



**COLORADO**

**Division of Reclamation,  
Mining and Safety**

Department of Natural Resources

1313 Sherman Street, Room 215  
Denver, CO 80203

November 23, 2015

Mr. Joseph B. Venuti  
Ace West Trucking, Inc.  
P.O. Box 117  
Rangely, CO 81648

**Re: East Douglas Pit, Permit No. M-1987-103, Amendment Approval, Revision No. AM-2**

Dear Mr. Venuti:

On November 23, 2015 the Division of Reclamation, Mining and Safety approved the Amendment application submitted to the Division on October 16, 2015, addressing the following:

*Amendment to increase the permit acreage from 7.4 acres to 9.9 acres.*

The terms of the Amendment No. 2 approved by the Division are hereby incorporated into Permit No. M-1987-103. All other conditions and requirements of Permit No. M-1987-103 remain in full force and effect.

The estimated liability amount of \$38,227.67 exceeds the \$15,590.00 performance bond currently held. If you have not already done so, please submit additional bond in the amount of \$38,227.67. The revision will not be final until the bond is approved by the Division.

If you have any questions, please contact me at (970) 241-2042.

Sincerely,

Travis Marshall  
Environmental Protection Specialist



Enclosure - AM-2 Reclamation Cost Estimate

ec: Russ Means, DRMS  
Barbara Coria, DRMS

cc: Ivan Geer  
Parkerson Construction, Inc.  
710 South 15<sup>th</sup> Street  
Grand Junction, CO 81501

Paul Daggett  
BLM - WRFO  
220 East Market Street  
Meeker, CO 81641

## COST SUMMARY WORK

Task description: Final Reclamation Cost Estimate for AM-1

Site: East Douglas Pit

Permit Action: AM-1

Permit/Job#: M1987103

### PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 11/23/2015

County: Rio Blanco

Filename: M103-001

User: THM

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Regrade Pit Highwalls	DOZER	1	19.38	\$3,181.00
02a	Regrade Pit Highwalls	DOZER	1	3.84	\$630.00
03a	Move Rip-Rap Boulders to Base of Cliff	DOZER	1	6.12	\$1,005.00
04a	Place topsoil over re-graded areas	DOZER	1	13.19	\$2,164.00
05a	Place topsoil over lower mine area	DOZER	1	0.62	\$101.00
06a	Reclaim Access Road	EXCAVATE	1	8.46	\$882.00
07a	Revegetation of 9.9 acres disturbance	REVEGE	1	16.00	\$14,463.00
08a	Mobilization	MOBILIZE	1	4.66	\$4,231.00
<b><u>SUBTOTALS:</u></b>				<b>72.27</b>	<b>\$26,657</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02  
Performance bond: 1.05  
Job superintendent: 36.14  
Profit: 10.00

Total = \$538.47

Total = \$279.90

Total = \$2,715.91

Total = \$2,665.70

TOTAL O & P = \$6,199.98

CONTRACT AMOUNT (direct + O & P) = \$32,856.98

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 500.00

Total = 500.00

Engineering work and/or contract/bid preparation: 7.39

Total = \$2,428.13

Reclamation management and/or administration: 5.00

\$1,642.85

CONTINGENCY: 3.00

Total = \$799.71

TOTAL INDIRECT COST = \$11,570.67

**TOTAL BOND AMOUNT (direct + indirect) = \$38,227.67**

**BULLDOZER WORK**Task description: **Regrade Pit Highwalls**Site: **East Douglas Pit**Permit Action: **AM-2**Permit/Job#: **M1987103****PROJECT IDENTIFICATION**Task #: **01A**State: **Colorado**Abbreviation: **None**Date: **11/20/2015**County: **Rio Blanco**Filename: **M103-01a**User: **THM**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS XR Series II**Horsepower: **240**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$46.88	NA
Operating Cost/Hour:	\$79.23	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.01	NA

Total unit Cost/Hour: **\$164.12**Total Fleet Cost/Hour: **\$164.12****MATERIAL QUANTITIES**Initial Volume: **5,050**Swell factor: **1.165**Loose volume: **5,883 LCY**Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **75 feet**Unadjusted hourly production: **854.1 LCY/hr**Materials consistency description: **Compacted fill or embankment 0.9**Average push gradient: **0 %**Average site altitude: **6,000 feet**Material weight: **2,900 lbs/LCY**Weight description: **Decomposed rock - 50% Rock, 50% Earth****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3554

Adjusted unit production: 303.55 LCY/hr

Adjusted fleet production: 303.55 LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.541/LCY

Total job time: 19.38 Hours

Total job cost: \$3,181

**BULLDOZER WORK**Task description: Regrade Pit BottomSite: East Douglas PitPermit Action: AM-2Permit/Job#: M1987103**PROJECT IDENTIFICATION**Task #: 02AState: ColoradoAbbreviation: NoneDate: 11/23/2015County: Rio BlancoFilename: M103-02aUser: THMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D7R DS XR Series IIHorsepower: 240Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$46.88	NA
Operating Cost/Hour:	\$79.23	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.01	NA

Total unit Cost/Hour: \$164.12Total Fleet Cost/Hour: \$164.12**MATERIAL QUANTITIES**Initial Volume: 1,000Swell factor: 1.165Loose volume: 1,165 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 75 feetUnadjusted hourly production: 854.1 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 6,000 feetMaterial weight: 2,900 lbs/LCYWeight description: Decomposed rock - 50% Rock, 50% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3554

Adjusted unit production: 303.55 LCY/hr

Adjusted fleet production: 303.55 LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.541/LCY

Total job time: 3.84 Hours

Total job cost: \$630

**BULLDOZER WORK**Task description: Move Rip-Rap Boulders to Base of CliffSite: East Douglas PitPermit Action: AM-2Permit/Job#: M1987103**PROJECT IDENTIFICATION**Task #: 03AState: ColoradoAbbreviation: NoneDate: 11/23/2015County: Rio BlancoFilename: M103-03aUser: THMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D7R DS XR Series IIHorsepower: 240Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$46.88	NA
Operating Cost/Hour:	\$79.23	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.01	NA

Total unit Cost/Hour: \$164.12Total Fleet Cost/Hour: \$164.12**MATERIAL QUANTITIES**Initial Volume: 1,634Swell factor: 1.000Loose volume: 1,634 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 75 feetUnadjusted hourly production: 854.1 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 6,000 feetMaterial weight: 3,300 lbs/LCYWeight description: Decomposed rock - 75% Rock, 25% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(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:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3124

Adjusted unit production: 266.82 LCY/hr

Adjusted fleet production: 266.82 LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.615/LCY

Total job time: 6.12 Hours

Total job cost: \$1,005

**BULLDOZER WORK**Task description: Place topsoil over re-graded areasSite: East Douglas PitPermit Action: AM-1Permit/Job#: M1987103**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 11/23/2015County: Rio BlancoFilename: M103-04aUser: THMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D7R DS XR Series IIHorsepower: 240Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$46.88	NA
Operating Cost/Hour:	\$79.23	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.01	NA

Total unit Cost/Hour: \$164.12Total Fleet Cost/Hour: \$164.12**MATERIAL QUANTITIES**Initial Volume: 7,260Swell factor: 1.000Loose volume: 7,260 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 75 feetUnadjusted hourly production: 854.1 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 6,000 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(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: 0.6445

Adjusted unit production: 550.47 LCY/hr

Adjusted fleet production: 550.47 LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.298/LCY

Total job time: 13.19 Hours

Total job cost: \$2,164

**BULLDOZER WORK**Task description: Place topsoil over lower mine areaSite: East Douglas PitPermit Action: AM-1Permit/Job#: M1987103**PROJECT IDENTIFICATION**Task #: 05AState: ColoradoAbbreviation: NoneDate: 11/23/2015County: Rio BlancoFilename: M103-05aUser: THMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D7R DS XR Series IIHorsepower: 240Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$46.88	NA
Operating Cost/Hour:	\$79.23	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.01	NA

Total unit Cost/Hour: \$164.12Total Fleet Cost/Hour: \$164.12**MATERIAL QUANTITIES**Initial Volume: 340Swell factor: 1.000Loose volume: 340 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 75 feetUnadjusted hourly production: 854.1 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 6,000 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(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: 0.6445

Adjusted unit production: 550.47 LCY/hr

Adjusted fleet production: 550.47 LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.298/LCY

Total job time: 0.62 Hours

Total job cost: \$101

## HYDRAULIC EXCAVATOR WORK

Task description: Reclaim Access Road

Site: East Douglas Pit Permit Action: AM-1 Permit/Job#: M1987103

### PROJECT IDENTIFICATION

Task #: 06A State: Colorado Abbreviation: None  
Date: 11/23/2015 County: Rio Blanco Filename: M103-06a  
User: THM

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 320D LRR 9'-6" Horsepower: 148  
Stick  
Attachment 1: ROPS Cab Weight (MT): 21.55  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$26.63</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$49.35</u>	<u>100</u>
Operator Cost/Hour:	<u>\$28.17</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$104.15</u>	
Total Fleet Cost/Hour:	<u>\$104.15</u>	

### MATERIAL QUANTITIES

Initial volume: 1,600 CCY Swell factor: 1.125  
Loose volume: 1,800 LCY

Source of estimated volume: Division of Reclamation, Mining & Safety  
Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: AVERAGE  
Secondary Job Condition within Basic Description: AVERAGE  
Cycle Time Value: 0.284 minutes

#### Load Bucket Capacity

Rated Capacity: 1.54 LCY (heaped) Bucket Size Class: Medium  
Bucket Fill Factor: 0.875 Loose material - 1/2" to 3/4" (85 - 90%) 0.875  
Adjusted Capacity: 1.35 LCY

#### Job Condition Correction Factors

Site Altitude: 6000 feet

		Source
Altitude Adj:	<u>0.90</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.75</u>	<u>multiplier</u>

Unadjusted Hourly Unit Production: 284.68 LCY/Hour  
Adjusted Hourly Unit Production: 212.66 LCY/Hour  
Adjusted Hourly Fleet Production: 212.66 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 8.46 Hours

Unit cost: \$0.490 /LCY Total job cost: \$882

REVEGETATION WORKTask description: Revegetation of 9.9 acres disturbanceSite: East Douglas PitPermit Action: AM-2Permit/Job#: M1987103PROJECT IDENTIFICATIONTask #: 07AState: ColoradoAbbreviation: NoneDate: 11/23/2015County: Rio BlancoFilename: M103-07aUser: THMAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
6-24-24, 10-20-10, 15-15-15	200.00	pound	\$0.26	\$52.80
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$52.80</b>

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$52.71
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$52.71</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
Crested Wheatgrass - Fairway	2.00	9.18	\$4.84
Russian Wildrye - Vinal	2.00	8.03	\$7.42
Pubescent Wheatgrass - Luna	2.00	4.13	\$4.48
Western Wheatgrass - Arriba	3.00	7.58	\$11.04
Saltbush, Four Wing	2.00	2.75	\$21.46
<b>Totals Seed Mix</b>	<b>11.00</b>	<b>31.68</b>	<b>\$49.24</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
Straw, 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**

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$65.89
Power mulcher (MEANS 32 91 13.16 0250)	\$86.68
<b>Total Mulch Application Cost/Acre</b>	<b>\$152.57</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: 9.9                      Cost /Acre: \$1,168.73  
 Estimated Failure Rate: 25%                      Cost /Acre\*: \$1,168.73  
 \*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,MULCHING

Initial Job Cost: \$11,570.43  
 Reseeding Job Cost: \$2,892.61  
 Total Job Cost: \$14,463  
 Job Hours: 16.00



**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Mobilization**Site: **East Douglas Pit**Permit Action: **AM-2**Permit/Job#: **M1987103****PROJECT IDENTIFICATION**Task #: **08A**State: **Colorado**Abbreviation: **None**Date: **11/23/2015**County: **Rio Blanco**Filename: **M103-08a**User: **THM**Agency or organization name: **DRMS****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:**

<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 D7R DS XR Series II	32.01	\$46.88	\$117.55	1	\$164.43	\$117.55	\$250.00
Cat 320D LRR 9'- 6" Stick	23.70	\$26.63	\$88.67	1	\$115.30	\$88.67	\$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: **\$503.69** **\$383.56** **\$1,000.00****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.	\$15.30	2	\$30.60	\$30.60

Subtotals: **\$30.60** **\$30.60**

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>RANGELY</u>	
Total one-way travel distance:	<u>30.00</u>	miles
Average Travel Speed:	<u>45.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$4,190.38</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$40.80</u>
'** one round trip, no haul rig:	

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.67</u>	<u>0.67</u>
Return Time (Hours):	<u>0.67</u>	<u>0.67</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>2.33</u>	<u>1.33</u>

**JOB TIME AND COST**

Total job time:	<u>4.67</u>	Hours
-----------------	-------------	-------

Total job cost:	<u>\$4,231</u>
-----------------	----------------