

COST SUMMARY WORK

Task description: Summary of Reclamation Tasks

Site: Red Cone

Permit Action: MD-01

Permit/Job#: P2014003

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 8/13/2019

County: Park

Filename: P003-000

User: ERR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Plug and Abandon 2 Boreholes	BOREHOLE	1	62.40	\$25,359
002	Regrade Mud Pits, Drill Pads, Roads, and Replace Topsoil	DOZER	1	1.83	\$290
003	Revegetate Drill Pads and Roads	REVEGE	1	1.00	\$169
004	Mob/Demob	MOBILIZE	1	8.10	\$4,076
<u>SUBTOTALS:</u>				73.33	\$29,894

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$604

Performance bond: 1.05

Total = \$314

Job superintendent: 16.00

Total = \$1,110

Profit: 10.00

Total = \$2,989

TOTAL O & P = \$5,017

CONTRACT AMOUNT (direct + O & P) = \$34,911

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$0

Engineering work and/or contract/bid preparation: 4.25

Total = \$1,484

Reclamation management and/or administration: 5.00

\$1,746

CONTINGENCY: 3.00

Total = \$897

TOTAL INDIRECT COST = \$9,144

TOTAL (direct + indirect) = \$39,038

TOTAL BOND AMOUNT (rounded) = \$39,000

BOREHOLE SEALING WORK

Task description: Plug and Abandon 2 Boreholes

Site: Red Cone Permit Action: MD-01 Permit/Job#: P2014003

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 7/22/2019 County: Park Filename: P003-001
User: ERR

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Plug and Abandon (2) 3" Dia. x 3000'	Portland cement grout (Bag, material cost only...94 lb. bag)	3	6000	66.00	bag	\$13.40	\$884.40
Water Truck	Water Tanker, 2,500 Gal.	NA	NA	62.40	EA	\$48.11	\$3,002.06
Drill Rig	SCHRAMM T450WS	NA	NA	62.40	EA	\$343.09	\$21,408.82
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	2.00	EA	\$32.00	\$64.00

Job Hours: 62.40 Total Cost: \$25,359.00

BULLDOZER WORKTask description: **Regrade Mud Pits, Drill Pads, Roads, and Replace Topsoil**Site: **Red Cone** Permit Action: MD-01 Permit/Job#: P2014003**PROJECT IDENTIFICATION**

Task #: 002 State: Colorado Abbreviation: None
 Date: 7/22/2019 County: Park Filename: P003-002
 User: ERR

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

Basic Machine: Cat D6T LGP
 Horsepower: 200
 Blade Type: Straight
 Attachment: 3-shank ripper
 Shift Basis: 1 per day
 Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$59.16</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$50.06</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$6.80</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$1.17</u>	<u>25</u>
Operator Cost/Hour:	<u>\$41.24</u>	<u>NA</u>

Total unit Cost/Hour: \$158.43
 Total Fleet Cost/Hour: **\$158.43**

MATERIAL QUANTITIES

Initial Volume: 250
 Swell factor: 1.330
 Loose volume: **333 LCY**

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

HOURLY PRODUCTION

Average push distance: 50 feet
 Unadjusted hourly production: 444.6 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
 Average site altitude: 11,200 feet

Material weight: 2,900 lbs/LCYWeight description: Decomposed rock - 50% Rock, 50% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.100</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	0.940	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4083

Adjusted unit production: 181.53 LCY/hr

Adjusted fleet production: **181.53** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.873/LCY

Total job time: **1.83** Hours

Total job cost: **\$290**

REVEGETATION WORKTask description: **Revegetate Drill Pads and Roads**Site: **Red Cone**Permit Action: **MD-01**Permit/Job#: **P2014003****PROJECT IDENTIFICATION**Task #: **003**State: **Colorado**Abbreviation: **None**Date: **7/22/2019**County: **Park**Filename: **P003-003**User: **ERR**Agency or organization name: **DRMS****FERTILIZING****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
Hand raking (MEANS 32 91 13.23 0250)	\$1,437.48
Total Tilling Cost/Acre	\$1,437.48

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Fringed Brome grass - Native	6.25	11.48	\$106.25
Swamp (or Fowl) Bluegrass - Native	6.25	315.66	\$54.22
Idaho Fescue	3.75	47.35	\$35.53
Slender Wheatgrass - Native	2.50	9.13	\$11.56
Reedgrass, Canadian (or Blue Joint)	3.75	385.67	\$762.19
Tufted Hairgrass	2.50	143.48	\$27.56
Totals Seed Mix	25.00	912.76	\$997.31

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: 0.05 Cost /Acre: \$2,702.01
 Estimated Failure Rate: 25% Cost /Acre*: \$2,702.01
 *Selected Replanting Work Items: TILLING,SEEDING

Initial Job Cost: **\$135.10**
 Reseeding Job Cost: **\$33.78**
 Total Job Cost: **\$169**
 Job Hours: **1.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/Demob**Site: **Red Cone**Permit Action: MD-01Permit/Job#: P2014003**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 7/22/2019County: ParkFilename: P003-004User: ERRAgency 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 D6T LGP	28.63	\$65.96	\$123.81	1	\$189.77	\$123.81	\$250.00
SCHRAMM T450WS	0.00	\$113.31	\$67.39	1	\$180.70	\$67.39	\$250.00

Subtotals: **\$370.47** **\$191.20** **\$500.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 2,500 Gal.	\$48.11	1	\$48.11	\$48.11
Light Duty Pickup, 4x4, 1 T. Crew	\$76.23	2	\$152.46	\$152.46

Subtotals: **\$200.57** **\$200.57**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: DENVER
 Total one-way travel distance: 71.00 miles
 Average Travel Speed: 40.00 mph

Total Non-Roadable Mob/Demob Cost * \$3,364.40
 ** two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$712.02
 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	1.78	1.78
Return Time (Hours):	1.78	1.78
Loading Time (Hours):	0.25	NA
Unloading Time (Hours):	0.25	NA
Subtotals:	4.05	3.55

JOB TIME AND COST

Total job time: 8.10 Hours

Total job cost: \$4,076