


**COLORADO**Division of Reclamation,
Mining and Safety

Department of Natural Resources

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: Gypsum Ranch Pit | MINE/PROSPECTING ID#: M-1998-014 | MINERAL: Sand and gravel | COUNTY: Eagle |
| INSPECTION TYPE: Monitoring | INSPECTOR(S): Travis H. Marshall | INSP. DATE: April 11, 2017 | INSP. TIME: 11:30 |
| OPERATOR: Oldcastle SW Group, Inc. dba United Comp County | OPERATOR REPRESENTATIVE: Chip Bair | TYPE OF OPERATION: 112c - Construction Regular Operation | |

| | | |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| REASON FOR INSPECTION: Normal I&E Program | BOND CALCULATION TYPE: Complete Bond | BOND AMOUNT: \$446,143.00 |
| DATE OF COMPLAINT: NA | POST INSP. CONTACTS: None | JOINT INSP. AGENCY: None |
| WEATHER: Clear | INSPECTOR'S SIGNATURE:  | SIGNATURE DATE: April 17, 2017 |

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

INSPECTION TOPIC: Financial Warranty

PROBLEM/POSSIBLE VIOLATION: Problem: The financial warranty is not adequate to reclaim the site in accordance with the approved reclamation plan. This is a failure to maintain the proper financial warranty amount to complete reclamation of the affected lands pursuant to C.R.S. 34-32.5-117(4)(b) of the Act.

CORRECTIVE ACTIONS: The operator shall submit adequate financial warranty, as determined by the Division. The Division will be sending a separate surety increase notice to the operator regarding the increase of the financial warranty. The operator will have 60 days from the date on the surety increase notice to post the additional financial warranty.

CORRECTIVE ACTION DUE DATE: 6/12/17

INSPECTION TOPIC: Sediment Control

PROBLEM/POSSIBLE VIOLATION: Problem: Erosion gullies and ruts were observed on-site. This is a problem at this time for failure to protect the affected land from erosion pursuant to C.R.S. 34-32.5-116 (4) (j).

CORRECTIVE ACTIONS: The operator shall provide a technical revision to the Division addressing the erosion and sloughing of material adjacent to the Eagle River. The technical revision shall include methods and a proposed configuration that demonstrates how the area of concern will minimize the future potential for off-site damage and stabilized to prevent erosion damage by the corrective action due date.

CORRECTIVE ACTION DUE DATE: 6/02/17

OBSERVATIONS

This inspection was conducted as part of the normal monitoring program established by the Colorado Division of Reclamation, Mining and Safety. The Gypsum Ranch Pit is located approximately 1.5 miles east of Gypsum just north of U.S. Highway 6. The site is a 112c operation that consists of 155.6 acres. Chip Bair of Oldcastle SW Group, Inc. dba United Companies of Mesa County accompanied the inspector during the inspection.

The mine identification sign and the affected area boundary markers are in place and in compliance with rule 3.1.12.

The pit was active during the inspection and various stockpiles of construction materials were observed on the pit floor. All fuel storage was properly stored in secondary containment. The overall appearance of the site was organized and no unnecessary trash or debris was observed.

One area of concern is sediment control problem cited above. It appears that there is some sloughing adjacent to the Eagle River along the northern permit boundary. All the material that has sloughed down the bank appears to be within the permit boundary but is a concern and considered a problem. The operator shall provide a technical revision to the Division addressing the erosion and sloughing of material adjacent to the Eagle River. The technical revision shall include methods and a proposed configuration that demonstrates how the area of concern will minimize the future potential for off-site damage and stabilized to prevent erosion damage by the corrective action due date of June 2, 2017.

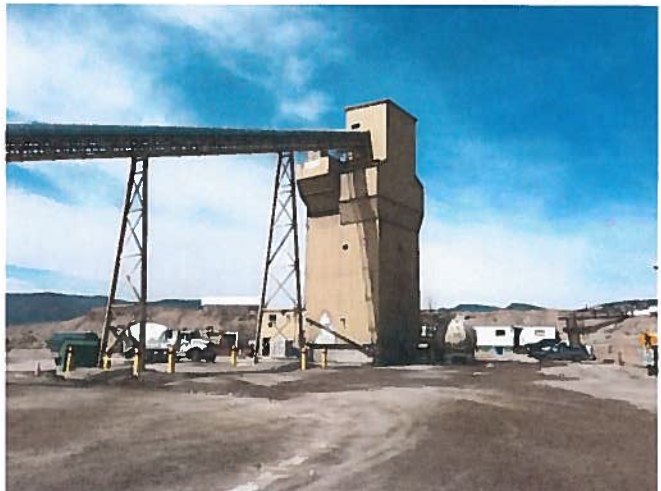
No noxious weeds were observed during the inspection.

In an effort to ensure that the financial warranty remains adequate to reclaim the site per the requirements of the approved reclamation plan, DRMS has recalculated the reclamation cost estimate (copy enclosed). Therefore pursuant to Sections 34-32.5-117(4) of the Colorado Land Reclamation Act, adequate financial warranty must be submitted to the DRMS within 60 days of the mailing date of this inspection. If you have any questions regarding placement of the additional required financial warranty please contact Barbara Coria at (303) 866-3567 ext. 8148.

Photos that show the conditions observed during the inspection are included at the end of this report.

Responses to this inspection report should be directed to Travis Marshall at the Division of Reclamation, Mining and Safety, Grand Junction Field Office, 101 South 3rd Street, Room 301, Grand Junction, Colorado 81501, phone no. 970-241-2042.

PHOTOGRAPHS







GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

| | | |
|--------------------------------------------|------------------------------------------|----------------------------------|
| (AR) RECORDS----- <u>Y</u> | (FN) FINANCIAL WARRANTY----- <u>PB</u> | (RD) ROADS----- <u>N</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>Y</u> | (TS) TOPSOIL----- <u>Y</u> |
| (MP) GENL MINE PLAN COMPLIANCE- <u>Y</u> | (FW) FISH & WILDLIFE----- <u>Y</u> | (RV) REVEGETATION--- <u>Y</u> |
| (SM) SIGNS AND MARKERS----- <u>Y</u> | (SP) STORM WATER MGT PLAN--- <u>NA</u> | (CI) COMPLETE INSP--- <u>Y</u> |
| (ES) OVERBURDEN/DEV. WASTE----- <u>NA</u> | (SC) EROSION/SEDIMENTATION--- <u>PB</u> | (RS) RECL PLAN/COMP-- <u>Y</u> |
| (AT) ACID OR TOXIC MATERIALS----- <u>Y</u> | (OD) OFF-SITE DAMAGE----- <u>Y</u> | (ST) STIPULATIONS----- <u>NA</u> |

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

Inspection Contact Address

Jason Burkey
Oldcastle SW Group, Inc.
2273 River Road
Grand Junction, CO 81502

PERMIT #: M-1998-014
INSPECTOR'S INITIALS: THM
INSPECTION DATE: April 11, 2017

Enclosure – Reclamation Cost Update

COST SUMMARY WORK

Task description: _____

Site: Gypsum Ranch Pit

Permit Action: SI-01

Permit/Job#: M1998014

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 4/13/2017

County: Eagle

Filename: M014-001

User: THM

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

| Task | Description | Form Used | Fleet Size | Task Hours | Cost |
|--------------------------|---------------------------------------------------|-----------|------------|---------------|------------------|
| 01a | Demo/Disposal concrete batch plant and feeder bin | DEMOLISH | 1 | 80.00 | \$46,345.04 |
| 01b | Demo/disposal of site facilities | DEMOLISH | 1 | 40.00 | \$1,956.72 |
| 02a | Highwall slope reduction (Phase 1-4) | DOZER | 2 | 149.83 | \$48,861.00 |
| 02b | Transport backfill material | SCRAPER1 | 4 | 44.27 | \$139,760.00 |
| 03a | Rip pit floor and access road | RIPPER | 2 | 57.16 | \$23,618.00 |
| 04a | Replace topsoil | SCRAPER1 | 4 | 15.57 | \$49,156.00 |
| 05a | Distribute topsoil | DOZER | 2 | 30.00 | \$9,784.00 |
| 06a | Revegetate pit floor | REVEGE | 1 | 80.00 | \$131,232.00 |
| 06b | Revegetate slopes | REVEGE | 1 | 40.00 | \$24,635.00 |
| 07a | Mobilize/demobilize reclamation crew/equipment | MOBILIZE | 1 | 3.14 | \$5,065.00 |
| <u>SUBTOTALS:</u> | | | | 539.97 | \$480,413 |

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02
Performance bond: 1.05
Job superintendent: 344.85
Profit: 10.00

Total = \$9,704.34

Total = \$5,044.34

Total = \$25,191.29

Total = \$48,041.30

TOTAL O & P = \$87,981.27

CONTRACT AMOUNT (direct + O & P) = \$568,394.27

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

\$28,419.71

CONTINGENCY: 3.00

Total = \$14,412.39

TOTAL INDIRECT COST = \$131,313.37

TOTAL BOND AMOUNT (direct + indirect) = \$611,726.37

DEMOLITION WORK

Task description: Demo/Disposal concrete batch plant and feeder bin

Site: Gypsum Ranch Pit

Permit Action: SI-01

Permit/Job#: M1998014

PROJECT IDENTIFICATION

Task #: 01A

State: Colorado

Abbreviation: None

Date: 4/13/2017

County: Eagle

Filename: 01a

User: THM

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 102.20 %

| Structure or Item Description | Dimensions | Demolition Menu Selection | Quantity | Unit | Unit Cost | Total Cost |
|-------------------------------------|---------------------|-------------------------------------------------------------------------------|-----------|------|-----------|-------------|
| Concrete batch plant | 20' x 24' x 65'H | Plant (3S) demo./off-site disposal in approved landfill - Max. 15 mile haul | 31,200.00 | CF | \$0.60 | \$18,720.00 |
| Concrete batch plant stem wall | 1.5'T x 4'H x 64'L | Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push | 384.00 | SF | \$1.41 | \$541.44 |
| Concrete plant pad/wash area | 20' x 24' (3) | Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push | 1,440.00 | SF | \$0.87 | \$1,251.36 |
| Plant storage building | 40' x 40' x 14'H | Bldg. (SN) demo./off-site disposal in approved landfill - Max. 15 mile haul | 22,400.00 | CF | \$0.35 | \$7,929.60 |
| Plant storage building stemwall | 1'T x 6'H x 126'L | Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push | 756.00 | SF | \$1.41 | \$1,065.96 |
| Conveyer | 192.5'L | OBSOLETE-Conveyor, elevated, including supports - 5 ft. W x 6 ft. H housing | 192.50 | LF | \$44.51 | \$8,567.98 |
| Lower feeder bin walls and dividers | 1752.65 cf., 14.5'H | Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push | 1,752.65 | SF | \$1.41 | \$2,471.24 |
| Upper feeder bin walls and dividers | 3.5'H x 115'L | Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push | 402.50 | SF | \$0.94 | \$378.35 |
| Feeder bin pad | 80' x 60' x 8"T | Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push | 4,800.00 | SF | \$0.87 | \$4,171.20 |
| Fuel storage facility | 3'H x 96'L x 8"T | Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push | 288.00 | SF | \$0.87 | \$250.27 |

Job Hours: 80.00

Subtotal
(unadjusted): \$45,347.40

Total Cost
(adjusted for location): \$46,345.04

DEMOLITION WORK

Task description: Demo/disposal of site facilities

Site: Gypsum Ranch Pit

Permit Action: SI-01

Permit/Job#: M1998014

PROJECT IDENTIFICATION

Task #: 01B

State: Colorado

Abbreviation: None

Date: 4/13/2017

County: Eagle

Filename: 01b

User: THM

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 102.20 %

| Structure or Item Description | Dimensions | Demolition Menu Selection | Quantity | Unit | Unit Cost | Total Cost |
|-------------------------------|----------------|-------------------------------------------------------------------------------|----------|------|-----------|------------|
| Office Trailer | 8' x 10' x 40' | Bldg. (SN) demo./off-site disposal in approved landfill - Max. 15 mile haul | 3,200.00 | CF | \$0.35 | \$1,132.80 |
| Scale | 60' x 10' | Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push | 600.00 | SF | \$1.30 | \$781.80 |

Job Hours: 40.00

Subtotal
(unadjusted): \$1,914.60

Total Cost
(adjusted for
location): \$1,956.72

BULLDOZER WORKTask description: Highwall slope reduction (Phase 1-4)Site: Gypsum Ranch PitPermit Action: SI-01Permit/Job#: M1998014**PROJECT IDENTIFICATION**Task #: 02AState: ColoradoAbbreviation: NoneDate: 4/13/2017County: EagleFilename: 02aUser: THMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: OBSOLETE-Cat D8T - 8UHorsepower: 305Blade Type: UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

| | | <u>Utilization %</u> |
|------------------------|----------------|----------------------|
| Ownership Cost/Hour: | <u>\$52.86</u> | <u>NA</u> |
| Operating Cost/Hour: | <u>\$68.35</u> | <u>100</u> |
| Ripper own. Cost/Hour: | <u>\$0.00</u> | <u>NA</u> |
| Ripper op. Cost/Hour: | <u>\$0.00</u> | <u>0</u> |
| Operator Cost/Hour: | <u>\$41.85</u> | <u>NA</u> |

Total unit Cost/Hour: \$163.06Total Fleet Cost/Hour: \$326.11**MATERIAL QUANTITIES**Initial Volume: 219,907Swell factor: 1.124Loose volume: 247,088 LCYSource of estimated volume: Observations made during Oct. 2010 inspectionSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 1,627.0 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: -20 %Average site altitude: 6,400 feetMaterial weight: 2,900 lbs/LCYWeight description: Sand and gravel - Dry**Job Condition Correction Factor**

| | | <u>Source</u> |
|-----------------------|--------------|-----------------|
| Operator Skill: | <u>0.750</u> | <u>(AVG.)</u> |
| Material consistency: | <u>0.900</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: | 0.793 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Net correction: 0.5068

Adjusted unit production: 824.56 LCY/hr
Adjusted fleet production: 1649.12 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.198/LCY

Total job time: 149.83 Hours
Total job cost: \$48,861

SCRAPER TEAM WORKTask description: **Transport backfill material**Site: **Gypsum Ranch Pit**Permit Action: **SI-01**Permit/Job#: **M1998014****PROJECT IDENTIFICATION**Task #: **02B**State: **Colorado**Abbreviation: **None**Date: **4/13/2017**County: **Eagle**Filename: **02b**User: **THM**Agency or organization name: **DRMS****HOURLY EQUIPMENT**COSTShift basis: **1 per day**

| | Equipment Description |
|---------------------------------|-----------------------|
| -Scraper: | Cat 657G |
| -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: | \$154.79 | \$83.81 | NA | NA | NA | NA |
| Operating cost/hour: | \$184.57 | \$66.17 | NA | NA | NA | NA |
| %Utilization-ripper: | NA | NA | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | \$0.00 | NA | NA | NA | NA |
| Ripper op. cost/hour: | NA | \$0.00 | NA | NA | NA | NA |
| Operator cost/hour: | \$31.26 | \$41.85 | NA | NA | NA | NA |
| Unit Subtotals: | \$370.62 | \$191.83 | NA | NA | NA | NA |
| Number of Units: | 8 | 1 | 0 | 0 | 0 | 0 |
| Group Subtotals: | Work: \$3,156.79 | | Support: | \$0.00 | Maint: | \$0.00 |

Total work team cost/hour: **\$3,156.79****MATERIAL QUANTITIES**Initial volume: **219,907**

CCY

Swell factor: **1.124**Loose volume: **247,088**

LCY

Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight: **2,900 lbs/LCY**
 Material description: **Sand and gravel - Dry**
 Rated Payload: **104,000 pounds**
 Payload Capacity: **35.86 LCY**

Struck Volume: **32.00** LCY
 Heaped Volume: **44.00** LCY
 Average Volume: **38.00** LCY
 Adjusted Capacity: **35.86** LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 6400 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 5.0Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|-----------|---------------|---------------|----------------|-------------------|
| 1 | 500.00 | 0.00 | 5.00 | 5.00 | 2335 | 0.57 |

Haul Time: 0.57 minutesReturn Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|-----------|---------------|---------------|----------------|-------------------|
| 1 | 500.00 | 0.00 | 5.00 | 5.00 | 2888 | 0.39 |

Return Time: 0.39 minutesTotal Scraper team cycle time: 2.56 minutesAdjusted for job conditions: 697.63 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,395.26 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 5,581.03 LCY/HourUnadjusted unit production/hour: 840.52 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 4 Team(s)Total job time: 44.27 HoursUnit cost: \$0.566 /LCYTotal job cost: \$139,760

BULLDOZER RIPPING WORK

Task description: Rip pit floor and access road

Site: Gypsum Ranch Pit Permit Action: SI-01 Permit/Job#: M1998014

PROJECT IDENTIFICATION

Task #: 03A State: Colorado Abbreviation: None
Date: 4/13/2017 County: Eagle Filename: 03a
User: THM

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU Horsepower: 310
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

| | | Utilization % |
|-----------------------------|-----------------|---------------|
| Ownership Cost/Hour: | <u>\$83.81</u> | <u>NA</u> |
| Operating Cost/Hour: | <u>\$66.17</u> | <u>100</u> |
| Ripper Ownership Cost/Hour: | <u>\$7.55</u> | <u>NA</u> |
| Ripper Operating Cost/Hour: | <u>\$7.21</u> | <u>100</u> |
| Operator Cost/Hour: | <u>\$41.85</u> | <u>NA</u> |
| Total Unit Cost/Hour: | <u>\$206.59</u> | |
| Total Fleet Cost/Hour: | <u>\$413.17</u> | |

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 78.00 acres Rip Depth (ft): 1.00 Volume: 125,840 BCY or CCY

Source of estimated quantity: Annual report

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.56 mph
Average Ripping Width: 7.08 degrees
Average Ripping Length: 500.00 feet
Average Dozer Speed: 88.00 feet
Average Maneuver Time: 0.25 feet
Production per unit area: 0.822 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.822 Acres/hr
Site Altitude: 6,400 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.68 Acres/hr
Adjusted Hourly Fleet Production: 1.36 Acres/hr

JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: 57.16 Hours

Unit cost: \$302.798 Per acre Total job cost: \$23,618

SCRAPER TEAM WORKTask description: **Replace topsoil**Site: **Gypsum Ranch Pit**Permit Action: **SI-01**Permit/Job#: **M1998014****PROJECT IDENTIFICATION**Task #: **04A**State: **Colorado**Abbreviation: **None**Date: **4/13/2017**County: **Eagle**Filename: **04a**User: **THM**Agency or organization name: **DRMS****HOURLY EQUIPMENT**COSTShift basis: **1 per day**

| | Equipment Description |
|---------------------------------|-----------------------|
| -Scraper: | Cat 657G |
| -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: | \$154.79 | \$83.81 | NA | NA | NA | NA |
| Operating cost/hour: | \$184.57 | \$66.17 | NA | NA | NA | NA |
| %Utilization-ripper: | NA | NA | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | \$0.00 | NA | NA | NA | NA |
| Ripper op. cost/hour: | NA | \$0.00 | NA | NA | NA | NA |
| Operator cost/hour: | \$31.26 | \$41.85 | NA | NA | NA | NA |
| Unit Subtotals: | \$370.62 | \$191.83 | NA | NA | NA | NA |
| Number of Units: | 8 | 1 | 0 | 0 | 0 | 0 |
| Group Subtotals: | Work: \$3,156.79 | | Support: | \$0.00 | Maint: | \$0.00 |

Total work team cost/hour: **\$3,156.79****MATERIAL QUANTITIES**Initial volume: **83,893**

CCY

Swell factor: **1.000**Loose volume: **83,893**

LCY

Source of estimated volume: **78 ac. at 8" depth**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight: **1,600 lbs/LCY**
 Material description: **Top Soil**
 Rated Payload: **104,000 pounds**
 Payload Capacity: **65.00 LCY**

Struck Volume: **32.00** LCY
 Heaped Volume: **44.00** LCY
 Average Volume: **38.00** LCY
 Adjusted Capacity: **38.00** LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 6400 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 5.0Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|-----------|---------------|---------------|----------------|-------------------|
| 1 | 1000.00 | 0.00 | 5.00 | 5.00 | 2335 | 0.65 |

Haul Time: 0.65 minutesReturn Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|-----------|---------------|---------------|----------------|-------------------|
| 1 | 1000.00 | 0.00 | 5.00 | 5.00 | 2888 | 0.56 |

Return Time: 0.56 minutesTotal Scraper team cycle time: 2.81 minutesAdjusted for job conditions: 673.45 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,346.90 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 5,387.62 LCY/HourUnadjusted unit production/hour: 811.39 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 4 Team(s)Total job time: 15.57 HoursUnit cost: \$0.586 /LCYTotal job cost: \$49,156

BULLDOZER WORKTask description: Distribute topsoilSite: Gypsum Ranch PitPermit Action: SI-01Permit/Job#: M1998014**PROJECT IDENTIFICATION**Task #: 05AState: ColoradoAbbreviation: NoneDate: 4/13/2017County: EagleFilename: 05aUser: THMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: OBSOLETE-Cat D8T - 8UHorsepower: 305Blade Type: UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

| | | <u>Utilization %</u> |
|------------------------|----------------|----------------------|
| Ownership Cost/Hour: | <u>\$52.86</u> | <u>NA</u> |
| Operating Cost/Hour: | <u>\$68.35</u> | <u>100</u> |
| Ripper own. Cost/Hour: | <u>\$0.00</u> | <u>NA</u> |
| Ripper op. Cost/Hour: | <u>\$0.00</u> | <u>0</u> |
| Operator Cost/Hour: | <u>\$41.85</u> | <u>NA</u> |

Total unit Cost/Hour: \$163.06Total Fleet Cost/Hour: \$326.11**MATERIAL QUANTITIES**Initial Volume: 83,893Swell factor: 1.000Loose volume: 83,893 LCYSource of estimated volume: 78 ac. at 8" depthSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 1,627.0 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 6,400 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

| | | <u>Source</u> |
|-----------------------|--------------|-----------------|
| Operator Skill: | <u>0.750</u> | <u>(AVG.)</u> |
| Material consistency: | <u>1.200</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: | 1.000 | (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: 1,398.08 LCY/hr

Adjusted fleet production: 2796.16 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.117/LCY

Total job time: 30.00 Hours

Total job cost: \$9,784

REVEGETATION WORKTask description: Revegetate pit floorSite: Gypsum Ranch PitPermit Action: SI-01Permit/Job#: M1998014**PROJECT IDENTIFICATION**Task #: 06AState: ColoradoAbbreviation: NoneDate: 4/13/2017County: EagleFilename: 06aUser: THMAgency 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 |
|------------------------------------------------|-----------------|
| Chisel plowing {DMG} | \$90.60 |
| Weed control spraying (MEANS 31 31 16.13 3100) | \$242.00 |
| Total Tilling Cost/Acre | \$332.60 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|--------------------------------|--------------------------------|------------------------|-----------------|
| Meadow Brome - Regar | 10.00 | 9.18 | \$50.80 |
| Orchardgrass - Potomac | 4.00 | 49.59 | \$12.12 |
| Alfalfa - Ladak (inoculated) | 3.00 | 14.46 | \$8.04 |
| Red Clover - Medium | 2.00 | 12.40 | \$26.66 |
| Ryegrass, Perennial - Zero Nui | 4.00 | 22.68 | \$6.64 |
| Timothy - Climax | 1.00 | 28.70 | \$1.57 |
| Totals Seed Mix | 24.00 | 137.01 | \$105.83 |

Application

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

MULCHING and MISCELLANEOUS**Materials**

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------------------|-----------------|------|-------------|-----------------|
| Herbicide - Curtail @ 4.0 pt/ac | 1.00 | ACRE | \$7.16 | \$7.16 |
| Straw, delivered {MEANS 31 25 14.16 1200} | 2.00 | TON | \$261.00 | \$522.00 |
| Total Mulch Materials Cost/Acre | | | | \$529.16 |

Application

| Description | Cost /Acre |
|-------------------------------------------------|-----------------|
| Crimping, with tractor {DMG survey data} | \$66.02 |
| Weed spray, truck, non-aquatic area, nox. [DMG] | \$71.50 |
| Total Mulch Application Cost/Acre | \$137.52 |

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: 95
 Estimated Failure Rate: 25%
 *Selected Replanting Work Items: TILLING, SEEDING, MULCHING
 Initial Job Cost: **\$104,985.45**
 Reseeding Job Cost: **\$26,246.36**
 Total Job Cost: **\$131,232**
 Job Hours: **80.00**

Cost /Acre: \$1,105.11
 Cost /Acre*: \$1,105.11

REVEGETATION WORKTask description: Revegetate slopesSite: Gypsum Ranch PitPermit Action: SI-01Permit/Job#: M1998014PROJECT IDENTIFICATIONTask #: 06BState: ColoradoAbbreviation: NoneDate: 4/13/2017County: EagleFilename: 06bUser: THMAgency or organization name: DRMSFERTILIZING**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 |
|------------------------------------------------|-----------------|
| Chisel plowing {DMG} | \$90.60 |
| Weed control spraying (MEANS 31 31 16.13 3100) | \$242.00 |
| Total Tilling Cost/Acre | \$332.60 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|-----------------------------|--------------------------------|------------------------|------------|
| Arrowleaf Balsamroot | 0.25 | 0.31 | \$17.55 |
| Bitterbrush, Antelope | 0.13 | 0.04 | \$2.44 |
| Indian Ricegrass - Native | 1.00 | 3.24 | \$7.00 |
| Creeping Red Fescue - Cindy | 2.00 | 25.25 | \$4.44 |
| Bottlebrush Squirreltail | 1.00 | 4.41 | \$23.50 |
| Sandberg Bluegrass - VNS | 2.00 | 42.47 | \$16.12 |
| Idaho Fescue | 2.00 | 25.25 | \$18.00 |
| Holly or Oregon Grape | 0.25 | 0.31 | \$43.88 |
| Lupine, Silver | 0.25 | 0.15 | \$17.50 |

| | | | |
|----------------------------------|--------------|---------------|-----------------|
| Slender Wheatgrass - Native | 4.00 | 14.60 | \$11.28 |
| Rabbitbrush, Rubber | 0.13 | 1.86 | \$8.04 |
| Western Wheatgrass - Native | 4.00 | 10.10 | \$28.00 |
| Needlegrass, Green - Lodorm | 2.00 | 8.31 | \$9.74 |
| Rose, Wood's | 0.25 | 0.00 | \$5.13 |
| Sage, Fringed | 0.06 | 5.22 | \$2.56 |
| Sagebrush, Mountain or Big | 0.13 | 6.60 | \$2.47 |
| Prairie Junegrass | 1.00 | 53.15 | \$30.33 |
| Globemallow, Scarlet (or copper) | 0.25 | 2.83 | \$33.88 |
| Sulphur Flower (or Buckwheat) | 0.25 | 0.52 | \$32.25 |
| Yarrow, Western | 0.01 | 0.76 | \$0.52 |
| Totals Seed Mix | 20.95 | 205.39 | \$314.61 |

Application

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

MULCHING and MISCELLANEOUS**Materials**

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------------------|-----------------|------|-------------|-----------------|
| Herbicide - Curtail @ 4.0 pt/ac | 1.00 | ACRE | \$7.16 | \$7.16 |
| Straw, delivered {MEANS 31 25 14.16 1200} | 2.00 | TON | \$261.00 | \$522.00 |
| Total Mulch Materials Cost/Acre | | | | \$529.16 |

Application

| Description | Cost /Acre |
|-------------------------------------------------|-----------------|
| Crimping, with tractor {DMG survey data} | \$66.02 |
| Weed spray, truck, non-aquatic area, nox. [DMG] | \$71.50 |
| Total Mulch Application Cost/Acre | \$137.52 |

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: 15 Cost /Acre: \$1,313.89
 Estimated Failure Rate: 25% Cost /Acre*: \$1,313.89
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING
 Initial Job Cost: \$19,708.35
 Reseeding Job Cost: \$4,927.09

| | |
|-----------------|-----------------|
| Total Job Cost: | <u>\$24,635</u> |
| Job Hours: | <u>40.00</u> |

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Mobilize/demobilize reclamation crew/equipmentSite: Gypsum Ranch PitPermit Action: SI-01Permit/Job#: M1998014**PROJECT IDENTIFICATION**Task #: 07AState: ColoradoAbbreviation: NoneDate: 4/13/2017County: EagleFilename: 07aUser: THMAgency 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 D8R Series II - 8U (2005) | 53.17 | \$45.97 | \$125.45 | 2 | \$342.83 | \$250.90 | \$500.00 |
| Cat 651E | 67.38 | \$69.90 | \$125.45 | 2 | \$390.70 | \$250.90 | \$500.00 |
| Drill/Broadcast Seeder with Tractor | 25.00 | \$39.59 | \$88.67 | 1 | \$128.26 | \$88.67 | \$250.00 |

Subtotals: **\$861.79** **\$590.47** **\$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, 1 T. Crew | \$20.91 | 1 | \$20.91 | \$20.91 |

Subtotals: **\$20.91** **\$20.91**

EQUIPMENT HAUL DISTANCE and Time

| | | |
|--------------------------------------------------------|--------------|-------|
| Nearest Major City or Town within project area region: | <u>EAGLE</u> | |
| Total one-way travel distance: | <u>10.00</u> | miles |
| Average Travel Speed: | <u>35.00</u> | mph |

| | |
|-------------------------------------|-------------------|
| Total Non-Roadable Mob/Demob Cost * | <u>\$5,053.44</u> |
| '* two round trips with haul rig: | |
| Total Roadable Mob/Demob Cost ** | <u>\$11.95</u> |
| ** one round trip, no haul rig: | |

Transportation Cycle Time:

| | Non-Roadable Equipment | Roadable Equipment |
|-------------------------|------------------------|--------------------|
| Haul Time (Hours): | 0.29 | 0.29 |
| Return Time (Hours): | 0.29 | 0.29 |
| Loading Time (Hours): | 0.50 | NA |
| Unloading Time (Hours): | 0.50 | NA |
| Subtotals: | 1.57 | 0.57 |

JOB TIME AND COST

| | | |
|-----------------|-------------|-------|
| Total job time: | <u>3.14</u> | Hours |
|-----------------|-------------|-------|

| | |
|-----------------|----------------|
| Total job cost: | <u>\$5,065</u> |
|-----------------|----------------|