



## COLORADO

Division of Reclamation,  
Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215  
Denver, CO 80203

September 18, 2014

Mr. Thomas Latham  
P.O. Box 66  
Debeque, CO 81630

**Re: Debeque Gravel Pit, Permit No. M-1981-058, Surety Increase, Revision No. SI-2**

Dear Mr. Latham,

On September 18, 2014 the Division of Reclamation, Mining and Safety increased the current Financial Warranty for this permit to \$58,202.18, in accordance with Rule 4.2.1 of the Rules and Regulations. This is an increase of \$20,846.18 over the currently held \$37,356.00 financial warranty.

The Division ordered amendment of the current Financial Warranty or submittal of a new Financial Warranty reflecting the increase is due within 60 days from the date of this letter. If you wish to submit a different type of Financial Warranty or have questions regarding modification of the existing financial warranty please contact Barbara Coria at (303) 866-3567 extension 8148.

If you have any other questions regarding this permit activity please contact me at 970.241.2042.

Sincerely,



Travis Marshall  
Environmental Protection Specialist

Enclosure - Reclamation Cost Estimate

cc: Russ Means, DRMS  
Barbara Coria, DRMS

Joe C. Baxter  
Kirkland Construction LLLP  
P.O. Box 580  
Rye, CO 81609





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## COST SUMMARY WORK

Task description: Reclamation Cost Update SI-2

Site: DeBeque Gravel Pit

Permit Action: SI-2

Permit/Job#: M1981058

### PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 9/18/2014

County: Mesa

Filename: M058-001

User: THM

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Rip and grade portions of Phases 1, 2 and 3 and process area	DOZER	1	62.67	\$13,104.00
02a	Distribute topsoil over 15.8 acres at 8" depth	DOZER	1	23.21	\$4,853.00
03a	Revegetation of 15.8 acres	REVEGE	1	16.00	\$22,942.00
04a	Mobilization	MOBILIZE	1	4.00	\$3,073.00
<b><u>SUBTOTALS:</u></b>				<b>105.88</b>	<b>\$43,972</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02%

Total = \$888.23

Performance bond: 1.05%

Total = \$461.71

Job superintendent: 52.94 hrs

Total = \$3,978.97

Profit: 10.00%

Total = \$4,397.20

TOTAL O & P = \$9,726.11

CONTRACT AMOUNT (direct + O & P) = \$53,698.11

#### 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%

\$2,684.91

CONTINGENCY: 3.00

Total = \$1,319.16

TOTAL INDIRECT COST = \$14,230.18

**TOTAL BOND AMOUNT (direct + indirect) = \$58,202.18**

**BULLDOZER WORK**Task description: Rip and grade portions of Phases 1, 2 and 3 and process areaSite: DeBeque Gravel PitPermit Action: SI-2Permit/Job#: M1981058**PROJECT IDENTIFICATION**Task #: 01AState: ColoradoAbbreviation: NoneDate: 9/18/2014County: MesaFilename: M058-01aUser: THMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$62.67	NA
Operating Cost/Hour:	\$107.59	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.85	NA

Total unit Cost/Hour: \$209.11Total Fleet Cost/Hour: \$209.11**MATERIAL QUANTITIES**Initial Volume: 25,491Swell factor: 1.000Loose volume: 25,491 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 852.6 LCY/hrMaterials consistency description: Consolidated stockpile 1.0Average push gradient: 0 %Average site altitude: 4,865 feetMaterial weight: 2,400 lbs/LCYWeight description: Clay and gravel - Dry**Job Condition Correction Factor**

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

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4771

Adjusted unit production: 406.78 LCY/hr

Adjusted fleet production: **406.78** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.514/LCY

Total job time: 62.67 Hours

Total job cost: **\$13,104**

**BULLDOZER WORK**Task description: Distribute topsoil over 15.8 acres at 8" depthSite: DeBeque Gravel PitPermit Action: SI-2Permit/Job#: M1981058**PROJECT IDENTIFICATION**Task #: 02AState: ColoradoAbbreviation: NoneDate: 9/18/2014County: MesaFilename: M058-02aUser: THMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$62.67	NA
Operating Cost/Hour:	\$107.59	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.85	NA

Total unit Cost/Hour: \$209.11Total Fleet Cost/Hour: \$209.11**MATERIAL QUANTITIES**Initial Volume: 17,002Swell factor: 1.000Loose volume: 17,002 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 852.6 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 4,865 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: 732.64 LCY/hr

Adjusted fleet production: **732.64** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.285/LCY

Total job time: **23.21** Hours

Total job cost: **\$4,853**

REVEGETATION WORKTask description: Revegetation of 15.8 acresSite: DeBeque Gravel PitPermit Action: SI-2Permit/Job#: M1981058PROJECT IDENTIFICATIONTask #: 03AState: ColoradoAbbreviation: NoneDate: 9/18/2014County: MesaFilename: M058-03aUser: THMAgency or organization name: DRMSFERTILIZING**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$98.01
Weed control spraying (MEANS 31 31 16.13 3100)	\$145.20
<b>Total Tilling Cost/Acre</b>	<b>\$243.21</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.25	9.76	\$5.70
Indian Ricegrass - Paloma	1.50	4.86	\$13.07
Sand Dropseed	0.10	11.94	\$0.70
Pubescent Wheatgrass - Luna	2.00	4.13	\$4.48
Sainfoin - Remont	2.00	0.87	\$5.62
Western Wheatgrass - Native	2.00	5.05	\$6.08
Saltbush, Four Wing	0.25	0.34	\$2.68
<b>Totals Seed Mix</b>	<b>8.10</b>	<b>36.95</b>	<b>\$38.33</b>



**Application**

Description	Cost /Acre
Drill seeding (DRMS Cost Data)	\$88.20
<b>Total Seed Application Cost/Acre</b>	<b>\$88.20</b>

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

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - Banvel @ 1.0 pt/ac	1.00	ACRE	\$3.15	\$3.15
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$265.00	\$530.00
<b>Total Mulch Materials Cost/Acre</b>				<b>\$533.15</b>

**Application**

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$65.89
Power mulcher (MEANS 32 91 13.16 0250)	\$86.68
Weed spray, truck, aquatic area, nox. [DMG]	\$61.49
<b>Total Mulch Application Cost/Acre</b>	<b>\$214.06</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: 15.8                      Cost /Acre: \$1,116.95  
 Estimated Failure Rate: 30%                      Cost /Acre\*: \$1,116.95  
 \*Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: \$17,647.81  
 Reseeding Job Cost: \$5,294.34  
 Total Job Cost: \$22,942  
 Job Hours: 16.00

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: MobilizationSite: DeBeque Gravel PitPermit Action: SI-2Permit/Job#: M1981058**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 9/18/2014County: MesaFilename: M058-04aUser: 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 D8T - 8SU	53.08	\$69.05	\$125.45	1	\$194.50	\$125.45	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$39.59	\$88.67	1	\$128.26	\$88.67	\$250.00
Power Mulcher (Reinco M90)	6.00	\$7.03	\$88.67	1	\$95.70	\$88.67	\$250.00

Subtotals: **\$418.46** **\$302.79** **\$750.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$15.25	1	\$15.25	\$15.25

Subtotals: **\$15.25** **\$15.25**

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	GRAND JUNCTION	
Total one-way travel distance:	25.00	miles
Average Travel Speed:	50.00	mph

Total Non-Roadable Mob/Demob Cost *	\$3,058.17
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$15.25
** one round trip, no haul rig:	

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.50	0.50
Return Time (Hours):	0.50	0.50
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	2.00	1.00

**JOB TIME AND COST**

Total job time: 4.00 Hours

Total job cost: \$3,073