

## COST SUMMARY WORK

Task description: Reclamation Cost Summary

Site: C8 Drilling NOI

Permit Action: 2019 MD-1

Permit/Job#: P2016025

### PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 4/26/2019

County: Gunnison

Filename: P025-000

User: DMC

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Backfill drill holes with cuttings	MINESEAL	1	53.00	\$3,050
02a	Seal drill holes	BOREHOLE	1	53.00	\$1,240
03a	Spread topsoil over drill pads	LOADER	1	7.28	\$672
04a	Revegetate drill pad areas	REVEGE	1	2.00	\$2,758
05a	Mobilize reclamation crew/equipment	MOBILIZE	1	4.97	\$1,045
<b><u>SUBTOTALS:</u></b>				<b>120.25</b>	<b>\$8,765</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$177

Performance bond: 1.05

Total = \$92

Job superintendent: 0.00

Total = \$0

Profit: 10.00

Total = \$876

TOTAL O & P = \$1,146

CONTRACT AMOUNT (direct + O & P) = \$9,911

#### 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

\$496

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$1,641

**TOTAL BOND AMOUNT (direct + indirect) = \$10,406**

## SAFEGUARDING UNDERGROUND OPENINGS

Task description: Backfill drill holes with cuttings

Site: C8 Drilling NOI

Permit Action: 2019 MD-1

Permit/Job#: P2016025

### PROJECT IDENTIFICATION

Task #: 01A

State: Colorado

Abbreviation: None

Date: 4/29/2019

County: Gunnison

Filename: P025-01a

User: DMC

Agency or organization name: DRMS

### UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
51 drill holes, avg. 700' depth	51 x 700' x 4"	Shaft closure - backfilling, by hand	231.00	CY	\$13.00	\$3,003.00
2 existing holes, avg. 500' depth	2 x 500' x 3"	Shaft closure - backfilling, by hand	3.60	CY	\$13.00	\$46.80

Job Hours: 53.00

Total Cost: \$3,049.80

## BOREHOLE SEALING WORK

Task description: Seal drill holes

Site: C8 Drilling NOI

Permit Action: 2019 MD-1

Permit/Job#: P2016025

### PROJECT IDENTIFICATION

Task #: 02A

State: Colorado

Abbreviation: None

Date: 4/29/2019

County: Gunnison

Filename: P025-02a

User: DMC

Agency or organization name: DRMS

### UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Plug 53 drill holes	Portland cement grout - 4 in. (labor, equip, materials)	4	5	265.00	LF	\$4.68	\$1,240.20

Job Hours: 53.00

Total Cost: \$1,240.00

**WHEEL LOADER – LOAD AND CARRY WORK**Task description: Spread topsoil over drill padsSite: C8 Drilling NOIPermit Action: 2019 MD-1Permit/Job#: P2016025**PROJECT IDENTIFICATION**Task #: 03AState: ColoradoAbbreviation: NoneDate: 4/30/2019County: GunnisonFilename: P025-03aUser: DMCAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: CAT 450EAttachment 1: ROPS CabHorsepower: 101Shift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$24.67	NA
Operating Cost/Hour:	\$26.68	100
Operator Cost/Hour:	\$40.90	NA
Total Unit Cost/Hour:	\$92.25	
Total Fleet Cost/Hour:	\$92.25	

**MATERIAL QUANTITIES**Initial volume: 1,076

CCY

Swell factor: 1.000Loose volume: 1,076

LCY

Source of estimated volume: 34 Drill Pads x 50' x 50' x 4" avg. depthSource 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:	Material up to 1/8" diameter 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(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:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.010	minutes
Adjusted Basic Cycle Time:		0.465	minutes

**Rolling Resistance – Road Conditions**Haul: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Return: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0**Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
--	------------------	-------------------	---------------------	-------------------	--------------------------	--------

Haul Route:	50	0.00	4.00	4.00	0.0317	(Cat HB)
Return Route:	50	0.00	4.00	4.00	0.0317	(Cat HB)

Total Travel Time: 0.0635 minutes  
Total Cycle Time: **0.5285** minutes

Load Bucket Capacity

Rated Capacity: 1.50 LCY (heaped)  
Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100  
Adjusted Capacity: **1.65** LCY

Job Condition Correction Factors

Site Altitude: 10000 feet

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

Unadjusted Hourly Unit Production: 187.33 LCY/Hour  
Adjusted Hourly Unit Production: 147.71 LCY/Hour  
Adjusted Hourly Fleet Production: **147.71** LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Loader(s) Total job time: **7.28** Hours  
Unit cost: \$0.625 /LCY Total job cost: **\$672**

**REVEGETATION WORK**Task description: Revegetate drill pad areasSite: C8 Drilling NOIPermit Action: 2019 MD-1Permit/Job#: P2016025**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 4/30/2019County: GunnisonFilename: P025-04aUser: 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
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alpine Fescue	6.00	179.06	\$107.04
Canby Bluegrass - Canbar	5.00	106.29	\$48.65
Penstemon, Rocky Mountain	1.00	15.67	\$30.21
Sainfoin - Shoshone	3.00	1.31	\$5.10
<b>Totals Seed Mix</b>	<b>15.00</b>	<b>302.34</b>	<b>\$191.00</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
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$288.00	\$576.00
<b>Total Mulch Materials Cost/Acre</b>				<b>\$576.00</b>

**Application**

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$68.78
<b>Total Mulch Application Cost/Acre</b>	<b>\$68.78</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: 2 Cost /Acre: \$1,103.00  
 Estimated Failure Rate: 25% Cost /Acre\*: \$1,103.00  
 \*Selected Replanting Work Items: TILLING, SEEDING, MULCHING

Initial Job Cost: **\$2,206.00**  
 Reseeding Job Cost: **\$551.50**  
 Total Job Cost: **\$2,758**  
 Job Hours: **2.00**

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Mobilize reclamation crew/equipment**Site: **C8 Drilling NOI**Permit Action: **2019 MD-1**Permit/Job#: **P2016025****PROJECT IDENTIFICATION**Task #: **05A**State: **Colorado**Abbreviation: **None**Date: **4/30/2019**County: **Gunnison**Filename: **P025-05a**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:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

**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	\$24.67	\$88.67	1	\$113.34	\$88.67	\$250.00
Subtotals:					<b>\$113.34</b>	<b>\$88.67</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.	\$12.23	1	\$12.23	\$12.23
Subtotals:			<b>\$12.23</b>	<b>\$12.23</b>



**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>GUNNISON</u>	
Total one-way travel distance:	<u>26.00</u>	miles
Average Travel Speed:	<u>35.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,026.81</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$18.17</u>
** one round trip, no haul rig:	

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.74</u>	<u>0.74</u>
Return Time (Hours):	<u>0.74</u>	<u>0.74</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>2.49</u>	<u>1.49</u>

**JOB TIME AND COST**

Total job time:	<u>4.97</u>	Hours
-----------------	-------------	-------

Total job cost:	<u>\$1,045</u>
-----------------	----------------