



## COLORADO

Division of Reclamation,  
Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215  
Denver, CO 80203

September 11, 2014

Mr. Sean Mello  
Western Slope Aggregates, Inc.  
P O Box 1319  
Carbondale, CO 81623

**Re: Blue Pit, Permit No. M-1981-207, Amendment Approval, Revision No. AM-1**

Dear Mr. Mello:

On September 11, 2014 the Division of Reclamation, Mining and Safety approved the Amendment application submitted to the Division on June 20, 2014, addressing the following:

*AM01- Addition of 60 acres to permit*

The terms of the Amendment No. 1 approved by the Division are hereby incorporated into Permit No. M-1981-207. All other conditions and requirements of Permit No. M-1981-207 remain in full force and effect.

The estimated liability amount of \$889,606.00 exceeds the \$354,757.00 performance bond currently held. If you have not already done so, please submit additional bond in the amount of \$534,849.00. The revision will not be final until the bond is approved by the Division.

If you have any questions, please contact me.

Sincerely,

Stephanie J. Mitchell  
Environmental Protection Specialist

CC: Barbara Coria, DRMS  
Russ Means, DRMS

Enclosure: Bond Calculation AM01



## COST SUMMARY WORK

Task description: 60 acre reclamation

Site: Blue Pit

Permit Action: AM01 60 acres

Permit/Job#: M1981207

### PROJECT IDENTIFICATION

Task #: 01

State: Colorado

Abbreviation: None

Date: 9/2/2014

County: Garfield

Filename: M207-01

User: SJM

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
02	Replace Topsoil	DOZER	1	149.16	\$33,224.00
03	Place Overburden	DOZER	2	742.79	\$330,887.00
04	rip pit floor and compacted areas	RIPPER	1	34.25	\$7,630.00
05	Revegetation	REVEGE	1	0.00	\$103,576.00
06	install grouted channels	POSTMINING	1	250.05	\$59,532.00
<u>SUBTOTALS:</u>				1176.25	\$534,849

## Post-Mining Drainage Channel Construction (Ditches)

Task description: Install grouted channels

Site: Blue Pit Permit Action: AM01 60 Acres Permit/Job#: M1981207

### **PROJECT IDENTIFICATION**

Task #: 06 State: Colorado Abbreviation: None  
Date: 9/2/2014 County: Garfield Filename: M207-06  
User: SJM

Agency or organization name: DRMS

Channel	L (ft)	D (ft)	W (bot) (ft)	Slopes (X:1)	W (top) (ft)	V/LF (CY)	V tot (CY)
BCPD-M:	3,417	2.00	10.00	0.00	10.00	0.7407	2,531
BCPD-S:	0	0.00	0.00	0.00	0.00	0.0000	0
Totals:	3,417						2,531

Riprap	Slope L (ft)	Surface Area (ft)	Riprap V (ft)
BCPD-M:	2.00	47,838	886
BCPD-S:	0.00	0	0
Totals:		47,838	886

### **Materials Needed:**

Geotextile (SY): 5,315  
Riprap (CY): 886  
Excavation (CY): 2,531

### **Material Costs:**

Geotextile (SY): \$2.25  
Means Reference 02340 300 1500  
Riprap (CY): \$43.10  
Means Reference 02370 450 0100  
Excavation (CY): \$3.71  
Means Reference 02315 610 0062

### **Totals:**

Geotextile (SY): \$11,959.50  
Riprap (CY): \$38,181.81  
Excavation (CY): \$9,390.42

### **Hours:**

Geotextile (SY): 60.75  
87.5 SY/HR  
Riprap (CY): 114.31  
7.75 CY/HR  
Excavation (CY): 33.75  
CY/HR 75.00

Total Post-Mining Channel Reconstruction hours: 250.05 Hours  
Total Post-Mining Channel Reconstruction Cost: \$59,532

## Application

<b>Description</b>	<b>Cost /Acre</b>
Drill seeding (MEANS 32 92 19.13 0020)	\$404.00
<b>Total Seed Application Cost/Acre</b>	<b>\$404.00</b>

## MULCHING and MISCELLANEOUS

## Materials

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

## Application

Application	
Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$65.89
<b>Total Mulch Application Cost/Acre</b>	<b>\$65.89</b>

## NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Aspen	30	Container, 2 gallon (MEANS)	\$27.05	\$0.00	\$811.50
Spruce, Blue	35	Container, 2 gallon (MEANS)	\$27.05	\$0.00	\$946.75
Totals Nursery Stock Cost / Acre					\$1,758.25

### **JOB TIME AND COST**

No. of Acres:	29.21	Cost /Acre:	\$2,954.91
Estimated Failure Rate:	20%	Cost /Acre*:	\$2,954.91
*Selected Replanting Work Items:	FERTILIZING,SEEDING,NURSERY,M ULCHING		
Initial Job Cost:	\$86,312.92		
Reseeding Job Cost:	\$17,262.58		
Total Job Cost:	\$103,576		
Job Hours:	0.00		

REVEGETATION WORKTask description: RevegetationSite: Blue PitPermit Action: AM01 60 acresPermit/Job#: M1981207PROJECT IDENTIFICATIONTask #: 05State: ColoradoAbbreviation: NoneDate: 9/2/2014County: GarfieldFilename: M207-05User: SJMAgency 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
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost / Acre
Indian Ricegrass - Native	2.50	8.09	\$16.85
Mountain Brome - Bromar	3.75	6.03	\$12.75
Slender Wheatgrass - Native	5.00	18.25	\$11.25
Thickspike Wheatgrass - Critana	5.00	17.68	\$25.85
Rabbitbrush, Rubber	2.00	29.80	\$73.20
Western Wheatgrass - Native	5.00	12.63	\$15.20
Needlegrass, Green - Lodorm	3.75	15.58	\$20.21
Saltbush, Four Wing	2.00	2.75	\$21.46
<b>Totals Seed Mix</b>	<b>29.00</b>	<b>110.81</b>	<b>\$196.77</b>

**BULLDOZER WORK**Task description: Replace TopsoilSite: Blue PitPermit Action: AM01 60 acresPermit/Job#: M1981207**PROJECT IDENTIFICATION**Task #: 02State: ColoradoAbbreviation: NoneDate: 9/2/2014County: GarfieldFilename: M207-02User: SJMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8UHorsepower: 310Blade Type: UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$69.05	NA
Operating Cost/Hour:	\$108.22	100
Ripper op. Cost/Hour:	\$7.46	100
Operator Cost/Hour:	\$38.01	NA

Total unit Cost/Hour: \$222.73Total Fleet Cost/Hour: \$222.73**MATERIAL QUANTITIES**Initial Volume: 96,800Swell factor: 1.000Loose volume: 96,800 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 931.6 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 10 %Average site altitude: 7,000 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6966

Adjusted unit production: 648.95 LCY/hr

Adjusted fleet production: 648.95 LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.343/LCY

Total job time: 149.16 Hours

Total job cost: \$33,224

BULLDOZER WORKTask description: Place OverburdenSite: Blue PitPermit Action: AM01 60 acresPermit/Job#: M1981207PROJECT IDENTIFICATIONTask #: 03State: ColoradoAbbreviation: NoneDate: 9/2/2014County: GarfieldFilename: M207-03User: SJMAgency or organization name: DRMSHOURLY EQUIPMENT COSTBasic Machine: Cat D8T - 8UHorsepower: 310Blade Type: UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$69.05	NA
Operating Cost/Hour:	\$108.22	100
Ripper op. Cost/Hour:	\$7.46	100
Operator Cost/Hour:	\$38.01	NA

Total unit Cost/Hour: \$222.73Total Fleet Cost/Hour: \$445.46MATERIAL QUANTITIESInitial Volume: 581,962Swell factor: 1.000Loose volume: 581,962 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat HandbookHOURLY PRODUCTIONAverage push distance: 100 feetUnadjusted hourly production: 931.6 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 10 %Average site altitude: 7,000 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% EarthJob Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)



Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4205

Adjusted unit production: 391.74 LCY/hr

Adjusted fleet production: 783.48 LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$0.569/LCY

Total job time: 742.79 Hours

Total job cost: \$330,887

## BULLDOZER RIPPING WORK

Task description: Rip pit floor and compacted areas

Site: Blue Pit Permit Action: AM01 60 acres Permit/Job#: M1981207

### PROJECT IDENTIFICATION

Task #: 04 State: Colorado Abbreviation: None  
Date: 9/2/2014 County: Garfield Filename: M207-04  
User: SJM

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8U Horsepower: 310  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$69.05	NA
Operating Cost/Hour:	\$108.22	100
Ripper Operating Cost/Hour:	\$7.46	100
Operator Cost/Hour:	\$38.01	NA
Total Unit Cost/Hour:	\$222.73	
Total Fleet Cost/Hour:	\$222.73	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 20.00 acres Rip Depth (ft): 1.00 Volume: 32,267 BCY or CCY

Source of estimated quantity: Am01 application information

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 2.56 mph  
Average Ripping Width: 7.08 degrees  
Average Ripping Length: 100.00 feet  
Average Dozer Speed: 88.00 feet  
Average Maneuver Time: 0.25 feet  
Production per unit area: 0.703 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.703 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: 0.58 Acres/hr  
Adjusted Hourly Fleet Production: 0.58 Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 34.26 Hours  
Unit cost: \$381.488 Per acre Total job cost: \$7,630