




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.

| | | | |
|---|--|--|-----------------------------|
| MINE NAME: M & G Pit | MINE/PROSPECTING ID#: M-1986-079 | MINERAL: Sand and gravel | COUNTY: Adams |
| INSPECTION TYPE: Monitoring | INSPECTOR(S): Jared L. Ebert | INSP. DATE: December 20, 2017 | INSP. TIME: 09:20 |
| OPERATOR: Mann Resources LLC | OPERATOR REPRESENTATIVE: Andrew Blackford and Joe O'Dea, Mann Lake Holding LLC. and Steve O'Brian with Environment, Inc. | TYPE OF OPERATION: 112c - Construction Regular Operation | |
| REASON FOR INSPECTION: Normal I&E Program | BOND CALCULATION TYPE: Complete Bond | BOND AMOUNT: \$283,500.00 | |
| DATE OF COMPLAINT: NA | POST INSP. CONTACTS: None | JOINT INSP. AGENCY: None | |
| WEATHER: Clear | INSPECTOR'S SIGNATURE:  | SIGNATURE DATE: December 21, 2017 | |

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

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

OBSERVATIONS

This was an inspection of the M & G Pit, DRMS permit number M-1986-079. The current permittee of the site is Mann Resources, LLC. On August 14, 2017 the Colorado Division of Reclamation, Mining and Safety (Division or DRMS) received a Transfer of Mineral Permit and Succession of Operators application (SO3). The current permit holder would like to transfer the permit to Mann Lake Holding, LLC. The SO3 application was deemed incomplete for review on August 15, 2017. On December 4th, 2017 the Division received all of the required documents to deem the application complete and filed. This inspection was conducted in order to calculate the required surety for the site and to evaluate the site for compliance with the permit and rules and regulations. I, Jared Ebert with DRMS conducted the inspection. Mr. Andrew Blackford and Joseph O'Dea representing Mann Lake Holding, LLC. and Steve O'Brian with Environment Inc. representing Mann Resources, LLC. accompanied me during the inspection.

Acid And Toxic Materials:

The currently approved permit allows for the backfilling of the pit with inert material. At the time of the inspection the visible fill material appeared to be clean fill dirt.

Backfilling and Grading:

The current permit holder appears to be working with the proposed successor operator to backfill the existing pit at the site. The current pit has exposed groundwater and is about 17.36 acres in size according to the 2017 annual report. The currently approved reclamation plan calls for leaving two open groundwater ponds at the north end of the site based on the approval of Technical Revision No. 8 (TR08). However, it appears the Operators have elected to backfill the majority of the former pit area. According to Mr. O'Dea they plan to leave a small open water channel through the site. The site currently consists of a long shallow pit on the south side of the site where the water appears to be only 4 to 5 feet deep in places. This southern pit is separated from the northern pit by a berm. A culvert has been installed to allow water from the southern pit to flow into the northern pit.

In the future, the current permit holder or the successor permit holder will need to file a technical revision with the Division to revise the final proposed configuration of the site and supply detail regarding the post mining channel to be left at the site.

The pit slopes range from near the angle of repose to 2H:1V where current inert filling is occurring in portions of the northern pond and southern ponds. The western pit slopes of the southern pond are shallow and less than a 3H:1V. The eastern pit slopes of the south pond appear to be steeper than a 3H:1V.

Financial Warranty:

The current permittee has posted a financial warranty in the amount of \$283,500.00. Based on the observations made during the inspection and information contained in the 2017 annual report, I have calculated the remaining liability at the site to be about \$243,300.00, this is about \$40,200.00 less than the current liability posted. The reclamation cost estimate is enclosed with this report. Regarding the SO3 application, the proposed successor operator will need to post the currently required financial warranty of \$283,500.00 in order for the SO3 application to be approved. Or, prior to the approval of the SO3 application, the current permit holder could submit and receive approval of a surety reduction request to lower the required liability amount to \$243,300.00. Subsequently, the successor operator could submit a financial warranty in the \$243,300.00 amount and SO3 application would then be approved.

Hydrologic Balance:

Water flows into the pit at the southwest end of the site and flows out of the pit at the northwest corner of the pit.

Reclamation Success:

Reclamation is proceeding at the site but it appears the final site configuration will be different than what is currently approved with TR08. The reclamation plan will need to be revised based on the future plan for the site.

Revegetation:

Portions of the southern half of the mine site have been revegetated and a dense stand of grasses and forbs have established throughout the area. Trees and willows have established along the pond slopes of the southern pond.

Topsoil:

Topsoil is stored in a berm on the north end of the site.

PHOTOGRAPHS



Figure 1. From the southwest end of the north pond looking north.



Figure 2. From near the southwest corner of the north pond looking east at inert fill area.



Figure 3. From near the southeast end of the north pond looking northwest.



Figure 4. From near the southeast corner of the north pond looking northeast.



Figure 5. Berm between the north pond and south pond.



Figure 6. From northwest corner of the south pond looking south.



Figure 7. View of revegetated area west of the south pond.



Figure 8. Near the southern end of the south pond looking south.



Figure 9. From the south end of the south pond looking north.



Figure 10. From the southwest corner of the site looking north.

Inspection Contact Address

Clay Carlson
Mann Resources LLC
P.O. Box 247
Eastlake, CO 80614

Enclosure: 1.) CIRCES Reclamation Cost Estimate, Dated December 21, 2017, SO3

EC: Andrew Blackford, CEI Constructors
Joe O'Dea, Mann Lake Holding LLC.
Steve O'Brian, Environment, Inc.

COST SUMMARY WORK

Task description: _____

Site: M & G Pit

Permit Action: SO3 2017

Permit/Job#: M1986079

PROJECT IDENTIFICATION

Task #: 000
Date: 12/21/2017
User: JLE

State: Colorado
County: Adams

Abbreviation: None
Filename: M079-000

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

| Task | Description | Form Used | Fleet Size | Task Hours | Cost |
|--------------------------|-----------------------------------|-----------|------------|---------------|------------------|
| 001 | Backfill pond | DOZER | 2 | 262.81 | \$120,022.00 |
| 002 | Spread topsoil over affected area | SCRAPER1 | 1 | 31.96 | \$30,015.00 |
| 003 | Seed 44.6 acres | REVEGE | 1 | 44.60 | \$25,618.00 |
| 004 | Weed control entire site | REVEGE | 1 | 0.00 | \$6,145.00 |
| 005 | Mobilization and Demobilization | MOBILIZE | 1 | 3.20 | \$7,272.00 |
| <u>SUBTOTALS:</u> | | | | 342.57 | \$189,072 |

INDIRECT COSTS

OVERHEAD AND PROFIT:

| | | | |
|----------------------|--------|---------|-------------|
| Liability insurance: | 2.02 | Total = | \$3,819.25 |
| Performance bond: | 1.05 | Total = | \$1,985.26 |
| Job superintendent: | 171.29 | Total = | \$12,512.37 |
| Profit: | 10.00 | Total = | \$18,907.20 |

TOTAL O & P = \$37,224.08

CONTRACT AMOUNT (direct + O & P) = \$226,296.08

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

| | | | |
|--|-------------|---------|--------------------|
| Financial warranty processing (legal/related costs): | <u>0.00</u> | Total = | <u>0.00</u> |
| Engineering work and/or contract/bid preparation: | <u>0.00</u> | Total = | <u>\$0.00</u> |
| Reclamation management and/or administration: | <u>5.00</u> | | <u>\$11,314.80</u> |

CONTINGENCY: 3.00 Total = \$5,672.16

TOTAL INDIRECT COST = \$54,211.04

TOTAL BOND AMOUNT (direct + indirect) = \$243,283.04

Required Surety Amount = \$243,300.00

BULLDOZER WORK

Task description: Backfill pond

Site: M & G Pit

Permit Action: SO3 2017

Permit/Job#: M1986079

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 12/21/2017

County: Adams

Filename: NA

User: JLE

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU

Horsepower: 405

Blade Type: Semi-Universal

Attachment: NA

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

| | | <u>Utilization %</u> |
|---------------------------|-----------------|----------------------|
| Ownership Cost/Hour: | \$100.59 | NA |
| Operating Cost/Hour: | \$87.23 | 100 |
| Ripper own. Cost/Hour: | \$0.00 | NA |
| Ripper op. Cost/Hour: | \$0.00 | 100 |
| Operator Cost/Hour: | \$40.52 | NA |
| Total unit Cost/Hour: | \$228.34 | |
| Total Fleet Cost/Hour: | \$456.68 | |

MATERIAL QUANTITIES

Initial Volume: 272,000

Swell factor: 1.000

Loose volume: 272,000 LCY

Source of estimated volume: About 15,646.5 LCY/Acre at 17.36 acres of open water

Source of estimated swell
factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 300 feet

Unadjusted hourly
production: 437.8 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push
gradient: -5 %

Average site altitude: 5,035 feet

Material weight: 2,100 lbs/LCY

Weight description: Earth - Loam

Job Condition Correction Factor

| | | <u>Source</u> |
|-----------------------|-------|---------------|
| Operator Skill: | 0.900 | (AB.AVG.) |
| Material consistency: | 1.200 | (CAT HB) |
| Dozing method: | 1.200 | (SLOT) |
| Visibility: | 1.000 | (AVG.) |
| Job efficiency: | 0.830 | (1 SHIFT/DAY) |
| Spoil pile: | 0.900 | (SSD-FC) |
| Push gradient: | 1.115 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 1.095 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Net correction: 1.1820

Adjusted unit
production: 517.48 LCY/hr

Adjusted fleet
production: **1034.96** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.441/LCY

Total job time: **262.81** Hours

Total job cost: **\$120,022**

SCRAPER TEAM WORK

Task description: Spread topsoil over affected area

Site: M & G Pit

Permit Action: SO3 2017

Permit/Job#: M1986079

PROJECT IDENTIFICATION

Task #: 002

State: Colorado

Abbreviation: None

Date: 12/21/2017

County: Adams

Filename: M079-002

User: JLE

Agency or organization name: DRMS

HOURLY EQUIPMENT

COSTShift basis: 1 per day

| Equipment Description | |
|---------------------------------|--------------------------|
| -Scraper: | Cat 627G w/push-pull |
| -Dozer: | Cat D9T - 9SU |
| Support Equipment -Load Area: | NA |
| -Dump Area: | NA |
| Road Maintenance -Motor Grader: | CAT 12M |
| -Water Truck: | Water Tanker, 5,000 Gal. |

Cost Breakdown:

| | Scraper Work Team | | Support Equipment | | Maintenance Equipment | |
|------------------------|-------------------|----------|-------------------|-----------|-----------------------|-------------|
| | Scraper | Dozer | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | NA | NA | 100 | 100 |
| Ownership cost/hour: | \$99.75 | \$100.59 | NA | NA | \$28.02 | \$24.01 |
| Operating cost/hour: | \$118.23 | \$87.23 | NA | NA | \$28.28 | \$34.13 |
| %Utilization-ripper: | NA | NA | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | \$0.00 | NA | NA | \$0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | NA | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$41.46 | \$40.52 | NA | NA | \$38.16 | \$39.38 |
| Unit Subtotals: | \$259.44 | \$228.34 | NA | NA | \$94.46 | \$97.52 |
| Number of Units: | 2 | 1 | 0 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$747.22 | Support: | \$0.00 | Maint: | \$191.98 |

Total work team cost/hour: \$939.20

MATERIAL QUANTITIES

Initial volume: 24,000

CCY

Swell factor: 1.000

Loose volume: 24,000

LCY

Source of estimated volume: 44.66 acres partially backfilled (2017 ARR)

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

| | | | | |
|-----------------------|----------------------|--------------------|--------------|-----|
| Material weight: | <u>1,600 lbs/LCY</u> | Struck Volume: | <u>15.70</u> | LCY |
| Material description: | <u>Top Soil</u> | Heaped Volume: | <u>22.00</u> | LCY |
| Rated Payload: | <u>52,800 pounds</u> | Average Volume: | <u>18.85</u> | LCY |
| Payload Capacity: | <u>33.00 LCY</u> | Adjusted Capacity: | <u>18.85</u> | LCY |

Cycle Time:

Scraper Loading Time: 0.90 Minutes
Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 5035 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|-----------|---------------|---------------|----------------|-------------------|
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2824 | 0.53 |

Haul Time: 0.53 minutes

Return Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|-----------|---------------|---------------|----------------|-------------------|
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2874 | 0.47 |

Return Time: 0.47 minutes

Total Scraper team cycle time: 2.50 minutes
Adjusted for job conditions: 750.98 LCY/Hour
Selected Number of Scrapers: 2 Scraper(s)
Adjusted single scraper team (unit) hourly production: 750.98 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: 750.98 LCY/Hour

Unadjusted unit production/hour: 904.80 LCY/Hour
Optimal Number of Scrapers per push
dozer: _____

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 31.96 Hours

Unit cost: \$1.251 /LCY Total job cost: \$30,015

REVEGETATION WORK

Task description: Seed 44.6 acres

Site: M & G Pit

Permit Action: SO3 2017

Permit/Job#: M1986079

PROJECT IDENTIFICATION

Task #: 003

State: Colorado

Abbreviation: None

Date: 12/21/2017

County: Adams

Filename: M079-003

User: JLE

Agency or organization name: DRMS

FERTILIZING

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------|-----------------|------|---|---------------|
| | | | \$ | \$ |
| | | | Total Fertilizer Materials Cost/Acre | \$0.00 |

Application

| Description | Cost /Acre |
|---|---------------|
| | \$ |
| Total Fertilizer Application Cost/Acre | \$0.00 |

TILLING

| Description | Cost /Acre |
|--|-----------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$106.29 |
| Total Tilling Cost/Acre | \$106.29 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|-------------------------------|--------------------------------|------------------------|----------------|
| Switchgrass - Blackwell | 0.50 | 4.47 | \$4.79 |
| Blue Grama - Lovington | 0.60 | 9.79 | \$9.75 |
| Little Bluestem - Pastura | 0.70 | 4.18 | \$11.78 |
| Sideoats Grama - Vaughn | 0.90 | 2.95 | \$9.00 |
| Slender Wheatgrass - Native | 1.10 | 4.02 | \$3.10 |
| Milk Vetch, Cicer - Monarch | 1.30 | 4.33 | \$10.66 |
| Streambank Wheatgrass - Sodar | 1.10 | 3.59 | \$6.70 |
| Western Wheatgrass - Barton | 3.20 | 8.08 | \$24.29 |
| Totals Seed Mix | 9.40 | 41.40 | \$80.07 |

Application

| Description | Cost /Acre |
|---|-----------------|
| Drill Seeding (DRMS Survey Cost) | \$232.00 |
| Total Seed Application Cost/Acre | \$232.00 |

MULCHING and MISCELLANEOUS**Materials**

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|--|-----------------|------|-------------|---------------|
| | | | \$ | \$ |
| Total Mulch Materials Cost/Acre | | | | \$0.00 |

Application

| Description | Cost /Acre |
|--|---------------|
| | \$ |
| Total Mulch Application Cost/Acre | \$0.00 |

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|---|--------------|---------------|------------------|---------------------------|---------------|
| | | | | | \$ |
| Totals Nursery Stock Cost / Acre | | | | | \$0.00 |

JOB TIME AND COST

| | | | |
|----------------------------------|---------|--------------|----------|
| No. of Acres: | 44.6 | Cost /Acre: | \$418.36 |
| Estimated Failure Rate: | 50% | Cost /Acre*: | \$312.07 |
| *Selected Replanting Work Items: | SEEDING | | |

| | |
|---------------------|--------------------|
| Initial Job Cost: | \$18,658.86 |
| Reseeding Job Cost: | \$6,959.16 |
| Total Job Cost: | \$25,618 |
| Job Hours: | 44.60 |

REVEGETATION WORK

Task description: Weed control entire site

Site: M & G Pit

Permit Action: SO3 2017

Permit/Job#: M1986079

PROJECT IDENTIFICATION

Task #: 004

State: Colorado

Abbreviation: None

Date: 12/21/2017

County: Adams

Filename: M079-004

User: JLE

Agency or organization name: DRMS

FERTILIZING

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------|-----------------|------|---|---------------|
| | | | \$ | \$ |
| | | | Total Fertilizer Materials Cost/Acre | \$0.00 |

Application

| Description | Cost /Acre |
|---|---------------|
| | \$ |
| Total Fertilizer Application Cost/Acre | \$0.00 |

TILLING

| Description | Cost /Acre |
|--------------------------------|---------------|
| | \$ |
| Total Tilling Cost/Acre | \$0.00 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|------------------------|--------------------------------|------------------------|---------------|
| | | | \$ |
| Totals Seed Mix | 0.00 | 0.00 | \$0.00 |

Application

| Description | Cost /Acre |
|-------------|------------|
| | \$ |
| | |

| | |
|---|---------------|
| Total Seed Application Cost/Acre | \$0.00 |
|---|---------------|

MULCHING and MISCELLANEOUS

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---|-------------------------|-------------|--------------------|-------------------|
| Herbicide - 2,4D @ 1.0 pt/ac | 4.00 | ACRE | \$2.74 | \$10.96 |
| Herbicide - Glyphosate (Journey)@ 1.0 pt/ac | 2.00 | ACRE | \$4.16 | \$8.32 |
| Total Mulch Materials Cost/Acre | | | | \$19.28 |

Application

| Description | Cost /Acre |
|---|-------------------|
| Weed spray, truck, aquatic area, nox. [DMG] | \$68.50 |
| Total Mulch Application Cost/Acre | \$68.50 |

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|---|----------------------|----------------------|--------------------------|-----------------------------------|-------------------|
| | | | | | \$ |
| Totals Nursery Stock Cost / Acre | | | | | \$0.00 |

JOB TIME AND COST

| | | | |
|----------------------------------|------|--------------|---------|
| No. of Acres: | 70 | Cost /Acre: | \$87.78 |
| Estimated Failure Rate: | 0% | Cost /Acre*: | \$0.00 |
| *Selected Replanting Work Items: | NONE | | |

| | |
|---------------------|-------------------|
| Initial Job Cost: | \$6,144.60 |
| Reseeding Job Cost: | \$0.00 |
| Total Job Cost: | \$6,145 |
| Job Hours: | 0.00 |

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: Mobilization and Demobilization

Site: M & G Pit

Permit Action: SO3 2017

Permit/Job#: M1986079

PROJECT IDENTIFICATION

Task #: 005

State: Colorado

Abbreviation: None

Date: 12/21/2017

County: Adams

Filename: M079-005

User: JLE

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:

| 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 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 D9T - 9SU | 60.01 | \$100.59 | \$125.45 | 2 | \$452.08 | \$250.90 | \$500.00 |
| Cat 627G w/push-pull | 43.48 | \$99.75 | \$117.55 | 2 | \$434.60 | \$235.10 | \$500.00 |
| CAT 12M | 16.01 | \$28.02 | \$88.67 | 1 | \$116.69 | \$88.67 | \$250.00 |
| Drill/Broadcast Seeder with Tractor | 25.00 | \$12.22 | \$88.67 | 2 | \$201.78 | \$177.34 | \$500.00 |

Subtotals: **\$1,205.15** **\$752.01** **\$1,750.00**

ROADABLE EQUIPMENT:

| Machine Description | Total Cost/hr/ unit | Fleet Size | Haul Trip Cost/hr/ fleet | Return Trip Cost/hr/ fleet |
|--------------------------------|------------------------|------------|-----------------------------|-------------------------------|
| Water Tanker, 5,000 Gal. | \$97.52 | 1 | \$97.52 | \$97.52 |
| Light Duty Pickup, 4x4, 3/4 T. | \$69.33 | 1 | \$69.33 | \$69.33 |
| Fuel Tanker, 6x4, 210 HP | \$74.87 | 1 | \$74.87 | \$74.87 |

Subtotals: **\$241.72** **\$241.72**

EQUIPMENT HAUL DISTANCE and Time

| | | |
|--|---------------------|-------|
| Nearest Major City or Town within project area region: | <u>BRIGHTON, CO</u> | |
| Total one-way travel distance: | <u>6.40</u> | miles |
| Average Travel Speed: | <u>32.00</u> | mph |

| | |
|-------------------------------------|-------------------|
| Total Non-Roadable Mob/Demob Cost * | <u>\$7,175.22</u> |
| '* two round trips with haul rig: | |
| Total Roadable Mob/Demob Cost ** | <u>\$96.69</u> |
| ** one round trip, no haul rig: | |

Transportation Cycle Time:

| | Non-Roadable Equipment | Roadable Equipment |
|-------------------------|------------------------|--------------------|
| Haul Time (Hours): | <u>0.20</u> | <u>0.20</u> |
| Return Time (Hours): | <u>0.20</u> | <u>0.20</u> |
| Loading Time (Hours): | <u>0.60</u> | <u>NA</u> |
| Unloading Time (Hours): | <u>0.60</u> | <u>NA</u> |
| Subtotals: | <u>1.60</u> | <u>0.40</u> |

JOB TIME AND COST

| | | |
|-----------------|----------------|-------|
| Total job time: | <u>3.20</u> | Hours |
| Total job cost: | <u>\$7,272</u> | |