

## COST SUMMARY WORK

Task description: Reclamation Cost Estimate

Permit Action: 2022-05-05  
Reclamation Cost  
Estimate

Site: Arkansas Valley Slag (AVS)

Permit/Job#: M2021058

### PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None  
Date: 5/6/2022 County: Lake Filename: M058-000  
User: DMC

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

| Task                     | Description                         | Form Used | Fleet Size | Task Hours   | Cost            |
|--------------------------|-------------------------------------|-----------|------------|--------------|-----------------|
| 01a                      | Remove rock berms and check dams    | DOZER     | 1          | 0.35         | \$82            |
| 02a                      | Grade mining area                   | DOZER     | 1          | 28.16        | \$6,657         |
| 03a                      | Vegetate affected areas             | REVEGE    | 1          | 8.00         | \$9,492         |
| 04a                      | Mobilize reclamation crew/equipment | MOBILIZE  | 1          | 2.22         | \$2,356         |
| <b><u>SUBTOTALS:</u></b> |                                     |           |            | <b>38.73</b> | <b>\$18,587</b> |

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

|                      |       |                                    |          |
|----------------------|-------|------------------------------------|----------|
| Liability insurance: | 2.02  | Total =                            | \$375    |
| Performance bond:    | 1.05  | Total =                            | \$195    |
| Job superintendent:  | 0.00  | Total =                            | \$0      |
| Profit:              | 10.00 | Total =                            | \$1,859  |
|                      |       | TOTAL O & P =                      | \$2,429  |
|                      |       | CONTRACT AMOUNT (direct + O & P) = | \$21,016 |

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

|  |      |         |         |
|--|------|---------|---------|
| Financial warranty processing (legal/related costs): | \$0  | Total = | \$0     |
| Engineering work and/or contract/bid preparation:    | 0.00 | Total = | \$0     |
| Reclamation management and/or administration:        | 5.00 |         | \$1,051 |

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$3,480

**TOTAL BOND AMOUNT (direct + indirect) = \$22,067**

**BULLDOZER WORK**Task description: **Remove rock berms and check dams**Permit Action: 2022-05-05  
Reclamation Cost  
EstimateSite: **Arkansas Valley Slag (AVS)**Permit/Job#: M2021058**PROJECT IDENTIFICATION**Task #: 01A  
Date: 5/6/2022  
User: DMCState: Colorado  
County: LakeAbbreviation: None  
Filename: M058-01aAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SU  
Horsepower: 310  
Blade Type: Semi-Universal  
Attachment: NA  
Shift Basis: 1 per day  
Data Source: (CRG)**Cost Breakdown:**

|                           |                        | <u>Utilization %</u> |
|---------------------------|------------------------|----------------------|
| Ownership Cost/Hour:      | <u>\$97.46</u>         | <u>NA</u>            |
| Operating Cost/Hour:      | <u>\$97.63</u>         | <u>100</u>           |
| Ripper own.<br>Cost/Hour: | <u>\$0.00</u>          | <u>NA</u>            |
| Ripper op. Cost/Hour:     | <u>\$0.00</u>          | <u>0</u>             |
| Operator Cost/Hour:       | <u>\$41.30</u>         | <u>NA</u>            |
| Total unit Cost/Hour:     | <u>\$236.39</u>        |                      |
| Total Fleet Cost/Hour:    | <u><b>\$236.39</b></u> |                      |

**MATERIAL QUANTITIES**Initial Volume: 250  
Swell factor: 1.000  
Loose volume: **250 LCY**Source of estimated volume: Division of Reclamation, Mining & Safety  
Source of estimated swell  
factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feet  
Unadjusted hourly  
production: 1,400.0 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push  
gradient: 0 %  
Average site altitude: 9,800 feetMaterial weight: 3,300 lbs/LCYWeight description: Decomposed rock - 75% Rock, 25% Earth

Job Condition Correction Factor

|                       |       | <u>Source</u> |
|-----------------------|-------|---------------|
| Operator Skill:       | 0.750 | (AVG.)        |
| Material consistency: | 1.200 | (CAT HB)      |
| Dozing method:        | 1.100 | (50% SL)      |
| Visibility:           | 1.000 | (AVG.)        |
| Job efficiency:       | 0.830 | (1 SHIFT/DAY) |
| Spoil pile:           | 0.900 | (SSD-FC)      |
| Push gradient:        | 1.000 | (CAT HB)      |
| Altitude:             | 1.000 | (CAT HB)      |
| Material Weight:      | 0.697 | (CAT HB)      |
| Blade type:           | 1.000 | (PAT)         |

Net correction: 0.5155

Adjusted unit  
production: 721.70 LCY/hr  
Adjusted fleet  
production: **721.7** LCY/hr

**JOB TIME AND COST**

Fleet size: 1 Dozer(s)  
Unit cost: \$0.328/LCY

Total job time: **0.35** Hours  
Total job cost: **\$82**

**BULLDOZER WORK**Task description: Grade mining areaPermit Action: 2022-05-05  
Reclamation Cost  
EstimateSite: Arkansas Valley Slag (AVS)Permit/Job#: M2021058**PROJECT IDENTIFICATION**Task #: 02A  
Date: 5/6/2022  
User: DMCState: Colorado  
County: LakeAbbreviation: None  
Filename: M058-02aAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SU  
Horsepower: 310  
Blade Type: Semi-Universal  
Attachment: NA  
Shift Basis: 1 per day  
Data Source: (CRG)**Cost Breakdown:**

|                           |                 | <u>Utilization %</u> |
|---------------------------|-----------------|----------------------|
| Ownership Cost/Hour:      | \$97.46         | NA                   |
| Operating Cost/Hour:      | \$97.63         | 100                  |
| Ripper own.<br>Cost/Hour: | \$0.00          | NA                   |
| Ripper op. Cost/Hour:     | \$0.00          | 0                    |
| Operator Cost/Hour:       | \$41.30         | NA                   |
| Total unit Cost/Hour:     | \$236.39        |                      |
| Total Fleet Cost/Hour:    | <b>\$236.39</b> |                      |

**MATERIAL QUANTITIES**Initial Volume: 10,000  
Swell factor: 1.000  
Loose volume: **10,000 LCY**Source of estimated volume: Division of Reclamation, Mining & Safety  
Source of estimated swell  
factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feet  
Unadjusted hourly  
production: 852.6 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push  
gradient: 0 %  
Average site altitude: 9,800 feetMaterial weight: 3,300 lbs/LCYWeight description: Decomposed rock - 75% Rock, 25% Earth

Job Condition Correction Factor

|                       |       | <u>Source</u> |
|-----------------------|-------|---------------|
| Operator Skill:       | 0.750 | (AVG.)        |
| Material consistency: | 1.200 | (CAT HB)      |
| Dozing method:        | 1.000 | (GEN.)        |
| Visibility:           | 1.000 | (AVG.)        |
| Job efficiency:       | 0.830 | (1 SHIFT/DAY) |
| Spoil pile:           | 0.800 | (FND-RF)      |
| Push gradient:        | 1.000 | (CAT HB)      |
| Altitude:             | 1.000 | (CAT HB)      |
| Material Weight:      | 0.697 | (CAT HB)      |
| Blade type:           | 1.000 | (PAT)         |

Net correction: 0.4165

Adjusted unit  
production: 355.11 LCY/hr  
Adjusted fleet  
production: **355.11** LCY/hr

**JOB TIME AND COST**

Fleet size: 1 Dozer(s)  
Unit cost: \$0.666/LCY

Total job time: **28.16** Hours  
Total job cost: **\$6,657**

**REVEGETATION WORK**Task description: Vegetate affected areasPermit Action: 2022-05-05  
Reclamation Cost  
EstimateSite: Arkansas Valley Slag (AVS)Permit/Job#: M2021058**PROJECT IDENTIFICATION**Task #: 03A  
Date: 5/6/2022  
User: DMCState: Colorado  
County: LakeAbbreviation: None  
Filename: M058-03aAgency or organization name: DRMS**FERTILIZING****Materials**

| Description | Units /<br>Acre | Unit | Cost / Unit   | Cost /Acre    |
|-------------|-----------------|------|---|---------------|
|             |                 |      | \$  | \$            |
|             |                 |      | <b>Total Fertilizer<br/>Materials<br/>Cost/Acre</b> | <b>\$0.00</b> |

**Application**

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

**TILLING**

| Description                                    | Cost /Acre      |
|--|-----------------|
| Chisel plowing {DMG}                           | \$96.50         |
| Weed control spraying (MEANS 31 31 16.13 3100) | \$290.40        |
| <b>Total Tilling Cost/Acre</b>                 | <b>\$386.90</b> |

**SEEDING**

| Seed Mix                             | Rate –<br>PLS<br>LBS /<br>Acre | Seeds<br>per SQ.<br>FT | Cost /Acre |
|--------------------------------------|--------------------------------|------------------------|------------|
| Blue Wildrye - Arlington or Elkton   | 1.75                           | 6.03                   | \$11.66    |
| Nodding Brome                        | 2.50                           | 6.23                   | \$21.25    |
| Creeping Red Fescue - Shademaster II | 0.50                           | 6.31                   | \$1.03     |
| Lupine, Annual                       | 1.00                           | 0.73                   | \$35.98    |
| Hard Fescue - Durar                  | 0.50                           | 6.49                   | \$1.46     |
| Sheep Fescue - Covar                 | 0.50                           | 7.81                   | \$3.05     |
| Slender Wheatgrass - San Luis        | 1.40                           | 5.11                   | \$5.95     |

|                        |             |              |                 |
|------------------------|-------------|--------------|-----------------|
| Muttongrass            | 0.50        | 10.33        | \$17.20         |
| Red Top                | 0.10        | 11.46        | \$0.79          |
| Tufted Hairgrass       | 0.50        | 28.70        | \$5.51          |
| Yarrow, White          | 0.10        | 6.36         | \$4.00          |
| <b>Totals Seed Mix</b> | <b>9.35</b> | <b>95.54</b> | <b>\$107.87</b> |

**Application**

| Description                             | Cost /Acre      |
|---|-----------------|
| Drill Seeding (DRMS Survey Cost)        | \$232.00        |
| <b>Total Seed Application Cost/Acre</b> | <b>\$232.00</b> |

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

| Description                               | Units /<br>Acre | Unit | Cost / Unit | Cost /Acre      |
|---|-----------------|------|-------------|-----------------|
| Straw, delivered {MEANS 31 25 14.16 1200} | 2.00            | TON  | \$307.02    | \$614.04        |
| <b>Total Mulch Materials Cost/Acre</b>    |                 |      |             | <b>\$614.04</b> |

**Application**

| Description                              | Cost /Acre      |
|--|-----------------|
| Crimping, with tractor {DMG survey data} | \$71.57         |
| Power mulcher (MEANS 32 91 13.16 0350)   | \$106.29        |
| <b>Total Mulch Application Cost/Acre</b> | <b>\$177.86</b> |

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres: 5 Cost /Acre: \$1,518.67  
 Estimated Failure Rate: 25% Cost /Acre\*: \$1,518.67  
 \*Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: \$7,593.35  
 Reseeding Job Cost: \$1,898.34  
 Total Job Cost: \$9,492  
 Job Hours: 8.00

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Mobilize reclamation crew/equipment**Permit Action: 2022-05-05

Reclamation Cost

Site: Arkansas Valley Slag (AVS)

Estimate

Permit/Job#: M2021058**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 5/6/2022County: LakeFilename: M058-04aUser: DMCAgency 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:**

| <b>Available Rig Capacities</b> | <b>0-25 Tons</b> | <b>26-50 Tons</b> | <b>51+ Tons</b> |
|---------------------------------|------------------|-------------------|-----------------|
| Ownership Cost/Hour:            | \$21.28          | \$37.94           | \$47.67         |
| Operating Cost/Hour:            | \$26.55          | \$50.48           | \$56.21         |
| Operator Cost/Hour:             | \$20.54          | \$20.54           | \$20.54         |
| Helper Cost/Hour:               | \$0.00           | \$23.53           | \$23.53         |
| Total Unit Cost/Hour:           | \$68.37          | \$132.49          | \$147.95        |

**NON ROADABLE EQUIPMENT:**

| Machine Description                       | Weight/<br>Unit<br>(TONS) | Owner ship<br>Cost/hr/ unit | Haul Rig<br>Cost/hr/unit | Fleet<br>Size | Haul Trip<br>Cost/hr/<br>fleet | Return Trip<br>Cost/hr/ fleet | DOT Permit<br>Cost/ fleet |
|---|---------------------------|-----------------------------|--------------------------|---------------|--------------------------------|-------------------------------|---------------------------|
| Cat D8T - 8SU                             | 47.71                     | \$97.46                     | \$132.49                 | 1             | \$229.95                       | \$132.49                      | \$250.00                  |
| Drill/Broadcast<br>Seeder with<br>Tractor | 25.00                     | \$7.98                      | \$68.37                  | 1             | \$76.35                        | \$68.37                       | \$250.00                  |
| Power Mulcher<br>(Bowie LD-90)            | 6.00                      | \$14.98                     | \$68.37                  | 1             | \$83.35                        | \$68.37                       | \$250.00                  |

Subtotals: **\$389.65** **\$269.23** **\$750.00****ROADABLE EQUIPMENT:**

| Machine Description            | Total Cost/hr/<br>unit | Fleet Size | Haul Trip<br>Cost/hr/ fleet | Return Trip<br>Cost/hr/ fleet |
|--------------------------------|------------------------|------------|-----------------------------|-------------------------------|
| Light Duty Pickup, 4x4, 3/4 T. | \$12.93                | 1          | \$12.93                     | \$12.93                       |

Subtotals: **\$12.93** **\$12.93**



**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: LEADVILLE  
 Total one-way travel distance: 2.00 miles  
 Average Travel Speed: 35.00 mph

Total Non-Roadable Mob/Demob Cost \* \$2,354.60  
 \*\* two round trips with haul rig:  
 Total Roadable Mob/Demob Cost \*\* \$1.48  
 \*\* one round trip, no haul rig:

**Transportation Cycle Time:**

|                         | Non-<br>Roadable<br>Equipment | Roadable<br>Equipment |
|-------------------------|-------------------------------|-----------------------|
| Haul Time (Hours):      | 0.06                          | 0.06                  |
| Return Time (Hours):    | 0.06                          | 0.06                  |
| Loading Time (Hours):   | 0.50                          | NA                    |
| Unloading Time (Hours): | 0.50                          | NA                    |
| Subtotals:              | 1.11                          | 0.11                  |

**JOB TIME AND COST**

Total job time: 2.23 Hours

Total job cost: \$2,356