

## COST SUMMARY WORK

Task description: Summary of TR79 Costs

Site: New Horizon Mine

Permit Action: TR79

Permit/Job#: C1981008

### PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 4/26/2017

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	Haul Topsoil to Morgan Storage Area via County Road	TRUCK1	1	27.46	\$26,078.00
<b><u>SUBTOTALS:</u></b>				<b>27.46</b>	<b>\$26,078</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$526.78

Performance bond: 1.05

Total = \$273.82

Job superintendent: 13.73

Total = \$1,002.98

Profit: 10.00

Total = \$2,607.80

TOTAL O & P = \$4,411.38

CONTRACT AMOUNT (direct + O & P) = \$30,489.38

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 0.00

Total = 0.00

Engineering work and/or contract/bid preparation: 0.00

Total = \$0.00

Reclamation management and/or administration: 0.00

\$0.00

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$4,411.38

**TOTAL BOND AMOUNT (direct + indirect) = \$30,489.38**

**TRUCK/LOADER TEAM WORK**Task description: **Haul Topsoil to Morgan Storage Area via County Road**Site: **New Horizon Mine**Permit Action: TR79Permit/Job#: C1981008**PROJECT IDENTIFICATION**Task #: 001State: ColoradoAbbreviation: NoneDate: 4/26/2017County: MontroseFilename: C008-001User: JDMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 15-18 cy, 6x4
-Loader:		CAT 988H
Support Equipment -Load Area:		NA
-Dump Area:		Cat D8T - 8SU
Road Maintenance -Motor Grader:		CAT 14M
-Water Truck:		Water Tanker, 2,500 Gal.

**Cost Breakdown:**

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	75	NA	100	100	100
Ownership cost/hour:	\$26.62	\$83.38	NA	\$83.81	\$54.68	\$7.88
Operating cost/hour:	\$47.82	\$60.92	NA	\$66.17	\$46.99	\$14.74
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.37	\$41.20	NA	\$41.85	\$28.90	\$0.00
Unit Subtotals:	\$104.81	\$185.50	NA	\$191.83	\$130.57	\$22.62
Number of Units:	4	1	0	1	1	1
Group Subtotals:	Work: \$604.74		Support: \$191.83		Maint: \$153.19	

Total work team cost/hour: **\$949.76****MATERIAL QUANTITIES**Initial volume: 9,470

CCY

Swell factor: 1.215Loose volume: **11,506**

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00

## HOURLY PRODUCTION

### Truck Capacity:

#### Truck Payload (weight) Basis:

Material weight:	1,600	Pounds/LCY
Description:	Top Soil	
Rated Payload:	63,980	Pounds
Payload Capacity:	39.99	LCY

#### Truck Bed (volume) Basis:

Struck Volume:	15.00	LCY
Heaped Volume:	18.00	LCY
Average Volume:	16.50	LCY
Adjusted Volume:	18.00	LCY

Final Truck Volume Based on Number of Loader Passes: **16.56** LCY

#### Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	9.200	LCY (heaped)
Bucket Fill Factor:	0.900	Other - soil, boulders, roots (80 -100%) 0.900
Adjusted Capacity:	<b>8.280</b>	LCY

### Job Condition Corrections:

Site Altitude (ft.): 5700 feet

	Truck	Loader	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	<b>0.830</b>	<b>0.830</b>	

### Loading Tool Cycle Time:

Number of Loading Tool Passes Required to Fill Truck: 2 passes

#### Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: NA  
Selected Value within this Basic Rating: NA

Track Loaders – Material Description: \_\_\_\_\_

#### Cycle Time Elements (min.):

Load: NA      Maneuver: NA      Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.575 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material up to 1/8" diameter 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:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)

Net Cycle Time Adjustment: -0.040 minutes  
Adjusted Loader Cycle Time: **0.535** minutes  
Net Load Time per Truck: **0.635** minutes

**Truck Cycle Time:**

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.635</u>	Minutes	Adjusted for site altitude:	<u>0.635</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time:

Road Condition: Hard, smooth, stabilized, surfaced, watered,

maintained 2.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	8100.00	1.00	2.00	3.00	2800	3.070

Haul Time: 3.070 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	8100.00	-1.00	2.00	1.00	2963	2.767

Return Time: 2.767 minutes

Total Truck Cycle Time: 7.872 minutes

Loading Tool unit

Production	<u>875.42</u>	LCY/Hour	Adjusted for job efficiency:	<u>726.60</u>	LCY/Hour
Truck Unit Production	<u>126.22</u>	LCY/Hour	Adjusted for job efficiency:	<u>104.76</u>	LCY/Hour

Optimal No. of Trucks: 7 Truck(s)      Selected Number of Trucks: 4 Truck(s)

Adjusted hourly truck team production:	<u>419.05</u>	LCY/Hour
Adjusted single truck/loader team production:	<u>419.05</u>	LCY/Hour
Adjusted multiple truck/loader team production:	<u>419.05</u>	LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 27.46 Hours

Unit cost: \$2.266 /LCY      Total job cost: \$26,078