

## COST SUMMARY WORK

Task description: Reclamation Cost Estimate

Site: Lucky Strike-Mineral  
Exploration

Permit Action: 2019-12-03

Permit/Job#: P2019013

### PROJECT IDENTIFICATION

Task #: 000  
Date: 12/3/2019  
User: DMC

State: Colorado  
County: Gunnison

Abbreviation: None  
Filename: P013-000

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Seal underground openings	MINESEAL	1	40.00	\$15,275
02a	Seal Boreholes	BOREHOLE	1	24.00	\$7,497
03a	Final grading - pad areas, backfill trenches	LOADER	1	49.75	\$5,055
04a	Revegetate disturbed area	REVEGE	1	8.00	\$1,561
05a	Mobilize reclamation crew/equipment	MOBILIZE	1	4.00	\$880
<b><u>SUBTOTALS:</u></b>				<b>125.75</b>	<b>\$30,268</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$611
Performance bond:	1.05	Total =	\$318
Job superintendent:	62.88	Total =	\$4,363
Profit:	10.00	Total =	\$3,027

TOTAL O & P = \$8,319

CONTRACT AMOUNT (direct + O & P) = \$38,587

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	<u>\$0</u>	Total =	<u>\$0</u>
Engineering work and/or contract/bid preparation:	<u>0.00</u>	Total =	<u>\$0</u>
Reclamation management and/or administration:	<u>5.00</u>		<u>\$1,929</u>

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$10,248

**TOTAL BOND AMOUNT (direct + indirect) = \$40,516**

## SAFEGUARDING UNDERGROUND OPENINGS

Task description: Seal underground openings

Site: Lucky Strike-Mineral  
Exploration

Permit Action: 2019-12-03

Permit/Job#: P2019013

### PROJECT IDENTIFICATION

Task #: 01A  
Date: 12/3/2019  
User: DMC

State: Colorado  
County: Gunnison

Abbreviation: None  
Filename: P013-01a

Agency or organization name: DRMS

### UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Adit	8' x 8' x 8'	Adit closure - grated door (per opening)	1.00	EA	\$3,898.80	\$3,898.80
Shaft	5' x 5' x 5'	Shaft closure - grate (per opening)	1.00	EA	\$11,376.00	\$11,376.00

Job Hours: 40.00

Total Cost: \$15,274.80

## BOREHOLE SEALING WORK

Task description: Seal Boreholes

**Lucky Strike-Mineral**  
Site: Exploration

Permit Action: 2019-12-03

Permit/Job#: P2019013

### PROJECT IDENTIFICATION

Task #: 02A  
Date: 12/3/2019  
User: DMC

State: Colorado  
County: Gunnison

Abbreviation: None  
Filename: P013-02a

Agency or organization name: DRMS

### UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Boreholes (3)	Portland cement grout - 4 in. (labor, equip, materials)	4	500	1,500.00	LF	\$5.00	\$7,497.00

Job Hours: 24.00

Total Cost: \$7,497.00

**WHEEL LOADER – LOAD AND CARRY WORK**Task description: **Final grading - pad areas, backfill trenches**

Site: **Lucky Strike-Mineral Exploration** Permit Action: **2019-12-03** Permit/Job#: **P2019013**

**PROJECT IDENTIFICATION**

Task #: **03A** State: **Colorado** Abbreviation: **None**  
 Date: **12/3/2019** County: **Gunnison** Filename: **P013-03a**  
 User: **DMC**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **CAT 450E** Horsepower: **101**  
 Attachment 1: **ROPS Cab** 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: **5,000** CCY Swell factor: **1.000**  
 Loose volume: **5,000** 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:	Inconsistent operation 0.04	0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		0.060	minutes
Adjusted Basic Cycle Time:		0.535	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
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Haul Route:	25	0.00	8.00	8.00	0.0238	(Cat HB)
Return Route:	25	0.00	8.00	8.00	0.0238	(Cat HB)

Total Travel Time: 0.0476 minutesTotal Cycle Time: **0.5826** minutesLoad Bucket Capacity

Rated Capacity:	<u>1.50</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.825</u>	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	<u><b>1.24</b></u>	LCY

Job Condition Correction FactorsSite Altitude: 9200 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:	<u>127.46</u>	LCY/Hour
Adjusted Hourly Unit Production:	<u>100.50</u>	LCY/Hour
Adjusted Hourly Fleet Production:	<u><b>100.50</b></u>	LCY/Hour

**JOB TIME AND COST**Fleet size: 1 Loader(s) Total job time: **49.75** HoursUnit cost: \$1.011 /LCY Total job cost: **\$5,055**

**REVEGETATION WORK**Task description: Revegetate disturbed areaSite: Lucky Strike-Mineral  
ExplorationPermit Action: 2019-12-03Permit/Job#: P2019013**PROJECT IDENTIFICATION**Task #: 04A  
Date: 12/3/2019  
User: DMCState: Colorado  
County: GunnisonAbbreviation: None  
Filename: P013-04aAgency 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
Blue Grama - Native	0.60	9.79	\$8.24
Indian Ricegrass - Native	2.40	7.77	\$15.60
Thickspike Wheatgrass - Critana	4.00	14.14	\$27.50
Western Wheatgrass - Native	12.80	32.32	\$76.80
<b>Totals Seed Mix</b>	<b>19.80</b>	<b>64.03</b>	<b>\$128.14</b>

**Application**

Description	Cost /Acre
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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	\$295.00	\$590.00
<b>Total Mulch Materials Cost/Acre</b>				<b>\$590.00</b>

**Application**

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$70.17
<b>Total Mulch Application Cost/Acre</b>	<b>\$70.17</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: \$1,249.13  
 Estimated Failure Rate: 25% Cost /Acre\*: \$1,249.13  
 \*Selected Replanting Work Items: TILLING, SEEDING, MULCHING

Initial Job Cost: **\$1,249.13**  
 Reseeding Job Cost: **\$312.28**  
 Total Job Cost: **\$1,561**  
 Job Hours: **8.00**

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Mobilize reclamation crew/equipment**Site: **Lucky Strike-Mineral  
Exploration**Permit Action: 2019-12-03Permit/Job#: P2019013**PROJECT IDENTIFICATION**

Task #: 05A State: Colorado Abbreviation: None  
 Date: 12/3/2019 County: Gunnison Filename: P013-05a  
 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:	\$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, 1 T. Crew	\$20.93	1	\$20.93	\$20.93
Subtotals:			<b>\$20.93</b>	<b>\$20.93</b>



**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>GUNNISON</u>	
Total one-way travel distance:	<u>14.00</u>	miles
Average Travel Speed:	<u>28.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$858.75</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$20.93</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>\$880</u>
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