



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

May 17, 2019

Gregory Larson
14977 Co. Rd. 97
Haxtun, CO 80731

Re: Notice of Surety Increase (SI-01), Larson Pit, Permit File No. M-2007-012

Dear Mr. Larson:

On March 20, 2019, the Division of Reclamation, Mining and Safety (Division) conducted an inspection of the Larson Pit, Permit Number M-2007-012. In accordance with Rule 4.2.1, the Division may review a financial warranty at any time to determine if the amount is sufficient to fulfill the reclamation plan. The Division currently holds a financial warranty of \$28,889.00. The Division has calculated a reclamation cost estimate for Phase 1 and Phase 2 of the Larson Pit based on the approved mining and reclamation plans. As previously discussed in the April 1, 2019 Inspection Report, the Division calculated the cost to reclaim Phase 1 and Phase 2 to be \$65,800.00. **This is an increase of \$36,911.00 from the current financial warranty held.**

Pursuant to Rule 4.2.1(2), the current Financial Warranty must be amended or replaced to reflect the increase within 60 days from the date of this letter, due **July 16, 2019**.

For questions regarding financial warranties, please contact Barbara Coria, the Division's Financial Assurance Specialist, at (303) 866-3567 x 8148. There are various financial warranty application forms on our website at mining.state.co.us.

For all other questions, please contact me at 303-866-3567 x 8132.

Sincerely,

Elliott R. Russell
Environmental Protection Specialist

Enclosure: Reclamation Cost Estimate SI02 M2007012

Cc: Michael Cunningham, Division of Reclamation, Mining & Safety
Barbara Coria, Division of Reclamation, Mining & Safety



COST SUMMARY WORK

Task description: Cost Summary (Mining Areas 1 & 2)

Site: Larson Pit

Permit Action: 2019 Update

Permit/Job#: M2007012

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 3/29/2019

County: Phillips

Filename: M012-000

User: ERR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

| Task | Description | Form Used | Fleet Size | Task Hours | Cost |
|--------------------------|-------------------------------------|-----------|------------|---------------|-----------------|
| 001 | Backfill and Grade Slopes to 3H:1V | DOZER | 1 | 6.60 | \$1,449 |
| 002 | Replace Topsoil | DOZER | 1 | 75.85 | \$16,638 |
| 003 | Seedbed Prep & Plant Cover Crop | REVEGE | 1 | 10.00 | \$13,458 |
| 004 | Plant Reclamation Seed Mixture | REVEGE | 1 | 10.00 | \$20,054 |
| 005 | Mob/ Demob of Reclamation Equipment | MOBILIZE | 1 | 5.80 | \$3,844 |
| <u>SUBTOTALS:</u> | | | | 108.25 | \$55,443 |

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$1,120

Performance bond: 1.05

Total = \$582

Job superintendent: 0.00

Total = \$0

Profit: 10.00

Total = \$5,544

TOTAL O & P = \$7,246

CONTRACT AMOUNT (direct + O & P) = \$62,689

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$0

Total = \$0

Engineering work and/or contract/bid preparation: 0.00

Total = \$0

Reclamation management and/or administration: 5.00

\$3,134

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$10,381

TOTAL (direct + indirect) = \$65,824

TOTAL BOND AMOUNT (rounded) = \$65,800

BULLDOZER WORKTask description: **Backfill and Grade Slopes to 3H:1V**Site: **Larson Pit** Permit Action: **2019 Update** Permit/Job#: **M2007012****PROJECT IDENTIFICATION**

Task #: **001** State: **Colorado** Abbreviation: **None**
 Date: **3/29/2019** County: **Phillips** Filename: **M012-001**
 User: **ERR**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D8T - 8SU**
 Horsepower: **310**
 Blade Type: **Semi-Universal**
 Attachment: **3-shank ripper**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

| | | <u>Utilization %</u> |
|------------------------|---------|----------------------|
| Ownership Cost/Hour: | \$93.62 | NA |
| Operating Cost/Hour: | \$73.35 | 100 |
| Ripper own. Cost/Hour: | \$8.93 | NA |
| Ripper op. Cost/Hour: | \$1.95 | 25 |
| Operator Cost/Hour: | \$41.52 | NA |

Total unit Cost/Hour: **\$219.36**
 Total Fleet Cost/Hour: **\$219.36**

MATERIAL QUANTITIES

Initial Volume: **3,955**
 Swell factor: **1.330**
 Loose volume: **5,260 LCY**

Source of estimated volume: **DRMS 1800' of 15' tall highwall**
 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: **Compacted fill or embankment 0.9**

Average push gradient: **-30 %**
 Average site altitude: **4,020 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: | 1.601 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.793 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Net correction: 0.5690

Adjusted unit production: 796.60 LCY/hr

Adjusted fleet production: **796.6** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.275/LCY

Total job time: **6.60** Hours

Total job cost: **\$1,449**

BULLDOZER WORKTask description: **Replace Topsoil**Site: **Larson Pit** Permit Action: 2019 Update Permit/Job#: M2007012**PROJECT IDENTIFICATION**

Task #: 002 State: Colorado Abbreviation: None
 Date: 3/29/2019 County: Phillips Filename: M012-002
 User: ERR

Agency or organization name: DRMS**HOURLY EQUIPMENT COST**

Basic Machine: Cat D8T - 8SU
 Horsepower: 310
 Blade Type: Semi-Universal
 Attachment: 3-shank ripper
 Shift Basis: 1 per day
 Data Source: (CRG)

Cost Breakdown:

| | | <u>Utilization %</u> |
|------------------------|----------------|----------------------|
| Ownership Cost/Hour: | <u>\$93.62</u> | <u>NA</u> |
| Operating Cost/Hour: | <u>\$73.35</u> | <u>100</u> |
| Ripper own. Cost/Hour: | <u>\$8.93</u> | <u>NA</u> |
| Ripper op. Cost/Hour: | <u>\$1.95</u> | <u>25</u> |
| Operator Cost/Hour: | <u>\$41.52</u> | <u>NA</u> |

Total unit Cost/Hour: \$219.36
 Total Fleet Cost/Hour: **\$219.36**

MATERIAL QUANTITIES

Initial Volume: 25,947
 Swell factor: 1.230
 Loose volume: **31,915 LCY**

Source of estimated volume: Application: 5" on 38.6 Acres Outside of Creekbed
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 200 feet
 Unadjusted hourly production: 491.9 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: -20 %
 Average site altitude: 4,020 feet

Material weight: 2,100 lbs/LCYWeight description: Earth - Loam**Job Condition Correction Factor**

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

| | | |
|------------------|-------|---------------|
| Job efficiency: | 0.830 | (1 SHIFT/DAY) |
| Spoil pile: | 0.800 | (FND-RF) |
| Push gradient: | 1.426 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 1.095 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Net correction: 0.8554

Adjusted unit production: 420.77 LCY/hr

Adjusted fleet production: **420.77 LCY/hr**

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.521/LCY

Total job time: **75.85 Hours**

Total job cost: **\$16,638**

REVEGETATION WORKTask description: Seedbed Prep & Plant Cover CropSite: Larson PitPermit Action: 2019 UpdatePermit/Job#: M2007012**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 3/29/2019County: PhillipsFilename: M012-003User: ERRAgency 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 |
|---------------------------|--------------------------------|------------------------|----------------|
| Sorghum, Sudan - Arikaree | 15.00 | 8.61 | \$10.35 |
| Totals Seed Mix | 15.00 | 8.61 | \$10.35 |

Application

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

| | |
|---|--|
| Total Seed Application Cost/Acre | |
|---|--|

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: | 38.6 | Cost /Acre: | \$348.64 |
| Estimated Failure Rate: | 25% | Cost /Acre*: | \$0.00 |
| *Selected Replanting Work Items: | NONE | | |

| | |
|---------------------|--------------------|
| Initial Job Cost: | \$13,457.50 |
| Reseeding Job Cost: | \$0.00 |
| Total Job Cost: | \$13,458 |
| Job Hours: | 10.00 |

REVEGETATION WORKTask description: **Plant Reclamation Seed Mixture**Site: **Larson Pit**Permit Action: 2019 UpdatePermit/Job#: M2007012**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 3/29/2019County: PhillipsFilename: M012-004User: ERRAgency or organization name: DRMS**FERTILIZING****Materials**

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------|-----------------|-------|---|----------------|
| Ammonium nitrate, 33-0-0 | 121.20 | pound | \$0.34 | \$41.21 |
| Triple superphosphate, 0-46-0 | 86.90 | pound | \$0.44 | \$38.24 |
| | | | Total Fertilizer Materials Cost/Acre | \$79.44 |

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 |
|--------------------------------|--------------------------------|------------------------|-----------------|
| Blue Grama - Hachita | 0.50 | 8.16 | \$8.33 |
| Prairie Clover, Purple - Kaneb | 0.50 | 3.42 | \$28.94 |
| Little Bluestem - Pastura | 2.10 | 12.53 | \$36.20 |
| Sideoats Grama - El Reno | 2.70 | 8.86 | \$26.73 |
| Western Wheatgrass - Arriba | 2.40 | 6.06 | \$19.87 |
| Totals Seed Mix | 8.20 | 39.04 | \$120.08 |

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: | 38.6 | Cost /Acre: | \$431.52 |
| Estimated Failure Rate: | 25% | Cost /Acre*: | \$352.08 |
| *Selected Replanting Work Items: | SEEDING | | |

| | |
|---------------------|--------------------|
| Initial Job Cost: | \$16,656.67 |
| Reseeding Job Cost: | \$3,397.57 |
| Total Job Cost: | \$20,054 |
| Job Hours: | 10.00 |

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/ Demob of Reclamation Equipment**Site: **Larson Pit**Permit Action: 2019 UpdatePermit/Job#: M2007012**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 3/29/2019County: PhillipsFilename: M012-005User: ERRAgency 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:**

| 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 D8T - 8SU | 53.08 | \$102.55 | \$125.45 | 1 | \$228.00 | \$125.45 | \$250.00 |
| Drill/Broadcast Seeder with Tractor | 25.00 | \$15.54 | \$88.67 | 2 | \$208.42 | \$177.34 | \$500.00 |
| Subtotals: | | | | | \$436.42 | \$302.79 | \$750.00 |

ROADABLE EQUIPMENT:

| Machine Description | Total Cost/hr/ unit | Fleet Size | Haul Trip Cost/hr/ fleet | Return Trip Cost/hr/ fleet |
|---------------------|------------------------|------------|-----------------------------|-------------------------------|
| Subtotals: | | | \$0.00 | \$0.00 |

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: YUMA
 Total one-way travel distance: 35.00 miles
 Average Travel Speed: 50.00 mph

Total Non-Roadable Mob/Demob Cost * \$3,844.15
 * two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$0.00
 ** one round trip, no haul rig:

Transportation Cycle Time:

| | Non- Roadable Equipment | Roadable Equipment |
|-------------------------|-------------------------------|-----------------------|
| Haul Time (Hours): | 0.70 | 0.70 |
| Return Time (Hours): | 0.70 | 0.70 |
| Loading Time (Hours): | 0.75 | NA |
| Unloading Time (Hours): | 0.75 | NA |
| Subtotals: | 2.90 | 1.40 |

JOB TIME AND COST

Total job time: 5.80 Hours

Total job cost: \$3,844