

COST SUMMARY WORK

Task description: 2022 Update

Site: Shale Core 2020-01

Permit Action: 2022

Permit/Job#: P2021002

PROJECT IDENTIFICATION

Task #: ACY

State: Colorado

Abbreviation: None

Date: 6/22/2022

County: Rio Blanco

Filename: P002-ACY

User: ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Backfill/Grade Pad	DOZER	1	1.14	\$194
02a	Backfill/Grade Pit	DOZER	1	0.41	\$69
03a	Decompact	RIPPER	1	0.41	\$75
04a	Apply topsoil	DOZER	1	1.39	\$238
05a	Reveg	REVEGE	1	5.00	\$1,468
06a	Remove Exclusion Fence	DEMOLISH	1	8.00	\$802
10a	Initial Mobilization	MOBILIZE	1	9.00	\$2,980
10b	Secondary Mobilization	MOBILIZE	1	3.50	\$142
<u>SUBTOTALS:</u>				28.85	\$5,968

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$121

Performance bond: 1.05

Total = \$63

Job superintendent: 0.00

Total = \$0

Profit: 10.00

Total = \$597

TOTAL O & P = \$780

CONTRACT AMOUNT (direct + O & P) = \$6,748

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: 0.00

\$0

CONTINGENCY: 3.00

Total = \$179

TOTAL INDIRECT COST = \$959

TOTAL BOND AMOUNT (direct + indirect) = \$6,927

BULLDOZER WORKTask description: **Backfill/Grade Pad**Site: **Shale Core 2020-01** Permit Action: **2022** Permit/Job#: **P2021002****PROJECT IDENTIFICATION**

Task #: **01A** State: **Colorado** Abbreviation: **None**
 Date: **6/22/2022** County: **Rio Blanco** Filename: **P002-01a**
 User: **ACY**

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

Basic Machine: **Cat D6T XL**
 Horsepower: **185**
 Blade Type: **Semi-Universal**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$64.38	NA
Operating Cost/Hour:	\$64.62	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: **\$170.30**
 Total Fleet Cost/Hour: **\$170.30**

MATERIAL QUANTITIES

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

Source of estimated volume: **Pad Drawing**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **50 feet**
 Unadjusted hourly production: **444.6 LCY/hr**

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

Average push gradient: **0 %**
 Average site altitude: **8,560 feet**

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

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

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

Net correction: 0.4941

Adjusted unit production: 219.68 LCY/hr

Adjusted fleet production: **219.68** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.775/LCY

Total job time: **1.14** Hours

Total job cost: **\$194**

BULLDOZER WORKTask description: **Backfill/Grade Pit**Site: **Shale Core 2020-01**Permit Action: **2022**Permit/Job#: **P2021002****PROJECT IDENTIFICATION**Task #: **02A**State: **Colorado**Abbreviation: **None**Date: **6/22/2022**County: **Rio Blanco**Filename: **P002-02a**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D6T XL**Horsepower: **185**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$64.38	NA
Operating Cost/Hour:	\$64.62	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: **\$170.30**Total Fleet Cost/Hour: **\$170.30****MATERIAL QUANTITIES**Initial Volume: **89**Swell factor: **1.000**Loose volume: **89 LCY**Source of estimated volume: **Pad Drawing**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **50 feet**Unadjusted hourly production: **444.6 LCY/hr**Materials consistency description: **Partly consolidated stockpile 1.1**Average push gradient: **0 %**Average site altitude: **8,560 feet**Material weight: **2,550 lbs/LCY**Weight description: **Earth - Dry packed****Job Condition Correction Factor**

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

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

Net correction: 0.4941

Adjusted unit production: 219.68 LCY/hr

Adjusted fleet production: **219.68** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.775/LCY

Total job time: **0.41** Hours

Total job cost: **\$69**

BULLDOZER RIPPING WORK

Task description: Decompact

Site: Shale Core 2020-01

Permit Action: 2022

Permit/Job#: P2021002

PROJECT IDENTIFICATION

Task #: 03A

State: Colorado

Abbreviation: None

Date: 6/22/2022

County: Rio Blanco

Filename: P002-03a

User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D6T XL
Ripper Attachment: 3-Shank Ripper

Horsepower: 185
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$64.38	NA
Operating Cost/Hour:	\$64.62	100
Ripper Ownership Cost/Hour:	\$5.99	NA
Ripper Operating Cost/Hour:	\$4.30	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$180.59	
Total Fleet Cost/Hour:	\$180.59	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 0.19 acres Rip Depth (ft): 2.00 Volume: 613 BCY or CCY

Source of estimated quantity: NOI App

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 1.64 feet/pass
Average Ripping Width: 6.58 feet/pass
Average Ripping Length: 50.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.554 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.554 Acres/hr
Site Altitude: 8,560 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.46 Acres/hr
Adjusted Hourly Fleet Production: **0.46** Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **0.41** Hours

Unit cost: \$392.831 Per acre Total job cost: **\$75**

BULLDOZER WORKTask description: Apply topsoilSite: Shale Core 2020-01Permit Action: 2022Permit/Job#: P2021002**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 6/22/2022County: Rio BlancoFilename: P002-04aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D6T XLHorsepower: 185Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$64.38	NA
Operating Cost/Hour:	\$64.62	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: \$170.30Total Fleet Cost/Hour: \$170.30**MATERIAL QUANTITIES**Initial Volume: 372Swell factor: 1.000Loose volume: 372 LCYSource of estimated volume: Pad DrawingSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 444.6 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %Average site altitude: 8,560 feetMaterial weight: 2,100 lbs/LCYWeight description: Earth - Loam**Job Condition Correction Factor**

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

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5998

Adjusted unit production: 266.67 LCY/hr

Adjusted fleet production: **266.67** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.639/LCY

Total job time: **1.39** Hours

Total job cost: **\$238**

REVEGETATION WORKTask description: RevegSite: Shale Core 2020-01Permit Action: 2022Permit/Job#: P2021002**PROJECT IDENTIFICATION**Task #: 05AState: ColoradoAbbreviation: NoneDate: 6/22/2022County: Rio BlancoFilename: P002-05aUser: ACYAgency 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)	\$114.56
Total Tilling Cost/Acre	\$114.56

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Lupine, Silky	3.48	1.97	\$242.21
Slender Wheatgrass - Native	5.80	21.17	\$26.83
Milk Vetch, Cicer - Lutana	3.00	9.99	\$24.60
Western Wheatgrass - Rosanna	7.42	18.74	\$42.67
Prairie Junegrass	1.18	62.72	\$30.68
Serviceberry	3.38	6.21	\$207.87
Snowberry, Mountain	3.18	5.48	\$160.59
Penstemon, Rocky Mountain	0.92	14.42	\$27.14
		140.69	\$762.58

Totals Seed Mix	28.36		
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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
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$2.98	\$2.98
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$617.02

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$71.57
Hand spread, 1" deep (MEANS 32 91 13.16 0200)	\$3,630.00
Weed spray, hand, non-aquatic area, nox. [DMG]	\$183.16
Total Mulch Application Cost/Acre	\$3,884.73

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: 0.2 Cost /Acre: \$5,646.11
 Estimated Failure Rate: 30% Cost /Acre*: \$5,646.11
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$1,129.22**
 Reseeding Job Cost: **\$338.77**
 Total Job Cost: **\$1,468**
 Job Hours: **5.00**

DEMOLITION WORK

Task description: Remove Exclusion Fence

Site: Shale Core 2020-01

Permit Action: 2022

Permit/Job#: P2021002

PROJECT IDENTIFICATION

Task #: 06A

State: Colorado

Abbreviation: None

Date: 6/22/2022

County: Rio Blanco

Filename: P002-06a

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 90.70 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Wire Fence	536	Fencing, barbed wire, - 3 strand	536.00	LF	\$1.65	\$884.40

Job Hours: 8.00

Subtotal
(unadjusted): \$884.40

Total Cost
(adjusted for location): \$802.15

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Initial Mobilization**Site: **Shale Core 2020-01**Permit Action: **2022**Permit/Job#: **P2021002****PROJECT IDENTIFICATION**Task #: **10A**State: **Colorado**Abbreviation: **None**Date: **6/22/2022**County: **Rio Blanco**Filename: **P002-10a**User: **ACY**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:	\$21.28	\$37.94	\$47.67
Operating Cost/Hour:	\$26.55	\$50.48	\$56.21
Operator Cost/Hour:	\$20.54	\$20.54	\$20.54
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$68.37	\$132.49	\$147.95

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D6T XL	25.01	\$70.37	\$68.37	1	\$138.74	\$68.37	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$7.98	\$68.37	1	\$76.35	\$68.37	\$250.00
Subtotals:					\$215.09	\$136.74	\$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, 15K GVW	\$50.30	1	\$50.30	\$50.30
Light Duty Pickup, 4x4, 3/4 T.	\$40.61	1	\$40.61	\$40.61
Subtotals:			\$90.91	\$90.91

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: RIFLE
 Total one-way travel distance: 70.00 miles
 Average Travel Speed: 40.00 mph

Total Non-Roadable Mob/Demob Cost * \$2,661.59
 * two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$318.19
 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>1.75</u>	<u>1.75</u>
Return Time (Hours):	<u>1.75</u>	<u>1.75</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>4.50</u>	<u>3.50</u>

JOB TIME AND COST

Total job time: 9.00 Hours

Total job cost: \$2,980

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Secondary Mobilization**Site: **Shale Core 2020-01**Permit Action: **2022**Permit/Job#: **P2021002****PROJECT IDENTIFICATION**Task #: **10B**State: **Colorado**Abbreviation: **None**Date: **6/22/2022**County: **Rio Blanco**Filename: **P002-10b**User: **ACY**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:	\$21.28	\$37.94	\$47.67
Operating Cost/Hour:	\$26.55	\$50.48	\$56.21
Operator Cost/Hour:	\$20.54	\$20.54	\$20.54
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$68.37	\$132.49	\$147.95

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Subtotals:					\$0.00	\$0.00	\$0.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$40.61	1	\$40.61	\$40.61
Subtotals:			\$40.61	\$40.61

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: RIFLE
 Total one-way travel distance: 70.00 miles
 Average Travel Speed: 40.00 mph

Total Non-Roadable Mob/Demob Cost * \$0.00
 * two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$142.14
 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>1.75</u>	<u>1.75</u>
Return Time (Hours):	<u>1.75</u>	<u>1.75</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>4.50</u>	<u>3.50</u>

JOB TIME AND COST

Total job time: 3.50 Hours

Total job cost: \$142