STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY

Department of Natural Resources

1313 Sherman St., Room 215 Denver, Colorado 80203 Phone: (303) 866-3567 FAX: (303) 832-8106

July 26, 2013

Mr. Randy Diluzio Tezak Heavy Equipment Co. Inc. 205 Tunnel Dr. Cañon City, CO 81212

Re: T.H.E. Aggregate Source; DRMS File No. M-1977-193; Amendment Approval with Stipulation, Revision No. AM-05

Dear Mr. Diluzio:

On July 26, 2013 the Division of Reclamation, Mining and Safety approved the Amendment application submitted to the Division on January 4, 2013, addressing the following:

Increase permit area to 314 acres including 79 acres of BLM land

The terms of the Amendment No. 05 approved by the Division are hereby incorporated into Permit No. M-1977-193.

The conditions of the Division approval are noted below. Please note that all other provisions of Permit No. M-1977-193 remain in full force and effect.

Stipulation No. Description

7

Prior to entering into Phase 3 as shown on Exhibit C in AM-05, the Operator shall submit a Technical Revision addressing a re-evaluation of the reclamation bond as necessary for the Phase 3 highwall conversion to the final 30' x 40' bench configuration along with unfinished phase one and phase 2 reclamation; and receive approval from the Division.

The revised estimated liability amount of \$674,200 exceeds the \$540,215 performance bond currently held. If you have not already done so, please submit additional bond in the amount of \$133,985. The revision will not be final until the bond is approved by the Division. Please see the enclosed cost summary sheets for details.

If you have any questions, please contact me.

Sincerely,

Timothy A. Cazier, P.E.

Environmental Protection Specialist

Enclosure

cc: Tom Kaldenbach, DRMS



John W. Hickenlooper Governor

Mike King Executive Director

Loretta Piñeda Director Enclosure:

COST SUMMARY WORK

Task o	description:	D1					
Site: Cro	esson Project	Per	mit Action:	AM-10/MLE2	Permit/Job#:	M1980244	
PRO.	JECT IDENTIFICA	ATION					
I	sk #: 100 Date: 9/13/2012 Jser: TC1	State: County:	Colorado Teller		Abbreviation: Filename:	None M244-100	
	Agency or organi	zation name: DF	RMS				

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Direct Cost Summary*	NA	1	0.00	\$148,405,317.00
		<u>SUBTO</u>	OTALS:	1	\$ 148,405,317.00

^{*} From AM-10 Application, Volume VI, Appendix 13, Sheet 6

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02 % Total = \$2,997,787.40 1.05 % Performance bond: Total = \$1,558,255.83 Job superintendent: 0.00 Total = \$0.00 Profit: 10.00 % Total = \$14,840,531.70 TOTAL O & P =\$19,396,574.93

CONTRACT AMOUNT (direct + O & P) = $\frac{$17,390,374.93}{$167,801,891.93}$

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 500.00 Total = 500.00

Engineering work and/or contract/bid preparation: 0.00 Total = \$0.00

Reclamation management and/or administration: 5.00 % \$8,390,094.60

CONTINGENCY: 0.00 % Total = \$0.00

TOTAL INDIRECT COST = \$27,787,169.53

TOTAL BOND AMOUNT (direct + indirect) = \$176,192,486.53

COMBINED COST SUMMARY WORK

: <u>T.H.E. A</u>	ggregate Source		Permit Action:	AM05-Phase 1 Perm	it/Job#: <u>M1977193</u>
PROJECT	Γ IDENTIFICA	TION			
Task #:	COVER	State:	Colorado	Abbreviation	ı: None
Date:	7/26/2013	County:	Fremont	Filename	
User:	TC1				

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
100	TOTAL BOND AMOUNT (direct + indirect)	Cost Summary	0	355.01	\$393,426.78
200	TOTAL BOND AMOUNT (direct + indirect)	Cost Summary	0	242.71	\$280,692.88
		597.72	\$674,119.66		

TOTAL BOND AMOUNT (Phase 1 + Phase 2) = \$674,119.66

COST SUMMARY WORK

T.H.E. A	ggregate Source		Permit Action:	AM05-Phase 1 Permit/J	Job#: <u>M1977193</u>
PROJECT	T IDENTIFICA	<u>TION</u>			
Task #:	100	State:	Colorado	Abbreviation:	None
Date:	7/26/2013	County:	Fremont	Filename:	M193-100
User:	TC1	<u> </u>			

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
110	Replace Topsoil in Phase 1 Pit Area (12" over 40ac)	SCRAPER1	1	197.21	\$39,126.91
120	Rough Grade Phase 1 Pit Topsoil (assume 10% of Tsk 110 Vol.)	GRADER	1	3.88	\$327.00
130	Rip Phase 1 Pit Floor, TS Source Area & Road Easm't	RIPPER	1	147.61	\$24,338.00
140	Reseed Phase 1 Dist. Area (pit flr, borrow area & rd easm't)	REVEGE	1	0.00	\$193,779.16
150	Phase 1 Bench Ditch Maintenance (5 benches x3300'x12')	GRADER	1	4.91	\$414.00
170	Permanent Structure Demolition	DEMOLISH	1	0.00	\$60,597.00
190	Mob/Demob	MOBILIZE	1	1.40	\$2,109.27
		<u>SUBTO</u>	TALS:	355.01	\$320,691.34

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02%	Total =	\$6,477.97
Performance bond:	1.05%	Total =	\$3,367.26
Job superintendent:	177.50 hrs	Total =	\$11,610.28
Profit:	10.00%	Total =	\$32,069.13

TOTAL O & P = \$53,524.64

CONTRACT AMOUNT (direct + O & P) = $\sqrt{374,215.98}$

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	500.00	Total =	500.00
Engineering work and/or contract/bid preparation:	0.00%	Total =	\$0.00
Reclamation management and/or administration:	5.00%		\$18,710.80

CONTINGENCY: 0.00 Total = \$0.00

TOTAL INDIRECT COST = \$72,735.44

TOTAL BOND AMOUNT (direct + indirect) = \$_\$393,426.78

SCRAPER TEAM WORK

Task description:	Replace To	opsoil in Phase 1 l	Pit Area (12" ove	er 40ac)		
Site: T.H.E. Aggregate	Source	Permit Action:	AM05-Phase 1	Peri	mit/Job#: <u>M197</u>	7193
PROJECT IDENT	<u> </u>					
Task #:110 Date:7/18/20 User:TC1	013 Co	State: Colorado Fremont			viation: None M193-	110
HOURLY EQUIP	organization name	DRMS	COSTS	hift bosis: 1 per d	lov	
Suppo	-S rt Equipment -Loa -Dum intenance –Motor	Scraper: Cat 621 -Dozer: NA d Area: NA p Area: NA	ent Description	hift basis: <u>1 per d</u>	<u>av</u>	
Cost Breakdown:	Scraper Wo		Support Equip		Maintenance Motor Grader	Equipment Water Truck
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	water Truck
%Utilization-machine:	100	NA	NA	NA	NA	NA
Ownership cost/hour:	\$52.68	NA	NA	NA	NA	NA
Operating cost/hour:	\$115.69	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.02	NA	NA	NA	NA	NA
Unit Subtotals: Number of Units:	\$198.40	NA O	NA 0	NA 0	NA 0	NA
Group Subtotals:	1 Work:	0 \$198.40	0 Support:	0 \$0.00	0 Maint:	\$0.00
Total work team cost MATERIAL QUA	/hour: \$198.40	ψ170.10	Support	\$0.00	TVIGITE.	\$0.00
Initial volume: Loose volume:	64,533 72,600	CCY LCY	Swell fact	tor: 1.125		
	rce of estimated vo of estimated swell			s/ac x 40 ac (@ 10	00#/CF)	
HOURLY PROD	<u>UCTION</u>			1/ 1) 5		
			•	owl (volume) Bas		
Material weight: Material description:	2,650 lbs/LCY Decomposed roc 75% Earth	k - 25% Rock,	Struck Heaped	Volume: 15.70 Volume: 22.00		CY CY
Rated Payload: Payload Capacity:	52,800 pounds 19.92 LCY		Average Adjusted C			CY CY

Cycle Time:

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{0.90} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.70} \text{ Minutes} \end{array}$

<u>Job Condition Correction:</u> Site Altitude: 5600 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	3.00	5.00	8.00	916	0.59

Haul Time: **0.59** minutes

Return Time: **0.36** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	-3.00	5.00	2.00	2898	0.36

Total Scraper team cycle time:
Adjusted for job conditions:
Selected Number of Scrapers:

2.55
minutes
LCY/Hour
Scraper(s)

Adjusted single scraper team (unit) hourly production: 368.13 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 368.13 LCY/Hour

Unadjusted unit production/hour: 443.53 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size: _____1 Team(s) Total job time: _____197.21 Hours

Unit cost: \$0.539 /LCY Total job cost: \$39,126.91

MOTOR GRADER WORK

Task description:	Rough Grade I	Phase 1 Pit To	psoil (assume 1	10% of Tsk 110 V	Vol.)	
T.H.E. Aggregate S	ource Pe	ermit Action:	AM05-Phase	1 Pe	ermit/Job#:	M1977193
PROJECT IDENTI	FICATION					
Task #: 120	State:	: Colorado		۸hhr	eviation:	None
Date: $\frac{120}{7/18/2013}$					ilename:	M193-120
User: TC1					-	
Agency or org	anization name: <u>I</u>	DRMS				
HOURLY EQUIPM	ENT COST					
Basic Machi	ne: CAT 12M			Horsepower:		158
Ripper Attachme	nt:			Shift Basis:		er day
				Data Source:	(0	CRG)
Cost Breakdown:			1			
0	1: C/II	\$22	(5	Utilization %		
	nership Cost/Hour: erating Cost/Hour:	\$22 \$34		NA 75		
	erating Cost/Hour:	\$0.		13		
	perator Cost/Hour:	\$27		NA		
Tot	al Unit Cost/Hour:	\$84	.23			
Tota	al Fleet Cost/Hour:	\$95	57			
100	ii i icci costilioui.	φλο	.51			
	a to be graded or ripperce of estimated acre	-	f Task 110 Vol.	or 4 ac (10% of 4	0 ac) / AM	acres -04 Exh. L
HOURLY PRODUC	<u>CTION</u>					
	Average Grader	•	1.50	mph		
	Selected Applie			grading (0-2.5 mp	oh) - 1.5	
	Selected Blade A Effective Blade L		30 10.40	degrees feet		
Widt	n of blade overlap pe		2.00	feet		
	g or ripping width pe		8.40	feet		
	ed Hourly Unit Produ		1.5273	acres/ho	ur	
Job Condition Correction	on Factors		Si	te Altitude: 5600	feet	
	,	Source				
Altitude Adj:	1.00	(CAT HE				
Job Efficiency: Net Correction:	0.90	(1sh/d, fav				
inet Collection:	0.9000	multiplier				
	Adjusted Hourly Un Adjusted Hourly Flee		1.3745 1.3745	acres/Hour acres/Hour		
JOB TIME AND CO	OST					
Fleet size:	1 Grader(s	s)	Total job time	3.88		Hours
I Init aget:	(1.20		Total inh a			
Unit cost: \$6	per acre		Total job cost	\$327.0	<i>J</i> U	

BULLDOZER RIPPING WORK

Task description	on: Rip Phase 1	Pit Floor, TS So	ource Area & Ro	ad Easm't	
Site: T.H.E. Agg	regate Source	Permit Action:	AM05-Phase 1	Permit/Job	#: M1977193
PROJECT I	DENTIFICATION				
Task #:	130 St	tate: Colorado		Abbreviation	: None
Date:	7/18/2013 Cou	nty: Fremont		Filename	M193-130
User:	<u>ΓC1</u>				
Agen	cy or organization name:	DRMS			
HOURLY E	QUIPMENT COST				
Bas	ic Machine: Cat D7R D	S XR Series II		Horsepower:	240
Ripper A	Attachment: 3-Shank R	ipper		Shift Basis:	l per day
				Data Source:	(CRG)
Cost Breakdov	<u>vn:</u>				
	0 1: 0 //II	Φ.4.		Utilization %	
	Ownership Cost/Hou Operating Cost/Hou		6.33 6.81	NA 100	
R	ipper Operating Cost/Hou		.31	100	
	Operator Cost/Hou		7.41	NA	
	Total Unit Cost/Hou	r: \$16	54.87		
	Total Fleet Cost/Hou	r: \$1 6	4.87		
MATERIAI	QUANTITIES	Sal	ected estimating n	nothed: Area	
Alternate Meth		501	ected estimating in	nethod: Area	
ea: 91.50	-	Rip Depth (ft): uantity: <u>AM-0</u>	1.00 4 & -05, Exh. L (p	Volume: 147,620 bit flr & borrow area, Rd	easm't) BCY or
HOURLY P	RODUCTION				
Seismic:	Saigmia	Velocity:	NA	feet/second	
	Seisinic	velocity.	INA	reet/second	
Area:	Average Rippi	ng Denth:	2.45	mph	
	Average Rippi Average Rippi		6.50	degrees	
	Average Rippir		400.00	feet	
	Average Doz		88.00	feet	
	Average Maneu		0.25	feet	
	Production per			-	
Job Condition	1	unit area:	0.747	acres/hour	
,	Correction Factors	unit area:		-	
	-			-	
	Correction Factors Unadjusted Hourly Unit P		0.747	acres/hour	
	Correction Factors Unadjusted Hourly Unit P Site Alt	roduction:e Altitude: itude Adj:	0.747 0.747 5,600 1.00	acres/hour Acres/hr feet (CAT HB)	
	Correction Factors Unadjusted Hourly Unit P Site Alt Job F	roduction: e Altitude: itude Adj: Efficiency:	0.747 0.747 5,600 1.00 0.83	acres/hour Acres/hr feet (CAT HB) (1 shift/day)	
	Correction Factors Unadjusted Hourly Unit P Site Alt Job F	roduction:e Altitude: itude Adj:	0.747 0.747 5,600 1.00	acres/hour Acres/hr feet (CAT HB)	
	Correction Factors Unadjusted Hourly Unit P Site Alt Job F Net C	roduction: e Altitude: itude Adj: Efficiency: Correction: Unit Production:	0.747 0.747 5,600 1.00 0.83 0.83 0.62	acres/hour Acres/hr feet (CAT HB) (1 shift/day)	
JOB TIME A	Correction Factors Unadjusted Hourly Unit P Site Alt Job F Net C Adjusted Hourly Adjusted Hourly	roduction: e Altitude: itude Adj: Efficiency: Correction: Unit Production:	0.747 0.747 5,600 1.00 0.83 0.83 0.62	acres/hour Acres/hr feet (CAT HB) (1 shift/day) multiplier Acres/hr	
	Correction Factors Unadjusted Hourly Unit P Site Alt Job F Net C Adjusted Hourly Adjusted Hourly	roduction: e Altitude: itude Adj: Efficiency: Correction: Unit Production: Fleet Production:	0.747 0.747 5,600 1.00 0.83 0.83 0.62	acres/hour Acres/hr feet (CAT HB) (1 shift/day) multiplier Acres/hr Acres/hr	Hours

REVEGETATION WORK

	Fask descrip	otion:	Reseed Phase 1 E	Dist. Area (p	it flr, borrow area &	rd easm't)		
Site:	T.H.E. A	ggregate Source	Perr	mit Action:	AM05-Phase 1	Permit/Job#:	M1977193	
]	PROJECT	T IDENTIFICA	ATION					
	Task #:	140	State:	Colorado		Abbreviation:	None	
	Date:	7/18/2013	County:	Fremont		Filename:	M193-140	
	User:	TC1	<u> </u>					

FERTILIZING

Agency or organization name: DRMS

Materials

Description 6-24-24, 10-20-10, 15-15-15 Composted manure {MEANS 32 91 13.23 4400}	Units / Acre 300.00 1.00	Unit pound pound	Cost / Unit \$0.26 \$0.48	Cost /Acre \$79.20 \$0.48
4400}			Total Fertilizer Materials Cost/Acre	\$79.68

Application

Description		Cost /Acre
Tractor spreader (MEANS 32 91 13.16 0950)		\$37.46
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$52.71
	Total Fertilizer Application Cost/Acre	\$90.17

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$88.58
Total Tilling Cost/Acre	\$88.58

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	0.50	8.16	\$5.33
Indian Ricegrass - Nespar	1.50	4.86	\$10.62
Sideoats Grama - Butte	2.50	8.21	\$27.85
Juniper, Single Seed	1.00	0.29	\$88.00
Crested Wheatgrass - Standard	0.50	2.30	\$1.11
Pine, Pinyon	1.00	0.03	\$30.91
Mahogany, Mountain	1.50	2.03	\$69.47
Needle and Thread	1.50	3.96	\$70.49
Western Wheatgrass - Native	1.00	2.53	\$3.04

Saltbush, Four Wing	2.50	3.44	\$26.83
Winter Fat	1.50	3.82	\$49.04
Totals Seed Mix	15.00	39.63	\$382.67

Application

Description	Cost /Acre
Drill seeding (DRMS Cost Data)	\$88.20
Total Seed Applicat	tion Cost/Acre \$88.20

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$265.00	\$530.00
Total Mulch Materials Cost/Acre				\$530.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$65.89
Power mulcher (MEANS 32 91 13.16 0250)		\$86.68
Т	otal Mulch Application Cost/Acre	\$152.57

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 91.5 Cost /Acre: \$1,411.87 Cost /Acre*: \$1,411.87

Estimated Failure Rate: 50%

*Selected Replanting Work Items: FERTILIZING, TILLING, SEEDING, MU

LCHING

Initial Job Cost: \$129,186.11 Reseeding Job Cost: \$64,593.05 Total Job Cost: \$193,779.16

Job Hours: 0.00

MOTOR GRADER WORK

T.H.E. Aggregate S						
	Source Pe	ermit Action:	AM05-Phase 1	P	ermit/Job#:	M1977193
PROJECT IDENTI	IFICATION					
Task #: 150	State:	Colorado		Abb	reviation:	None
Date: 7/18/201		-			Filename:	M193-150
User: TC1	<u> </u>					1,11,50 100
Agency or org	ganization name: <u>I</u>	DRMS				
HOURLY EQUIPM	MENT COST					
Basic Machi	ine: CAT 12M			Horsepower:		158
Ripper Attachme	ant:		<u> </u>	Shift Basis:	1 p	er day
11			_	Data Source:		CRG)
Coot Door laterons					•	
Cost Breakdown:				Utilization %		
O***	nership Cost/Hour:	\$22.	65	NA		
	perating Cost/Hour:	\$22. \$34.		75		
	perating Cost/Hour:	\$0.0		13		
	Operator Cost/Hour:	\$27.		NA		
	tal Unit Cost/Hour:	\$84.		1,112		
Tot	tal Fleet Cost/Hour:	\$95.	57			
100	_	Ψ, υ,	<u> </u>			
MATERIAL QUAN	<u>NTITIES</u>					
Total Are	ea to be graded or ripp	ped: 4.50				acres
Sou	irce of estimated acres	age: Five 3,3	00-ft benches 2	x 12-ft blade wid	th	
HOUDLY BRODE	CTION					
HOURLY PRODUC						
	Average Grader S	Speed:	1.50	la		
	_	<u> </u>		mph		
	Selected Applie	eation:	Finish g	grading (0-2.5 m	. /	
	Selected Blade	cation:	Finish §	grading (0-2.5 m degrees	. /	
	Selected Blade A Effective Blade L	cation: Angle: ength:	Finish § 30 10.40	grading (0-2.5 m degrees feet	. /	
	Selected Blade A Effective Blade L th of blade overlap pe	eation: Angle: ength: r pass:	Finish § 30 10.40 2.00	grading (0-2.5 m degrees feet feet	. /	
Net gradin	Selected Blade A Effective Blade L th of blade overlap pe ag or ripping width pe	cation: Angle: ength: r pass: r pass:	Finish § 30 10.40 2.00 8.40	grading (0-2.5 m degrees feet feet feet		
Net gradin Unadjust	Selected Blade A Effective Blade L th of blade overlap pe ag or ripping width pe ted Hourly Unit Produ	cation: Angle: ength: r pass: r pass:	Finish § 30 10.40 2.00 8.40 1.5273	grading (0-2.5 m degrees feet feet feet acres/ho	our	
Net gradin	Selected Blade A Effective Blade L th of blade overlap pe ag or ripping width pe ted Hourly Unit Produ	cation: Angle: ength: r pass: r pass:	Finish § 30 10.40 2.00 8.40 1.5273	grading (0-2.5 m degrees feet feet feet	our	
Net gradin Unadjust Job Condition Correcti	Selected Blade A Effective Blade L th of blade overlap pe ag or ripping width pe ted Hourly Unit Produ on Factors	cation: Angle: ength: r pass: r pass: uction: Source	Finish § 30 10.40 2.00 8.40 1.5273	grading (0-2.5 m degrees feet feet feet acres/ho	our	
Net gradin Unadjust Job Condition Correcti Altitude Adj:	Selected Blade A Effective Blade L th of blade overlap pe ag or ripping width pe ted Hourly Unit Produ on Factors 1.00	cation: Angle: ength: r pass: r pass: action: Source (CAT HB	Finish § 30 10.40 2.00 8.40 1.5273 Sit	grading (0-2.5 m degrees feet feet feet acres/ho	our	
Net gradin Unadjust Job Condition Correcti Altitude Adj: Job Efficiency:	Selected Blade A Effective Blade L th of blade overlap pe ag or ripping width pe ted Hourly Unit Produ on Factors 1.00 0.80	cation: Angle: ength: r pass: r pass: action: Source (CAT HB) (1sh/d, adv	Finish § 30 10.40 2.00 8.40 1.5273 Sit	grading (0-2.5 m degrees feet feet feet acres/ho	our	
Net gradin Unadjust Job Condition Correcti Altitude Adj:	Selected Blade A Effective Blade L th of blade overlap pe ag or ripping width pe ted Hourly Unit Produ on Factors 1.00 0.80	cation: Angle: ength: r pass: r pass: action: Source (CAT HB	Finish § 30 10.40 2.00 8.40 1.5273 Sit	grading (0-2.5 m degrees feet feet feet acres/ho	our	
Net gradin Unadjust Job Condition Correcti Altitude Adj: Job Efficiency:	Selected Blade A Effective Blade L th of blade overlap pe ag or ripping width pe ted Hourly Unit Produ on Factors 1.00 0.80	Source (CAT HB (1sh/d, adv multiplier	Finish § 30 10.40 2.00 8.40 1.5273 Sit	grading (0-2.5 m degrees feet feet feet acres/ho	our	
Net gradin Unadjust Job Condition Correcti Altitude Adj: Job Efficiency:	Selected Blade A Effective Blade L th of blade overlap pe ag or ripping width pe ted Hourly Unit Produ on Factors 1.00 0.80 0.8000	Source (CAT HB (1sh/d, adv multiplier	Finish § 30 10.40 2.00 8.40 1.5273 Sit	grading (0-2.5 m degrees feet feet feet acres/ho se Altitude: 5600	our	
Net gradin Unadjust Job Condition Correcti Altitude Adj: Job Efficiency: Net Correction:	Selected Blade A Effective Blade L th of blade overlap pe ag or ripping width pe ted Hourly Unit Produ on Factors 1.00 0.80 0.8000 Adjusted Hourly Un Adjusted Hourly Flee	Source (CAT HB (1sh/d, adv multiplier	Finish § 30 10.40 2.00 8.40 1.5273 Sit	grading (0-2.5 m degrees feet feet acres/hour acres/Hour	our	
Net gradin Unadjust Job Condition Correcti Altitude Adj: Job Efficiency: Net Correction:	Selected Blade A Effective Blade L th of blade overlap pe ag or ripping width pe ted Hourly Unit Produ on Factors 1.00 0.80 0.8000 Adjusted Hourly Un Adjusted Hourly Flee OST	Angle: ength: r pass: r pass: ction: Source (CAT HB (1sh/d, adv multiplier it Production: et Production:	Finish § 30 10.40 2.00 8.40 1.5273 Sit	grading (0-2.5 m degrees feet feet feet acres/hour acres/Hour acres/Hour	our feet	
Net gradin Unadjust Job Condition Correcti Altitude Adj: Job Efficiency: Net Correction:	Selected Blade A Effective Blade L th of blade overlap pe ag or ripping width pe ted Hourly Unit Produ on Factors 1.00 0.80 0.8000 Adjusted Hourly Un Adjusted Hourly Flee	Angle: ength: r pass: r pass: ction: Source (CAT HB (1sh/d, adv multiplier it Production: et Production:	Finish § 30 10.40 2.00 8.40 1.5273 Sit	grading (0-2.5 m degrees feet feet feet acres/hour acres/Hour acres/Hour	our feet	Hours

DEMOLITION WORK

Site: _	T.H.E. Aggregate Source		Permit Action:	AM05-Phase 1	Permit/.	Job#: M1977193
ROJEC	CT IDENTIFICATION					
Γask #:	170	State:	Colorado		Abbreviation:	None
Date:	7/26/2013	County:	Fremont		Filename:	M193-170
User:	TC1					

Location adjustment: 94.10 %

<u>UNIT COSTS</u>

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Existing Office - single story	30'x40'x8'	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 15 mile haul	9,600.00	CF	\$1.07	\$10,272.00
Existing Office Floor	30'x40'	Floor, concrete, demolition only, average reinforcing - 6 in. thick	1,200.00	SF	\$1.59	\$1,910.40
Office Addition - 2- story portion ONLY	30'x40'x16'	Bldg. (MN) demo./off-site disposal in approved landfill - Max. 15 mile haul	19,200.00	CF	\$1.09	\$20,985.60
Office Addition Mech. Room	8.5'x10'x8'	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 15 mile haul	680.00	CF	\$1.07	\$727.60
Office Addition Vault (conc.)	9.5'x10'x8'	Bldg. (SC) demo./off-site disposal in approved landfill - Max. 15 mile haul	760.00	CF	\$1.12	\$850.44
Office Addition Floor	30'x40'+18'x10'	Floor, concrete, demolition only, average reinforcing - 6 in. thick	1,380.00	SF	\$1.59	\$2,196.96
Water Tank Stor. bldg #1 (dirt floor)	35'x20'x8'	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 15 mile haul	5,600.00	CF	\$1.07	\$5,992.00
Water Tank Stor. bldg #2 (dirt floor)	35'x15'x8'	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 15 mile haul	4,200.00	CF	\$1.07	\$4,494.00
Remove Pavement from Cañon City prop.	1000'x30'	Pavement, bituminous, demolition only - 3 in. thick	3,333.00	SY	\$4.01	\$13,365.33
Truck Scale Pit Floors (2)	70'x10' each	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	1,400.00	SF	\$1.70	\$2,378.60
Truck Scale Pit Foundation	70'x20'	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft Max. 10,000 ft. haul	180.00	LF	\$6.80	\$1,223.46

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	0.00	(unadjusted):	\$64,396.39	location):	\$60,597.00

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Aob/Demob				
ite: T.H.E. Aggregate Source	Permit	Action: AM05-P	hase 1 Peri	mit/Job#:	M1977193
PROJECT IDENTIFICA	<u>ATION</u>				
Task #: 190 Date: 7/18/2013		Colorado		viation: ename:	None M102 100
Date: 7/18/2013 User: TC1	County: F	Fremont	rıı	ename:	M193-190
Agency or organization	tion name: DRM	S			
EQUIPMENT TRANSPO	ORT RIG COST				
			Shift bas Cost Data Source		l per day CRG Data
Truck Tractor D	escription: GEN	NERIC ON-HIGHW	AY TRUCK TRACTO 400 HP (2ND HALF, 2		DIESEL POWERED,
Truck Trailer D	escription: GEN	ERIC FOLDING G	OOSENECK, DROP DI (25T, 50T, AND 100		UIPMENT TRAILER
Cost Breakdown:					
Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons		
Ownership Cost/Hour	\$16.63	\$18.37	\$22.33		

\$46.13

\$27.66

\$25.39

\$117.55

\$50.07

\$27.66

\$25.39

\$125.45

\$44.38

\$27.66

\$0.00

\$88.67

NON ROADABLE EQUIPMENT:

Operating Cost/Hour:

Operator Cost/Hour:

Total Unit Cost/Hour:

Helper Cost/Hour:

Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/unit	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
	(TONS)				fleet		
Cat 621G	37.47	\$52.68	\$117.55	1	\$170.23	\$117.55	\$250.00
Cat D7R DS XR	32.01	\$41.75	\$117.55	1	\$159.30	\$117.55	\$250.00
Series II							
CAT 12M	16.01	\$22.65	\$88.67	1	\$111.32	\$88.67	\$250.00

Subtotals: \$440.85 \$323.77 \$750.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Drill/Broadcast Seeder with	\$51.96	1	\$51.96	\$51.96
Tractor				
Power Mulcher (Reinco M90)	\$25.56	1	\$25.56	\$25.56

Subtotals: \$77.52 \$77.52

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:

Total one-way travel distance:

Average Travel Speed:

CAÑON CITY
miles
3.00
mph

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

\$2,093.77

\$15.50

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.10	0.10
Return Time (Hours):	0.10	0.10
Loading Time (Hours):	0.25	NA
Unloading Time (Hours):	0.25	NA
Subtotals:	0.70	0.20

JOB TIME AND COST

Total job cost: 1.40 Hours

Total job cost: \$2,109.27

COST SUMMARY WORK

E:T.H.E. A	ggregate Source		Permit Action:	AM05-Phs 2 Permit/	Job#: <u>M1977193</u>
PROJEC	T IDENTIFICA	TION			
Task #:	200	State:	Colorado	Abbreviation:	None
Date:	7/19/2013	County:	Fremont	Filename:	M193-200
User:	TC1				

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
210	Replace Topsoil in Phase 1 Pit Area (12" over 3	SCRAPER1	1	14.79	\$2,934.53
	ac)				
220	Rough Grade Phase 1 Pit Topsoil (assume 10% of	GRADER	1	0.29	\$25.00
	TSK 210 Vol.)				
230	Rip Phase 1 Pit Floor & TS Source Area	RIPPER	1	4.83	\$798.00
240	Reseed Phase 2 Dist. Area (660' x 200' pit floor)	REVEGE	1	0.00	\$6,353.42
251	Drill & Blast 20'x40' Benches to Final 30'x40'	NA	0	0.00	\$194,242.51
	Benches				
252	Blast mucking for 30'x40' final benches (Phase 2)	LOADER	1	99.10	\$42,045.00
253	Push Phase 2 mucked blast material to 3H:1V	DOZER	1	122.30	\$30,503.63
	slope				
290	Mob/Demob	MOBILIZE	1	1.40	\$3,790.79
		SUBTO	DTALS:	242.71	\$280,692.88

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02% Total = \$5,670.00 Performance bond: 1.05% Total = \$2,947.28 Job superintendent: Total = 82.63 hrs \$5,404.83 Profit: 10.00% Total = \$28,069.29 TOTAL O & P =\$42,091.40

CONTRACT AMOUNT (direct + O & P) = \$42,091.40 \$322,784.28

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): Engineering work and/or contract/bid preparation: Reclamation management and/or administration: 0.00*

CONTINGENCY: 0.00 Total = \$0.00

TOTAL INDIRECT COST = \$58,230.61

TOTAL BOND AMOUNT (direct + indirect) = \$338,923.49

^{**} The \$500 Financial warranty processing fee is included in Task 100 for Phase 1 to avoid duplication.

SCRAPER TEAM WORK

Task description:	Replace To	opsoil in Phase 2	Pit Area (12" ove	er 3 ac)		
Site: T.H.E. Aggregate	Source	Permit Action:	AM05-Phs 2	Per	mit/Job#: <u>M197</u>	7193
PROJECT IDENT	<u> </u>					
Task #: 210 Date: 7/18/20 User: TC1		State: Colorado unty: Fremont			eviation: None lename: M193-	210
Agency or o	organization name:	DRMS				
HOURLY EQUIP	PMENT_		COSTS	hift basis: 1 per o	<u>lay</u>	
		Equipm	ent Description			
	-5	Scraper: Cat 62				
		-Dozer: NA				
Suppo	rt Equipment -Loa	d Area: NA p Area: NA				
Road Ma	intenance –Motor					
		Truck: NA				
Cost Breakdown:	Scraper Wo		Support Equip		Maintenance	Equipment Water Truck
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	water fruck
%Utilization-machine:	100	NA	NA	NA	NA	NA
Ownership cost/hour:	\$52.68	NA	NA	NA	NA	NA
Operating cost/hour:	\$115.69	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.02	NA	NA	NA	NA	NA
Unit Subtotals:	\$198.40	NA	NA	NA	NA	NA
Number of Units:	1	0	0	0	0	0
Group Subtotals:	Work:	\$198.40	Support:	\$0.00	Maint:	\$0.00
Total work team cost MATERIAL QUA						
Initial volume:	4,840	CCY	Swell fact	tor: 1.125		
Loose volume:	5,445	LCY				
Sou	rce of estimated vo	olume: AM-05- (@100#	Phase2 (~660'x20 E/CF)	0' flt): 2178 tons	s/ACx3 AC	
Source of	of estimated swell	factor: Cat Han	dbook			
HOURLY PROD	<u>UCTION</u>					
			Scraper Bo	owl (volume) Bas	sis:	
Material weight:	2,650 lbs/LCY			Volume: 15.70		CY
Material description:	Decomposed roc 75% Earth	k - 25% Rock,	Heaped			CY
Rated Payload:	52,800 pounds		Average			CY
Payload Capacity:	19.92 LCY		Adjusted C	Capacity: 18.85	L	CY

~		-	
Cyc	le.	11	me:

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{0.90} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.70} \text{ Minutes} \end{array}$

Job Condition Correction: Site Altitude: 5600 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res	Velocity (fpm)	Travel Time (min)
1	500.00	3.00	5.00	8.00	916	0.59

Haul Time: **0.59** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res	Velocity (fpm)	Travel Time (min)
1	500.00	-3.00	5.00	2.00	2898	0.36

Return Time: 0.36 minutes

Total Scraper team cycle time: 2.55 minutes

Adjusted for job conditions: 368.13 LCY/Hour Selected Number of Scrapers: 1 Scraper(s)

Adjusted single scraper team (unit) hourly production: 368.13 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 368.13 LCY/Hour

Unadjusted unit production/hour: 443.53 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 14.79
 Hours

 Unit cost:
 \$0.539
 /LCY
 Total job cost:
 \$2,934.53

MOTOR GRADER WORK

Task description:						
T.H.E. Aggregate S	ource	Permit Action:	AM05-Phs 2		Permit/Job#	M1977193
PROJECT IDENTI	FICATION					
Task #: 220	Stat	te: Colorado		Ab	breviation:	None
Date: 7/18/201					Filename:	M193-220
User: TC1		.y. <u>110110110</u>			1 11011011101	111175 220
Agency or org	ganization name: _	DRMS				
HOURLY EQUIPM	IENT COST					
Basic Machi	ne: CAT 12M			Horsepower:		158
Ripper Attachme	ent:		_	Shift Basis:		per day
				Data Source:	(CRG)
Coat Daniel do						
Cost Breakdown:			ĺ	Utilization %		
Ow	nership Cost/Hour:	\$22	65	NA		
	perating Cost/Hour:	\$34		75	_	
	perating Cost/Hour:	\$0.		13		
	perator Cost/Hour:	\$27		NA		
	tal Unit Cost/Hour:	\$84		1121		
	al Fleet Cost/Hour:	\$95				
MATERIAL QUAN	NTITIES					
MATERIAL QUAN	NTITIES ea to be graded or ri	ipped: 0.30				acres
Total Are			f Task 210 Vol.	or 0.3 ac (10%	of 3 ac) / Al	=
Total Ard	ea to be graded or ri		f Task 210 Vol.	or 0.3 ac (10%	of 3 ac) / Al	=
Total Are	ea to be graded or ri	reage: 10% of		,	of 3 ac) / Al	=
Total Ard	ea to be graded or ri rce of estimated act CTION Average Grade	reage: 10% of	1.50	mph	,	=
Total Ard	ea to be graded or ri rce of estimated act CTION Average Grade Selected App	reage: 10% of	1.50 Finish	mph grading (0-2.5 r	nph) - 1.5	=
Total Ard	ea to be graded or ri rce of estimated act CTION Average Grade Selected App Selected Blade	reage: 10% of	1.50 Finish 30	mph grading (0-2.5 r	nph) - 1.5	=
Total Are Sou HOURLY PRODUC	ea to be graded or ri crce of estimated act CTION Average Grade Selected App Selected Blade Effective Blade	reage: 10% of strength:	1.50 Finish 30 10.40	mph grading (0-2.5 r degree feet	nph) - 1.5	=
Total Ard Sou HOURLY PRODUC	ea to be graded or ri rice of estimated acr CTION Average Grade Selected App Selected Blade Effective Blade h of blade overlap p	r Speed:	1.50 Finish 30 10.40 2.00	mph grading (0-2.5 r degree feet feet	nph) - 1.5	=
Total Ard Sou HOURLY PRODUCE Widt Net gradin	ea to be graded or ri rice of estimated acr CTION Average Grade Selected App Selected Blade Effective Blade h of blade overlap p g or ripping width p	r Speed:	1.50 Finish 30 10.40 2.00 8.40	mph grading (0-2.5 i degree feet feet feet feet	mph) - 1.5	=
Total Ard Sou HOURLY PRODUCE Widt Net gradin	ea to be graded or ri crce of estimated accentrated ac	r Speed:	1.50 Finish 30 10.40 2.00 8.40 1.5273	mph grading (0-2.5 r degree feet feet	mph) - 1.5	=
Total Arc Sou HOURLY PRODUC Widt Net gradin Unadjust Job Condition Correction	ea to be graded or ri cree of estimated accommendated. CTION Average Grade Selected App Selected Blade Effective Blade h of blade overlap p g or ripping width p ed Hourly Unit Pro	reage: 10% of strength:	1.50 Finish 30 10.40 2.00 8.40 1.5273	mph grading (0-2.5 r degree feet feet feet acres/l	mph) - 1.5	=
Total Arc Sou HOURLY PRODUC Widt Net gradin Unadjust Job Condition Correction Altitude Adj:	ea to be graded or rigree of estimated acressive ETION Average Grade Selected App Selected Blade Effective Blade h of blade overlap g or ripping width ped Hourly Unit Proon Factors 1.00	reage: 10% of strength:	1.50 Finish 30 10.40 2.00 8.40 1.5273 Si	mph grading (0-2.5 r degree feet feet feet acres/l	mph) - 1.5	=
Total Arc Sou HOURLY PRODUC Widt Net gradin Unadjust Job Condition Correction Altitude Adj: Job Efficiency:	ea to be graded or rigree of estimated acressive ETION Average Grader Selected App Selected Blader Effective Blader h of blade overlapt gor ripping width produced Hourly Unit Produced Factors 1.00 0.90	reage: 10% of strength:	1.50 Finish 30 10.40 2.00 8.40 1.5273 Si	mph grading (0-2.5 r degree feet feet feet acres/l	mph) - 1.5	=
Total Arc Sou HOURLY PRODUC Widt Net gradin Unadjust Job Condition Correction Altitude Adj:	ea to be graded or rigree of estimated acressive ETION Average Grade Selected App Selected Blade Effective Blade h of blade overlap g or ripping width ped Hourly Unit Proon Factors 1.00	reage: 10% of strength:	1.50 Finish 30 10.40 2.00 8.40 1.5273 Si	mph grading (0-2.5 r degree feet feet feet acres/l	mph) - 1.5	=
Total Arc Sou HOURLY PRODUC Widt Net gradin Unadjust Job Condition Correction Altitude Adj: Job Efficiency:	ea to be graded or rigree of estimated acressive extractions. Average Grade Selected App Selected Blade Effective Blade h of blade overlap g or ripping width gred Hourly Unit Proon Factors. 1.00 0.90 0.9000	r Speed: lication: e Angle: Length: per pass: duction: Source (CAT HE (1sh/d, fav multiplier	1.50 Finish 30 10.40 2.00 8.40 1.5273 Si 8)	mph grading (0-2.5 r degree feet feet feet acres/l te Altitude: 560	mph) - 1.5 ss nour 0 feet	=
Total Arc Sou HOURLY PRODUC Widt Net gradin Unadjust Job Condition Correction Altitude Adj: Job Efficiency:	ea to be graded or rigree of estimated acressive ETION Average Grader Selected App Selected Blader Effective Blader h of blade overlapt gor ripping width produced Hourly Unit Produced Factors 1.00 0.90	reage: 10% of strength:	1.50 Finish 30 10.40 2.00 8.40 1.5273 Si	mph grading (0-2.5 r degree feet feet feet acres/l	mph) - 1.5 s nour 0 feet	=
Total Arc Sou HOURLY PRODUC Widt Net gradin Unadjust Job Condition Correction Altitude Adj: Job Efficiency: Net Correction:	ea to be graded or ricree of estimated acres of estimated App Selected App Selected Blade Effective Blade hof blade overlap g or ripping width g ed Hourly Unit Proon Factors 1.00 0.90 0.9000 Adjusted Hourly United Hourly Inited Hourly I	reage: 10% of strength:	1.50 Finish 30 10.40 2.00 8.40 1.5273 Si 8) v.) 1.3745	mph grading (0-2.5 r degree feet feet feet acres/l te Altitude: 560	mph) - 1.5 s nour 0 feet	=
Total Arc Sou HOURLY PRODUC Widt Net gradin Unadjust Job Condition Correction Altitude Adj: Job Efficiency: Net Correction:	ea to be graded or rice of estimated acres of estimated App Selected App Selected Blade Effective Blade hof blade overlap properties of estimated acres of estimated	r Speed: lication: e Angle: Length: per pass: duction: Source (CAT HE (1sh/d, fav multiplier Unit Production: leet Production:	1.50 Finish 30 10.40 2.00 8.40 1.5273 Si 8) v.) 1.3745 1.3745	mph grading (0-2.5 r degree feet feet feet acres/l te Altitude: 560 acres/Hou	mph) - 1.5 es nour 0 feet	M-05 Phs 2
Total Arc Sou HOURLY PRODUC Widt Net gradin Unadjust Job Condition Correction Altitude Adj: Job Efficiency: Net Correction:	ea to be graded or ricree of estimated acres of estimated App Selected App Selected Blade Effective Blade hof blade overlap g or ripping width g ed Hourly Unit Proon Factors 1.00 0.90 0.9000 Adjusted Hourly United Hourly Inited Hourly I	r Speed: lication: e Angle: Length: per pass: duction: Source (CAT HE (1sh/d, fav multiplier Unit Production: leet Production:	1.50 Finish 30 10.40 2.00 8.40 1.5273 Si 8) v.) 1.3745	mph grading (0-2.5 r degree feet feet feet acres/l te Altitude: 560 acres/Hou	mph) - 1.5 es nour 0 feet	=

BULLDOZER RIPPING WORK

	Task description:	Rip P	hase 2 Pit Floor &	TS Source Area			
Site:	T.H.E. Aggreg	ate Source	Permit Action	on: AM05-Phs 2	Permit/Jo	ob#: <u>M1977</u>	193
	PROJECT IDE	ENTIFICATIO	<u>ON</u>				
	Task #: 230		State: Colora	ado	Abbreviatio	on: None	
		3/2013	County: Fremo		Filenam		30
	User: TC	1					
	Agency	or organization i	name: DRMS				
	HOURLY EQU	JIPMENT CO	OST				
			D7R DS XR Series	II	Horsepower:	240	
	Ripper Atta		ank Ripper	<u></u>	Shift Basis:	1 per day	
			**		Data Source:	(CRG)	
	Cost Breakdown:						
					Utilization %		
		Ownership Co		\$46.33	NA		
	D:	Operating Co		\$76.81	100		
	Кірр	er Operating Co Operator Co		\$4.31 \$37.41	100 NA		
		Total Unit Co		\$164.87	11//1		
				\$164.87			
		Total Fleet Co	SUTIOUI.	\$104.07			
	MATERIAL Q	<u>UANTITIES</u>		Selected estimating	g method: Area		
	Alternate Method	<u>s:</u>					
nic:	NA		Bank Volum	ne: NA	BCY	NA	
rea:	3.00	acres	Rip Depth (f		Volume: 4,840	- 1,12	BCY or
		Source of estim	ated quantity: Al	M_05 Phase 2 (area			
			ated quantity. A	vi-05, i nase 2 (area	1000 X 200)		 ,
	HOURLY PRO	<u>DDUCTION</u>					
	Seismic:						
		S	eismic Velocity:	NA	feet/second		
	Area:						
		Average	Ripping Depth:	2.45	mph		
			Ripping Width:	6.50	degrees		
			Ripping Length:	400.00	feet		
			ge Dozer Speed:	88.00	feet		
		_	Maneuver Time: on per unit area:	0.25 0.747	feet acres/hour		
	Job Condition Co		on per unit area.	0.747	acres/110u1		
			Unit Production:	0.747	A aras/hr		
	Una	aujusteu Hourly	_		Acres/hr		
			Site Altitude:	5,600	feet (CAT HP)		
			Altitude Adj: Job Efficiency:	1.00 0.83	(CAT HB) (1 shift/day)		
			Net Correction:	0.83	multiplier		
		A 10	_				
			Hourly Unit Product Iourly Fleet Product		Acres/hr Acres/hr		
	IOD TIME AN	•	iourry rissi froudel		ACIES/III		
	JOB TIME AN	1 D CO21	Grader(s)	Total ich 4in	ne: 4.84	II.	ours
	Fleet size:	1	Grader(s)	Total job tin	nc. 4.04	пс	uis
	Unit cost:	\$265 985	Per acre	Total job co	ost: \$798.00		

REVEGETATION WORK

Task description: Reseed Phase 2 Dist. Area (660' x 200' pit floor)

Site: T.H.E. Aggregate Source Permit Action: AM05-Phs 2 Permit/Job#: M1977193

PROJECT IDENTIFICATION

Task #:240State:ColoradoAbbreviation:NoneDate:7/19/2013County:FremontFilename:M193-240

User: TC1

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
6-24-24, 10-20-10, 15-15-15	300.00	pound	\$0.26	\$79.20
Composted manure {MEANS 32 91 13.23	1.00	pound	\$0.48	\$0.48
4400}				
			Total Fertilizer Materials Cost/Acre	\$79.68

Application

Description		Cost /Acre
Tractor spreader (MEANS 32 91 13.16 0950)		\$37.46
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$52.71
	Total Fertilizer Application Cost/Acre	\$90.17

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$88.58
Total Tilling Cost/Acre	\$88.58

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	0.50	8.16	\$5.33
Indian Ricegrass - Nespar	1.50	4.86	\$10.62
Sideoats Grama - Butte	2.50	8.21	\$27.85
Juniper, Single Seed	1.00	0.29	\$88.00
Crested Wheatgrass - Standard	0.50	2.30	\$1.11
Pine, Pinyon	1.00	0.03	\$30.91
Mahogany, Mountain	1.50	2.03	\$69.47
Needle and Thread	1.50	3.96	\$70.49
Western Wheatgrass - Native	1.00	2.53	\$3.04

Saltbush, Four Wing	2.50	3.44	\$26.83
Winter Fat	1.50	3.82	\$49.04
Totals Seed Mix	15.00	39.63	\$382.67

Application

Description	Cost /Acre
Drill seeding (DRMS Cost Data)	\$88.20
Total Seed Applicat	tion Cost/Acre \$88.20

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$265.00	\$530.00
Total Mulch Materials Cost/Acre				\$530.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$65.89
Power mulcher (MEANS 32 91 13.16 0250)		\$86.68
	Total Mulch Application Cost/Acre	\$152.57

NURSERY STOCK PLANTING

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

JOB TIME AND COST

Cost /Acre: \$1,411.87 Cost /Acre*: \$1,411.87 No. of Acres: $\frac{3}{50}$ Estimated Failure Rate: $\frac{3}{50}$ 50%

*Selected Replanting Work Items: FERTILIZING, TILLING, SEEDING, MU

LCHING

Initial Job Cost: **\$4,235.61** Reseeding Job Cost: \$2,117.81 Total Job Cost: **\$6,353.42** Job Hours: **0.00**

DRILL BLAST WORK

Task Description: Phase 2 Final Highwall Reclamation Volumes (3-Bench Fill at 3H:1V)

Site: T.H.E. Aggregate Source Permit Action: AM05-Phs 2 Permit/Job #: M1977193

PROJECT IDENTIFICATION

Task #: 251 State: Colorado 7/19/2013 Date: County: Fremont User: TC1

Assumed bench Height: 40 ft 20 ft Working Bench Depth: 0.25 H:1V Working Face Slope: Reclaimed Slope: 3 H:1V 18.435 degrees 0.32175 radians, or θ: **71.565** degrees 1.24905 radians, or α:

> 660 ft Assumed N-S Bench Length @ Pit Floor: 300 ft Assumed N-S Bench Length @ Elev. 6100 ft: Assumed E-W Bench Length @ Pit Floor: 200 ft Assumed E-W Bench Length @ Elev. 6100 ft: 100 ft

Abbreviation: None

Filename: C:\Documents and Settings\tc1\My Documents\Projects_Fremont\M-77-193 THE Aggregate Source\AM05\Quantities\[BenchOffsets.xlsx]3-BenchCut-Fill Summary Phase 2

Pit Floor Elev.: 5650 ft Assumed Min. Crest Elev. of Highwall: 5700 ft Assumed Max. Crest Elev. of Highwall: 6100 ft

30 ft Reclaimed Bench Width: 50 ft Minimum Slice Width: Selected Bench Elev. to Backfill at 3H:1V: 5770 ft

3

Lowest Bench No. to begin 30-ft Bench Depth:

FIGURE 1. Variable Definitions

Material Blast & Fill Volume Balance Estimates for Phase 2 Bond Calculation.

Supplemental Slice Depth to Achieve Desired 3H:1V Fill Volume:

Assumed Swell Factor:

	FILL MATERIAL										BLAST MA	TERIAL				MU	JCKED MATERIA	AL						
	No.	Iterpolated	Iterpolated E	Combined Iterpolated N-S & E-W	Bench Depth, Db	Bench Fill Cross- Sectional	Horizontal Distance, Lt from 3H:1V Toe to Lower		Lift Height, P Perpendicular	Fill Slope	Toe Fill Cross-	Combined Toe & Bench Fill Cross-	Toe Fill Volume	Cumulative Toe Fill Volume for	Minimum Bench Depth based on 50 ft Min. Slice &	- Bench Depth of Material	Minimum Volume of Material to be	Supplemental Slice Depth (ft) to Achieve	Supplemental Volume of Material to be Removed for	Combined Volume of Material to be Blasted &	Cumulative Volume of Blasted & Available	Mucked Material Volume by bench w/	Cumulative Mucked Material Volume w/	Mucked Material Volume w/
Bench	ench	N-S Bench	W Bench	Bench	to be Filled	,	Bench Fill	Length		Length, Ln	,		· · · · · · · · · · · · · · · · · · ·		Lowest Bench for	Available for	Removed for Given	Desired 3H:1V	Given Bench	Available for Fill,	Material for Fill	Swell Factor	Swell Factor	Swell Factor
Elev. (ft)	Be	Length (ft) 660.0	Length (ft) 200.0	Length (ft) 860.0	(ft)	(ft2) 0	Toe (ft)	Check(ft)	Slope (ft)	(ft)	An (ft2)	(ft2)	Vn (ft3)	Vn (ft3)	3H:1V Fill (ft) 20	Blasting (ft)	Bench (ft3)	Fill Volume	(ft3)	by Bench (ft3)	(ft3)	(ft3)	(ft3)	(CY)
5690	1	628.0	191.1	819.1	20	400	110	120	34.8	126.5	2,200	2,600	2,129,660	2,129,660	20	0	0	0	0	0	0	0	0	0
5730	2	596.0	182.2	778.2	20	400	90	210	28.5	253.0	5,400	5,800	4,513,560	6,643,220	20	0	0	0	0	0	0	0	0	0
5770	3	564.0	173.3	737.3	20	400	90	300	28.5	379.5	9,000	9,400	6,930,620	13,573,840	20	10	294,920	0	0	294,920	294,920	442,380	442,380	16,384
5810	4	532.0	164.4	696.4	20	400	90	390	28.5	506.0	12,600	13,000	9,053,200	22,627,040	50	30	835,680	0	0	835,680	1,130,600	1,253,520	1,695,900	46,427
5850	5	500.0	155.6	655.6	20	400	90	480	28.5	632.5	16,200	16,600	10,882,960	33,510,000	60	40	1,048,960	0	0	1,048,960	2,179,560	1,573,440	3,269,340	58,276
5890	<u>6</u>	468.0	146.7	614.7	20	400	90	570	28.5	758.9	19,800	20,200	12,416,940	45,926,940	70	50	1,229,400	0	0	1,229,400	3,408,960	1,844,100	5,113,440	68,300
5930	7	436.0	137.8	573.8	20	400	90	660	28.5	885.4	23,400	23,800	13,656,440	59,583,380	80	60	1,377,120	0	0	1,377,120	4,786,080	2,065,680	7,179,120	76,507
5970	8	404.0	128.9	532.9	20	400	90	750	28.5	1011.9	27,000	27,400	14,601,460	74,184,840	90	70	1,492,120	0	0	1,492,120	6,278,200	2,238,180	9,417,300	82,896
6010	9	372.0	120.0	492.0	20	400	90	840	28.5	1138.4	30,600	31,000	15,252,000	89,436,840	100	80	1,574,400	0	0	1,574,400	7,852,600	2,361,600	11,778,900	87,467
6050	<u>10</u>	340.0	111.1	451.1	20	400	90	930	28.5	1264.9	34,200	34,600	15,608,060	105,044,900	110	90	1,623,960	0	0	1,623,960	9,476,560	2,435,940	14,214,840	90,220
6090	11	308.0	102.2	410.2	20	400	90	1020	28.5	1391.4	37,800	38,200	15,669,640	120,714,540	120	100	1,640,800	0	0	1,640,800	11,117,360	2,461,200	16,676,040	91,156
6130	12	0.0	0.0	0.0	0	0	0	1020	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6170	13	0.0	0.0	0.0	0	0	0	1020	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6210	14	0.0	0.0	0.0	0	0	0	1020	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6250	15	0.0	0.0	0.0	0	0	0	1020	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6290	16	0.0	0.0	0.0	0	0	0	1020	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6330	17	0.0	0.0	0.0	0	0	0	1020	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6370	18	0.0	0.0	0.0	0	0	0	1020	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
																		DRILL & BLAST	QUANTITY			MUCKING QL	<u>ANTITY</u>	

11,117,360 ft3 Drill & Blast Volume: Assumed Specific gravity of rock: 1.6 Weight of Blasted Rock: 554,979 tons Unit Drill & Blast Cost: \$ 0.35 per ton*

TOTAL COST TO DRILL & BLAST: \$ 194,242.51

*(provided by Operator)

Other Task #s Using This Volume: 252, 253

Mucking Volume:

WHEEL LOADER – LOAD AND CARRY WORK

			0' final benche			
T.H.E. Aggregate	e Source	Permit Acti	on: AM05-Pl	ns 2	Permit/Job#:	M1977193
PROJECT IDEN	TIFICATION					
Task #: 252		State: Colora	ado		Abbreviation:	None
Date: $\frac{232}{7/19/2}$	013	County: Fremo			Filename:	M193-252
User: TC1		<u> </u>	, , , , , , , , , , , , , , , , , , ,		i iiciidiiic.	1411)3 232
Agency or	organization nam	ne: DRMS				
HOURLY EQUI	PMENT COST	_				
Basic Machir	ne: CAT 992K			Horsep	ower:	801
Attachment		<u> </u>	=	Shift 1		er day
			_	Data So		CRG)
C (D 11						,
Cost Breakdown:			Utilizatio	n 0/-		
Ownership (Cost/Hour	\$175.54	NA	лі 70		
Operating (\$212.88	100			
Operator (\$35.82	NA			
Total Unit C		\$424.23	1171			
10000		Ψ.225				
MATERIAL QUA	ANTITLS					
Initial volume: Loose volume:	91,156 91,15 6	CCY 6 LCY		ell factor: 1.	000	
Loose volume:		6 LCY volume: Divis			<u> </u>	
Loose volume:	91,150 arce of estimated of estimated swe	6 LCY volume: Divis	sion of Reclama		<u> </u>	
Loose volume: Sou Source	91,150 gree of estimated of estimated swe	6 LCY volume: Divis	sion of Reclama Handbook	ation, Mining &	<u> </u>	minutes
Loose volume: Source HOURLY PROD Loader Cycle Time:	91,150 urce of estimated of estimated swe UCTION Unadjuste	6 LCY volume: Divis Il factor: Cat I	sion of Reclama Handbook	ation, Mining &	& Safety 0.625	
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time	91,150 urce of estimated of estimated swe UCTION Unadjusted Factors	6 LCY volume: Divis Il factor: Cat I	sion of Reclama Handbook	ation, Mining &	& Safety	Source
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time	91,150 arce of estimated of estimated swe UCTION Unadjusted Factors aterial: Mixed	volume: Divis Cat I de Basic Cycle T	sion of Reclams Handbook ime (load, dum	p, maneuver):	& Safety 0.625 Factor (min.)	
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time	91,156 arce of estimated swe UCTION Unadjuste Factors aterial: Mixed ckpile: No adj	volume: Division Cat I ed Basic Cycle T material 0.02	sion of Reclama Handbook Time (load, dum	p, maneuver):	0.625 Factor (min.) 0.020	Source (Cat HB)
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time M Sto Truck Own	91,150 arce of estimated swe UCTION Unadjustor Factors aterial: Mixed ckpile: No adjustor ership: Commercation: Consta	volume: Division Cat I ed Basic Cycle T material 0.02 justment - factor ion ownership of ant operation -0.0	Fime (load, dum	p, maneuver):	0.625 Factor (min.) 0.020 0.000 -0.040 -0.040	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)
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Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time M Sto Truck Own	91,150 arce of estimated swe UCTION Unadjustor Factors aterial: Mixed ckpile: No adjustor ership: Commercation: Consta	volume: Division Cat I ed Basic Cycle T material 0.02 justment - factor ion ownership of ant operation -0.0 justment - factor Net	rime (load, dum not applicable (trucks and load) not applicable (t Cycle Time A	p, maneuver): 0.00 ders -0.04 0.00 djustment:	0.625 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)
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Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time M Sto Truck Own Ope Dump Rolling Resistance -	91,156 arce of estimated of estimated swell UCTION Unadjusted Factors aterial: Mixed ckpile: No adjusted sership: Commercation: Constate Target: No adjusted turn: Loose saturn: Loose saturn: Loose saturn:	volume: Divisual Infactor: Cat	sion of Reclama Handbook Time (load, dum not applicable (trucks and load) 4 not applicable (t Cycle Time A ljusted Basic C	p, maneuver): 0.00 ders -0.04 0.00 djustment: ycle Time:	0.625 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.565	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes

Loader Worksheet Cont'd Task # 252 Page 2 of 2

			Total Travel Ti Total Cycle Ti		minutes minutes
Load Bucket Capacity					
Rated Capao Bucket Fill Fao Adjusted Capao	etor: 0.825	LCY (hea Blasted ro LCY	. ,	(75 - 90%) 0.825	
Job Condition Correct Site Altitude: 5800 fee	ion Factors				
		Source			
Altitude Adj		(CAT HB)		
Job Efficiency	0.83	(1 shift/day	y)		
Net Correction	0.83	multiplier			
τ	Jnadjusted Hourly Ur Adjusted Hourly Ur		1,108.15	_ LCY/Hour LCY/Hour	
	Adjusted Hourly Fle		919.77	LCY/Hour	
JOB TIME AND C	COST				
Fleet size:	1 Loader((s)	Total job time:	99.11	Hours

Unit cost: \$0.461 /LCY Total job cost: \$42,045.00

BULLDOZER WORK

			!	
T.H.E. Aggregate Source	Permit Action:	AM05-Phs 2	Permit/Job#:	M1977193
PROJECT IDENTIFICAT	ΓΙΟΝ			
Task #: 253	State: Colorado		Abbreviation:	None
Date: 7/19/2013	County: Fremont		Filename:	M193-253
User: TC1			-	
Agency or organization	on name: DRMS			
HOURLY EQUIPMENT	COST			
Basic Machine: Cat D9T				
Horsepower: 405	- 70	_		
Blade Type: Universa	1	<u>—</u>		
Attachment: NA	.1	<u>—</u>		
Shift Basis: 1 per day	7	_		
Data Source: (CRG)	/			
Data Source. (CRG)		<u> </u>		
Cost Breakdown:		i		
		<u>Utilization %</u>		
Ownership Cost/Hour:	\$69.88	NA		
Operating Cost/Hour:	\$142.13	100		
Ripper op. Cost/Hour:	\$0.00	0		
Operator Cost/Hour:	\$37.41	NA		
·				
Total unit Cost/Hour: \$24	19.42			
Total Fleet Cost/Hour: \$24	19.42			
Total Fleet Cost/Hour: \$24	19.42			
MATERIAL QUANTITIE				
MATERIAL QUANTITIE Initial Volume: 91,156				
MATERIAL QUANTITIE				
MATERIAL QUANTITIE Initial Volume: 91,156	<u>ES</u>			
Initial Volume: 91,156 Swell factor: 1.000 Loose volume: 91,156 LO Source of estimated volume:	CY Division of Reclamat	ion, Mining & Safety		
MATERIAL QUANTITIE Initial Volume: 91,156 Swell factor: 1.000 Loose volume: 91,156 LO	CY Division of Reclamat	ion, Mining & Safety		
Initial Volume: 91,156 Swell factor: 1.000 Loose volume: 91,156 LO Source of estimated volume:	Division of Reclamat Cat Handbook	ion, Mining & Safety		
MATERIAL QUANTITIE Initial Volume: 91,156 Swell factor: 1.000 Loose volume: 91,156 Loose volume: Source of estimated volume: Source of estimated swell factors	Division of Reclamat Cat Handbook	ion, Mining & Safety		
MATERIAL QUANTITIE Initial Volume: 91,156 Swell factor: 1.000 Loose volume: 91,156 LO Source of estimated volume: Source of estimated swell factor HOURLY PRODUCTION	Division of Reclamat Cat Handbook 210 feet	ion, Mining & Safety		
MATERIAL QUANTITIE Initial Volume: 91,156 Swell factor: 1.000 Loose volume: 91,156 LO Source of estimated volume: Source of estimated swell factor HOURLY PRODUCTION Average push distance:	Division of Reclamat Cat Handbook 210 feet 702.9 LCY/hr			
Initial Volume: 91,156 Swell factor: 1.000 Loose volume: 91,156 LO Source of estimated volume: Source of estimated swell factor HOURLY PRODUCTION Average push distance: Unadjusted hourly production: Materials consistency description	Division of Reclamat Cat Handbook 210 feet 702.9 LCY/hr on: Loose stockpile 1.2			
Initial Volume: 91,156 Swell factor: 1.000 Loose volume: 91,156 LO Source of estimated volume: Source of estimated swell factor HOURLY PRODUCTION Average push distance: Unadjusted hourly production: Materials consistency description	Division of Reclamat Cat Handbook 210 feet 702.9 LCY/hr on: Loose stockpile 1.2			
Initial Volume: 91,156 Swell factor: 1.000 Loose volume: 91,156 LO Source of estimated volume: Source of estimated swell factor HOURLY PRODUCTION Average push distance: Unadjusted hourly production: Materials consistency description	Division of Reclamat Cat Handbook 210 feet 702.9 LCY/hr on: Loose stockpile 1.2			
Initial Volume: 91,156 Swell factor: 1.000 Loose volume: 91,156 LC Source of estimated volume: Source of estimated swell factor HOURLY PRODUCTION Average push distance: Unadjusted hourly production: Materials consistency description Average push gradient: -30 Average site altitude: 5,6	Division of Reclamat Cat Handbook 210 feet 702.9 LCY/hr on: Loose stockpile 1.2			
Initial Volume: 91,156 Swell factor: 1.000 Loose volume: 91,156 LC Source of estimated volume: Source of estimated swell factor HOURLY PRODUCTION Average push distance: Unadjusted hourly production: Materials consistency descripti Average push gradient: -30 Average site altitude: 5,6 Material weight: 2,8	Division of Reclamat Cat Handbook 210 feet 702.9 LCY/hr on: Loose stockpile 1.2			
Initial Volume: 91,156 Swell factor: 1.000 Loose volume: 91,156 LC Source of estimated volume: Source of estimated swell factor HOURLY PRODUCTION Average push distance: Unadjusted hourly production: Materials consistency description Average push gradient: -30 Average site altitude: 5,6 Material weight: 2,8	Division of Reclamat Cat Handbook 210 feet 702.9 LCY/hr on: Loose stockpile 1.2 % 00 feet 00 lbs/LCY anite - Broken			
Initial Volume: 91,156 Swell factor: 1.000 Loose volume: 91,156 LO Source of estimated volume: Source of estimated swell factor HOURLY PRODUCTION Average push distance: Unadjusted hourly production: Materials consistency descripti Average push gradient: -30 Average site altitude: 5,6 Material weight: 2,8 Weight description: Gra	Division of Reclamat Cat Handbook 210 feet 702.9 LCY/hr on: Loose stockpile 1.2 % 00 feet 00 lbs/LCY anite - Broken			
Initial Volume: 91,156 Swell factor: 1.000 Loose volume: 91,156 LC Source of estimated volume: Source of estimated swell factor HOURLY PRODUCTION Average push distance: Unadjusted hourly production: Materials consistency descripti Average push gradient: -30 Average site altitude: 5,6 Material weight: 2,8 Weight description: Grad Job Condition Correction Factor	Division of Reclamat Cat Handbook 210 feet 702.9 LCY/hr on: Loose stockpile 1.2 00 feet 00 lbs/LCY anite - Broken	Source		

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.821	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.0604

Adjusted unit production: 745.36 LCY/hr
Adjusted fleet production: 745.36 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s) Unit cost: \$0.335/LCY

Total job time: Total job cost: 122.30 Hours \$30,503.63

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Site:	T.H.E. Aggregate Source	Permit Action:	AM05-Phs 2	Permit/Job#:	M1977193	

PROJECT IDENTIFICATION

Task #:290State:ColoradoAbbreviation:NoneDate:7/18/2013County:FremontFilename:M193-290

User: TC1

Agency or organization name: DRMS

Mob/Demob (Phase 2 Equipment)

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:

Task description:

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

NON ROADABLE EQUIPMENT:

Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/unit	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
	(TONS)				fleet		
Cat 621G	37.47	\$52.68	\$117.55	1	\$170.23	\$117.55	\$250.00
Cat D7R DS XR	32.01	\$41.75	\$117.55	1	\$159.30	\$117.55	\$250.00
Series II							
CAT 12M	16.01	\$22.65	\$88.67	1	\$111.32	\$88.67	\$250.00
CAT 992K	107.88	\$175.54	\$125.45	1	\$300.99	\$125.45	\$250.00
Cat D9T - 9U	60.66	\$69.88	\$125.45	1	\$195.33	\$125.45	\$250.00

Subtotals: \$937.17 \$574.67 \$1,250.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Drill/Broadcast Seeder with Tractor	\$51.96	1	\$51.96	\$51.96
Power Mulcher (Reinco M90)	\$25.56	1	\$25.56	\$25.56
ANFO Bulk Delivery Truck	\$178.73	1	\$178.73	\$178.73

Subtotals: \$256.25 \$256.25

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:

Total one-way travel distance:

Average Travel Speed:

CAÑON CITY
miles
3.00
mph

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

\$3,739.54

\$51.25

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.10	0.10
Return Time (Hours):	0.10	0.10
Loading Time (Hours):	0.25	NA
Unloading Time (Hours):	0.25	NA
Subtotals:	0.70	0.20

JOB TIME AND COST

Total job cost: 1.40 Hours

Total job cost: \$3,790.79