

COST SUMMARY WORK

Task description: Reclamation Cost Update

Site: Olathe Pit

Permit Action: TR-02

Permit/Job#: M1984108

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 5/30/2018

County: Montrose

Filename: M108-000

User: DMC

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Regrade 1500' of south pond perimeter	DOZER	1	28.70	\$4,703.00
02a	Topsoil Placement	DOZER	1	2.23	\$365.00
03a	Revegetate dryland area	REVEGE	1	1.00	\$2,263.00
04a	Revegetate wetlands area	REVEGE	1	1.00	\$919.00
05a	Mobilize reclamation equipment	MOBILIZE	1	2.88	\$994.00
<u>SUBTOTALS:</u>				35.81	\$9,244

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$186.73

Performance bond: 1.05

Total = \$97.06

Job superintendent: 0.00

Total = \$0.00

Profit: 10.00

Total = \$924.40

TOTAL O & P = \$1,208.19

CONTRACT AMOUNT (direct + O & P) = \$10,452.19

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 0.00

Total = 0.00

Engineering work and/or contract/bid preparation: 0.00

Total = \$0.00

Reclamation management and/or administration: 5.00

\$522.61

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$1,730.80

TOTAL BOND AMOUNT (direct + indirect) = \$10,975.00

BULLDOZER WORKTask description: **Regrade 1500' of south pond perimeter**Site: **Olathe Pit**Permit Action: TR-02Permit/Job#: M1984108**PROJECT IDENTIFICATION**Task #: 01AState: ColoradoAbbreviation: NoneDate: 5/30/2018County: MontroseFilename: M108-01aUser: DMCAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D7R DS Series II LGPHorsepower: 240Blade Type: StraightAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$60.88	NA
Operating Cost/Hour:	\$61.14	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.85	NA

Total unit Cost/Hour: \$163.87Total Fleet Cost/Hour: **\$163.87****MATERIAL QUANTITIES**Initial Volume: 11,000Swell factor: 1.125Loose volume: **12,375 LCY**Source of estimated volume: Division of Reclamation, Mining & Safety

Source of estimated swell

factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feet

Unadjusted hourly

production: 800.0 LCY/hrMaterials consistency description: Loose stockpile 1.2

Average push

gradient: 0 %Average site altitude: 5,400 feetMaterial weight: 2,550 lbs/LCYWeight description: Earth - Dry packed**Job Condition Correction Factor****Source**

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: 431.20 LCY/hr
Adjusted fleet
production: **431.2** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.380/LCY

Total job time: **28.70** Hours
Total job cost: **\$4,703**

BULLDOZER WORKTask description: **Topsoil Placement**Site: **Olathe Pit**Permit Action: **TR-02**Permit/Job#: **M1984108****PROJECT IDENTIFICATION**Task #: **02A**State: **Colorado**Abbreviation: **None**Date: **5/30/2018**County: **Montrose**Filename: **M108-02a**User: **DMC**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS Series II LGP**Horsepower: **240**Blade Type: **Straight**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$60.88	NA
Operating Cost/Hour:	\$61.14	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.85	NA

Total unit Cost/Hour: **\$163.87**Total Fleet Cost/Hour: **\$163.87****MATERIAL QUANTITIES**Initial Volume: **1,532**Swell factor: **1.000**Loose volume: **1,532 LCY**Source of estimated volume: **Division of Reclamation, Mining & Safety**

Source of estimated swell

factor:

Cat Handbook**HOURLY PRODUCTION**Average push distance: **50 feet**

Unadjusted hourly

production:

800.0 LCY/hrMaterials consistency description: **Loose stockpile 1.2**

Average push

gradient:

0 %

Average site altitude:

5,400 feetMaterial weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor****Source**

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: 687.44 LCY/hr
Adjusted fleet
production: **687.44** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.238/LCY

Total job time: **2.23** Hours
Total job cost: **\$365**

REVEGETATION WORKTask description: Revegetate dryland areaSite: Olathe PitPermit Action: TR-02Permit/Job#: M1984108**PROJECT IDENTIFICATION**Task #: 03AState: ColoradoAbbreviation: NoneDate: 5/30/2018County: MontroseFilename: M108-03aUser: 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$106.29
Weed control spraying (MEANS 31 31 16.13 3100)	\$242.00
Total Tilling Cost/Acre	\$348.29

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alfalfa - Common	0.25	1.21	\$0.64
Indian Ricegrass - Paloma	6.00	19.42	\$58.50
Crested Wheatgrass - Ephraim	3.00	13.77	\$11.01
Canby Bluegrass - Canbar	1.00	21.26	\$9.50
Crested Wheatgrass - Fairway	0.80	3.67	\$2.67
Russian Wildrye - VNS	1.30	5.22	\$7.51
Pubescent Wheatgrass - VNS	2.30	4.75	\$7.82
Streambank Wheatgrass - Sodar	3.00	9.78	\$18.27
Western Wheatgrass - Native	0.80	2.02	\$5.60

Saltbush, Four Wing	0.25	0.34	\$3.13
Totals Seed Mix	18.70	81.45	\$124.65

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
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$261.00	\$522.00
Total Mulch Materials Cost/Acre				\$522.00

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$66.02
Total Mulch Application Cost/Acre	\$66.02

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: 1.36 Cost /Acre: \$1,328.18
 Estimated Failure Rate: 25% Cost /Acre*: \$1,328.18
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING
 Initial Job Cost: **\$1,806.32**
 Reseeding Job Cost: **\$451.58**
 Total Job Cost: **\$2,258**
 Job Hours: **1.00**

REVEGETATION WORKTask description: Revegetate wetlands areaSite: Olathe Pit Permit Action: TR-02 Permit/Job#: M1984108PROJECT IDENTIFICATION

Task #: 04A State: Colorado Abbreviation: None
 Date: 5/30/2018 County: Montrose Filename: M108-04a
 User: DMC

Agency or organization name: DRMSFERTILIZING**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
Weed control spraying (MEANS 31 31 16.13 3100)	\$242.00
Total Tilling Cost/Acre	\$242.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Bulrush	2.00	19.74	\$109.00
Beaked Sedge	1.00	8.32	\$195.00
Hardstem Bulrush	4.00	37.19	\$598.80
Nebraska Sedge	1.00	20.94	\$161.50
Totals Seed Mix	8.00	86.20	\$1,064.30

Application

Description	Cost /Acre
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Broadcast seeding [DMG]	\$267.22
Total Seed Application Cost/Acre	\$267.22

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$261.00	\$522.00
Total Mulch Materials Cost/Acre				\$522.00

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$66.02
Total Mulch Application Cost/Acre	\$66.02

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: 0.34 Cost /Acre: \$2,161.54
 Estimated Failure Rate: 25% Cost /Acre*: \$2,161.54
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$734.92**
 Reseeding Job Cost: **\$183.73**
 Total Job Cost: **\$919**
 Job Hours: **1.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilize reclamation equipment**Site: **Olathe Pit**Permit Action: **TR-02**Permit/Job#: **M1984108****PROJECT IDENTIFICATION**Task #: **05A**State: **Colorado**Abbreviation: **None**Date: **5/30/2018**County: **Montrose**Filename: **M108-05a**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:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

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 Series II LGP	34.57	\$60.88	\$117.55	1	\$178.43	\$117.55	\$250.00

Subtotals: **\$178.43** **\$117.55** **\$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, 3/4 T.	\$12.26	1	\$12.26	\$12.26

Subtotals: **\$12.26** **\$12.26**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>MONTROSE</u>	
Total one-way travel distance:	<u>10.00</u>	miles
Average Travel Speed:	<u>45.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$988.41</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$5.45</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.22</u>	<u>0.22</u>
Return Time (Hours):	<u>0.22</u>	<u>0.22</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>1.44</u>	<u>0.44</u>

JOB TIME AND COST

Total job time:	<u>2.89</u>	Hours
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Total job cost:	<u>\$994</u>
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