

COST SUMMARY WORK

Task description: Reclamation Cost Estimate Summary

Site: Macanite #VII & #VIII

Permit Action: TR1 and 2022 Update

Permit/Job#: M2014041

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 2/18/2022

County: Teller

Filename: M041-000

User: ERR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill Open Excavation (30'W x 60'L x 20'D)	DOZER	1	4.76	\$960
002	Replace Topsoil	DOZER	1	0.17	\$35
002A	Rip Access Trail	RIPPER	1	0.14	\$31
003	Revegetate 1 Acre	REVEGE	1	2.00	\$1,672
004	Mob/Demob of Reclamation Equipment	MOBILIZE	1	5.57	\$1,719
<u>SUBTOTALS:</u>				12.64	\$4,417

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$89

Performance bond: 1.05

Total = \$46

Job superintendent: 0.00

Total = \$0

Profit: 10.00

Total = \$442

TOTAL O & P = \$577

CONTRACT AMOUNT (direct + O & P) = \$4,994

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$0

Engineering work and/or contract/bid preparation: 0.00

Total = \$0

Reclamation management and/or administration: 5.00

\$250

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$827

TOTAL (direct + indirect) = \$5,244

TOTAL BOND AMOUNT (rounded) = \$5,250

BULLDOZER WORKTask description: **Backfill Open Excavation (30'W x 60'L x 20'D)**Site: **Macanite #VII & #VIII**Permit Action: **TR1 and 2022 Update**Permit/Job#: **M2014041****PROJECT IDENTIFICATION**Task #: **001**State: **Colorado**Abbreviation: **None**Date: **2/17/2022**County: **Teller**Filename: **001**User: **ERR**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS XR Series II**Horsepower: **240**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$81.02	NA
Operating Cost/Hour:	\$79.33	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$201.65**Total Fleet Cost/Hour: **\$201.65****MATERIAL QUANTITIES**Initial Volume: **1,300**Swell factor: **1.430**Loose volume: **1,859 LCY**Source of estimated volume: **TR1: 1,300 CY (30' x 60' x 20' deep dig)**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **50 feet**Unadjusted hourly production: **1,022.9 LCY/hr**Materials consistency description: **Partly consolidated stockpile 1.1**Average push gradient: **0 %**Average site altitude: **8,450 feet**Material weight: **3,300 lbs/LCY**Weight description: **Decomposed rock - 75% Rock, 25% Earth****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(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:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3818

Adjusted unit production: 390.54 LCY/hr

Adjusted fleet production: **390.54** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.516/LCY

Total job time: **4.76** Hours

Total job cost: **\$960**

BULLDOZER WORKTask description: **Replace Topsoil**Site: **Macanite #VII & #VIII**Permit Action: TR1 and 2022 UpdatePermit/Job#: M2014041**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 2/17/2022County: TellerFilename: M041-002User: ERRAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D7R DS XR Series IIHorsepower: 240Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$81.02</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$79.33</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$0.00</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: \$201.65Total Fleet Cost/Hour: **\$201.65****MATERIAL QUANTITIES**Initial Volume: 67Swell factor: 1.250Loose volume: **84 LCY**Source of estimated volume: TR1 (12" on 60' x 30')Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 1,022.9 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %Average site altitude: 8,450 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% 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:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4755

Adjusted unit production: 486.39 LCY/hr

Adjusted fleet production: **486.39** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.415/LCY

Total job time: **0.17** Hours

Total job cost: **\$35**

BULLDOZER RIPPING WORK

Task description: Rip Access Trail

Site: Macanite #VII & #VIII Permit Action: TR1 and 2022 Update Permit/Job#: M2014041

PROJECT IDENTIFICATION

Task #: 002A State: Colorado Abbreviation: None
Date: 2/18/2022 County: Teller Filename: M041-002A
User: ERR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS XR Series II Horsepower: 240
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$81.02</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$79.33</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$9.32</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$5.93</u>	<u>100</u>
Operator Cost/Hour:	<u>\$41.30</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$216.90</u>	
Total Fleet Cost/Hour:	<u>\$216.90</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 0.05 acres Rip Depth (ft): 12.00 Volume: 968 BCY or CCY

Source of estimated quantity: TR1 Map (125'x15')

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.45 feet/pass
Average Ripping Width: 6.50 feet/pass
Average Ripping Length: 25.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.419 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.419 Acres/hr
Site Altitude: 8,450 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.35 Acres/hr
Adjusted Hourly Fleet Production: **0.35** Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **0.14** Hours

Unit cost: \$623.562 Per acre Total job cost: **\$31**

REVEGETATION WORKTask description: Revegetate 1 AcreSite: Macanite #VII & #VIIIPermit Action: TR1 and 2022 UpdatePermit/Job#: M2014041**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 2/17/2022County: TellerFilename: M041-003User: ERRAgency 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
Total Tilling Cost/Acre	\$96.50

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arizona Fescue - Redondo	10.50	120.52	\$97.13
Blue Grama - Native	2.50	40.81	\$34.31
Sand Dropseed	4.00	477.50	\$39.00
Currant, Wax	2.00	6.89	\$118.62
Western Wheatgrass - Arriba	32.00	80.81	\$208.00
Needle and Thread	10.90	28.78	\$456.17
Prairie Junegrass	0.80	42.52	\$20.80
Totals Seed Mix	62.70	797.83	\$974.02

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:	1	Cost /Acre:	\$1,337.74
Estimated Failure Rate:	25%	Cost /Acre*:	\$1,337.74
*Selected Replanting Work Items:	TILLING,SEEDING		
Initial Job Cost:	\$1,337.74		
Reseeding Job Cost:	\$334.44		
Total Job Cost:	\$1,672		
Job Hours:	2.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/Demob of Reclamation Equipment**Site: **Macanite #VII & #VIII**Permit Action: **TR1 and 2022 Update**Permit/Job#: **M2014041****PROJECT IDENTIFICATION**Task #: **004**State: **Colorado**Abbreviation: **None**Date: **2/17/2022**County: **Teller**Filename: **M041-004**User: **ERR**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 D7R DS XR Series II	32.01	\$81.02	\$132.49	1	\$213.51	\$132.49	\$250.00

Subtotals: **\$213.51** **\$132.49** **\$250.00****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	\$75.87	1	\$75.87	\$75.87
Drill/Broadcast Seeder with Tractor	\$16.28	1	\$16.28	\$16.28

Subtotals: **\$92.15** **\$92.15**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>COLORADO SPRINGS</u>	
Total one-way travel distance:	<u>56.00</u>	miles
Average Travel Speed:	<u>45.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,489.26</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$229.35</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>1.24</u>	<u>1.24</u>
Return Time (Hours):	<u>1.24</u>	<u>1.24</u>
Loading Time (Hours):	<u>0.15</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.15</u>	<u>NA</u>
Subtotals:	<u>2.79</u>	<u>2.49</u>

JOB TIME AND COST

Total job time:	<u>5.58</u>	Hours
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Total job cost:	<u>\$1,719</u>
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