

COST SUMMARY WORK

Task description: Reclamation Cost Estimate

Site: Adobe Longhorn Mine

Permit Action: 2019-07-21

Permit/Job#: P2019008

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 7/2/2019

County: Gunnison

Filename: P008-000

User: DMC

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Backfill two portals	MINESEAL	1	8.00	\$4,211
02a	Grade disturbance area	LOADER	1	2.07	\$211
03a	Vegetate disturbed area	REVEGE	1	1.00	\$192
04a	Mobilize reclamation crew/equipment	MOBILIZE	1	6.80	\$1,120
<u>SUBTOTALS:</u>				17.87	\$5,734

INDIRECT COSTS

OVERHEAD AND PROFIT:

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

Total = \$116

Total = \$60

Total = \$0

Total = \$573

TOTAL O & P = \$749

CONTRACT AMOUNT (direct + O & P) = \$6,483

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

\$324

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$1,074

TOTAL BOND AMOUNT (direct + indirect) = \$6,808

SAFEGUARDING UNDERGROUND OPENINGS

Task description: Backfill two portals

Site: Adobe Longhorn Mine

Permit Action: 2019-07-21

Permit/Job#: P2019008

PROJECT IDENTIFICATION

Task #: 01A

State: Colorado

Abbreviation: None

Date: 7/2/2019

County: Gunnison

Filename: P008-01a

User: DMC

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Portals 1 & 2	8x8	Adit closure - backfilling (per opening)	2.00	EA	\$2,105.30	\$4,210.60

Job Hours: 8.00

Total Cost: \$4,210.60

WHEEL LOADER – LOAD AND CARRY WORKTask description: Grade disturbance areaSite: Adobe Longhorn MinePermit Action: 2019-07-21Permit/Job#: P2019008**PROJECT IDENTIFICATION**Task #: 02AState: ColoradoAbbreviation: NoneDate: 7/2/2019County: GunnisonFilename: P008-02aUser: 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:	\$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 QUANTITIESInitial volume: 200

CCY

Swell factor: 1.000Loose volume: 200

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource 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:	Bank or broken material 0.04	0.040	(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:		0.000	minutes
Adjusted Basic Cycle Time:		0.475	minutes

Rolling Resistance – Road ConditionsHaul: Soft, rutted dirt, no maintenance or water, 4" tire penetration 8.0Return: 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: 0.5701 minutes

Load Bucket Capacity

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

Job Condition Correction Factors

Site Altitude: 10270 feet

		Source
Altitude Adj:	<u>0.89</u>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.74</u>	multiplier

Unadjusted Hourly Unit Production: 130.24 LCY/Hour
Adjusted Hourly Unit Production: 96.21 LCY/Hour
Adjusted Hourly Fleet Production: 96.21 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 2.08 Hours
Unit cost: \$1.056 /LCY Total job cost: \$211

REVEGETATION WORKTask description: Vegetate disturbed areaSite: Adobe Longhorn MinePermit Action: 2019-07-21Permit/Job#: P2019008PROJECT IDENTIFICATIONTask #: 03AState: ColoradoAbbreviation: NoneDate: 7/2/2019County: GunnisonFilename: P008-03aUser: DMCAgency or organization name: DRMSFERTILIZING**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
Weed control spraying (MEANS 31 31 16.13 3100)	\$193.60
Total Tilling Cost/Acre	\$193.60

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Lupine, Annual	0.25	0.18	\$8.99
Idaho Fescue	1.60	20.20	\$15.16
Locoweed, Showy	0.50	1.44	\$34.75
Parry's Oatgrass	4.00	8.26	\$88.00
Prairie Junegrass	0.30	15.95	\$7.80
Totals Seed Mix	6.65	46.04	\$154.70

Application

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

MULCHING and MISCELLANEOUS**Materials**

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

Application

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

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: 0.25 Cost /Acre: \$615.52
 Estimated Failure Rate: 25% Cost /Acre*: \$615.52
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$153.88**
 Reseeding Job Cost: **\$38.47**
 Total Job Cost: **\$192**
 Job Hours: **1.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilize reclamation crew/equipment**Site: **Adobe Longhorn Mine**Permit Action: 2019-07-21Permit/Job#: P2019008**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 7/2/2019County: GunnisonFilename: P008-04aUser: DMCAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck 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

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:					\$97.12	\$67.39	\$250.00

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:			\$12.96	\$12.96

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>GUNNISON</u>	
Total one-way travel distance:	<u>42.00</u>	miles
Average Travel Speed:	<u>35.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,089.06</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$31.10</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>1.20</u>	<u>1.20</u>
Return Time (Hours):	<u>1.20</u>	<u>1.20</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>3.40</u>	<u>2.40</u>

JOB TIME AND COST

Total job time:	<u>6.80</u>	Hours
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Total job cost:	<u>\$1,120</u>
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