



**COLORADO**  
Division of Reclamation,  
Mining and Safety  
Department of Natural Resources

August 23, 2023

A. Bruce Johnson  
J. Quarter Circle Mineral Co., LLC  
801 8th Street, Suite 220  
Greeley, CO 80631

**Re: Frentress Gravel Pit - File No. M-2011-017  
J. Quarter Circle Mineral Co., LLC  
Surety Increase (SI-1)  
Bond increase from \$17,414.13 to \$37,390.**

Dear A. Bruce Johnson:

On August 23, 2023 the Division of Reclamation, Mining and Safety increased the current Financial Warranty for this permit to \$37,390.00, in accordance with Rule 4.2.1 of the Rules and Regulations. This is an increase of \$19,975.47.

Please see the July 17, 2023 inspection report for details regarding why this surety increase is required.

The Division ordered amendment of the current Financial Warranty, or submittal of a new Financial Warranty reflecting the increase, within 60 days from the date of this letter (August 23, 2023).

Please make arrangements with Sara M. Stevenson-Benn at the Division's Denver office for submittal of the financial warranty. Any other questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Sara M. Stevenson-Benn by telephone at (303) 866-3567 (8148), or by email at [Sara.stevenson-benn@state.co.us](mailto:Sara.stevenson-benn@state.co.us).

The Permittee for this site may be scheduled for a Formal Board Hearing for possible revocation of the permit after October 22, 2023, if the amount of any increased Financial Warranty has not been provided.

|                       |             |
|-----------------------|-------------|
| Bond Held:            | \$17,414.53 |
| Prior Liability:      | \$17,414.53 |
| Change in Liability:  | \$19,975.47 |
| Revised Liability:    | \$37,390.00 |
| Prior Permit Acreage: | 9.90        |



|                             |      |
|-----------------------------|------|
| Change in Permit Acreage:   | 0.00 |
| Revised Permit Acreage:     | 9.90 |
| Prior Affected Acreage:     | 9.90 |
| Change in Affected Acreage: | 0.00 |
| Revised Affected Acreage:   | 9.90 |

If you have any questions, please contact me by telephone at (303) 866-3567 x 8176, or by email at [Hunter.ridley@state.co.us](mailto:Hunter.ridley@state.co.us).

Sincerely,



Hunter C. Ridley  
Environmental Protection Specialist

## COST SUMMARY WORK

Task description: Updated post inspection 7/17/2023

Site: Frentress Gravel Pit

Permit Action: Insp 7/17/23

Permit/Job#: M2011017

### PROJECT IDENTIFICATION

Task #: HCR

State: Colorado

Abbreviation: None

Date: 7/17/2023

County: Routt

Filename: M017-HCR

User: HR1

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

| Task                     | Description                                      | Form Used | Fleet Size | Task Hours   | Cost            |
|--------------------------|--|-----------|------------|--------------|-----------------|
| 01a                      | Push & Grade pit slopes to 3H:1V                 | DOZER     | 1          | 27.44        | \$11,704        |
| 02a                      | Placement of topsoil (4.5 ac. at 7" depth)       | DOZER     | 1          | 3.52         | \$1,502         |
| 03a                      | Vegetate disturbed area                          | REVEGE    | 1          | 16.00        | \$10,698        |
| 04a                      | Initial Mob./Demob. reclamation crew/equipment   | MOBILIZE  | 1          | 5.20         | \$4,209         |
| 04b                      | Secondary Mob./Demob. reclamation crew/equipment | MOBILIZE  | 1          | 5.20         | \$2,017         |
| <b><u>SUBTOTALS:</u></b> |  |           |            | <b>57.36</b> | <b>\$30,130</b> |

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$609

Performance bond: 1.05

Total = \$316

Job superintendent: 16.36

Total = \$1,065

Profit: 10.00

Total = \$3,013

TOTAL O & P = \$5,003

CONTRACT AMOUNT (direct + O & P) = \$35,133

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$500

Engineering work and/or contract/bid preparation: 0.00

Total = \$0

Reclamation management and/or administration: 5.00

\$1,757

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$7,260

**TOTAL BOND AMOUNT (direct + indirect) = \$37,390**

**BULLDOZER WORK**Task description: **Push & Grade pit slopes to 3H:1V**Site: **Frentress Gravel Pit**Permit Action: **Insp 7/17/23**Permit/Job#: **M2011017****PROJECT IDENTIFICATION**Task #: **01A**State: **Colorado**Abbreviation: **None**Date: **7/19/2023**County: **Routt**Filename: **01a**User: **HR1**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

|                        |          | <u>Utilization %</u> |
|------------------------|----------|----------------------|
| Ownership Cost/Hour:   | \$241.38 | NA                   |
| Operating Cost/Hour:   | \$143.92 | 100                  |
| Ripper own. Cost/Hour: | \$0.00   | NA                   |
| Ripper op. Cost/Hour:  | \$0.00   | 0                    |
| Operator Cost/Hour:    | \$41.30  | NA                   |

Total unit Cost/Hour: **\$426.60**Total Fleet Cost/Hour: **\$426.60****MATERIAL QUANTITIES**Initial Volume: **9,259**Swell factor: **1.230**Loose volume: **11,389 LCY**Source of estimated volume: **400 lft, 25' H @ 1:1 to a 3:1**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **150 feet**Unadjusted hourly production: **634.3 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **6,380 feet**Material weight: **2,100 lbs/LCY**Weight description: **Earth - Loam****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: | 1.095 | (CAT HB) |
| Blade type:      | 1.000 | (PAT)    |

Net correction: 0.6544

Adjusted unit production: 415.09 LCY/hr

Adjusted fleet production: **415.09** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.028/LCY

Total job time: **27.44** Hours

Total job cost: **\$11,704**

**BULLDOZER WORK**Task description: **Placement of topsoil (4.5 ac. at 7" depth)**Site: **Frentress Gravel Pit**Permit Action: **Insp 7/17/23**Permit/Job#: **M2011017****PROJECT IDENTIFICATION**Task #: **02A**State: **Colorado**Abbreviation: **None**Date: **7/19/2023**County: **Routt**Filename: **02a**User: **HR1**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

|                        |          | <b><u>Utilization %</u></b> |
|------------------------|----------|-----------------------------|
| Ownership Cost/Hour:   | \$241.38 | NA                          |
| Operating Cost/Hour:   | \$143.92 | 100                         |
| Ripper own. Cost/Hour: | \$0.00   | NA                          |
| Ripper op. Cost/Hour:  | \$0.00   | 0                           |
| Operator Cost/Hour:    | \$41.30  | NA                          |

Total unit Cost/Hour: **\$426.60**Total Fleet Cost/Hour: **\$426.60****MATERIAL QUANTITIES**Initial Volume: **4,235**Swell factor: **1.000**Loose volume: **4,235 LCY**Source of estimated volume: **4.5 ac @ 7" deep**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **50 feet**Unadjusted hourly production: **1,400.0 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **6,380 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

|                       |       | <b><u>Source</u></b> |
|-----------------------|-------|----------------------|
| 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: 1,203.02 LCY/hr

Adjusted fleet production: **1203.02** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.355/LCY

Total job time: **3.52** Hours

Total job cost: **\$1,502**

REVEGETATION WORKTask description: Vegetate disturbed areaSite: Frentress Gravel PitPermit Action: Insp 7/17/23Permit/Job#: M2011017PROJECT IDENTIFICATIONTask #: 03AState: ColoradoAbbreviation: NoneDate: 7/19/2023County: RouttFilename: 03aUser: HR1Agency or organization name: DRMSFERTILIZING**Materials**

| Description | Units /<br>Acre | Unit  | Cost / Unit   | Cost /Acre     |
|-------------|-----------------|-------|---|----------------|
| 6--6--6     | 40.00           | pound | \$0.45  | \$18.00        |
|             |                 |       | <b>Total Fertilizer<br/>Materials<br/>Cost/Acre</b> | <b>\$18.00</b> |

**Application**

| Description                                     | Cost /Acre     |
|---|----------------|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | \$41.82        |
| <b>Total Fertilizer Application Cost/Acre</b>   | <b>\$41.82</b> |

TILLING

| Description                                      | Cost /Acre      |
|--|-----------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$112.82        |
| <b>Total Tilling Cost/Acre</b>                   | <b>\$112.82</b> |

SEEDING

| Seed Mix                       | Rate –<br>PLS<br>LBS /<br>Acre | Seeds<br>per SQ.<br>FT | Cost /Acre      |
|--------------------------------|--------------------------------|------------------------|-----------------|
| Alfalfa - Common               | 8.00                           | 38.57                  | \$20.40         |
| Smooth Brome - Lincoln         | 13.00                          | 43.27                  | \$43.23         |
| Intermediate Wheatgrass - Rush | 20.00                          | 42.70                  | \$56.00         |
| <b>Totals Seed Mix</b>         | <b>41.00</b>                   | <b>124.54</b>          | <b>\$119.63</b> |

**Application**

| Description                            | Cost /Acre |
|--|------------|
| Drill seeding (MEANS 32 92 19.13 0020) | \$468.00   |
|  |            |



|   |                 |
|---|-----------------|
| <b>Total Seed Application Cost/Acre</b> | <b>\$468.00</b> |
|---|-----------------|

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

| <b>Description</b>                        | <b>Units /<br/>Acre</b> | <b>Unit</b> | <b>Cost / Unit</b> | <b>Cost /Acre</b> |
|---|-------------------------|-------------|--------------------|-------------------|
| Herbicide - 2,4D @ 1.0 pt/ac              | 1.00                    | ACRE        | \$4.01             | \$4.01            |
| Straw, delivered {MEANS 31 25 14.16 1200} | 2.00                    | TON         | \$429.79           | \$859.57          |
| <b>Total Mulch Materials Cost/Acre</b>    |                         |             |                    | <b>\$863.58</b>   |

**Application**

| <b>Description</b>                              | <b>Cost /Acre</b> |
|---|-------------------|
| Crimping, with tractor {DMG survey data}        | \$74.46           |
| Weed spray, truck, non-aquatic area, nox. [DMG] | \$62.72           |
| <b>Total Mulch Application Cost/Acre</b>        | <b>\$137.18</b>   |

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres: 4.5 Cost /Acre: \$1,761.03  
 Estimated Failure Rate: 35% Cost /Acre\*: \$1,761.03  
 \*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,MU  
LCHING

Initial Job Cost: \$7,924.64  
 Reseeding Job Cost: \$2,773.62  
 Total Job Cost: \$10,698  
 Job Hours: 16.00

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Initial Mob./Demob. reclamation crew/equipment**Site: **Frentress Gravel Pit**Permit Action: **Insp 7/17/23**Permit/Job#: **M2011017****PROJECT IDENTIFICATION**

Task #: **04A** State: **Colorado** Abbreviation: **None**  
 Date: **7/19/2023** County: **Routt** Filename: **04a**  
 User: **HR1**

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:            | \$20.26          | \$36.04           | \$47.05         |
| Operating Cost/Hour:            | \$39.51          | \$76.08           | \$82.85         |
| Operator Cost/Hour:             | \$22.52          | \$22.52           | \$22.52         |
| Helper Cost/Hour:               | \$0.00           | \$23.53           | \$23.53         |
| Total Unit Cost/Hour:           | \$82.29          | \$158.17          | \$175.95        |

**NON ROADABLE EQUIPMENT:**

| Machine Description                       | Weight/<br>Unit<br>(TONS) | Owner ship<br>Cost/hr/ unit | Haul Rig<br>Cost/hr/unit | Fleet<br>Size | Haul Trip<br>Cost/hr/<br>fleet | Return Trip<br>Cost/hr/ fleet | DOT Permit<br>Cost/ fleet |
|---|---------------------------|-----------------------------|--------------------------|---------------|--------------------------------|-------------------------------|---------------------------|
| Cat D8T - 8SU                             | 47.71                     | \$241.38                    | \$158.17                 | 1             | \$399.55                       | \$158.17                      | \$250.00                  |
| Drill/Broadcast<br>Seeder with<br>Tractor | 25.00                     | \$6.73                      | \$82.29                  | 1             | \$89.02                        | \$82.29                       | \$250.00                  |
| Power Mulcher<br>(Bowie LD-90)            | 6.00                      | \$25.94                     | \$82.29                  | 1             | \$108.23                       | \$82.29                       | \$250.00                  |
| Subtotals:                                |                           |                             |                          |               | <b>\$596.80</b>                | <b>\$322.75</b>               | <b>\$750.00</b>           |

**ROADABLE EQUIPMENT:**

| Machine Description                  | Total Cost/hr/<br>unit | Fleet Size | Haul Trip<br>Cost/hr/ fleet | Return Trip<br>Cost/hr/ fleet |
|--------------------------------------|------------------------|------------|-----------------------------|-------------------------------|
| Light Duty Pickup, 4x4, 1 T.<br>Crew | \$27.44                | 1          | \$27.44                     | \$27.44                       |
| Subtotals:                           |                        |            | <b>\$27.44</b>              | <b>\$27.44</b>                |

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:

STEAMBOAT  
SPRINGSTotal one-way travel distance: 28.00 milesAverage Travel Speed: 35.00 mph

Total Non-Roadable Mob/Demob Cost \*

\$4,164.88

\*\* two round trips with haul rig:

Total Roadable Mob/Demob Cost \*\*

\$43.90

\*\* one round trip, no haul rig:

**Transportation Cycle Time:**

|                         | Non-<br>Roadable<br>Equipment | Roadable<br>Equipment |
|-------------------------|-------------------------------|-----------------------|
| Haul Time (Hours):      | 0.80                          | 0.80                  |
| Return Time (Hours):    | 0.80                          | 0.80                  |
| Loading Time (Hours):   | 0.50                          | NA                    |
| Unloading Time (Hours): | 0.50                          | NA                    |
| Subtotals:              | 2.60                          | 1.60                  |

**JOB TIME AND COST**Total job time: 5.20 HoursTotal job cost: \$4,209

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: Secondary Mob./Demob. reclamation crew/equipmentSite: Frentress Gravel PitPermit Action: Insp 7/17/23Permit/Job#: M2011017**PROJECT IDENTIFICATION**

Task #: 04B State: Colorado Abbreviation: None  
 Date: 7/19/2023 County: Routt Filename: 04b  
 User: HR1

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:            | \$20.26          | \$36.04           | \$47.05         |
| Operating Cost/Hour:            | \$39.51          | \$76.08           | \$82.85         |
| Operator Cost/Hour:             | \$22.52          | \$22.52           | \$22.52         |
| Helper Cost/Hour:               | \$0.00           | \$23.53           | \$23.53         |
| Total Unit Cost/Hour:           | \$82.29          | \$158.17          | \$175.95        |

**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 |
|-------------------------------------|---------------------|--------------------------|-----------------------|------------|--------------------------|----------------------------|------------------------|
| Drill/Broadcast Seeder with Tractor | 25.00               | \$6.73                   | \$82.29               | 1          | \$89.02                  | \$82.29                    | \$250.00               |
| Power Mulcher (Bowie LD-90)         | 6.00                | \$25.94                  | \$82.29               | 1          | \$108.23                 | \$82.29                    | \$250.00               |
| Subtotals:                          |                     |                          |                       |            | <b>\$197.25</b>          | <b>\$164.58</b>            | <b>\$500.00</b>        |

**ROADABLE EQUIPMENT:**

| Machine Description               | Total Cost/hr/ unit | Fleet Size | Haul Trip Cost/hr/ fleet | Return Trip Cost/hr/ fleet |
|-----------------------------------|---------------------|------------|--------------------------|----------------------------|
| Light Duty Pickup, 4x4, 1 T. Crew | \$27.44             | 1          | \$27.44                  | \$27.44                    |
| Subtotals:                        |                     |            | <b>\$27.44</b>           | <b>\$27.44</b>             |

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:

STEAMBOAT  
SPRINGSTotal one-way travel distance: 28.00 milesAverage Travel Speed: 35.00 mph

Total Non-Roadable Mob/Demob Cost \*

\$1,973.43

\*\* two round trips with haul rig:

Total Roadable Mob/Demob Cost \*\*

\$43.90

\*\* one round trip, no haul rig:

**Transportation Cycle Time:**

|                         | Non-<br>Roadable<br>Equipment | Roadable<br>Equipment |
|-------------------------|-------------------------------|-----------------------|
| Haul Time (Hours):      | 0.80                          | 0.80                  |
| Return Time (Hours):    | 0.80                          | 0.80                  |
| Loading Time (Hours):   | 0.50                          | NA                    |
| Unloading Time (Hours): | 0.50                          | NA                    |
| Subtotals:              | 2.60                          | 1.60                  |

**JOB TIME AND COST**Total job time: 5.20 HoursTotal job cost: \$2,017