.75** minutes

0.66

minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1500.00	0.00	3.00	3.00	2949	0.66

Total Scraper team cycle time:

Adjusted for job conditions:
Selected Number of Scrapers:

2 minutes
LCY/Hour
Scraper(s)

Return Time:

Adjusted single scraper team (unit) hourly production: 959.60 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 959.60 LCY/Hour

Unadjusted unit production/hour: 1,156.15 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 20.51
 Hours

 Unit cost:
 \$1.416
 /LCY
 Total job cost:
 \$27,875

Task description:	Retopsoil	Hi-Cal/2nd Ridge	e pit with NE/mi	iddle stockpile		
Site: Dowe Flats Mine		Permit Action	TR-04 Bond l	Estimate P	Permit/Job#: M1	1993041
PROJECT IDENT	<u>TIFICATION</u>					
Task #: 025		State: Colorado			viation: None	
Date: Rev 9/ User: AME	<u>/1/2020</u> Cou	unty: Boulder		Fil	ename: M041-	-025
Agency or o	organization name:	DRMS				
HOURLY EQUIP	MENT_		COSTS	Shift basis: <u>1 per</u>	<u>day</u>	
			ent Description			
			7G w/push-pull T - 9SU			
Suppor	rt Equipment -Load	d Area: NA	1 750			
Dood Moi	-Dumj	o Area: NA Grader: CAT 10	cM			
Road Mai	ntenance – Motor C -Water		οινι Γanker, 3,500 Ga	1.		
	G W	1.70	g . F		36.5	
Cost Breakdown:	Scraper Wor Scraper	Dozer	Support Equi Load Area	Dump Area	Maintenand Motor Grader	e Equipment Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA NA	NA NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA NA	NA NA	\$30.04	\$15.29
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA NA	\$0.00	NA	NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
Total work team cost/	hour: \$1,358.99					
MATERIAL QUA	NTITIES					
Initial volume: Loose volume:	32,300 39,245	CCY LCY	Swell fact	tor: 1.215		
	rce of estimated vo		r bond estimate			
Source 0	i estimated swell I		uook			
HOURLY PRODU	<u>JCTION</u>					
			Scraper B	owl (volume) Ba	sis:	
Material weight:	1,600 lbs/LCY		Struck	Volume: 24.00	L	.CY
Material description:	Top Soil			Volume: 34.00		.CY
Rated Payload:	81,600 pounds		Average	Volume: 29.00		.CY
Payload Capacity:	51.00 LCY		Adjusted C	Capacity: 29.00	L	.CY

Cy	cle	Time	e:

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

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

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	0.00	3.00	3.00	2800	0.93

Haul Time: **0.93** minutes

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	0.00	3.00	3.00	2949	0.83

Return Time: 0.83 minutes Total Scraper team cycle time: 3.36 minutes Adjusted for job conditions: 859.64 LCY/Hour Selected Number of Scrapers: Scraper(s) 2 Adjusted single scraper team (unit) hourly production: LCY/Hour 859.64 Adjusted multiple scraper team (fleet) hourly production: 859.64 LCY/Hour

Unadjusted unit production/hour: 1,035.71 LCY/Hour Optimal Number of Scrapers per push dozer:

Fleet size:	1	Team(s)	Total job time:	45.65	Hours
	** ***				
Unit cost:	\$1.581	/LCY	Total job cost:	\$62,041	

Task description:	Retopsoil	Hi-Cal/2nd Ridg	e pit with NW st	tockpile		
Site: Dowe Flats Mine		Permit Action	: TR-04 Bond	Estimate P	Permit/Job#: M1	993041
PROJECT IDENT	<u>IFICATION</u>					
Task #: 026	S	State: Colorado		Abbre	viation: None	
		unty: Boulder			lename: M041-	026
User: AME		<u> </u>				
Agency or o	organization name:	DRMS				
HOURLY EQUIP	MENT_		COSTS	Shift basis: 1 per	day	
			ent Description			
			7G w/push-pull			
			T - 9SU			
Suppor	t Equipment -Load	d Area: NA p Area: NA				
Road Mai	ntenance –Motor (6M			
11040 11141	-Water		Γanker, 3,500 Ga	ıl.		
Cost Breakdown:	Scraper Wor		Support Equ			e Equipment
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA	NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
Total work team cost/	hour: \$1,358.99					
MATERIAL QUA	NTITIES					
Initial volume:	3,300	CCY	Swell fac	tor: 1.215		
Loose volume:	4,010	LCY				
	ce of estimated vo f estimated swell f		r bond estimate dbook			
HOURLY PRODU	<u>ICTION</u>					
			Scraper E	Bowl (volume) Ba	ısis:	
Material weight:	1,600 lbs/LCY			Volume: 24.00		CY
Material description:	Top Soil			Volume: 24.00 Volume: 34.00		CY
Rated Payload:	81,600 pounds		Average			CY
Payload Capacity:	51.00 LCY		Adjusted (CY

Cvc	le	Time	:
\sim y \sim	ı	I IIIIC	٠

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

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

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	1500.00	0.00	3.00	3.00	2800	0.75

Haul Time: **0.75** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1500.00	0.00	3.00	3.00	2949	0.66

Return Time: 0.66 minutes

Total Scraper team cycle time: 3.01 minutes

Adjusted for job conditions: 959.60 LCY/Hour Selected Number of Scrapers: 2 Scraper(s)

team (unit) hourly production: 959.60 LCY/Hour

Adjusted single scraper team (unit) hourly production: 959.60 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 959.60 LCY/Hour

Unadjusted unit production/hour: 1,156.15 LCY/Hour Optimal Number of Scrapers per push dozer:

Fleet size: _	1	Team(s)	Total job time:	4.18	Hours
Unit cost:	\$1.416	/LCY	Total job cost:	\$5,678	

Task description:	Retopsoil	Hi-Cal/2nd Ridg	e pit with High-	Cal stockpile		
Site: Dowe Flats Mine		Permit Action	: TR-04 Bond	Estimate P	ermit/Job#: M1	993041
PROJECT IDENT	<u>TIFICATION</u>					
Task #: 027	S	State: Colorado		Abbrev	viation: None	
		anty: Boulder			ename: M041-	027
User: AME						
Agency or o	organization name:	DRMS				
HOURLY EQUIP	MENT_		COSTS	Shift basis: 1 per	<u>day</u>	
			ent Description			
			7G w/push-pull			
Suppor	rt Equipment -Load		T - 9SU			
Бирроі		o Area: NA				
Road Mai	ntenance –Motor (Grader: CAT 1				
	-Water	Truck: Water	Tanker, 3,500 Ga	1.		
Coot Ducoledonius	Cananan Wan	1- T	Commont Form		Maintanana	- Carinana
<u>Cost Breakdown</u> :	Scraper Wor Scraper	Dozer Dozer	Support Equ Load Area	Dump Area	Motor Grader	e Equipment Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA	NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
Total work team cost/	hour: \$1,358.99					
MATERIAL QUA	NTITIES					
Initial volume:	5,700	CCY	Swell fac	tor: 1.215		
Loose volume:	6,926	LCY				
	ce of estimated vo		r bond estimate			
Source o	of estimated swell f	factor: Cat Han	dbook			
HOURLY PRODU	JCTION					
			Scraper E	Bowl (volume) Ba	sis:	
Material weight:	1,600 lbs/LCY		Struck	Volume: 24.00	L	CY
Material description:	Top Soil			Volume: 34.00		CY
Rated Payload:	81,600 pounds		Average			CY
Payload Capacity:	51 00 LCY		Adjusted (Capacity: 29.00	I.	CY

Cy	cle	Time	e:

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

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

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	1000.00	0.00	3.00	3.00	2800	0.57

Haul Time: **0.57** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	3.00	3.00	2949	0.49

Return Time: 0.49 minutes

Total Scraper team cycle time:2.66minutesAdjusted for job conditions:1,085.86LCY/HourSelected Number of Scrapers:2Scraper(s)

Adjusted single scraper team (unit) hourly production: 1,085.86 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,085.86 LCY/Hour

Unadjusted unit production/hour: 1,308.27 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size: _____1 Team(s) Total job time: _____ 6.38 Hours

Unit cost: \$1.252 /LCY Total job cost: **\$8,667**

Task description:	Retopsoil 3	Brd Ridge pit wi	th NE/middle sto	ockpile		
Site: Dowe Flats Mine		Permit Action	: TR-04 Bond	Estimate P	ermit/Job#: M1	993041
PROJECT IDENT	<u>TIFICATION</u>					
Task #: 028	S	tate: Colorado)	Abbrey	viation: None	
	71/2020 Cou	inty: Boulder			ename: M041-	028
	organization name:	DRMS				
		DRIVIS				
HOURLY EQUIP	MENT_		COSTS	Shift basis: 1 per	<u>day</u>	
-	S.		ent Description 7G w/push-pull			
	-	Dozer: Cat D9	T - 9SU			
Suppor	rt Equipment -Load Dumr-	l Area: NA NA NA				
Road Mai	ntenance –Motor (Grader: CAT 1				
	-Water	Truck: Water	Tanker, 3,500 Ga	ıl.		
Cost Breakdown:	Scraper Wor		Support Equ			e Equipment
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA	NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
Total work team cost/	hour: \$1,358.99					
MATERIAL QUA	<u>NTITIES</u>					
Initial volume:	450	CCY	Swell fac	tor: 1.215		
Loose volume:	547	LCY				
	ce of estimated vo of estimated swell f		or bond estimate adbook			
HOURLY PRODU	ICTION					
HOURLITRODE	<u> </u>		Scraper F	Bowl (volume) Ba	sis:	
Material weight:	1,600 lbs/LCY		Struck	Volume: 24.00	L	CY
Material description:	Top Soil			Volume: 34.00		CY
Rated Payload:	81,600 pounds		Average	Volume: 29.00	L	CY
Payload Capacity:	51 00 LCY		Adjusted (Canacity: 29.00	I.	CY

minutes

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

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

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	0.00	3.00	3.00	2800	0.93

Haul Time: **0.93** minutes

0.83

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res	Velocity (fpm)	Travel Time (min)
1	2000.00	0.00	3.00	3.00	2949	0.83

Total Scraper team cycle time:

Adjusted for job conditions:
Selected Number of Scrapers:

2 minutes
LCY/Hour
Scraper(s)

Return Time:

Adjusted single scraper team (unit) hourly production: 859.64 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 859.64 LCY/Hour

Unadjusted unit production/hour: 1,035.71 LCY/Hour Optimal Number of Scrapers per push dozer:

Fleet size:	1	Team(s)	Total job time:	0.64	Hours
Unit aget	¢1 5 01	/I CV	Total ich acet	\$9.64	
Unit cost:	\$1.581	/LC Y	Total job cost:	\$864	

Task description:	Retopsoil 3	Brd Ridge pit wit	th NE/S stockpil	e		
Site: Dowe Flats Mine		Permit Action	: TR-04 Bond	Estimate P	ermit/Job#: M1	993041
PROJECT IDENT	<u>IFICATION</u>					
Task #: 029 Date: Rev 9/ User: AME		tate: Colorado inty: Boulder			viation: None M041-	029
Agency or o	rganization name:	DRMS				
HOURLY EQUIP			COSTS	Shift basis: 1 per	day	
		Equipme	ent Description			
			7G w/push-pull			
Suppor	t Equipment -Load		T - 9SU			
Зиррог		Area: NA				
Road Mai	ntenance –Motor (Grader: CAT 1				
-	-Water	Truck: Water	Tanker, 3,500 Ga	ıl.		
Cost Breakdown:	Scraper Wor	k Team	Support Equ	inment	Maintenanc	e Equipment
Cost Bicardown.	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA NA	NA NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29
%Utilization-ripper:	NA NA	NA NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
Total work team cost/	_	<u> </u>				
Initial volume: Loose volume:	8,263 10,040	CCY LCY	Swell fac	tor: 1.215		
	ce of estimated vo f estimated swell f		r bond estimate dbook			
HOURLY PRODU	<u>ICTION</u>		~ -			
				Bowl (volume) Ba		
Material weight:	1,600 lbs/LCY			Volume: 24.00		CY
Material description: Rated Payload:	Top Soil 81,600 pounds		Heaped Average	Volume: 34.00 Volume: 29.00		CY CY
Payload Capacity:	51.00 LCY		Adjusted (CY

Job Condition Correction:

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

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	1500.00	0.00	3.00	3.00	2800	0.75

Haul Time: **0.75** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1500.00	0.00	3.00	3.00	2949	0.66

Return Time: 0.66 minutes

Total Scraper team cycle time:
Adjusted for job conditions:
Selected Number of Scrapers:

2 minutes
LCY/Hour
Scraper(s)

Adjusted single scraper team (unit) hourly production: 959.60 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 959.60 LCY/Hour

Unadjusted unit production/hour: 1,156.15 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size: _____1 Team(s) Total job time: _____10.46 Hours

Unit cost: \$1.416 /LCY Total job cost: \$14,218

Task description:	3rd Ridge	wetland area exc	cavation			
Site: Dowe Flats Mine		Permit Action	: TR-04 Bond	Estimate P	Permit/Job#: M1	993041
PROJECT IDENT	<u>IFICATION</u>					
Task #: 030		State: Colorado		Abbre	viation: None	
-	1/2020 Co	unty: Boulder		Fil	ename: M041-	030
User: AME						
Agency or o	organization name:	DRMS				
HOURLY EQUIP	MENT_		COSTS	Shift basis: 1 per	<u>day</u>	
			ent Description			
			7G w/push-pull T - 9SU			
Suppor	t Equipment -Loa		1 - 930			
	-Dum	p Area: NA				
Road Mai	ntenance –Motor					
	-Water	Truck: Water	Γanker, 3,500 Ga	ıl.		
Cost Breakdown:	Scraper Wo	·k Team	Support Equ	inment	Maintenanc	e Equipment
Cost Dicardown.	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA	NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
Total work team cost/	hour: \$1,358.99	<u></u>				
MATERIAL QUA	NTITIES					
Initial volume:	7,313	CCY	Swell fac	tor: 1.215		
Loose volume:	8,885	LCY				
Sour	ce of estimated vo	olume: Operator	r bond estimate			
Source o	f estimated swell	factor: Cat Han	dbook			
HOURLY PRODU	<u>ICTION</u>					
			Scraper E	Bowl (volume) Ba	sis:	
Material weight:	1,600 lbs/LCY		Struck	Volume: 24.00	L	CY
Material description:	Top Soil		Heaped	Volume: 34.00		CY
Rated Payload:	81,600 pounds		Average			CY
Payload Capacity:	51.00 LCY		Adjusted (Capacity: 29.00	L	CY

C۱	cle	Time:	

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

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

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	1000.00	0.00	3.00	3.00	2800	0.57

Haul Time: **0.57** minutes

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	3.00	3.00	2949	0.49

Return Time: 0.49 minutes

Total Scraper team cycle time: 2.66 minutes

Adjusted for job conditions: 1,085.86 LCY/Hour
Selected Number of Scrapers: 2 Scraper(s)

Adjusted single scraper team (unit) hourly production: 1,085.86 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,085.86 LCY/Hour

Unadjusted unit production/hour: 1,308.27 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 8.18
 Hours

 Unit cost:
 \$1.252
 /LCY
 Total job cost:
 \$11,120

Task description:	Retopsoil 4	4th Ridge pit wet	land area excav	ation		
Site: Dowe Flats Mine Peri		Permit Action	TR-04 Bond	Estimate P	Permit/Job#: M1	1993041
PROJECT IDENT	<u>TFICATION</u>					
Task #: 031		State: Colorado			viation: None	
Date: Rev 9/ User: AME	<u>1/2020</u> Cou	unty: Boulder		Fil	ename: M041	-031
Agency or o	organization name:	DRMS				
HOURLY EQUIP	MENT_		COSTS	Shift basis: 1 per	day	
		Equipme	ent Description			
			G w/push-pull			
Suppor	t Equipment -Load		T - 9SU			
	-Dumj	p Area: NA				
Road Mai	ntenance – Motor (.1		
	-Water	Truck: water	<u>Γanker, 3,500 Ga</u>	11.		
Cost Breakdown:	Scraper Wor	k Team	Support Equ	ipment		e Equipment
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA	NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
Total work team cost/	hour: \$1,358.99					
MATERIAL QUA	NTITIES					
Initial volume: Loose volume:	3,764 4,573	CCY LCY	Swell fac	tor: 1.215		
	ce of estimated vo f estimated swell f		r bond estimate dbook			
HOURLY PRODU	JCTION					
			Scraper E	Bowl (volume) Ba	sis:	
Material weight:	1,600 lbs/LCY		_	Volume: 24.00		.CY
Material description:	Top Soil			Volume: 24.00 Volume: 34.00		.CY
Rated Payload:	81,600 pounds		Average			CY
Payload Capacity:	51.00 LCY		Adjusted (I	.CY

Cy	cle	Time	e:

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

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

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	500.00	0.00	3.00	3.00	2800	0.39

Haul Time: **0.39** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	0.00	3.00	3.00	2949	0.32

Return Time: **0.32** minutes

Total Scraper team cycle time:
Adjusted for job conditions:
Selected Number of Scrapers:

2.31 minutes
1,250.39 LCY/Hour
Scraper(s)

Adjusted single scraper team (unit) hourly production: 1,250.39 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,250.39 LCY/Hour

Unadjusted unit production/hour: 1,506.49 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 3.66
 Hours

 Unit cost:
 \$1.087
 /LCY
 Total job cost:
 \$4,970

Task description:	Retopsoil	Retopsoil wetland area excavation							
Site: Dowe Flats Mine	<u>e</u>	Permit Action	: TR-04 Bond	Estimate P	Permit/Job#: M1	993041			
PROJECT IDENT	<u> </u>								
Task #: 032 Date: Rev 9 User: AME		State: Colorado unty: Boulder			viation: None M041-	032			
Agency or	organization name:	DRMS							
HOURLY EQUIP	<u>PMENT</u>		COSTS	Shift basis: 1 per	day				
			ent Description						
			7G w/push-pull						
Suppo	ort Equipment -Loa		T - 9SU						
Suppo		p Area: NA							
Road Ma	intenance –Motor								
	-Water	Truck: Water	Tanker, 3,500 Ga	վ.					
Cost Breakdown:	Scraper Wor	rk Toom	Support Equ	inmont	Maintanana	e Equipment			
Cost Dieakuowii,	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck			
%Utilization-machine:	100	100	NA	NA	50	50			
Ownership cost/hour:	\$181.30	\$156.88	NA NA	NA NA	\$55.79	\$14.71			
Operating cost/hour:	\$203.87	\$127.87	NA	NA NA	\$30.04	\$15.29			
%Utilization-ripper:	NA	NA NA	NA	NA	50	NA			
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00			
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00			
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00			
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00			
Number of Units:	2	1	0	0	1	1			
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73			
Total work team cost	/hour: \$1,358.99								
MATERIAL QUA	ANTITIES								
Initial volume: Loose volume:		CCY LCY	Swell fac	tor: 1.215					
	rce of estimated vo of estimated swell		r bond estimate dbook						
HOURLY PRODU	<u>UCTION</u>								
			Scraper E	Bowl (volume) Ba	sis:				
Material weight:	1,600 lbs/LCY		Struck	Volume: 24.00	L	CY			
Material description:	Top Soil		Heaped	Volume: 34.00	L	CY			
Rated Payload:			Average			CY			
Payload Capacity:	51.00 LCY		Adjusted (Adjusted Capacity: 29.00 LC					

Cyc	le	Tiı	ne:

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

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

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	500.00	0.00	3.00	3.00	2800	0.39

Haul Time: **0.39** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	0.00	3.00	3.00	2949	0.32

Return Time: 0.32 minutes

Total Scraper team cycle time:

Adjusted for job conditions:

Selected Number of Scrapers:

2.31 minutes

1,250.39 LCY/Hour

2 Scraper(s)

1,250.39 LCY/Hour

Adjusted single scraper team (unit) hourly production: 1,250.39 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,250.39 LCY/Hour

Unadjusted unit production/hour: 1,506.49 LCY/Hour Optimal Number of Scrapers per push dozer:

Fleet size:	1	Team(s)	Total job time:	5.49	Hours
Unit cost:	\$1.087	/LCY	Total job cost:	\$7,457	

Task description: Retopsoil crusher area with reclaimed area stripping						
Site: Dowe Flats Mine	Permit Action	: TR-04 Bond	Estimate P	ermit/Job#: M1	993041	
PROJECT IDENT	<u>TIFICATION</u>					
Task #: 033	S	tate: Colorado		Abbre	viation: None	
	1/2020 Co	inty: Boulder		Fil	ename: M041-	033
User: AME						
Agency or o	rganization name:	DRMS				
HOURLY EQUIP	MENT_		COSTS	Shift basis: 1 per	day	
			ent Description			
		•	7G w/push-pull T - 9SU			
Suppor	t Equipment -Loa		1 - 980			
Биррог		o Area: NA				
Road Mai	ntenance –Motor					
	-Water	Truck: Water	Tanker, 3,500 Ga	ıl.		
Cost Breakdown:	Scraper Wor	k Taam	Support Equ	inment	Maintenanc	e Equipment
Cost Breakdown.	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA	NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
Total work team cost/						
MATERIAL QUA	<u>NTITIES</u>					
Initial volume: Loose volume:	9,437 11,466	CCY LCY	Swell fac	tor: 1.215		
	ce of estimated vo f estimated swell f		r bond estimate dbook			
HOURLY PRODU	<u>ICTION</u>					
			Scraper E	Bowl (volume) Ba	sis:	
Material weight:	1,600 lbs/LCY		Struck	Volume: 24.00	L	CY
Material description:	Top Soil		Heaped	Volume: 34.00	L	CY
Rated Payload:	81,600 pounds		Average			CY
Payload Capacity:	51.00 LCY		Adjusted (Capacity: 29.00	L	CY

Cy	cle	Time	e:

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

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

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	500.00	0.00	3.00	3.00	2800	0.39

Haul Time: **0.39** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	0.00	3.00	3.00	2949	0.32

Return Time: **0.32** minutes

Total Scraper team cycle time:

Adjusted for job conditions:

Selected Number of Scrapers:

2.31 minutes

1,250.39 LCY/Hour

Scraper(s)

LCY/Hour

Adjusted single scraper team (unit) hourly production: 1,250.39 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,250.39 LCY/Hour

Unadjusted unit production/hour: 1,506.49 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 9.17
 Hours

 Unit cost:
 \$1.087
 /LCY
 Total job cost:
 \$12,462

Task description: Retopsoil crusher area with SE stockpile						
Site: Dowe Flats Mine Permit Action			TR-04 Bond	Estimate F	Permit/Job#: M1	993041
PROJECT IDENT	IFICATION					
Task #: 034	S	State: Colorado		Abbre	viation: None	
Date: Rev 9/	1/2020 Co	unty: Boulder			lename: M041-	034
User: AME						
Agency or o	rganization name:	DRMS				
HOURLY EQUIP	MENT_		COSTS	Shift basis: 1 per	day	
			ent Description			
			7G w/push-pull T - 9SU			
Suppor	t Equipment -Loa		1 - 930			
z wpp or		p Area: NA				
Road Mai	ntenance –Motor					
	-Water	Truck: Water	Γanker, 3,500 Ga	ıl.		
Cost Breakdown:	Scraper Woi	rk Team	Support Equ	inment	Maintenanc	e Equipment
Cost Di Cakuowii.	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA	NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
-	l.	, ,	111	, , , , , ,		
Total work team cost/	hour: \$1,358.99					
MATERIAL QUA	NTITIES					
Initial volume:	16,054	CCY	Swell fac	tor: 1.215		
Loose volume:	19,506	LCY				
	ce of estimated vo		r bond estimate			
Source of	f estimated swell	factor: Cat Hand	dbook			
HOURLY PRODU	ICTION					
			Scraper F	Bowl (volume) Ba	ısis:	
Material weight:	1,600 lbs/LCY		· -	Volume: 24.00		CY
Material description:	Top Soil			Volume: 24.00 Volume: 34.00		CY
Rated Payload:	81,600 pounds		Average			CY
Payload Capacity:	51.00 LCY		Adjusted (CY

Cyc	le	Tiı	ne:

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

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

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	2500.00	0.00	3.00	3.00	2800	1.10

Haul Time: 1.10 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2500.00	0.00	3.00	3.00	2949	0.99

Return Time: 0.99 minutes

Total Scraper team cycle time: 3.69 minutes

Adjusted for job conditions: 782.76 LCY/Hour Selected Number of Scrapers: 2 Scraper(s)

team (unit) hourly production: 782.76 LCY/Hour

Total job cost: \$33,865

Adjusted single scraper team (unit) hourly production: 782.76 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 782.76 LCY/Hour

Unadjusted unit production/hour: 943.09 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Unit cost: \$1.736 /LCY

Fleet size: _____1 Team(s) Total job time: _____24.92 Hours

Task description: Retopsoil office/maint/equip/fuel areas with SE stockpile						
Site: Dowe Flats Mine	Permit Action:	TR-04 Bond I	Estimate P	Permit/Job#: <u>M1</u>	993041	
PROJECT IDENT	TIFICATION					
Task #:035		State: Colorado			viation: None	
Date: Rev 9 User: AME	/1/2020 Co	unty: Boulder		Fil	ename: <u>M041-</u>	035
Agency or o	organization name:	DRMS				
HOURLY EQUIP	PMENT_		COSTS	hift basis: 1 per	day	
			nt Description			
		Scraper: Cat 637 -Dozer: Cat D97	G w/push-pull			
Suppo	rt Equipment -Loa		1 - 750			
		p Area: NA				
Road Ma	intenance –Motor (5Μ Γanker, 3,500 Ga	1		
-	vv ater	Truck. Water I	anker, 3,300 Ga	1.		
Cost Breakdown:	Scraper Wor		Support Equi	•		e Equipment
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA	NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
Total work team cost.	/hour: \$1,358.99					
MATERIAL QUA	<u>ANTITIES</u>					
Initial volume: Loose volume:		CCY LCY	Swell fact	or: 1.215		
	rce of estimated vo of estimated swell t		bond estimate			
HOURLY PRODU	<u>UCTION</u>					
			Scraper B	owl (volume) Ba	sis:	
Material weight:	1,600 lbs/LCY		Struck	Volume: 24.00	L	CY
Material description:	Top Soil		Heaped	Volume: 34.00	L	CY
Rated Payload:			Average			CY
Payload Capacity:	51.00 LCY		Adjusted C	Adjusted Capacity: 29.00 I		

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

Job Condition Correction:

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

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	5000.00	0.00	3.00	3.00	2800	2.00

Haul Time: 2.00 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5000.00	0.00	3.00	3.00	2949	1.84

Return Time: 1.84 minutes

Total Scraper team cycle time: 5.44 minutes
Adjusted for job conditions: 530.96 LCY/Hour
Selected Number of Scrapers: 2 Scraper(s)

Adjusted single scraper team (unit) hourly production: 530.96 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 530.96 LCY/Hour

Unadjusted unit production/hour: 639.71 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size: _____1 Team(s) Total job time: _____4.68 Hours

Unit cost: \$2.560 /LCY Total job cost: \$6,356

Task description:	Retopsoil r	oads and other o	listurbances with	NE/S stockpile		
Site: Dowe Flats Mine		Permit Action:	TR-04 Bond Es	timate Peri	mit/Job#: <u>M1993</u>	3041
PROJECT IDEN	TIFICATION					
Task #: 036 Date: Rev 9/ User: AME		tate: Colorado inty: Boulder)		viation: None ename: M041-0)36
Agency or o	organization name:	DRMS				
HOURLY EQUIP	PMENT		COSTS	hift basis: <u>1 per d</u>	<u>ay</u>	
			ent Description			
			7G w/push-pull 9T - 9SU			
Suppo	ort Equipment -Load		71 - 930			
D. a.d Ma	-Dump		CM			
Road Ma	intenance –Motor (-Water		Tanker, 3,500 Gal			
			, ,			
Cost Breakdown:	Scraper Wor Scraper	k Team Dozer	Support Equi Load Area	pment Dump Area	Maintenance Motor Grader	Equipment Water Truck
	-			-		
%Utilization-machine:	100	100	NA NA	NA NA	50	5(
Ownership cost/hour:	\$181.30	\$156.88	NA NA	NA NA	\$55.79	\$14.71
Operating cost/hour: %Utilization-ripper:	\$203.87 NA	\$127.87 NA	NA NA	NA NA	\$30.04 50	\$15.29 NA
Ripper own. cost/hour:	NA NA	\$0.00	NA NA	NA NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA NA	\$0.00	NA NA	NA NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA NA	NA NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA NA	NA NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	ψ30.00
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
Total work team cost			Support	φοιοσ	1/24/200	Ψ10).,,ε
MATERIAL QUA	ANTITIES					
Initial volume:	16,433	CCY	Swell fac	tor: 1.215		
Loose volume:	19,966	LCY				
	rce of estimated vol of estimated swell fa		or bond estimate adbook			
HOURLY PROD	<u>UCTION</u>					
			Scraper B	owl (volume) Bas	is:	
Material weight:	1,600 lbs/LCY		Struck	Volume: 24.00	LO	CY
Material description:	Top Soil		Heaped	Volume: 34.00	LO	CY
Rated Payload:	81,600 pounds		Average			CY
Payload Capacity:	51.00 LCY		Adjusted (Capacity: 29.00	L(CY

Cyc	le '	Time	
-----	------	------	--

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

Job Condition Correction:

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

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	2500.00	0.00	3.00	3.00	2800	1.10

Haul Time: 1.10 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2500.00	0.00	3.00	3.00	2949	0.99

Return Time: **0.99** minutes Total Scraper team cycle time: 3.69 minutes Adjusted for job conditions: 782.76 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: LCY/Hour 782.76 Adjusted multiple scraper team (fleet) hourly production: 782.76 LCY/Hour

Unadjusted unit production/hour: 943.09 LCY/Hour Optimal Number of Scrapers per push dozer:

Fleet size:	1	Team(s)	Total job time:	25.51	Hours
Unit cost:	\$1.736	/LCY	Total job cost:	\$34,664	

Task description:	Retopsoil	roads and other o	disturbances wit	h SE stockpile		
Site: Dowe Flats Mine		Permit Action	: TR-04 Bond	Estimate P	Permit/Job#: M1	1993041
PROJECT IDENT	<u>TIFICATION</u>					
Task #: 037		State: Colorado			viation: None	
Date: Rev 9/ User: AME	<u>1/2020</u> Cou	unty: Boulder		Fil	ename: M041-	-037
Agency or o	organization name:	DRMS				
HOURLY EQUIP	MENT_		COSTS	Shift basis: 1 per	<u>day</u>	
			ent Description			
			7G w/push-pull T - 9SU			
Suppor	t Equipment -Load	d Area: NA	1 750			
Pood Moi	-Dumj ntenance –Motor (o Area: NA Grader: CAT 10	6M			
Koau Mai	-Water		οινι Γanker, 3,500 Ga	1.		
	C W	1 70	G /F		3.6.1.4	T
Cost Breakdown:	Scraper Wor Scraper	Dozer	Support Equi Load Area	Dump Area	Maintenand Motor Grader	e Equipment Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$181.30	\$156.88	NA NA	NA NA	\$55.79	\$14.71
Operating cost/hour:	\$203.87	\$127.87	NA	NA	\$30.04	\$15.29
%Utilization-ripper:	NA NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73
Total work team cost/	hour: \$1,358.99					
MATERIAL QUA	<u>NTITIES</u>					
Initial volume: Loose volume:	17,466 21,221	CCY LCY	Swell face	tor: 1.215		
	ce of estimated vo		r bond estimate dbook			
HOURLY PRODU	<u>ICTION</u>					
			Scraper B	Sowl (volume) Ba	sis:	
Material weight:	1,600 lbs/LCY		Struck	Volume: 24.00	I	.CY
Material description:	Top Soil			Volume: 34.00		.CY
Rated Payload:	81,600 pounds		Average	Volume: 29.00	L	.CY
Payload Capacity:	51.00 LCY		Adjusted (Capacity: 29.00	L	.CY

C۱	cle	Time:	

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

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

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	2500.00	0.00	3.00	3.00	2800	1.10

Haul Time: 1.10 minutes

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2500.00	0.00	3.00	3.00	2949	0.99

Return Time: 0.99 minutes Total Scraper team cycle time: 3.69 minutes Adjusted for job conditions: 782.76 LCY/Hour Selected Number of Scrapers: Scraper(s) 2 Adjusted single scraper team (unit) hourly production: 782.76 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 782.76 LCY/Hour

Unadjusted unit production/hour: 943.09 LCY/Hour Optimal Number of Scrapers per push dozer:

Fleet size:	1	Team(s)	Total job time:	27.11	Hours
Unit cost:	\$1.736	/LCY	Total job cost:	\$36.843	

Task description:	Retopsoil	Retopsoil roads and other disturbances with wetland excav						
Site: Dowe Flats Mine		Permit Action:	TR-04 Bond l	Estimate P	Permit/Job#: M1	993041		
PROJECT IDENT	<u>IFICATION</u>							
Task #: 038		State: Colorado			viation: None			
Date: Rev 9/ User: AME	1/2020 Cou	unty: Boulder		Fil	ename: M041-	038		
Agency or o	rganization name:	DRMS						
HOURLY EQUIP	MENT_		COSTS	Shift basis: 1 per	<u>day</u>			
			ent Description					
			7G w/push-pull T - 9SU					
Suppor	t Equipment -Load	d Area: NA	1 750					
Dood Mai	-Dump ntenance –Motor (o Area: NA Grader: CAT 10	cM					
Road Mai	ntenance – Motor C -Water		οινι Γanker, 3,500 Ga	1.				
G (P 11	C W	1.00	g . F		36.1			
Cost Breakdown:	Scraper Wor Scraper	Dozer Dozer	Support Equi Load Area	Dump Area	Maintenand Motor Grader	e Equipment Water Truck		
%Utilization-machine:	100	100	NA	NA	50	50		
Ownership cost/hour:	\$181.30	\$156.88	NA NA	NA NA	\$55.79	\$14.71		
Operating cost/hour:	\$203.87	\$127.87	NA NA	NA NA	\$30.04	\$15.29		
%Utilization-ripper:	NA NA	NA NA	NA	NA	50	NA		
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$4.83	\$0.00		
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$2.20	\$0.00		
Operator cost/hour:	\$47.07	\$40.04	NA	NA	\$46.87	\$0.00		
Unit Subtotals:	\$432.24	\$324.78	NA	NA	\$139.73	\$30.00		
Number of Units:	2	1	0	0	1	1		
Group Subtotals:	Work:	\$1,189.26	Support:	\$0.00	Maint:	\$169.73		
Total work team cost/	hour: \$1,358.99							
MATERIAL QUA	NTITIES							
Initial volume: Loose volume:	216 262	CCY LCY	Swell fact	tor: 1.215				
	ce of estimated vo f estimated swell f		r bond estimate dbook					
HOURLY PRODU	<u>ICTION</u>							
			Scraper B	owl (volume) Ba	sis:			
Material weight:	1,600 lbs/LCY		Struck	Volume: 24.00	L	CY		
Material description:	Top Soil		Heaped	Volume: 34.00	L	CY		
Rated Payload:	81,600 pounds		Average			CY		
Payload Capacity:	51.00 LCY		Adjusted C	Capacity: 29.00	L	CY		

Cy	cle	Time	e:

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

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

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	2500.00	0.00	3.00	3.00	2800	1.10

Haul Time: 1.10 minutes

782.76

LCY/Hour

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2500.00	0.00	3.00	3.00	2949	0.99

Return Time: 0.99 minutes

Total Scraper team cycle time: 3.69 minutes

Adjusted for job conditions: 782.76 LCY/Hour Selected Number of Scrapers: 2 Scraper(s)

Adjusted single scraper team (unit) hourly production: 782.76 LCY/Hour

Unadjusted unit production/hour: 943.09 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	0.34	Hour
Unit cost:	\$1.736	/LCY	Total job cost:	\$456	

Adjusted multiple scraper team (fleet) hourly production:

REVEGETATION WORK

Task description: Revegetate Hi-Cal/2nd Ridge pit (107.3 ac)						
Site: Dowe Flats Mine	Permit Action:	TR-04 Bond Estimate	Permit/Job#:	M1993041		
PROJECT IDENTIFICA	<u>ATION</u>					

Task #:039State:ColoradoAbbreviation:NoneDate:Rev 9/1/2020County:BoulderFilename:M041-039

User: AME

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Triple superphosphate, 0-46-0	67.00	pound	\$0.43	\$28.48
			Total Fertilizer Materials	400.40
			Cost/Acre	\$28.48

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$37.03
	Total Fertilizer Application Cost/Acre	\$37.03

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Acre	\$107.16

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless Wheatgrass - Whitmar	2.20	7.17	\$25.80
Arizona Fescue - Redondo	0.60	6.89	\$5.55
Indian Ricegrass - Paloma	1.90	6.15	\$21.14
Bluebunch Wheatgrass - Secar	1.90	6.11	\$20.66
Blue Grama - Native	0.20	3.26	\$2.75
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Buffalograss - Native/Plains	2.90	2.80	\$34.99
Prairie Clover, Purple - Kaneb	0.11	0.75	\$6.22
Aster, Smooth	0.06	1.04	\$8.79
Little Bluestem - Pastura	1.00	5.97	\$13.48
Alfalfa - Ladak (inoculated)	0.16	0.77	\$0.41

Sideoats Grama - Vaughn	0.90	2.95	\$7.54
Coneflower, Prairie	0.03	0.82	\$0.99
Streambank Wheatgrass - Sodar	0.60	1.96	\$3.42
Thickspike Wheatgrass - Critana	0.40	1.41	\$2.75
Coreopsis, Plains	0.03	0.95	\$4.30
Western Wheatgrass - Arriba	1.50	3.79	\$9.75
Needle and Thread	1.40	3.70	\$58.59
Needlegrass, Green - Lodorm	0.90	3.74	\$10.60
Prairie Junegrass	0.03	1.59	\$0.78
Flax, Lewis Blue	0.11	0.73	\$1.82
Globemallow, Scarlet (or copper)	0.06	0.68	\$8.13
Penstemon, Palmer	0.05	1.11	\$2.73
Yarrow, Western	0.01	0.61	\$0.42
Goldeneye - Showy	0.03	0.34	\$1.80
Totals Seed Mix	17.28	69.54	\$255.43

Application

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$602.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
	Total Mulch Application Cost/Acre	\$70.17

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
	\$0.00				

No. of Acres:	107.3	Cost /Acre:	\$1,332.27	
Estimated Failure Rate:	10%	Cost /Acre*:	\$487.43	
*Selected Replanting Work Items:	SEEDING			
Initial Job Cost: \$142.952.57				

Reseeding Job Cost:	\$5,230.12
Total Job Cost:	\$148,183
Job Hours:	107.30

REVEGETATION WORK

Task description:	Reveget	ate 3rd I	Riage pit mir	nus wetland (25 ac)			
Site: Dowe Flats Mi	ne	Per	rmit Action:	TR-04 Bond Estimate	Permit/Job	o#: M1993041	
PROJECT IDEN	<u>NTIFICATION</u>						
Task #: 040		State:	Colorado		Abbreviation:	None	
Date: Rev	9/1/2020	County:	Boulder		Filename:	M041-040	

User: AME

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Triple superphosphate, 0-46-0	67.00	pound	\$0.43	\$28.48
			Total Fertilizer	
			Materials	
			Cost/Acre	\$28.48

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$37.03
	Total Fertilizer Application Cost/Acre	\$37.03

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Acre	\$107.16

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless Wheatgrass - Whitmar	2.20	7.17	\$25.80
Arizona Fescue - Redondo	0.60	6.89	\$5.55
Indian Ricegrass - Paloma	1.90	6.15	\$21.14
Bluebunch Wheatgrass - Secar	1.90	6.11	\$20.66
Blue Grama - Native	0.20	3.26	\$2.75
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Buffalograss - Native/Plains	2.90	2.80	\$34.99
Prairie Clover, Purple - Kaneb	0.11	0.75	\$6.22
Aster, Smooth	0.06	1.04	\$8.79
Little Bluestem - Pastura	1.00	5.97	\$13.48
Alfalfa - Ladak (inoculated)	0.16	0.77	\$0.41

Sideoats Grama - Vaughn	0.90	2.95	\$7.54
Coneflower, Prairie	0.03	0.82	\$0.99
Streambank Wheatgrass - Sodar	0.60	1.96	\$3.42
Thickspike Wheatgrass - Critana	0.40	1.41	\$2.75
Coreopsis, Plains	0.03	0.95	\$4.30
Western Wheatgrass - Arriba	1.50	3.79	\$9.75
Needle and Thread	1.40	3.70	\$58.59
Needlegrass, Green - Lodorm	0.90	3.74	\$10.60
Prairie Junegrass	0.03	1.59	\$0.78
Flax, Lewis Blue	0.11	0.73	\$1.82
Globemallow, Scarlet (or copper)	0.06	0.68	\$8.13
Penstemon, Palmer	0.05	1.11	\$2.73
Yarrow, Western	0.01	0.61	\$0.42
Goldeneye - Showy	0.03	0.34	\$1.80
Totals Seed Mix	17.28	69.54	\$255.43

Application

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$602.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
	Total Mulch Application Cost/Acre	\$70.17

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

No. of Acres:	25	Cost /Acre:	\$1,332.27	
Estimated Failure Rate:	10%	Cost /Acre*:	\$487.43	
*Selected Replanting Work Items:	SEEDING			
Initial Job Cost: \$33.306.75				

Reseeding Job Cost:	\$1,218.58
Total Job Cost:	\$34,525
Job Hours:	25.00

Task # 040

REVEGETATION WORK

Dowe Fla	ts Mine	Per	rmit Action:	TR-04 Bond Estimate	Permit/Job	#: <u>M1993041</u>
OJECT	IDENTIFIC	ATION				
Task #:	041	State:	Colorado		Abbreviation:	None
Date:	Rev 9/1/2020	County:	Boulder		Filename:	M041-041
2000.					_	

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Triple superphosphate, 0-46-0	67.00	pound	\$0.43	\$28.48
			Total Fertilizer Materials Cost/Agree	\$28.48
			Cost/Acre	\$28.48

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$37.03
	Total Fertilizer Application Cost/Acre	\$37.03

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Acre	\$107.16

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless Wheatgrass - Whitmar	2.20	7.17	\$25.80
Arizona Fescue - Redondo	0.60	6.89	\$5.55
Indian Ricegrass - Paloma	1.90	6.15	\$21.14
Bluebunch Wheatgrass - Secar	1.90	6.11	\$20.66
Blue Grama - Native	0.20	3.26	\$2.75
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Buffalograss - Native/Plains	2.90	2.80	\$34.99
Prairie Clover, Purple - Kaneb	0.11	0.75	\$6.22
Aster, Smooth	0.06	1.04	\$8.79
Little Bluestem - Pastura	1.00	5.97	\$13.48
Alfalfa - Ladak (inoculated)	0.16	0.77	\$0.41

Sideoats Grama - Vaughn	0.90	2.95	\$7.54
Coneflower, Prairie	0.03	0.82	\$0.99
Streambank Wheatgrass - Sodar	0.60	1.96	\$3.42
Thickspike Wheatgrass - Critana	0.40	1.41	\$2.75
Coreopsis, Plains	0.03	0.95	\$4.30
Western Wheatgrass - Arriba	1.50	3.79	\$9.75
Needle and Thread	1.40	3.70	\$58.59
Needlegrass, Green - Lodorm	0.90	3.74	\$10.60
Prairie Junegrass	0.03	1.59	\$0.78
Flax, Lewis Blue	0.11	0.73	\$1.82
Globemallow, Scarlet (or copper)	0.06	0.68	\$8.13
Penstemon, Palmer	0.05	1.11	\$2.73
Yarrow, Western	0.01	0.61	\$0.42
Goldeneye - Showy	0.03	0.34	\$1.80
Totals Seed Mix	17.28	69.54	\$255.43

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$602.00

Application

Description Crimping, with tractor {DMG survey data}		Cost /Acre \$70.17
ermping, with tractor (Divid survey data)	Total Mulch Application Cost/Acre	\$70.17

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals	Nursery Stoc	ek Cost / Acre	\$0.00

No. of Acres:	2.3	Cost /Acre:	\$1,332.27	
Estimated Failure Rate:	10%	Cost /Acre*:	\$487.43	
*Selected Replanting Work Items:	SEEDING			
Initial Job Cost: \$3.064.22				

Reseeding Job Cost:	\$112.11
Total Job Cost:	\$3,176
Job Hours:	2.30

Dowe Flats	s Mine	Pei	mit Action: TF	R-04 Bond Es	timate	Permit/Job	#: <u>M1993041</u>
ROJECT II	<u>DENTIFICATI</u>	<u>ON</u>					
Task #:	042	State:	Colorado		At	breviation:	None
	Rev 9/1/2020	County:	Boulder			Filename:	M041-042
	AME	,				-	
Agen	cy or organization	name: DR	RMS				
RTILIZI	<u>NG</u>						
iterials							
D	_		Units /	TT *4	Co	st / Unit	Cost /Acre
Description	<u>n</u>		Acre	Unit	Co	St / Umt	Cost /Acre
					\$		\$
					То	tal Fertilizer	
					10	Materials	
						Cost/Acre	
	n		То	tal Fertilizer	Application	on Cost/Acre	Cost /Acre \$
plication Description	n		То	tal Fertilizer	Application	on Cost/Acre	\$
Description			То	tal Fertilizer	Application	on Cost/Acre	\$
Description LLING Description			То	tal Fertilizer	Application	on Cost/Acre	\$ \$0.00
Description LLING Description	n		То			on Cost/Acre	\$ \$0.00 Cost /Acre \$175.31
Description LLING Description	n		То				\$ \$0.00 Cost /Acre \$175.31
Description LLING Description Subsoiling,	n		То		Rate – PLS LBS /		\$ \$0.00 Cost /Acre \$175.31
Description LLING Description Subsoiling,	n light {(DMG}		То		Rate – PLS LBS / Acre	ng Cost/Acre Seeds per SQ.	\$0.00 Cost /Acre \$175.31 \$175.31
LLING Description Subsoiling, EDING Seed Mix	n light {(DMG}		То		Rate – PLS LBS /	Seeds per SQ. FT	\$ \$0.00 Cost /Acre \$175.31 \$175.31
LLING Description Subsoiling, EDING Seed Mix Alkali Bulr	n light {(DMG}		То		Rate – PLS LBS / Acre 2.00	Seeds per SQ. FT	\$0.00 Cost /Acre \$175.31 \$175.31 Cost /Acre

Broadcast seeding [DMG]

\$267.22

Total Seed Application Cost/Acre	\$267.22

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
Total Mulch Materials Cost/Acre				\$0.00

Application

Description		Cost /Acre
		\$
	Total Mulch Application Cost/Acre	\$0.00

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals 1	Nursery Stoc	ck Cost / Acre	\$0.00

JOB TIME AND COST

 No. of Acres:
 20
 Cost /Acre:
 \$934.67

 Estimated Failure Rate:
 10%
 Cost /Acre*:
 \$759.36

*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$18,693.40

Reseeding Job Cost: \$1,518.72

Total Job Cost: \$20,212

20.00

Task description:		Revegetate crusher area (47.4 ac)				
Site:	Dowe Flats Mine	Permit Action:	TR-04 Bond Estimate	Permit/Job#:	M1993041	
DI		ATTON				

PROJECT IDENTIFICATION

Task #:043State:ColoradoAbbreviation:NoneDate:Rev 9/1/2020County:BoulderFilename:M041-043

User: AME

Agency or organization name: <u>DRMS</u>

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Triple superphosphate, 0-46-0	67.00	pound	\$0.43	\$28.48
			Total Fertilizer Materials	400.40
			Cost/Acre	\$28.48

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$37.03
	Total Fertilizer Application Cost/Acre	\$37.03

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Acre	\$107.16

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless Wheatgrass - Whitmar	2.20	7.17	\$25.80
Arizona Fescue - Redondo	0.60	6.89	\$5.55
Indian Ricegrass - Paloma	1.90	6.15	\$21.14
Bluebunch Wheatgrass - Secar	1.90	6.11	\$20.66
Blue Grama - Native	0.20	3.26	\$2.75
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Buffalograss - Native/Plains	2.90	2.80	\$34.99
Prairie Clover, Purple - Kaneb	0.11	0.75	\$6.22
Aster, Smooth	0.06	1.04	\$8.79
Little Bluestem - Pastura	1.00	5.97	\$13.48
Alfalfa - Ladak (inoculated)	0.16	0.77	\$0.41

Sideoats Grama - Vaughn	0.90	2.95	\$7.54
Coneflower, Prairie	0.03	0.82	\$0.99
Streambank Wheatgrass - Sodar	0.60	1.96	\$3.42
Thickspike Wheatgrass - Critana	0.40	1.41	\$2.75
Coreopsis, Plains	0.03	0.95	\$4.30
Western Wheatgrass - Arriba	1.50	3.79	\$9.75
Needle and Thread	1.40	3.70	\$58.59
Needlegrass, Green - Lodorm	0.90	3.74	\$10.60
Prairie Junegrass	0.03	1.59	\$0.78
Flax, Lewis Blue	0.11	0.73	\$1.82
Globemallow, Scarlet (or copper)	0.06	0.68	\$8.13
Penstemon, Palmer	0.05	1.11	\$2.73
Yarrow, Western	0.01	0.61	\$0.42
Goldeneye - Showy	0.03	0.34	\$1.80
Totals Seed Mix	17.28	69.54	\$255.43

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$602.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
	Total Mulch Application Cost/Acre	\$70.17

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals	Nursery Stoc	ek Cost / Acre	\$0.00

No. of Acres:	47.4	Cost /Acre:	\$1,332.27	
Estimated Failure Rate:	10%	Cost /Acre*:	\$487.43	
*Selected Replanting Work Items:	SEEDING			
Initial Job Cost: \$63,149.60				

Reseeding Job Cost:	\$2,310.42
Total Job Cost:	\$65,460
Job Hours:	47.40

Revegetate Mt. George stockpile area (22.9 ac)					
Site: Dowe Flats Mine	Pe	rmit Action:	TR-04 Bond Estimate	Permit/Job#	t: M1993041
PROJECT IDENTIFIC	<u>LATION</u>				
Task #: 044	State:	Colorado		Abbreviation:	None
Date: Rev 9/1/202	20 County	Boulder		Filename:	M041-044

User: AME

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Triple superphosphate, 0-46-0	67.00	pound	\$0.43	\$28.48
			Total Fertilizer Materials	400.40
			Cost/Acre	\$28.48

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$37.03
	Total Fertilizer Application Cost/Acre	\$37.03

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Acre	\$107.16

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless Wheatgrass - Whitmar	2.20	7.17	\$25.80
Arizona Fescue - Redondo	0.60	6.89	\$5.55
Indian Ricegrass - Paloma	1.90	6.15	\$21.14
Bluebunch Wheatgrass - Secar	1.90	6.11	\$20.66
Blue Grama - Native	0.20	3.26	\$2.75
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Buffalograss - Native/Plains	2.90	2.80	\$34.99
Prairie Clover, Purple - Kaneb	0.11	0.75	\$6.22
Aster, Smooth	0.06	1.04	\$8.79
Little Bluestem - Pastura	1.00	5.97	\$13.48
Alfalfa - Ladak (inoculated)	0.16	0.77	\$0.41

Sideoats Grama - Vaughn	0.90	2.95	\$7.54
Coneflower, Prairie	0.03	0.82	\$0.99
Streambank Wheatgrass - Sodar	0.60	1.96	\$3.42
Thickspike Wheatgrass - Critana	0.40	1.41	\$2.75
Coreopsis, Plains	0.03	0.95	\$4.30
Western Wheatgrass - Arriba	1.50	3.79	\$9.75
Needle and Thread	1.40	3.70	\$58.59
Needlegrass, Green - Lodorm	0.90	3.74	\$10.60
Prairie Junegrass	0.03	1.59	\$0.78
Flax, Lewis Blue	0.11	0.73	\$1.82
Globemallow, Scarlet (or copper)	0.06	0.68	\$8.13
Penstemon, Palmer	0.05	1.11	\$2.73
Yarrow, Western	0.01	0.61	\$0.42
Goldeneye - Showy	0.03	0.34	\$1.80
Totals Seed Mix	17.28	69.54	\$255.43

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$602.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
	Total Mulch Application Cost/Acre	\$70.17

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals	Nursery Stoc	k Cost / Acre	\$0.00

JOB TIME AND COST

No. of Acres:	22.9	Cost /Acre:	\$1,332.27
Estimated Failure Rate:	10%	Cost /Acre*:	\$487.43
*Selected Replanting Work Items:	SEEDING		
*			

Initial Job Cost: **\$30,508.98**

Reseeding Job Cost:	\$1,116.21
Total Job Cost:	\$31,625
Job Hours:	22.90

Revegetate topsoil stockpile areas (27.7 ac)

	-		•	•			
Site:	Dowe Flats Mine]	Permit Action	n: TR-04 Bond Estimate	Permit/Job#:	M1993041	
		<u>.</u>		-			

PROJECT IDENTIFICATION

Task #:045State:ColoradoAbbreviation:NoneDate:Rev 9/1/2020County:BoulderFilename:M041-045

User: AME

Agency or organization name: <u>DRMS</u>

FERTILIZING

Task description:

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Triple superphosphate, 0-46-0	67.00	pound	\$0.43	\$28.48
			Total Fertilizer Materials	400.40
			Cost/Acre	\$28.48

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$37.03
	Total Fertilizer Application Cost/Acre	\$37.03

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Acre	\$107.16

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless Wheatgrass - Whitmar	2.20	7.17	\$25.80
Arizona Fescue - Redondo	0.60	6.89	\$5.55
Indian Ricegrass - Paloma	1.90	6.15	\$21.14
Bluebunch Wheatgrass - Secar	1.90	6.11	\$20.66
Blue Grama - Native	0.20	3.26	\$2.75
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Buffalograss - Native/Plains	2.90	2.80	\$34.99
Prairie Clover, Purple - Kaneb	0.11	0.75	\$6.22
Aster, Smooth	0.06	1.04	\$8.79
Little Bluestem - Pastura	1.00	5.97	\$13.48
Alfalfa - Ladak (inoculated)	0.16	0.77	\$0.41

Sideoats Grama - Vaughn	0.90	2.95	\$7.54
Coneflower, Prairie	0.03	0.82	\$0.99
Streambank Wheatgrass - Sodar	0.60	1.96	\$3.42
Thickspike Wheatgrass - Critana	0.40	1.41	\$2.75
Coreopsis, Plains	0.03	0.95	\$4.30
Western Wheatgrass - Arriba	1.50	3.79	\$9.75
Needle and Thread	1.40	3.70	\$58.59
Needlegrass, Green - Lodorm	0.90	3.74	\$10.60
Prairie Junegrass	0.03	1.59	\$0.78
Flax, Lewis Blue	0.11	0.73	\$1.82
Globemallow, Scarlet (or copper)	0.06	0.68	\$8.13
Penstemon, Palmer	0.05	1.11	\$2.73
Yarrow, Western	0.01	0.61	\$0.42
Goldeneye - Showy	0.03	0.34	\$1.80
Totals Seed Mix	17.28	69.54	\$255.43

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$602.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
	Total Mulch Application Cost/Acre	\$70.17

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals	Nursery Stoc	ek Cost / Acre	\$0.00

JOB TIME AND COST

No. of Acres:	27.7	Cost /Acre:	\$1,332.27
Estimated Failure Rate:	10%	Cost /Acre*:	\$487.43
*Selected Replanting Work Items:	SEEDING		
1 2 11 1 0 4 42 002 00			

Initial Job Cost: **\$36,903.88**

Reseeding Job Cost:	\$1,350.18
Total Job Cost:	\$38,254
Job Hours:	27.70

Task descript	10n: <u>R</u>	evegetate offic	e/maint/equi	p/fuel areas (3.8 ac)			
Site: Dowe Flat	s Mine	Pe	rmit Action:	TR-04 Bond Estimate	Permit/Job	#: <u>M1993041</u>	
PROJECT I	DENTIFICAT	ΓΙΟΝ					
Task #:	046	State:	Colorado		Abbreviation:	None	_
Date: _	Rev 9/1/2020	County:	Boulder		Filename:	M041-046	_

User: AME

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Triple superphosphate, 0-46-0	67.00	pound	\$0.43	\$28.48
			Total Fertilizer	
			Materials Cost/Acre	\$28.48

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$37.03
	Total Fertilizer Application Cost/Acre	\$37.03

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Acre	\$107.16

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless Wheatgrass - Whitmar	2.20	7.17	\$25.80
Arizona Fescue - Redondo	0.60	6.89	\$5.55
Indian Ricegrass - Paloma	1.90	6.15	\$21.14
Bluebunch Wheatgrass - Secar	1.90	6.11	\$20.66
Blue Grama - Native	0.20	3.26	\$2.75
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Buffalograss - Native/Plains	2.90	2.80	\$34.99
Prairie Clover, Purple - Kaneb	0.11	0.75	\$6.22
Aster, Smooth	0.06	1.04	\$8.79
Little Bluestem - Pastura	1.00	5.97	\$13.48
Alfalfa - Ladak (inoculated)	0.16	0.77	\$0.41

Sideoats Grama - Vaughn	0.90	2.95	\$7.54
Coneflower, Prairie	0.03	0.82	\$0.99
Streambank Wheatgrass - Sodar	0.60	1.96	\$3.42
Thickspike Wheatgrass - Critana	0.40	1.41	\$2.75
Coreopsis, Plains	0.03	0.95	\$4.30
Western Wheatgrass - Arriba	1.50	3.79	\$9.75
Needle and Thread	1.40	3.70	\$58.59
Needlegrass, Green - Lodorm	0.90	3.74	\$10.60
Prairie Junegrass	0.03	1.59	\$0.78
Flax, Lewis Blue	0.11	0.73	\$1.82
Globemallow, Scarlet (or copper)	0.06	0.68	\$8.13
Penstemon, Palmer	0.05	1.11	\$2.73
Yarrow, Western	0.01	0.61	\$0.42
Goldeneye - Showy	0.03	0.34	\$1.80
Totals Seed Mix	17.28	69.54	\$255.43

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$602.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
	Total Mulch Application Cost/Acre	\$70.17

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals	Nursery Stoc	ek Cost / Acre	\$0.00

No. of Acres:	3.8	Cost /Acre:	\$1,332.27	
Estimated Failure Rate:	10%	Cost /Acre*:	\$487.43	
*Selected Replanting Work Items:	SEEDING			
Initial Job Cost: \$5,062.63				

Reseeding Job Cost:	\$185.22
Total Job Cost:	\$5,248
Job Hours:	3.80

None

Filename: M041-047

Abbreviation:

REVEGETATION WORK

Colorado

Boulder

State:

County:

Task description:	Revegetate conveyor corrido	r (4.6 ac)			
Site: Dowe Flats Mine	Permit Action:	TR-04 Bond Estimate	Permit/Job#:	M1993041	
PROJECT IDENTIFICA	<u>ATION</u>				

Date: Rev 9/1/2020
User: AME

Agency or organization name: DRMS

FERTILIZING

Task #: 047

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Triple superphosphate, 0-46-0	67.00	pound	\$0.43	\$28.48
			Total Fertilizer Materials	
			Cost/Acre	\$28.48

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$37.03
	Total Fertilizer Application Cost/Acre	\$37.03

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Acre	\$107.16

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless Wheatgrass - Whitmar	2.20	7.17	\$25.80
Arizona Fescue - Redondo	0.60	6.89	\$5.55
Indian Ricegrass - Paloma	1.90	6.15	\$21.14
Bluebunch Wheatgrass - Secar	1.90	6.11	\$20.66
Blue Grama - Native	0.20	3.26	\$2.75
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Buffalograss - Native/Plains	2.90	2.80	\$34.99
Prairie Clover, Purple - Kaneb	0.11	0.75	\$6.22
Aster, Smooth	0.06	1.04	\$8.79
Little Bluestem - Pastura	1.00	5.97	\$13.48
Alfalfa - Ladak (inoculated)	0.16	0.77	\$0.41

Sideoats Grama - Vaughn	0.90	2.95	\$7.54
Coneflower, Prairie	0.03	0.82	\$0.99
Streambank Wheatgrass - Sodar	0.60	1.96	\$3.42
Thickspike Wheatgrass - Critana	0.40	1.41	\$2.75
Coreopsis, Plains	0.03	0.95	\$4.30
Western Wheatgrass - Arriba	1.50	3.79	\$9.75
Needle and Thread	1.40	3.70	\$58.59
Needlegrass, Green - Lodorm	0.90	3.74	\$10.60
Prairie Junegrass	0.03	1.59	\$0.78
Flax, Lewis Blue	0.11	0.73	\$1.82
Globemallow, Scarlet (or copper)	0.06	0.68	\$8.13
Penstemon, Palmer	0.05	1.11	\$2.73
Yarrow, Western	0.01	0.61	\$0.42
Goldeneye - Showy	0.03	0.34	\$1.80
Totals Seed Mix	17.28	69.54	\$255.43

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$602.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
	Total Mulch Application Cost/Acre	\$70.17

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals	Nursery Stoc	ek Cost / Acre	\$0.00

No. of Acres:	4.6	Cost /Acre:	\$1,332.27	
Estimated Failure Rate:	10%	Cost /Acre*:	\$487.43	
*Selected Replanting Work Items:	SEEDING			
Initial Job Cost: \$6,128.44				

Reseeding Job Cost:	\$224.22
Total Job Cost:	\$6,353
Job Hours:	4.60

Task description:	Revegetate	roads and other	disturbances (63.4 ac)		
Site: Dowe Flats Min	ie	Permit Action:	TR-04 Bond Estimate	Permit/Job	#: M1993041
PROJECT IDEN	<u>TIFICATION</u>				
Task #: 048	S	tate: Colorado		Abbreviation:	None
Date: Rev	9/1/2020 Cou	nty: Boulder		Filename:	M041-048

User: AME

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Triple superphosphate, 0-46-0	67.00	pound	\$0.43	\$28.48
			Total Fertilizer	
			Materials	
			Cost/Acre	\$28.48

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$37.03
	Total Fertilizer Application Cost/Acre	\$37.03

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Acre	\$107.16

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless Wheatgrass - Whitmar	2.20	7.17	\$25.80
Arizona Fescue - Redondo	0.60	6.89	\$5.55
Indian Ricegrass - Paloma	1.90	6.15	\$21.14
Bluebunch Wheatgrass - Secar	1.90	6.11	\$20.66
Blue Grama - Native	0.20	3.26	\$2.75
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Buffalograss - Native/Plains	2.90	2.80	\$34.99
Prairie Clover, Purple - Kaneb	0.11	0.75	\$6.22
Aster, Smooth	0.06	1.04	\$8.79
Little Bluestem - Pastura	1.00	5.97	\$13.48
Alfalfa - Ladak (inoculated)	0.16	0.77	\$0.41

Sideoats Grama - Vaughn	0.90	2.95	\$7.54
Coneflower, Prairie	0.03	0.82	\$0.99
Streambank Wheatgrass - Sodar	0.60	1.96	\$3.42
Thickspike Wheatgrass - Critana	0.40	1.41	\$2.75
Coreopsis, Plains	0.03	0.95	\$4.30
Western Wheatgrass - Arriba	1.50	3.79	\$9.75
Needle and Thread	1.40	3.70	\$58.59
Needlegrass, Green - Lodorm	0.90	3.74	\$10.60
Prairie Junegrass	0.03	1.59	\$0.78
Flax, Lewis Blue	0.11	0.73	\$1.82
Globemallow, Scarlet (or copper)	0.06	0.68	\$8.13
Penstemon, Palmer	0.05	1.11	\$2.73
Yarrow, Western	0.01	0.61	\$0.42
Goldeneye - Showy	0.03	0.34	\$1.80
Totals Seed Mix	17.28	69.54	\$255.43

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$602.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
	Total Mulch Application Cost/Acre	\$70.17

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals	Nursery Stoc	k Cost / Acre	\$0.00

No. of Acres:	63.4	Cost /Acre:	\$1,332.27	
Estimated Failure Rate:	10%	Cost /Acre*:	\$487.43	
*Selected Replanting Work Items:	SEEDING			
Initial Job Cost: \$84.465.92				

Reseeding Job Cost:	\$3,090.31
Total Job Cost:	\$87,556
Job Hours:	63.40

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Site:	Dowe Fl45.00 Mine	Permit Action:	TR-04 Bond Estimate	Permit/Job#:	M1993041

PROJECT IDENTIFICATION

Task description:

Task #:049State:ColoradoAbbreviation:NoneDate:Rev 9/1/2020County:BoulderFilename:M041-049

User: AME

Agency or organization name: DRMS

EQUIPMENT TRANSPORT RIG COST

Shift basis: 1 per day
Cost Data Source: CRG Data

Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,

400 HP (2ND HALF, 2006)

Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT

TRAILER (25T, 50T, AND 100T)

Cost Breakdown:

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$17.20	\$29.63	\$38.69
Operating Cost/Hour:	\$26.56	\$47.02	\$55.69
Operator Cost/Hour:	\$23.63	\$23.63	\$23.63
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$67.39	\$123.81	\$141.54

Mobilization/Demobilization

NON ROADABLE EQUIPMENT:

Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
_	(TONS)		t		fleet		
Cat 637G w/push-	59.59	\$181.30	\$141.54	6	\$1,937.04	\$849.24	\$2,500.00
pull							
CAT 992K	107.88	\$238.62	\$141.54	4	\$1,520.64	\$566.16	\$1,000.00
Cat D9T - 9SU	60.01	\$156.88	\$141.54	6	\$1,790.52	\$849.24	\$1,500.00
CAT 16M	28.73	\$60.62	\$123.81	6	\$1,106.58	\$742.86	\$2,000.00
Drill/Broadcast	25.00	\$6.72	\$67.39	4	\$296.44	\$269.56	\$1,000.00
Seeder with							
Tractor							

Subtotals: \$6,651.22 \$3,277.06 \$8,000.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Cat 777F	\$333.11	6	\$1,998.66	\$1,998.66
Water Tanker, 3,500 Gal.	\$45.29	3	\$135.87	\$135.87
Light Duty Pickup, 4x4, 3/4 T.	\$13.23	2	\$26.46	\$26.46

Subtotals: **\$2,160.99 \$2,160.99**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:

Total one-way travel distance:

Average Travel Speed:

LONGMONT

miles

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:

\$392,880.89

\$960.44

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.22	0.22
Return Time (Hours):	0.22	0.22
Loading Time (Hours):	14.00	NA
Unloading Time (Hours):	14.00	NA
Subtotals:	28.44	0.44

JOB TIME AND COST

Total job cost: \$393,841 Hours