



## COLORADO

Division of Reclamation,  
Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215  
Denver, CO 80203

November 27, 2017

Mr. Jared D. Rhea  
American Gypsum Company LLC  
PO Box 980  
Gypsum, CO 81637

**Re: Eagle-Gypsum Mine, Permit No. M-1984-041, Technical Revision Approval, Revision No. TR-10**

Dear Mr. Rhea:

On November 27, 2017 the Division of Reclamation, Mining and Safety approved the Technical Revision application submitted to the Division on October 2, 2017, addressing the following:

- *Recovery of an additional 100 vertical feet of Gypsum in the West (Lower) Pit. The original highwall and final pit will be backfilled to a 3:1 slope or flatter. The mine will continue to follow the remaining stipulations as outlined in the original approval.*

The terms of the Technical Revision No. 10 approved by the Division are hereby incorporated into Permit No. M-1984-041. All other conditions and requirements of Permit No. M-1984-041 remain in full force and effect.

If the revised liability amount exceeds the performance bond currently held (see below), please submit additional bond. The revision will not be final until the bond is approved by the Division. If you need assistance placing the additional bond please contact Barbara Coria at (303) 866-3567 extension 8148.

Bond Held:	\$1,429,700.00
Prior Liability:	\$1,429,700.00
Change in Liability:	\$439,618.28
<b>Revised Liability:</b>	<b>\$1,869,318.28</b>

If you need additional information, please contact me at the Division of Reclamation, Mining and Safety, Grand Junction Field Office, 101 S. 3rd St., Suite 301, Grand Junction, Colorado 81501, telephone no. 970.241.2042.



Mr. Jared  
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November 27, 2017

Sincerely,



Travis Marshall  
Environmental Protection Specialist

Enclosure(s): Reclamation Cost Update

cc: Jessica Lopez-Pearce  
BLM - Colo. River Valley Field Office  
2300 River Frontage Road  
Silt, CO 81652

## COST SUMMARY WORK

Task description: \_\_\_\_\_

Site: Eagle-Gypsum Mine

Permit Action: TR-10

Permit/Job#: M1984041

### PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 11/27/2017

County: Eagle

Filename: M041-001

User: THM

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Demo maintenance shed and office building	DEMOLISH	1	24.00	\$11,782.34
02a	Rip 246 acres of disturbed and compacted area	RIPPER	2	176.93	\$94,282.00
03a	Move material from west dump to west pit	TRUCK1	6	99.83	\$398,898.00
04a	Lower Pit Backfill	DOZER	2	456.48	\$209,673.00
05a	Distribute topsoil throughout disturbed area	LOADER	4	471.96	\$180,042.00
06a	Spread topsoil over disturbed area	DOZER	2	197.94	\$90,921.00
07a	Revegetate disturbed areas	REVEGE	1	160.00	\$413,351.00
08a	Mobilize reclamation crew and equipment	MOBILIZE	1	3.00	\$27,891.00
<b><u>SUBTOTALS:</u></b>				<b>1590.14</b>	<b>\$1,426,840</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02  
Performance bond: 1.05  
Job superintendent: 795.07  
Profit: 10.00

Total = \$28,822.17

Total = \$14,981.82

Total = \$58,079.86

Total = \$142,684.00

TOTAL O & P = \$244,567.85

CONTRACT AMOUNT (direct + O & P) = \$1,671,407.85

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 500.00

Total = 500.00

Engineering work and/or contract/bid preparation: 4.25

Total = \$71,034.83

Reclamation management and/or administration: 5.00

\$83,570.39

CONTINGENCY: 3.00

Total = \$42,805.20

TOTAL INDIRECT COST = \$442,478.28

**TOTAL BOND AMOUNT (direct + indirect) = \$1,869,318.28**

## DEMOLITION WORK

Task description: Demo maintenance shed and office building

Site: Eagle-Gypsum Mine

Permit Action: TR-10

Permit/Job#: M1984041

### PROJECT IDENTIFICATION

Task #: 01A

State: Colorado

Abbreviation: None

Date: 11/27/2017

County: Eagle

Filename: M041-01a

User: THM

Agency or organization name: DRMS

### UNIT COSTS

Location adjustment: 102.20 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Steel maintenance building (K-span)	35'Wx40'Lx20'H	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 30 mile haul	19,242.00	CF	\$0.44	\$8,389.51
Office building	12'Wx60'Lx10'H	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 30 mile haul	7,200.00	CF	\$0.44	\$3,139.20

Job Hours: 24.00

Subtotal  
(unadjusted): \$11,528.71

Total Cost  
(adjusted for location): \$11,782.34

## BULLDOZER RIPPING WORK

Task description: Rip 246 acres of disturbed and compacted area

Site: Eagle-Gypsum Mine Permit Action: TR-10 Permit/Job#: M1984041

### PROJECT IDENTIFICATION

Task #: 02A State: Colorado Abbreviation: None  
Date: 11/27/2017 County: Eagle Filename: 02a  
User: THM

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: OBSOLETE- Cat D9T - 9U Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$95.80	NA
Operating Cost/Hour:	\$111.03	100
Ripper Ownership Cost/Hour:	\$10.94	NA
Ripper Operating Cost/Hour:	\$6.82	100
Operator Cost/Hour:	\$41.85	NA
Total Unit Cost/Hour:	\$266.44	
Total Fleet Cost/Hour:	<b>\$532.87</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 246.00 acres Rip Depth (ft): 1.00 Volume: 396,880 BCY or CCY

Source of estimated quantity: Maximum disturbed area

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 2.63 mph  
Average Ripping Width: 7.67 degrees  
Average Ripping Length: 200.00 feet  
Average Dozer Speed: 88.00 feet  
Average Maneuver Time: 0.25 feet  
Production per unit area: 0.838 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 7,000 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 1.39 Acres/hr

### JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: 176.93 Hours

Unit cost: \$383.268 Per acre Total job cost: \$94,282

TRUCK/LOADER TEAM WORKTask description: Move material from west dump to west pitSite: Eagle-Gypsum MinePermit Action: TR-10Permit/Job#: M1984041PROJECT IDENTIFICATIONTask #: 03AState: ColoradoAbbreviation: NoneDate: 11/27/2017County: EagleFilename: M041-03aUser: THMAgency or organization name: DRMSHOURLY EQUIPMENT COSTShift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 775F
-Loader:	Cat 345D L 12'-10" Stick
Support Equipment -Load Area:	CAT 990H
-Dump Area:	Cat D9T - 9SU
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$93.78	\$61.75	\$126.84	\$100.59	NA	NA
Operating cost/hour:	\$78.45	\$71.04	\$118.18	\$87.23	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	\$0.00	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$0.00	\$0.00	NA	NA
Operator cost/hour:	\$32.47	\$37.79	\$41.20	\$41.85	NA	NA
Unit Subtotals:	\$204.70	\$170.58	\$286.22	\$229.67	NA	NA
Number of Units:	12	6	1	1	0	0
Group Subtotals:	Work: \$3,479.88		Support: \$515.89		Maint: \$0.00	

Total work team cost/hour: \$3,995.77MATERIAL QUANTITIESInitial volume: 308,600

CCY

Swell factor: 1.115Loose volume: 344,089

LCY

Source of estimated volume:

Division of Reclamation, Mining & Safety

Source of estimated swell factor:

Cat Handbook

Material Purchase Cost:

\$0.00

Total Cost:

\$0.00HOURLY PRODUCTIONTruck Capacity:Truck Payload (weight) Basis:Material weight: 2,500

Pounds/LCY

Description: Clay - DryRated Payload: 141,220

Pounds

Payload Capacity: 56.49

LCY

**Truck Bed (volume) Basis:**

Struck Volume:	43.30	LCY
Heaped Volume:	55.60	LCY
Average Volume:	49.45	LCY
Adjusted Volume:	55.60	LCY

Final Truck Volume Based on Number of Loader Passes: 52.07 LCY**Loading Tool Capacity**Bucket Size Class: Large

Rated Capacity:	4.450	LCY (heaped)
Bucket Fill Factor:	0.975	Loose material - uniform aggregates to 1/8" (95-100%) 0.975
Adjusted Capacity:	4.339	LCY

**Job Condition Corrections:**Site Altitude (ft.): 7000 feet

	Truck	Loader	Source
Altitude Adj:	1.000	0.960	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.797	

**Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill Truck: 12 passes**Excavators and Front Shovels:**Machine Cycle Time vs. Job Condition Rating: AVERAGESelected Value within this Basic Rating: AVERAGE

Track Loaders – Material Description: \_\_\_\_\_

**Cycle Time Elements (min.):**Load: NA Maneuver: NA Dump: 0.100Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): NA minutes

Cycle Time Factors		Factor (min.)	Source
Material:	NA	NA	(Cat HB)
Stockpile:	NA	NA	(Cat HB)
Truck Ownership:	NA	NA	(Cat HB)
Operation:	NA	NA	(Cat HB)
Dump Target:	NA	NA	(Cat HB)
Net Cycle Time Adjustment:		NA	minutes
Adjusted Loader Cycle Time:		0.315	minutes
Net Load Time per Truck:		3.565	minutes

**Truck Cycle Time:**

Truck Exchange Time:	0.80	Minutes	Adjusted for site altitude:	0.800	Minutes
Truck Load Time:	3.565	Minutes	Adjusted for site altitude:	3.714	Minutes
Truck Maneuver and Dump Time:	1.20	Minutes	Adjusted for site altitude:	1.200	Minutes

**Truck Travel (Haul & Return) Time:**  
maintained 3.0Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

## Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	-3.00	3.00	0.00	3550	0.500

Haul Time: 0.500 minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	3.00	3.00	6.00	3039	0.410

Return Time: 0.410 minutesTotal Truck Cycle Time: 6.624 minutes

Loading Tool unit Production 692.12 LCY/Hour  
 Truck Unit Production 471.64 LCY/Hour  
 Optimal No. of Trucks: 1 Truck(s)

Adjusted for job efficiency: 574.46 LCY/Hour  
 Adjusted for job efficiency: 391.46 LCY/Hour  
 Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 782.92 LCY/Hour  
 Adjusted single truck/loader team production: 574.46 LCY/Hour  
 Adjusted multiple truck/loader team production: 3,446.74 LCY/Hour

**JOB TIME AND COST**Fleet size: 6 Team(s) Total job time: 99.83 HoursUnit cost: \$1.159 /LCY Total job cost: \$398,898



**BULLDOZER WORK**Task description: Lower Pit BackfillSite: Eagle-Gypsum MinePermit Action: TR-10Permit/Job#: M1984041**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 11/27/2017County: EagleFilename: M041-04aUser: THMAgency 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:	<u>\$100.59</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$87.23</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>\$41.85</u>	<u>NA</u>

Total unit Cost/Hour: \$229.67Total Fleet Cost/Hour: \$459.33**MATERIAL QUANTITIES**Initial Volume: 400,000Swell factor: 1.220Loose volume: 488,000 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 120 feetUnadjusted hourly production: 1,093.1 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: -15 %Average site altitude: 7,000 feetMaterial weight: 2,800 lbs/LCYWeight description: Clay - Natural bed**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</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:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.821	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4890

Adjusted unit production: 534.53 LCY/hr

Adjusted fleet production: 1069.06 LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$0.430/LCY

Total job time: 456.48 Hours

Total job cost: \$209,673

**WHEEL LOADER – LOAD AND CARRY WORK**Task description: Distribute topsoil throughout disturbed areaSite: Eagle-Gypsum MinePermit Action: TR-10Permit/Job#: M1984041**PROJECT IDENTIFICATION**Task #: 05AState: ColoradoAbbreviation: NoneDate: 11/27/2017County: EagleFilename: M041-05aUser: THMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: CAT 950HHorsepower: 197Attachment 1: ROPS CabShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$25.38	NA
Operating Cost/Hour:	\$28.79	100
Operator Cost/Hour:	\$41.20	NA
Total Unit Cost/Hour:	\$95.37	
Total Fleet Cost/Hour:	\$381.47	

**MATERIAL QUANTITIES**Initial volume: 238,128

CCY

Swell factor: 1.000Loose volume: 238,128

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Loader Cycle Time:** Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(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:		-0.050	minutes
Adjusted Basic Cycle Time:		0.450	minutes

**Rolling Resistance – Road Conditions**Haul: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0Return: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0**Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	600	5.00	5.00	10.00	0.8097	(Cat HB)
Return Route:	600	-5.00	5.00	0.00	0.3955	(Cat HB)

Total Travel Time: 1.2053 minutes  
 Total Cycle Time: 1.6553 minutes

Load Bucket Capacity

Rated Capacity: 4.30 LCY (heaped)  
 Bucket Fill Factor: 0.975 Loose material - uniform aggregates to 1/8" (95-100%) 0.975  
 Adjusted Capacity: 4.19 LCY

Job Condition Correction FactorsSite Altitude: 7000 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: 151.97 LCY/Hour  
 Adjusted Hourly Unit Production: 126.14 LCY/Hour  
 Adjusted Hourly Fleet Production: 504.54 LCY/Hour

JOB TIME AND COST

Fleet size: 4 Loader(s) Total job time: 471.97 Hours  
 Unit cost: \$0.756 /LCY Total job cost: \$180,042

**BULLDOZER WORK**Task description: Spread topsoil over disturbed areaSite: Eagle-Gypsum MinePermit Action: TR-10Permit/Job#: M1984041**PROJECT IDENTIFICATION**Task #: 06AState: ColoradoAbbreviation: NoneDate: 11/27/2017County: EagleFilename: M041-06aUser: THMAgency 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:	\$100.59	NA
Operating Cost/Hour:	\$87.23	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.85	NA

Total unit Cost/Hour: \$229.67Total Fleet Cost/Hour: \$459.33**MATERIAL QUANTITIES**Initial Volume: 238,128Swell factor: 1.000Loose volume: 238,128 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 700.0 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 7,000 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
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: 601.51 LCY/hr

Adjusted fleet production: 1203.02 LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)  
Unit cost: \$0.382/LCY

Total job time: 197.94 Hours  
Total job cost: \$90,921

**REVEGETATION WORK**Task description: Revegetate disturbed areasSite: Eagle-Gypsum MinePermit Action: TR-10Permit/Job#: M1984041**PROJECT IDENTIFICATION**Task #: 07AState: ColoradoAbbreviation: NoneDate: 11/27/2017County: EagleFilename: M041-07aUser: THMAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
8-24-24, 10-15-15, 10-20-20	200.00	pound	\$0.32	\$64.00
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$64.00</b>

**Application**

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$144.62
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$144.62</b>

**TILLING**

Description	Cost /Acre
Chisel plowing {DMG}	\$90.60
Weed control spraying (MEANS 31 31 16.13 3100)	\$242.00
<b>Total Tilling Cost/Acre</b>	<b>\$332.60</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Paloma	3.00	9.71	\$29.25
Russian Wildrye - Vinal	4.00	16.07	\$24.12
Slender Wheatgrass - San Luis	4.00	14.60	\$12.96
Western Wheatgrass - Native	10.00	25.25	\$70.00
<b>Totals Seed Mix</b>	<b>21.00</b>	<b>65.63</b>	<b>\$136.33</b>

**Application**

Description	Cost /Acre
-------------	------------

	\$0.00
<b>Total Seed Application Cost/Acre</b>	<b>\$0.00</b>

**MULCHING and MISCELLANEOUS****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$7.16	\$7.16
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$261.00	\$522.00
<b>Total Mulch Materials Cost/Acre</b>				<b>\$529.16</b>

**Application**

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$66.02
Weed spray, truck, non-aquatic area, nox. [DMG]	\$71.50
<b>Total Mulch Application Cost/Acre</b>	<b>\$137.52</b>

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres:	246	Cost /Acre:	\$1,344.23
Estimated Failure Rate:	25%	Cost /Acre*:	\$1,344.23
*Selected Replanting Work Items:	FERTILIZING,TILLING,SEEDING,MULCHING		
Initial Job Cost:	<b>\$330,680.58</b>		
Reseeding Job Cost:	<b>\$82,670.15</b>		
Total Job Cost:	<b>\$413,351</b>		
Job Hours:	<b>160.00</b>		



**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: Mobilize reclamation crew and equipmentSite: Eagle-Gypsum MinePermit Action: TR-10Permit/Job#: M1984041**PROJECT IDENTIFICATION**Task #: 08AState: ColoradoAbbreviation: NoneDate: 11/27/2017County: EagleFilename: M041-08aUser: THMAgency 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:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
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 D9T - 9SU	60.01	\$100.59	\$125.45	2	\$452.08	\$250.90	\$500.00
CAT 990H	83.34	\$126.84	\$125.45	4	\$1,009.16	\$501.80	\$1,000.00
Drill/Broadcast Seeder with Tractor	25.00	\$12.22	\$88.67	2	\$201.78	\$177.34	\$500.00
Cat 775F	50.39	\$93.78	\$117.55	12	\$2,535.96	\$1,410.60	\$3,000.00
Cat 345D L 12'-10" Stick	54.31	\$61.75	\$125.45	6	\$1,123.20	\$752.70	\$1,500.00

Subtotals: **\$5,322.18** **\$3,093.34** **\$6,500.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$19.43	4	\$77.72	\$77.72

Subtotals: **\$77.72** **\$77.72**

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>EAGLE</u>	
Total one-way travel distance:	<u>10.00</u>	miles
Average Travel Speed:	<u>40.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$27,852.12</u>
** two round trips with haul rig:	

Total Roadable Mob/Demob Cost **	<u>\$38.86</u>
** one round trip, no haul rig:	

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.25</u>	<u>0.25</u>
Return Time (Hours):	<u>0.25</u>	<u>0.25</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>1.50</u>	<u>0.50</u>

**JOB TIME AND COST**

Total job time:	<u>3.00</u>	Hours
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Total job cost:	<u>\$27,891</u>
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