# STATE OF COLORADO

#### **DIVISION OF RECLAMATION, MINING AND SAFETY**

Department of Natural Resources

1313 Sherman St., Room 215 Denver, Colorado 80203 Phone: (303) 866-3567 FAX: (303) 832-8106



April 20, 2012

Gayle Lyman
Elam Construction, Inc.
556 Struthers Avenue
Grand Junction, CO
81501

John W. Hickenlooper Governor Mike King Executive Director Loretta E. Piñeda Director

RE: Bunn Ranch Pit, Permit No. M-1980-131, Reclamation Costs Update and Notice of Surety Increase SI-2

Dear Mr. Lyman:

In an effort to ensure the Financial Warranty for the above referenced site adequately reflects the actual current costs of fulfilling the requirements of the approved reclamation plan, the Colorado Division of Reclamation, Mining and Safety (Division) has updated the reclamation cost estimate (copy enclosed). Therefore, pursuant to Section 34–32.5–117(4) of the Colorado Land Reclamation Act, adequate Financial Warranty must be submitted to the Division within 60 days of the mailing date of this letter. The additional amount needs to be accepted prior to Wednesday, June 20, 2012. Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted.

Staff calculations estimate the cost to reclaim the above referenced site to be <u>\$182,486.00</u>. This is an increase of <u>\$134,166.00</u> over the <u>\$48,320.00</u> currently held by the Division. This estimate is based on conditions observed during the March 28, 2012 inspection.

Please make arrangements with Barbara Coria at the Division of Reclamation, Mining and Safety Denver Office, phone no. 303.866.3567, ext. 8148 for submittal of the financial warranty. Any questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Barbara Coria.

If you require additional information, have questions or concerns, please contact me at the DRMS Grand Junction Field Office.

Elam Construction, Inc. Page 2 of 2 April 20, 2012

Sincerely,

Dustin Czapla

Environmental Protection Specialist Department of Natural Resources

Division of Reclamation, Mining and Safety

101 South 3<sup>rd</sup>, Suite 301

Grand Junction, CO 81501

Phone: (970) 243-6299 Fax: (970) 241-1516

Cc:

Enc: Financial Warranty Cost Estimate

### **COST SUMMARY WORK**

Task description: Reclamation cost review

Permit Action: 2012 Mar 28

Site: Bunn Ranch Pit Inspection Permit/Job#: M1980131

**PROJECT IDENTIFICATION** 

Task #: 000 State: Colorado Abbreviation: None

Date: 4/19/2012 County: Moffat Filename: M131-000

User: DMC

Agency or organization name: DRMS

#### TASK LIST (DIRECT COSTS)

| Task  |   | Form     | Fleet        | Task   |             |
|-------|---|----------|--------------|--------|-------------|
| 1 ask | Description                                 | Used     | Size         | Hours  | Cost        |
| 01a   | Remove office building                      | DEMOLISH | 1            | 8.00   | \$13,886.73 |
| 02a   | Lower water level by 10 feet in pit 1       | PUMPING  | ] 1          | 114.68 | \$5,543.00  |
| 02ь   | DewaterPit 2                                | PUMPING  | 1            | 42.42  | \$2,050.00  |
| 02c   | DewaterPit 3                                | PUMPING  | ] 1          | 70.88  | \$3,426.00  |
| 02d   | Lower water level by 10 feet in pit 4       | PUMPING  | 1            | 25.17  | \$1,217.00  |
| 02e   | Lower water level by 10 feet in pit 5       | PUMPING  | 1            | 25.17  | \$1,217.00  |
| 02f   | Dewater Pit 6                               | PUMPING  | ] 1          | 256.31 | \$12,387.00 |
| 03a   | Reduce all slopes to 3H:1V or flatter       | DOZER    | 2            | 60.80  | \$24,304.81 |
| 04a   | Rip compacted stockpile and operation areas | RIPPER   | 2            | 13.70  | \$5,840.00  |
| 05a   | Transport topsoil from stockpiles           | LOADER   | 2            | 46.65  | \$13,131.00 |
| 05b   | Distribute topsoil                          | DOZER    | 2            | 16.79  | \$6,714.10  |
| 06a   | Revegetate affected areas                   | REVEGE   | ] 1          | 20.00  | \$19,897.00 |
| 07a   | Mobilize reclamation crew and equipment     | MOBILIZE | 1            | 2.11   | \$4,920.72  |
|       |   | 702.68   | \$114,534.36 |        |             |

#### **INDIRECT COSTS**

#### **OVERHEAD AND PROFIT:**

 Liability insurance:
 2.02
 Total =
 \$2,313.59

 Performance bond:
 1.05
 Total =
 \$1,202.61

 Job superintendent:
 738.89
 Total =
 \$43,816.18

Profit: 10.00 Total =  $\frac{$11,453.44}{$58,785.82}$ 

TOTAL O & P = \$58,785.82 CONTRACT AMOUNT (direct + O & P) = \$173,320.18

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 \$8,666.01

CONTINGENCY: 0.00 Total = \$0.00

TOTAL INDIRECT COST = \$67,951.83

TOTAL BOND AMOUNT (direct + indirect) = \$182,486

# **DEMOLITION WORK**

Task description: Remove office building Permit Action: 2012 Mar 28 Site: Bunn Ranch Pit Inspection Permit/Job#: M1980131 **PROJECT IDENTIFICATION** Task #: 01A Colorado State: Abbreviation: None Date: 4/19/2012 County: Moffat Filename: M131-01a User: DMC Agency or organization name: DRMS

# **UNIT COSTS**

Job Hours: <u>8.00</u>

# Location adjustment: 91.30 %

| Structure or Item Description | Dimensions            | Demolition Menu<br>Selection  | Quantity  | Unit | Unit<br>Cost | Total Cost  |
|-------------------------------|-----------------------|---|-----------|------|--------------|-------------|
| Office building               | 50'L x 30'H x<br>10'H | Bldg. (SN) demo./off-site<br>disposal in approved<br>landfill - Max. 5 mile<br>haul | 15,000.00 | CF   | \$1.01       | \$15,210.00 |

Total Cost
Subtotal (adjusted for
(unadjusted): \$15,210.00 location): \$13,886.73

|   |  | 1 OMIT II   | IG WORK  |   |                       |
|---|--|---|--|---|-----------------------|
| Task description:   | Lowe   | er water level by 10 fee  | t in pit 1   |   |                       |
|   | 3  |   |  |   |                       |
| : Bunn Ranch Pit  |  | Permit Action:  | Inspection   | Permit/Job#:  | M1980131              |
| -   |  | -   | mspection  | T CHIII U 300//.  | 1411700131            |
| PROJECT IDENTII   | FICATIO  | <u> </u>  |  |   |                       |
| Task #: 02A   |  | State: Colorado   |  | Abbreviation:   | None                  |
| Date: 4/19/2012   |  | County: Moffat  |  | Filename:   | M131-02a              |
| User: DMC   | <u>'</u>   | 1.101141  |  |   |                       |
|   |  |   |  |   |                       |
| Agency or orga  | anization i  | name: DRMS  |  |   | <del></del>           |
| <b>HOURLY EQUIPM</b>  | ENT CO   | <u>OST</u>  |  |   |                       |
|   | Descri   | 8   |  | Quantity  |                       |
| Make and Model:   |  | fugal pump - 200M, 10   |  | 1   |                       |
| Attachment 1:   |  | n pipe - 10 in. diam., 25   |  | 1   |                       |
| Attachment 2:   |  | arge pipe - 10 in. D., 25   | ft.  | 2   |                       |
| Labor Unit 1:   | Pump   | operator  |  | 1   |                       |
| Horsepower:   | 70   |   |  |   |                       |
|   | per day  |   |  |   |                       |
| Weight:   | 1.95   |   |  |   |                       |
| J)  | JS Tons)   |   |  |   |                       |
| Cost Breakdown:   |  |   |  |   |                       |
|   |  |   | Utilization %  |   |                       |
| Ownership Cost  |  | \$11.47   | NA   |   |                       |
| Operating Cost  |  | \$17.44   | 100  |   |                       |
| Operator Cost   |  | \$19.42   | NA   |   |                       |
|   | AT T   | \$48.33   |  |   |                       |
| Total Unit Cost   | /Hour:   | Ψτο.55  |  |   |                       |
|   | -  |   |  |   |                       |
| Total Fleet Cos   | t/Hour:  | \$48.33   |  |   |                       |
|   | t/Hour:  |   |  |   |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo   | t/Hour: ITIES olume:   |   |  | Conversion factor:  | 325850.5800           |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Vo   | t/Hour: ITIES blume:   | \$48.33   | gallons  |   | 325850.5800           |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo   | t/Hour: ITIES blume:   | \$48.33<br>80.00<br><b>26,068,046.40</b>  | _ •  | Unit inflow rate in   |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Vo Total Pond Inflow S   | t/Hour: ITIES blume: olume: urface Area:   | \$48.33<br>80.00  | gallons Sq. ft.  |   | 325850.5800<br>0.1758 |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V  | t/Hour: ITIES blume: blume: urface Area: olume   | \$48.33<br>80.00<br><b>26,068,046.40</b><br>30,000  | Sq. ft.  | Unit inflow rate in   |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V  | t/Hour: ITIES blume: olume: urface Area:   | \$48.33<br>80.00<br><b>26,068,046.40</b>  | _ •  | Unit inflow rate in   |                       |
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| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Vo Total Pond Inflow S  Total Pond Inflow V per Source   | t/Hour: ITIES  blume: blume: urface Area: olume Hour:  | \$48.33<br>80.00<br><b>26,068,046.40</b><br>30,000<br>5,274.00  | Sq. ft.  | Unit inflow rate in   |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME   | t/Hour: ITIES plume: plume: urface Area: olume Hour: e of estima   | \$48.33  80.00  26,068,046.40  30,000  5,274.00  ated volume: Site may  | Sq. ft. gallons  | Unit inflow rate in gph/sq. ft.:  |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma   | t/Hour: ITIES  plume: plume: urface Area: olume Hour: e of estima  | \$48.33  80.00  26,068,046.40  30,000  5,274.00  ated volume: Site major site site site site site site site site  | Sq. ft. gallons ps   | Unit inflow rate in gph/sq. ft.:  |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma   | t/Hour: ITIES  plume: plume: urface Area: olume Hour: e of estima  aximum Pr Estimated   | \$48.33  80.00  26,068,046.40  30,000  5,274.00  Ited volume: Site manual street with the street manual street with the street manual street with the street manual street  | Sq. ft.  gallons  200,000  5   | Unit inflow rate in gph/sq. ft.:  gph/pump feet   |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma   | t/Hour: ITIES  plume: plume: urface Area: olume Hour: e of estima  aximum Pr Estimated   | \$48.33  80.00  26,068,046.40  30,000  5,274.00  Ited volume: Site manual street with the street manual street with the street manual street with the street manual street  | Sq. ft.  gallons  200,000  5 0   | Unit inflow rate in gph/sq. ft.:  gph/pump feet feet feet   |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma   | t/Hour: ITIES  blume: urface Area: olume Hour: e of estima  aximum Pr Estimated timated Di   | \$48.33  80.00  26,068,046.40  30,000  5,274.00  Itted volume: Site may  sump Capacity: Suction Head: ischarge Head: Total Head:  | Sq. ft.  gallons  200,000  5  0  5   | Unit inflow rate in gph/sq. ft.:  gph/pump feet feet feet feet  |                       |
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| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma   | t/Hour: ITIES  blume: urface Area: olume Hour: e of estima  aximum Pr Estimated timated Di   | \$48.33  80.00  26,068,046.40  30,000  5,274.00  Itted volume: Site may  sump Capacity: Suction Head: ischarge Head: Total Head:  | Sq. ft.  gallons  200,000  5  0  5   | Unit inflow rate in gph/sq. ft.:  gph/pump feet feet feet feet  |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma I Est   | t/Hour: ITIES  blume: colume: urface     Area: colume     Hour: cof estima  aximum Pr Estimated timated Di  CPB Pr   | \$48.33  80.00  26,068,046.40  30,000  5,274.00  Inted volume: Site magnetic Site magnetic Site magnetic Site magnetic Suction Head: Site is charge Head: Total Head: Site Altitude: Site Altitude:   | Sq. ft.  gallons  200,000  5  0  5  201,000  6,200   | Unit inflow rate in gph/sq. ft.:  gph/pump feet feet feet gph/pump feet   |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma I Est   | t/Hour:  ITIES  blume: urface     Area: olume     Hour: e of estima  aximum Pr Estimated timated Di  CPB Pr  usted Pump  | \$48.33  80.00  26,068,046.40  30,000  5,274.00  Inted volume: Site magnetic site magnetic sischarge Head: Interpretation Total He | Sq. ft.  gallons  200,000  5  0  5  201,000  6,200   | Unit inflow rate in gph/sq. ft.:  gph/pump feet feet feet gph/pump feet gph/pump feet gph/pump                  |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma I Est   | t/Hour: ITIES  plume: plume: urface Area: olume Hour: e of estima  aximum Pr Estimated timated Di  CPB Pr  usted Pump adjusted P   | \$48.33  80.00  26,068,046.40  30,000  5,274.00  Ited volume: Site may be sump Capacity: Suction Head: ischarge Head: Total Head: ump Capacity: Site Altitude: Site Altitude: Pring Capacity: Pumping Time:   | Sq. ft.  gallons  200,000  5  0  5  201,000  6,200  201,000  129.69  | Unit inflow rate in gph/sq. ft.:  gph/pump feet feet feet gph/pump feet gph/pump feet gph hours                 |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma I Est  Adju Initial Uni Inflow                      | t/Hour:  ITIES  plume: olume: urface Area: olume Hour: e of estima  aximum Pr Estimated timated Di  CPB Pr  usted Pum adjusted P   | \$48.33  80.00  26,068,046.40  30,000  5,274.00  Ited volume: Site may  sump Capacity: Suction Head: ischarge Head: Total Head: ump Capacity: Site Altitude:  ping Capacity: Pumping Time: initial Pumping:   | Sq. ft.  gallons  200,000  5  0  5  201,000  6,200  201,000  129.69  683,994                                 | Unit inflow rate in gph/sq. ft.:  gph/pump feet feet feet gph/pump feet gph/pump feet gph hours gallons         |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma I Est  Adju Initial Un Inflow Net Uni               | t/Hour:  ITIES  plume: urface Area: olume Hour: c of estima  eximum Pr Estimated Di  CPB Pr  usted Pump adjusted P during In adjusted P                                    | \$48.33  80.00  26,068,046.40  30,000  5,274.00  Ited volume: Site may  sump Capacity: Suction Head: ischarge Head: Total Head: ump Capacity: Site Altitude:  ping Capacity: Dumping Time: initial Pumping: Dumping Time: pumping Time:   | Sq. ft.  gallons  200,000  5 0 5 201,000 6,200  201,000 129.69 683,994 133.09                                | Unit inflow rate in gph/sq. ft.:  gph/pump feet feet feet gph/pump feet gph hours gallons Hours                 |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma I Est  Adju Initial Uni Inflow Net Uni Alti         | t/Hour:  ITIES  plume: urface Area: olume Hour: e of estima  aximum Pr Estimated Di  CPB Pr  usted Pump adjusted Pr during In adjusted P tude Adju                         | \$48.33  80.00  26,068,046.40  30,000  5,274.00  Ited volume: Site may ump Capacity: Suction Head: ischarge Head: Total Head: ump Capacity: Site Altitude: Pumping Time: initial Pumping: Pumping Time: isstment Factor:  | Sq. ft.  gallons  200,000  5  0  5  201,000  6,200  201,000  129.69  683,994  133.09  0.9400                 | gph/pump feet feet gph/pump feet feet gph/pump feet Hours gallons Hours (3% rule)                               |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma I Est  Adju Initial Un Inflow Net Un Alti           | t/Hour:  ITIES  plume: urface Area: olume Hour: c of estima  eximum Prestimated bimated Di  CPB Prested Pump adjusted Prestimated during In adjusted Prestimated Pump Effi | \$48.33  80.00  26,068,046.40  30,000  5,274.00  Ited volume: Site may ump Capacity: Suction Head: ischarge Head: Total Head: ump Capacity: Site Altitude:  Pumping Time: initial Pumping: Pumping Time: isstment Factor: iciency Factor:   | Sq. ft.  gallons  200,000  5  0  5  201,000  6,200  201,000  129.69  683,994  133.09  0.9400  0.9167         | gph/pump feet feet feet gph/pump feet feet gph/pump feet  gph hours gallons Hours (3% rule) (55 min./hr.)       |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma I Est  Adju Initial Uni Inflow Net Uni Alti Total A | t/Hour:  ITIES  plume: urface Area: olume Hour: c of estima  eximum Pr Estimated Di  CPB Pr  usted Pump adjusted Pr during In adjusted Pr tude Adju Pump Effi Adjusted P   | \$48.33  80.00  26,068,046.40  30,000  5,274.00  Ited volume: Site may ump Capacity: Suction Head: ischarge Head: Total Head: ump Capacity: Site Altitude: Pumping Time: initial Pumping: Pumping Time: isstment Factor:  | Sq. ft.  gallons  200,000  5  0  5  201,000  6,200  201,000  129.69  683,994  133.09  0.9400                 | gph/pump feet feet gph/pump feet feet gph/pump feet Hours gallons Hours (3% rule)                               |                       |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma I Est  Adju Initial Un Inflow Net Un Alti           | t/Hour:  ITIES  plume: urface Area: olume Hour: c of estima  eximum Pr Estimated Di  CPB Pr  usted Pump adjusted Pr during In adjusted Pr tude Adju Pump Effi Adjusted P   | \$48.33  80.00  26,068,046.40  30,000  5,274.00  Ited volume: Site may ump Capacity: Suction Head: ischarge Head: Total Head: ump Capacity: Site Altitude:  Pumping Time: initial Pumping: Pumping Time: isstment Factor: iciency Factor:   | Sq. ft.  gallons  200,000  5  0  5  201,000  6,200  201,000  129.69  683,994  133.09  0.9400  0.9167  114.69 | gph/pump feet feet feet gph/pump feet feet gph/pump feet  gph hours gallons Hours (3% rule) (55 min./hr.) hours | 0.1758                |
| Total Fleet Cos  PUMPING QUANT  Initial Pond Vo Final Pond Inflow S  Total Pond Inflow V per Source  PUMPING TIME  Ma I Est  Adju Initial Uni Inflow Net Uni Alti Total A | t/Hour:  ITIES  plume: urface Area: olume Hour: c of estima  eximum Pr Estimated Di  CPB Pr  usted Pump adjusted Pr during In adjusted Pr tude Adju Pump Effi Adjusted P   | \$48.33  80.00  26,068,046.40  30,000  5,274.00  Ited volume: Site may ump Capacity: Suction Head: ischarge Head: Total Head: ump Capacity: Site Altitude:  Pumping Time: initial Pumping: Pumping Time: isstment Factor: iciency Factor:   | Sq. ft.  gallons  200,000  5  0  5  201,000  6,200  201,000  129.69  683,994  133.09  0.9400  0.9167         | gph/pump feet feet feet gph/pump feet feet gph/pump feet  gph hours gallons Hours (3% rule) (55 min./hr.) hours |                       |

|                                       | FUNIF  | HAO WOKK            |                         |             |
|---------------------------------------|--|---------------------|-------------------------|-------------|
| Task description:                     | DewaterPit 2   |                     |                         |             |
| F :                                   | Permit Action  | n: 2012 Mar 28      |                         |             |
| : Bunn Ranch Pit                      | Permit Action  | Inspection          | Permit/Job#:            | M1080131    |
|                                       |  | Inspection          | 1 CIIIII JOO#.          | WITHOUTST   |
| PROJECT IDENTIFICA                    | TION   |                     |                         |             |
| Task #: 02B                           | State: Colorac   | do                  | Abbreviation:           | None        |
| Date: 4/19/2012                       | County: Moffat   |                     |                         | M131-02b    |
| User: DMC                             |  |                     |                         |             |
|                                       | — DDMG   |                     |                         |             |
| Agency or organization                |  |                     |                         |             |
| HOURLY EQUIPMENT                      | <del></del>  |                     |                         |             |
|                                       | escription   | 0:-                 | Quantity                |             |
|                                       | entrifugal pump - 200M, 1<br>action pipe - 10 in. diam., |                     | 1                       |             |
|                                       | ischarge pipe - 10 in. diam., 2                          |                     | 2                       |             |
|                                       | imp operator   | .5 11.              | 1                       |             |
|                                       | imp operator   |                     | -                       |             |
| Horsepower: 70 Shift Basis: 1 per d   | la   |                     |                         |             |
|                                       |  |                     |                         |             |
| Weight: 1.95                          |  |                     |                         |             |
| •                                     | 110)   |                     |                         |             |
| Cost Breakdown:                       |  | 1 14:1:4: 07        |                         |             |
| Ownership Cost/Hour                   | r: \$11.47   | Utilization %<br>NA |                         |             |
| Operating Cost/Hour                   |  | 100                 |                         |             |
| Operator Cost/Hour                    |  | NA NA               |                         |             |
| Total Unit Cost/Hour                  |  | A 14 B              |                         |             |
|                                       | ·  | _                   |                         |             |
| Total Fleet Cost/Hou                  |  |                     |                         |             |
| PUMPING QUANTITIE                     | <u>S</u>   |                     |                         |             |
| Initial Pond Volume                   |  |                     | Conversion factor:      | 325850.5800 |
| Final Pond Volume                     |  | gallons             |                         |             |
| Total Pond Inflow Surface             | -  |                     | Unit inflow rate in     |             |
| Area                                  |  | Sq. ft.             | gph/sq. ft.:            | 0.1758      |
| Total Pond Inflow Volume              |  | 11                  |                         |             |
| per Hour                              | : 2,461.20   | gallons             |                         |             |
| Source of es                          | timated volume: Site m                                   | aps                 |                         |             |
| PUMPING TIME                          |  |                     |                         |             |
| · · · · · · · · · · · · · · · · · · · | m Pump Capacity:   | 200,000             | gph/pump                |             |
|                                       | ated Suction Head:                                       | 5                   | feet                    |             |
|                                       | ed Discharge Head:                                       | 0                   | feet                    |             |
| Limite                                | Total Head:  | 5                   | feet                    |             |
| CF                                    | PB Pump Capacity:  | 201,000             | gph/pump                |             |
|                                       | Site Altitude:   | 6,200               | feet                    |             |
|                                       |  | -,                  |                         |             |
| Adiusted 1                            | Pumping Capacity:  | 201,000             | gph                     |             |
|                                       | ed Pumping Time:   | 48.63               | hours                   |             |
|                                       | ng Initial Pumping:                                      | 119,699             | gallons                 |             |
|                                       | ed Pumping Time:   | 49.23               | Hours                   |             |
|                                       | Adjustment Factor:                                       | 0.9400              | (3% rule)               |             |
|                                       | Efficiency Factor:                                       | 0.9167              | (55 min./hr.)           |             |
|                                       | ted Pumping Time:  | 42.42               | hours                   |             |
| JOB TIME AND COST                     | · · · · · · · · · · · · · · · · · · ·                    |                     |                         |             |
| JOB I IMIE AND COST                   |  | Total job           | time: 42.42             | Hours       |
|                                       |  | 2 300               |                         |             |
| Unit cost: \$0.00020                  | 7 /Gallon  | Total job           | cost: <b>\$2,050.00</b> |             |

|   |                              | NO WORK       |                     |             |
|---|------------------------------|---------------|---------------------|-------------|
| Task description: De                      | waterPit 3                   |               | -2                  |             |
| Bunn Ranch Pit                            | Permit Action:               |               | D:4/I-1.#.          | N#1090121   |
|   |                              | Inspection    | Permit/Job#:        | M1980131    |
| PROJECT IDENTIFICAT                       | <u>'ION</u>                  |               |                     |             |
| Task #: 02C                               | State: Colorado              |               | Abbreviation: N     | None        |
| Date: 4/19/2012                           | County: Moffat               |               | Filename: N         | /1131-02c   |
| User: DMC                                 |                              |               |                     |             |
| Agency or organization                    | n name: DRMS                 |               |                     |             |
| HOURLY EQUIPMENT                          |                              |               |                     |             |
|   | cription                     |               | Quantity            |             |
|   | trifugal pump - 200M, 10     | in.           | 1                   |             |
|   | tion pipe - 10 in. diam., 25 |               | 1                   |             |
|   | charge pipe - 10 in. D., 25  | ft.           | 2                   | _           |
| Labor Unit 1: Pun                         | ip operator                  |               | 1                   | _           |
| Horsepower: 70                            |                              |               |                     |             |
| Shift Basis: 1 per day                    | /                            |               |                     |             |
| Weight: 1.95                              |                              |               |                     |             |
| (US Tons                                  | s)                           |               |                     |             |
| Cost Breakdown:                           |                              |               |                     |             |
|   |                              | Utilization % |                     |             |
| Ownership Cost/Hour:                      | \$11.47                      | NA<br>100     |                     |             |
| Operating Cost/Hour:                      | \$17.44                      | 100           |                     |             |
| Operator Cost/Hour: Total Unit Cost/Hour: | \$19.42<br>\$48.33           | NA            |                     |             |
| Total Unit Cost/Hour.                     | \$40.33                      |               |                     |             |
| Total Fleet Cost/Hour:                    | \$48.33                      |               |                     |             |
| <b>PUMPING QUANTITIES</b>                 |                              |               |                     |             |
| Initial Pond Volume:                      | 50.00                        |               | Conversion factor:  | 325850.5800 |
| Final Pond Volume:                        | 16,292,529.00                | gallons       | Conversion factor.  | 323630.3600 |
| Total Pond Inflow Surface                 | 10,272,027.00                | Builous       | Unit inflow rate in |             |
| Area:                                     | 17,000                       | Sq. ft.       | gph/sq. ft.:        | 0.1758      |
| Total Pond Inflow Volume                  |                              | •             | J                   |             |
| per Hour:                                 | 2,988.60                     | gallons       |                     |             |
| Source of estin                           | mated volume: Site map       | ps            |                     |             |
| <b>PUMPING TIME</b>                       | -                            |               |                     |             |
|   | Pump Capacity:               | 200,000       | gph/pump            |             |
|   | ed Suction Head:             | 5             | feet                |             |
| Estimated                                 | Discharge Head:              | 0             | feet                |             |
|   | Total Head:                  | 5             | feet                |             |
| CPB                                       | Pump Capacity:               | 201,000       | gph/pump            |             |
|   | Site Altitude:               | 6,200         | feet                |             |
| Adiusted Pu                               | imping Capacity:             | 201,000       | gph                 |             |
| Initial Unadjusted                        |                              | 81.06         | hours               |             |
|   | Initial Pumping:             | 242,248       | gallons             |             |
|   | I Pumping Time:              | 82.26         | Hours               |             |
| Altitude Ac                               | ljustment Factor:            | 0.9400        | (3% rule)           |             |
|   | Efficiency Factor:           | 0.9167        | (55 min./hr.)       |             |
| Total Adjusted                            | d Pumping Time:              | 70.89         | hours               |             |
| JOB TIME AND COST                         |                              |               |                     |             |
|   |                              | Total job     | time: 70.89         | Hours       |
| Unit cost: \$0.000207                     | /Gallon                      | Total job     | cost: \$3,426.00    |             |

| Permit Action:  N  State: Colorado County: Moffat  me: DRMS | 2012 Mar 28<br>Inspection  | Abbreviation: N               | M1980131  None 1131-02d  |
|---|--|-------------------------------|--|
| State: Colorado County: Moffat                              | Inspection   | Abbreviation: N               | lone   |
| State: Colorado County: Moffat                              |  |                               |  |
| County: Moffat  |  |                               |  |
| County: Moffat  |  |                               |  |
|   |  | _                             |  |
| me: DRMS  |  |                               |  |
|   |  |                               |  |
| <u> </u>  | 1=3  |                               |  |
| ion   |  | Quantity                      |  |
|   | n.   | 1                             | _  |
|   |  | 1                             | _  |
|   | ft.  | 2                             |  |
| erator  |  | 1                             | _  |
|   |  |                               |  |
| _   |  |                               |  |
| _   |  |                               |  |
|   |  |                               |  |
|   |  |                               |  |
|   | Utilization %  |                               |  |
|   |  |                               |  |
|   |  |                               |  |
|   | NA   |                               |  |
| \$48.33   |  |                               |  |
| \$48.33   |  |                               |  |
|   |  |                               |  |
| 18.00   |  | Conversion factor:            | 325850.5800  |
|   | gallons  |                               |  |
|   | _ 0  | Unit inflow rate in           |  |
| 1,200   | Sq. ft.  | gph/sq. ft.:                  | 0.1758   |
|   |  |                               |  |
|   | gallons  |                               |  |
| d volume: Site map  | S  | 35000                         |  |
|   |  |                               |  |
| np Capacity:  | 200,000  | gph/pump                      |  |
|   | 5  | feet                          |  |
|   |  |                               |  |
|   |  |                               |  |
|   |  |                               |  |
| file Affiliade.   | 0,200  | 1661                          |  |
| ng Canacity   | 201 000  | anh                           |  |
| mping Time:   | 29.18  | hours                         |  |
|   |  | gallons                       |  |
| al Pumping:   | 0.130  |                               |  |
| ial Pumping:<br>mping Time:                                 | 6,156<br>29.21   | Hours                         |  |
| ial Pumping:<br>mping Time:<br>ment Factor:                 | 29.21<br>0.9400  |                               |  |
| mping Time:   | 29.21  | Hours                         |  |
| mping Time:ment Factor:                                     | 29.21<br>0.9400  | Hours<br>(3% rule)            |  |
| mping Time:<br>ment Factor:<br>ency Factor:                 | 29.21<br>0.9400<br>0.9167  | Hours (3% rule) (55 min./hr.) |  |
|   | \$11.47 \$11.47 \$17.44 \$19.42 \$48.33 \$48.33 \$18.00 \$5,865,310.44  1,200 210.96 d volume: Site map  ap Capacity: action Head: aharge Head: Total Head: ap Capacity: Site Altitude: ang Capacity: Site Altitude: Site Altitude: ang Capacity: Site Altitude: | Sala pump - 200M, 10 in.      | gal pump - 200M, 10 in. pipe - 10 in. diam., 25 ft. ge pipe - 10 in. D., 25 ft. ge pipe - 10 in. diam., 25 ft. ge pipe - 10 in |

Unit cost: \_\_\_\$0.000207 /Gallon

\$1,217.00

Total job cost:

| Task description:      | Lower water          | level by 10 feet    | in pit 5      |                     |             |
|------------------------|----------------------|---------------------|---------------|---------------------|-------------|
| : Bunn Ranch Pit       |                      | Permit Action:      | 2012 Mar 28   | Permit/Job#:        | N/1000121   |
| : Bunn Ranch Pit       | 7                    |                     | Inspection    | Репшијов#:          | M1980131    |
| PROJECT IDENTII        | <u>FICATION</u>      |                     |               |                     |             |
| Task #: 02E            | Sta                  | te: Colorado        |               | Abbreviation:       | None        |
| Date: 4/19/2012        |                      |                     |               | Filename:           | M131-02e    |
| User: DMC              |                      |                     |               |                     |             |
| Agency or org          | anization name:      | DRMS                |               |                     |             |
| HOURLY EQUIPM          | ENT COST             |                     |               |                     |             |
|                        | Description          |                     |               | Quantity            |             |
| Make and Model:        |                      | mp - 200M, 10 i     |               | 1                   |             |
| Attachment 1:          |                      | 10 in. diam., 25    |               | 1                   |             |
| Attachment 2:          |                      | e - 10 in. D., 25 f | <u>t</u>      | 2                   |             |
| Labor Unit 1:          | Pump operator        | •                   |               | 1                   |             |
| Horsepower:            | 70                   |                     |               |                     |             |
| Shift Basis: 1         | per day              |                     |               |                     |             |
| Weight:                | 1.95                 |                     |               |                     |             |
| J)                     | JS Tons)             |                     |               |                     |             |
| Cost Breakdown:        |                      |                     |               |                     |             |
|                        |                      |                     | Utilization % |                     |             |
| Ownership Cost         |                      | 311.47              | NA            | <u> </u>            |             |
| Operating Cost         |                      | 317.44              | 100           | _                   |             |
| Operator Cost          |                      | 319.42              | NA            | _                   |             |
| Total Unit Cost        | :/Hour: \$           | 348.33              |               |                     |             |
| Total Fleet Cos        | st/Hour:             | \$48.33             |               |                     |             |
| <b>PUMPING QUANT</b>   | <u>ITIES</u>         |                     |               |                     |             |
| Initial Pond Vo        | olume:               | 18.00               |               | Conversion factor:  | 325850.5800 |
| Final Pond Vo          |                      | 65,310.44           | gallons       |                     |             |
| Total Pond Inflow S    |                      | ,                   | _ •           | Unit inflow rate in |             |
|                        | Area:                | 1,200               | _ Sq. ft.     | gph/sq. ft.:        | 0.1758      |
| Total Pond Inflow V    |                      |                     |               |                     |             |
| _                      |                      | 210.96              | _ gallons     |                     |             |
|                        | e of estimated volu  | me: Site map        | S             |                     |             |
| PUMPING TIME           |                      | •.                  | 200.000       |                     |             |
|                        | aximum Pump Car      |                     | 200,000       | gph/pump            |             |
|                        | Estimated Suction    |                     | 5             | feet                |             |
| ESI                    | timated Discharge    | Head:               | 5             | feet<br>feet        |             |
|                        | CPB Pump Cap         |                     | 201,000       | gph/pump            |             |
|                        | Site Al              |                     | 6,200         | feet                |             |
|                        |                      |                     | 0,200         |                     |             |
|                        | usted Pumping Cap    |                     | 201,000       | gph                 |             |
|                        | adjusted Pumping     |                     | 29.18         | hours               |             |
|                        | v during Initial Pur |                     | 6,156         | gallons             |             |
|                        | adjusted Pumping     |                     | 29.21         | Hours               |             |
|                        | itude Adjustment I   |                     | 0.9400        | (3% rule)           |             |
|                        | Pump Efficiency I    |                     | 0.9167        | (55 min./hr.)       |             |
| I otal A               | Adjusted Pumping     | ı ime:              | 25.17         | hours               |             |
| <b>JOB TIME AND CO</b> | <u>DST</u>           |                     |               |                     |             |
|                        | _                    |                     | Total jol     | b time: 25.17       | Hours       |
|                        |                      |                     | 2             | 25                  |             |

Unit cost: \_\_\_\$0.000207\_\_\_/Gallon

Total job cost: \_\_\_\_\_\_**\$1,217.00** 

|   | PUMPIN                      | <u>G WORK</u>             |                     |             |
|---|-----------------------------|---------------------------|---------------------|-------------|
| Task description: Dewa                    | iter Pit 6                  |                           |                     |             |
| Bunn Ranch Pit                            | Permit Action:              | 2012 Mar 28<br>Inspection | Permit/Job#:        | M1980131    |
|   | —<br>DN                     |                           |                     |             |
| PROJECT IDENTIFICATION                    | <u>JN</u>                   |                           |                     |             |
| Task #: 02F                               | State: Colorado             |                           |                     | Vone        |
| Date: 4/19/2012                           | County: Moffat              |                           | Filename: N         | M131-02f    |
| User: DMC                                 |                             |                           |                     |             |
| Agency or organization                    | name: DRMS                  |                           |                     |             |
| HOURLY EQUIPMENT CO                       | <u>DST</u>                  |                           |                     |             |
| Descri                                    | iption                      |                           | Quantity            |             |
| Make and Model: Centri                    | fugal pump - 200M, 10 i     | in.                       | 1                   |             |
|   | n pipe - 10 in. diam., 25   |                           | 1                   |             |
|   | arge pipe - 10 in. D., 25 i | <u>ft.</u>                | 2                   |             |
| Labor Unit 1: Pump                        | operator                    |                           | 1                   |             |
| Horsepower: 70                            |                             |                           |                     |             |
| Shift Basis: 1 per day                    |                             |                           |                     |             |
| Weight: 1.95                              |                             |                           |                     |             |
| (US Tons)                                 |                             |                           |                     |             |
| Cost Breakdown:                           |                             |                           |                     |             |
| Our marchin Cost/Hours                    | \$11.47                     | Utilization %<br>NA       |                     |             |
| Ownership Cost/Hour: Operating Cost/Hour: | \$17.44                     | 100                       |                     |             |
| Operator Cost/Hour:                       | \$19.42                     | NA                        |                     |             |
| Total Unit Cost/Hour:                     | \$48.33                     | 1121                      |                     |             |
| -   |                             |                           |                     |             |
| Total Fleet Cost/Hour:                    | \$48.33                     |                           |                     |             |
| <b>PUMPING QUANTITIES</b>                 |                             |                           |                     |             |
| Initial Pond Volume:                      | 183.00                      |                           | Conversion factor:  | 325850.5800 |
| Final Pond Volume:                        | 59,630,656.14               | gallons                   |                     |             |
| Total Pond Inflow Surface                 |                             | _                         | Unit inflow rate in |             |
| Area:                                     | 3,000                       | Sq. ft.                   | gph/sq. ft.:        | 0.1758      |
| Total Pond Inflow Volume                  |                             |                           |                     |             |
| per Hour:                                 | 527.40                      | gallons                   |                     |             |
| Source of estima                          | ated volume: Site map       | S                         |                     |             |
| PUMPING TIME                              |                             |                           |                     |             |
|   | ump Capacity:               | 200,000                   | gph/pump            |             |
|   | Suction Head:               | 5                         | feet                |             |
|   | ischarge Head:              | 0                         | feet                |             |
|   | Total Head:                 | 5                         | feet                |             |
| СРВ Р                                     | ump Capacity:               | 201,000                   | gph/pump            |             |
|   | Site Altitude:              | 6,200                     | feet                |             |
|   |                             |                           |                     |             |
|   | ping Capacity:              | 201,000                   | gph                 |             |
| Initial Unadjusted I                      |                             | 296.67                    | hours               |             |
| Inflow during In                          | nitial Pumping:             | 156,464                   | gallons             |             |
| Net Unadjusted I                          |                             | 297.45                    | Hours               |             |
|   | stment Factor:              | 0.9400                    | (3% rule)           |             |
|   | iciency Factor:             | 0.9167                    | (55 min./hr.)       |             |
| Total Adjusted I                          | Pumping Time:               | 256.31                    | hours               |             |
| JOB TIME AND COST                         |                             | Total job                 | time: <b>256.31</b> | Hours       |
| Unit cost: \$0.000207                     | /Gallon                     | Total job                 | cost: \$12,387.00   |             |
| Ψ0.000207                                 | , Guiloii                   | 10141100                  |                     |             |

#### **BULLDOZER WORK**

Task description: Reduce all slopes to 3H:1V or flatter Permit Action: 2012 Mar 28 Site: Bunn Ranch Pit Inspection Permit/Job#: M1980131 PROJECT IDENTIFICATION Task #: 03A State: Colorado Abbreviation: None Date: 4/19/2012 Moffat M131-03a County: Filename: **DMC** User: Agency or organization name: **DRMS HOURLY EQUIPMENT COST** Basic Machine: Cat D8T - 8U Horsepower: 310 Blade Type: Universal Attachment: NA Shift Basis: 1 per day Data Source: (CRG) Cost Breakdown: Utilization % Ownership Cost/Hour: \$58.56 NA Operating Cost/Hour: \$102.84 100 Ripper op. Cost/Hour: 0 \$0.00 Operator Cost/Hour: \$38.49 NA Total unit Cost/Hour: \$199.89 Total Fleet Cost/Hour: \$399.77 **MATERIAL QUANTITIES** Initial Volume: 59,219 Swell factor: 1.060 Loose volume: 62,772 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: 1,627.0 LCY/hr Materials consistency description: Compacted fill or embankment 0.9 Average push gradient: 0% Average site altitude: 6,200 feet Material weight: 3,250 lbs/LCY Weight description: Gravel - Pitrun 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: | 0.708 | (CAT HB)      |
| Blade type:      | 1.000 | (PAT)         |

Net correction: 0.3173

Adjusted unit production: 516.25 LCY/hr
Adjusted fleet production: 1032.5 LCY/hr

# **JOB TIME AND COST**

Fleet size: 2 Dozer(s)
Unit cost: \$0.387/LCY

Total job time: 60.80 Hours
Total job cost: \$24,304.81

# **BULLDOZER RIPPING WORK**

|          | Task description: | Rip compacted stockpile a                           | nd operation area  | as                 |               |           |
|----------|-------------------|---|--------------------|--------------------|---------------|-----------|
|          |                   | Permit Action                                       |                    |                    | 362           |           |
| Site     | : Bunn Ranch P    | it  | Inspection         | Permi              | it/Job#: M198 | 30131     |
|          | PROJECT IDE       | <u>NTIFICATION</u>                                  |                    |                    |               |           |
|          | Task #: 04A       | State: Colorad                                      | 0                  | Abbrevia           | ation: None   |           |
|          |                   | /2012 County: Moffat                                |                    | Filer              | name: M131    | -04a      |
|          | User: DM          | C   |                    |                    |               |           |
|          | Agency            | or organization name: DRMS                          | man and the same   |                    |               |           |
|          | HOURLY EQU        | IPMENT COST   |                    |                    |               |           |
|          | Basic M           | fachine: Cat D8T - 8U                               |                    | Horsepower:        | 310           |           |
|          | Ripper Atta       | chment: 3-Shank Ripper                              |                    | Shift Basis:       | 1 per day     |           |
|          |                   |   |                    | Data Source:       | (CRG)         |           |
|          | Cost Breakdown:   |   |                    |                    |               |           |
|          |                   |   |                    | Utilization %      |               |           |
|          |                   | •   | 65.28              | NA                 |               |           |
|          |                   | 1 0   | 102.84             | 100                |               |           |
|          | Rippo             |   | \$6.49             | 100                |               |           |
|          |                   | •   | 38.49              | NA                 |               |           |
|          |                   | Total Unit Cost/Hour: 5.                            | 213.10             |                    |               |           |
|          |                   | Total Fleet Cost/Hour: \$                           | 426.20             |                    |               |           |
|          | MATERIAL Q        | UANTITIES S   | elected estimating | method: Area       |               |           |
|          | Alternate Methods |   |                    |                    |               |           |
| Seismic: | NA                | Bank Volume   | : NA               | BCY                | NA            |           |
| Area:    | 16.00             | acres Rip Depth (ft):                               |                    | Volume: 51,6       |               | BCY or CC |
|          | ·                 | -   | maps               |                    |               |           |
|          |                   |   | шаръ               |                    |               |           |
|          | HOURLY PRO        | DUCTION   |                    |                    |               |           |
|          | Seismic:          |   |                    |                    |               |           |
|          |                   | Seismic Velocity:                                   | NA                 | feet/second        |               |           |
|          | Area:             |   |                    |                    |               |           |
|          |                   | Average Ripping Depth:                              | 2.56               | mph                |               |           |
|          |                   | Average Ripping Width:                              | 7.08               | degrees            |               |           |
|          |                   | Average Ripping Length:                             | 100.00             | feet               |               |           |
|          |                   | Average Dozer Speed:                                | 88.00              | feet               |               |           |
|          |                   | Average Maneuver Time:<br>Production per unit area: | 0.25<br>0.703      | feet acres/hour    |               |           |
|          |                   |   | 0.703              | acres/flour        |               |           |
|          | Job Condition Con | rection Factors                                     |                    |                    |               |           |
|          | Una               | djusted Hourly Unit Production:                     | 0.703              | Acres/hr           |               |           |
|          |                   | Site Altitude:                                      | 6,200              | feet               |               |           |
|          |                   | Altitude Adj:                                       | 1.00               | (CAT HB)           |               |           |
|          |                   | Job Efficiency:                                     | 0.83               | (1 shift/day)      | )             |           |
|          |                   | Net Correction:                                     | 0.83               | multiplier         |               |           |
|          |                   | Adjusted Hourly Unit Productio                      |                    | Acres/hr           |               |           |
|          |                   | Adjusted Hourly Fleet Production                    | n:1.17             | Acres/hr           |               |           |
|          | JOB TIME AN       | D COST  |                    |                    |               |           |
|          | Fleet size:       | 2 Grader(s)   | Total job time     | e: <u>13.7</u>     | 0             | Hours     |
|          | Unit cost:        | \$364.994 Per acre                                  | Total job cos      | st: <b>\$5,840</b> | .00           |           |

#### WHEEL LOADER - LOAD AND CARRY WORK

Task description: Transport topsoil from stockpiles Permit Action: 2012 Mar 28 Site: Bunn Ranch Pit Inspection Permit/Job#: M1980131 PROJECT IDENTIFICATION Task #: 05A State: Colorado Abbreviation: None Date: 4/19/2012 Moffat M131-05a County: Filename: User: **DMC** Agency or organization name: **DRMS** HOURLY EQUIPMENT COST Basic Machine: **CAT 972H** Horsepower: 287 Attachment 1: **ROPS Cab** Shift Basis: 1 per day Data Source: (CRG) Cost Breakdown: Utilization % Ownership Cost/Hour: \$36.70 NA Operating Cost/Hour: \$65.54 100 Operator Cost/Hour: \$38.49 NA Total Unit Cost/Hour: \$140.73 Total Fleet Cost/Hour: \$281.46 **MATERIAL QUANTITIES** CCY Initial volume: 26,888 Swell factor: 1.000 Loose volume: 26,888 LCY Source of estimated volume: Pond banks and operations area covered with 10" TS Source of estimated swell factor: Cat Handbook **HOURLY PRODUCTION** Loader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.525 minutes Cycle Time Factors Factor (min.) Source Material: Material up to 1/8" diameter 0.02 0.020 (Cat HB) Stockpile: Conveyor or dozer piled 10 ft. high and up 0.00 0.000 (Cat HB) Truck Ownership: No adjustment - factor not applicable 0.00 0.000 (Cat HB) Operation: Constant operation -0.04 (Cat HB) -0.040Dump Target: Nominal target 0.00 0.000 (Cat HB) Net Cycle Time Adjustment: -0.020 minutes Adjusted Basic Cycle Time: 0.505 minutes Rolling Resistance – Road Conditions Haul: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0 Return: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0 Haul and Return Time Length Grade Res. Rolling Total Res. Travel Time Source (feet) (%) Res. (%) (%)(minutes)

Haul Route:

Return Route:

250

250

0.00

0.00

5.00

5.00

5.00

5.00

(Cat HB)

(Cat HB)

0.2305

0.2080

Total Travel Time: 0.4385 minutes
Total Cycle Time: 0.9435 minutes

#### **Load Bucket Capacity**

Rated Capacity: 5.60 LCY (heaped)

Bucket Fill Factor: 0.975 Loose material - uniform aggregates to 1/8" (95-100%) 0.975

Adjusted Capacity: 5.46 LCY

#### Job Condition Correction Factors

Site Altitude: 6200 feet

|                 |      | Source        |
|-----------------|------|---------------|
| Altitude Adj:   | 1.00 | (CAT HB)      |
| Job Efficiency: | 0.83 | (1 shift/day) |
| Net Correction: | 0.83 | multiplier    |

Unadjusted Hourly Unit Production:347.20LCY/HourAdjusted Hourly Unit Production:288.18LCY/HourAdjusted Hourly Fleet Production:576.36LCY/Hour

### **JOB TIME AND COST**

| Fleet size: | 2       | Loader(s) | Total job time: | 46.65       | Hours |
|-------------|---------|-----------|-----------------|-------------|-------|
| Unit cost:  | \$0.488 | /LCY      | Total job cost: | \$13,131.00 |       |

#### **BULLDOZER WORK**

Task description: Distribute topsoil Permit Action: 2012 Mar 28 Site: Bunn Ranch Pit Inspection Permit/Job#: M1980131 **PROJECT IDENTIFICATION** Task #: 05B State: Colorado Abbreviation: None Date: 4/19/2012 Moffat Filename: M131-05b County: **DMC** User: Agency or organization name: **DRMS** HOURLY EQUIPMENT COST Basic Machine: Cat D8T - 8U 310 Horsepower: Blade Type: Universal Attachment: NA Shift Basis: 1 per day Data Source: (CRG) Cost Breakdown: Utilization % Ownership Cost/Hour: \$58.56 NA Operating Cost/Hour: \$102.84 100 Ripper op. Cost/Hour: 0 \$0.00 Operator Cost/Hour: \$38.49 NA Total unit Cost/Hour: \$199.89 Total Fleet Cost/Hour: \$399.77 **MATERIAL QUANTITIES** Initial Volume: 26,889 Swell factor: 1.000 Loose volume: 26,889 LCY Division of Reclamation, Mining & Safety Source of estimated volume: Source of estimated swell factor: Cat Handbook **HOURLY PRODUCTION** Average push distance: 100 feet Unadjusted hourly production: 931.6 LCY/hr Materials consistency description: Loose stockpile 1.2 Average push gradient: 0% Average site altitude: 6,200 feet Material weight: 1,600 lbs/LCY Weight description: Top Soil

0.750

1.200

Job Condition Correction Factor

Operator Skill:

Material consistency:

Source

(AVG.)

(CAT HB)

| Dozing method:   |       |               |
|------------------|-------|---------------|
| 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)         |

Task # 05B

Net correction: 0.8593

Adjusted unit production: 800.52 LCY/hr
Adjusted fleet production: 1601.04 LCY/hr

# **JOB TIME AND COST**

Fleet size: 2 Dozer(s)
Unit cost: \$0.250/LCY

Total job time: 16.79 Hours
Total job cost: \$6,714.10

# **REVEGETATION WORK**

Task description:

Revegetate affected areas

Permit Action:

Site: Bunn Ranch Pit

2012 Mar 28 Inspection

Permit/Job#: M1980131

# **PROJECT IDENTIFICATION**

Task #: Date: 06A 4/19/2012 State:

Colorado

Abbreviation:

None

User:

DMC

County: Moffat Filename:

M131-06a

Agency or organization name:

DRMS

# **FERTILIZING**

#### Materials

| Description | Units /<br>Acre | Unit          | Cost / Unit         | Cost /Acre |
|-------------|-----------------|---------------|---------------------|------------|
|             |                 |               | \$                  | \$         |
|             | То              | tal Fertilize | Materials Cost/Acre | \$0.00     |

Application

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

# **TILLING**

| Description                                    | Cost /Acre |
|--|------------|
| Chisel plowing {DMG}                           | \$86.71    |
| Weed control spraying (MEANS 31 31 16.13 3100) | \$145.20   |
| Total Tilling Cost/Acre                        | \$231.91   |

# **SEEDING**

| Seed Mix                 | Rate –<br>PLS<br>LBS /<br>Acre | Seeds<br>per SQ.<br>FT | Cost /Acre |
|--------------------------|--------------------------------|------------------------|------------|
| Alfalfa - Common         | 0.80                           | 3.86                   | \$2.00     |
| Orchardgrass - Paiute    | 0.60                           | 7.44                   | \$1.27     |
| Smooth Brome - Lincoln   | 7.80                           | 25.96                  | \$10.14    |
| Timothy, Alpine - Native | 0.15                           | 4.48                   | \$3.98     |
| Totals Seed Mix          | 9.35                           | 41.74                  | \$17.38    |

Application

| Description         | Cost /Acre |
|---------------------|------------|
| Drill seeding {DMG} | \$90.11    |

| Total Seed Application Cost/Acre \$90. |  |
|--|--|
|--|--|

Task # 06A

#### **MULCHING and MISCELLANEOUS**

#### Materials

| Description                               | Units /<br>Acre | Unit        | Cost / Unit         | Cost /Acre |
|---|-----------------|-------------|---------------------|------------|
| Herbicide - 2,4D @ 2.0 pt/ac              | 1.00            | ACRE        | \$2.40              | \$2.40     |
| Straw, delivered {MEANS 31 25 14.16 1200} | 2.00            | TON         | \$164.00            | \$328.00   |
|   |                 | Total Mulch | Materials Cost/Acre | \$330.40   |

Application

| Description                                 |                                   | Cost /Acre |
|---|-----------------------------------|------------|
| Crimping, with tractor {DMG survey data}    |                                   | \$65.89    |
| Weed spray, truck, aquatic area, nox. [DMG] |                                   | \$60.19    |
|   | Total Mulch Application Cost/Acre | \$126.08   |

# **NURSERY STOCK PLANTING**

| Common Name | No /<br>Acre | Type and Size | Planting<br>Cost  | Fertilizer<br>Pellet Cost | Cost /Acre |
|-------------|--------------|---------------|-------------------|---------------------------|------------|
|             |              |               |                   |                           | \$         |
|             |              | To            | tals Nursery Stoc | k Cost / Acre             | \$0.00     |

#### **JOB TIME AND COST**

No. of Acres: 20 Cost /Acre: \$795.88

Estimated Failure Rate: 25% Cost /Acre\*: \$795.88

\*Selected Replanting Work Items: TILLING, SEEDING, MULCHING

Initial Job Cost: \$15,917.60

Reseeding Job Cost: \$3,979.40

Total Job Cost: \$19,897.00

20.00

#### **EQUIPMENT MOBILIZATION/DEMOBILIZATION**

Task description: Mobilize reclamation crew and equipment

Permit Action: 2012 Mar 28

Site: Bunn Ranch Pit Inspection Permit/Job#: M1980131

**PROJECT IDENTIFICATION** 

Task #: 07A State: Colorado Abbreviation: None

Date: 4/19/2012 County: Moffat Filename: M131-07a

User: DMC
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             | Weight/ | Owner ship    | Haul Rig     | Fleet | Haul Trip | Return Trip    | DOT Permit  |
|---------------------|---------|---------------|--------------|-------|-----------|----------------|-------------|
| Description         | Unit    | Cost/hr/ unit | Cost/hr/unit | Size  | Cost/hr/  | Cost/hr/ fleet | Cost/ fleet |
| _                   | (TONS)  |               |              |       | fleet     |                |             |
| Cat D8T - 8U        | 53.70   | \$65.28       | \$125.45     | 2     | \$381.46  | \$250.90       | \$500.00    |
| CAT 972H            | 28.00   | \$36.70       | \$117.55     | 2     | \$308.50  | \$235.10       | \$500.00    |
| Centrifugal pump -  | 1.95    | \$7.66        | \$88.67      | 1     | \$96.33   | \$88.67        | \$250.00    |
| 200M, 10 in.        |         |               |              |       |           |                |             |
| Drill/Broadcast     | 25.00   | \$39.59       | \$88.67      | 1     | \$128.26  | \$88.67        | \$250.00    |
| Seeder with Tractor |         |               |              |       |           |                |             |

Subtotals: \$914.55 \$663.34 \$1,500.00

#### **ROADABLE EQUIPMENT:**

| Machine Description               | Total Cost/hr/ unit | Fleet Size | Haul Trip<br>Cost/hr/ fleet | Return Trip<br>Cost/hr/ fleet |
|-----------------------------------|---------------------|------------|-----------------------------|-------------------------------|
| Light Duty Pickup, 4x4, 1 T. Crew | \$25.30             | 1          | \$25.30                     | \$25.30                       |

Subtotals: \$25.30 \$25.30

#### **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:

Total one-way travel distance:

Average Travel Speed:

CRAIG

miles

35.00

mph

Total Non-Roadable Mob/Demob Cost \*

'\* two round trips with haul rig:

Total Roadable Mob/Demob Cost \*\*

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

\$4,919.27

\$1.45

Transportation Cycle Time:

|                         | Non-Roadable<br>Equipment | Roadable<br>Equipment |
|-------------------------|---------------------------|-----------------------|
| Haul Time (Hours):      | 0.03                      | 0.03                  |
| Return Time (Hours):    | 0.03                      | 0.03                  |
| Loading Time (Hours):   | 0.50                      | NA                    |
| Unloading Time (Hours): | 0.50                      | NA                    |
| Subtotals:              | 1.06                      | 0.06                  |

#### **JOB TIME AND COST**

Total job time: 2.11 Hours

Total job cost: \$4,920.72

### **Notes**

#### Pit 1

Though vegetation is established on much of the slopes, the slopes have not yet been graded to the required 3H:1V. The average slope grade around this pit appeared to be approximately 2H:1V. The pit perimeter is approximately 3,000 lft. Topsoil was stockpiled along the west side of this pit.

#### Pit 2

Average grade of the slopes around this pit appeared to be approximately 1H:1V. The pit perimeter is approximately 1,400 lft. The west and south slopes, approximately 600 lft., will need to be backfilled because of their close proximity to the Ana Branch. The north and east slopes could be cut and filled. A topsoil stockpile was located on the west side of this pit.

#### Pit 3

Average grade of the slopes around this pit appeared to be approximately 1H:1V. The north slope will need to be backfilled because of the close proximity to the permit boundary. The east and south slope will also need to be backfilled because of their close proximity to the Ana Branch. The west slope could be cut and filled. The pit perimeter is approximately 1,700 lft. The north, east and south slopes requiring backfilling are approximately 1,100 lft. Some topsoil was located along the west side of this pit. Any additional topsoil needed could come from the stockpile located near Pit 2.

#### Pit 4

All but the east bank were graded to 3H:1V or less and well vegetated. The east bank, approximately 350 lft., will require some minor grading from approximately 2H:1V to 3H:1V.

#### Pit 5

The west and south pit banks were graded to 3H:1V or less and well vegetated. The north and east banks will require some minor grading from approximately 2H:1V to 3H:1V. The north slope, approximately 450 lft., will need to be backfilled in order to maintain the buffer between the Ana Branch. The east slope, approximately 200 lft., could be cut and filled.

#### Pit 6

The west and northwest pit banks appeared to be graded to 3H:1V or less and well vegetated. A portion of the northeast bank and much of the east bank were near vertical, approximately 1,600 lft. These banks are close to the permit boundary, so they will require backfilling instead of cut and fill. The south bank along the road, roughly 1,700 lft., was approximately 2H:1V. This slope will require backfilling as well so as not to remove the road area between pits 6 and 7. All slopes will need to be reduced to 3H:1V or flatter.

Pits 7-8 appeared adequately reclaimed.

#### Operations and stockpile areas

An office building will need to be removed. Approximate dimensions =  $(30^{\circ}\text{W x } 50^{\circ}\text{L x } 10^{\circ}\text{H})$ .

Approximately 16 acres will need to be ripped and topsoiled.

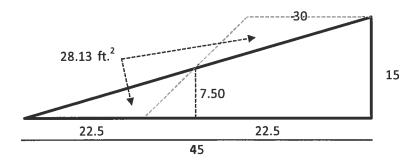


# Highwall reduction - cut and fill

Pit 1

| High                           | nwall Height (ft.)           | 15.0   |      |
|--------------------------------|------------------------------|--------|------|
| Length                         | of Highwall (Ift.)           | 3000   |      |
| ting day day day less care day | Initial Slope                | 2.0    | H:1V |
| -                              | Desired Slope                | 3      | H:1V |
| Volume of material to          | be moved (ft. <sup>3</sup> ) | 84,375 |      |
| olume of material to           | be moved (yd. <sup>3</sup> ) | 3,125  |      |

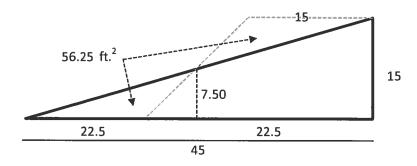
All dimensions measured in feet Drawing not to scale

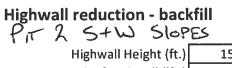


# Highwall reduction - cut and fill Pit 2 N + E SLOPES

|      |        |                                | 1102 / 12                         |
|------|--------|--------------------------------|-----------------------------------|
|      | 15.0   | hwall Height (ft.)             | Hig                               |
| ĺ    | 800    | of Highwall (lft.)             | Lengtl                            |
| H:1V | 1.0    | Initial Slope                  | that they done then they did that |
| H:1V | 3      | Desired Slope                  | -                                 |
|      | 45,000 | o be moved (ft. <sup>3</sup> ) | Volume of material                |
|      | 1.667  | be moved (vd.3)                | Volume of material to             |

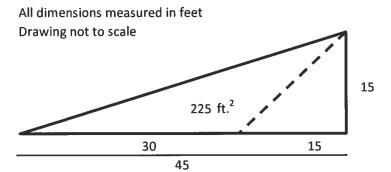
All dimensions measured in feet Drawing not to scale





|      | 15.00  | Highwall Height (ft.)     |
|------|--------|---------------------------|
|      | 600.00 | Length of Highwall (lft.) |
| H:1V | 1.00   | <b></b> Initial Slope     |
| H:1V | 3.00   | ——— Desired Slope         |
|      |        |                           |

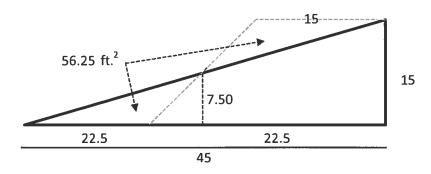
Volume of material to be moved (ft. 3) 135,000 Volume of material to be moved (yd. 3) 5,000

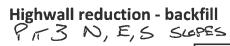


# Highwall reduction - cut and fill

|      |        | 25T SUPE                        | Pit 3 いど           |
|------|--------|---------------------------------|--------------------|
|      | 15.0   | ighwall Height (ft.)            | Н                  |
|      | 600    | th of Highwall (Ift.)           | Leng               |
| H:1V | 1.0    | Initial Slope                   |                    |
| H:1V | 3      | Desired Slope                   | -                  |
|      | 33,750 | to be moved (ft. <sup>3</sup> ) | Volume of material |
|      | 1,250  | to be moved (yd. <sup>3</sup> ) | Volume of material |

All dimensions measured in feet Drawing not to scale



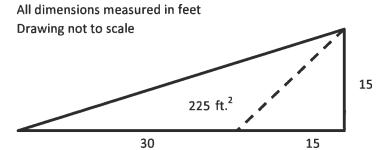


Highwall Height (ft.) 15.00
Length of Highwall (lft.) 1100.00

- - - Initial Slope 1.00 H:1V

Desired Slope 3.00 H:1V

Volume of material to be moved (ft. 3) 247,500 Volume of material to be moved (yd. 3) 9,167



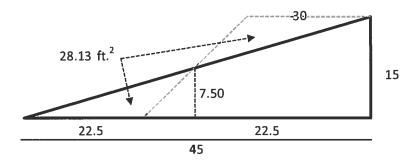
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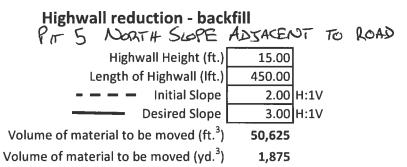
# Highwall reduction - cut and fill

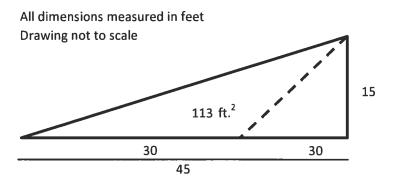
Pit 4

|      | 15.0  | shwall Height (ft.)            | Hi                          |
|------|-------|--------------------------------|-----------------------------|
|      | 350   | of Highwall (Ift.)             | Lengt                       |
| H:1V | 2.0   | Initial Slope                  | *** *** *** *** *** *** *** |
| H:1V | 3     | Desired Slope                  |                             |
| •    | 9,844 | o be moved (ft. <sup>3</sup> ) | Volume of material          |
|      | 365   | be moved (yd. <sup>3</sup> )   | olume of material t         |

All dimensions measured in feet Drawing not to scale



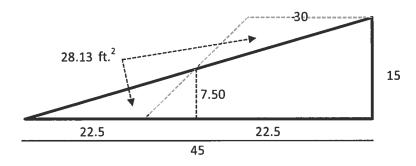




# Highwall reduction - cut and fill Pit 5 EAST Scope

| Volume of material to be moved ( | yd. <sup>3</sup> )  | 208   |      |
|----------------------------------|---------------------|-------|------|
| Volume of material to be moved   | (ft. <sup>3</sup> ) | 5,625 |      |
| Desired SI                       | ope                 | 3     | H:1V |
| Initial SI                       | ope                 | 2.0   | H:1V |
| Length of Highwall               | (lft.)              | 200   |      |
| Highwall Height                  | (ft.)               | 15.0  |      |
| 1100 -117 -                      |                     |       |      |

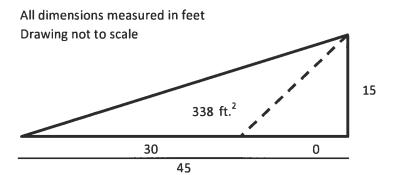
All dimensions measured in feet Drawing not to scale





Highwall reduction - backfill
PIT 6 N + E VERTICAL SCOPES Highwall Height (ft.) 15.00 Length of Highwall (Ift.) 1600.00 0.00 H:1V Initial Slope Desired Slope 3.00 H:1V

Volume of material to be moved (ft.3) 540,000 Volume of material to be moved (yd.3) 20,000



# Highwall reduction - backfill PIT 6 ADTAKENT TO ROAD

| 111 - 11-511-1-1           | 1 - 1     |
|----------------------------|-----------|
| Highwall Height (ft.)      | 15.00     |
| Length of Highwall (Ift.)  | 1700.00   |
| <b>– – –</b> Initial Slope | 2.00 H:1V |
| Desired Slope              | 3.00 H:1V |
| , '                        |           |

Volume of material to be moved (ft. 3) 191,250 Volume of material to be moved (yd. 3) 7,083

