

## COST SUMMARY WORK

Task description: MD-01 Reclamation Cost Estimate

Site: Maple Leaf Mine

Permit Action: MD-01

Permit/Job#: P2016001

### PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 4/29/2020

County: Gunnison

Filename: P001-000

User: DMC

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Seal 9 boreholes	BOREHOLE	1	9.00	\$21,438
02a	Reclamation grading	LOADER	1	27.78	\$2,823
03a	Revegetate disturbed areas	REVEGE	1	1.00	\$758
04a	Mobilize reclamation crew and equipment	MOBILIZE	1	4.00	\$872
<b><u>SUBTOTALS:</u></b>				<b>41.78</b>	<b>\$25,891</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02  
Performance bond: 1.05  
Job superintendent: 0.00  
Profit: 10.00

Total = \$523

Total = \$272

Total = \$0

Total = \$2,589

TOTAL O & P = \$3,384

CONTRACT AMOUNT (direct + O & P) = \$29,275

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$0

Total = \$0

Engineering work and/or contract/bid preparation: 0.00

Total = \$0

Reclamation management and/or administration: 5.00

\$1,464

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$4,848

**TOTAL BOND AMOUNT (direct + indirect) = \$30,739**

## BOREHOLE SEALING WORK

Task description: Seal 9 boreholes

Site: Maple Leaf Mine

Permit Action: MD-01

Permit/Job#: P2016001

### PROJECT IDENTIFICATION

Task #: 01A

State: Colorado

Abbreviation: None

Date: 4/29/2020

County: Gunnison

Filename: P001-01a

User: DMC

Agency or organization name: DRMS

### UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Bore Hole (9 holes)	Portland cement grout - 2 in. (labor, equip, materials)	2	500 ea	4,500.00	LF	\$4.76	\$21,438.00

Job Hours: 9.00

Total Cost: \$21,438.00

**WHEEL LOADER – LOAD AND CARRY WORK**Task description: **Reclamation grading**Site: **Maple Leaf Mine**Permit Action: **MD-01**Permit/Job#: **P2016001****PROJECT IDENTIFICATION**Task #: **02A**State: **Colorado**Abbreviation: **None**Date: **4/29/2020**County: **Gunnison**Filename: **P001-02a**User: **DMC**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **CAT 450E**Attachment 1: **ROPS Cab**Horsepower: **101**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$29.73	NA
Operating Cost/Hour:	\$31.22	100
Operator Cost/Hour:	\$40.65	NA
Total Unit Cost/Hour:	\$101.60	
Total Fleet Cost/Hour:	\$101.60	

**MATERIAL QUANTITIES**Initial volume: **1,613**

CCY

Swell factor: **1.000**Loose volume: **1,613**

LCY

Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION****Loader Cycle Time:**Unadjusted Basic Cycle Time (load, dump, maneuver): **0.475** minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Truck Ownership:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.020	minutes
Adjusted Basic Cycle Time:		0.455	minutes

**Rolling Resistance – Road Conditions**Haul: **Soft, rutted dirt, no maintenance or water, 4" tire penetration 8.0**Return: **Soft, rutted dirt, no maintenance or water, 4" tire penetration 8.0****Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	50	0.00	8.00	8.00	0.0476	(Cat HB)

Return Route:	50	0.00	8.00	8.00	0.0476	(Cat HB)
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Total Travel Time: 0.0951 minutes  
Total Cycle Time: 0.5501 minutes

Load Bucket Capacity

Rated Capacity: 1.50 LCY (heaped)  
Bucket Fill Factor: 0.450 Rock - Poorly blasted (40% - 50%) 0.450  
Adjusted Capacity: 0.68 LCY

Job Condition Correction Factors

Site Altitude: 8200 feet

		Source
Altitude Adj:	<u>0.95</u>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.79</u>	multiplier

Unadjusted Hourly Unit Production: 73.62 LCY/Hour  
Adjusted Hourly Unit Production: 58.05 LCY/Hour  
Adjusted Hourly Fleet Production: 58.05 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 27.79 Hours  
Unit cost: \$1.750 /LCY Total job cost: \$2,823

**REVEGETATION WORK**Task description: Revegetate disturbed areasSite: Maple Leaf MinePermit Action: MD-01Permit/Job#: P2016001**PROJECT IDENTIFICATION**Task #: 03AState: ColoradoAbbreviation: NoneDate: 4/29/2020County: GunnisonFilename: P001-03aUser: DMCAgency or organization name: DRMS**FERTILIZING****Materials**

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

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
Weed control spraying (MEANS 31 31 16.13 3100)	\$193.60
<b>Total Tilling Cost/Acre</b>	<b>\$193.60</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Bluebunch Wheatgrass - Secar	7.42	23.85	\$80.69
Mountain Brome - Bromar	3.86	6.20	\$14.67
Sandberg Bluegrass - VNS	0.74	15.71	\$6.22
Idaho Fescue	1.58	19.95	\$14.97
Prairie Junegrass	0.30	15.95	\$7.80
Yarrow, Western	0.50	30.40	\$20.90
<b>Totals Seed Mix</b>	<b>14.40</b>	<b>112.06</b>	<b>\$145.25</b>

**Application**

Description	Cost /Acre
Broadcast seeding [DMG]	\$267.22
<b>Total Seed Application Cost/Acre</b>	<b>\$267.22</b>

**MULCHING and MISCELLANEOUS****Materials**

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

**Application**

Description	Cost /Acre
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</b>

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres: 1                      Cost /Acre: \$606.07  
 Estimated Failure Rate: 25%                      Cost /Acre\*: \$606.07  
 \*Selected Replanting Work Items: TILLING,SEEDING

Initial Job Cost: **\$606.07**  
 Reseeding Job Cost: **\$151.52**  
 Total Job Cost: **\$758**  
 Job Hours: **1.00**

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Moblilize reclamation crew and equipment**Site: **Maple Leaf Mine**Permit Action: **MD-01**Permit/Job#: **P2016001****PROJECT IDENTIFICATION**Task #: **04A**State: **Colorado**Abbreviation: **None**Date: **4/29/2020**County: **Gunnison**Filename: **P001-04a**User: **DMC**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:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
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

**NON ROADABLE EQUIPMENT:**

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
CAT 450E	9.80	\$29.73	\$67.39	1	\$97.12	\$67.39	\$250.00
Subtotals:					<b>\$97.12</b>	<b>\$67.39</b>	<b>\$250.00</b>

**ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$12.96	1	\$12.96	\$12.96
Subtotals:			<b>\$12.96</b>	<b>\$12.96</b>

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>GUNNISON</u>	
Total one-way travel distance:	<u>15.00</u>	miles
Average Travel Speed:	<u>30.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$858.75</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$12.96</u>
** one round trip, no haul rig:	

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.50</u>	<u>0.50</u>
Return Time (Hours):	<u>0.50</u>	<u>0.50</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>2.00</u>	<u>1.00</u>

**JOB TIME AND COST**

Total job time:	<u>4.00</u>	Hours
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Total job cost:	<u>\$872</u>
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