COST SUMMARY WORK

Task description: Estimate for application

Site: **Keenesburg No. 2 Mine** Permit Action: 2020 Application Permit/Job#: M2019058

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None

Date: 5/22/2020 County: Weld Filename: M058-000

User: 10:24:09 AM BFB

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Tools		Form	Fleet	Task	
Task	Description Used		Size	Hours	Cost
100	Reduce Highwall (2500'x25') sidewalls (300'x12')	DOZER	1	13.66	\$3,651
101	Regrade Wastepile- estimated 1 yr production	DOZER	2	416.65	\$222,746
201	Structure demo	DEMOLISH	1	160.00	\$1,512,481
202	Slab and Footer Demo	DEMOLISH	1	160.00	\$392,726
203	Sales Road Demo	DEMOLISH	1	80.00	\$261,604
400	Rip facilities area	RIPPER	1	67.28	\$19,710
401	Rip Haul Roads	RIPPER] 1	40.37	\$11,826
402	Rip Topsoil Piles TS-0 & TS-1	RIPPER	1	46.14	\$13,516
500	Topsoil Facilities Area	TRUCK1	2	69.67	\$87,500
501	Topsoil Waste Pile	TRUCK1	2	184.55	\$288,190
502	Topsoil Haul Roads	TRUCK1	2	24.19	\$30,378
503	Topsoil Active Pit Area 184 acres	TRUCK1	2	207.05	\$323,335
600	Reveg- 66 ac Facilities	REVEGE	1	66.00	\$106,335
601	Reveg- Waste Pile 164 ac	REVEGE	1	164.00	\$242,496
602	Reveg- Haul Roads 21 ac	REVEGE	1	21.00	\$33,834
603	Reveg- Active Pit Area 184 ac	REVEGE	1	184.00	\$272,068
604	Reveg- Topsoil piles TS-0 & TS-1, 24 ac	REVEGE	1	24.00	\$38,667
700	Mobilize Equipment	MOBILIZE	1	3.20	\$12,850
701	Vehicles for onsite support	MISCTRUK	2	300.00	\$29,475
702	Fuel truck 1.5 hour daily, 6 mos	MISCTRUK	1	200.00	\$13,174
703	Heavy equipment support vehicle 4 hrs/week, 6	MISCTRUK	1	100.00	\$7,161
	mos				
		2531.76	\$3,923,723		

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:2.02Total =\$79,259Performance bond:1.05Total =\$41,199Job superintendent:988.62Total =\$68,600

Profit: 10.00 Total = \$392,372

TOTAL O & P =\$581,431

CONTRACT AMOUNT (direct + O & P) = \$4,505,154

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$0	Total =	\$0
Engineering work and/or contract/bid preparation:	4.25	Total =	\$191,469
Reclamation management and/or administration:	5.00	_	\$225,258
CONTINGENCY:	0.00	Total =	\$0
	TOTAL IN	NDIRECT COST =	\$998,158
TOTAL BO	ND AMOUNT (d	lirect + indirect) =	\$4,921,881

BULLDOZER WORK

Task description:			`) sidewalls (300'x12')		1.4. 1/2010050
Keenesburg No	. 2 Mine	Per	mit Action:	2020 Application	Permit/Jo	b#: <u>M2019058</u>
PROJECT IDEN	TIFICATION	<u>ON</u>				
Task #: 100		State:	Colorado		Abbreviation:	None
Date: 5/22/	72020 5:01 AM	County:	Weld		Filename:	M058-100
User: BFB		-				
Agency or	organization	name: DR	MS			
HOURLY EQUI	PMENT CO)ST				
Basic Machine:	Cat D9T -					
Horsepower:	405	750				
Blade Type:	Semi-Univ	versal		_		
Attachment:	NA			_		
Shift Basis:	1 per day			_		
Data Source:	(CRG)			-		
Cost Breakdown:			ĺ	TTest of A		
0 11 0 17	-		ф1 2 1 40	<u>Utilization %</u>		
Ownership Cost/F			\$121.49	NA 100		
Operating Cost/F			\$105.84	100		
Ripper Cost/H			\$0.00	NA		
Ripper op. Cost/H			\$0.00	0		
Operator Cost/F			\$39.98	NA		
m 1 1 G 77	Φ2.5	2.1				
Total unit Cost/Ho	ur: \$267	.31				
Total Fleet Cost/H	our: \$267	31				
1014111001 005011	φ207			<u></u>		
MATERIAL QU	A NITITIES					
Initial Volume: Swell factor:	16,103 1.124					
Loose volume:	1.124 18,093 LCY	<i>y</i>				
Loose volume:	10,093 LC	L				
Source of estimate	d volume:	Division of	of Reclamati	on, Mining & Safety		
Source of estimate	d swell	Cat Hand		· · · · · · · · · · · · · · · · · · ·		
factor:						
HOURLY PROD	UCTION					
Average push dista	ance:	50 feet				
Unadjusted hourly		2,110.5 LC	Y/hr			
production:		2,110.3 LC	.,111			
r. outon.						
Materials consister	ncy description	on: Compa	cted fill or e	mbankment 0.9		
Average push	-15 %	6				
gradient:						
Average site altitu	de: 4,800) feet				
Material weight:	2,400) lbs/LCY				
Weight description	r Sand	- Dry, loose				

Job Condition Correction Factor		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.100	(50% SL)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.6277	

Adjusted unit production:

Adjusted fleet production:

1,324.76 LCY/hr

1324.76 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.202/LCY

Total job time: 13.66 Hours
Total job cost: \$3,651

BULLDOZER WORK

Task description:	Reg	rade Wastepile- estimat	ed 1 yr production		
ite: Keenesburg No.	2 Mine	Permit Action:	2020 Application	Permit/Jo	b#: M2019058
PROJECT IDENT	<u>TIFICATI</u>	<u>ON</u>			
Task #: 101 Date: 5/22/2 User: BFB	020	State: Colorado County: Weld		Abbreviation: Filename:	None M058-101
Agency or o	organization	name: DRMS			
HOURLY EQUIP	MENT CO	<u>OST</u>			
Basic Machine: Horsepower: Blade Type: Attachment: Shift Basis:	Cat D9T - 405 Semi-Uni NA				
Data Source:	1 per day (CRG)		<u> </u>		
Cost Breakdown:	(===0)				
Ownership Cost/Ho		\$121.49	NA		
Operating Cost/Ho		\$105.84	100		
Ripper of Cost/Ho		\$0.00	NA		
Ripper op. Cost/Ho		\$0.00	0		
Operator Cost/Ho	our:	\$39.98	NA		
Total unit Cost/Hou Total Fleet Cost/Ho MATERIAL QUA Initial Volume:	ur: \$534	l.61			
Swell factor:	1.000 799,134 LO	CY			
Source of estimated Source of estimated factor:		Division of Reclamate Cat Handbook	ion, Mining & Safety		
HOURLY PRODU	<u>JCTION</u>				
Average push distar Unadjusted hourly production:	nce:	100 feet 1,243.2 LCY/hr			
Materials consistence	cy description	on: Loose stockpile 1.2	,		
Average push gradient:	-10 9	%			
Average site altitude	e: 4,80	0 feet			
Material weight:	2,40	0 lbs/LCY			
Weight description:	Sanc	l - Dry, loose			
Job Condition Correct	tion Factor		Source		

Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.100	(50% SL)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.7714

Adjusted unit production:

Adjusted fleet 959.00 LCY/hr

1018 LCY/hr

production: 1918 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.279/LCY

Total job time: 416.65 Hours
Total job cost: \$222,746

DEMOLITION WORK

T	Task description:	Structure d	emo				
Site: Keenesburg No. 2 Mine		Permit Action:		2020 Application	Permit/Job#: <u>M2019058</u>		
PROJEC	CT IDENTIFICATION	<u>1</u>					
Task #	: 201	State:	Colorado		Abbreviation:	None	
Date	: 5/22/2020	County:	Weld		Filename:	M058-201	
	10:24:28 AM						
User	: BFB						

UNIT COSTS

Location adjustment: 89.40 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Dry Sand Storage Building	125x450x20	Bldg. (MN) demo./off- site disposal in approved landfill - Max. 5 mile haul	1,125,000.00	CF	\$0.32	\$363,712.50
Mobile equipment Shop	75x100x25	Bldg. (MN) demo./off- site disposal in approved landfill - Max. 5 mile haul	187,500.00	CF	\$0.32	\$60,618.75
Maintenance Parts Storage	75x150x20	Bldg. (MN) demo./off- site disposal in approved landfill - Max. 5 mile haul	225,000.00	CF	\$0.32	\$72,742.50
Wet Sand and Storage Building	180x610x20	Bldg. (MN) demo./off- site disposal in approved landfill - Max. 5 mile haul	2,196,000.00	CF	\$0.32	\$709,966.80
Air compressor 1 and 2	30x30x16 x2	Bldg. (SN) demo./off- site disposal in approved landfill - Max. 5 mile haul	28,800.00	CF	\$0.30	\$8,668.80
Scales Loadout	110x155	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	13,797.00	SF	\$1.25	\$17,180.02
Water Treatment	60x130x20	Bldg. (MN) demo./off- site disposal in approved landfill - Max. 5 mile haul	156,000.00	CF	\$0.32	\$50,434.80
Wet Plant Enclosure	190x190x35	Bldg. (MN) demo./off- site disposal in approved landfill - Max. 5 mile haul	1,263,500.00	CF	\$0.32	\$408,489.55

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	160.00	(unadjusted):	\$1,691,813.72	location):	\$1,512,481.47

DEMOLITION WORK

	Task description:	Slab and Fo	oter Demo			
Site: Keenesburg No. 2 Min		Permit Action:		2020 Application	Permit	/Job#: <u>M2019058</u>
<u>PROJE</u>	ECT IDENTIFICATION	<u>1</u>				
Task	#: 202	State:	Colorado		Abbreviation:	None
Da	te: 5/22/2020	County:	Weld		Filename:	M058-202
	10:24:40 AM					
	er: BFB		·			

UNIT COSTS

Location adjustment: 89.40 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Dry Sand Storage Building	125x450	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	56,250.00	SF	\$1.87	\$105,063.75
Mobile equipment Shop	75x100	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	7,500.00	SF	\$1.87	\$14,008.50
Maintenance Parts Storage	75x150	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	11,250.00	SF	\$1.56	\$17,510.63
Wet Sand and Storage Building	180x610	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	109,800.00	SF	\$1.87	\$205,084.44
Air compressor 1 and 2	30x30 x2	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	1,800.00	SF	\$0.93	\$1,681.02
Scales Loadout	110x155	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	17,050.00	SF	\$1.25	\$21,230.66
Water Treatment	60x130	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	7,800.00	SF	\$0.93	\$7,284.42
Wet Plant Enclosure	190x190	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	36,100.00	SF	\$1.87	\$67,427.58

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	160.00	(unadjusted):	\$439,291.00	location):	\$392,726.15

DEMOLITION WORK

Т	Task description:	Sales Road Demo				
Site: _	Keenesburg No. 2 Mine	Permit Action:	2020 Application	Permit	/Job#: <u>M2019058</u>	
PROJE(CT IDENTIFICATION	<u>N</u>				
Task #	±: 203	State: Colorado		Abbreviation:	None	
Date		County: Weld		Filename:	M058-203	-
	10:24:47 AM					_
User	: BFB					
	Agency or organiza	tion name: DRMS				_
UNIT CO	<u>OSTS</u>			Location adju	ıstment: 89.40 %	

Demolition Menu

Selection

Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push

UNIT COSTS

Sales road

Structure or Item

Description

Dimensions

2800x84x8"

Quantity	Unit	Unit Cost	Total Cost
235,000.00	SF	\$1.25	\$292,622.00

				Total Cost		
		Subtotal		(adjusted for		
Job Hours:	80.00	(unadiusted):	\$292,622,00	location):	\$261,604,07	

BULLDOZER RIPPING WORK

Task description:	Rip facilities area				
Site: Keenesburg No. 2 Mine	e Permit Actio	n: 2020 Applic	eation Pern	nit/Job#: <u>M20190</u>	58
PROJECT IDENTIFIC	ATION				
Task #: 400	State: Colorad	0	Abbreviat	ion: None	
Date: 5/22/2020	County: Weld		Filena		
11:25:32 AM	<u> </u>				
User: BFB					
Agency or organiz	cation name: DRMS				_
HOURLY EQUIPMEN	T COST				
Basic Machine:	Cat D9T - 9SU		Horsepower:	405	=
Ripper Attachment:	1-Shank Ripper		Shift Basis:	1 per day	_
			Data Source:	(CRG)	=
Cost Breakdown:		1	Y Y 111		
Ownersh	nip Cost/Hour:	\$121.49	Utilization % NA		
	ng Cost/Hour:	\$105.84	100		
Ripper Ownersl		\$15.98	NA		
Ripper Operati		\$9.64	100		
-	tor Cost/Hour:	\$39.98	NA		
Total U	nit Cost/Hour:	\$292.92			
Total Flo	eet Cost/Hour: \$2	292.92			
Alternate Methods: Seismic: NA Area: 35.00 acre	Bank Volum): 1.50	ВСҮ	NA 700	BCY or CC
	· ·	пі аррпсацоп			=
HOURLY PRODUCTION	<u> </u>				
Seismic:	Seismic Velocity:	NA	feet/second		
	geishile verseity.	1111			
Area:	verage Ripping Depth:	4.05	feet/pass		
	verage Ripping Width:	6.08	feet/pass		
Av	erage Ripping Length:	125.00	feet/pass		
	Average Dozer Speed:	88.00	feet/minute		
	erage Maneuver Time:	0.25	minutes/pass	3	
	oduction per unit area:	0.627	acres/hour		
Job Condition Correction Fa	<u>actors</u>				
Unadjusted H	ourly Unit Production:	0.627	Acres/hr		
	Site Altitude:	4,800	feet		
	Altitude Adj:	1.00	(CAT HB)		
	Job Efficiency: Net Correction:	0.83 0.83	(1 shift/day) multiplier		
					
	usted Hourly Unit Production sted Hourly Fleet Production		Acres/hr Acres/hr		
· ·	•	1. U.32	ACIES/III		
JOB TIME AND COST					
Fleet size: 1	Grader(s)	Total job tim	ne: 67.29	Hours	,

Unit cost: \$563.156 Per acre Total job cost: \$19,710

BULLDOZER RIPPING WORK

PROJECT IDEN	2 Min			
_	2 Wine Permit Ac	etion: 2020 Applic	cation	Permit/Job#: M20190
Тая1- 4. 401	<u>TIFICATION</u>			
Task #: 401 Date: 5/22/ 11:25 User: BFB	State: Color 2020 County: Weld 5:44 AM			reviation: None M058-401
Agency or	organization name: DRMS			
HOURLY EQUII	PMENT COST			
Basic Ma Ripper Attack			Horsepower: Shift Basis: Data Source:	405 1 per day (CRG)
Cost Breakdown:				
	Ownership Cost/Hour: Operating Cost/Hour:	\$121.49 \$105.84	Utilization % NA 100	-
Ripper (Ownership Cost/Hour:	\$15.98	NA	=
Ripper	Operating Cost/Hour: Operator Cost/Hour:	\$9.64 \$39.98	100 NA	-
	Total Unit Cost/Hour:	\$292.92	IVA	-
-	Γotal Fleet Cost/Hour:	\$292.92		
ea: 21.00 S	acres Rip Depth ource of estimated quantity: Po		Volume:	50,820
HOURLY PROD	· · ·	этин аррисанон		
	<u>cerron</u>			
Seismic:				
Seismic:	Seismic Velocity:	NA	feet/sec	ond
Area:				
	Average Ripping Depth:	4.05	feet/pas	ss
	Average Ripping Depth: _ Average Ripping Width:	4.05 6.08	feet/pas	es es
	Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed:	4.05 6.08 125.00 88.00	feet/pas feet/pas feet/pas feet/mii	ss ss nute
	Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time:	4.05 6.08 125.00 88.00 0.25	feet/pas feet/pas feet/mii minutes	ss ss nute s/pass
Area:	Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area:	4.05 6.08 125.00 88.00	feet/pas feet/pas feet/pas feet/mii	ss ss nute s/pass
Area: Job Condition Corre	Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area:	4.05 6.08 125.00 88.00 0.25 0.627	feet/pas feet/pas feet/pas feet/min minutes acres/ho	ss ss nute s/pass our
Area: Job Condition Corre	Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: ction Factors usted Hourly Unit Production:	4.05 6.08 125.00 88.00 0.25 0.627	feet/pas feet/pas feet/pas feet/min minutes acres/ho	ss ss nute s/pass our
Area: Job Condition Corre	Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: ction Factors usted Hourly Unit Production: Site Altitude:	4.05 6.08 125.00 88.00 0.25 0.627	feet/pas feet/pas feet/pas feet/min minutes acres/h Acres/h	ss ss ss nute s/pass our
Area: Job Condition Corre	Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: ction Factors usted Hourly Unit Production: Site Altitude: Altitude Adj:	4.05 6.08 125.00 88.00 0.25 0.627 4,800 1.00	feet/pas feet/pas feet/pas feet/min minutes acres/h Acres/h feet (CAT H	ss ss nute s/pass our
Area: Job Condition Corre	Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: ction Factors usted Hourly Unit Production: Site Altitude:	4.05 6.08 125.00 88.00 0.25 0.627	feet/pas feet/pas feet/pas feet/pas feet/min minutes acres/h Acres/h feet (CAT F (1 shift/	ss ss nute s/pass our HB) /day)
Area: Job Condition Corre	Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: ction Factors usted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: Adjusted Hourly Unit Production:	4.05 6.08 125.00 88.00 0.25 0.627 4,800 1.00 0.83 0.83	feet/pas feet/pas feet/pas feet/min minutes acres/h Acres/h feet (CAT H	ss ss nute s/pass our HB) /day)
Area: Job Condition Corre	Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: ction Factors usted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction:	4.05 6.08 125.00 88.00 0.25 0.627 4,800 1.00 0.83 0.83	feet/pas feet/pas feet/pas feet/pas feet/min minutes acres/h Acres/h feet (CAT F (1 shift) multipli	ss ss nute s/pass our HB) /day)
Area: Job Condition Corre	Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: ction Factors usted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: Adjusted Hourly Unit Production: Adjusted Hourly Unit Production:	4.05 6.08 125.00 88.00 0.25 0.627 4,800 1.00 0.83 0.83	feet/pas feet/pas feet/pas feet/pas feet/min minutes acres/h Acres/h feet (CAT H (1 shift/ multipli Acres/hr	ss ss nute s/pass our HB) /day)

Unit cost: \$563.156 Per acre Total job cost: \$11,826

BULLDOZER RIPPING WORK

Task description:	Rip Topsoil Piles TS	S-0 & TS-1				
Site: Keenesburg No	o. 2 Mine Permit	Action: _ 2020 A	pplication	Permit/Jo	b#: <u>M20190</u>	58
PROJECT IDEN	<u>NTIFICATION</u>					
Task #: 402 Date: 5/22 User: BFB	2/2020 County: W	olorado ⁷ eld		Abbreviation: Filename:	None M058-402	
	r organization name: DRMS					
HOURLY EQUI						-
Basic M Ripper Attac	Iachine: Cat D9T - 9SU		Shi		405 per day CRG)	-
Cost Breakdown:						
	Ownership Cost/Hour: Operating Cost/Hour:	\$121.4 \$105.8	19 N	ation % NA 100		
**	Ownership Cost/Hour:	\$15.9		NA		
Ripper	r Operating Cost/Hour: Operator Cost/Hour:	\$9.0 \$39.9		100 NA		
	Total Unit Cost/Hour:	\$292.9				
	Total Fleet Cost/Hour:	\$292.92				
MATERIAL QU Alternate Methods: Seismic: NA		Selected estimates	ating metho	d: Area BCY	NA	_
Area: 24.00	acres Rip De	pth (ft): 1.50		Volume: 58,080		BCY or CC
S	Source of estimated quantity:	Permit application	n			=
HOURLY PROD	<u>DUCTION</u>					
Seismic:	Seismic Velocity	: NA		_ feet/second		
<u>Area:</u>	Average Ripping Depth	: 4.05		feet/pass		
	Average Ripping Depth Average Ripping Width			feet/pass		
	Average Ripping Length	: 125.0		feet/pass		
	Average Dozer Speed Average Maneuver Time			feet/minute minutes/pass		
	Production per unit area			acres/hour		
Job Condition Corre	ection Factors					
Unad	justed Hourly Unit Production	: 0.62	7	Acres/hr		
	Site Altitude	: 4,800)	feet		
	Altitude Adj			(CAT HB)		
	Job Efficiency Net Correction			(1 shift/day) multiplier		
	Adjusted Hourly Unit Proc Adjusted Hourly Fleet Proc	luction: 0.5	52 A	acres/hr		
JOB TIME AND	O COST					
Fleet size:	1 Grader(s)	Total jo	time:	46.14	Hours	
Unit cost:	\$563.156 Per acre	Total jo	b cost:	\$13,516		

TRUCK/LOADER TEAM WORK

ite: Keenesburg No. 2 PROJECT IDENT		Pern	nit Acti	on: <u>2020 Appl</u>	ication	Permit/Job#: _	M2019058
Task #: 500 Date: 4/29/20 User: BFB		State:County:	Colora Weld	do		oreviation: No Filename: MC	ne 058-500
Agency or o	rganization nan	ne: DRN	ЛS				
HOURLY EQUIPM	MENT COST	1			Shift ba	sis: <u>1 per day</u>	
22002222022		-	F	quipment Descri		<u>1 por au</u>	
Tru	ick Loader Tea	m -Truck:	Cat		ption		
		-Loader:		`980H			
Suppor	t Equipment -L		NA Cat 1	D8T - 8SU			
Road Mair	ום- ntenance –Moto	mp Area: or Grader		140M			
		ter Truck:		er Tanker, 3,500	Gal.		
Cost Breakdown:	Truck/Loa Truck	der Team Loader		Support Load Area	Equipment Dump Area	Maintena Motor	nce Equipment Water Truck
	Truck	Loadei		Loau Alea	Dunip Area	Grader	water fruck
Utilization-machine:	100		100	NA	100	25	25
wnership cost/hour:	\$68.27	\$5	2.71	NA	\$103.86	\$42.12	\$13.51
Operating cost/hour:	\$59.78	\$6	51.51	NA	\$82.26	\$9.92	\$7.24
%Utilization-riper:	NA		0	NA	NA	NA	N.A
oper own. cost/hour:	NA		0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA		0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$24.79		5.93	NA	\$39.98	\$45.39	\$0.00
Unit Subtotals:	\$152.84	\$15	0.14	NA	\$226.10	\$97.42	\$20.75
Number of Units:	4		2	0	1	1	1
Group Subtotals:	Work:	\$911.64		Support:	\$226.10	Maint:	\$118.17
Total work team cost/l		1					
Initial volume:	72,309		CCY	Swell	factor: 1.215		
Loose volume:	87,85	5	LCY				
Sour	ce of estimated	volume:	Divisi	on of Reclamati	on, Mining & Sat	fety	
	f estimated swe	_		andbook			
	Material Purcha	-	\$0.00				
	10	tal Cost:	\$0.00				
HOURLY PROD	IICTION						

Pounds

Top Soil 87,000

Truck/Loader Worksheet Cont	1 1 ask # 500				Page 2 of	4
Payload Capacity:	54.38	LCY				
Truck Bed (volume) Basis: Struck Volume: Heaped Volume: Average Volume: Adjusted Volume:	31.40 27.80	LCY LCY LCY LCY				
Final Tr	ruck Volume B	ased on Number of	Loader Passes:	31.50	LCY	
Loading Tool Capacity						
			Bucl	ket Size Class:	NA	
Rated Capacity:	7.500	LCY (heaped)		-		
Bucket Fill Factor:	1.050	Moist loam or s	sandy clay (1009	% - 110%) 1.050)	
Adjusted Capacity:	7.875	LCY				
Job Condition Corrections:		Si	te Altitude (ft.):	4800 feet		
	Truck	Loader	Source	2		
Altitude Adj:	1.000	1.000	(CAT H			
Job Efficiency:	0.830	0.830	(CAT H	B)		
Net Correction:	0.830	0.830				
Loading Tool Cycle Time:	N	umber of Loading	Fool Passes Rea	uired to Fill		passes
Excavators and Front Shovels		differ of Louding	roorr asses req	Truck:	4	passes
Machine Cycle Time vs.	_	Rating: NA				
Selected Value wi						
Track Loaders - N	Iaterial Descri	ption:				
Cycle Time Elements (min.):						
Load: NA	Ma	aneuver: NA		Dump: 0.	.100	
Wheel and Track	Loaders - Una	djusted Basic Loade		oad, dump, maneuver):	0.550 min	utes
Cycle Time Factors				Factor (min.) Source	
Material:	Material up to	1/8" diameter 0.02		0.020	(Cat HB)	_
Stockpile:	Conveyor or 0.00	dozer piled 10 ft. hig	gh and up	0.000	(Cat HB)	
Truck Ownership:	0.04	Common ownership of trucks and loaders - O 040 (Cat HB				
Operation:	Constant oper			-0.040	(Cat HB)	_
Dump Target:	Nominal targe		- A 4:	0.000	(Cat HB)	
		Net Cycle Tim Adjusted Loade		-0.060 0.490	minutes minutes	
			me per Truck:	1.570	minutes	
Truck Cycle Time:						
Truck Exchange Time:	0.60	Minutes	Adjusted	for site altitude:	0.600	Minutes
Truck Load Time:	1.570	 Minutes	· ·	for site altitude:	<u></u>	_ Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	· ·	for site altitude:		Minutes

<u>Truck Travel (Haul & Return) Time:</u> maintained 2.0

Road Condition: Hard, smooth, stabilized, surfaced, watered,

Haul Route:

	••					
Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1800.00	0.00	2.00	2.00	3005	1.062

Haul Time: 1.062 minutes Return Route: Seg# Haul Distance Grade (%) Roll. Res Total Res Velocity Travel Time (fpm) (Ft) (%) (%) (min) 1800.00 0.00 2.00 2.00 3005 0.744

Return Time: 0.744 minutes
Total Truck Cycle Time: 4.976 minutes

Loading Tool unit

Production 870.97 LCY/Hour Adjusted for job efficiency: 722.90 LCY/Hour Truck Unit Production 379.82 LCY/Hour Adjusted for job efficiency: 315.25 LCY/Hour

Optimal No. of Trucks: _____ 2 ___ Truck(s) Selected Number of Trucks: ____ 2 ___ Truck(s)

Adjusted hourly truck team production: 630.51 LCY/Hour Adjusted single truck/loader team production: 630.51 LCY/Hour Adjusted multiple truck/loader team production: 1,261.01 LCY/Hour

JOB TIME AND COST

 Fleet size:
 2
 Team(s)
 Total job time:
 69.67
 Hours

 Unit cost:
 \$0.996
 /LCY
 Total job cost:
 \$87,500

TRUCK/LOADER TEAM WORK

ite: Keenesburg No.	2 Mine	Perm	it Acti	on: 2020 Appl	lication	Permit/Job#:	M2019058
PROJECT IDEN	TIFICATION						
Task #: 501		State: 0	Colora	do	Abl	oreviation: No	one
Date: 4/29/	2020		Weld			Filename: M	058-501
User: BFB							
Agency or	organization nar	ne: DRM	IS				
HOURLY EQUIP	PMENT COST	1 -			Shift ba	sis: 1 per day	
			Е	Equipment Descri	iption		
T	ruck Loader Tea		Cat '				
Cum	ort Equipment -L	-Loader:	CAT NA	Г 980Н			
Suppo		imp Area:		D8T - 8SU			
Road Ma	aintenance –Mote		CAT	Γ 140M			
	-Wa	ter Truck:	Wate	er Tanker, 3,500	Gal.		
Cost Breakdown:	Truck/Loa	dan Taam		Crommont	Davismant	Maintan	anaa Eavinman
Cost Breakdown:	Truck/Loa	Loader		Load Area	Equipment Dump Area	Motor Grader	ance Equipmen Water Truck
Utilization-machine:	100		100	NA	100	25	2
wnership cost/hour:	\$68.27	\$52	2.71	NA	\$103.86	\$42.12	\$13.5
Operating cost/hour:	\$59.78	\$61	1.51	NA	\$82.26	\$9.92	\$7.2
%Utilization-riper:	NA		0	NA	NA	NA	N.
per own. cost/hour:	NA	\$0	0.00	NA	\$0.00	\$0.00	\$0.0
ipper op. cost/hour:	NA	\$0	0.00	NA	\$0.00	\$0.00	\$0.0
Operator cost/hour:	\$24.79		5.93	NA	\$39.98	\$45.39	\$0.0
Unit Subtotals:	\$152.84	\$150	0.14	NA	\$226.10	\$97.42	\$20.7
Number of Units:	6		2	0	1	1	
Group Subtotals:	Work:	\$1,217.32		Support:	\$226.10	Maint:	\$118.17
Total work team cos	t/hour: \$1,561.5	<u> </u>					
MATERIAL QUA	<u>ANTITIES</u>						
Initial volume	: 219,607		CCY	Swell	factor: 1.215		
Loose volume	: 266,8	23	LCY				
Sou	irce of estimated	volume: _	Divis	ion of Reclamati	on, Mining & Sat	ety	
Source	of estimated swe			landbook			
	Material Purcha	_	\$0.00				
	10	otal Cost: _	\$0.00	<u>'</u>			
HOURLY PRO	<u>DUCTION</u>						
Truck Capacity:							
	tht) Basis:						

Pounds

Description:

Rated Payload:

Top Soil

87,000

Truck/Loader Worksheet Cont	'd	Task # 50	1		Page 2 of	4
Payload Capacity:	54.38	LC	Y			
Truck Bed (volume) Basis:	24.20					
Struck Volume:		LCY				
Heaped Volume: Average Volume:		LCY LCY				
Adjusted Volume:		LCY				
Final Tr	uck Volume F	Based on Number of	of Loader Passes:	31.50	LCY	
Loading Tool Capacity	den volume i	Susce on I valleer	or Louder 1 disses.			
			Bucl	ket Size Class:	NA	
Rated Capacity:	7.500	LCY (heaped)			
Bucket Fill Factor:	1.050	Moist loam o	r sandy clay (1009	% - 110%) 1.050)	_
Adjusted Capacity:	7.875	LCY				
Job Condition Corrections:			Site Altitude (ft.):	4800 feet		
	Truck	Loader	Source	2		
Altitude Adj:	1.000	1.000	(CAT H			
Job Efficiency:	0.830	0.830	(CAT HI	B)		
Net Correction:	0.830	0.830				
Loading Tool Cycle Time:	1	Number of Loading	g Tool Passes Req	uired to Fill	4	passes
Excavators and Front Shovels	<u>:</u>			Truck:		
Machine Cycle Time vs. Selected Value w						
Track Loaders – N	Interial Descri	iption:				
Cycle Time Elements (min.):						
Load: NA	M	aneuver: NA		Dump: 0.	100	
Wheel and Track	Loaders - Una	djusted Basic Loa	•	oad, dump, maneuver):	0.550 mir	nutes
Cycle Time Factors				Factor (min.)	Source	
Material:		o 1/8" diameter 0.		0.020	(Cat HB)	
Stockpile:	0.00	dozer piled 10 ft.		0.000	(Cat HB)	
Truck Ownership:	0.04	Common ownership of trucks and loaders - 0.040 (Cat HB)				
Operation:	Constant ope			-0.040	(Cat HB)	
Dump Target:	Nominal targ		A di	0.000	(Cat HB)	_
			me Adjustment: der Cycle Time:	-0.060 0.490	minutes minutes	
			Time per Truck:	1.570	minutes	
Truck Cycle Time:						
Truck Exchange Time:	0.60	Minutes	Adjusted	for site altitude:	0.600	Minutes
Truck Load Time:	1.570	Minutes		for site altitude:		Minutes
Truck Maneuver and Dump	1.00	- Minutes		for site altitude:		- Minutes
Time:	1.00	Minutes	Adjusted	ioi site aititude.	1.000	Milliancs

<u>Truck Travel (Haul & Return) Time:</u> maintained 2.0

Road Condition: Hard, smooth, stabilized, surfaced, watered,

TT 1	D .
Hanl	Route:
Haui	NOUIC.

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3200.00	0.00	2.00	2.00	3005	1.528

Haul Time: 1.528 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)	
1	3200.00	0.00	2.00	2.00	3005	1.210	

Return Time: 1.210 minutes
Total Truck Cycle Time: 5.908 minutes

Loading Tool unit

Production 870.97 LCY/Hour Adjusted for job efficiency: 722.90 LCY/Hour Truck Unit Production

_____319.91 LCY/Hour Adjusted for job efficiency: _____265.52 LCY/Hour

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

Adjusted hourly truck team production: 796.56 LCY/Hour Adjusted single truck/loader team production: 722.90 LCY/Hour Adjusted multiple truck/loader team production: 1,445.81 LCY/Hour

JOB TIME AND COST

 Fleet size:
 2
 Team(s)
 Total job time:
 184.55
 Hours

 Unit cost:
 \$1.080
 /LCY
 Total job cost:
 \$288,190

TRUCK/LOADER TEAM WORK

ite: Keenesburg No. 2	2 Mine	Perm	nit Acti	on: 2020 Appl	ication	Permit/Job#: _	M2019058
PROJECT IDENT	<u>TIFICATION</u>						
Task #: 502 Date: 5/21/2 User: BFB	020		Colora Weld	do	Abl	Filename: No MO	ne 058-502
	organization nan	ne: DRN	⁄IS				
					~		
HOURLY EQUIP	MENT COST	<u>-</u>	_	_		sis: <u>1 per day</u>	
Т.,,	uck Loader Tea	m Tmiole	Cat 7	quipment Descri	iption		
11	uck Loader Tea	m - 1 ruck: -Loader:		'980H			
Suppor	rt Equipment -L		NA	70011			
		ımp Area:		D8T - 8SU			
Road Mai	intenance –Moto			140M	C-1		
	-wa	ter Truck:	wate	er Tanker, 3,500	Gal.		
Cost Breakdown:	Truck/Loa	der Team		Support 1	Equipment	Maintena	ance Equipmen
	Truck	Loader		Load Area	Dump Area	Motor Grader	Water Truck
Utilization-machine:	100		100	NA	100	25	2
wnership cost/hour:	\$68.27	\$5	2.71	NA	\$103.86	\$42.12	\$13.5
Operating cost/hour:	\$59.78	\$6	1.51	NA	\$82.26	\$9.92	\$7.2
% Utilization-riper:	NA		0	NA	NA	NA	N/
oper own. cost/hour:	NA	\$	0.00	NA	\$0.00	\$0.00	\$0.0
Ripper op. cost/hour:	NA		0.00	NA	\$0.00	\$0.00	\$0.0
Operator cost/hour:	\$24.79		5.93	NA	\$39.98	\$45.39	\$0.0
Unit Subtotals:	\$152.84	\$15	0.14	NA	\$226.10	\$97.42	\$20.7
Number of Units:	4		2	0	1	1	
Group Subtotals:	Work:	\$911.64		Support:	\$226.10	Maint:	\$118.17
Total work team cost/ MATERIAL QUA		1					
Initial volume:			CCY	Swell :	factor: 1.215		
Loose volume:	34,15	2	LCY	5 WCII	1.213		
Sour	rce of estimated	volume:	Adeq	acy response 4/6	/20- road area of	21 acres	
	of estimated swe	_		andbook			
	Material Purcha	_	\$0.00				
	To	tal Cost:	\$0.00				
HOURLY PROD	LICTION						

Pounds

Top Soil 87,000

Truck/Loader Worksheet Con	nt'd	Task # 502			Page 2 of	4
Payload Capacity:	54.38	LCY				
Truck Bed (volume) Basis:						
Struck Volume:		LCY				
Heaped Volume:		LCY				
Average Volume: _		LCY				
Adjusted Volume: _	31.40	LCY				
Final 7	Fruck Volume F	Based on Number of I	oader Passes	31.50	LCY	
Loading Tool Capacity	rruck volume i	ased on Ivamoer of I	Loader rasses.	31.30	LC1	
<u> Louding Foor Capacity</u>			Buck	et Size Class: N	A	
Rated Capacity:	7.500	LCY (heaped)				_
Bucket Fill Factor:	1.050	Moist loam or sa	andy clay (100%	6 - 110%) 1.050		=
Adjusted Capacity:	7.875	LCY		,		_
Job Condition Corrections:		Sit	e Altitude (ft.):	4800 feet		
gos conamon corrections	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HB	3)		
Job Efficiency:	0.830	0.830	(CAT HB	·		
Net Correction:	0.830	0.830				
Loading Tool Cycle Time:		Number of Loading T	ool Passes Requ	nred to Fill Truck:	4	passes
Excavators and Front Shove						
Machine Cycle Time v Selected Value v						
Track Loaders –	Material Descri	ption:				
Cycle Time Elements (min.):						
Load: NA	M	aneuver: NA		Dump: 0.100)	
Wheel and Traci	c Loaders - Una	djusted Basic Loader	· Cycle Time (lo	ad dumn	sso min	utes
wheel and Track	x Loaders Ond	djusted Basic Loader	•	naneuver):	550	ates
Cycle Time Factors			1	Factor (min.)	Source	
Material:	Material up t	o 1/8" diameter 0.02		0.020	(Cat HB)	_
Stockpile:	Conveyor or 0.00	dozer piled 10 ft. hig	h and up	0.000	(Cat HB)	
Truck Ownership:	Common ow 0.04	nership of trucks and	loaders -	-0.040	(Cat HB)	_
Operation:	Constant ope	ration -0.04		-0.040	(Cat HB)	_
Dump Target:	Nominal targ			0.000	(Cat HB)	
		Net Cycle Time		-0.060	minutes	_
		Adjusted Loader		0.490	minutes	
		Net Load Tir	ne per Truck:	1.570	minutes	
Truck Cycle Time:						
Truck Exchange Time	e: 0.60	Minutes	Adjusted t	for site altitude:	0.600	Minutes
Truck Load Time	e: 1.570	Minutes	Adjusted t	for site altitude:	1.570	Minutes
Truck Maneuver and Dum	p 1.00	Minutes	Adjusted 1	for site altitude:	1.000	Minutes
Time		<u> </u>	Ū			— :

<u>Truck Travel (Haul & Return) Time:</u> maintained 2.0

Road Condition: Hard, smooth, stabilized, surfaced, watered,

Haul Route:

	••					
Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	2.00	2.00	3005	0.796

Haul Time: 0.796 minutes Return Route: Haul Distance Grade (%) Roll. Res Total Res Velocity Travel Seg# Time (fpm) (Ft) (%) (%) (min) 1000.00 0.00 2.00 2.00 3005 0.478

Return Time: 0.478 minutes
Total Truck Cycle Time: 4.444 minutes

Loading Tool unit

Production 870.97 LCY/Hour Adjusted for job efficiency: 722.90 LCY/Hour Truck Unit Production 425.29 LCY/Hour Adjusted for job efficiency: 352.99 LCY/Hour

Optimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 705.99 LCY/Hour Adjusted single truck/loader team production: 705.99 LCY/Hour Adjusted multiple truck/loader team production: 1,411.97 LCY/Hour

JOB TIME AND COST

 Fleet size:
 2
 Team(s)
 Total job time:
 24.19
 Hours

 Unit cost:
 \$0.889
 /LCY
 Total job cost:
 \$30,378

TRUCK/LOADER TEAM WORK

T Site:	Cask description: Keenesburg No.		Active Pit A		184 acres ion:2020 Appl	ication	Permit/Job#:	M2019058
<u>P</u> 1	ROJECT IDEN	<u>TIFICATION</u>						
	Task #: 503		State: (Colora	ado	Abl	oreviation: No	one
	Date: 5/21/2	2020		Weld				058-503
	User: BFB							
	Agency or	organization nan	ne: DRM	S				
<u>H</u>	OURLY EQUIE	PMENT COST	1 -			Shift ba	sis: <u>1 per day</u>	
					Equipment Descri	ption		
	T	ruck Loader Tea	+	Cat				
	Supp	ort Equipment -L	-Loader:	NA	Г 980Н			
	Suppo		mp Area:		D8T - 8SU			
_	Road Ma	aintenance –Moto			Γ 140M			
_		-Wa	ter Truck:	Wat	ter Tanker, 3,500	Gal.		
C	a at Duna a la dia a sana a	Truck/Loa	4 T		C	F	Maintan	E
<u>C(</u>	ost Breakdown:	Truck/Loa	Loader		Load Area	Equipment Dump Area	Motor Grader	Water Truck
6 Utili	zation-machine:	100		100	NA	100	25	25
Owne	ership cost/hour:	\$68.27	\$52	2.71	NA	\$103.86	\$42.12	\$13.51
	rating cost/hour:	\$59.78	\$61	.51	NA	\$82.26	\$9.92	\$7.24
	Utilization-riper:	NA		0	NA	NA	NA	NA
	own. cost/hour:	NA	\$0	0.00	NA	\$0.00	\$0.00	\$0.00
Ripp	er op. cost/hour:	NA	\$0	0.00	NA	\$0.00	\$0.00	\$0.00
Ope	erator cost/hour:	\$24.79	\$35	5.93	NA	\$39.98	\$45.39	\$0.00
	Unit Subtotals:	\$152.84	\$150).14	NA	\$226.10	\$97.42	\$20.75
N	lumber of Units:	6		2	0	1	1	1
(Group Subtotals:	Work:	\$1,217.32		Support:	\$226.10	Maint:	\$118.17
То	otal work team cost	t/hour: \$1,561.5	9					
M	ATERIAL QUA	<u>ANTITIES</u>						
	Initial volume Loose volume			CCY LCY		factor: 1.215		
	Sou	irce of estimated	volume:	Adec	jucy response 4/6	/20-		
	Source	of estimated swe			Handbook			
		Material Purcha		\$0.00				
		То	tal Cost: _	\$0.00)			
Ц	ΛΙΙΡΙ V ΡΡΛΙ	DUCTION						
	OURLY PRO	DUCTION						
	ruck Capacity:	det) Davie						
ır	uck Payload (weig	veight: 1,600			Pounds/LCY			

Pounds

Top Soil

87,000

Description: Rated Payload:

Truck/Loader Worksheet Cont	'd	Task # 503			Page 2 of	4
Payload Capacity:	54.38	LCY				
Truck Bed (volume) Basis:	24.20					
Struck Volume:		LCY				
Heaped Volume: Average Volume:		LCY LCY				
Adjusted Volume:		LCY				
Final Tr	ruck Volume E	Based on Number of	f Loader Passes:	31.50	LCY	
Loading Tool Capacity				-		
			Buck	ket Size Class:	NA	
Rated Capacity:	7.500	LCY (heaped)		-		_
Bucket Fill Factor:	1.050		sandy clay (1009	% - 110%) 1.050		_
Adjusted Capacity:	7.875	LCY				_
Job Condition Corrections:		S	ite Altitude (ft.):	4800 feet		
	Truck	Loader	Source	;		
Altitude Adj:	1.000	1.000	(CAT HI	B)		
Job Efficiency:	0.830	0.830	(CAT HI	3)		
Net Correction:	0.830	0.830				
Loading Tool Cycle Time:	N	Number of Loading	Tool Passes Req		4	passes
Excavators and Front Shovels	<u>:</u>			Truck:		
Machine Cycle Time vs. Selected Value w						
Track Loaders – N	Material Descri	ption:				
Cycle Time Elements (min.):						
Load: NA	M	aneuver: NA		Dump: 0.	100	
Wheel and Track	Loaders - Una	djusted Basic Load	•	oad, dump, naneuver):	0.550 mir	utes
Cycle Time Factors				Factor (min.)	Source	
Material:		o 1/8" diameter 0.0		0.020	(Cat HB)	
Stockpile:	0.00	dozer piled 10 ft. h		0.000	(Cat HB)	
Truck Ownership:	0.04	nership of trucks an	id loaders -	-0.040	(Cat HB)	_
Operation:	Constant ope			-0.040	(Cat HB)	_
Dump Target:	Nominal targ		as Adinatmanti	0.000	(Cat HB)	_
			ne Adjustment: er Cycle Time:	-0.060 0.490	minutes minutes	
			ime per Truck:	1.570	minutes	
Truck Cycle Time:						
Truck Exchange Time:	0.60	Minutes	Adjusted	for site altitude:	0.600	Minutes
Truck Load Time:	1.570	Minutes	•	for site altitude:	1.570	_ Minutes
Truck Maneuver and Dump Time:	-	Minutes	•	for site altitude:	1.000	Minutes

<u>Truck Travel (Haul & Return) Time:</u> maintained 2.0

Road Condition: Hard, smooth, stabilized, surfaced, watered,

TT 1	D .
Hanl	Route:
Haui	NOUIC.

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3500.00	0.00	2.00	2.00	3005	1.627

Haul Time: 1.627 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3500.00	0.00	2.00	2.00	3005	1.310

Return Time: 1.310 minutes
Total Truck Cycle Time: 6.107 minutes

Loading Tool unit

Production 870.97 LCY/Hour Adjusted for job efficiency: 722.90 LCY/Hour Truck Unit Production 309.48 LCY/Hour Adjusted for job efficiency: 256.87 LCY/Hour

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

Adjusted hourly truck team production: 770.61 LCY/Hour Adjusted single truck/loader team production: 722.90 LCY/Hour Adjusted multiple truck/loader team production: 1,445.81 LCY/Hour

JOB TIME AND COST

 Fleet size:
 2
 Team(s)
 Total job time:
 207.05
 Hours

 Unit cost:
 \$1.080
 /LCY
 Total job cost:
 \$323,335

REVEGETATION WORK

П	Task description:	Reveg- 66 ac Facilities				
Site:	Keenesburg No. 2 Min	e Permit Action:	2020 Application	Permit/Job#:	M2019058	

PROJECT IDENTIFICATION

Task #: 600 State: Colorado Abbreviation: None

Date: 5/22/2020 County: Weld Filename: M058-600

11:24:12 AM

User: BFB

Agency or organization name: DRMS

FERTILIZING

Materials

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

Application

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

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$101.93
Total Tilling Cost/Acre	\$101.93

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indiangrass - Cheyenne	0.50	1.52	\$5.65
Indian Ricegrass - Nespar	3.00	9.71	\$26.63
Switchgrass - Blackwell	1.50	13.40	\$17.25
Sand Lovegrass - Bend	2.50	86.09	\$35.63
Little Bluestem - Camper	0.75	4.48	\$9.44
Sand Dropseed	0.50	59.69	\$4.88
Sand Bluestem - Garden Co.	1.00	2.59	\$24.53
Needlegrass, Green - Lodorm	1.50	6.23	\$17.66
Prairie Sandreed - Goshen	0.75	4.70	\$7.76

\$232.00

	Totals Seed Mix	12.00	188.41	\$149.41
pplication				
Description				Cost /Acre
Drill Seeding (DRMS Survey Cost)	·		·	\$232.00

Total Seed Application Cost/Acre

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$590.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Power mulcher (MEANS 32 91 13.16 0350)		\$95.83
	Total Mulch Application Cost/Acre	\$166.00

NURSERY STOCK PLANTING

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

JOB TIME AND COST

 No. of Acres:
 66
 Cost /Acre:
 \$1,239.34

 Estimated Failure Rate:
 30%
 Cost /Acre*:
 \$1,239.34

*Selected Replanting Work Items: TILLING, SEEDING, MULCHING

Initial Job Cost: \$81,796.44

Reseeding Job Cost: \$24,538.93

Total Job Cost: \$106,335

Job Hours: 66.00

REVEGETATION WORK

1 ask	k description:	Reveg- Waste P	Pile 164 ac			
e: <u>K</u>	eenesburg No. 2 Mir	ne Pe	ermit Action:2	020 Application	Permit/Job	o#: <u>M2019058</u>
<u>PRO</u>	JECT IDENTIFIC	<u>CATION</u>				
Т	Task #: 601 Date: 5/22/2020 11:24:31 Al	State: County:	Colorado Weld		Abbreviation: Filename:	None M058-601
	User: BFB				-	
	Agency or organi	zation name: D	RMS			
FER'	TILIZING					
Mate			Units Acre	/ Unit	Cost / Unit	Cost /Acre
Mate	rials				Cost / Unit	Cost /Acre

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

Total Fertilizer Application Cost/Acre

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indiangrass - Cheyenne	0.50	1.52	\$5.65
Indian Ricegrass - Nespar	3.00	9.71	\$26.63
Switchgrass - Blackwell	1.50	13.40	\$17.25
Sand Lovegrass - Bend	2.50	86.09	\$35.63
Little Bluestem - Camper	0.75	4.48	\$9.44
Sand Dropseed	0.50	59.69	\$4.88
Sand Bluestem - Garden Co.	1.00	2.59	\$24.53
Needlegrass, Green - Lodorm	1.50	6.23	\$17.66

\$

\$0.00

Prairie Sandreed - Goshen	0.75	4.70	\$7.76
		100 11	
Totals Seed Mix	12.00	188.41	\$149.41

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	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$590.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Power mulcher (MEANS 32 91 13.16 0350)		\$95.83
	Total Mulch Application Cost/Acre	\$166.00

NURSERY STOCK PLANTING

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

JOB TIME AND COST

 No. of Acres:
 164
 Cost / Acre:
 \$1,137.41

 Estimated Failure Rate:
 30%
 Cost / Acre*:
 \$1,137.41

*Selected Replanting Work Items: _TILLING,SEEDING,MULCHING

Initial Job Cost: \$186,535.24

Reseeding Job Cost: \$55,960.57

Total Job Cost: \$242,496

Job Hours: 164.00

REVEGETATION WORK

7	Γask description:	Reveg- Haul Roads 21 ac				
Site:	Keenesburg No. 2 Min	e Permit Action:	2020 Application	Permit/Job#:	M2019058	

PROJECT IDENTIFICATION

Task #: 602 State: Colorado Abbreviation: None

Date: 5/22/2020 County: Weld Filename: M058-602

Agency or organization name: DRMS

FERTILIZING

Materials

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

Application

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

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$101.93
Total Tilling Cost/Acre	\$101.93

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indiangrass - Cheyenne	0.50	1.52	\$5.65
Indian Ricegrass - Nespar	3.00	9.71	\$26.63
Switchgrass - Blackwell	1.50	13.40	\$17.25
Sand Lovegrass - Bend	2.50	86.09	\$35.63
Little Bluestem - Camper	0.75	4.48	\$9.44
Sand Dropseed	0.50	59.69	\$4.88
Sand Bluestem - Garden Co.	1.00	2.59	\$24.53
Needlegrass, Green - Lodorm	1.50	6.23	\$17.66
Prairie Sandreed - Goshen	0.75	4.70	\$7.76

\$232.00

	Totals Seed Mix	12.00	188.41	\$149.41
pplication				
Description				Cost /Acre
Drill Seeding (DRMS Survey Cost)				\$232.00

Total Seed Application Cost/Acre

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$590.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Power mulcher (MEANS 32 91 13.16 0350)		\$95.83
	Total Mulch Application Cost/Acre	\$166.00

NURSERY STOCK PLANTING

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

JOB TIME AND COST

 No. of Acres:
 21
 Cost /Acre:
 \$1,239.34

 Estimated Failure Rate:
 30%
 Cost /Acre*:
 \$1,239.34

*Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: \$26,026.14

Reseeding Job Cost: \$7,807.84

Total Job Cost: \$33,834

21.00

REVEGETATION WORK

: <u>K</u>	Keenesbu	org No. 2 Mine	Per	mit Action: _	2020	Application	Permit/Job	#: <u>M2019058</u>
PRO)JECT	<u>IDENTIFICATI</u>	<u>ON</u>					
7	Task #: Date: User:	603 5/22/2020 11:24:59 AM BFB	State: County:	Colorado Weld			Abbreviation:Filename:	None M058-603
	RTILIZI	ency or organization	name: <u>DR</u>	RMS				
	erials Description	on		Unit Acre		Unit	Cost / Unit	Cost /Acre
							\$	\$
							Total Fertilizer Materials Cost/Acre	\$0.00
Appl	lication							
D	Descriptio	on						Cost /Acre
								\$
						5 4 33 A	olication Cost/Acre	

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indiangrass - Cheyenne	0.50	1.52	\$5.65
Indian Ricegrass - Nespar	3.00	9.71	\$26.63
Switchgrass - Blackwell	1.50	13.40	\$17.25
Sand Lovegrass - Bend	2.50	86.09	\$35.63
Little Bluestem - Camper	0.75	4.48	\$9.44
Sand Dropseed	0.50	59.69	\$4.88
Sand Bluestem - Garden Co.	1.00	2.59	\$24.53
Needlegrass, Green - Lodorm	1.50	6.23	\$17.66

Prairie Sandreed - Goshen	0.75	4.70	\$7.76
		100 11	
Totals Seed Mix	12.00	188.41	\$149.41

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	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$590.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Power mulcher (MEANS 32 91 13.16 0350)		\$95.83
	Total Mulch Application Cost/Acre	\$166.00

NURSERY STOCK PLANTING

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

JOB TIME AND COST

 No. of Acres:
 184
 Cost /Acre:
 \$1,137.41

 Estimated Failure Rate:
 30%
 Cost /Acre*:
 \$1,137.41

*Selected Replanting Work Items: _TILLING,SEEDING,MULCHING

Initial Job Cost: \$209,283.44

Reseeding Job Cost: \$62,785.03

Total Job Cost: \$272,068

184.00

REVEGETATION WORK

Keenesburg No. 2 Min	e Pe	rmit Action: 202	0 Application	Permit/Job	#: <u>M2019058</u>
PROJECT IDENTIFIC	CATION				
Task #: 604 Date: 5/22/2020 User: BFB	State: County:	Colorado Weld		Abbreviation: Filename:	None M058-604
Agency or organia	zation name:DF	RMS			
FERTILIZING					
Materials		Units /			
Description		Acre	Unit	Cost / Unit	Cost /Acre
				\$	\$
				Total Fertilizer Materials Cost/Acre	
Application					
Description					Cost /Acre
					\$
		Tota	al Fertilizer Ap	plication Cost/Acre	\$0.00
TILLING					
Description					Cost /Acre
Disc harrowing, 6" deep	(MEANS 32 91 1	3.23 6100)			\$101.93

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indiangrass - Cheyenne	0.50	1.52	\$5.65
Indian Ricegrass - Nespar	3.00	9.71	\$26.63
Switchgrass - Blackwell	1.50	13.40	\$17.25
Sand Lovegrass - Bend	2.50	86.09	\$35.63
Little Bluestem - Camper	0.75	4.48	\$9.44
Sand Dropseed	0.50	59.69	\$4.88
Sand Bluestem - Garden Co.	1.00	2.59	\$24.53
Needlegrass, Green - Lodorm	1.50	6.23	\$17.66
Prairie Sandreed - Goshen	0.75	4.70	\$7.76

\$101.93

Total Tilling Cost/Acre

\$232.00

	Totals Seed Mix	12.00	188.41	\$149.41
Application				
Description				Cost /Acre
Drill Seeding (DRMS Survey Cost)				\$232.00

Total Seed Application Cost/Acre

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$590.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Power mulcher (MEANS 32 91 13.16 0350)		\$95.83
	Total Mulch Application Cost/Acre	\$166.00

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals 2	Nursery Stoc	k Cost / Acre	\$0.00

JOB TIME AND COST

 No. of Acres:
 24
 Cost /Acre:
 \$1,239.34

 Estimated Failure Rate:
 30%
 Cost /Acre*:
 \$1,239.34

*Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: \$29,744.16

Reseeding Job Cost: \$8,923.25

Total Job Cost: \$38,667

Job Hours: 24.00

EQUIPMENT MOBILIZATION/DEMOBILIZATION

•	T7 1 37 43.51		2020 4 11 1	D 1.77 1.0	3.50010050
ite:	Keenesburg No. 2 Mine	Permit Action	· 2020 Application	Permit/Joh#:	M2019058

PROJECT IDENTIFICATION

Task description:

Task #:700State:ColoradoAbbreviation:NoneDate:5/22/2020County:WeldFilename:M058-700

User: BFB

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

Mobilize Equipment

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 D8T - 8SU	47.71	\$103.86	\$123.81	1	\$227.67	\$123.81	\$250.00
Cat D9T - 9SU	60.01	\$121.49	\$141.54	1	\$263.03	\$141.54	\$250.00
CAT 980H	33.12	\$52.71	\$123.81	2	\$353.04	\$247.62	\$500.00
Cat 740	36.49	\$68.27	\$123.81	6	\$1,152.48	\$742.86	\$1,500.00
CAT 140M	16.68	\$42.12	\$67.39	1	\$109.51	\$67.39	\$250.00
Drill/Broadcast	25.00	\$18.15	\$67.39	1	\$85.54	\$67.39	\$250.00
Seeder with							
Tractor							
Cat 320D L 9'-6"	23.70	\$37.31	\$67.39	2	\$209.40	\$134.78	\$250.00
Stick							

Subtotals: \$2,400.67 \$1,525.39 \$3,250.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 3,500 Gal.	\$42.46	1	\$42.46	\$42.46

Subtotals: \$42.46 \$42.46	42.46 \$42.46
----------------------------	---------------

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:

Total one-way travel distance:

Average Travel Speed:

DENVER

40.00
miles
50.00

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.80	0.80
Return Time (Hours):	0.80	0.80
Loading Time (Hours):	0.00	NA
Unloading Time (Hours):	0.00	NA
Subtotals:	1.60	1.60

JOB TIME AND COST

Total job cost: 3.20 Hours

Total job cost: \$12,850

MISCELLANEOUS TRUCK WORK

Task description:	Vehicles for onsite suppo	ort		
ite: Keenesburg No. 2 Mi	ne Permit Acti	on: 2020 Application	Permit/Job	#: <u>M2019058</u>
PROJECT IDENTIFIC	<u>CATION</u>			
Task #: 701 Date: 5/26/2020 User: BFB	State: Colora County: Weld	do	Abbreviation: Filename:	None M058-701
Agency or organ				
Make and Model:	Light Duty Pickup, 4x4, 1	T. Crew	Horsepow	er: 340
Attachment 1:			Shift Bas	
Attachment 2:			Weig	
Labor Unit 1:	General Laborer			(US Tons)
Labor Unit 2:				
Cost Breakdown:				
		Utilization %		
Ownership Cost/F		NA		
Operating Cost/F		100		
Operator Cost/F		NA		
Total Unit Cost/F	Hour: \$49.12			
Total Fleet Cost/	Hour: \$98.25	_		
JOB TIME AND CO	<u>OST</u>			
Fleet size: 2	2 Truck(s)	Total job time:	300.00	Hours
Unit cost: \$98	.25 /Hour	Total job cost:	\$29,475	

MISCELLANEOUS TRUCK WORK

Task description:	Fuel	truck 1.5 hour daily, 6	mos		
ite: Keenesburg No. 2 N	Iine	Permit Action:	2020 Application	Permit/Job	#: <u>M2019058</u>
PROJECT IDENTIF	<u>ICATIO</u>	<u>N</u>			
Task #: 702 Date: 5/26/202 User: BFB	0	State: Colorado County: Weld		Abbreviation:Filename:	None M058-702
Agency or orga					
HOURLY EQUIPM	ENT CO	<u>ST</u>			
Make and Model: Attachment 1: Attachment 2: Labor Unit 1: Labor Unit 2:	Tanke	anker, 4x2, 170 HP T Driver - 2+ rear axles		Horsepow Shift Bas Weig	is: 1 per day
Cost Breakdown:					
Ownership Cost Operating Cost Operator Cost Total Unit Cost Total Fleet Cos	/Hour: /Hour: /Hour:	\$9.27 \$17.75 \$38.86 \$65.87	Utilization % NA 100 NA		
JOB TIME AND C	_	φοσιοι			
Fleet size:	1	Truck(s)	Total job time:	200.00	Hours
Unit cost: \$6	55.87	/Hour	Total job cost:	\$13,174	

MISCELLANEOUS TRUCK WORK

Task description:	Hear	vy equipment support v	ehicle 4 hrs/week, 6 mo	s	,
te: Keenesburg No. 2	Mine	Permit Action:	2020 Application	Permit/Job#:	M2019058
PROJECT IDENTI	FICATIO	<u>ON</u>			
Task #: 703 Date: 5/26/20 User: BFB	220	State: Colorado County: Weld			None M058-703
Agency or or	ganization	name: DRMS			
HOURLY EQUIPM	MENT CO	<u>ost</u>			
Make and Mode Attachment	1:	Truck, 4x2, 190 HP		Horsepower: Shift Basis:	1 per day
Attachment Labor Unit	1: Tanke	er Driver - 1 rear axle		Weight:	(US Tons)
Labor Unit Cost Breakdown:	2:				
Cost Breakdown.			Utilization %		
Ownership Co	st/Hour:	\$10.95	NA		
Operating Co		\$21.81	100		
Operator Co	_	\$38.86	NA		
Total Unit Co	st/Hour:	\$71.61			
Total Fleet Co	ost/Hour:	\$71.61			
JOB TIME AND	COST				
Fleet size:	1	_ Truck(s)	Total job time:	100.00	Hours
Unit cost:	\$71.61	/Hour	Total job cost:	\$7,161	