



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

January 3, 2023

Jason Burkey
Oldcastle SW Group, Inc. dba United Companies of Mesa County
2273 River Road
Grand Junction, CO 81502-3609

**Re: Chambers Pit - File No. M-1979-205
Oldcastle SW Group, Inc. dba United Companies of Mesa County
Surety Increase (SI-1)
Chambers Pit, M-1979-205 Surety Increase 2023.**

Dear Jason Burkey:

On January 3, 2023 the Division of Reclamation, Mining and Safety increased the current Financial Warranty for this permit to \$297,269.00, in accordance with Rule 4.2.1 of the Rules and Regulations. This is an increase of \$85,269.00.

Please see the November 1, 2022 inspection report for details regarding why this surety increase is required.

The Division ordered amendment of the current Financial Warranty, or submittal of a new Financial Warranty reflecting the increase, within 60 days from the date of this letter (January 3, 2023).

Please make arrangements with Sara M. Stevenson-Benn at the Division's Denver office for submittal of the financial warranty. Any other questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Sara M. Stevenson-Benn by telephone at (303) 866-3567 (8148), or by email at Sara.stevenson-benn@state.co.us.

The Permittee for this site may be scheduled for a Formal Board Hearing for possible revocation of the permit after March 4, 2023, if the amount of any increased Financial Warranty has not been provided.

Bond Held:	\$212,000.00
Prior Liability:	\$212,000.00
Change in Liability:	\$85,269.00
Revised Liability:	\$297,269.00
Prior Permit Acreage:	110.00



Change in Permit Acreage:	0.00
Revised Permit Acreage:	110.00
Prior Affected Acreage:	110.00
Change in Affected Acreage:	0.00
Revised Affected Acreage:	110.00

If you have any questions, please contact me by telephone at (303) 866-3567 x 8185, or by email at Clayton.wein@state.co.us.

Sincerely,



Clayton C. Wein
Environmental Protection Specialist

cc: Jason Burkey

M-GR-04

COST SUMMARY WORK

Task description: Post Inspection Update

Site: Chambers Pit

Permit Action: 11-2022

Permit/Job#: M1979205

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 12/12/2022

County: Garfield

Filename: M205-000

User: CCW

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	AM-2 Area 1 Secondary Reveg Wetlands	REVEGE	1	1.00	\$864
01b	AM-2 Area 1 Secondary Reveg Dryland	REVEGE	1	2.00	\$2,587
02a	AM-2 Area 1 Rip access road	RIPPER	1	0.77	\$221
02b	AM-2 Area 1 Transport topsoil for access road	LOADER	1	10.93	\$1,591
02c	AM-2 Area 1 Spread topsoil on access road	DOZER	1	1.00	\$265
02d	AM-2 Area 1 Access Road Reveg Dryland	REVEGE	1	1.00	\$924
03a	AM-2 Area 2 Dewater 12.1 ac pond	PUMPING	1	147.44	\$14,016
04a	AM-2 Area 2 Highwall Reduction	DOZER	1	61.95	\$16,342
05a	AM-2 Area 2 Removal of Scale foundation	DEMOLISH	1	20.00	\$1,991
06a	AM-2 Area 2 Rip compacted areas	RIPPER	1	4.67	\$1,329
07a	AM-2 Area 2 Transport topsoil	LOADER	1	41.11	\$5,981
07b	AM-2 Area 2 Spread topsoil	DOZER	1	7.85	\$2,072
08a	AM-2 Area 2 Reveg Wetlands	REVEGE	1	1.00	\$1,080
08b	AM-2 Area 2 Reveg Dryland	REVEGE	1	8.00	\$8,546
08c	AM-2 Area 2 Trees/Shrubs	REVEGE	1	20.00	\$1,735
09a	Main Dewater 20.17 ac pond	PUMPING	1	261.77	\$24,884
10a	Main Removal of Scale foundation	DEMOLISH	1	20.00	\$6,560
11a	Main Highwall Reduction	DOZER	1	20.91	\$5,515
11b	Main Grading import stockpiles on pit floor	DOZER	1	15.64	\$4,127
12a	Main-Transport topsoil from Glen Pit	TRUCK1	1	28.90	\$37,910
12b	Main Spread topsoil	DOZER	1	31.91	\$8,417
13a	Main Reveg Wetlands	REVEGE	1	2.50	\$4,679
13b	Main Reveg Dryland	REVEGE	1	30.00	\$54,870
13c	Main Trees/Shrubs	REVEGE	1	20.00	\$516
14a	Mobilization of Equipment	MOBILIZE	1	2.34	\$6,428
14b	Secondary mobilization of equipment	MOBILIZE	1	2.34	\$1,376
<u>SUBTOTALS:</u>				765.03	\$214,826

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02
 Performance bond: 1.05
 Job superintendent: 382.52
 Profit: 10.00

Total = \$4,339
 Total = \$2,256
 Total = \$28,738
 Total = \$21,483
TOTAL O & P = \$56,816

CONTRACT AMOUNT (direct + O & P) = \$271,642

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>4.25</u>	Total =	<u>\$11,545</u>
Reclamation management and/or administration:	<u>5.00</u>		<u>\$13,582</u>

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$82,443

TOTAL BOND AMOUNT (direct + indirect) = \$297,269

REVEGETATION WORKTask description: AM-2 Area 1 Secondary Reveg WetlandsSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205PROJECT IDENTIFICATIONTask #: 01AState: ColoradoAbbreviation: NoneDate: 12/12/2022County: GarfieldFilename: M205-01aUser: CCWAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.18
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$407.58

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Bulrush	2.00	19.74	\$81.00
Beaked Sedge	1.00	8.32	\$220.00
Canada Wildrye	2.50	6.60	\$27.10
Hardstem Bulrush	4.00	37.19	\$598.80
Nebraska Sedge	1.00	20.94	\$166.50
Slender Wheatgrass - Pryor	2.50	9.13	\$10.63
Totals Seed Mix	13.00	101.92	\$1,104.03

Application

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
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$4.61	\$4.61
Herbicide - Plateau @ 1.0 pt/ac	1.00	ACRE	\$11.21	\$11.21
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$858.54

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$73.00
Power mulcher (MEANS 32 91 13.16 0350)	\$141.57
Weed spray, truck, aquatic area, nox. [DMG]	\$62.72
Total Mulch Application Cost/Acre	\$277.29

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:	0.3	Cost /Acre:	\$2,879.44
Estimated Failure Rate:	0%	Cost /Acre*:	\$2,879.44
*Selected Replanting Work Items:	TILLING,SEEDING,MULCHING		
Initial Job Cost:	\$863.83		
Reseeding Job Cost:	\$0.00		
Total Job Cost:	\$864		
Job Hours:	1.00		

REVEGETATION WORKTask description: AM-2 Area 1 Secondary Reveg DrylandSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205**PROJECT IDENTIFICATION**Task #: 01BState: ColoradoAbbreviation: NoneDate: 12/12/2022County: GarfieldFilename: M205-01bUser: CCWAgency 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)	\$117.18
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$407.58

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Paloma	3.00	9.71	\$33.38
Crested Wheatgrass - Ephraim	1.50	6.89	\$6.49
Canby Bluegrass - Canbar	0.50	10.63	\$5.13
Canada Wildrye	1.25	3.30	\$13.55
Slender Wheatgrass - Pryor	1.25	4.56	\$5.31
Streambank Wheatgrass - Sodar	1.50	4.89	\$8.55
Totals Seed Mix	9.00	39.98	\$72.40

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
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$4.61	\$4.61
Herbicide - Plateau @ 1.0 pt/ac	1.00	ACRE	\$11.21	\$11.21
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$858.54

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$73.00
Power mulcher (MEANS 32 91 13.16 0350)	\$141.57
Weed spray, truck, non-aquatic area, nox. [DMG]	\$62.72
Total Mulch Application Cost/Acre	\$277.29

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: 1.4 Cost /Acre: \$1,847.81
 Estimated Failure Rate: 0% Cost /Acre*: \$1,847.81
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$2,586.93**
 Reseeding Job Cost: **\$0.00**
 Total Job Cost: **\$2,587**
 Job Hours: **2.00**

BULLDOZER RIPPING WORK

Task description: AM-2 Area 1 Rip access road

Site: Chambers Pit

Permit Action: 11-2022

Permit/Job#: M1979205

PROJECT IDENTIFICATION

Task #: 02A

State: Colorado

Abbreviation: None

Date: 12/12/2022

County: Garfield

Filename: M205-02a

User: CCW

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU

Horsepower: 310

Ripper Attachment: 3-Shank Ripper

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper Ownership Cost/Hour:	\$13.10	NA
Ripper Operating Cost/Hour:	\$7.30	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$284.18	
Total Fleet Cost/Hour:	\$284.18	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA

Bank Volume: NA

BCY NA

Area: 0.50 acres

Rip Depth (ft): 2.00

Volume: 1,613

BCY or CCY

Source of estimated quantity: 1800 LF x 12' W

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	<u>2.56</u>	feet/pass
Average Ripping Width:	<u>7.08</u>	feet/pass
Average Ripping Length:	<u>200.00</u>	feet/pass
Average Dozer Speed:	<u>88.00</u>	feet/minute
Average Maneuver Time:	<u>0.25</u>	minutes/pass
Production per unit area:	<u>0.773</u>	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.773 Acres/hr

Site Altitude: 5,320 feet

Altitude Adj: 1.00 (CAT HB)

Job Efficiency: 0.83 (1 shift/day)

Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.64 Acres/hr

Adjusted Hourly Fleet Production: 0.64 Acres/hr

JOB TIME AND COST

Fleet size: 1

Grader(s)

Total job time: 0.78

Hours

Unit cost: \$442.852

Per acre

Total job cost: \$221

WHEEL LOADER – LOAD AND CARRY WORKTask description: AM-2 Area 1 Transport topsoil for access roadSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205**PROJECT IDENTIFICATION**Task #: 02BState: ColoradoAbbreviation: NoneDate: 12/12/2022County: GarfieldFilename: M205-02bUser: CCWAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: CAT 972HAttachment 1: ROPS CabHorsepower: 287Shift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$53.96	NA
Operating Cost/Hour:	\$50.78	100
Operator Cost/Hour:	\$40.71	NA
Total Unit Cost/Hour:	\$145.45	
Total Fleet Cost/Hour:	\$145.45	

MATERIAL QUANTITIESInitial volume: 810

CCY

Swell factor: 1.115Loose volume: 903

LCY

Source of estimated volume: 1800FL x 12'W x 12" DSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Loader Cycle Time:**Unadjusted Basic Cycle Time (load, dump,
maneuver):

0.525

minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 3/4" to 6" diameter 0.00	0.000	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.080	minutes
Adjusted Basic Cycle Time:		0.445	minutes

Rolling Resistance – Road ConditionsHaul: Soft, rutted dirt, no maintenance or water, 8" tire penetration 14Return: Soft, rutted dirt, no maintenance or water, 8" tire penetration 14**Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	1000	0.00	14.00	14.00	1.8047	(Cat HB)
Return Route:	1000	0.00	14.00	14.00	1.4657	(Cat HB)

Total Travel Time: 3.2704 minutes
Total Cycle Time: 3.7154 minutes

Load Bucket Capacity

Rated Capacity: 5.60 LCY (heaped)
Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity: 6.16 LCY

Job Condition Correction Factors

Site Altitude: 5320 feet

Altitude Adj:	<u>1.00</u>	Source (CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.83</u>	multiplier

Unadjusted Hourly Unit Production: 99.48 LCY/Hour
Adjusted Hourly Unit Production: 82.57 LCY/Hour
Adjusted Hourly Fleet Production: 82.57 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 10.94 Hours
Unit cost: \$1.762 /LCY Total job cost: \$1,591

BULLDOZER WORKTask description: AM-2 Area 1 Spread topsoil on access roadSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205**PROJECT IDENTIFICATION**Task #: 02CState: ColoradoAbbreviation: NoneDate: 12/12/2022County: GarfieldFilename: M205-02cUser: CCWAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	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:	\$263.78	
Total Fleet Cost/Hour:	\$263.78	

MATERIAL QUANTITIESInitial Volume: 919Swell factor: 1.000Loose volume: 919 LCYSource of estimated volume: Transported volumeSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 1,400.0 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 5,320 feetMaterial weight: 2,100 lbs/LCYWeight description: Earth - LoamJob 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:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6544

Adjusted unit
production: 916.16 LCY/hr
Adjusted fleet
production: **916.16** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.288/LCY

Total job time: **1.00** Hours
Total job cost: **\$265**

REVEGETATION WORKTask description: AM-2 Area 1 Access Road Reveg DrylandSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205**PROJECT IDENTIFICATION**Task #: 02DState: ColoradoAbbreviation: NoneDate: 12/12/2022County: GarfieldFilename: M205-02dUser: CCWAgency 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)	\$117.18
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$407.58

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Paloma	3.00	9.71	\$33.38
Crested Wheatgrass - Ephraim	1.50	6.89	\$6.49
Canby Bluegrass - Canbar	0.50	10.63	\$5.13
Canada Wildrye	1.25	3.30	\$13.55
Slender Wheatgrass - Pryor	1.25	4.56	\$5.31
Streambank Wheatgrass - Sodar	1.50	4.89	\$8.55
Totals Seed Mix	9.00	39.98	\$72.40

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
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$4.61	\$4.61
Herbicide - Plateau @ 1.0 pt/ac	1.00	ACRE	\$11.21	\$11.21
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$858.54

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$73.00
Power mulcher (MEANS 32 91 13.16 0350)	\$141.57
Weed spray, truck, non-aquatic area, nox. [DMG]	\$62.72
Total Mulch Application Cost/Acre	\$277.29

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: 0.5 Cost /Acre: \$1,847.81
 Estimated Failure Rate: 0% Cost /Acre*: \$1,847.81
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$923.91**
 Reseeding Job Cost: **\$0.00**
 Total Job Cost: **\$924**
 Job Hours: **1.00**

PUMPING WORK

Task description: AM-2 Area 2 Dewater 12.1 ac pond

Site: Chambers Pit

Permit Action: 11-2022

Permit/Job#: M1979205

PROJECT IDENTIFICATION

Task #: 03A

State: Colorado

Abbreviation: None

Date: 12/12/2022

County: Garfield

Filename: M205-03a

User: CCW

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

	Description	Quantity
Make and Model:	Submersible pump - 460v, 8 in.	3
Attachment 1:	Suction hose - 6 in. diam., 25 ft.	3
Attachment 2:	Discharge hose - 6 in. D., 25 ft.	24
Labor Unit 1:	Pump operator	1
Horsepower:	95	
Shift Basis:	1 per day	
Weight:	0.70	
	(US Tons)	

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$54.69	NA
Operating Cost/Hour:	\$12.69	100
Operator Cost/Hour:	\$27.68	NA
Total Unit Cost/Hour:	\$95.06	

Total Fleet Cost/Hour: \$95.06

PUMPING QUANTITIES

Initial Pond Volume:	242.00		Conversion factor:	325850.5800
Final Pond Volume:	78,855,840.36	gallons		
Total Pond Inflow Surface Area:	18,800	Sq. ft.	Unit inflow rate in gph/sq. ft.:	0.3516
Total Pond Inflow Volume per Hour:	6,610.08	gallons		

Source of estimated volume: 12.1 ac at 20 ft depth

PUMPING TIME

Maximum Pump Capacity:	170,000	gph/pump
Estimated Suction Head:	5	feet
Estimated Discharge Head:	20	feet
Total Head:	25	feet
CPB Pump Capacity:	165,600	gph/pump
Site Altitude:	5,320	feet
Adjusted Pumping Capacity:	496,800	gph
Initial Unadjusted Pumping Time:	158.73	hours
Inflow during Initial Pumping:	1,049,202	gallons
Net Unadjusted Pumping Time:	160.84	Hours
Altitude Adjustment Factor:	1.0000	(3% rule)
Pump Efficiency Factor:	0.9167	(55 min./hr.)
Total Adjusted Pumping Time:	147.44	hours

JOB TIME AND COST

Total job time: 147.44 Hours

Unit cost: \$0.000175 /Gallon

Total job cost: \$14,016

BULLDOZER WORKTask description: AM-2 Area 2 Highwall ReductionSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 12/12/2022County: GarfieldFilename: M205-04aUser: CCWAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	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:	\$263.78	
Total Fleet Cost/Hour:	\$263.78	

MATERIAL QUANTITIESInitial Volume: 22,222Swell factor: 1.050Loose volume: **23,333** LCYSource of estimated volume: 1300LF backfill 800 LF cut/fill 1:1 20'H to 3:1Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 75 feetUnadjusted hourly production: 1,017.1 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %Average site altitude: 5,320 feetMaterial weight: 3,400 lbs/LCYWeight description: Sand and gravel - WetJob Condition Correction FactorSource

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:	0.676	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3703

Adjusted unit
production: 376.63 LCY/hr
Adjusted fleet
production: **376.63** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.700/LCY

Total job time: **61.95** Hours
Total job cost: **\$16,342**

DEMOLITION WORK

Task description: AM-2 Area 2 Removal of Scale foundation

Site: Chambers Pit

Permit Action: 11-2022

Permit/Job#: M1979205

PROJECT IDENTIFICATION

Task #: 05A

State: Colorado

Abbreviation: None

Date: 12/12/2022

County: Garfield

Filename: M205-05a

User: CCW

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 95.50 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Scale footers	12' x 70'	Demo. and on-site disposal in existing pit, 1.5 ft. x 3 ft. - Max. 200 ft. push	164.00	LF	\$10.45	\$1,713.80
Scale ramps	2 x 12'W x 20'L	Demo. and on-site disposal in existing pit, 4 in. thick - Max. 200 ft. push	480.00	SF	\$0.77	\$371.52

Job Hours: 20.00

Subtotal
(unadjusted): \$2,085.32

Total Cost
(adjusted for location): \$1,991.48

BULLDOZER RIPPING WORK

Task description: AM-2 Area 2 Rip compacted areas

Site: Chambers Pit

Permit Action: 11-2022

Permit/Job#: M1979205

PROJECT IDENTIFICATION

Task #: 06A

State: Colorado

Abbreviation: None

Date: 12/12/2022

County: Garfield

Filename: M205-06a

User: CCW

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU

Horsepower: 310

Ripper Attachment: 3-Shank Ripper

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper Ownership Cost/Hour:	\$13.10	NA
Ripper Operating Cost/Hour:	\$7.30	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$284.18	
Total Fleet Cost/Hour:	\$284.18	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA

Bank Volume: NA

BCY NA

Area: 3.00 acres

Rip Depth (ft): 2.00

Volume: 9,680

BCY or CCY

Source of estimated quantity: Staff estimates

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	2.56	feet/pass
Average Ripping Width:	7.08	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:	0.773	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.773 Acres/hr

Site Altitude: 5,320 feet

Altitude Adj: 1.00 (CAT HB)

Job Efficiency: 0.83 (1 shift/day)

Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.64 Acres/hr

Adjusted Hourly Fleet Production: 0.64 Acres/hr

JOB TIME AND COST

Fleet size: 1

Grader(s)

Total job time: 4.68

Hours

Unit cost: \$442.852

Per acre

Total job cost: \$1,329

WHEEL LOADER – LOAD AND CARRY WORKTask description: AM-2 Area 2 Transport topsoilSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205**PROJECT IDENTIFICATION**Task #: 07AState: ColoradoAbbreviation: NoneDate: 12/12/2022County: GarfieldFilename: M205-07aUser: CCWAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: CAT 972HAttachment 1: ROPS CabHorsepower: 287Shift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$53.96	NA
Operating Cost/Hour:	\$50.78	100
Operator Cost/Hour:	\$40.71	NA
Total Unit Cost/Hour:	\$145.45	
Total Fleet Cost/Hour:	\$145.45	

MATERIAL QUANTITIESInitial volume: 6,453

CCY

Swell factor: 1.115Loose volume: 7,195

LCY

Source of estimated volume: 4 ac 12" depthSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Loader Cycle Time:**Unadjusted Basic Cycle Time (load, dump,
maneuver):

0.525

minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 3/4" to 6" diameter 0.00	0.000	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.080	minutes
Adjusted Basic Cycle Time:		0.445	minutes

Rolling Resistance – Road ConditionsHaul: Soft, rutted dirt, no maintenance or water, 8" tire penetration 14Return: Soft, rutted dirt, no maintenance or water, 8" tire penetration 14**Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	400	0.00	14.00	14.00	0.7219	(Cat HB)
Return Route:	400	0.00	14.00	14.00	0.5863	(Cat HB)

Total Travel Time: 1.3082 minutes
Total Cycle Time: **1.7532** minutes

Load Bucket Capacity

Rated Capacity: 5.60 LCY (heaped)
Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity: **6.16** LCY

Job Condition Correction Factors

Site Altitude: 5320 feet

Altitude Adj:	<u>1.00</u>	Source (CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.83</u>	multiplier

Unadjusted Hourly Unit Production: 210.82 LCY/Hour
Adjusted Hourly Unit Production: 174.98 LCY/Hour
Adjusted Hourly Fleet Production: **174.98** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: **41.12** Hours
Unit cost: \$0.831 /LCY Total job cost: **\$5,981**

BULLDOZER WORKTask description: AM-2 Area 2 Spread topsoilSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205**PROJECT IDENTIFICATION**Task #: 07BState: ColoradoAbbreviation: NoneDate: 12/12/2022County: GarfieldFilename: M205-07bUser: CCWAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	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:	\$263.78	
Total Fleet Cost/Hour:	\$263.78	

MATERIAL QUANTITIESInitial Volume: 7,195Swell factor: 1.000Loose volume: 7,195 LCYSource of estimated volume: Transported volumeSource of estimated swell
factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly
production: 1,400.0 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push
gradient: 0 %Average site altitude: 5,320 feetMaterial weight: 2,100 lbs/LCYWeight description: Earth - LoamJob 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:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6544

Adjusted unit
production: 916.16 LCY/hr
Adjusted fleet
production: **916.16** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.288/LCY

Total job time: **7.85** Hours
Total job cost: **\$2,072**

REVEGETATION WORKTask description: AM-2 Area 2 Reveg WetlandsSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205**PROJECT IDENTIFICATION**Task #: 08AState: ColoradoAbbreviation: NoneDate: 12/14/2022County: GarfieldFilename: M205-08aUser: CCWAgency 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)	\$117.18
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$407.58

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Bulrush	2.00	19.74	\$81.00
Beaked Sedge	1.00	8.32	\$220.00
Canada Wildrye	2.50	6.60	\$27.10
Hardstem Bulrush	4.00	37.19	\$598.80
Nebraska Sedge	1.00	20.94	\$166.50
Slender Wheatgrass - Pryor	2.50	9.13	\$10.63
Totals Seed Mix	13.00	101.92	\$1,104.03

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
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$4.61	\$4.61
Herbicide - Plateau @ 1.0 pt/ac	1.00	ACRE	\$11.21	\$11.21
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$858.54

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$73.00
Power mulcher (MEANS 32 91 13.16 0350)	\$141.57
Weed spray, truck, aquatic area, nox. [DMG]	\$62.72
Total Mulch Application Cost/Acre	\$277.29

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: 0.3 Cost /Acre: \$2,879.44
 Estimated Failure Rate: 25% Cost /Acre*: \$2,879.44
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$863.83**
 Reseeding Job Cost: **\$215.96**
 Total Job Cost: **\$1,080**
 Job Hours: **1.00**

REVEGETATION WORKTask description: AM-2 Area 2 Reveg DrylandSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205PROJECT IDENTIFICATIONTask #: 08BState: ColoradoAbbreviation: NoneDate: 12/14/2022County: GarfieldFilename: M205-08bUser: CCWAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.18
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$407.58

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Paloma	3.00	9.71	\$33.38
Crested Wheatgrass - Ephraim	1.50	6.89	\$6.49
Canby Bluegrass - Canbar	0.50	10.63	\$5.13
Canada Wildrye	1.25	3.30	\$13.55
Slender Wheatgrass - Pryor	1.25	4.56	\$5.31
Streambank Wheatgrass - Sodar	1.50	4.89	\$8.55
Totals Seed Mix	9.00	39.98	\$72.40

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
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$4.61	\$4.61
Herbicide - Plateau @ 1.0 pt/ac	1.00	ACRE	\$11.21	\$11.21
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$858.54

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$73.00
Power mulcher (MEANS 32 91 13.16 0350)	\$141.57
Weed spray, truck, non-aquatic area, nox. [DMG]	\$62.72
Total Mulch Application Cost/Acre	\$277.29

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: 3.7 Cost /Acre: \$1,847.81
 Estimated Failure Rate: 25% Cost /Acre*: \$1,847.81
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$6,836.90**
 Reseeding Job Cost: **\$1,709.22**
 Total Job Cost: **\$8,546**
 Job Hours: **8.00**

REVEGETATION WORKTask description: AM-2 Area 2 Trees/ShrubsSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205PROJECT IDENTIFICATIONTask #: 08CState: ColoradoAbbreviation: NoneDate: 12/14/2022County: GarfieldFilename: M205-08cUser: CCWAgency 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
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

Description	Cost /Acre
	\$

Total Seed Application Cost/Acre	\$0.00
-----------------------------------------	---------------

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
Buffaloberry, Russet	148	Tubling, 3 cu. in. container (MEANS)	\$1.14	\$2.40	\$168.72
Cottonwood, Narrowleaf	148	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.35	\$2.40	\$347.80
Willow, Sandbar	148	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.35	\$2.40	\$347.80
Sumac, Smooth	148	Tubling, 3 cu. in. container (MEANS)	\$3.54	\$2.40	\$523.92
Totals Nursery Stock Cost / Acre					\$1,388.24

JOB TIME AND COST

No. of Acres:	1	Cost /Acre:	\$1,388.24
Estimated Failure Rate:	25%	Cost /Acre*:	\$1,388.24
*Selected Replanting Work Items:	NURSERY		

Initial Job Cost:	\$1,388.24
Reseeding Job Cost:	\$347.06
Total Job Cost:	\$1,735
Job Hours:	20.00

PUMPING WORK

Task description: Main Dewater 20.17 ac pond

Site: Chambers Pit

Permit Action: 11-2022

Permit/Job#: M1979205

PROJECT IDENTIFICATION

Task #: 09A

State: Colorado

Abbreviation: None

Date: 12/14/2022

County: Garfield

Filename: 09a

User: CCW

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

	Description	Quantity
Make and Model:	Submersible pump - 460v, 8 in.	3
Attachment 1:	Suction hose - 6 in. diam., 25 ft.	3
Attachment 2:	Discharge hose - 6 in. D., 25 ft.	24
Labor Unit 1:	Pump operator	1
Horsepower:	95	
Shift Basis:	1 per day	
Weight:	0.70	
	(US Tons)	

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$54.69	NA
Operating Cost/Hour:	\$12.69	100
Operator Cost/Hour:	\$27.68	NA
Total Unit Cost/Hour:	\$95.06	

Total Fleet Cost/Hour: \$95.06

PUMPING QUANTITIES

Initial Pond Volume:	403.40		Conversion factor:	325850.5800
Final Pond Volume:	131,448,123.97	gallons		
Total Pond Inflow Surface Area:	112,000	Sq. ft.	Unit inflow rate in gph/sq. ft.:	0.3516
Total Pond Inflow Volume per Hour:	39,379.20	gallons		

Source of estimated volume: 20.17 ac at 20 ft depth

PUMPING TIME

Maximum Pump Capacity:	170,000	gph/pump
Estimated Suction Head:	5	feet
Estimated Discharge Head:	20	feet
Total Head:	25	feet
CPB Pump Capacity:	165,600	gph/pump
Site Altitude:	5,320	feet
Adjusted Pumping Capacity:	496,800	gph
Initial Unadjusted Pumping Time:	264.59	hours
Inflow during Initial Pumping:	10,419,328	gallons
Net Unadjusted Pumping Time:	285.56	Hours
Altitude Adjustment Factor:	1.0000	(3% rule)
Pump Efficiency Factor:	0.9167	(55 min./hr.)
Total Adjusted Pumping Time:	261.78	hours

JOB TIME AND COST

Total job time: 261.78 Hours

Unit cost: \$0.000175 /Gallon

Total job cost: \$24,884

DEMOLITION WORK

Task description: Main Removal of Scale foundation

Site: Chambers Pit

Permit Action: 11-2022

Permit/Job#: M1979205

PROJECT IDENTIFICATION

Task #: 10A

State: Colorado

Abbreviation: None

Date: 12/14/2022

County: Garfield

Filename: M205-10a

User: CCW

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 95.50 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Scale footers	12' x 70'	Demo. and on-site disposal in existing pit, 1.5 ft. x 3 ft. - Max. 200 ft. push	164.00	LF	\$10.45	\$1,713.80
Scale ramps	2 x 12'W x 20'L	Demo. and on-site disposal in existing pit, 4 in. thick - Max. 200 ft. push	480.00	SF	\$0.77	\$371.52
Scale-Loading/Hauling	70' x 12'	Loading and 2 mile haul, no salvage - Machine loading	32.00	CY	\$19.40	\$620.80
Scale-Hauling	70' x 12'	Hauling only, per mile, 12-18 CY truck - 50 mph average speed	10.00	MI	\$3.78	\$37.80
Scale house	60'L x 12"W x 10'H	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 15 mile haul	7,200.00	CF	\$0.36	\$2,620.80
Scale house foundation	60' L x 12' W	Demo. and on-site disposal in existing pit, 1.5 ft. x 3 ft. - Max. 200 ft. push	144.00	LF	\$10.45	\$1,504.80

Job Hours: 20.00

Subtotal
(unadjusted): \$6,869.52

Total Cost
(adjusted for location): \$6,560.39

BULLDOZER WORKTask description: **Main Highwall Reduction**Site: **Chambers Pit**Permit Action: **11-2022**Permit/Job#: **M1979205****PROJECT IDENTIFICATION**Task #: **11A**State: **Colorado**Abbreviation: **None**Date: **12/14/2022**County: **Garfield**Filename: **M205-11a**User: **CCW**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper own.	\$0.00	NA
Cost/Hour:		
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$263.78**Total Fleet Cost/Hour: **\$263.78****MATERIAL QUANTITIES**Initial Volume: **7,500**Swell factor: **1.050**Loose volume: **7,875 LCY**Source of estimated volume: **2000 LF cut/fill 1:1 20'H to 3:1**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **75 feet**Unadjusted hourly production: **1,017.1 LCY/hr**Materials consistency description: **Partly consolidated stockpile 1.1**Average push gradient: **0 %**Average site altitude: **5,320 feet**Material weight: **3,400 lbs/LCY**Weight description: **Sand and gravel - Wet****Job Condition Correction Factor****Source**

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:	0.676	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3703

Adjusted unit
production: 376.63 LCY/hr
Adjusted fleet
production: **376.63** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.700/LCY

Total job time: **20.91** Hours
Total job cost: **\$5,515**

BULLDOZER WORKTask description: Main Grading import stockpiles on pit floorSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205**PROJECT IDENTIFICATION**Task #: 11BState: ColoradoAbbreviation: NoneDate: 12/14/2022County: GarfieldFilename: M205-11bUser: CCWAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	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:	\$263.78	
Total Fleet Cost/Hour:	\$263.78	

MATERIAL QUANTITIESInitial Volume: 5,000Swell factor: 1.215Loose volume: **6,075 LCY**Source of estimated volume: Staff estimatesSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 75 feetUnadjusted hourly production: 1,017.1 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %Average site altitude: 5,320 feetMaterial weight: 3,300 lbs/LCYWeight description: Decomposed rock - 75% Rock, 25% EarthJob Condition Correction FactorSource

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: 388.33 LCY/hr
Adjusted fleet
production: **388.33** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.679/LCY

Total job time: **15.64** Hours
Total job cost: **\$4,127**

TRUCK/LOADER TEAM WORKTask description: Main-Transport topsoil from Glen PitSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205PROJECT IDENTIFICATIONTask #: 12AState: ColoradoAbbreviation: NoneDate: 12/14/2022County: GarfieldFilename: M205-12aUser: CCWAgency or organization name: DRMSHOURLY EQUIPMENT COSTShift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 972H
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	NA	NA	NA
Ownership cost/hour:	\$97.13	\$53.96	\$124.85	NA	NA	NA
Operating cost/hour:	\$65.52	\$50.78	\$24.41	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Operator cost/hour:	\$32.54	\$40.71	\$41.30	NA	NA	NA
Unit Subtotals:	\$195.19	\$145.45	\$190.56	NA	NA	NA
Number of Units:	5	1	1	0	0	0
Group Subtotals:	Work: \$1,121.40		Support: \$190.56		Maint: \$0.00	

Total work team cost/hour: \$1,311.96MATERIAL QUANTITIESInitial volume: 15,000

CCY

Swell factor: 1.115Loose volume: 16,725

LCY

Source of estimated volume: Half necessary volumeSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:Truck Payload (weight) Basis:Material weight: 2,100

Pounds/LCY

Description: Earth - LoamRated Payload: 62,000

Pounds

Payload Capacity: 29.52 LCY

Truck Bed (volume) Basis:

Struck Volume: 17.10 LCY
 Heaped Volume: 22.10 LCY
 Average Volume: 19.60 LCY
 Adjusted Volume: 22.10 LCY

Final Truck Volume Based on Number of Loader Passes: 18.48 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.600</u>	LCY (heaped)
Bucket Fill Factor:	<u>1.100</u>	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	<u>6.160</u>	LCY

Job Condition Corrections:

Site Altitude (ft.): 5320 feet

	Truck	Loader	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Loading Tool Cycle Time:

Number of Loading Tool Passes Required to Fill Truck: 3 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: NA
 Selected Value within this Basic Rating: NA

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.525 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 3/4" to 6" diameter 0.00	0.000	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.080	minutes
Adjusted Loader Cycle Time:		0.445	minutes
Net Load Time per Truck:		0.990	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.60</u>	Minutes	Adjusted for site altitude:	<u>0.600</u>	Minutes
Truck Load Time:	<u>0.990</u>	Minutes	Adjusted for site altitude:	<u>0.990</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.00</u>	Minutes	Adjusted for site altitude:	<u>1.000</u>	Minutes

Truck Travel (Haul & Return) Time:
penetration 4.0

Road Condition: Rutted dirt, little maintenance, no water, 1" tire

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5280.00	0.00	4.00	4.00	1774	3.166

Haul Time: **3.166** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5280.00	0.00	4.00	4.00	2855	2.017

Return Time: **2.017** minutesTotal Truck Cycle Time: **7.773** minutes

Loading Tool unit

Production 697.36 LCY/HourAdjusted for job efficiency: 578.81 LCY/Hour

Truck Unit Production

142.65 LCY/HourAdjusted for job efficiency: 118.40 LCY/HourOptimal No. of Trucks: 5 Truck(s)Selected Number of Trucks: 5 Truck(s)Adjusted hourly truck team production: 591.99 LCY/HourAdjusted single truck/loader team production: 578.81 LCY/HourAdjusted multiple truck/loader team production: **578.81** LCY/Hour**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: **28.90** HoursUnit cost: \$2.267 /LCYTotal job cost: **\$37,910**

BULLDOZER WORKTask description: **Main Spread topsoil**Site: **Chambers Pit**Permit Action: **11-2022**Permit/Job#: **M1979205****PROJECT IDENTIFICATION**Task #: **12B**State: **Colorado**Abbreviation: **None**Date: **12/14/2022**County: **Garfield**Filename: **M205-12b**User: **CCW**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	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: **\$263.78**Total Fleet Cost/Hour: **\$263.78****MATERIAL QUANTITIES**Initial Volume: **29,234**Swell factor: **1.000**Loose volume: **29,234 LCY**Source of estimated volume: **24.16 ac @ 12" depth**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **50 feet**Unadjusted hourly production: **1,400.0 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **5,320 feet**Material weight: **2,100 lbs/LCY**Weight description: **Earth - Loam****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:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6544

Adjusted unit
production: 916.16 LCY/hr
Adjusted fleet
production: **916.16** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.288/LCY

Total job time: **31.91** Hours
Total job cost: **\$8,417**

REVEGETATION WORKTask description: Main Reveg WetlandsSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205PROJECT IDENTIFICATIONTask #: 13AState: ColoradoAbbreviation: NoneDate: 12/14/2022County: GarfieldFilename: M205-13aUser: CCWAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.18
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$407.58

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Bulrush	2.00	19.74	\$81.00
Beaked Sedge	1.00	8.32	\$220.00
Canada Wildrye	2.50	6.60	\$27.10
Hardstem Bulrush	4.00	37.19	\$598.80
Nebraska Sedge	1.00	20.94	\$166.50
Slender Wheatgrass - Pryor	2.50	9.13	\$10.63
Totals Seed Mix	13.00	101.92	\$1,104.03

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
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$4.61	\$4.61
Herbicide - Plateau @ 1.0 pt/ac	1.00	ACRE	\$11.21	\$11.21
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$858.54

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$73.00
Power mulcher (MEANS 32 91 13.16 0350)	\$141.57
Weed spray, truck, aquatic area, nox. [DMG]	\$62.72
Total Mulch Application Cost/Acre	\$277.29

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: 1.3 Cost /Acre: \$2,879.44
 Estimated Failure Rate: 25% Cost /Acre*: \$2,879.44
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: \$3,743.27
 Reseeding Job Cost: \$935.82
 Total Job Cost: \$4,679
 Job Hours: 2.50

REVEGETATION WORKTask description: **Main Reveg Dryland**Site: **Chambers Pit**Permit Action: 11-2022Permit/Job#: M1979205**PROJECT IDENTIFICATION**Task #: 13BState: ColoradoAbbreviation: NoneDate: 12/14/2022County: GarfieldFilename: M205-13bUser: CCWAgency 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)	\$117.18
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$407.58

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Paloma	6.00	19.42	\$66.75
Crested Wheatgrass - Ephraim	3.00	13.77	\$12.98
Canby Bluegrass - Canbar	1.00	21.26	\$10.25
Canada Wildrye	2.50	6.60	\$27.10
Slender Wheatgrass - Pryor	2.50	9.13	\$10.63
Streambank Wheatgrass - Sodar	3.00	9.78	\$17.10
Totals Seed Mix	18.00	79.96	\$144.80

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
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$4.61	\$4.61
Herbicide - Plateau @ 1.0 pt/ac	1.00	ACRE	\$11.21	\$11.21
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$858.54

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$73.00
Power mulcher (MEANS 32 91 13.16 0350)	\$141.57
Weed spray, truck, non-aquatic area, nox. [DMG]	\$62.72
Total Mulch Application Cost/Acre	\$277.29

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: 22.86 Cost /Acre: \$1,920.21
 Estimated Failure Rate: 25% Cost /Acre*: \$1,920.21
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$43,896.00**
 Reseeding Job Cost: **\$10,974.00**
 Total Job Cost: **\$54,870**
 Job Hours: **30.00**

REVEGETATION WORKTask description: Main Trees/ShrubsSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205PROJECT IDENTIFICATIONTask #: 13CState: ColoradoAbbreviation: NoneDate: 12/14/2022County: GarfieldFilename: M205-13cUser: CCWAgency 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
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

Description	Cost /Acre
	\$

Total Seed Application Cost/Acre	\$0.00
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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
Buffaloberry, Russet	44	Tubling, 3 cu. in. container (MEANS)	\$1.14	\$2.40	\$50.16
Cottonwood, Narrowleaf	44	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.35	\$2.40	\$103.40
Willow, Sandbar	44	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.35	\$2.40	\$103.40
Sumac, Smooth	44	Tubling, 3 cu. in. container (MEANS)	\$3.54	\$2.40	\$155.76
Totals Nursery Stock Cost / Acre					\$412.72

JOB TIME AND COST

No. of Acres:	<u>1</u>	Cost /Acre:	<u>\$412.72</u>
Estimated Failure Rate:	<u>25%</u>	Cost /Acre*:	<u>\$412.72</u>
*Selected Replanting Work Items:	<u>NURSERY</u>		

Initial Job Cost:	<u>\$412.72</u>
Reseeding Job Cost:	<u>\$103.18</u>
Total Job Cost:	<u>\$516</u>
Job Hours:	<u>20.00</u>

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilization of Equipment**Site: **Chambers Pit**Permit Action: **11-2022**Permit/Job#: **M1979205****PROJECT IDENTIFICATION**

Task #: **14A** State: **Colorado** Abbreviation: **None**
 Date: **12/14/2022** County: **Garfield** Filename: **M205-14a**
 User: **CCW**

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:	\$15.25	\$23.06	\$37.58
Operating Cost/Hour:	\$25.26	\$30.83	\$51.41
Operator Cost/Hour:	\$27.71	\$27.71	\$27.71
Helper Cost/Hour:	\$0.00	\$20.22	\$20.22
Total Unit Cost/Hour:	\$68.22	\$101.82	\$136.92

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
Submersible pump - 460v, 8 in.	0.70	\$14.38	\$68.22	1	\$82.60	\$68.22	\$250.00
Cat D8T - 8SU	53.08	\$137.95	\$136.92	1	\$274.87	\$136.92	\$250.00
CAT 972H	28.00	\$53.96	\$101.82	1	\$155.78	\$101.82	\$250.00
CAT 973D	29.07	\$147.66	\$101.82	1	\$249.48	\$101.82	\$250.00
Cat 365C L 13'-7" Stick	77.56	\$146.89	\$136.92	1	\$283.81	\$136.92	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.25	\$68.22	1	\$74.47	\$68.22	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$14.79	\$68.22	1	\$83.01	\$68.22	\$250.00

Subtotals: **\$1,204.02** **\$682.14** **\$1,750.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Generic 12-18 cy, 6x4	\$113.40	1	\$113.40	\$113.40
Cat 730	\$194.56	5	\$972.80	\$972.80
Flatbed Truck, 4x2, 30K GVW	\$60.02	1	\$60.02	\$60.02

Subtotals:	\$1,146.22	\$1,146.22
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EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>RIFLE</u>	
Total one-way travel distance:	<u>3.00</u>	miles
Average Travel Speed:	<u>35.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$6,231.38</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$196.49</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.09</u>	<u>0.09</u>
Return Time (Hours):	<u>0.09</u>	<u>0.09</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>1.17</u>	<u>0.17</u>

JOB TIME AND COST

Total job time:	<u>2.34</u>	Hours
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Total job cost:	<u>\$6,428</u>
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EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Secondary mobilization of equipmentSite: Chambers PitPermit Action: 11-2022Permit/Job#: M1979205**PROJECT IDENTIFICATION**Task #: 14BState: ColoradoAbbreviation: NoneDate: 12/14/2022County: GarfieldFilename: M205-14bUser: CCWAgency 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:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$15.25	\$23.06	\$37.58
Operating Cost/Hour:	\$25.26	\$30.83	\$51.41
Operator Cost/Hour:	\$27.71	\$27.71	\$27.71
Helper Cost/Hour:	\$0.00	\$20.22	\$20.22
Total Unit Cost/Hour:	\$68.22	\$101.82	\$136.92

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
Drill/Broadcast Seeder with Tractor	25.00	\$6.25	\$68.22	1	\$74.47	\$68.22	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$14.79	\$68.22	1	\$83.01	\$68.22	\$250.00
Subtotals:					\$157.48	\$136.44	\$500.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Flatbed Truck, 4x2, 30K GVW	\$60.02	1	\$60.02	\$60.02
Subtotals:			\$60.02	\$60.02

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>RIFLE</u>	
Total one-way travel distance:	<u>3.00</u>	miles
Average Travel Speed:	<u>35.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,365.35</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$10.29</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.09</u>	<u>0.09</u>
Return Time (Hours):	<u>0.09</u>	<u>0.09</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>1.17</u>	<u>0.17</u>

JOB TIME AND COST

Total job time:	<u>2.34</u>	Hours
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Total job cost:	<u>\$1,376</u>
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