



Memo to File

Date: October 1, 2020

To: Whom it May Concern

From: Lucas West, DRMS

RE: Revenue Mine; DRMS File No. M-2012-032; Memo to File

To Whom it May Concern,

The Enclosed reclamation cost estimate worksheets are based on the details of Technical Revision 11. The currently held Financial Warranty is sufficient to achieve reclamation of the site in accordance with the Act, Rules and Regulations and the Approved Reclamation Plan. No Surety increased is required at this time.

Sincerely,
DRMS Minerals Staff



COST SUMMARY WORK

Task description: TR-11 Update

Site: Revenue Mine

Permit Action: TR-11

Permit/Job#: M2012032

PROJECT IDENTIFICATION

Task #: ACY

State: Colorado

Abbreviation: None

Date: 6/29/2020

County: Ouray

Filename: M032-ACY

User: ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Removal of Permanent Structures and Surface Debris	DEMOLISH	1	120.00	\$67,394
01b	Disposal of Chemicals-Per AM-1	DEMOLISH	1	0.00	\$14,579
02a	Contour portal backfill areas	DOZER	1	23.10	\$7,530
02b	Reinforce gate at Revenue Portal	MINESEAL	1	40.00	\$3,000
03a	Shaft foundation and structure removal	DEMOLISH	1	80.00	\$37,668
03b	Vent Shaft Closure-Cut Casing	BOREHOLE	1	10.00	\$204
03c	Vent Shaft Closure-Place Seal	MINESEAL	1	72.00	\$2,927
03d	Vent Shaft Closure- Excavate & Bury	EXCAVATE	1	0.93	\$157
04a	Minor site grading	DOZER	1	8.31	\$2,709
05a	Import Topsoil-Purchase & Delivered	NA	1	250.00	\$176,000
05b	Spread Topsoil on TSF	DOZER	1	5.20	\$1,695
05d	Spread Caprock on TSF	DOZER	1	19.97	\$6,512
06a	Reveg TSF	REVEGE	1	30.00	\$8,619
06b	Reveg Vent Shafts	REVEGE	1	10.00	\$4,209
07a	Initial Mobilization	MOBILIZE	1	11.14	\$8,003
07b	Secondary Mobilization	MOBILIZE	1	7.14	\$1,638
<u>SUBTOTALS:</u>				687.79	\$342,844

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02
Performance bond: 1.05
Job superintendent: 343.89
Profit: 10.00

Total = \$6,925

Total = \$3,600

Total = \$23,918

Total = \$34,284

TOTAL O & P = \$68,727

CONTRACT AMOUNT (direct + O & P) = \$411,571

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$0
Engineering work and/or contract/bid preparation: 4.25
Reclamation management and/or administration: 5.00

Total = \$0

Total = \$17,492

\$20,579

CONTINGENCY: 3.00

Total = \$10,285

TOTAL INDIRECT COST = \$117,083

TOTAL BOND AMOUNT (direct + indirect) = \$459,927

DEMOLITION WORK

Task description: Removal of Permanent Structures and Surface Debris

Site: Revenue Mine

Permit Action: TR-11

Permit/Job#: M2012032

PROJECT IDENTIFICATION

Task #: 01A

State: Colorado

Abbreviation: None

Date: 5/18/2020

County: Ouray

Filename: M032-01a

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 87.60 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Remove Diesel Strage Tank	10,000 gal	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	2.00	EA	\$760.00	\$1,520.00
Diesel Filling Station	TR-11 PAR Pg. 25	USER PROVIDED ITEM	1.00	EA	\$500.00	\$500.00
Administration Bldg- Internal Contents Only	TR-11 Table L- 2	USER PROVIDED ITEM	1.00	EA	\$3,600.00	\$3,600.00
Air Compressor Bldg-Internal Contents Only	TR-11 Table L- 2	USER PROVIDED ITEM	1.00	EA	\$2,000.00	\$2,000.00
Propane Storage Bldg A	TR-1 PAR pg. 25	USER PROVIDED ITEM	1.00	EA	\$750.00	\$750.00
Propane Storage Bldg C	TR-11 PAR pg. 25	USER PROVIDED ITEM	1.00	EA	\$750.00	\$750.00
Vent Fan	TR-11 PAR pg. 25	USER PROVIDED ITEM	1.00	EA	\$500.00	\$500.00
Rail Yard Track & Ties	TR-11 PAR pg.25	Railroad track - Ties and track	400.00	LF	\$9.56	\$3,824.00
Rail Yard & Battery Charging Bldg- Contents Only	TR-11 PAR pg. 25	USER PROVIDED ITEM	1.00	EA	\$1,400.00	\$1,400.00
Underground Warehouse and Shop	TR-11 PAR pg.25	USER PROVIDED ITEM	1.00	EA	\$500.00	\$500.00
Concentrator & Filter Bldg- Internal Contents Only	TR-11 PAR pg.25	USER PROVIDED ITEM	1.00	EA	\$8,000.00	\$8,000.00
Waste Storage Pad & Secondary Containment	TR-11 PAR pg.25	USER PROVIDED ITEM	1.00	EA	\$4,000.00	\$4,000.00
Tailings Thickener - Tank Cut Up	TR-11 PAR pg.25	USER PROVIDED ITEM	1.00	EA	\$5,000.00	\$5,000.00
Tailings Thickener- Cement Pad and Piping	TR-11 PAR pg. 25	USER PROVIDED ITEM	1.00	EA	\$23,011.20	\$23,011.20
Materials Storage Connex	TR-11 PAR pg. 25	USER PROVIDED ITEM	1.00	EA	\$500.00	\$500.00
Crusher & Retaining Wall	TR-11 PAR pg. 25	USER PROVIDED ITEM	1.00	EA	\$4,000.00	\$4,000.00
Portal Cover Structure	TR-11 PAR pg.25	USER PROVIDED ITEM	1.00	EA	\$4,080.00	\$4,080.00
Half-Culvert	TR-11 PAR Table L-1	USER PROVIDED ITEM	1.00	EA	\$7,840.00	\$7,840.00
Water Tanks	TR-11 PAR	USER PROVIDED	4.00	EA	\$150.00	\$600.00

	pg.25	ITEM				
Misc Debris-Disposal	TR-11 PAR pg.25	Dump fees - Building construction materials.	150.00	CY	\$11.10	\$1,665.00
Misc Debris- Transport	TR-11 PAR pg. 25	Hauling only, per mile, 12-18 CY truck - 30 mph average speed	390.00	MI	\$7.42	\$2,893.80

Job Hours: 120.00Subtotal
(unadjusted): \$76,934.00Total Cost
(adjusted for
location): \$67,394.18

DEMOLITION WORK

Task description: Disposal of Chemicals-Per AM-1

Site: Revenue Mine

Permit Action: TR-11

Permit/Job#: M2012032

PROJECT IDENTIFICATION

Task #: 01B

State: Colorado

Abbreviation: None

Date: 6/29/2020

County: Ouray

Filename: M032-01b

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 87.60 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Potassium Amxl Xanthate	1.5 (55 gal Drum)	Hazardous waste removal - Drum solids/liquids, per drum, (1-6 drum job)	2.00	DRUM	\$587.78	\$1,175.56
Copper (II) Sulfate Anhydrous	9 (50 lb bags)	Hazardous waste removal - Bulk solids, small quantities (up to 1.5 tons)	0.23	TON	\$2,187.83	\$492.26
Zinc Sulfate Heptahydrate	9 (50lb bags)	Hazardous waste removal - Bulk solids, small quantities (up to 1.5 tons)	0.23	TON	\$2,187.83	\$503.20
Flottec E120 Frother	1.5 (55 gal Drum)	Dispose of tank sludge off-site - Average	82.50	GAL	\$6.25	\$515.63
Hi-Cal Hydrate	150 (50 lb bags)	Hazardous waste removal - Bulk solids, large quantities (over 1.5 tons)	3.75	TON	\$1,802.62	\$6,759.83
Flotecc or Dow Frother 534	1.5 (55 gal Drum)	Dispose of tank sludge off-site - Average	82.50	GAL	\$6.25	\$515.63
Sodium Hydroxide	1.5 (250 gal tote)	Hazardous waste removal - Bulk liquids, small quantities (to 2,500 gal.)	375.00	GAL	\$2.61	\$978.75
Sulfuric Acid (73-98%)	1.5 (55 gal Drum)	Hazardous waste removal - Drum solids/liquids, per drum, (1-6 drum job)	2.00	DRUM	\$587.78	\$1,175.56
Perlite	40 (30lb bags)	Hazardous waste removal - Bulk solids, small quantities (up to 1.5 tons)	0.60	TON	\$2,187.83	\$1,312.70
Pebble/Burnt Lime	48 (50 lb bags)	Hazardous waste removal - Bulk solids, small quantities (up to 1.5 tons)	1.20	TON	\$2,187.83	\$2,625.40
Orfom D8 Depressant	1 (55 gal Drum)	Hazardous waste removal - Drum solids/liquids, per drum, (1-6 drum job)	1.00	DRUM	\$587.78	\$587.78

Job Hours: 0.00

Subtotal
(unadjusted): \$16,642.30

Total Cost
(adjusted for location): \$14,578.65

BULLDOZER WORKTask description: Contour portal backfill areasSite: Revenue MinePermit Action: TR-11Permit/Job#: M2012032**PROJECT IDENTIFICATION**Task #: 02AState: ColoradoAbbreviation: NoneDate: 9/30/2020County: OurayFilename: M032-02aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$156.88	NA
Operating Cost/Hour:	\$127.87	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: \$326.04Total Fleet Cost/Hour: **\$326.04****MATERIAL QUANTITIES**Initial Volume: 3,328Swell factor: 1.165Loose volume: **3,877 LCY**Source of estimated volume: TR-11 inputsSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 235 feetUnadjusted hourly production: 588.4 LCY/hrMaterials consistency description: Rock, well ripped or blasted 0.8Average push gradient: 5 %Average site altitude: 10,650 feetMaterial weight: 2,900 lbs/LCYWeight description: Decomposed rock - 50% Rock, 50% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.800	(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:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2853

Adjusted unit production: 167.87 LCY/hr

Adjusted fleet production: **167.87** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$1.942/LCY

Total job time: **23.10** Hours

Total job cost: **\$7,530**

SAFEGUARDING UNDERGROUND OPENINGS

Task description: Reinforce gate at Revenue Portal

Site: Revenue Mine

Permit Action: TR-11

Permit/Job#: M2012032

PROJECT IDENTIFICATION

Task #: 02B

State: Colorado

Abbreviation: None

Date: 9/30/2020

County: Ouray

Filename: M032-02b

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Revenue Gate	TR-11 PAR Table L-1	USER PROVIDED ITEM	1.00	EA	\$3,000.00	\$3,000.00

Job Hours: 40.00

Total Cost: \$3,000.00

DEMOLITION WORK

Task description: Shaft foundation and structure removal

Site: Revenue Mine

Permit Action: TR-11

Permit/Job#: M2012032

PROJECT IDENTIFICATION

Task #: 03A

State: Colorado

Abbreviation: None

Date: 7/6/2020

County: Ouray

Filename: M032-03a

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 87.60 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
960 Raise Shaft-Superstructure & foundation	TR-11 PAR Demo	USER PROVIDED ITEM	1.00	EA	\$14,333.33	\$14,333.33
Yellow Rose Shaft-Superstructure & foundation	TR-11 PAR Demo	USER PROVIDED ITEM	1.00	EA	\$14,333.33	\$14,333.33
Monogahela Shaft-Superstructure & Foundation	TR-11 PAR Demo	USER PROVIDED ITEM	1.00	EA	\$14,333.33	\$14,333.33

Job Hours: 80.00

Subtotal
(unadjusted): \$42,999.99

Total Cost
(adjusted for location): \$37,667.99

BOREHOLE SEALING WORK

Task description: Vent Shaft Closure-Cut Casing

Site: Revenue Mine

Permit Action: TR-11

Permit/Job#: M2012032

PROJECT IDENTIFICATION

Task #: 03B

State: Colorado

Abbreviation: None

Date: 7/6/2020

County: Ouray

Filename: M032-03b

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
960 Raise- Cut Casing	Exposed casing removal - Calculate Circumference in Linear Feet	72	18.8	18.80	LF	\$3.26	\$61.29
Yellow Rose Shaft- Cut casing	Exposed casing removal - Calculate Circumference in Linear Feet	72	18.8	18.80	LF	\$3.26	\$61.29
Monogahela Shaft (escape)- Cut Casing	Exposed casing removal - Calculate Circumference in Linear Feet	96	25.1	25.10	LF	\$3.26	\$81.83

Job Hours: 10.00

Total Cost: \$204.00

SAFEGUARDING UNDERGROUND OPENINGS

Task description: Vent Shaft Closure-Place Seal

Site: Revenue Mine

Permit Action: TR-11

Permit/Job#: M2012032

PROJECT IDENTIFICATION

Task #: 03C

State: Colorado

Abbreviation: None

Date: 7/6/2020

County: Ouray

Filename: M032-03c

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
960 Raise- Plate	6' x 6'	Shaft closure - grate (per sq. ft.)	36.00	SF	\$19.67	\$708.12
Yellow Rose Shaft- Plate	6' x 6'	Shaft closure - grate (per sq. ft.)	36.00	SF	\$19.67	\$708.12
Monogahela Shaft (escape)- Plate	8' x 8'	Shaft closure - grate (per sq. ft.)	64.00	SF	\$19.67	\$1,258.88
960 Raise- Cement Cap	6' x 6' x 6"	Shaft closure - concrete cap, poured-in-place (per Cubic Feet)	18.00	CF	\$3.70	\$66.67
Yellow Rose Shaft- Cement Cap	6' x 6' x 6"	Shaft closure - concrete cap, poured-in-place (per Cubic Feet)	18.00	CF	\$3.70	\$66.67
Monogahela Shaft (escape)- Cement Cap	8' x 8' x 6"	Shaft closure - concrete cap, poured-in-place (per Cubic Feet)	32.00	CF	\$3.70	\$118.52

Job Hours: 72.00

Total Cost: \$2,926.98

HYDRAULIC EXCAVATOR WORK

Task description: Vent Shaft Closure- Excavate & Bury

Site: Revenue Mine

Permit Action: TR-11

Permit/Job#: M2012032

PROJECT IDENTIFICATION

Task #: 03D

State: Colorado

Abbreviation: None

Date: 7/6/2020

County: Ouray

Filename: M032-03d

User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat 336D L 10'-6" Stick

Attachment 1: ROPS Cab

Horsepower: 268

Weight (MT): 29.30

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$60.67	NA
Operating Cost/Hour:	\$69.53	100
Operator Cost/Hour:	\$37.32	NA
Total Unit Cost/Hour:	\$167.52	
Total Fleet Cost/Hour:	\$167.52	

MATERIAL QUANTITIES

Initial volume: 153

CCY

Swell factor: 1.165

Loose volume: 178

LCY

Source of estimated volume: TR-11 Sec 3.2

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: BELOW AVERAGE

Secondary Job Condition within Basic Description: SEVERE

Cycle Time Value: 0.390 minutes

Load Bucket Capacity

Bucket Size Class: Small

Rated Capacity: 1.56 LCY (heaped)

Bucket Fill Factor: 1.025 Rock - Earth Mixture (100%-105%) 1.025

Adjusted Capacity: 1.60 LCY

Job Condition Correction Factors

Site Altitude: 10650 feet

Altitude Adj:	0.93	Source (CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.77	multiplier

Unadjusted Hourly Unit Production: 246.00 LCY/Hour

Adjusted Hourly Unit Production: 189.89 LCY/Hour

Adjusted Hourly Fleet Production: 189.89 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 0.94 Hours

Unit cost: \$0.882 /LCY Total job cost: \$157

BULLDOZER WORKTask description: Minor site gradingSite: Revenue Mine Permit Action: TR-11 Permit/Job#: M2012032**PROJECT IDENTIFICATION**

Task #: 04A State: Colorado Abbreviation: None
 Date: 9/30/2020 County: Ouray Filename: M032-04a
 User: ACY

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

Basic Machine: Cat D9T - 9SU
 Horsepower: 405
 Blade Type: Semi-Universal
 Attachment: NA
 Shift Basis: 1 per day
 Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$156.88</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$127.87</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>\$41.30</u>	<u>NA</u>

Total unit Cost/Hour: \$326.04
 Total Fleet Cost/Hour: **\$326.04**

MATERIAL QUANTITIES

Initial Volume: 3,045
 Swell factor: 1.165
 Loose volume: **3,547** LCY

Source of estimated volume: TR-11 PAR Table L-1
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 90 feet
 Unadjusted hourly production: 1,351.7 LCY/hr

Materials consistency description: Rock, well ripped or blasted 0.8

Average push gradient: 0 %
 Average site altitude: 10,650 feet

Material weight: 2,900 lbs/LCYWeight description: Decomposed rock - 50% Rock, 50% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.800</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

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

Net correction: 0.3159

Adjusted unit production: 427.00 LCY/hr

Adjusted fleet production: **427** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.764/LCY

Total job time: **8.31** Hours

Total job cost: **\$2,709**

Cost Summary Work

Task description: Final Reclamation Cost Estimate: TR-11
Site: Revenue Mine

Permit Action: TR-411

Permit Sub#: NA-2012-431

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Demolish and dispose of buildings and debris	DEMOLISH	1	120.00	\$110,405.07
02a	Dispose of mill chemicals	DEMOLISH	1	10.00	\$15,926.61
03a	Grade slopes to 3H:1V max	DOZER	1	8.91	\$2,047.44
04a	Improve permanent portal closures	MINESEAL	1	132.00	\$5,463.36
05a	Purchase, deliver and dump topsoil from permitted source	NA	1	250.00	\$176,000.00
06a	Spread topsoil	DOZER	1	5.94	\$1,363.98
07a	Revegetate disturbed area	REVEGE	1	40.00	\$10,277.62
08a	Haul reclamation equipment to and from site	MOBILIZE	1	6.14	\$4,632.45
SUBTOTALS:				573.00	\$326,116.53

INDIRECT COSTS OVERHEAD AND ODC

Liability insurance	2.02	Total =	\$6,587.55
Performance bond	1.05	Total =	\$3,424.22
Job superintendent	329.91	Total =	\$24,099.56
Profit	10	Total =	\$32,611.65
		TOTAL O & P =	\$66,722.99
		CONTRACT AMOUNT (direct + O & P) =	\$392,839.52

ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	500	Total =	\$500.00
Engineering work and/or contract/bid preparation:	4%	Total =	\$13,859.95
Reclamation management and/or administration:	5%		\$16,305.83
CONTINGENCY	3%	Total =	\$9,783.50
		TOTAL INDIRECT COST =	\$107,172.27
		TOTAL BOND AMOUNT (direct + indirect) =	\$433,288.80

* User Provided Cost, except from TR-11

BULLDOZER WORKTask description: **Spread Topsoil on TSF**Site: **Revenue Mine**Permit Action: TR-11Permit/Job#: M2012032**PROJECT IDENTIFICATION**Task #: 05BState: ColoradoAbbreviation: NoneDate: 9/30/2020County: OurayFilename: M032-05bUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$156.88	NA
Operating Cost/Hour:	\$127.87	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: \$326.04Total Fleet Cost/Hour: **\$326.04****MATERIAL QUANTITIES**Initial Volume: 4,001Swell factor: 1.125Loose volume: **4,501 LCY**Source of estimated volume: TR-11 PARSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 65 feetUnadjusted hourly production: 1,752.8 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %Average site altitude: 10,650 feetMaterial weight: 2,550 lbs/LCYWeight 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: 866.06 LCY/hr

Adjusted fleet production: **866.06** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.376/LCY

Total job time: **5.20** Hours

Total job cost: **\$1,695**

BULLDOZER WORKTask description: **Spread Caprock on TSF**Site: **Revenue Mine**Permit Action: TR-11Permit/Job#: M2012032**PROJECT IDENTIFICATION**Task #: 05DState: ColoradoAbbreviation: NoneDate: 9/30/2020County: OurayFilename: M032-05dUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$156.88	NA
Operating Cost/Hour:	\$127.87	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: \$326.04Total Fleet Cost/Hour: **\$326.04****MATERIAL QUANTITIES**Initial Volume: 8,002Swell factor: 1.215Loose volume: **9,722 LCY**Source of estimated volume: TR-11 PARSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 65 feetUnadjusted hourly production: 1,752.8 LCY/hrMaterials consistency description: Rock, well ripped or blasted 0.8Average push gradient: 0 %Average site altitude: 10,650 feetMaterial weight: 3,300 lbs/LCYWeight description: Decomposed rock - 75% Rock, 25% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.800	(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: 0.2777

Adjusted unit production: 486.75 LCY/hr

Adjusted fleet production: **486.75** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.670/LCY

Total job time: **19.97** Hours

Total job cost: **\$6,512**

REVEGETATION WORKTask description: Reveg TSFSite: Revenue MinePermit Action: TR-11Permit/Job#: M2012032**PROJECT IDENTIFICATION**Task #: 06AState: ColoradoAbbreviation: NoneDate: 9/30/2020County: OurayFilename: M032-06aUser: 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
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Paloma	2.96	9.58	\$32.93
Mountain Brome - Bromar	8.00	12.86	\$30.40
Sandberg Bluegrass - VNS	1.00	21.24	\$8.40
Rye, Winter - VNS	19.20	7.93	\$10.27
Sheep Fescue - Covar	2.88	44.96	\$17.57
Slender Wheatgrass - Native	5.60	20.44	\$25.90
Milk Vetch, Cicer - Monarch	1.92	6.39	\$15.74
Thickspike Wheatgrass - Critana	6.76	23.90	\$46.48
Flax, Lewis Blue	0.50	3.32	\$8.25

Yarrow, Western	0.12	7.30	\$5.02
Totals Seed Mix	48.94	157.91	\$200.96

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	\$2.92	\$2.92
Hydromulch, 1 ton/ac. rate {Materials Only}	1.00	ACRE	\$527.08	\$527.08
Total Mulch Materials Cost/Acre				\$530.00

Application

Description	Cost /Acre
Hydromulching (MEANS 32 92 19.13 1100)	\$968.00
Weed spray, hand, non-aquatic area, nox. [DMG]	\$183.16
Total Mulch Application Cost/Acre	\$1,151.16

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:	4.74	Cost /Acre:	\$2,149.34
Estimated Failure Rate:	30%	Cost /Acre*:	\$2,149.34
*Selected Replanting Work Items:	SEEDING,MULCHING		
Initial Job Cost:	\$10,187.87		
Reseeding Job Cost:	\$3,056.36		
Total Job Cost:	\$13,244		
Job Hours:	30.00		

REVEGETATION WORKTask description: **Reveg Vent Shafts**Site: **Revenue Mine**Permit Action: **TR-11**Permit/Job#: **M2012032****PROJECT IDENTIFICATION**Task #: **06B**State: **Colorado**Abbreviation: **None**Date: **9/30/2020**County: **Ouray**Filename: **M032-06b**User: **ACY**Agency 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
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Paloma	2.96	9.58	\$32.93
Mountain Brome - Bromar	8.00	12.86	\$30.40
Sandberg Bluegrass - VNS	1.00	21.24	\$8.40
Rye, Winter - VNS	19.20	7.93	\$10.27
Sheep Fescue - Covar	2.88	44.96	\$17.57
Slender Wheatgrass - Native	5.60	20.44	\$25.90
Milk Vetch, Cicer - Monarch	1.92	6.39	\$15.74
Thickspike Wheatgrass - Critana	6.76	23.90	\$46.48
Flax, Lewis Blue	0.50	3.32	\$8.25

Yarrow, Western	0.12	7.30	\$5.02
Totals Seed Mix	48.94	157.91	\$200.96

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
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$2.92	\$2.92
Total Mulch Materials Cost/Acre				\$604.92

Application

Description	Cost /Acre
Hand spread, 1" deep (MEANS 32 91 13.16 0200)	\$3,436.40
Weed spray, hand, non-aquatic area, nox. [DMG]	\$183.16
Total Mulch Application Cost/Acre	\$3,619.56

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: 0.69 Cost /Acre: \$4,692.66
 Estimated Failure Rate: 30% Cost /Acre*: \$4,692.66
 *Selected Replanting Work Items: SEEDING,MULCHING

Initial Job Cost: **\$3,237.94**
 Reseeding Job Cost: **\$971.38**
 Total Job Cost: **\$4,209**
 Job Hours: **10.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Initial Mobilization**Site: **Revenue Mine**Permit Action: **TR-11**Permit/Job#: **M2012032****PROJECT IDENTIFICATION**Task #: **07A**State: **Colorado**Abbreviation: **None**Date: **9/30/2020**County: **Ouray**Filename: **M032-07a**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:	\$17.20	\$29.63	\$38.69
Operating Cost/Hour:	\$26.56	\$47.02	\$55.69
Operator Cost/Hour:	\$23.63	\$23.63	\$23.63
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$67.39	\$123.81	\$141.54

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D9T - 9SU	60.01	\$156.88	\$141.54	1	\$298.42	\$141.54	\$250.00
Hydroseeder with Tractor	28.00	\$11.88	\$123.81	1	\$135.69	\$123.81	\$250.00
Cat 336D L 10'-6" Stick	32.23	\$60.67	\$123.81	1	\$184.48	\$123.81	\$250.00
Subtotals:					\$618.59	\$389.16	\$750.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Flatbed Truck, 6x4, 45K GVW	\$77.71	1	\$77.71	\$77.71
Subtotals:			\$77.71	\$77.71

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>MONTROSE</u>	
Total one-way travel distance:	<u>45.00</u>	miles
Average Travel Speed:	<u>35.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$7,802.90</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$199.83</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>1.29</u>	<u>1.29</u>
Return Time (Hours):	<u>1.29</u>	<u>1.29</u>
Loading Time (Hours):	<u>1.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>1.50</u>	<u>NA</u>
Subtotals:	<u>5.57</u>	<u>2.57</u>

JOB TIME AND COST

Total job time:	<u>11.14</u>	Hours
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Total job cost:	<u>\$8,003</u>
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EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Secondary MobilizationSite: Revenue MinePermit Action: TR-11Permit/Job#: M2012032**PROJECT IDENTIFICATION**Task #: 07BState: ColoradoAbbreviation: NoneDate: 9/30/2020County: OurayFilename: M032-07bUser: ACYAgency 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:	\$17.20	\$29.63	\$38.69
Operating Cost/Hour:	\$26.56	\$47.02	\$55.69
Operator Cost/Hour:	\$23.63	\$23.63	\$23.63
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$67.39	\$123.81	\$141.54

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Hydroseeder with Tractor	28.00	\$11.88	\$123.81	1	\$135.69	\$123.81	\$250.00

Subtotals: **\$135.69** **\$123.81** **\$250.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Flatbed Truck, 6x4, 45K GVW	\$77.71	1	\$77.71	\$77.71

Subtotals: **\$77.71** **\$77.71**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>MONTROSE</u>	
Total one-way travel distance:	<u>45.00</u>	miles
Average Travel Speed:	<u>35.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,438.67</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$199.83</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>1.29</u>	<u>1.29</u>
Return Time (Hours):	<u>1.29</u>	<u>1.29</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>3.57</u>	<u>2.57</u>

JOB TIME AND COST

Total job time:	<u>7.14</u>	Hours
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Total job cost:	<u>\$1,638</u>
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