

COST SUMMARY WORK

Task description: New NOI Cost Estimate

Site: Aetna Exploration

Permit Action: New NOI

Permit/Job#: P2021017

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 11/28/2021

County: Clear Creek

Filename: P017-001

User: PSH

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
002	Topsoil 0.75 acres, 2" depth	LOADER	1	3.85	\$305
003	Revegetate 0.75 acres	REVEGE	1	20.00	\$5,516
004	Mob / Demob	MOBILIZE	1	4.40	\$892
<u>SUBTOTALS:</u>				28.25	\$6,713

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$136

Performance bond: 1.05

Total = \$70

Job superintendent: 14.13

Total = \$1,017

Profit: 10.00

Total = \$671

TOTAL O & P = \$1,895

CONTRACT AMOUNT (direct + O & P) = \$8,608

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$0

Engineering work and/or contract/bid preparation: 4.25

Total = \$366

Reclamation management and/or administration: 5.00

\$430

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$2,691

TOTAL BOND AMOUNT (direct + indirect) = \$9,400 (Rounded)

WHEEL LOADER – LOAD AND CARRY WORKTask description: Topsoil 0.75 acres, 2" depthSite: Aetna ExplorationPermit Action: New NOIPermit/Job#: P2021017**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 11/28/2021County: Clear CreekFilename: P017-002User: PSHAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: CAT 246CAttachment 1: ROPS CabHorsepower: 73Shift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$21.64	NA
Operating Cost/Hour:	\$16.64	100
Operator Cost/Hour:	\$40.71	NA
Total Unit Cost/Hour:	\$78.99	
Total Fleet Cost/Hour:	\$78.99	

MATERIAL QUANTITIESInitial volume: 195

CCY

Swell factor: 1.000Loose volume: 195

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):

0.425

minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(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:		-0.040	minutes
Adjusted Basic Cycle Time:		0.385	minutes

Rolling Resistance – Road ConditionsHaul: Hard, smooth, stabilized, surfaced, watered, maintained 2.0Return: Hard, smooth, stabilized, surfaced, watered, maintained 2.0**Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
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Haul Route:	100	0.00	2.00	2.00	0.0493	(Cat HB)
Return Route:	100	0.00	2.00	2.00	0.0493	(Cat HB)

Total Travel Time: 0.0986 minutesTotal Cycle Time: **0.4836** minutesLoad Bucket Capacity

Rated Capacity:	<u>0.53</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.975</u>	Loose material - mixed moist aggregates (95-100%) 0.975
Adjusted Capacity:	<u>0.52</u>	LCY

Job Condition Correction FactorsSite Altitude: 8550 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: 64.11 LCY/HourAdjusted Hourly Unit Production: 50.55 LCY/HourAdjusted Hourly Fleet Production: **50.55** LCY/Hour**JOB TIME AND COST**Fleet size: 1 Loader(s) Total job time: **3.86** HoursUnit cost: \$1.562 /LCY Total job cost: **\$305**

REVEGETATION WORKTask description: Revegetate 0.75 acresSite: Aetna ExplorationPermit Action: New NOIPermit/Job#: P2021017**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 11/28/2021County: Clear CreekFilename: P017-003User: PSHAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
0-20-20, 4-8-12, 10-10-10	1.00	pound	\$0.22	\$0.22
			Total Fertilizer Materials Cost/Acre	\$0.22

Application

Description	Cost /Acre
Hand spread (MEANS 32 01 90.13 0100)	\$644.69
Total Fertilizer Application Cost/Acre	\$644.69

TILLING

Description	Cost /Acre
Subsoiling, light {(DMG)}	\$175.31
Total Tilling Cost/Acre	\$175.31

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arizona Fescue - Redondo	8.00	91.83	\$74.00
Pubescent Wheatgrass - Luna	20.00	41.32	\$68.00
Milk Vetch, Cicer - Lutana	8.00	26.63	\$65.60
Western Wheatgrass - Barton	20.00	50.51	\$140.00
Regreen Hybrid	40.00	10.10	\$187.00
Totals Seed Mix	96.00	220.39	\$534.60

Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Jute mesh #2, stapled (MEANS 31 25 14.16 0300)	1.00	ACRE	\$1,258.40	\$1,258.40
Total Mulch Materials Cost/Acre				\$1,258.40

Application

Description	Cost /Acre
Jute mesh #2 (MEANS 31 25 14.16 0300)	\$2,081.20
Total Mulch Application Cost/Acre	\$2,081.20

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: 0.75 Cost /Acre: \$4,961.64
 Estimated Failure Rate: 50% Cost /Acre*: \$4,786.33
 *Selected Replanting Work Items: FERTILIZING,SEEDING,MULCHING

Initial Job Cost: **\$3,721.23**
 Reseeding Job Cost: **\$1,794.87**
 Total Job Cost: **\$5,516**
 Job Hours: **20.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob / Demob**Site: **Aetna Exploration**Permit Action: **New NOI**Permit/Job#: **P2021017****PROJECT IDENTIFICATION**Task #: **004**State: **Colorado**Abbreviation: **None**Date: **11/28/2021**County: **Clear Creek**Filename: **P017-004**User: **PSH**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:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$21.28	\$37.94	\$47.67
Operating Cost/Hour:	\$26.55	\$50.48	\$56.21
Operator Cost/Hour:	\$20.54	\$20.54	\$20.54
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$68.37	\$132.49	\$147.95

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 246C	3.58	\$21.64	\$68.37	1	\$90.01	\$68.37	\$250.00
Subtotals:					\$90.01	\$68.37	\$250.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Subtotals:			\$0.00	\$0.00

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: GEORGETOWN, CO
 Total one-way travel distance: 2.50 miles
 Average Travel Speed: 25.00 mph

Total Non-Roadable Mob/Demob Cost * \$891.72
 ** two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$0.00
 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.10	0.10
Return Time (Hours):	0.10	0.10
Loading Time (Hours):	1.00	NA
Unloading Time (Hours):	1.00	NA
Subtotals:	2.20	0.20

JOB TIME AND COST

Total job time: 4.40 Hours

Total job cost: \$892