

COST SUMMARY WORK

Task description: Cost Summary

Site: Monogram Mines

Permit Action: 2019-04-22

Permit/Job#: M1978222UG

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 4/22/2019

County: Montrose

Filename: M222-000

User: DMC

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Seal 5 disturbed portals	MINESEAL	1	40.00	\$12,646
02a	Seal maximum 50 drill holes - 300 ft depth	BOREHOLE	1	25.00	\$2,230
03a	Recontour portal staging areas	DOZER	1	15.08	\$3,397
04a	Reveg. 4.1 acre total drill disturbance	REVEGE	1	4.00	\$8,090
05a	Reveg. 1 acre portal areas	REVEGE	1	1.00	\$1,973
06a	Demo concrete ore bins	DEMOLISH	1	8.00	\$1,074
07a	Haul 6" ore pad material to pit for burial	LOADER	1	2.44	\$226
08a	Rip/grade staging-office-ore bin area	RIPPER	1	1.71	\$386
09a	Push 4" topsoil over staging area	DOZER	1	0.45	\$93
10a	Reveg. staging area	REVEGE	1	1.00	\$1,973
11a	Push overburden / waste rock over pit area	DOZER	1	8.21	\$1,711
12a	Push 4" topsoil over pit area	DOZER	1	1.32	\$274
13a	Reveg. pit area	REVEGE	1	2.00	\$3,946
14a	Mobilize reclamation crew/equipment	MOBILIZE	1	4.28	\$4,167
<u>SUBTOTALS:</u>				114.49	\$42,186

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$852

Performance bond: 1.05

Total = \$443

Job superintendent: 57.25

Total = \$4,182

Profit: 10.00

Total = \$4,219

TOTAL O & P = \$9,695

CONTRACT AMOUNT (direct + O & P) = \$51,881

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

\$2,594

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$12,290

TOTAL BOND AMOUNT (direct + indirect) = \$54,500

SAFEGUARDING UNDERGROUND OPENINGS

Task description: Seal 5 disturbed portals

Site: Monogram Mines

Permit Action: 2019-04-22

Permit/Job#: M1978222UG

PROJECT IDENTIFICATION

Task #: 01A

State: Colorado

Abbreviation: None

Date: 4/22/2019

County: Montrose

Filename: M222-01a

User: DMC

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Pre-law "reopened" portals	8' x 8'	Adit closure - backfilling (per opening)	5.00	EA	\$2,529.10	\$12,645.50

Job Hours: 40.00

Total Cost: \$12,645.50

BOREHOLE SEALING WORK

Task description: Seal maximum 50 drill holes -300 ft depth

Site: Monogram Mines

Permit Action: 2019-04-22

Permit/Job#: M1978222UG

PROJECT IDENTIFICATION

Task #: 02A
Date: 4/22/2019
User: DMC

State: Colorado
County: Montrose

Abbreviation: None
Filename: M222-02a

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
50 exploration drill holes-bentonite	Bentonite seal - 6 in. (labor, equip, materials)	6	5	250.00	LF	\$5.72	\$1,430.00
50 exploration drill holes-plug	Portland cement grout - 6 in. (labor, equip, materials)	6	3	150.00	LF	\$5.33	\$799.50

Job Hours: 25.00

Total Cost: \$2,230.00

BULLDOZER WORKTask description: **Recontour portal staging areas**Site: **Monogram Mines**Permit Action: **2019-04-22**Permit/Job#: **M1978222UG****PROJECT IDENTIFICATION**Task #: **03A**State: **Colorado**Abbreviation: **None**Date: **4/22/2019**County: **Montrose**Filename: **03a Doz**User: **DMC**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:	\$93.62	NA
Operating Cost/Hour:	\$73.35	100
Ripper own.		
Cost/Hour:	\$8.93	NA
Ripper op. Cost/Hour:	\$7.78	100
Operator Cost/Hour:	\$41.52	NA

Total unit Cost/Hour: **\$225.20**Total Fleet Cost/Hour: **\$225.20****MATERIAL QUANTITIES**Initial Volume: **6,950**Swell factor: **1.000**Loose volume: **6,950 LCY**Source of estimated volume: **50' x 100' pad * 15' face /2 *5 = ft3 conv. yd3**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: **Partly consolidated stockpile 1.1**Average push gradient: **15 %**Average site altitude: **6,350 feet**Material weight: **2,550 lbs/LCY**Weight description: **Sandstone**Job 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:	0.666	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3291

Adjusted unit
production: 460.74 LCY/hr
Adjusted fleet
production: **460.74** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.489/LCY

Total job time: **15.08** Hours
Total job cost: **\$3,397**

REVEGETATION WORKTask description: Reveg. 4.1 acre total drill disturbanceSite: Monogram MinesPermit Action: 2019-04-22Permit/Job#: M1978222UG**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 4/22/2019County: MontroseFilename: M222-04aUser: 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
Subsoil scarification, (MEANS 32 91 13.23 3100)	\$191.66
Weed control spraying (MEANS 31 31 16.13 3100)	\$193.60
Total Tilling Cost/Acre	\$385.26

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Paloma	1.20	3.88	\$11.70
Sand Dropseed	0.04	4.78	\$0.44
Bottlebrush Squirreltail	3.20	14.10	\$76.99
Sandberg Bluegrass - VNS	0.60	12.74	\$4.95
Galleta	0.60	2.19	\$15.17
Sweetvetch, Utah or Northern	0.20	0.09	\$15.36
Needle and Thread	0.80	2.11	\$34.00
Western Wheatgrass - Native	5.60	14.14	\$40.15
Daisy or Sunflower, Maximillians	0.40	2.27	\$22.46

Sagebrush, Mountain or Big	0.10	5.28	\$2.02
Saltbush, Four Wing	0.06	0.08	\$0.77
Globemallow, Scarlet (or copper)	0.18	2.04	\$24.98
Winter Fat	0.10	0.25	\$2.10
Penstemon, Rocky Mountain	0.12	1.88	\$3.63
Yarrow, White	0.06	3.82	\$2.46
Totals Seed Mix	13.26	69.66	\$257.18

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	\$288.00	\$576.00
Total Mulch Materials Cost/Acre				\$576.00

Application

Description	Cost /Acre
Power mulcher (MEANS 32 91 13.16 0350)	\$92.78
Total Mulch Application Cost/Acre	\$92.78

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:	4.1	Cost /Acre:	\$1,578.44
Estimated Failure Rate:	25%	Cost /Acre*:	\$1,578.44
*Selected Replanting Work Items:	TILLING,SEEDING,MULCHING		
Initial Job Cost:	\$6,471.60		
Reseeding Job Cost:	\$1,617.90		
Total Job Cost:	\$8,090		
Job Hours:	4.00		

REVEGETATION WORKTask description: Reveg. 1 acre portal areasSite: Monogram MinesPermit Action: 2019-04-22Permit/Job#: M1978222UG**PROJECT IDENTIFICATION**Task #: 05AState: ColoradoAbbreviation: NoneDate: 4/22/2019County: MontroseFilename: M222-05aUser: 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
Subsoil scarification, (MEANS 32 91 13.23 3100)	\$191.66
Weed control spraying (MEANS 31 31 16.13 3100)	\$193.60
Total Tilling Cost/Acre	\$385.26

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Paloma	1.20	3.88	\$11.70
Sand Dropseed	0.04	4.78	\$0.44
Bottlebrush Squirreltail	3.20	14.10	\$76.99
Sandberg Bluegrass - VNS	0.60	12.74	\$4.95
Galleta	0.60	2.19	\$15.17
Sweetvetch, Utah or Northern	0.20	0.09	\$15.36
Needle and Thread	0.80	2.11	\$34.00
Western Wheatgrass - Native	5.60	14.14	\$40.15
Daisy or Sunflower, Maximillians	0.40	2.27	\$22.46

Sagebrush, Mountain or Big	0.10	5.28	\$2.02
Saltbush, Four Wing	0.06	0.08	\$0.77
Globemallow, Scarlet (or copper)	0.18	2.04	\$24.98
Winter Fat	0.10	0.25	\$2.10
Penstemon, Rocky Mountain	0.12	1.88	\$3.63
Yarrow, White	0.06	3.82	\$2.46
Totals Seed Mix	13.26	69.66	\$257.18

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	\$288.00	\$576.00
Total Mulch Materials Cost/Acre				\$576.00

Application

Description	Cost /Acre
Power mulcher (MEANS 32 91 13.16 0350)	\$92.78
Total Mulch Application Cost/Acre	\$92.78

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 1 Cost /Acre: \$1,578.44
 Estimated Failure Rate: 25% Cost /Acre*: \$1,578.44
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: \$1,578.44
 Reseeding Job Cost: \$394.61
 Total Job Cost: \$1,973
 Job Hours: 1.00

DEMOLITION WORK

Task description: Demo concrete ore bins

Site: Monogram Mines

Permit Action: 2019-04-22

Permit/Job#: M1978222UG

PROJECT IDENTIFICATION

Task #: 06A

State: Colorado

Abbreviation: None

Date: 4/22/2019

County: Montrose

Filename: M222-06a

User: DMC

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 92.10 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Concrete ore bins	20' x 40' x 6'	(SC) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	4,800.00	CF	\$0.24	\$1,166.40

Job Hours: 8.00

Subtotal
(unadjusted): \$1,166.40

Total Cost
(adjusted for location): \$1,074.25

WHEEL LOADER – LOAD AND CARRY WORKTask description: **Haul 6" ore pad material to pit for burial**Site: **Monogram Mines** Permit Action: **2019-04-22** Permit/Job#: **M1978222UG****PROJECT IDENTIFICATION**

Task #: **07A** State: **Colorado** Abbreviation: **None**
 Date: **4/22/2019** County: **Montrose** Filename: **M222-07a**
 User: **DMC**

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

Basic Machine: **CAT 450E** Horsepower: **101**
 Attachment 1: **ROPS Cab** Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$24.67	NA
Operating Cost/Hour:	\$26.68	100
Operator Cost/Hour:	\$40.90	NA
Total Unit Cost/Hour:	\$92.25	
Total Fleet Cost/Hour:	\$92.25	

MATERIAL QUANTITIES

Initial volume: **65** CCY Swell factor: **1.335**
 Loose volume: **87** LCY

Source of estimated volume: **.08 acre ore pad load zone x 6" lift**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Loader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): **0.475** minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 3/4" to 6" diameter 0.00	0.000	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Truck Ownership:	No adjustment - factor not applicable 0.00	0.000	(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:		-0.040	minutes
Adjusted Basic Cycle Time:		0.435	minutes

Rolling Resistance – Road Conditions

Haul: **Rutted dirt, little maintenance, no water, 1" tire penetration 4.0**
 Return: **Rutted dirt, little maintenance, no water, 1" tire penetration 4.0**

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	1000	4.00	4.00	8.00	0.9510	(Cat HB)

Return Route:	1000	-4.00	4.00	0.00	0.3516	(Cat HB)
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Total Travel Time: 1.3026 minutes
Total Cycle Time: 1.7376 minutes

Load Bucket Capacity

Rated Capacity: 1.50 LCY (heaped)
Bucket Fill Factor: 0.825 Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity: 1.24 LCY

Job Condition Correction Factors

Site Altitude: 6350 feet

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

Unadjusted Hourly Unit Production: 42.73 LCY/Hour
Adjusted Hourly Unit Production: 35.47 LCY/Hour
Adjusted Hourly Fleet Production: 35.47 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 2.45 Hours
Unit cost: \$2.601 /LCY Total job cost: \$226

BULLDOZER RIPPING WORK

Task description: Rip/grade staging-office-ore bin area

Site: Monogram Mines

Permit Action: 2019-04-22

Permit/Job#: M1978222UG

PROJECT IDENTIFICATION

Task #: 08A

State: Colorado

Abbreviation: None

Date: 4/22/2019

County: Montrose

Filename: M222-08a

User: DMC

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:	\$93.62	NA
Operating Cost/Hour:	\$73.35	100
Ripper Ownership Cost/Hour:	\$8.93	NA
Ripper Operating Cost/Hour:	\$7.78	100
Operator Cost/Hour:	\$41.52	NA
Total Unit Cost/Hour:	\$225.20	
Total Fleet Cost/Hour:	\$225.20	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA

Bank Volume: NA

BCY NA

Area: 1.00 acres

Rip Depth (ft): 2.00

Volume: 3,227

BCY or CCY

Source of estimated quantity: DRMS

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:	100.00	feet/pass
Average Dozer Speed:	88.00	feet/minute
Average Maneuver Time:	0.25	minutes/pass
Production per unit area:	0.703	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.703 Acres/hr

Site Altitude: 6,350 feet

Altitude Adj: 1.00 (CAT HB)

Job Efficiency: 0.83 (1 shift/day)

Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.58 Acres/hr

Adjusted Hourly Fleet Production: **0.58** Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 1.71 Hours

Unit cost: \$385.719 Per acre Total job cost: **\$386**

BULLDOZER WORKTask description: **Push 4" topsoil over staging area**Site: **Monogram Mines**Permit Action: **2019-04-22**Permit/Job#: **M1978222UG****PROJECT IDENTIFICATION**Task #: **09A**State: **Colorado**Abbreviation: **None**Date: **4/22/2019**County: **Montrose**Filename: **M222-09a**User: **DMC**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:	\$93.62	NA
Operating Cost/Hour:	\$73.35	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.52	NA

Total unit Cost/Hour: **\$208.49**Total Fleet Cost/Hour: **\$208.49****MATERIAL QUANTITIES**Initial Volume: **537**Swell factor: **1.000**Loose volume: **537 LCY**Source of estimated volume: **1 ac. 4" 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: **6,350 feet**Material 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: 1,203.02 LCY/hr
Adjusted fleet
production: **1203.02** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.173/LCY

Total job time: **0.45** Hours
Total job cost: **\$93**

REVEGETATION WORKTask description: Reveg. staging areaSite: Monogram MinesPermit Action: 2019-04-22Permit/Job#: M1978222UG**PROJECT IDENTIFICATION**Task #: 10AState: ColoradoAbbreviation: NoneDate: 4/22/2019County: MontroseFilename: M222-10aUser: 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
Subsoil scarification, (MEANS 32 91 13.23 3100)	\$191.66
Weed control spraying (MEANS 31 31 16.13 3100)	\$193.60
Total Tilling Cost/Acre	\$385.26

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Paloma	1.20	3.88	\$11.70
Sand Dropseed	0.04	4.78	\$0.44
Bottlebrush Squirreltail	3.20	14.10	\$76.99
Sandberg Bluegrass - VNS	0.60	12.74	\$4.95
Galleta	0.60	2.19	\$15.17
Sweetvetch, Utah or Northern	0.20	0.09	\$15.36
Needle and Thread	0.80	2.11	\$34.00
Western Wheatgrass - Native	5.60	14.14	\$40.15
Daisy or Sunflower, Maximillians	0.40	2.27	\$22.46

Sagebrush, Mountain or Big	0.10	5.28	\$2.02
Saltbush, Four Wing	0.06	0.08	\$0.77
Globemallow, Scarlet (or copper)	0.18	2.04	\$24.98
Winter Fat	0.10	0.25	\$2.10
Penstemon, Rocky Mountain	0.12	1.88	\$3.63
Yarrow, White	0.06	3.82	\$2.46
Totals Seed Mix	13.26	69.66	\$257.18

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	\$288.00	\$576.00
Total Mulch Materials Cost/Acre				\$576.00

Application

Description	Cost /Acre
Power mulcher (MEANS 32 91 13.16 0350)	\$92.78
Total Mulch Application Cost/Acre	\$92.78

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 1 Cost /Acre: \$1,578.44
 Estimated Failure Rate: 25% Cost /Acre*: \$1,578.44
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: \$1,578.44
 Reseeding Job Cost: \$394.61
 Total Job Cost: \$1,973
 Job Hours: 1.00

BULLDOZER WORKTask description: **Push overburden / waste rock over pit area**Site: **Monogram Mines**Permit Action: 2019-04-22Permit/Job#: M1978222UG**PROJECT IDENTIFICATION**Task #: 11AState: ColoradoAbbreviation: NoneDate: 4/22/2019County: MontroseFilename: M222-11aUser: DMCAgency 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:	<u>\$93.62</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$73.35</u>	<u>100</u>
Ripper own.		
Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$41.52</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$208.49</u>	
Total Fleet Cost/Hour:	<u>\$208.49</u>	

MATERIAL QUANTITIES

Initial Volume: 3,250
 Swell factor: 1.000
 Loose volume: **3,250 LCY**

Source of estimated volume: 2 acres 1' depth
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 100 feet
 Unadjusted hourly production: 852.6 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: -5 %
 Average site altitude: 6,350 feet

Material weight: 3,300 lbs/LCYWeight description: Decomposed rock - 75% Rock, 25% EarthJob 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:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4644

Adjusted unit
production: 395.95 LCY/hr
Adjusted fleet
production: **395.95** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.527/LCY

Total job time: **8.21** Hours
Total job cost: **\$1,711**

BULLDOZER WORKTask description: **Push 4" topsoil over pit area**Site: **Monogram Mines**Permit Action: **2019-04-22**Permit/Job#: **M1978222UG****PROJECT IDENTIFICATION**Task #: **12A**State: **Colorado**Abbreviation: **None**Date: **4/22/2019**County: **Montrose**Filename: **M222-12a**User: **DMC**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:	\$93.62	NA
Operating Cost/Hour:	\$73.35	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.52	NA

Total unit Cost/Hour: **\$208.49**Total Fleet Cost/Hour: **\$208.49****MATERIAL QUANTITIES**Initial Volume: **1,075**Swell factor: **1.000**Loose volume: **1,075 LCY**Source of estimated volume: **2 acres 4" depth**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **100 feet**Unadjusted hourly production: **852.6 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **-5 %**Average site altitude: **6,350 feet**Material 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:	1.115	(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: 816.96 LCY/hr
Adjusted fleet
production: **816.96** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.255/LCY

Total job time: **1.32** Hours
Total job cost: **\$274**

REVEGETATION WORKTask description: Reveg. pit areaSite: Monogram MinesPermit Action: 2019-04-22Permit/Job#: M1978222UG**PROJECT IDENTIFICATION**Task #: 13AState: ColoradoAbbreviation: NoneDate: 4/22/2019County: MontroseFilename: M222-13aUser: 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
Subsoil scarification, (MEANS 32 91 13.23 3100)	\$191.66
Weed control spraying (MEANS 31 31 16.13 3100)	\$193.60
Total Tilling Cost/Acre	\$385.26

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Paloma	1.20	3.88	\$11.70
Sand Dropseed	0.04	4.78	\$0.44
Bottlebrush Squirreltail	3.20	14.10	\$76.99
Sandberg Bluegrass - VNS	0.60	12.74	\$4.95
Galleta	0.60	2.19	\$15.17
Sweetvetch, Utah or Northern	0.20	0.09	\$15.36
Needle and Thread	0.80	2.11	\$34.00
Western Wheatgrass - Native	5.60	14.14	\$40.15
Daisy or Sunflower, Maximillians	0.40	2.27	\$22.46

Sagebrush, Mountain or Big	0.10	5.28	\$2.02
Saltbush, Four Wing	0.06	0.08	\$0.77
Globemallow, Scarlet (or copper)	0.18	2.04	\$24.98
Winter Fat	0.10	0.25	\$2.10
Penstemon, Rocky Mountain	0.12	1.88	\$3.63
Yarrow, White	0.06	3.82	\$2.46
Totals Seed Mix	13.26	69.66	\$257.18

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	\$288.00	\$576.00
Total Mulch Materials Cost/Acre				\$576.00

Application

Description	Cost /Acre
Power mulcher (MEANS 32 91 13.16 0350)	\$92.78
Total Mulch Application Cost/Acre	\$92.78

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: 2 Cost /Acre: \$1,578.44
 Estimated Failure Rate: 25% Cost /Acre*: \$1,578.44
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: \$3,156.88
 Reseeding Job Cost: \$789.22
 Total Job Cost: \$3,946
 Job Hours: 2.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Mobilize reclamation crew/equipmentSite: Monogram MinesPermit Action: 2019-04-22Permit/Job#: M1978222UG**PROJECT IDENTIFICATION**

Task #: 14A State: Colorado Abbreviation: None
 Date: 4/22/2019 County: Montrose Filename: M222-14a
 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 D8T - 8SU	53.08	\$102.55	\$125.45	1	\$228.00	\$125.45	\$250.00
CAT 450E	9.80	\$24.67	\$88.67	1	\$113.34	\$88.67	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$15.54	\$88.67	1	\$104.21	\$88.67	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$8.33	\$88.67	1	\$97.00	\$88.67	\$250.00
Subtotals:					\$542.55	\$391.46	\$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.	\$12.23	1	\$12.23	\$12.23
Subtotals:			\$12.23	\$12.23

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	NUCLA/NATURITA	
Total one-way travel distance:	20.00	miles
Average Travel Speed:	35.00	mph

Total Non-Roadable Mob/Demob Cost *	\$4,152.54
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$13.98
'** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.57	0.57
Return Time (Hours):	0.57	0.57
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	2.14	1.14

JOB TIME AND COST

Total job time: 4.29 Hours

Total job cost: \$4,167