

## COST SUMMARY WORK

Task description: Cost Summary of Reclamation Tasks

Site: McCormick Pit 1

Permit Action: 2020 New App

Permit/Job#: M2020017

### PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 5/13/2020

County: Kit Carson

Filename: M017-000

User: ERR

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill and Grade Overburden	DOZER	1	44.31	\$10,630
002	Replace and Shape Topsoil	DOZER	1	19.88	\$4,727
003	Revegetate the Site	REVEGE	1	6.00	\$7,725
004	Mob/Demob of Reclamation Equipment	MOBILIZE	1	1.40	\$2,045
<b><u>SUBTOTALS:</u></b>				<b>71.59</b>	<b>\$25,127</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$508

Performance bond: 1.05

Total = \$264

Job superintendent: 0.00

Total = \$0

Profit: 10.00

Total = \$2,513

TOTAL O & P = \$3,284

CONTRACT AMOUNT (direct + O & P) = \$28,411

#### 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

\$1,421

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$4,705

TOTAL BOND AMOUNT (direct + indirect) = \$29,832

**TOTAL BOND AMOUNT (rounded) = \$30,000**

**BULLDOZER WORK**Task description: **Backfill and Grade Overburden**Site: **McCormick Pit 1** Permit Action: **2020 New App** Permit/Job#: **M2020017****PROJECT IDENTIFICATION**

Task #: **001** State: **Colorado** Abbreviation: **None**  
 Date: **5/13/2020** County: **Kit Carson** Filename: **M017-001**  
 User: **ERR**

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

Basic Machine: **Cat D8T - 8SU**  
 Horsepower: **310**  
 Blade Type: **Semi-Universal**  
 Attachment: **3-shank ripper**  
 Shift Basis: **1 per day**  
 Data Source: **(CRG)**

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$103.86	NA
Operating Cost/Hour:	\$82.26	100
Ripper own. Cost/Hour:	\$10.43	NA
Ripper op. Cost/Hour:	\$2.10	25
Operator Cost/Hour:	\$41.24	NA

Total unit Cost/Hour: **\$239.88**  
 Total Fleet Cost/Hour: **\$239.88**

**MATERIAL QUANTITIES**

Initial Volume: **17,778**  
 Swell factor: **1.115**  
 Loose volume: **19,822 LCY**

Source of estimated volume: **Application: Average of 2' over 5.51**  
 Source of estimated swell factor: **Cat Handbook**

**HOURLY PRODUCTION**

Average push distance: **200 feet**  
 Unadjusted hourly production: **491.9 LCY/hr**

Materials consistency description: **Partly consolidated stockpile 1.1**

Average push gradient: **-25 %**  
 Average site altitude: **4,300 feet**

Material weight: **2,100 lbs/LCY**Weight description: **Earth - Loam****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:	1.516	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9094

Adjusted unit production: 447.33 LCY/hr

Adjusted fleet production: **447.33** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.536/LCY

Total job time: **44.31** Hours

Total job cost: **\$10,630**

**BULLDOZER WORK**Task description: **Replace and Shape Topsoil**Site: **McCormick Pit 1**Permit Action: 2020 New AppPermit/Job#: M2020017**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 5/13/2020County: Kit CarsonFilename: M017-002User: ERRAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$103.86	NA
Operating Cost/Hour:	\$82.26	100
Ripper own. Cost/Hour:	\$10.43	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.24	NA

Total unit Cost/Hour: \$237.79Total Fleet Cost/Hour: **\$237.79****MATERIAL QUANTITIES**Initial Volume: 4,444Swell factor: 1.000Loose volume: **4,444 LCY**Source of estimated volume: Application: 6" over 5.51 AcresSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 350 feetUnadjusted hourly production: 233.3 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: -5 %Average site altitude: 4,300 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<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:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9582

Adjusted unit production: 223.55 LCY/hr

Adjusted fleet production: **223.55** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.064/LCY

Total job time: **19.88** Hours

Total job cost: **\$4,727**

**REVEGETATION WORK**Task description: **Revegetate the Site**Site: **McCormick Pit 1**Permit Action: 2020 New AppPermit/Job#: M2020017**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 5/13/2020County: Kit CarsonFilename: M017-003User: ERRAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	121.00	pound	\$0.34	\$40.54
Triple superphosphate, 0-46-0	87.00	pound	\$0.43	\$36.98
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$77.51</b>

**Application**

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$36.15
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$36.15</b>

**TILLING**

Description	Cost /Acre
Chisel plowing {DMG}	\$94.63
<b>Total Tilling Cost/Acre</b>	<b>\$94.63</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Native	10.00	163.22	\$137.25
Buffalograss - Native/Plains	10.00	9.64	\$120.67
Western Wheatgrass - Native	6.00	15.15	\$36.00
<b>Totals Seed Mix</b>	<b>26.00</b>	<b>188.02</b>	<b>\$293.92</b>

**Application**

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

<b>Total Seed Application Cost/Acre</b>	<b>\$232.00</b>
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**MULCHING and MISCELLANEOUS****Materials**

<b>Description</b>	<b>Units / Acre</b>	<b>Unit</b>	<b>Cost / Unit</b>	<b>Cost /Acre</b>
Straw, delivered {MEANS 31 25 14.16 1200}	1.50	TON	\$295.00	\$442.50
<b>Total Mulch Materials Cost/Acre</b>				<b>\$442.50</b>

**Application**

<b>Description</b>	<b>Cost /Acre</b>
Crimping, with tractor {DMG survey data}	\$70.17
<b>Total Mulch Application Cost/Acre</b>	<b>\$70.17</b>

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres:	5.51	Cost /Acre:	\$1,246.88
Estimated Failure Rate:	25%	Cost /Acre*:	\$620.55
*Selected Replanting Work Items:	TILLING,SEEDING		

Initial Job Cost:	<b>\$6,870.31</b>
Reseeding Job Cost:	<b>\$854.81</b>
Total Job Cost:	<b>\$7,725</b>
Job Hours:	<b>6.00</b>

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Mob/Demob of Reclamation Equipment**Site: **McCormick Pit 1**Permit Action: **2020 New App**Permit/Job#: **M2020017****PROJECT IDENTIFICATION**Task #: **004**State: **Colorado**Abbreviation: **None**Date: **5/13/2020**County: **Kit Carson**Filename: **M017-004**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:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
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 D8T - 8SU	53.08	\$114.29	\$141.54	1	\$255.83	\$141.54	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$9.74	\$67.39	1	\$77.13	\$67.39	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$18.15	\$67.39	1	\$85.54	\$67.39	\$250.00

Subtotals: **\$418.50** **\$276.32** **\$750.00****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.	\$40.61	1	\$40.61	\$40.61

Subtotals: **\$40.61** **\$40.61**



**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>BURLINGTON</u>	
Total one-way travel distance:	<u>11.00</u>	miles
Average Travel Speed:	<u>55.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$2,029.03</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$16.24</u>
** one round trip, no haul rig:	

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.20</u>	<u>0.20</u>
Return Time (Hours):	<u>0.20</u>	<u>0.20</u>
Loading Time (Hours):	<u>0.15</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.15</u>	<u>NA</u>
Subtotals:	<u>0.70</u>	<u>0.40</u>

**JOB TIME AND COST**

Total job time:	<u>1.40</u>	Hours
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Total job cost:	<u>\$2,045</u>
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