

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
Revised Liability:	\$1,869,318.28

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 Page 2 November 27, 2017

Sincerely,

2. and

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

Eagle-G	ypsum Mine	Pe	rmit Action:	TR-10	Permit/Job	#: <u>M1984041</u>
<u>ROJECT</u>	IDENTIFICAT	ION				
Task #:	001	State:	Colorado		Abbreviation:	None
Date:	11/27/2017	County:	Eagle		Filename:	M041-001
User:	THM					

TASK LIST (DIRECT COSTS)

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	Form	Fleet	Task	
Description	Used	Size	Hours	Cost
Demo maintenance shed and office building	DEMOLISH	1	24.00	\$11,782.34
Rip 246 acres of disturbed and compacted area	RIPPER	2	176.93	\$94,282.00
Move material from west dump to west pit	TRUCK1	6	99.83	\$398,898.00
Lower Pit Backfill	DOZER	2	456.48	\$209,673.00
Distribute topsoil throughout disturbed area	LOADER	4	471.96	\$180,042.00
Spread topsoil over disturbed area	DOZER	2	197.94	\$90,921.00
Revegetate disturbed areas	REVEGE	1	160.00	\$413,351.00
Mobilize reclamation crew and equipment	MOBILIZE	1	3.00	\$27,891.00
	SUBTO	TALS:	1590.14	\$1,426,840
	Demo maintenance shed and office building Rip 246 acres of disturbed and compacted area Move material from west dump to west pit Lower Pit Backfill Distribute topsoil throughout disturbed area Spread topsoil over disturbed area Revegetate disturbed areas	DescriptionUsedDemo maintenance shed and office buildingDEMOLISHRip 246 acres of disturbed and compacted areaRIPPERMove material from west dump to west pitTRUCK1Lower Pit BackfillDOZERDistribute topsoil throughout disturbed areaLOADERSpread topsoil over disturbed areaDOZERRevegetate disturbed areasREVEGEMobilize reclamation crew and equipmentMOBILIZE	DescriptionUsedSizeDemo maintenance shed and office buildingDEMOLISH1Rip 246 acres of disturbed and compacted areaRIPPER2Move material from west dump to west pitTRUCK16Lower Pit BackfillDOZER2Distribute topsoil throughout disturbed areaLOADER4Spread topsoil over disturbed areaDOZER2Revegetate disturbed areasREVEGE1	DescriptionUsedSizeHoursDemo maintenance shed and office buildingDEMOLISH124.00Rip 246 acres of disturbed and compacted areaRIPPER2176.93Move material from west dump to west pitTRUCK1699.83Lower Pit BackfillDOZER2456.48Distribute topsoil throughout disturbed areaLOADER4471.96Spread topsoil over disturbed areaDOZER2197.94Revegetate disturbed areasREVEGE1160.00Mobilize reclamation crew and equipmentMOBILIZE13.00

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$28,822.17
Performance bond:	1.05	Total =	\$14,981.82
Job superintendent:	795.07	Total =	\$58,079.86
Profit:	10.00	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): Engineering work and/or contract/bid preparation:	<u>500.00</u> 4.25	_ Total = Total =	500.00 \$71,034.83	_
Reclamation management and/or administration:	5.00	_	\$83,570.39	_
CONTINGENCY:	3.00	Total =	\$42,805.20	_
	TOTAL I	NDIRECT COST =	\$442,478.28	_
TOTAL BO	ND AMOUNT (d	lirect + indirect) =	\$1,869,318.28	

DEMOLITION WORK

	Task description	n: Demo	maintenance shed and office	e building			
Site:	Eagle-Gypsu	m Mine	Permit Action: TR-10)	Pe	rmit/Job#:	M1984041
<u>PROJE</u>	<u>CT IDENTI</u>	ICATION					
Task # Date: User:	11/27/2017 THM		<u> </u>		Abbreviat Filena		e 11-01a
UNIT CO	<u>OSTS</u>				Location	adjustmen	t: 102.20 %
	ure or Item cription	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Steel mai building	intenance (K-span)	35'Wx40'Lx20'H	Bldg. (SN) demo./off- site disposal in approved landfill - Max. 30 mile	19,242.00	CF	\$0.44	\$8,389.51

7,200.00

\$11,528.71

CF

\$0.44

Total Cost

location):

(adjusted for

\$3,139.20

\$11,782.34

haul

haul

Bldg. (SN) demo./off-

Subtotal

(unadjusted):

site disposal in approved landfill - Max. 30 mile

12'Wx60'Lx10'H

24.00

Office building

Job Hours:

BULLDOZER RIPPING WORK

	Task description:	Rip 246 acres of disturbed a	ind compacted a	area	
Site	: <u>Eagle-Gypsum</u>	Mine Permit Action:	TR-10	Permit/Job#:	M1984041
	PROJECT IDE	ENTIFICATION			
	Task #: 02A	State: Colorado		Abbreviation:	None
	Date: 11/2	27/2017 County: Eagle		Filename:	02a
	User: TH	M			
	Agency	or organization name: DRMS			
	HOURLY EQU	JIPMENT COST			
14 A	Basic N	Machine: OBSOLETE- Cat D9T - 9U		Horsepower: 4	05
	Ripper Atta				r day
				Data Source: (C	RG)
	Cost Breakdown:				
				Utilization %	
		Ownership Cost/Hour:	\$95.80	NA	
		Operating Cost/Hour:	\$111.03	100	
		r Ownership Cost/Hour:	\$10.94	NA	
	Кірр	er Operating Cost/Hour: Operator Cost/Hour:	\$6.82 \$41.85	<u>100</u> NA	
		Total Unit Cost/Hour:	\$266.44		
			\$200.77		
		Total Fleet Cost/Hour: \$53	2.87		
	MATERIAL Q	UANTITIES Sel	ected estimating	method: Area	
	Alternate Method	<u>s:</u>			
Seismic:	NA	Bank Volume:	NA	BCY	JA
Area:	246.00	acres Rip Depth (ft):	1.00	Volume: 396,880	BCY or CCY
		Source of estimated quantity: Maxin	num disturbed ar	ea	
	HOURLY PRO				
	Seismic:	Seismic Velocity:	NA	feet/second	
		Seisine velocity.	INA		
	Area:				
		Average Ripping Depth:	2.63	mph	
		Average Ripping Width: Average Ripping Length:	7.67 200.00	degrees	
		Average Ripping Length. Average Dozer Speed:	88.00	feet feet	
		Average Maneuver Time:	0.25	feet	
		Production per unit area:	0.838	acres/hour	
	Job Condition Co	rrection Factors			
	Una	adjusted 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:		Acres/hr	
				. 101 05/111	
	JOB TIME AN				
	Fleet size:	2 Grader(s)	Total job time	e: 176.93	Hours
	Unit cost:	\$383.268 Per acre	Total job cos	st: \$94,282	

TRUCK/LOADER TEAM WORK

Site: Eagle-Gypsum	Mine	Permi	t Actio	n: TR-10		Permit/Job#:	M1984	4041
PROJECT IDEN	TIFICATION	T						
Task #: 03A		-	Colora	do	Ab	breviation:	None	
	//2017		Eagle			Filename:	M041-0)3a
User: THM	[_		
Agency of	r organization nar	ne: DRM	IS					
HOURLY EQUI	PMENT COS	Γ		×	Shift bas	is: <u>1 per day</u>		
				quipment Descri	ption			
,	Fruck Loader Tea	m -Truck: -Loader:	Cat 7	775F 345DL 12'-10" 1	Stiels			
Supr	ort Equipment -I		+	990H	SUCK			
o «PF	* *	ump Area:		D9T - 9SU				
Road M	laintenance –Mot	or Grader:	NA					
	-Wa	ater Truck:	NA					
Cost Breakdown:	Tmak/Lo	ader Team		Sunnort I	Zauinmont	Maint	ononao E	
Cost Breakdowii.	Truck	Excavator	•	Load Area	Equipment Dump Area	Motor Grad		quipment ater Truck
6Utilization-machine:	100		100	100	100		NA	NA
Ownership cost/hour:	\$93.78	\$6	1.75	\$126.84	\$100.59		NA A	N/
Operating cost/hour:	\$78.45		1.04	\$118.18	\$87.23		NA	NA
%Utilization-riper:	NA		0	NA	NA		NA	NA
tipper own. cost/hour:	NA	\$	0.00	\$0.00	\$0.00		NA	NA
Ripper op. cost/hour:	NA	\$	0.00	\$0.00	\$0.00	N	NA	NA
Operator cost/hour:	\$32.47	\$3	7.79	\$41.20	\$41.85	N	NA	NA
Unit Subtotals:	\$204.70	\$17	0.58	\$286.22	\$229.67	N	NA	NA
Number of Units:	12		6	1	1		0	(
Group Subtotals:	Work:	\$3,479.88		Support:	\$515.89	Mai	int: \$C).00
Total work team co	st/hour: \$3.995.	77	1			1		
	<u></u>							
MATERIAL QU	ANTITIES							
Initial volume	: 308,600		CCY	Swell	factor: 1.115			
Loose volume		89	LCY	owen -				
Sc	ource of estimated	volume	Divisi	on of Reclamatic	on, Mining & Safe	atur		
	e of estimated swe			andbook	n, mining & Sar	, y		
	Material Purch	ase Cost:	\$0.00					
	Te	otal Cost:	\$0.00					
HOURLY PRO	DUCTION							
	20011011							
Truck Capacity: Truck Payload (wei	ght) Basis:							
Material				Pounds/LCY				
Desci	ription: Clay -							
Rated Pa	ayload: 141,22	0		Pounds				

LCY

Payload Capacity: 56.49

Truck Bed (volume) Basis:

Heaped Volume: Average Volume: Adjusted Volume:		LCY				
	55.60	LCY				
Adjusted Volume:	49.45	LCY				
	55.60	LCY				
Final	Truck Volume	Based on Number of Lo	adar Daaaaa	52.05	LOV	
	Truck volume	Dased on Number of La	bauer Passes:	52.07	LCY	
Loading Tool Capacity						
		0 6 8	Buck	tet Size Class: La	arge	
Rated Capacity:	4.450	LCY (heaped)	10			
Bucket Fill Factor:	0.975		liform aggrega	ates to 1/8" (95-100	%) 0.975	-
Adjusted Capacity.	4.339	LCY				
Job Condition Corrections:	<u>.</u>	Site	Altitude (ft.): <u>7</u>	<u>1000</u> 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:	Numbe	r of Loading Tool Passe	Pequirad to I	Cill Truck	12 r	
		TOT LOAding TOOT Passes	s Required to r		<u>12</u> F	asses
Excavators and Front Shovel	<u>ls:</u>					
Machine Cycle Time v	s. Job Conditio	n Rating: AVERAGE	1			
Selected Value v	within this Basi	c Rating: AVERAGE	2			
Track Loaders -	Material Descr	iption:				
Cycle Time Elements (min.):						
Sycie Time Liements (mm.).						
Load: NA	N	faneuver: NA		Dump: 0.100		
Wheel and Track Loaders -	Unadjusted Ba	asic Loader Cycle Time	load, dump, n	naneuver): 1	NA minu	ites
Cycle Time Factors				Factor (min.)	Source	
Material:	NA			NA	(Cat HB)	_
Stockpile:	NA			NA	(Cat HB)	
	NA			NA	(Cat HB)	-
Truck Ownership:	NA NA			NA NA	(Cat HB)	
Operation:			1	INA	(Cat HB)	
	1111	Net Cycle Time	diustment [,]	NΔ	the second se	_
Operation:	141	Net Cycle Time A Adjusted Loader (NA 0.315	minutes	
Operation:		Net Cycle Time A Adjusted Loader (Net Load Time	Cycle Time:	0.315	minutes minutes	
Operation: Dump Target:		Adjusted Loader (Cycle Time:		minutes	
Operation:		Adjusted Loader (Cycle Time:	0.315	minutes minutes	_
Operation: Dump Target:		Adjusted Loader (Cycle Time: _ per Truck: _	0.315	minutes minutes	Minute
Operation: Dump Target: Truck Cycle Time:	: 0.80	Adjusted Loader (Net Load Time	Cycle Time: per Truck: Adjusted	0.315 3.565	minutes minutes minutes	Minute
Operation: Dump Target: Truck Cycle Time: Truck Exchange Time:	: 0.80 : 3.565	Adjusted Loader (Net Load Time Minutes	Cycle Time: per Truck: Adjusted Adjusted	0.315 3.565 for site altitude:	minutes minutes minutes 0.800	-
Operation: Dump Target:		Adjusted Loader (Cycle Time:	0.315	minutes minutes	

Truck/Loader Worksheet Cont'd

_	Haul Rou	ite:							
	Seg #	Haul D	istance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
		(Ft)			(%)	(%)	(fpm)	Time (min)	
	1	600.00		-3.00	3.00	0.00	3550	0.500	
						Haul Time:	0.500	minutes	
	Return R	oute:					0.500	IIIIIdtes	
	Seg #	Haul D	istance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
		(Ft)			(%)	(%)	(fpm)	Time (min)	
L	1	600.00		3.00	3.00	6.00	3039	0.410	
						Return Time:	0.410	minute	s
					Total True	ck Cycle Time:	6.624	minute	s
Lo	oading Too	ol unit							
		uction	692.12	LCY/Hour		Adjusted for j	ob efficiency:	574.46	LCY/Hour
Iruck	Unit Prod	uction	471.64	LCY/Hour		Adjusted for j	ob efficiency:	391.46	LCY/Hour
Optima	l No. of T	rucks:	1	Truck(s)		Selected Numb	per of Trucks:	2	Truck(s)
				Adjuste	d hourly truc	k team productio	on: 782.	.92 LCY	//Hour
						r team production			/Hour
				Adjusted multip	le truck/loade	r team production	on: <u>3,446</u>	5.74 LCY	//Hour
	JOB TI	ME ANI) COST						
	Fleet	size:	6	Team(s)	г	Total job time:	99.83	3 Ho	ours
	Unit	cost:	\$1.159	/LCY	-	Fotal job cost:	\$398,8	98	

Task # 04A

BULLDOZER WORK

Task description:	Lower Pit Back				*
Eagle-Gypsum Mine	Per	mit Action:	TR-10	_ Permit/Job#:	M1984041
PROJECT IDENTIFI	CATION				
Task #: 04A	State:	Colorado		Abbreviation:	None
Date: $\frac{11/27}{2017}$	County:	Eagle		Filename:	M041-04a
User: THM	County.	Lagic		Thename.	1V1041-04a
Agency or organ	ization name: DI	RMS			
HOURLY EQUIPME	NT COST				
	D9T - 9SU				
Horsepower: 405	071 980				
1	ni-Universal				
Attachment: NA					
	er day				
Data Source: (CR					
Cost Breakdown:			TT/11' // A/		
Our analia Cast/Haun		¢100.50	Utilization %		
Ownership Cost/Hour:		\$100.59	NA		
Operating Cost/Hour:		\$87.23	100		
Ripper own. Cost/Hour: Ripper op. Cost/Hour:		\$0.00	NA		
		\$0.00 \$41.85	0		
Operator Cost/Hour:		54 I X 1	NEA		
Total unit Cost/Hour: Total Fleet Cost/Hour:	\$229.67 \$459.33	¢11.05	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT	\$459.33 ITIES	<i>Q</i> 11.05			
Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUANT</u> Initial Volume:400,0	\$459.33 ITIES 000				
Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUANT</u> Initial Volume: 400,0 Swell factor: 1.220	\$459.33 ITIES)000				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0	\$459.33 ITIES 000 000 LCY				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0 Source of estimated volum	\$459.33 ITIES 000 000 LCY ne: Division	of Reclamati	on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0	\$459.33 ITIES 000 000 LCY ne: Division	of Reclamati			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0 Source of estimated volum Source of estimated swell	\$459.33 ITIES 000 000 LCY ne: Division factor: Cat Hance	of Reclamati			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0 Source of estimated volum Source of estimated swell HOURLY PRODUCT	\$459.33 ITIES 000 000 LCY ne: Division factor: Cat Hand	of Reclamati			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance:	\$459.33 ITIES 000 000 LCY ne: Division factor: Cat Hand ION 120 feet	of Reclamati ibook			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0 Source of estimated volum Source of estimated swell HOURLY PRODUCT	\$459.33 ITIES 000 000 LCY ne: Division factor: Cat Hand YION 120 feet	of Reclamati ibook			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 1.220 Loose volume: 488,0 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance:	\$459.33 ITIES 000 000 000 LCY ne: Division factor: Cat Hand YION tion: 120 feet 1,093.1 LC	of Reclamati ibook			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0 Source of estimated volun Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc	\$459.33 ITIES 000 000 LCY ne: Division factor: Cat Hand 'ION tion: 120 feet 1,093.1 LC cription: Compa	of Reclamati ibook	on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product	\$459.33 ITIES 000 000 000 LCY ne: Division factor: Cat Hand YION tion: 120 feet 1,093.1 LC	of Reclamati ibook	on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0 Source of estimated volun Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc Average push gradient:	\$459.33 ITIES 000 000 LCY ne: Division factor: Cat Hand 'ION tion: 120 feet tion: 1,093.1 LC cription: Compa -15 %	of Reclamati ibook	on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency desc Average push gradient: Average site altitude:	\$459.33 ITIES 000 000 LCY ne: Division factor: Cat Hand 'ION tion: 1,093.1 LC cription: Compa -15 % 7,000 feet	of Reclamati book	on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency desc Average site altitude: Material weight: Weight description:	\$459.33 ITIES 000 000 LCY ne: Division factor: Cat Hand 'ION tion: 1,093.1 LC cription: Compa -15 % 7,000 feet 2,800 lbs/LCY Clay - Natural bed	of Reclamati book	on, Mining & Safety mbankment 0.9		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency desc Average push gradient: Average site altitude: Material weight: Material weight:	\$459.33 ITIES 000 000 LCY ne: Division factor: Cat Hand 'ION tion: 120 feet tion: 1,093.1 LC cription: Compa -15 % 7,000 feet 2,800 lbs/LCY Clay - Natural bed Factor Factor	of Reclamati book	on, Mining & Safety mbankment 0.9		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency desc Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Job Condition Correction	\$459.33 ITIES 000 000 LCY ne: Division factor: Cat Hand 'ION tion: 120 feet 1,093.1 LC cription: Compa -15 % 7,000 feet 2,800 lbs/LCY Clay - Natural bed Factor Skill: 0	of Reclamati ibook	on, Mining & Safety mbankment 0.9		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 400,0 Swell factor: 1.220 Loose volume: 488,0 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency desc Average site altitude: Material weight: Weight description: Job Condition Correction Operator S	\$459.33 ITIES 000 000 LCY ne: Division factor: Cat Hand TION tion: 120 feet 1,093.1 LC cription: Compa -15 % 7,000 feet 2,800 lbs/LCY Clay - Natural bed Factor 0 Skill: 0 oncy: 0	of Reclamati book	on, Mining & Safety mbankment 0.9		

0.830	(1 SHIFT/DAY)
0.800	(FND-RF)
1.329	(CAT HB)
1.000	(CAT HB)
0.821	(CAT HB)
1.000	(PAT)
	0.800 1.329 1.000 0.821

Net correction: 0.4890

Adjusted unit production:	534.53 LCY/hr	
Adjusted fleet production:	1069.06 LCY/hr	

Fleet size:	2 Dozer(s)	
Unit cost:	\$0.430/LCY	
tal ich time.	456 49 Llours	

Total job time:	456.48 Hours	
Total job cost:	\$209,673	

WHEEL LOADER - LOAD AND CARRY WORK

Eagle-Gypsu	um Mine	I	Permit Action:	TR-10	Pe	rmit/Job#:	M1984041
PROJECT II	DENTIFIC	CATION	×				
Date: 1 User: T	5A 1/27/2017 HM	State				eviation: ilename:	None M041-05a
Agenc	y or organi	zation name:	DRMS				
HOURLY EQ	OUIPMEN	NT COST					
Basic Ma	achine:	CAT 950H ROPS Cab			Horsepower: Shift Basis: Data Source:	1 p	197 er day CRG)
Cost Breakdown	<u>n:</u>						
Owners	hip Cost/He	our: \$2	25.38	Utilization % NA			
	ing Cost/Ho		28.79	100			
•	ator Cost/He		1.20	NA			
I otal U	Jnit Cost/He	our: \$9	95.37				
Total F	leet Cost/H	our: \$3	81.47				
MATERIAL	QUANTI	TIES					
Initial volu Loose volu		3,128 238,128		Swell fac	tor: <u>1.000</u>		
S. e.		estimated volun mated swell fact		of Reclamation,	Mining & Safety		

Loader Cycle Time:	Jnadjusted 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 Factors

Site Altitude: 7000 feet

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

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

Task # 06A

BULLDOZER WORK

Task description:	Spread topsoil ov	ci ulstui be	d area		
: Eagle-Gypsum Mine	e Perm	nit Action:	TR-10	Permit/Job#:	M1984041
PROJECT IDENTI	FICATION				
Task #: 06A	State:	Colorado		Abbreviation:	None
Date: 11/27/201	7 County:	Eagle		Filename:	M041-06a
User: THM				-	
Agency or org	anization name: DRI	MS			
HOURLY EQUIPM					
	at D9T - 9SU				
Horsepower: 40					
	emi-Universal		_		
Attachment: N	A				
Shift Basis: 1	per day				
Data Source: (C	CRG)				
Cost Breakdown:					
<u>oost sreakdo mi</u> .			Utilization %		
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:	\$229.67				
Total Fleet Cost/Hour:					
- 544 - 1997 - 0050 11041.	\$459.33				
MATERIAL QUAN	TITIES				
MATERIAL QUAN Initial Volume:28	TITIES 3,128	_			
MATERIAL QUAN Initial Volume: 238 Swell factor: 1.0	TITIES 8,128 00				
MATERIAL QUAN Initial Volume: 238 Swell factor: 1.0	TITIES 3,128	- - -			
MATERIAL QUANInitial Volume:238Swell factor:1.0Loose volume:238Source of estimated volume	TITIES 8,128 00 8,128 LCY ume: Division o		on, Mining & Safety		
MATERIAL QUANInitial Volume:238Swell factor:1.0Loose volume:238	TITIES 8,128 00 8,128 LCY ume: Division o		on, Mining & Safety		
MATERIAL QUAN Initial Volume: 238 Swell factor: 1.0 Loose volume: 238 Source of estimated volu Source of estimated swell	TITIES 8,128 00 8,128 LCY ume: Division o ell factor: Cat Handb		on, Mining & Safety		
MATERIAL QUANInitial Volume:238Swell factor:1.0Loose volume:238Source of estimated volume238	TITIES 8,128 00 8,128 LCY ume: Division o ell factor: Cat Handb		on, Mining & Safety		
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MATERIAL QUAN Initial Volume: 238 Swell factor: 1.0 Loose volume: 238 Source of estimated volu 238 Source of estimated volu 300 HOURLY PRODUCC 100	TITIES 8,128 00 8,128 LCY ume: Division o ell factor: Cat Handb CTION 200 feet uction: 700.0 LCY/h	ook	on, Mining & Safety		
MATERIAL QUAN Initial Volume: 238 Swell factor: 1.0 Loose volume: 238 Source of estimated volt 238 Source of estimated sweet 100 HOURLY PRODUC Average push distance: Unadjusted hourly produce Materials consistency definition	TITIES 8,128 00 8,128 LCY ume: Division o ell factor: Cat Handb CTION uction: 200 feet volume: 200 feet uction: Toose st	ook r	on, Mining & Safety		
MATERIAL QUAN Initial Volume: 238 Swell factor: 1.0 Loose volume: 238 Source of estimated volt 238 Source of estimated swell 388 HOURLY PRODUC Average push distance: Unadjusted hourly produce Materials consistency de Average push gradient: 388	TITIES 8,128 00 8,128 LCY ume: Division o ell factor: Cat Handb CTION uction: 200 feet uction: 700.0 LCY/h escription: Loose st 0 %	ook r	on, Mining & Safety		
MATERIAL QUAN Initial Volume: 238 Swell factor: 1.0 Loose volume: 238 Source of estimated volt 238 Source of estimated sweet 100 HOURLY PRODUC Average push distance: Unadjusted hourly produce Materials consistency definition	TITIES 8,128 00 8,128 LCY ume: Division o ell factor: Cat Handb CTION uction: 200 feet volume: 200 feet uction: Toose st	ook r	on, Mining & Safety		
MATERIAL QUAN Initial Volume: 238 Swell factor: 1.0 Loose volume: 238 Source of estimated volt 238 Source of estimated swell 388 HOURLY PRODUC Average push distance: Unadjusted hourly produce Materials consistency de Average push gradient: 388	TITIES 8,128 00 8,128 LCY ume: Division o ell factor: Cat Handb CTION uction: 200 feet uction: 700.0 LCY/h escription: Loose st 0 %	ook r	on, Mining & Safety		
MATERIAL QUAN Initial Volume: 238 Swell factor: 1.0 Loose volume: 238 Source of estimated volu 238 Source of estimated volu 238 Materials consistency de Average push distance: Unadjusted hourly produit Materials consistency de Average push gradient: Average site altitude:	TITIES 8,128 00 8,128 LCY ume: Division o ell factor: Cat Handb CTION uction: 200 feet uction: 700.0 LCY/h escription: Loose st 0 % 7,000 feet	ook r	on, Mining & Safety		
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MATERIAL QUAN Initial Volume: 238 Swell factor: 1.0 Loose volume: 238 Source of estimated volu 238 Source of estimated volu 238 Materials consistency de Average push distance: Unadjusted hourly produit Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description:	TITIES 8,128 00 8,128 LCY ume: Division o ell factor: Cat Handb CTION uction: 200 feet 200 feet 1,600 lbs/LCY Top Soil on Factor	ook r ockpile 1.2			
MATERIAL QUAN Initial Volume: 238 Swell factor: 1.0 Loose volume: 238 Source of estimated volt 238 Source of estimated volt Source of estimated swell HOURLY PRODUC Average push distance: Unadjusted hourly produce Materials consistency defined Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist Operator	TITIES 8,128 00 900 8,128 LCY ume: Division o escription: Cat Handb 200 feet 700.0 LCY/h escription: Loose st 0 % 7,000 feet 1,600 lbs/LCY Top Soil on Factor 0.7 r Skill: 0.7 stency: 1.2	r ockpile 1.2			
MATERIAL QUAN Initial Volume: 238 Swell factor: 1.0 Loose volume: 238 Source of estimated volt 238 Source of estimated swell 388 HOURLY PRODUC Average push distance: Unadjusted hourly produce Materials consistency details Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist Dozing m	TITIES 8,128 00 900 8,128 LCY ume: Division o escription: Cat Handb 200 feet 700.0 LCY/h escription: Loose st 0 % 7,000 feet 1,600 lbs/LCY Top Soil on Factor 0.7 r Skill: 0.7 stency: 1.2	ook r ockpile 1.2 50 00 00	<u>Source</u> (AVG.)		

Task # 06A

0.830	(1 SHIFT/DAY)
0.800	(FND-RF)
1.000	(CAT HB)
1.000	(CAT HB)
1.438	(CAT HB)
1.000	(PAT)
	0.800 1.000 1.000 1.438

Net correction: 0.8593

Adjusted unit production:	601.51 LCY/hr	
Adjusted fleet production:	1203.02 LCY/hr	

Fleet size:	2 Dozer(s)	
Unit cost:	\$0.382/LCY	
Total job time:	197.94 Hours	
Total job cost:	\$90,921	

REVEGETATION WORK

Task desc	ription:	Revegetate distu	rbed areas				
Site: Eagle-	Gypsum Mine	Per	mit Action:	TR-10	Permit/Job#	: M1984041	
PROJEC	<u>I IDENTIFIC</u>	CATION					
Task # Date User	11/27/2017	State: County:	Colorado Eagle			None M041-07a	
А	gency or organi	zation name: DR	MS				

FERTILIZING

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

Application

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

TILLING

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

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
Totals Seed Mix	21.00	65.63	\$136.33

Application

D		4	
Des	crit	otion	

Cost /Acre

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

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
Total Mulch Materials Cost/Acre				\$529.16

Application

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

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Tota	ls Nursery Stoc	ek Cost / Acre	\$0.00

	ed Failure Rate:	246 25% FERTILIZING,TILLIN LCHING	Cost /Acre: Cost /Acre*: NG,SEEDING,MU	
Initial Job Cost:	\$330,680.58			
Reseeding Job Cost:	\$82,670.15			
Total Job Cost:	\$413,351			
Job Hours:	160.00			

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task descrip	otion: <u>N</u>	lobilize reclamatio	n crew and equ	ipment			
: <u>Eagle-Gy</u>	psum Mine	Permit	Action: TR-1	0		Permit/Job#: _M	1984041
PRUJECT	IDENTIFICA	<u>HON</u>					
Task #:	08A	State: Co	olorado		Abbr	eviation: None	
Date: User:	11/27/2017 THM	County: Ea	gle		F	ilename: M041	-08a
Age	ency or organizati	on name: DRMS					
EQUIPME	NT TRANSPO	RT RIG COST					
					Shift ba	sis: 1 per da	v
				(Cost Data Sou		
-	Fruck Tractor De	scription: GENE	RIC ON-HIGH			OR, 6X4, DIESEL	POWERED,
				400 HP	(2ND HALF,	2006)	
	Truck Trailer De	scription: G	ENERIC FOLD	ING GOO	SENECK, DI	ROP DECK EQU	IPMENT
		-			(25T, 50T, Al		
		· · · · · · · · · · · · · · · · · · ·					
Cost Breakdo	wn:						
Available R	tig Capacities	0-25 Tons	26-50 Tons	51+	- Tons		
	rship Cost/Hour:	\$16.63	\$18.37		22.33		
	ating Cost/Hour:		\$46.13		50.07		
	erator Cost/Hour:	\$27.66	\$27.66	and the second s	27.66		
	elper Cost/Hour:		\$25.39		25.39		
	Unit Cost/Hour:	\$88.67	\$117.55		25.45		
Totu	Chit Cost Hour.	00.07	U 117.55	ΨΙ	23.43		
NON ROAL	DABLE EQUIE	<u>PMENT:</u>					
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
Description	(TONS)	COSUMI/ UNIT	t	Size	fleet		
Cat D9T - 9S		\$100.59	\$125.45	2		£250.00	£500.00
CAT 990H	83.34	\$100.39	\$125.45	4	\$452.08 \$1,009.16	\$250.90 \$501.80	\$500.00 \$1,000.00
Drill/Broadca		\$120.04	\$125.45 \$88.67	2	\$1,009.16	\$177.34	\$1,000.00
Seeder with	a. 23.00	\$12.22	\$00.V <i>\</i>	4	φ201./0	\$1//.54	\$200.00
Tractor		\$93.78	\$117.55	12	\$2,535.96	\$1,410.60	\$3,000.00
Tractor Cat 775F	50.39					· · · · · · · · · · · · · · · · · · ·	- 40,000.00
Cat 775F Cat 345D L	50.39 12'- 54.31	\$61.75	\$125.45	6	\$1,123.20	\$752.70	\$1,500.00
Cat 775F			\$125.45	6 Subtotals:		\$752.70 \$3,093.34	

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

	EAGLE	Nearest Major City or Town within project area region:
miles	10.00	Total one-way travel distance:
mph	40.00	Average Travel Speed:
	\$27,852.12	Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:
	\$38.86	Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:

Transportation Cycle Time:

Non-	
Roadable	Roadable
Equipment	Equipment
0.25	0.25
0.25	0.25
0.50	NA
0.50	NA
1.50	0.50
	Equipment 0.25 0.25 0.50 0.50

Total job time:	3.00	Hours
Total job cost:	\$27,891	