

COST SUMMARY WORK

Task description: Summary of SL20 Tasks

Site: New Horizon Mine

Permit Action: SL20

Permit/Job#: C1981008

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 10/2/2017

County: Montrose

Filename: C008-000

User: JDM

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Redistribute topsoil on BB Road Detour	SCRAPER1	2	3.54	\$5,521.00
002	Revegetate BB Road Detour	REVEGE	1	2.00	\$1,173.00
<u>SUBTOTALS:</u>				5.54	\$6,694

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$135.22

Performance bond: 1.05

Total = \$70.29

Job superintendent: 2.77

Total = \$202.35

Profit: 10.00

Total = \$669.40

TOTAL O & P = \$1,077.26

CONTRACT AMOUNT (direct + O & P) = \$7,771.26

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 0.00

Total = 0.00

Engineering work and/or contract/bid preparation: 4.61

Total = \$358.26

Reclamation management and/or administration: 3.58

\$278.21

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$1,713.73

TOTAL BOND AMOUNT (direct + indirect) = \$8,407.73

SCRAPER TEAM WORKTask description: Redistribute topsoil on BB Road DetourSite: New Horizon MinePermit Action: SL20Permit/Job#: C1981008**PROJECT IDENTIFICATION**Task #: 001State: ColoradoAbbreviation: NoneDate: 10/2/2017County: MontroseFilename: C008-001User: JDMAgency or organization name: Colorado Division of Reclamation, Mining and Safety**HOURLY EQUIPMENT**COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 631G
-Dozer:	Cat D9T - 9SU
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$98.72	\$100.59	NA	NA	\$54.68	\$24.01
Operating cost/hour:	\$108.19	\$87.23	NA	NA	\$23.50	\$17.07
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$31.26	\$41.85	NA	NA	\$28.90	\$0.00
Unit Subtotals:	\$238.17	\$229.67	NA	NA	\$107.07	\$41.08
Number of Units:	4	2	0	0	1	1
Group Subtotals:	Work:	\$1,412.02	Support:	\$0.00	Maint:	\$148.15

Total work team cost/hour: \$1,560.17**MATERIAL QUANTITIES**Initial volume: 3,227

CCY

Swell factor: 1.100Loose volume: 3,549

LCY

Source of estimated volume: Map 2.05.4-4, 17 ac including topsoil stockpile areaSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>2,100 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>User Provided</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>38.86 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:Scraper Loading Time: 0.60 MinutesManeuver and Spread Time: 0.70 MinutesJob Condition Correction:

Site Altitude: 5700 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Travel Time:Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3350.00	3.00	3.00	6.00	1069	3.18

Haul Time: 3.18 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3350.00	-3.00	3.00	0.00	2937	1.28

Return Time: 1.28 minutesTotal Scraper team cycle time: 5.76 minutesAdjusted for job conditions: 250.73 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 501.46 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,002.92 LCY/HourUnadjusted unit production/hour: 302.08 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 2 Team(s)Total job time: 3.54 HoursUnit cost: \$1.556 /LCYTotal job cost: \$5,521

REVEGETATION WORKTask description: **Revegetate BB Road Detour**Site: **New Horizon Mine**Permit Action: **SL20**Permit/Job#: **C1981008****PROJECT IDENTIFICATION**Task #: **002**State: **Colorado**Abbreviation: **None**Date: **10/2/2017**County: **Montrose**Filename: **C008-002**User: **JDM**Agency or organization name: **Colorado Division of Reclamation, Mining and Safety****FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	45.00	pound	\$0.34	\$15.30
			Total Fertilizer Materials Cost/Acre	\$15.30

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$144.62
Total Fertilizer Application Cost/Acre	\$144.62

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$106.29
Total Tilling Cost/Acre	\$106.29

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Crested Wheatgrass - Fairway	0.80	3.67	\$2.67
Russian Wildrye - Bozoisky	1.30	5.22	\$8.23
Pubescent Wheatgrass - Luna	3.30	6.82	\$13.43
Totals Seed Mix	5.40	15.71	\$24.33

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
	\$232.00

Total Seed Application Cost/Acre	
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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:	2	Cost /Acre:	\$522.54
Estimated Failure Rate:	25%	Cost /Acre*:	\$256.33
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$1,045.08
Reseeding Job Cost:	\$128.17
Total Job Cost:	\$1,173
Job Hours:	2.00