

## COST SUMMARY WORK

Task description: 2024-03-05 Update

Site: Ignacio Pit

Permit Action: 2024-03-05 Update

Permit/Job#: M1992054

### PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 3/5/2024

County: La Plata

Filename: M054-000

User: DMC

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Reduce interior highwalls to 3:1	DOZER	1	0.61	\$270
02a	Push overburden over graded areas	DOZER	1	20.95	\$9,650
04a	Spread topsoil over graded areas	DOZER	1	20.64	\$9,508
05a	Rip compacted areas	RIPPER	1	28.02	\$13,163
07a	Revegetate 40 acres of disturbance	REVEGE	1	30.00	\$35,663
08a	Haul reclamation equipment to and from site	MOBILIZE	1	4.66	\$8,026
<b><u>SUBTOTALS:</u></b>				<b>104.88</b>	<b>\$76,280</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$1,541

Performance bond: 1.05

Total = \$801

Job superintendent: 52.44

Total = \$3,413

Profit: 10.00

Total = \$7,628

TOTAL O & P = \$13,383

CONTRACT AMOUNT (direct + O & P) = \$89,663

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500

Total = \$500

Engineering work and/or contract/bid preparation: 0.00

Total = \$0

Reclamation management and/or administration: 5.00

\$4,483

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$18,366

**TOTAL BOND AMOUNT (direct + indirect) = \$94,646**

**BULLDOZER WORK**Task description: **Reduce interior highwalls to 3:1**Site: **Ignacio Pit**Permit Action: 2024-03-05 UpdatePermit/Job#: M1992054**PROJECT IDENTIFICATION**Task #: 01AState: ColoradoAbbreviation: NoneDate: 3/5/2024County: La PlataFilename: 03aUser: DMCAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$238.76	NA
Operating Cost/Hour:	\$162.29	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: \$442.35Total Fleet Cost/Hour: **\$442.35****MATERIAL QUANTITIES**Initial Volume: 869Swell factor: 1.000Loose volume: **869 LCY**Source of estimated volume: Operator provided 490' lf HW x 10'HSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 2,110.5 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: -25 %Average site altitude: 6,240 feetMaterial weight: 2,550 lbs/LCYWeight description: Earth - Dry packed**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.100	(50% SL)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.516	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6742

Adjusted unit production: 1,422.90 LCY/hr

Adjusted fleet production: **1422.9** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.311/LCY

Total job time: **0.61** Hours

Total job cost: **\$270**

**BULLDOZER WORK**Task description: **Push overburden over graded areas**Site: **Ignacio Pit** Permit Action: **2024-03-05 Update** Permit/Job#: **M1992054****PROJECT IDENTIFICATION**

Task #:	02A	State:	Colorado	Abbreviation:	None
Date:	3/5/2024	County:	La Plata	Filename:	02a
User:	DMC				

Agency 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:	\$238.76	NA
Operating Cost/Hour:	\$162.29	100
Ripper own. Cost/Hour:	\$18.32	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$460.67
Total Fleet Cost/Hour:	<b>\$460.67</b>

**MATERIAL QUANTITIES**

Initial Volume:	14,036
Swell factor:	1.000
Loose volume:	<b>14,036 LCY</b>

Source of estimated volume:	Operator provided 3/3/24
Source of estimated swell factor:	Cat Handbook

**HOURLY PRODUCTION**

Average push distance:	100 feet
Unadjusted hourly production:	1,243.2 LCY/hr

Materials consistency description: **Loose stockpile 1.2**

Average push gradient:	0 %
Average site altitude:	6,240 feet

Material weight: **2,550 lbs/LCY**Weight description: **Earth - Dry packed**

<u>Job Condition Correction Factor</u>		<u>Source</u>
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:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5390

Adjusted unit production: 670.08 LCY/hr

Adjusted fleet production: **670.08** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.687/LCY

Total job time: **20.95** Hours

Total job cost: **\$9,650**

**BULLDOZER WORK**Task description: Spread topsoil over graded areasSite: Ignacio Pit Permit Action: 2024-03-05 Update Permit/Job#: M1992054**PROJECT IDENTIFICATION**

Task #:	<u>04A</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>3/5/2024</u>	County:	<u>La Plata</u>	Filename:	<u>04a</u>
User:	<u>DMC</u>				

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

Basic Machine:	<u>Cat D9T - 9SU</u>
Horsepower:	<u>405</u>
Blade Type:	<u>Semi-Universal</u>
Attachment:	<u>3-shank ripper</u>
Shift Basis:	<u>1 per day</u>
Data Source:	<u>(CRG)</u>

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$238.76</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$162.29</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$18.32</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>\$460.67</u>
Total Fleet Cost/Hour:	<u><b>\$460.67</b></u>

**MATERIAL QUANTITIES**

Initial Volume:	<u>19,293</u>
Swell factor:	<u>1.000</u>
Loose volume:	<u><b>19,293</b> LCY</u>

Source of estimated volume:	<u>Operator provided 3/3/24</u>
Source of estimated swell factor:	<u>Cat Handbook</u>

**HOURLY PRODUCTION**

Average push distance:	<u>100 feet</u>
Unadjusted hourly production:	<u>1,243.2 LCY/hr</u>

Materials consistency description: Loose stockpile 1.2

Average push gradient:	<u>0 %</u>
Average site altitude:	<u>6,240 feet</u>

Material weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.200</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:	0.700	(FND-MF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.7519

Adjusted unit production: 934.76 LCY/hr

Adjusted fleet production: **934.76** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.493/LCY

Total job time: **20.64** Hours

Total job cost: **\$9,508**

## BULLDOZER RIPPING WORK

Task description: Rip compacted areas

Site: Ignacio Pit Permit Action: 2024-03-05 Update Permit/Job#: M1992054

### PROJECT IDENTIFICATION

Task #: 05A State: Colorado Abbreviation: None  
Date: 3/5/2024 County: La Plata Filename: 05a  
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:	<u>\$238.76</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$162.29</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$18.32</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$8.98</u>	<u>100</u>
Operator Cost/Hour:	<u>\$41.30</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$469.65</u>	
Total Fleet Cost/Hour:	<u>\$469.65</u>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 20.50 acres Rip Depth (ft): 1.00 Volume: 33,073 BCY or CCY

Source of estimated quantity: 30 ac area, TR map and 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: 400.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.881 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.881 Acres/hr  
Site Altitude: 6,240 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.73 Acres/hr  
Adjusted Hourly Fleet Production: 0.73 Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 28.03 Hours

Unit cost: \$642.107 Per acre Total job cost: \$13,163



REVEGETATION WORKTask description: Revegetate 40 acres of disturbanceSite: Ignacio PitPermit Action: 2024-03-05 UpdatePermit/Job#: M1992054PROJECT IDENTIFICATIONTask #: 07AState: ColoradoAbbreviation: NoneDate: 3/5/2024County: La PlataFilename: 07aUser: DMCAgency or organization name: DRMSFERTILIZING**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$112.82
Weed control spraying (MEANS 31 31 16.13 3100)	\$338.80
<b>Total Tilling Cost/Acre</b>	<b>\$451.62</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Rye, Annual Tetraploid - Barmultra	0.40	1.74	\$0.66
Orchardgrass - Paiute	1.60	19.83	\$6.52
Crested Wheatgrass - Hy-Crest	1.20	5.51	\$4.77
Smooth Brome - Lincoln	2.00	6.66	\$6.65
Russian Wildrye - VNS	0.80	3.21	\$4.74
Pubescent Wheatgrass - VNS	2.00	4.13	\$6.30
<b>Totals Seed Mix</b>	<b>8.00</b>	<b>41.09</b>	<b>\$29.64</b>

**Application**

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

**MULCHING and MISCELLANEOUS****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
<b>Total Mulch Materials Cost/Acre</b>				<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</b>

**NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$0.00</b>

**JOB TIME AND COST**

No. of Acres: 40                      Cost /Acre: \$713.26  
 Estimated Failure Rate: 25%                      Cost /Acre\*: \$713.26  
 \*Selected Replanting Work Items: TILLING,SEEDING

Initial Job Cost: **\$28,530.40**  
 Reseeding Job Cost: **\$7,132.60**  
 Total Job Cost: **\$35,663**  
 Job Hours: **30.00**

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Haul reclamation equipment to and from site**Site: **Ignacio Pit**Permit Action: 2024-03-05 UpdatePermit/Job#: M1992054**PROJECT IDENTIFICATION**Task #: 08AState: ColoradoAbbreviation: NoneDate: 3/5/2024County: La PlataFilename: 08aUser: DMCAgency 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:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
Ownership Cost/Hour:	\$20.26	\$36.04	\$47.05
Operating Cost/Hour:	\$39.51	\$76.08	\$82.85
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$82.29	\$158.17	\$175.95

**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	\$257.08	\$175.95	1	\$433.03	\$175.95	\$250.00
Cat 631G	52.50	\$341.67	\$175.95	2	\$1,035.24	\$351.90	\$500.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.73	\$82.29	1	\$89.02	\$82.29	\$250.00

Subtotals: **\$1,557.29** **\$610.14** **\$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.	\$15.83	1	\$15.83	\$15.83

Subtotals: **\$15.83** **\$15.83**

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>DURANGO</u>	
Total one-way travel distance:	<u>30.00</u>	miles
Average Travel Speed:	<u>45.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$8,004.49</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$21.11</u>
** one round trip, no haul rig:	

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.67</u>	<u>0.67</u>
Return Time (Hours):	<u>0.67</u>	<u>0.67</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>2.33</u>	<u>1.33</u>

**JOB TIME AND COST**

Total job time:	<u>4.67</u>	Hours
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Total job cost:	<u>\$8,026</u>
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