## COST SUMMARY WORK

Task description: Windsor East Mine Bond Estimate							
Site:	Windsor	East Mine	Pe	rmit Action:	2023 Permit Application	Permit/Jol	b#: <u>M2022042</u>
<u>P</u>	<u>ROJECT</u>	IDENTIFIC	CATION				
	Task #:	001	State:	Colorado		Abbreviation:	None
	Date:	3/24/2023	County:	Weld		Filename:	M042-001
	User:	PSH				_	
	Age	ency or organi	zation name: DF	RMS			

### TASK LIST (DIRECT COSTS)

Task		Form	Fleet	Task	
	Description	Used	Size	Hours	Cost
002	Overburden Replacement	SCRAPER1	1	247.17	\$747,969
003	Topsoil Replacement	SCRAPER1	1	33.84	\$102,414
004	Dewatering	SITEMAINT	1	0.00	\$10,350
		ENANCE			
005	Revegetation - 96 Acres	REVEGE	1	120.00	\$429,092
006	Cell C Liner Mobilization	SITEMAINT	1	20.00	\$150,000
		ENANCE			
007	Cell C - Backfill 200-400' Along River	SCRAPER1	1	51.70	\$181,899
008	Cell C - Foundation Excavation	SCRAPER1	1	7.71	\$27,115
009	Cell C - Slope Liner Embankment	SCRAPER1	1	38.54	\$135,577
010	Cell C - Reservoir Grading	DOZERGRA	1	200.00	\$55,270
		DER			
				719.00	©1 020 (Q(
		<u>SUBTO</u>	TALS:	718.96	\$1,839,686

### **INDIRECT COSTS**

### **OVERHEAD AND PROFIT:**

Liability insurance:	2.02	Total =	\$37,162
Performance bond:	1.05	Total =	\$19,317
Job superintendent:	299.48	Total =	\$22,500
Profit:	10.00	Total =	\$183,969
		TOTAL O & P =	\$262,947
		CONTRACT AMOUNT (direct + O & P) = $($	\$2,102,633

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): Engineering work and/or contract/bid preparation:	\$500 4.25	Total = Total =	\$500 \$89,362
Reclamation management and/or administration:	5.00		\$105,132
CONTINGENCY:	0.00	Total =	\$0
		TOTAL INDIRECT COST =	
TOTAL BO	ND AM	OUNT (direct + indirect) =	\$2,297,626 \$2,300,000 (Rounded)

Site: Windsor East	Mine	Perm	it Action	: 2023 Permit Application	P	ermit/Job#: <u>M</u>	2022042
PROJECT IDE	NTIFICATION						
Task #: $002$ Date: $3/2$ User: PSI	1/2023 Cou		Colorado Weld			viation: <u>None</u> ename: <u>M042</u>	-002
Agency	or organization name:	DRM	IS				
HOURLY EQU	IPMENT_			COSTS	Shift basis: <u>1 per</u>	day	
			Equipme	ent Description			
		craper:	Cat 637				
Sun	- port Equipment -Load	Dozer:	NA Cat D8	T - 8SU			
	-Dump	Area:	NA				
Road N	Additional Additi		CAT 14		1		
	-Water	Truck:	water	Tanker, 3,500 Ga			
<u>Cost Breakdown</u> :	Scraper Wor	k Team Doz	zer	Support Equi Load Area	pment Dump Area	Maintenan Motor Grader	ce Equipment Water Tru
%Utilization-machine	:: 100		NA	100	NA	100	1
Ownership cost/hou	:: \$264.49		NA	\$124.85	NA	\$114.80	\$14
Operating cost/hour			NA	\$97.63	NA	\$79.39	\$33.
%Utilization-rippe			NA	25	NA	NA	1
Ripper own. cost/hou			NA	\$13.10	NA	\$0.00	\$0.
Ripper op. cost/hou			NA	\$1.83	NA	\$0.00	\$0
Operator cost/hou Unit Subtotal			NA NA	\$40.04 \$277.44	NA NA	\$46.87 \$241.06	\$28 \$76
Number of Unit			0	\$277.44	0	\$241.00	\$70.
Group Subtotals		\$2,43	-	Support:	\$277.44	Maint:	\$317.99
Total work team co	JANTITIES						
Initial volun Loose volun	le: 489,000		CCY LCY	Swell fact			
	ource of estimated vo e of estimated swell f		Division Cat Han		Mining & Safety	7	
HOURLY PRO	DUCTION			S	out (values) D	aia	
				-	Bowl (volume) Ba		CI I
Material weigh Material descriptio		k - 25%	Rock,		Volume: 24.00 Volume: 34.00		LCY LCY
	/ J /0 L'altii						

<u>0.80</u> Minutes

0.60 Minutes

Payload Capacity: 30.79 LCY

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time:

Job Condition Correction:

Site Altitude: 4729 feet

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

Travel Time:

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1600.00	0.00	3.00	3.00	2800	0.84

Haul Time: 0.84 minutes

#### **Return Route:**

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1600.00	0.00	3.00	3.00	2949	0.68

Return Time: 0.68 minutes 2.92 minutes Total Scraper team cycle time:

Total Beraper team eyele time.	2.72	mmutes
Adjusted for job conditions:	494.59	LCY/Hour
Selected Number of Scrapers:	4	Scraper(s)
ted single scraper team (unit) hourly production:	1,978.36	LCY/Hour

Adjuste Adjusted multiple scraper team (thirt) hourly production: 1,978.36

Unadjusted unit production/hour: 595.89 LCY/Hour Optimal Number of Scrapers per push dozer:

### JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	247.17	Hours
Unit cost:	\$1.530	/LCY	Total job cost:	\$747,969	

LCY/Hour

Site: Windsor East Mi	ne	Permit Ac	tion: 2023 Permit Application	F	ermit/Job#: <u>M2</u>	022042
PROJECT IDENT	IFICATION					
I ROJECT IDENT						
Task #: 003		tate: Color			viation: None	
Date: 3/24/2	023 Cou	nty: Weld		Fil	ename: M042-	003
User: <u>PSH</u>						
Agency or c	rganization name:	DRMS				
HOURLY EQUIP	MENT		COST	Shift basis: <u>1 per</u>	dav	
		r ·		<u></u>	<u></u>	
	-Se		ipment Description t 637G			
	-	Dozer: NA	L			
Suppor	t Equipment -Load		t D8T - 8SU			
Road Mai	-Dump ntenance –Motor C		AT 14M			
Road Ma	-Water		ter Tanker, 3,500 G	al.		
<u>Cost Breakdown</u> :	Scraper Worl Scraper	<u>k Team</u> Dozer	Support Equ Load Area	ipment Dump Area	Maintenanc Motor Grader	e Equipr Water
	Scraper			Dump Area		water
%Utilization-machine:	100	N		NA	100	
Ownership cost/hour:	\$264.49	N		NA	\$114.80	
Operating cost/hour:	\$296.10	N		NA	\$79.39	
%Utilization-ripper:	NA	N.		NA	NA ©0.00	
Ripper own. cost/hour:	NA NA	N.		NA	\$0.00	
Ripper op. cost/hour: Operator cost/hour:	\$47.07	N. N.		NA NA	\$0.00 \$46.87	
Unit Subtotals:	\$607.66	N		NA NA	\$40.87	
Number of Units:	4		$\frac{4}{0}$ $\frac{5277.44}{1}$	0	3241.00	
Group Subtotals:	Work:	\$2,430.64	Support:	\$277.44	Maint:	\$31
Total work team cost/			rr	+-//		
	1001. <u>\$3,020.07</u>					
MATERIAL QUA	NTITIES					
Initial volume:	68,600	CCY	Swell fac	tor: 1.000		
Loose volume:	68,600	LCY	7			
	ce of estimated vol		sion of Reclamation	, Mining & Safety	4	
Source o	f estimated swell fa	actor: Cat	Handbook			
HOURLY PRODU	ICTION					
			Scraper	Bowl (volume) Ba	isis:	
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			Volume: 29.00		CY
Payload Capacity:	51.00 LCY			Capacity: <b>29.00</b>		CY

#### Cycle Time:

Scraper Loading Time: Maneuver and Spread Time:

Job Condition Correction:

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

Travel Time:

Road Condition: 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	1600.00	0.00	3.00	3.00	2800	0.77

Haul Time: 0.77 minutes

#### Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1600.00	0.00	3.00	3.00	2949	0.68

Return Time:	0.68	minutes
Total Scraper team cycle time:	2.85	minutes
Adjusted for job conditions:	506.74	LCY/Hour
Selected Number of Scrapers:	4	Scraper(s)
Adjusted single scraper team (unit) hourly production:	2,026.95	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	2,026.95	LCY/Hour
Unadjusted unit production/hour: 610.53 I CV/Hour		

Unadjusted unit production/hour: <u>610.53</u> LCY/Hour Optimal Number of Scrapers per push dozer:

### JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	33.84	Hours
Unit cost:	\$1.493	/LCY	Total job cost:	\$102,414	

<u>0.80</u> Minutes

0.60 Minutes

## SITE MAINTENANCE

Т	Task description:	Dewatering			
Site: _	Windsor East Mine	Permit Action:	2023 Permit Application	Permit	/Job#: <u>M2022042</u>
<u>PROJEC</u>	CT IDENTIFICATIO	<u>DN</u>			
Task #	: 004	State: Colorado		Abbreviation:	None
Date	: 3/24/2023	County: Weld		Filename:	M042-004
User	: PSH				
	Agency or organiz	ation name: DRMS			
<u>UNIT CO</u>	<u>DSTS</u>				

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Dewatering	80.00	Centrifugal pump - 90M, 6 in.	200.00	EA	\$51.75	\$10,350.00

Job Hours: 0.00

Total Cost: \$10,350.00

# **REVEGETATION WORK**

Task descr	ption:	Revegetation - 9	6 Acres			
ite: <u>Windso</u>	r East Mine	Pe	rmit Action:	2023 Permit Application	Permit/Jol	o#: <u>M2022042</u>
<b>PROJECT</b>	<u>IDENTIFIC</u>	CATION				
Task #:	005	State:	Colorado		Abbreviation:	None
i usk //.		Country	Weld		Filename:	M042-005
Date:	3/24/2023	County:	weid		i nename.	101042-005

# **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
0-20-20, 4-8-12, 10-10-10	2.00	pound	\$0.23	\$0.46
			Total Fertilizer Materials	
			Cost/Acre	\$0.46

### Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$39.64
	Total Fertilizer Application Cost/Acre	\$39.64

## **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.18
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$407.58

### **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.10	3.90	\$2.85
Switchgrass - Pathfinder	0.67	5.98	\$8.54
Mountain Brome - Bromar	1.74	2.80	\$6.61
Sideoats Grama - Butte	1.80	5.91	\$16.20
Western Wheatgrass - Arriba	1.74	4.39	\$11.31
Sweetvetch, Utah or Northern	1.02	0.46	\$76.50
Needle and Thread	1.29	3.41	\$53.99
Rose, Meadow	0.87	0.74	\$21.75
Prairie Sandreed - Goshen	0.48	3.01	\$4.97

Penstemon, Rocky Mountain	0.46	7.21	\$13.57
Globemallow, Gooseberry Leaf	0.26	2.94	\$25.22
Totals Seed Mix	10.43	40.75	\$241.51

## 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
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Herbicide - Tordon 22K @ 1.0 pt/ac	117.00	ACRE	\$13.40	\$1,567.80
Total Mulch Materials Cost/Acre				\$2,410.52

## Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$73.00
Weed spray, truck, aquatic area, annuals [DMG]		\$22.81
Weed spray, truck, aquatic area, nox. [DMG]		\$62.72
Weed spray, truck, non-aquatic area, nox. [DMG]		\$62.72
Weed spray, truck, non-aquatic areas, ann. [DMG]		\$22.81
	<b>Total Mulch Application Cost/Acre</b>	\$244.06

## **NURSERY STOCK PLANTING**

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

### JOB TIME AND COST

Estimated	No. of Acres: Failure Rate: g Work Items:	25%	Cost /Acre: Cost /Acre*: LING,SEEDING,MU	
Initial Job Cost: Reseeding Job Cost: Total Job Cost: Job Hours: 1	\$85,818.48 \$429,092			

## SITE MAINTENANCE

,	Task description:	Cell C Liner Mobilization			
Site:	Windsor East Mine	Permit Action:	2023 Permit Application	Permit	/Job#: <u>M2022042</u>
<u>PROJE</u>	CT IDENTIFICATIO	<u>DN</u>			
Task ≉	#: 006	State: Colorado		Abbreviation:	None
Date	e: 3/24/2023	County: Weld		Filename:	M042-006
Use	r: PSH				
	Agency or organiz	zation name: DRMS			
UNIT CO	<u>DSTS</u>				

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Cell C Liner	20.00	USER PROVIDED	1.00	1	\$150,000.00	\$150,000.00
Mobilization -		ITEM				
MMM Provided						

Job Hours: 20.00

Total Cost: \$150,000.00

Site: <u>Windsor East Mi</u>	ne	Perm	it Action:	2023 Permit Application	P	ermit/Job#: <u>M2</u>	022042
PROJECT IDENT	<b>IFICATION</b>						
Task #: 007		State:	Colorado		Abbray	viation: None	
Date: $3/24/2$			Weld			ename: M042-	007
User: PSH		• _					
Agency or o	rganization name	: DRM	IS				
HOURLY EQUIP	MENT_			COSTSI	nift basis: <u>1 per</u>	<u>day</u>	
				nt Description			
		Scraper:	Cat 637	G			
Suppor	t Equipment -Loa	-Dozer:	NA Cat D87	C - 8SU			
Suppor		p Area:	CAT 83				
Road Mai	ntenance – Motor		CAT 14				
	-Water	Truck:	Water T	anker, 3,500 Gal	•		
Cost Breakdown:	Scraper Wo	rk Team		Support Equip	oment	Maintenanc	e Equipn
<u>Cost Breakern</u> t	Scraper	Doz	zer	Load Area	Dump Area	Motor Grader	Water
%Utilization-machine:	100		NA	100	100	100	
Ownership cost/hour:	\$264.49		NA	\$124.85	\$241.92	\$114.80	
Operating cost/hour:	\$296.10		NA	\$97.63	\$218.66	\$79.39	
%Utilization-ripper:	NA		NA	25	NA	NA	
Ripper own. cost/hour:	NA		NA	\$13.10	\$0.00	\$0.00	
Ripper op. cost/hour:	NA		NA	\$1.83	\$0.00	\$0.00	
Operator cost/hour:	\$47.07		NA	\$40.04	\$31.50	\$46.87	
Unit Subtotals:	\$607.66		NA	\$277.44	\$492.08	\$241.06	
Number of Units:	4		0	1	1	1	
Group Subtotals:	Work:	\$2,43	0.64	Support:	\$769.52	Maint:	\$317
Total work team cost/	hour: <u>\$3,518.15</u>						
MATERIAL QUA	NTITIES						
Initial volume:	115,000		CCY	Swell facto	or: 1.000		
Loose volume:	115,000		LCY				
Sour	ce of estimated vo	olume:		of Reclamation,	Mining & Safety	7	
Source o	f estimated swell	factor:	Cat Hand	lbook			
HOURLY PRODU	<b>CTION</b>						
				Scraper Bo	<u>owl (volume) Ba</u>	<u>sis:</u>	
Material weight:	2,900 lbs/LCY			Struck V	Volume: 24.00	L	CY
Material description:	Sand and gravel	- Dry		Heaped V			CY
Rated Payload: Payload Capacity:	81,600 pounds 28.14 LCY			Average V Adjusted Ca			CY CY

### Cycle Time:

Scraper Loading Time: Maneuver and Spread Time:

Job Condition Correction:

Site	Altitude:	4729	feet

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

Travel Time:

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	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	0.48

Return Time:	0.48	minutes
Total Scraper team cycle time:	2.52	minutes
Adjusted for job conditions:	556.06	LCY/Hour
Selected Number of Scrapers:	4	Scraper(s)
Adjusted single scraper team (unit) hourly production:	2,224.24	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	2,224.24	LCY/Hour
Unadjusted unit production/hour: 669.95 LCY/Hour		

Unadjusted unit production/hour: <u>669.95</u> LCY/Hour Optimal Number of Scrapers per push dozer:

### JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	51.70	Hours
Unit cost:	\$1.582	/LCY	Total job cost:	\$181,899	

<u>0.80</u> Minutes

0.60 Minutes

Site: <u>Windsor East Mi</u>	ne	Permit A	ction:	2023 Permit Application	Р	ermit/Job#: <u>M2</u>	2022042
PROJECT IDENT	IFICATION						
Task #: 008	Stat		orado			viation: None	
Date: 3/24/20 User: PSH	023 Count	y: Wel	d		Fil	ename: M042-	-008
Agency or o	rganization name:	DRMS					
HOURLY EQUIPM	MENT			COSTS	Shift basis: <u>1 per</u>	dav	
<b>`</b>		Б					
	-Scra	-	upmen at 6370	t Description			
	-Do	Dzer: N.	A				
Suppor	t Equipment -Load A		at D8T				
Road Mair	-Dump A ntenance –Motor Gra		AT 836 AT 141				
Road Man	-Water Tr			unker, 3,500 Ga	1.		
<u>Cost Breakdown</u> :	Scraper Work 7			Support Equi	1	Maintenance Motor Grader	e Equip Wate
	Scraper	Dozer		Load Area	Dump Area	Motor Grader	wate
%Utilization-machine:	100	Ν	JA	100	100	100	
Ownership cost/hour:	\$264.49		JA	\$124.85	\$241.92	\$114.80	
Operating cost/hour:	\$296.10		JA	\$97.63	\$218.66	\$79.39	
%Utilization-ripper:	NA		JA	25	NA	NA	
Ripper own. cost/hour:	NA		JA	\$13.10	\$0.00	\$0.00	
Ripper op. cost/hour:	NA		JA	\$1.83	\$0.00	\$0.00	
Operator cost/hour:	\$47.07		JA	\$40.04	\$31.50	\$46.87	
Unit Subtotals:	\$607.66	Ν	JA	\$277.44	\$492.08	\$241.06	
Number of Units:	4		0	1	1	1	
Group Subtotals:	Work:	\$2,430.64	•	Support:	\$769.52	Maint:	\$31
Total work team cost/h	nour: <b>\$3,518.15</b>						
MATEDIAL OUA	NTITIES						
MATERIAL QUA		~	<b>x</b> 7	~	1 000		
Initial volume: Loose volume:	<u>18,000</u> <b>18,000</b>	CC LC		Swell fact	tor: <u>1.000</u>		
	ce of estimated volur f estimated swell fact		vision o Handt		Mining & Safety	I	
HOURLY PRODU	CTION						
				Scraper B	owl (volume) Ba	<u>sis:</u>	
Material weight:	2,900 lbs/LCY			Struck	Volume: 24.00	L	CY
Material description:	Sand and gravel - D	Dry					
Rated Payload:	81,600 pounds	- Dry Heaped Volume: 34.00 LCY Average Volume: 29.00 LCY					CY

<u>0.80</u> Minutes

0.60 Minutes

### Cycle Time:

Scraper Loading Time: Maneuver and Spread Time:

Job Condition Correction:

Site Altitude: 4729 feet

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

Travel Time:

Road Condition: Very hard, smooth, asphalt or concrete, no tire penetration 1.2

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	1.20	1.20	2952	0.55

Haul Time: 0.55 minutes

#### Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	1.20	1.20	2963	0.45

Return Time:	0.45	minutes
Total Scraper team cycle time:	2.40	minutes
Adjusted for job conditions:	583.86	LCY/Hour
Selected Number of Scrapers:	4	Scraper(s)
Adjusted single scraper team (unit) hourly production:	2,335.45	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	2,335.45	LCY/Hour
Unadjusted unit production/hours 702.45 I CV/Hour		

Unadjusted unit production/hour: 703.45 LCY/Hour Optimal Number of Scrapers per push dozer:

### JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	7.71	Hours
Unit cost:	\$1.506	/LCY	Total job cost:	\$27,115	

Site: Windsor East Mi		mit Action:	2023 Permit Application	P	ermit/Job#: <u>M</u>	2022042
PROJECT IDENT	IFICATION					
Task #: $009$ Date: $3/24/20$	State:	Colorado			viation: None	000
Date: $3/24/24$ User: PSH	023 County:	Weld		F1	ename: M042	-009
	rganization name: DR	MS				
Agency of 0		WI5				
HOURLY EQUIP	MENT		COSTS	hift basis: <u>1 per</u>	<u>day</u>	
		Equipmer	nt Description			
	-Scraper:		G			
Suppor	-Dozer: t Equipment -Load Area:		□ - 8SU			
Suppor	-Dump Area:					
Road Mai	ntenance – Motor Grader:					
	-Water Truck:	Water 1	anker, 3,500 Ga	l.		
Cost Breakdown:	Scraper Work Tean	1	Support Equi	pment	Maintenan	ce Equipi
	÷	ozer	Load Area	Dump Area	Motor Grader	Water
%Utilization-machine:	100	NA	100	100	100	
Ownership cost/hour:	\$264.49	NA	\$124.85	\$241.92	\$114.80	
Operating cost/hour:	\$296.10	NA	\$97.63	\$218.66	\$79.39	
%Utilization-ripper:	NA	NA	25	NA	NA	
Ripper own. cost/hour:	NA	NA	\$13.10	\$0.00	\$0.00	
Ripper op. cost/hour:	NA	NA	\$1.83	\$0.00	\$0.00	
Operator cost/hour:	\$47.07	NA	\$40.04	\$31.50	\$46.87	
Unit Subtotals:	\$607.66	NA	\$277.44	\$492.08	\$241.06	
Number of Units:	4	0	1	1	1	
Group Subtotals:	Work: \$2,4	30.64	Support:	\$769.52	Maint:	\$31
Total work team cost/	hour: <u>\$3,518.15</u>					
MATERIAL QUA	NTITIES					
Initial volume:	90,000	CCY	Swell fact	or: 1.000		
Loose volume:	90,000	LCY				
	ce of estimated volume:			Mining & Safety	7	
Source o	f estimated swell factor:	Cat Hand	lbook			
HOURLY PRODU	CTION					
			<u>Scraper B</u>	<u>owl (volume) Ba</u>	<u>sis:</u>	
Material weight:	2,900 lbs/LCY		Struck Y	Volume: _24.00	I	LCY
Material description:	Sand and gravel - Dry 81,600 pounds		Heaped '			LCY
Rated Payload:			Average V	Volume: 29.00	т	LCY

### Cycle Time:

Scraper Loading Time: Maneuver and Spread Time:

Job Condition Correction:

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

Travel Time:

Road Condition: Very hard, smooth, asphalt or concrete, no tire penetration 1.2

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	1.20	1.20	2952	0.55

Haul Time: 0.55 minutes

#### Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	1.20	1.20	2963	0.45

Return Time:	0.45	minutes
Total Scraper team cycle time:	2.40	minutes
Adjusted for job conditions:	583.86	LCY/Hour
Selected Number of Scrapers:	4	Scraper(s)
Adjusted single scraper team (unit) hourly production:	2,335.45	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	2,335.45	LCY/Hour
Unadjusted whith an eduction /hours 702.45 ICV/II.		

Unadjusted unit production/hour: 703.45 LCY/Hour Optimal Number of Scrapers per push dozer:

### JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	38.54	Hours
Unit cost:	\$1.506	/LCY	Total job cost:	\$135,577	

<u>0.80</u> Minutes

0.60 Minutes

## DOZERGRADER WORK

Task description:	<b>Cell C - Reservoir Grading</b>			
e: Windsor East Mine	Permit Action:	2023 Permit Application	Permit/Jo	b#: <u>M2022042</u>
PROJECT IDENTIFIC	CATION			
Task #:     010       Date:     3/24/2023       User:     PSH	State:ColoradoCounty:Weld		Abbreviation: Filename:	None M042-010
Agency or organi	zation name: DRMS			
HOURLY EQUIPMEN	<b>JT COST</b>			
	D8T - 8SU			
Horsepower:	001 - 000			
Blade Type:				
	ank ripper			
Shift Basis: 1 pe	er day	_		
Data Source:				
Cost Breakdown:				
Cost Divardo wil		Utilization %		
Ownership Cost/Hour:	\$124.85	NA		
Operating Cost/Hour:	\$97.63	100		
Ripper own. Cost/Hour:	\$13.10	NA		
	\$0.73	10		
Ripper op. Cost/Hour:	ψ0.75			
Ripper op. Cost/Hour: Operator Cost/Hour:	\$40.04	NA		
		NA		

\$276.35/LCY

Unit cost:

Total job time:200.00 HoursTotal job cost:\$55,270