




**MINERALS PROGRAM INSPECTION REPORT**  
**PHONE: (303) 866-3567**

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

<b>MINE NAME:</b> Beeman Pit #1	<b>MINE/PROSPECTING ID#:</b> M-2002-009	<b>MINERAL:</b> Sand and gravel	<b>COUNTY:</b> Pueblo
<b>INSPECTION TYPE:</b> Monitoring	<b>WEATHER:</b> Clear	<b>INSP. DATE:</b> April 5, 2023	<b>INSP. TIME:</b> 10:00
<b>OPERATOR:</b> Martin Marietta Materials, Inc.	<b>OPERATOR REPRESENTATIVE:</b> Julie Mikulas	<b>TYPE OF OPERATION:</b> 112c - Construction Regular Operation	
<b>REASON FOR INSPECTION:</b> Normal I&E Program	<b>BOND CALCULATION TYPE:</b> Complete	<b>BOND AMOUNT:</b> \$62,335.00	
<b>DATE OF COMPLAINT:</b> NA	<b>POST INSP. CONTACTS:</b> None	<b>JOINT INSP. AGENCY:</b> None	
<b>INSPECTOR(S):</b> Amber Michels	<b>INSPECTOR'S SIGNATURE:</b> 	<b>SIGNATURE DATE:</b> May 9, 2023	

**GENERAL INSPECTION TOPICS**

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

(AR) RECORDS----- <u>N</u>	(FN) FINANCIAL WARRANTY----- <u>Y</u>	(RD) ROADS----- <u>N</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>N</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>N</u>	(SF) PROCESSING FACILITIES----- <u>N</u>	(TS) TOPSOIL----- <u>N</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>N</u>	(FW) FISH & WILDLIFE----- <u>N</u>	(RV) REVEGETATION---- <u>N</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION-- <u>N</u>	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>N</u>	

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

## **OBSERVATIONS**

This inspection was conducted as part of the Division's routine monitoring program for permitted operations. Amber Michels, with the Division of Reclamation, Mining, and Safety (Division) conducted the inspection while Julie Mikulas, representing the Operator, accompanied me during the inspection.

The Beeman Pit #1 is a Construction Material Regular 112c Operation Reclamation Permit for 45 acres and is approved to affect a maximum of 20 acres of land. Affected lands will be reclaimed to support a rangeland post-mining land use. The site is located 3 miles southwest of Vineland, Colorado. The Beeman Pit #1 site is located east of one of the Operator's other permits, the Cortner Pit (M-1986-159).

The Division met Mrs. Mikulas at the mine site entrance on the south side of Cortner Road, approximately 1.5 miles east of 27th Lane/Doyle Road. The Beeman Pit may only be accessed through the Cortner Pit. Mining operations have not yet begun at this site.

### **Financial Warranty:**

The Division's 2018 inspection report indicated the Operator had planned to release the permit. During the current 2023 inspection, the Operator was asked if they still plan to release the permit and they stated that they do. If this is the case, the Operator can submit a release request for the site. There is a form available on Division's website (<https://drive.google.com/file/d/1S7XBbituMeKorliHjEgJhnNCwjJhdZWI/view>) which the Operator can fill out and send to the Division via certified mail without other correspondence.

The current bond held by the Division for this site is in the amount of \$62,335. The Division updated the cost estimate to reflect present day cost and the required surety is in the amount of \$125,071 a difference of \$62,736. The Division's cost estimate is enclosed with this report. The Operator will have 14 days (May 23, 2023), from the issuance of this report to submit any questions on the cost estimate. If no questions are received, the Division will issue a surety increase notice for the difference. The Operator will have 60 days from the date of the notice to submit and obtain acceptance of the increase from the Division in accordance with Rule 4.2.1(2).

### **Hydrologic Balance:**

No water was observed onsite during the inspection.

### **Signs and Markers:**

A mine sign was posted on the entrance gate located east of Cortner Road alongside the sign for the Operator's adjacent Cortner Pit (Photo 1). The mine sign posted for the Beeman Pit #1 complies with Rule 3.1.12(1).

No boundary markers have been installed at the site. The Operator is aware that if they were to begin mining, boundary markers delineating the land to be affected would need to be installed prior to disturbance. Photos were taken around the pit that show the land from various directions are georeferenced in Map 1.

### **Conclusion:**

This concludes the Division's Inspection Report; a map displaying topics discussed during the inspection and a subset of corresponding photographs that were taken during the time of the inspection are included below. If

you need additional information or have any questions, please contact me by email at [amber.michels@state.co.us](mailto:amber.michels@state.co.us) or by telephone at (720) 836-0967.

**Inspection Contact Address**

Julie Mikulas  
Martin Marietta Materials, Inc.  
1800 N. Taft Hill Road  
Fort Collins, CO 80521

*Enclosure: DRMS Updated Reclamation Cost Estimate*

CC: Jared Ebert, DRMS

## PHOTOGRAPHS



**Photo 1:** Looking east into the Corner Pit at the entrance sign for both the Corner Pit (M-1986-159) and the Beeman Pit #1 (M-2002-009).



**Photo 2:** Looking east into the pit area at the entrance from the Cortner pit to the Beeman Pit #1. This entrance is located on the border of the Cortner and Beeman Pit #1's and is the only entrance to the Beeman Pit #1 in the permitted area.





**Photo 3:** Looking north-east across the Beeman Pit #1. The yellow arrow indicates the location where Photo 4 was taken.

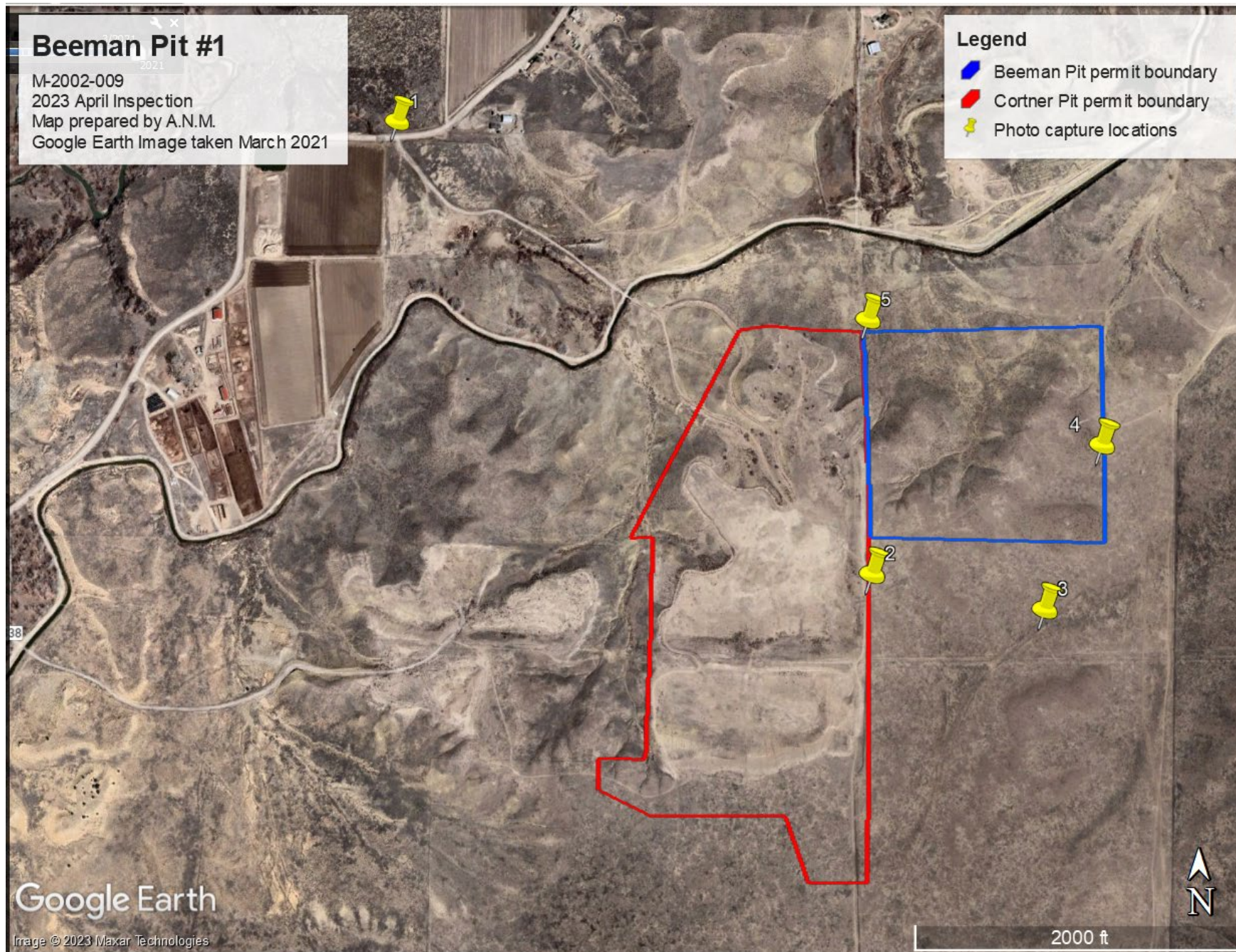


**Photo 4:** Looking south-west across the Beeman Pit #1 from the top of the location indicated in Photo 3 by the yellow arrow.



**Photo 5:** Looking east across the Beeman Pit #1 from its north-west corner.





**Map 1:** Map generated from Google Earth Pro showing approximate permit boundaries for the Beeman Pit #1 and the adjacent Cortner Pit. The yellow pins indicate the locations where the corresponding photos were taken.

## COST SUMMARY WORK

Task description: Updated cost estimate for the Beeman Pit #1

Site: Beeman Pit #1

Permit Action: 2023 Inspection

Permit/Job#: M2002009

### PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 5/8/2023

County: Pueblo

Filename: M009-000

User: ANM

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Rough grade working face from 1:1 to 3:1	DOZER	1	123.70	\$35,031
002	Spread 6 inches of topsoil over 20 acres	DOZER	1	89.37	\$25,308
003	Revegetate 20 Acres	REVEGE	1	20.00	\$30,479
004	Mob/Demob	MOBILIZE	1	2.72	\$2,192
<b><u>SUBTOTALS:</u></b>				<b>235.79</b>	<b>\$93,010</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$1,879

Performance bond: 1.05

Total = \$977

Job superintendent: 117.90

Total = \$8,857

Profit: 10.00

Total = \$9,301

TOTAL O & P = \$21,014

CONTRACT AMOUNT (direct + O & P) = \$114,024

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$4,846

Reclamation management and/or administration: 5.00

\$5,701

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$32,061

**TOTAL BOND AMOUNT (direct + indirect) = \$125,071**



BULLDOZER WORKTask description: Rough grade working face from 1:1 to 3:1Site: Beeman Pit #1Permit Action: 2023 InspectionPermit/Job#: M2002009PROJECT IDENTIFICATIONTask #: 001State: ColoradoAbbreviation: NoneDate: 5/8/2023County: PuebloFilename: M009-001User: ANMAgency or organization name: DRMSHOURLY EQUIPMENT COSTBasic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: 1-shank ripperShift Basis: 1 per dayData Source: (CRG)Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$16.38	NA
Ripper op. Cost/Hour:	\$4.30	50
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: \$283.20Total Fleet Cost/Hour: \$283.20MATERIAL QUANTITIESInitial Volume: 22,147Swell factor: 1.000Loose volume: 22,147 LCYSource of estimated volume: Permit Application Adequacy Response/DRMS 2002 EstimateSource of estimated swell factor: Cat HandbookHOURLY PRODUCTIONAverage push distance: 250 feetUnadjusted hourly production: 377.8 LCY/hrMaterials consistency description: Consolidated stockpile 1.0Average push gradient: 0 %Average site altitude: 4,800 feetMaterial weight: 2,900 lbs/LCY

Weight description: Sand and gravel - Dry

Job Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(SLOT)
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: 0.4739

Adjusted unit  
production: 179.04 LCY/hr  
Adjusted fleet  
production: **179.04** LCY/hr

**JOB TIME AND COST**

Fleet size: 1 Dozer(s)  
Unit cost: \$1.582/LCY

Total job time: **123.70** Hours  
Total job cost: **\$35,031**

BULLDOZER WORKTask description: Spread 6 inches of topsoil over 20 acresSite: Beeman Pit #1Permit Action: 2023 InspectionPermit/Job#: M2002009PROJECT IDENTIFICATIONTask #: 002State: ColoradoAbbreviation: NoneDate: 5/8/2023County: PuebloFilename: M009-002User: ANMAgency or organization name: DRMSHOURLY EQUIPMENT COSTBasic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: 1-shank ripperShift Basis: 1 per dayData Source: (CRG)Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$16.38	NA
Ripper op. Cost/Hour:	\$4.30	50
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: \$283.20Total Fleet Cost/Hour: \$283.20MATERIAL QUANTITIESInitial Volume: 16,000Swell factor: 1.000Loose volume: 16,000 LCYSource of estimated volume: Permit Application Adequacy Response/2002 DRMS  
Cost EstimateSource of estimated swell  
factor: Cat HandbookHOURLY PRODUCTIONAverage push distance: 250 feetUnadjusted hourly  
production: 377.8 LCY/hrMaterials consistency  
description: Consolidated stockpile 1.0Average push  
gradient: 0 %Average site altitude: 4,800 feetMaterial weight: 2,900 lbs/LCY



Weight description: Sand and gravel - Dry

Job Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(SLOT)
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: 0.4739

Adjusted unit  
production: 179.04 LCY/hr  
Adjusted fleet  
production: **179.04** LCY/hr

**JOB TIME AND COST**

Fleet size: 1 Dozer(s)  
Unit cost: \$1.582/LCY

Total job time: **89.37** Hours  
Total job cost: **\$25,308**

**REVEGETATION WORK**Task description: **Revegetate 20 Acres**Site: **Beeman Pit #1**Permit Action: 2023 InspectionPermit/Job#: M2002009**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 5/8/2023County: PuebloFilename: M009-003User: ANMAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Potassium nitrate, 13-46-0	20.00	pound	\$1.36	\$27.20
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$27.20</b>

**Application**

Description	Cost /Acre
Push rotary spreader (MEANS 32 01 90.13 0110)	\$113.69
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$113.69</b>

**TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.18
<b>Total Tilling Cost/Acre</b>	<b>\$117.18</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Lovington	0.90	14.69	\$14.38
Switchgrass - Nebraska 28	0.50	4.47	\$6.75
Sand Dropseed	0.10	11.94	\$0.98
Sideoats Grama - Vaughn	4.50	14.77	\$37.69
<b>Totals Seed Mix</b>	<b>6.00</b>	<b>45.87</b>	<b>\$59.79</b>

**Application**

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00

<b>Total Seed Application Cost/Acre</b>	<b>\$232.00</b>
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**MULCHING and MISCELLANEOUS****Materials**

<b>Description</b>	<b>Units / Acre</b>	<b>Unit</b>	<b>Cost / Unit</b>	<b>Cost /Acre</b>
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
<b>Total Mulch Materials Cost/Acre</b>				<b>\$842.72</b>

**Application**

<b>Description</b>	<b>Cost /Acre</b>
Crimping, with tractor {DMG survey data}	\$73.00
<b>Total Mulch Application Cost/Acre</b>	<b>\$73.00</b>

**JOB TIME AND COST**

No. of Acres:	20	Cost /Acre:	\$1,465.58
Estimated Failure Rate:	20%	Cost /Acre*:	\$291.79
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	<b>\$29,311.60</b>
Reseeding Job Cost:	<b>\$1,167.16</b>
Total Job Cost:	<b>\$30,479</b>
Job Hours:	<b>20.00</b>



**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Mob/Demob**Site: **Beeman Pit #1**Permit Action: 2023 InspectionPermit/Job#: M2002009**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 5/8/2023County: PuebloFilename: M009-004User: ANMAgency 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:	\$15.25	\$23.06	\$37.58
Operating Cost/Hour:	\$25.26	\$30.83	\$51.41
Operator Cost/Hour:	\$27.71	\$27.71	\$27.71
Helper Cost/Hour:	\$0.00	\$20.22	\$20.22
Total Unit Cost/Hour:	\$68.22	\$101.82	\$136.92

**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	52.21	\$141.23	\$136.92	1	\$278.15	\$136.92	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.25	\$68.22	2	\$148.94	\$136.44	\$250.00

Subtotals: **\$427.09** **\$273.36** **\$500.00****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.	\$14.23	1	\$14.23	\$14.23
Fuel Tanker, 4x2, 170 HP	\$69.51	1	\$69.51	\$69.51
Lube Truck, 4x2, 190 HP	\$76.19	1	\$76.19	\$76.19
Water Tanker, 2,500 Gal.	\$69.51	1	\$69.51	\$69.51

Subtotals: **\$229.44** **\$229.44****EQUIPMENT HAUL DISTANCE and Time**Nearest Major City or Town within project area region: PUEBLOTotal one-way travel distance: 10.00

miles

Average Travel Speed: 55.00

mph

Total Non-Roadable Mob/Demob Cost *	\$2,108.89
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$83.43
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.18	0.18
Return Time (Hours):	0.18	0.18
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.36	0.36

**JOB TIME AND COST**Total job time: 2.73 HoursTotal job cost: \$2,192