

COST SUMMARY WORK

Task description: Reclamation Cost Estimate

Site: Gray Pit #1 Permit Action: 2022-04-22 SO-01
Update

Permit/Job#: M2003092

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 4/22/2022 County: Montrose Filename: M092-000
User: DMC

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Reduce highwalls to 2H: 1V	DOZER	1	17.39	\$5,702
02a	Rip the pit floor	RIPPER	1	8.63	\$2,930
03a	Topsoil 20 acres	DOZER	1	22.35	\$7,331
04a	Revegetate steeper slopes	REVEGE	1	3.00	\$5,487
04b	Revegetate pit floor/operations area	REVEGE	1	3.00	\$32,881
05a	Mobilize to the site	MOBILIZE	1	2.50	\$3,456
<u>SUBTOTALS:</u>				56.87	\$57,787

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$1,167
Performance bond:	1.05	Total =	\$607
Job superintendent:	28.44	Total =	\$2,048
Profit:	10.00	Total =	\$5,779

TOTAL O & P = \$9,601

CONTRACT AMOUNT (direct + O & P) = \$67,388

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	<u>\$500</u>	Total =	<u>\$500</u>
Engineering work and/or contract/bid preparation:	<u>0.00</u>	Total =	<u>\$0</u>
Reclamation management and/or administration:	<u>5.00</u>		<u>\$3,369</u>

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$13,470

TOTAL BOND AMOUNT (direct + indirect) = \$71,257

BULLDOZER WORKTask description: **Reduce highwalls to 2H: 1V**Site: **Gray Pit #1**Permit Action: 2022-04-22 SO-01
UpdatePermit/Job#: M2003092**PROJECT IDENTIFICATION**Task #: 01A
Date: 4/22/2022
User: DMCState: Colorado
County: MontroseAbbreviation: None
Filename: M092-01aAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SU
Horsepower: 405
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own. Cost/Hour:	\$19.26	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA
Total unit Cost/Hour:	\$327.98	
Total Fleet Cost/Hour:	\$327.98	

MATERIAL QUANTITIESInitial Volume: 13,287
Swell factor: 1.165
Loose volume: **15,479 LCY**Source of estimated volume: 2,917 CY in pit, 10,370 CY around pond
Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 60 feet
Unadjusted hourly production: 1,872.0 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: -5 %
Average site altitude: 6,890 feetMaterial weight: 2,900 lbs/LCYWeight description: Decomposed rock - 50% Rock, 50% Earth**Job Condition Correction Factor****Source**

Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4756

Adjusted unit
production: 890.32 LCY/hr
Adjusted fleet
production: **890.32 LCY/hr**

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.368/LCY

Total job time: **17.39 Hours**
Total job cost: **\$5,702**

BULLDOZER RIPPING WORK

Task description: Rip the pit floor

Site: Gray Pit #1 Permit Action: 2022-04-22 SO-01
Update Permit/Job#: M2003092

PROJECT IDENTIFICATION

Task #: 02A State: Colorado Abbreviation: None
Date: 4/22/2022 County: Montrose Filename: M092-02a
User: DMC

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU Horsepower: 405
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper Ownership Cost/Hour:	\$19.26	NA
Ripper Operating Cost/Hour:	\$11.48	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$339.46	
Total Fleet Cost/Hour:	\$339.46	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 6.00 acres Rip Depth (ft): 1.50 Volume: 14,520 BCY or CCY

Source of estimated quantity: Inspection Observations and reclamation plan

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.63 feet/pass
Average Ripping Width: 7.67 feet/pass
Average Ripping Length: 200.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.838 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.838 Acres/hr
Site Altitude: 6,890 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr
Adjusted Hourly Fleet Production: 0.70 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 8.63 Hours

Unit cost: \$488.306 Per acre

Total job cost: \$2,930

BULLDOZER WORKTask description: Topsoil 20 acresSite: Gray Pit #1Permit Action: 2022-04-22 SO-01
UpdatePermit/Job#: M2003092**PROJECT IDENTIFICATION**Task #: 03A
Date: 4/22/2022
User: DMCState: Colorado
County: MontroseAbbreviation: None
Filename: M092-03aAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SU
Horsepower: 405
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$126.01</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$141.41</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$19.26</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$41.30</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$327.98</u>	
Total Fleet Cost/Hour:	<u>\$327.98</u>	

MATERIAL QUANTITIESInitial Volume: 13,444
Swell factor: 1.000
Loose volume: 13,444 LCYSource of estimated volume: Avg. 5 inches over 20 ac.Source of estimated swell
factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feet
Unadjusted hourly
production: 700.0 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push
gradient: 0 %
Average site altitude: 6,890 feetMaterial weight: 1,600 lbs/LCYWeight description: Top SoilJob Condition Correction FactorSource

Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit
production: 601.51 LCY/hr
Adjusted fleet
production: **601.51** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.545/LCY

Total job time: **22.35** Hours
Total job cost: **\$7,331**

REVEGETATION WORKTask description: Revegetate steeper slopes

Site: Gray Pit #1 Permit Action: 2022-04-22 SO-01 Permit/Job#: M2003092
Update

PROJECT IDENTIFICATION

Task #: 04A State: Colorado Abbreviation: None
 Date: 4/22/2022 County: Montrose Filename: M092-04a
 User: DMC

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
Chisel plowing {DMG}	\$96.50
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$386.90

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	6.25	20.23	\$40.63
Crested Wheatgrass - Ephraim	3.00	13.77	\$12.98
Canby Bluegrass - Canbar	0.90	19.13	\$9.23
Sand Dropseed	0.10	11.94	\$0.98
Galleta	6.00	21.90	\$134.10
Saltbush, Four Wing	2.00	2.75	\$25.00
		89.73	\$222.90

Totals Seed Mix	18.25		
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Application

Description	Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)	\$965.73
Total Seed Application Cost/Acre	\$965.73

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

Description	Cost /Acre
Hydromulching (MEANS 32 92 19.13 1100)	\$96.80
Total Mulch Application Cost/Acre	\$96.80

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: \$2,286.37
 Estimated Failure Rate: 20% Cost /Acre*: \$2,286.37
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$4,572.74**
 Reseeding Job Cost: **\$914.55**
 Total Job Cost: **\$5,487**
 Job Hours: **3.00**

REVEGETATION WORKTask description: Revegetate pit floor/operations areaSite: Gray Pit #1 Permit Action: 2022-04-22 SO-01
UpdatePermit/Job#: M2003092**PROJECT IDENTIFICATION**Task #: 04B State: Colorado Abbreviation: None
Date: 4/22/2022 County: Montrose Filename: M092-04b
User: DMCAgency 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
Chisel plowing {DMG}	\$96.50
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$386.90

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.13	10.12	\$20.31
Crested Wheatgrass - Ephraim	1.50	6.89	\$6.49
Canby Bluegrass - Canbar	0.45	9.57	\$4.61
Sand Dropseed	0.05	5.97	\$0.49
Galleta	3.00	10.95	\$67.05
Saltbush, Four Wing	1.00	1.38	\$12.50
		44.87	\$111.45

Totals Seed Mix	9.13		
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$71.57
Power mulcher (MEANS 32 91 13.16 0350)	\$106.29
Total Mulch Application Cost/Acre	\$177.86

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: 18
 Estimated Failure Rate: 20%
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Cost /Acre: \$1,522.25

Cost /Acre*: \$1,522.25

Initial Job Cost: **\$27,400.50**
 Reseeding Job Cost: **\$5,480.10**
 Total Job Cost: **\$32,881**
 Job Hours: **3.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilize to the site**Site: **Gray Pit #1**Permit Action: 2022-04-22 SO-01
Update

Permit/Job#: M2003092

PROJECT IDENTIFICATION

Task #: 05A State: Colorado Abbreviation: None
 Date: 4/22/2022 County: Montrose Filename: M092-05a
 User: DMC

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 D9T - 9SU	66.13	\$145.27	\$147.95	1	\$293.22	\$147.95	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$7.98	\$68.37	1	\$76.35	\$68.37	\$250.00
Hydroseeder with Tractor	28.00	\$13.97	\$132.49	1	\$146.46	\$132.49	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$14.98	\$68.37	1	\$83.35	\$68.37	\$250.00

Subtotals: **\$599.38** **\$417.18** **\$1,000.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$12.93	1	\$12.93	\$12.93

Subtotals: **\$12.93** **\$12.93**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: MONTROSE
 Total one-way travel distance: 5.00 miles
 Average Travel Speed: 40.00 mph

Total Non-Roadable Mob/Demob Cost * \$3,452.90
 ** two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$3.23
 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.13</u>	<u>0.13</u>
Return Time (Hours):	<u>0.13</u>	<u>0.13</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>1.25</u>	<u>0.25</u>

JOB TIME AND COST

Total job time: 2.50 Hours

Total job cost: \$3,456