# STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY
Department of Natural Resources

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COLORADO DIVISION OF RECLAMATION MINING & SAFETY



November 26, 2013

Jason Rinderle
Gary Rinderle Construction, Inc.
3202 Springfield Road
Grand Junction, CO 81503

**Re: Upland Gravel, Permit No. M-2001-088, Financial Warranty Increase, Revision No. SI-2**

Dear Mr. Rinderle:

On November 26, 2013 the Division of Reclamation, Mining and Safety increased the current Financial Warranty for this permit to $81,417.69, in accordance with Rule 4.2.1 of the Rules and Regulations. This is an increase of $22,859.69.

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. If you wish to submit a different type of Financial Warranty, please contact me such that I may send you the applicable form.

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

Sincerely,

Travis Marshall
Environmental Protection Specialist

cc: Russ Means, DRMS
Barbara Coria, DRMS

Enclosure(s): Reclamation Cost Update – SI-2

# COST SUMMARY WORK

Task description:

Site: **Upland Gravel** Permit Action: SI-2 Permit/Job#: M2001088

## PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 11/25/2013 County: Mesa Filename: M088-001
User: THM

Agency or organization name: DRMS

## TASK LIST (DIRECT COSTS)

| Task | Description | Form Used | Fleet Size | Task Hours | Cost |
|---|---|---|---|---|---|
| 01a | Backfill pit floor and highwall after mining Unit 5 | DOZER | 1 | 128.55 | $26,151.75 |
| 02a | Grade 2 feet of overburden over 8 acres disturbance | DOZER | 1 | 49.86 | $10,143.86 |
| 03a | Replace topsoil on 6.75 acres | SCRAPER1 | 1 | 13.75 | $10,832.03 |
| 04a | Revegetate 8 acres affected area | REVEGE | 1 | 16.00 | $8,699.01 |
| 05a | Mobilization | MOBILIZE | 1 | 3.00 | $4,692.81 |
| | | **SUBTOTALS:** | | **211.16** | **$60,519.46** |

## INDIRECT COSTS

OVERHEAD AND PROFIT:

| | | | |
|---|---|---|---|
| Liability insurance: | 2.02% | Total = | $1,222.49 |
| Performance bond: | 1.05% | Total = | $635.45 |
| Job superintendent: | 105.58 hrs | Total = | $6,905.99 |
| Profit: | 10.00% | Total = | $6,051.95 |
| | | TOTAL O & P = | $14,815.88 |
| | | CONTRACT AMOUNT (direct + O & P) = | $75,335.34 |

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

| | | | |
|---|---|---|---|
| Financial warranty processing (legal/related costs): | 500.00 | Total = | 500.00 |
| Engineering work and/or contract/bid preparation: | 0.00% | Total = | $0.00 |
| Reclamation management and/or administration: | 5.00% | | $3,766.77 |
| CONTINGENCY: | 3.00 | Total = | $1,815.58 |
| | | TOTAL INDIRECT COST = | $20,898.23 |
| | | **TOTAL BOND AMOUNT (direct + indirect) =** | **$81,417.69** |

# BULLDOZER WORK

Task description: **Backfill pit floor and highwall after mining Unit 5**

Site: **Upland Gravel** Permit Action: SI-2 Permit/Job#: M2001088

## PROJECT IDENTIFICATION

Task #: 01A State: Colorado Abbreviation: None
Date: 11/22/2013 County: Mesa Filename: M088-01a
User: THM

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:

| | | Utilization % |
|---|---|---|
| Ownership Cost/Hour: | $56.69 | NA |
| Operating Cost/Hour: | $107.90 | 100 |
| Ripper op. Cost/Hour: | $0.00 | 0 |
| Operator Cost/Hour: | $38.85 | NA |

Total unit Cost/Hour: $203.44
Total Fleet Cost/Hour: **$203.44**

## MATERIAL QUANTITIES

Initial Volume: 43,000
Swell factor: 1.115
Loose volume: **47,945** LCY

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

## HOURLY PRODUCTION

Average push distance: 150 feet
Unadjusted hourly production: 634.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -20 %
Average site altitude: 4,800 feet

Material weight: 2,500 lbs/LCY

Weight description: Clay - Dry

| Job Condition Correction Factor | | Source |
|---|---|---|
| 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: | 1.426 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.920 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Net correction: 0.5880

Adjusted unit production: 372.97 LCY/hr
Adjusted fleet production: **372.97** LCY/hr

## JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.545/LCY

Total job time: **128.55** Hours
Total job cost: **$26,151.75**

# BULLDOZER WORK

Task description: **Grade 2 feet of overburden over 8 acres disturbance**

Site: **Upland Gravel** Permit Action: SI-2 Permit/Job#: M2001088

## PROJECT IDENTIFICATION

| | | | | | |
|---|---|---|---|---|---|
| Task #: | 02A | State: | Colorado | Abbreviation: | None |
| Date: | 11/22/2013 | County: | Mesa | Filename: | M088-02a |
| User: | THM | | | | |

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:

| | | Utilization % |
|---|---|---|
| Ownership Cost/Hour: | $56.69 | NA |
| Operating Cost/Hour: | $107.90 | 100 |
| Ripper op. Cost/Hour: | $0.00 | 0 |
| Operator Cost/Hour: | $38.85 | NA |

Total unit Cost/Hour: $203.44
Total Fleet Cost/Hour: **$203.44**

## MATERIAL QUANTITIES

| | |
|---|---|
| Initial Volume: | 25,813 |
| Swell factor: | 1.115 |
| Loose volume: | **28,781** LCY |

Source of estimated volume: Division of Reclamation, Mining & Safety
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: 0 %
Average site altitude: 4,800 feet

Material weight: 2,500 lbs/LCY

Weight description: Clay - Dry

| Job Condition Correction Factor | | Source |
|---|---|---|
| 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: | 0.920 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Net correction: 0.4123

Adjusted unit production: 577.22 LCY/hr
Adjusted fleet production: **577.22** LCY/hr

## JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.352/LCY

Total job time: **49.86** Hours
Total job cost: **$10,143.86**

# SCRAPER TEAM WORK

Task description: **Replace topsoil on 6.75 acres**

Site: **Upland Gravel** Permit Action: SI-2 Permit/Job#: M2001088

## PROJECT IDENTIFICATION

Task #: 03A State: Colorado Abbreviation: None
Date: 11/25/2013 County: Mesa Filename: M088-03a
User: THM

Agency or organization name: DRMS

## HOURLY EQUIPMENT

COSTShift basis: 1 per day

| | Equipment Description |
|---|---|
| -Scraper: | Cat 627G w/push-pull |
| -Dozer: | Cat D8T - 8SU |
| Support Equipment -Load Area: | NA |
| -Dump Area: | NA |
| Road Maintenance -Motor Grader: | NA |
| -Water Truck: | NA |

**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 | NA | NA |
| Ownership cost/hour: | $65.78 | $56.69 | NA | NA | NA | NA |
| Operating cost/hour: | $187.67 | $107.90 | NA | NA | NA | NA |
| Ripper op. cost/hour: | NA | $0.00 | NA | NA | NA | NA |
| Operator cost/hour: | $38.82 | $38.85 | NA | NA | NA | NA |
| Unit Subtotals: | $292.26 | $203.44 | NA | NA | NA | NA |
| Number of Units: | 2 | 1 | 0 | 0 | 0 | 0 |
| Group Subtotals: | Work: | $787.96 | Support: | $0.00 | Maint: | $0.00 |

Total work team cost/hour: **$787.96**

## MATERIAL QUANTITIES

Initial volume: 10,890 CCY Swell factor: 1.000
Loose volume: **10,890** LCY

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

## HOURLY PRODUCTION

Material weight: 1,600 lbs/LCY
Material description: Top Soil
Rated Payload: 52,800 pounds
Payload Capacity: 33.00 LCY

Scraper Bowl (volume) Basis:

Struck Volume: 15.70 LCY
Heaped Volume: 22.00 LCY
Average Volume: 18.85 LCY
Adjusted Capacity: **18.85** LCY

Cycle Time:

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

Job Condition Correction: Site Altitude: 4800 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: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|---|---|---|---|---|---|---|
| 1 | 750.00 | -2.60 | 5.00 | 2.40 | 2868 | 0.43 |

Haul Time: **0.43** minutes

Return Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|---|---|---|---|---|---|---|
| 1 | 750.00 | 2.60 | 5.00 | 7.60 | 2202 | 0.44 |

Return Time: **0.44** minutes

Total Scraper team cycle time: **2.37** minutes
Adjusted for job conditions: 792.18 LCY/Hour
Selected Number of Scrapers: 2 Scraper(s)
Adjusted single scraper team (unit) hourly production: 792.18 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: **792.18** LCY/Hour

Unadjusted unit production/hour: 954.43 LCY/Hour
Optimal Number of Scrapers per push dozer:

## JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **13.75** Hours

Unit cost: $0.995 /LCY Total job cost: **$10,832.03**

# REVEGETATION WORK

Task description: **Revegetate 8 acres affected area**

Site: **Upland Gravel** Permit Action: SI-2 Permit/Job#: M2001088

## PROJECT IDENTIFICATION

Task #: 04A State: Colorado Abbreviation: None
Date: 11/25/2013 County: Mesa Filename: M088-04a
User: THM

Agency or organization name: DRMS

## FERTILIZING

**Materials**

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---|---|---|---|---|
| 10-34-0, 18-46-0, 5-10-5 | 100.00 | pound | $0.33 | $32.70 |
| | | | **Total Fertilizer Materials Cost/Acre** | **$32.70** |

**Application**

| Description | Cost /Acre |
|---|---|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | $52.71 |
| **Total Fertilizer Application Cost/Acre** | **$52.71** |

## TILLING

| Description | Cost /Acre |
|---|---|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | $98.01 |
| **Total Tilling Cost/Acre** | **$98.01** |

## SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|---|---|---|---|
| Indian Ricegrass - Paloma | 1.50 | 4.86 | $13.07 |
| Crested Wheatgrass - Ephraim | 1.20 | 5.51 | $2.68 |
| Sand Dropseed | 0.04 | 4.78 | $0.28 |
| Pubescent Wheatgrass - Luna | 2.25 | 4.65 | $5.04 |
| Galleta | 2.00 | 7.30 | $50.40 |
| Saltbush, Four Wing | 2.25 | 3.10 | $24.14 |
| Saltbush, Shadscale | 2.25 | 3.36 | $26.82 |
| **Totals Seed Mix** | 11.49 | 33.55 | **$122.42** |

**Application**

| Description | Cost /Acre |
|---|---|
| Drill seeding (DRMS Cost Data) | $88.20 |
| **Total Seed Application Cost/Acre** | **$88.20** |

## MULCHING and MISCELLANEOUS

**Materials**

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---|---|---|---|---|
| Hay, delivered {MEANS 31 25 14.16 1200} | 1.50 | TON | $265.00 | $397.50 |
| Herbicide - 2,4D @ 1.0 pt/ac | 1.00 | ACRE | $1.23 | $1.23 |
| **Total Mulch Materials Cost/Acre** | | | | **$398.73** |

**Application**

| Description | Cost /Acre |
|---|---|
| Crimping, with tractor {DMG survey data} | $65.89 |
| Power mulcher (MEANS 32 91 13.16 0250) | $86.68 |
| Weed spray, truck, non-aquatic area, nox. [DMG] | $61.49 |
| **Total Mulch Application Cost/Acre** | **$214.06** |

## 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: 8 Cost /Acre: $1,006.83
Estimated Failure Rate: 8% Cost /Acre*: $1,006.83
*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,MULCHING

Initial Job Cost: **$8,054.64**
Reseeding Job Cost: **$644.37**
Total Job Cost: **$8,699.01**
Job Hours: **16.00**

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mobilization**

Site: **Upland Gravel** Permit Action: SI-2 Permit/Job#: M2001088

## PROJECT IDENTIFICATION

Task #: 05A State: Colorado Abbreviation: None
Date: 11/25/2013 County: Mesa Filename: M088-05a
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:

| 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 | 47.71 | $56.69 | $117.55 | 1 | $174.24 | $117.55 | $250.00 |
| Cat 627G w/push-pull | 43.48 | $65.78 | $117.55 | 2 | $366.66 | $235.10 | $500.00 |
| 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: | | | | | **$764.86** | **$529.99** | **$1,250.00** |

## 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. | $15.66 | 2 | $31.32 | $31.32 |
| Subtotals: | | | **$31.32** | **$31.32** |

## EQUIPMENT HAUL DISTANCE and Time

| | | |
|---|---|---|
| Nearest Major City or Town within project area region: | GRAND JUNCTION | |
| Total one-way travel distance: | 10.00 | miles |
| Average Travel Speed: | 40.00 | mph |
| Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig: | $4,677.15 | |
| Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig: | $15.66 | |

Transportation Cycle Time:

| | Non-Roadable Equipment | Roadable Equipment |
|---|---|---|
| Haul Time (Hours): | 0.25 | 0.25 |
| Return Time (Hours): | 0.25 | 0.25 |
| Loading Time (Hours): | 0.50 | NA |
| Unloading Time (Hours): | 0.50 | NA |
| Subtotals: | 1.50 | 0.50 |

## JOB TIME AND COST

| | | |
|---|---|---|
| Total job time: | **3.00** | Hours |
| Total job cost: | **$4,692.81** | |