

COST SUMMARY WORK

Task description: Cost Summary

Site: Ulrich - Rovedo Mine

Permit Action: New Permit

Permit/Job#: M2019057

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 2/18/2020

County: Park

Filename: M057-000

User: ERR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill Pits, Replace Topsoil, and Grade Site	LOADER	1	4.89	\$326
002	Revegetate 0.5 Acres	REVEGE	1	5.00	\$443
003	Mob/Demob	MOBILIZE	1	2.16	\$194
<u>SUBTOTALS:</u>				12.05	\$963

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$19

Performance bond: 1.05

Total = \$10

Job superintendent: 0.00

Total = \$0

Profit: 10.00

Total = \$96

TOTAL O & P = \$126

CONTRACT AMOUNT (direct + O & P) = \$1,089

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$0

Engineering work and/or contract/bid preparation: 4.25

Total = \$46

Reclamation management and/or administration: 5.00

\$54

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$227

TOTAL (direct + indirect) = \$1,190

TOTAL BOND AMOUNT (rounded) = \$1,200

WHEEL LOADER – LOAD AND CARRY WORKTask description: **Backfill Pits, Replace Topsoil, and Grade Site**Site: **Ulrich - Rovedo Mine** Permit Action: **New Permit** Permit/Job#: **M2019057****PROJECT IDENTIFICATION**

Task #: **001** State: **Colorado** Abbreviation: **None**
 Date: **2/18/2020** County: **Park** Filename: **M057-001**
 User: **ERR**

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

Basic Machine: **CAT 246C** Horsepower: **73**
 Attachment 1: **ROPS Cab** Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$11.27	NA
Operating Cost/Hour:	\$14.69	100
Operator Cost/Hour:	\$40.65	NA
Total Unit Cost/Hour:	\$66.61	
Total Fleet Cost/Hour:	\$66.61	

MATERIAL QUANTITIES

Initial volume: **200** CCY Swell factor: **1.330**
 Loose volume: **266** LCY

Source of estimated volume: **Application**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTIONLoader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): **0.425** minutes

Cycle Time Factors		Factor (min.)	Source
Material:	No adjustment - factor not applicable 0.00	0.000	(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:	Small target 0.04	0.040	(Cat HB)
Net Cycle Time Adjustment:		0.000	minutes
Adjusted Basic Cycle Time:		0.425	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
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 minutes
Total Cycle Time: 0.4726 minutes

Load Bucket Capacity

Rated Capacity: 0.53 LCY (heaped)
Bucket Fill Factor: 1.025 Rock - Earth Mixture (100%-105%) 1.025
Adjusted Capacity: 0.54 LCY

Job Condition Correction Factors

Site Altitude: 8200 feet

Altitude Adj:	<u>0.95</u>	Source
Job Efficiency:	<u>0.83</u>	(CAT HB)
Net Correction:	<u>0.79</u>	(1 shift/day)
		multiplier

Unadjusted Hourly Unit Production: 68.98 LCY/Hour
Adjusted Hourly Unit Production: 54.39 LCY/Hour
Adjusted Hourly Fleet Production: 54.39 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 4.89 Hours
Unit cost: \$1.225 /LCY Total job cost: \$326

REVEGETATION WORKTask description: Revegetate the 0.5 AcresSite: Ulrich - Rovedo MinePermit Action: New PermitPermit/Job#: M2019057PROJECT IDENTIFICATIONTask #: 002
Date: 2/18/2020
User: ERRState: Colorado
County: ParkAbbreviation: None
Filename: M057-002Agency 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
Subsoiling, light {(DMG)}	\$175.31
Total Tilling Cost/Acre	\$175.31

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	1.25	20.40	\$19.97
Arizona Fescue - Redondo	3.75	43.04	\$34.69
Mountain Brome - Bromar	6.25	10.04	\$23.75
Bottlebrush Squirreltail	1.25	5.51	\$20.28
Slender Wheatgrass - Native	6.25	22.81	\$28.91
Muttongrass	2.50	51.65	\$86.00
Western Wheatgrass - Arriba	1.25	3.16	\$8.13
Prairie Junegrass	1.25	66.44	\$32.50
Spike Muhly	1.25	45.91	\$12.13

Totals Seed Mix	25.00	268.98	\$266.34
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Application

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:	0.5	Cost /Acre:	\$708.87
Estimated Failure Rate:	25%	Cost /Acre*:	\$708.87
*Selected Replanting Work Items:	TILLING,SEEDING		

Initial Job Cost:	\$354.44
Reseeding Job Cost:	\$88.61
Total Job Cost:	\$443
Job Hours:	5.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/Demob**Site: **Ulrich - Rovedo Mine**Permit Action: **New Permit**Permit/Job#: **M2019057****PROJECT IDENTIFICATION**Task #: **003**
Date: **2/18/2020**
User: **ERR**State: **Colorado**
County: **Park**Abbreviation: **None**
Filename: **M057-003**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:	\$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
Subtotals:					\$0.00	\$0.00	\$0.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$89.74	1	\$89.74	\$89.74
Subtotals:			\$89.74	\$89.74

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>COLORADO SPRINGS</u>	
Total one-way travel distance:	<u>54.00</u>	miles
Average Travel Speed:	<u>50.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$0.00</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$193.84</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>1.08</u>	<u>1.08</u>
Return Time (Hours):	<u>1.08</u>	<u>1.08</u>
Loading Time (Hours):	<u>0.15</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.15</u>	<u>NA</u>
Subtotals:	<u>2.46</u>	<u>2.16</u>

JOB TIME AND COST

Total job time: 2.16 Hours

Total job cost: \$194