

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

1313 Sherman Street, Room 215 Denver, CO 80203

October 1, 2018

Climax Molybdenum Company Attn: Ray Lazuk Highway 91, Fremont Pass Climax, Colorado 80429

RE: Climax Mine, DRMS File No. M-1977-493, DRAFT Reclamation Cost Estimate

Dear Mr. Lazuk,

The Colorado Division of Reclamation, Mining and Safety (DRMS or Division) has prepared its reclamation cost estimate for the Climax Mine. The DRMS estimate is enclosed for your review. The DRMS estimate is based on the cost estimate Climax provided in November of 2016, and on Climax's revised reclamation cost estimate provided to the Division on August 31, 2018. The Division has outstanding adequacy issues which will need to be addressed and incorporated into the Division's estimate before the financial liability amount is finalized.

The current liability amount estimated by the Division is \$103,910,882.73 (excluding some additional costs based on Climax's response to the review items below). The Division's estimate is higher than Climax's estimate, as well as the currently set liability for the site (\$78,246,088.00). There are two primary reasons which account for the increase in the liability amount:

- 1. DRMS proposes to bond for 10 years of water treatment at an annual treatment volume of 8,100 acre-feet to more closely align with the reclamation schedule presented under Amendment No. 6;
- 2. DRMS estimate includes demolition of existing structures which Climax originally requested to leave on-site after final mine closure. Climax has included the demolition of these structures in the revised reclamation cost estimate; however, the proposed demolition costs were significantly reduced by including a salvage credit for the steel contained in the demolished structures.

A financial warranty based on salvage credit must meet the requirements outlined in Rule 4.12.1. Approval of salvage credit for a fixture or piece of equipment does not reduce the reclamation liability, but may be applied towards the cost of completing reclamation. DRMS cannot reduce the bond amount for demolition tasks under the assumption that costs could be recovered by the state from salvaging debris generated from a reclamation project. Also, as the adequacy review items discuss below, Climax's cost estimate did not include the cost to demolish/dispose of the floors and footers associated with the structures onsite. The DRMS cost estimate does include these task items.



Climax Molybdenum Company Page 2 October 1, 2018

Adequacy Review Items:

- 1. There was no information provided for the demolition of the floors and footings for structures. The Division was able to use the AM06 cost estimate to find this information for many of the structures included in the estimate, with the exception of the following structures on the Demolition 3 New Structures sheet:
 - a. New Mill Building
 - b. Coarse Ore Dome
 - c. New Scalehouse

Please provide the floor and footing information for each of these structures.

2. Please provide information on the source of the cost for the Coarse Ore Dome and additional explanation of the cost estimate provided for this item.

The Division requests Climax respond to the above adequacy review questions by November 1, 2018.

Please review the Division's provided estimate, and contact me with questions at (303) 866-3567 ext. 8120 or at jared.ebert@state.co.us.

Sincerely,

Janel Ebert

Jared Ebert Environmental Protection Specialist III

Enclosure: 1.) CIRCES Cost Estimate, Climax Mine, M-1977-493, September 20, 2018

Ec: Eric Scott, DRMS Michael Cunningham, DRMS

COST SUMMARY WORK

| Та | Task description: | | Cost Summa | y | | | |
|-----------|-------------------|---------------|-----------------|----------------|-----------------------------------|----------------------------|---------------------|
| ite: | Climax M | line | | Permit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
| <u>PR</u> | OJECT | IDENTIFIC | ATION | | | | |
| | | | | | | | |
| | Task #: | 000 | State | e: Colorado | | Abbreviation: | None |
| | Task #: Date: | 000 9/20/2018 | State County | | | Abbreviation: Filename: | None M493-000 |
| | | | County | | | | |

TASK LIST (DIRECT COSTS)

| A01 Storke Complex - Load and haul biosolids to 10 acre area. TRUCK1 11 13.21 \$13,524.00 A02 Storke Complex, Spread biosolids DOZER 1 40.33 \$5,667.00 A03 Storke Complex, Grading at Storke disturbed areas GRADER 1 6.11 \$550.00 B01 Open Pit, Grade west open pit periphery DOZER 2 115.44 \$51,095.00 B03 Storke Complex, Spread biosolids DOZER 2 128.43 \$34,487.00 B04 Install Signs NA 1 25.29 \$4,629.31 C01 Mine Mill Comp. Grade 1' cut/fill across 76.2 acres DOZER 2 128.43 \$34,487.00 C02 Mine Mill Comp. Load/Haul Topsoil/Biosolids, 1' TRUCK1 1 914.73 \$796,463.00 C04 Mine Mill Comp. Spread Topsoil and Biosolids DOZER 2 22.59 \$11,191.00 D101 N40_OSF, X-section A/6, Overburden Cut/Fill toe, DOZER 2 22.59 \$11,191.00 D14: N40_OSF, X-section A/6, Low Grade Ore, Cut/Fill DOZER 446.96< | Task | Description | Form Used | Fleet Size | Task Hours | Cost |
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| Cut/Push to 2:1, SoutD01dN40_OSF, X-section A/6, Low Grade Ore, Cut/FillDOZER26.08\$3,011.00-East-East26.08\$3,011.00D01eN40_OSF, Grade top of OSF/Low Grade Ore Pile,DOZER4144.47\$143,131.00D02aNorth 40 OSF. Load/Haul Biosolids, 6" CoverTRUCK11320.49\$328,102.00D02bNorth 40 OSF. Load/Haul Topsoil, 6" CoverTRUCK11347.46\$249,357.00D03North 40 OSF, Spread Biosolids and TopsoilDOZER4168.26\$105,767.00E01aMcNulty OSF, Regrade slopes 2:1, 11,840 ft TopDOZER41,337.72\$1,391,472.00BenchBenchDOZER4933.74\$971,264.00E01bMcNulty, Regrade top level at11,840 ft Top BenchDOZER4584.03\$607,497.00E02aMcNulty OSF. Load/Haul Topsoil, 6" CoverTRUCK11707.67\$507,866.00E02bMcNulty OSF. Load/Haul Biosolids, 6" CoverTRUCK11639.00\$751,977.00E03North 40 OSF, Spread Biosolids and TopsoilDOZER4335.48\$210,880.00E04Construct Post-Mining ChannelsNA17,490.65\$2,282,409.08F01Tenmile TSF, Place geogrid on wet cover area,REVEGE11,757.89\$2,818,114.00 | | | | | | |
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| - East-D01eN40_OSF, Grade top of OSF/Low Grade Ore Pile, D02aDOZER4144.47\$143,131.00D02aNorth 40 OSF. Load/Haul Biosolids, 6" CoverTRUCK11320.49\$328,102.00D02bNorth 40 OSF. Load/Haul Topsoil, 6" CoverTRUCK11347.46\$249,357.00D03North 40 OSF, Spread Biosolids and TopsoilDOZER4168.26\$105,767.00E01aMcNulty OSF, Regrade slopes 2:1, 11,840 ft TopDOZER41,337.72\$1,391,472.00BenchBenchDOZER4933.74\$971,264.00E01bMcNulty, Regrade slopes 2:1, 11,840 ft Top Bench NW SideDOZER4584.03\$607,497.00E01cMcNulty, Regrade top level at11,840 ft Top Bench NW SideDOZER4584.03\$607,497.00E02aMcNulty OSF. Load/Haul Topsoil, 6" Cover McNulty OSF. Load/Haul Biosolids, 6" CoverTRUCK11639.00\$751,977.00E03North 40 OSF, Spread Biosolids and TopsoilDOZER435.48\$210,880.00E04Construct Post-Mining ChannelsNA17,490.65\$2,282,409.08F01Tenmile TSF, Place geogrid on wet cover area,REVEGE11,757.89\$2,818,114.00 | | | | | | |
| D01eN40_OSF, Grade top of OSF/Low Grade Ore Pile, North 40 OSF. Load/Haul Biosolids, 6" CoverD0ZER4144.47\$143,131.00D02aNorth 40 OSF. Load/Haul Biosolids, 6" CoverTRUCK11320.49\$328,102.00D02bNorth 40 OSF. Load/Haul Topsoil, 6" CoverTRUCK11347.46\$249,357.00D03North 40 OSF, Spread Biosolids and TopsoilDOZER4168.26\$105,767.00E01aMcNulty OSF, Regrade slopes 2:1, 11,840 ft Top BenchDOZER41,337.72\$1,391,472.00E01bMcNulty, Regrade slopes 2:1, 11,840 ft Top Bench NW SideDOZER4933.74\$971,264.00E01cMcNulty, Regrade top level at11,840 ft Top Bench NW SideDOZER4584.03\$607,497.00E02aMcNulty OSF. Load/Haul Topsoil, 6" Cover McNulty OSF. Load/Haul Biosolids, 6" CoverTRUCK11707.67\$507,866.00E02bMcNulty OSF. Load/Haul Biosolids, 6" Cover North 40 OSF, Spread Biosolids and TopsoilDOZER4335.48\$210,880.00E03North 40 OSF, Spread Biosolids and TopsoilDOZER4335.48\$210,880.00E04Construct Post-Mining ChannelsNA17,490.65\$2,282,409.08F01Tenmile TSF, Place geogrid on wet cover area, REVEGEREVEGE11,757.89\$2,818,114.00 | D01d | | DOZER | 2 | 6.08 | \$3,011.00 |
| D02a North 40 OSF. Load/Haul Biosolids, 6" Cover TRUCK1 1 320.49 \$328,102.00 D02b North 40 OSF. Load/Haul Topsoil, 6" Cover TRUCK1 1 347.46 \$249,357.00 D03 North 40 OSF, Spread Biosolids and Topsoil DOZER 4 168.26 \$105,767.00 E01a McNulty OSF, Regrade slopes 2:1, 11,840 ft Top Bench DOZER 4 1,337.72 \$1,391,472.00 E01b McNulty, Regrade slopes 2:1, 11,840 ft Top Bench NW Side DOZER 4 933.74 \$971,264.00 E01c McNulty, Regrade top level at11,840 ft Top Bench NW Side DOZER 4 584.03 \$607,497.00 E02a McNulty OSF. Load/Haul Topsoil, 6" Cover TRUCK1 1 707.67 \$507,866.00 E02b McNulty OSF. Load/Haul Biosolids, 6" Cover TRUCK1 1 639.00 \$751,977.00 E03 North 40 OSF, Spread Biosolids and Topsoil DOZER 4 335.48 \$210,880.00 E04 Construct Post-Mining Channels NA 1 7,490.65 \$2,282,409.08 F01 Tenmile TSF, | | | | 4 | | - |
| D02b North 40 OSF. Load/Haul Topsoil, 6" Cover TRUCK1 1 347.46 \$249,357.00 D03 North 40 OSF, Spread Biosolids and Topsoil DOZER 4 168.26 \$105,767.00 E01a McNulty OSF, Regrade slopes 2:1, 11,840 ft Top Bench DOZER 4 1,337.72 \$1,391,472.00 E01b McNulty, Regrade slopes 2:1, 11,840 ft Top Bench NW Side DOZER 4 933.74 \$971,264.00 E01c McNulty, Regrade top level at11,840 ft Top Bench NW Side DOZER 4 584.03 \$607,497.00 E02a McNulty OSF. Load/Haul Topsoil, 6" Cover TRUCK1 1 707.67 \$507,866.00 E03 North 40 OSF, Spread Biosolids, 6" Cover TRUCK1 1 639.00 \$751,977.00 E03 North 40 OSF, Spread Biosolids and Topsoil DOZER 4 335.48 \$210,880.00 E04 Construct Post-Mining Channels NA 1 7,490.65 \$2,282,409.08 F01 Tenmile TSF, Place geogrid on wet cover area, REVEGE 1 1,757.89 \$2,818,114.00 | | | | 4 | | |
| D03North 40 OSF, Spread Biosolids and TopsoilDOZER4168.26\$105,767.00E01aMcNulty OSF, Regrade slopes 2:1, 11,840 ft Top BenchDOZER41,337.72\$1,391,472.00E01bMcNulty, Regrade slopes 2:1, 11,840 ft Top Bench NW SideDOZER4933.74\$971,264.00E01cMcNulty, Regrade top level at11,840 ft Top Bench NW SideDOZER4584.03\$607,497.00E02aMcNulty OSF. Load/Haul Topsoil, 6" Cover McNulty OSF. Load/Haul Biosolids, 6" CoverTRUCK11707.67\$507,866.00E03North 40 OSF, Spread Biosolids and TopsoilDOZER4335.48\$210,880.00E04Construct Post-Mining ChannelsNA17,490.65\$2,282,409.08F01Tenmile TSF, Place geogrid on wet cover area,REVEGE11,757.89\$2,818,114.00 | | | | 1 | | |
| E01a McNulty OSF, Regrade slopes 2:1, 11,840 ft Top Bench DOZER 4 1,337.72 \$1,391,472.00 E01b McNulty, Regrade slopes 2:1, 11,840 ft Top Bench NW Side DOZER 4 933.74 \$971,264.00 E01c McNulty, Regrade top level at11,840 ft Top Bench NW Side DOZER 4 584.03 \$607,497.00 E02a McNulty OSF. Load/Haul Topsoil, 6" Cover TRUCK1 1 707.67 \$507,866.00 E02b McNulty OSF. Load/Haul Biosolids, 6" Cover TRUCK1 1 639.00 \$751,977.00 E03 North 40 OSF, Spread Biosolids and Topsoil DOZER 4 335.48 \$210,880.00 E04 Construct Post-Mining Channels NA 1 7,490.65 \$2,282,409.08 F01 Tenmile TSF, Place geogrid on wet cover area, REVEGE 1 1,757.89 \$2,818,114.00 | | | | - | | |
| BenchBenchP33.74E01bMcNulty, Regrade slopes 2:1, 11,840 ft Top Bench NW SideDOZER4933.74E01cMcNulty, Regrade top level at11,840 ft Top Bench McNulty OSF. Load/Haul Topsoil, 6" CoverDOZER4584.03E02aMcNulty OSF. Load/Haul Topsoil, 6" Cover McNulty OSF. Load/Haul Biosolids, 6" CoverTRUCK11707.67E03North 40 OSF, Spread Biosolids and TopsoilDOZER4335.48\$210,880.00E04Construct Post-Mining ChannelsNA17,490.65\$2,282,409.08F01Tenmile TSF, Place geogrid on wet cover area,REVEGE11,757.89\$2,818,114.00 | | · 1 1 | | - | | |
| E01bMcNulty, Regrade slopes 2:1, 11,840 ft Top Bench NW SideDOZER4933.74\$971,264.00E01cMcNulty, Regrade top level at11,840 ft Top BenchDOZER4584.03\$607,497.00E02aMcNulty OSF. Load/Haul Topsoil, 6" CoverTRUCK11707.67\$507,866.00E02bMcNulty OSF. Load/Haul Biosolids, 6" CoverTRUCK11639.00\$751,977.00E03North 40 OSF, Spread Biosolids and TopsoilDOZER4335.48\$210,880.00E04Construct Post-Mining ChannelsNA17,490.65\$2,282,409.08F01Tenmile TSF, Place geogrid on wet cover area,REVEGE11,757.89\$2,818,114.00 | E01a | | DOZER | 4 | 1,337.72 | \$1,391,472.00 |
| NW SideNW SideE01cMcNulty, Regrade top level at11,840 ft Top BenchDOZER4584.03\$607,497.00E02aMcNulty OSF. Load/Haul Topsoil, 6" CoverTRUCK11707.67\$507,866.00E02bMcNulty OSF. Load/Haul Biosolids, 6" CoverTRUCK11639.00\$751,977.00E03North 40 OSF, Spread Biosolids and TopsoilDOZER4335.48\$210,880.00E04Construct Post-Mining ChannelsNA17,490.65\$2,282,409.08F01Tenmile TSF, Place geogrid on wet cover area,REVEGE11,757.89\$2,818,114.00 | | | | 4 | | - |
| E01cMcNulty, Regrade top level at11,840 ft Top BenchDOZER4584.03\$607,497.00E02aMcNulty OSF. Load/Haul Topsoil, 6" CoverTRUCK11707.67\$507,866.00E02bMcNulty OSF. Load/Haul Biosolids, 6" CoverTRUCK11639.00\$751,977.00E03North 40 OSF, Spread Biosolids and TopsoilDOZER4335.48\$210,880.00E04Construct Post-Mining ChannelsNA17,490.65\$2,282,409.08F01Tenmile TSF, Place geogrid on wet cover area,REVEGE11,757.89\$2,818,114.00 | E01b | | DOZER | 4 | 933.74 | \$971,264.00 |
| E02a McNulty OSF. Load/Haul Topsoil, 6" Cover TRUCK1 1 707.67 \$507,866.00 E02b McNulty OSF. Load/Haul Biosolids, 6" Cover TRUCK1 1 639.00 \$751,977.00 E03 North 40 OSF, Spread Biosolids and Topsoil DOZER 4 335.48 \$210,880.00 E04 Construct Post-Mining Channels NA 1 7,490.65 \$2,282,409.08 F01 Tenmile TSF, Place geogrid on wet cover area, REVEGE 1 1,757.89 \$2,818,114.00 | E01c | | DOZER | 4 | 584.03 | \$607.497.00 |
| E02b McNulty OSF. Load/Haul Biosolids, 6" Cover TRUCK1 1 639.00 \$751,977.00 E03 North 40 OSF, Spread Biosolids and Topsoil DOZER 4 335.48 \$210,880.00 E04 Construct Post-Mining Channels NA 1 7,490.65 \$2,282,409.08 F01 Tenmile TSF, Place geogrid on wet cover area, REVEGE 1 1,757.89 \$2,818,114.00 | | | | 4 | | |
| E03North 40 OSF, Spread Biosolids and TopsoilDOZER4335.48\$210,880.00E04Construct Post-Mining ChannelsNA17,490.65\$2,282,409.08F01Tenmile TSF, Place geogrid on wet cover area,REVEGE11,757.89\$2,818,114.00 | | | | - | | |
| E04Construct Post-Mining ChannelsNA17,490.65\$2,282,409.08F01Tenmile TSF, Place geogrid on wet cover area,REVEGE11,757.89\$2,818,114.00 | | | | 4 | | |
| F01Tenmile TSF, Place geogrid on wet cover area,REVEGE11,757.89\$2,818,114.00 | | | | 4 | | |
| | | | | - | | |
| 113.3 4005 | | 113.5 acres | _ | | , | |

Page 2 of 199

| F02 | Tenmile TSF, Load and Haul Subsoil for Wet Cover Area | TRUCK1 | 1 | 1,194.69 | \$1,405,924.00 |
|------------|--|----------|----------|-----------|------------------------|
| F02a | Tenmile TSF, Load and Haul Topsoil for Wet | TRUCK1 | 1 | 238.94 | \$281,186.00 |
| | Cover Area | | _ | | |
| F03 | Tenmile TSF, Spread Subsoil | DOZER | 4 | 530.90 | \$442,756.00 |
| F03a | Tenmile TSF, Spread Biosolids and Topsoil | DOZER | 4 | 64.09 | \$53,451.00 |
| F04 | Tenmile TSF, Load and Haul Subsoil for Dry Cover Area | TRUCK1 | 1 | 673.62 | \$792,720.00 |
| F04a | Tenmile TSF, Load and Haul Topsoil/BioS. for Dry Cover Area | TRUCK1 | 1 | 673.62 | \$792,720.00 |
| F05 | Tenmile TSF, Spread Subsoil, Dry Cover | DOZER | 4 | 106.18 | \$88,552.00 |
| F05a | Tenmile TSF, Spread Topsoil/Subsoil, Dry Cover | DOZER | 4 | 64.09 | \$53,451.00 |
| G01 | Tenmile Tunnel, Bulkhead Closure | MINESEAL | \neg 1 | 0.00 | \$1,588,949.78 |
| G02 | Tenmile Tunnel; Dredge and Pump Sludge to Tunnel | PUMPING | 1 | 388.25 | \$87,098.00 |
| G03 | Tenmile Tunnel, Install Checkdams | MINESEAL | 1 | 0.00 | \$9,088.09 |
| H01a | 3 Dam, Load and Haul Topsoil to 3 Dam Rise | TRUCK1 | 1 | 19.10 | \$19,558.00 |
| H01b | 3 Dam, Load and Haul Biosolids to 3 Dam Rise | TRUCK1 | 1 | 18.19 | \$21,405.00 |
| H02 | 3 Dam, Spread Topsoil and Biosolids over 3 Dam Rise | DOZER | 1 | 53.09 | \$9,109.00 |
| I01 | Pond Shop, Grading | DOZER | 1 | 10.80 | \$2,390.00 |
| I01 I02 | Pond Shop, Load and Haul topsoil to Pond Shop | TRUCK1 | 1 | 1.61 | \$1,156.00 |
| I02 | Pond Shop, Spread topsoil | DOZER | 1 | 2.62 | \$471.00 |
| J01a | Mayflower TSF, Load and Haul Subsoil to TSF | TRUCK1 | \neg 1 | 526.57 | \$619,671.00 |
| J01b | Mayflower TSF, Load and Haul Topsoil to TSF | TRUCK1 | 1 | 526.57 | \$619,671.00 |
| J02a | Mayflower TSF, Spread Subsoil | DOZER | 2 | 502.21 | \$209,416.00 |
| J02b | Mayflower TSF, Spread Topsoil | DOZER | 2 | 303.15 | \$126,408.00 |
| J03 | Mayflower TSF, Finish Grade the Top Surface | GRADER | 2 | 78.47 | \$14,130.00 |
| K01 | East Side Channel Construction | NA | 1 | 14,774.41 | \$5,432,963.76 |
| K02 | East Side Channel, Install East Side Pipeline | DEMOLISH | 1 | 1,312.94 | \$4,941,648.00 |
| L01 | Mayflower Acid, Grade Site | DOZER | 2 | 100.81 | \$44,227.00 |
| L02a | Mayflower Acid, Load and Haul Subsoil to site | TRUCK1 | 1 | 1.48 | \$1,292.00 |
| L02b | Mayflower Acid, Load and Haul Topsoil | TRUCK1 | 1 | 1.48 | \$1,292.00 |
| L03a | Mayflower Acid, Spread Subsoil | DOZER | 1 | 5.06 | \$869.00 |
| L03b | Mayflower Acid, Spread Topsoil | DOZER | 1 | 3.06 | \$524.00 |
| M01 | Robinson TSF, Load and Haul Topsoil | TRUCK1 | 1 | 296.32 | \$212,656.00 |
| M02 | Robinson TSF, Spread Topsoil/Biosolids | DOZER | 2 | 291.27 | \$78,213.00 |
| N01 | 1 Dam, Load and Haul Topsoil/Biosolids | TRUCK1 | 1 | 85.68 | \$74,602.00 |
| N02 | 1 Dam, Spread Topsoil/Biosolids | DOZER | 2 | 101.76 | \$27,325.00 |
| O01 | Roads; rip switchback access roads from McNulty OSF to LBM | RIPPER | 1 | 17.29 | \$5,548.00 |
| O02 | Roads; rip other site roads | RIPPER | 2 | 17.91 | \$8,071.00 |
| O03 | Roads, Load and Haul Topsoil/Biosolids | TRUCK1 | 1 | 129.54 | \$112,792.00 |
| O04 | Roads, Spread Topsoil/Biosolids | DOZER | 2 | 153.85 | \$41,313.00 |
| P01 | Robinson Lake, sediment removal | NA | 1 | 0.00 | \$2,333,570.00 |
| Q01a | 5 Dam, Load and Haul Subsoil to site | TRUCK1 | 1 | 116.72 | \$137,358.00 |
| Q01b | 5 Dam, Load and haul topsoil to site | TRUCK1 | 1 | 116.72 | \$137,358.00 |
| Q02a | 5 Dam, Spread Subsoil | DOZER | 2 | 121.44 | \$50,637.00 |
| Q02b | 5 Dam, Spread Topsoil | DOZER | 2 | 73.30 | \$30,566.00 |
| R01 | Revegetation, Seeding Standard Mixture | REVEGE | 1 | 1,466.00 | \$2,464,632.00 |
| R02 | Revegetation, Seeding Standard Mixture - Steep Slope | REVEGE | 1 | 263.00 | \$944,019.00 |
| R03 | Revegetation, Seeding Alpine | REVEGE | 1 | 227.00 | \$300,208.00 |
| | · · · · | REVEGE | 1 | 475.00 | \$1,364,224.00 |
| R04 | Revegetation, Seeding Alpine - Steep Slope | KE V EUE | 1 | 475.00 | $\psi_{1,307,227.007}$ |

| S01 | Seal Underground Mine Opening | MINESEAL | 1 | 30.00 | \$1,804.96 |
|-----|---|-----------|----------|--------------|-----------------|
| T01 | Mobilization - Year 1 | MOBILIZE | 1 | 25.73 | \$215,059.00 |
| T02 | Mobilization - Year 2 | MOBILIZE |] 1 | 25.73 | \$215,059.00 |
| T03 | Mobilization - Year 3 | MOBILIZE |] 1 | 25.73 | \$215,059.00 |
| T04 | Mobilization - Year 4 | MOBILIZE |] 1 | 25.73 | \$215,059.00 |
| U01 | Reclaim 550 Acre Buffer Zone | NA |] 1 | 2,971.11 | \$2,677,288.65 |
| V01 | Hydrologic Protection | NA |] 1 | 0.00 | \$33,129,000.00 |
| W01 | Maintenance and Environmental Control | SITEMAINT | 1 | 0.00 | \$521,177.00 |
| | | ENANCE | | | |
| X01 | Demolition 1 - Former Mine | DEMOLISH | 1 | 0.00 | \$4,382,437.21 |
| X02 | Demolition 2 - Various demolition (continued from | DEMOLISH | 1 | 0.00 | \$24,181.04 |
| | Demo 1) | | | | |
| X03 | Demolition 3- New Structures | DEMOLISH | 1 | 0.00 | \$3,878,265.84 |
| Y01 | Disposal of Reagents | DEMOLISH | 1 | 0.00 | \$162,201.02 |
| | | TALS: | 47015.93 | \$84,368,312 | |

INDIRECT COSTS

OVERHEAD AND PROFIT:

| Liability insurance: | 2.02 | Total = | \$1,704,239.90 |
|----------------------|-----------|--|-----------------|
| Performance bond: | 1.05 | Total = | \$885,867.28 |
| Job superintendent: | 23,507.97 | Total = | \$1,717,256.84 |
| Profit: | 10.00 | Total = | \$8,436,831.20 |
| | | TOTAL O & P = | \$12,744,195.22 |
| | | CONTRACT AMOUNT (direct + O & P) = $($ | \$97,112,507.22 |

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

| Financial warranty processing (legal/related costs): Engineering work and/or contract/bid preparation: Reclamation management and/or administration: | 500.00 2.00 5.00 | Total = Total = | 500.00 \$1,942,250.14 \$4,855,625.36 |
|--|------------------------|--------------------|--|
| CONTINGENCY: | 0.00 | Total = | \$0.00 |
| | TOTAL IN | DIRECT COST = | \$19,542,570.73 |
| TOTAL BO | \$103,910,882.73 | | |

TRUCK/LOADER TEAM WORK

| Task description: | Storke | Complex - Load | and haul biosoli | ids to 10 acre are | ea. | |
|-------------------------|-------------------------------------|-------------------------------|-------------------------------|------------------------|-----------------------|--------------------------------|
| Site: Climax Mine | | Permit Ac | tion: 2016 Recl Cost Estin | | Permit/Job#: | M1977493 |
| PROJECT IDEN | TIFICATION | | | | | |
| Task #: A01 | | State: Color | ado | Abl | breviation: N | Jone |
| Date: 9/17/ | | County: Sum | | | | /493-A01 |
| | 1:18 AM | | | | | |
| | | | | | | |
| Agency or | organization nar | ne: DRMS | | | | |
| HOURLY EQUI | PMENT COST | | | Shift ba | sis: <u>1 per day</u> | |
| | | _ | Equipment Descr | iption | | |
| Т | ruck Loader Tea | m -Truck: Cat | t 740 | 1 | | |
| | | | T 950H | | | |
| Suppo | ort Equipment -L | imp Area: NA | t D6T XL | | | |
| Road Ma | aintenance – Mote | | T 12M | | | |
| | -Wa | ter Truck: Wa | ter Tanker, 5,000 | Gal. | | |
| | T 1 (| 1 | a . | | | |
| <u>Cost Breakdown</u> : | Truck/Loa Truck | der Team Loader | Load Area | Equipment Dump Area | Mainte | nance Equipment Water Truck |
| | THER | Louder | Loud Theu | Dumprieu | Grader | |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 |) 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | |
| %Utilization-riper: | NA | 0 | NA | NA | NA | |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | |
| Number of Units: | 4 Westler | 1 \$710.09 | 1 Source anti- | ¢140.52 |] Maint | _ |
| Group Subtotals: | Work: | \$710.09 | Support: | \$140.52 | Maint | \$173.15 |
| Total work team cos | t/hour: <u>\$1,023.7</u> | 6 | | | | |
| MATEDIAL OIL | ANTITIES | | | | | |
| MATERIAL QUA | | | | | | |
| Initial volume | | | | factor: <u>1.000</u> | | |
| Loose volume | | | | | | |
| | arce of estimated | | Over 10 Acres per | Climax Estimate | | |
| Source | of estimated swe Material Purcha | | Handbook | | | |
| | | tal Cost: $\frac{$0.0}{$0.0}$ | | | | |
| | | | | | | |

HOURLY PRODUCTION

Truck Capacity:Truck Payload (weight) Basis:Material weight:1,600Pounds/LCY

| | | | | | | U | |
|----------------------------|------------------------------------|------------------|-------------|----------------------|------------------|--------|---------|
| Description: | Top Soil | | | | | | |
| Rated Payload: | 87,000 | | Pounds | | | | |
| Payload Capacity: | 54.38 | | LCY | | | | |
| · · · · | | | | | | | |
| Truck Bed (volume) Basis: | | | | | | | |
| Struck Volume: | 24.20 | LCY | | | | | |
| Heaped Volume: | 31.40 | LCY | | | | | |
| Average Volume: | 27.80 | LCY | | | | | |
| Adjusted Volume: | 31.40 | LCY | | | | | |
| | | | | | | | |
| | Truck Volume | Based on Numb | er of Loade | r Passes: | 31.61 | LCY | , I |
| Loading Tool Capacity | | | | | | | |
| | | | | Bucke | et Size Class: | NA | |
| Rated Capacity: | 4.300 | LCY (hea | (ped) | | | | |
| Bucket Fill Factor: | 1.050 | Other - m | | (100-1 | 10%) 1.050 | | |
| Adjusted Capacity: | 4.515 | LCY | | | , | | |
| Job Condition Corrections | <u>s:</u> | | Site Alti | tude (ft.): <u>1</u> | <u>2000</u> feet | | |
| | Truck | Loader | | Source | | | |
| Altitude Adj: | 0.600 | 1.000 | | (CAT HB) | | | |
| Job Efficiency: | 0.830 | 0.830 | | (CAT HB) | | | |
| | | | | | | | |
| Net Correction: | 0.498 | 0.830 | | | | | |
| Loading Tool Cycle Time | <u>:</u> | Number of Loa | ding Tool P | asses Requ | ired to Fill | 7 | passes |
| Excavators and Front Shove | els: | | | | Truck: | 1 | |
| Machine Cycle Time | vs. Job Conditio | n Rating: NA | A | | | | |
| • | within this Basi | | | | | | |
| Track Loaders - | Material Descr | iption: | | | | | |
| Cycle Time Elements (min.) |): | | | | | | |
| Load: NA | Ν | laneuver: NA | 4 | _ | Dump: 0 | 0.100 | |
| Wheel and Tra | ck Loaders - Una | diusted Basic | oader Cycl | e Time (lo: | ad dumn | | minutes |
| wheel and Trav | ek Loaders - Ona | lujusted Daste I | Joader Cyci | | aneuver): | 0.500 | |
| Cycle Time Factors | 5 | | | | Factor (min | .) Sou | irce |
| Material | | ial 0.02 | | | 0.020 | (Cat | |
| Stockpile: | | | | | 0.020 | (Cat | |
| T_1_01; | | 1 | 1 11 1 | | | < | / |

Common ownership of trucks and loaders -

Net Cycle Time Adjustment:

Adjusted Loader Cycle Time:

Net Load Time per Truck:

Constant operation -0.04

Nominal target 0.00

1.00

Time:

0.04

Truck Ownership:

Truck Maneuver and Dump

Operation:

Dump Target:

-0.040

-0.040

0.000

-0.040

0.460

2.860

(Cat HB)

(Cat HB)

(Cat HB)

minutes

minutes

minutes

Truck Travel (Haul & Return) Time: maintained 3.0

| Haul Ro | | | 1 | | | | | |
|----------------|-----------|----------|-------------------|----------------|-------------------|---------------|---------------|----------|
| Seg # | | Distance | Grade (%) | Roll. Res | Total Res | Velocity | Travel | |
| | (Ft) | | | (%) | (%) | (fpm) | Time (min) | |
| 1 | 1372 | 8.00 | 0.00 | 3.00 | 3.00 | 3005 | 5.361 | |
| L | | | | | Haul Time: | 5.361 | minutes | |
| Return | Route: | | | | | | | |
| Seg # | Haul | Distance | Grade (%) | Roll. Res | Total Res | Velocity | Travel | |
| | (Ft) | | | (%) | (%) | (fpm) | Time (min) | |
| 1 | 1372 | 8.00 | 0.00 | 3.00 | 3.00 | 3005 | 4.736 | |
| | | | | | Return Time: | 4.736 | i minutes | |
| | | | | Total Tru | ck Cycle Time: | 15.62 | 4 minutes | |
| Loading ' | Tool unit | | | | | | | |
| | roduction | 491.27 | LCY/Hour | | Adjusted for jo | b efficiency: | 407.75 | LCY/Hour |
| Truck Unit Pr | roduction | | | | | | | _ |
| | | 121.37 | LCY/Hour | | Adjusted for jo | b efficiency: | 100.74 | LCY/Hour |
| Optimal No. of | f Trucks: | 4 | Truck(s) | | Selected Numb | er of Trucks: | 4 | Truck(s) |
| | | | Adjusted | l hourly truck | team production | on: 402 | .96 LCY/F | Hour |
| | | | Adjusted single | e truck/loader | r team production | on: 402 | .96 LCY/H | Hour |
| | | A | Adjusted multiple | e truck/loader | r team productio | on: 402 | .96 LCY/F | Hour |
| | | | | | | | | |
| <u>JOB T</u> | TIME AN | D COST | | | | | | |
| Fl | eet size: | 1 | Team(s) | Т | otal job time: | 13.2 | 1 Hour | rs |
| U | nit cost: | \$2.541 | /LCY | г | Total job cost: | \$13,5 | 24 | |

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| Task description: S | torke Complex, Spread bio Permit Action: | | | |
|---|---|---------------------|----------------------------|---------------------|
| climax Mine | | Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
| PROJECT IDENTIFICAT | <u>FION</u> | | | |
| Task #: A02 Date: 9/17/2018 10:46:59 AM User: JLE | State: <u>Colorado</u> County: Summit | | Abbreviation: Filename: | None M493-A02 |
| Agency or organizati | on name: DRMS | | | |
| HOURLY EQUIPMENT | <u>COST</u> | | | |
| Basic Machine: Cat D67 | T XL | _ | | |
| Horsepower: 185 | 1 | _ | | |
| Blade Type: Semi-U Attachment: NA | niversai | _ | | |
| Shift Basis:1 per daData Source:(CRG) | У | - | | |
| Cost Breakdown: | | Utilization % | | |
| Ownership Cost/Hour: | \$52.66 | NA | | |
| Operating Cost/Hour: | \$46.34 | 100 | | |
| Ripper own. Cost/Hour: | \$0.00 | NA | | |
| Ripper op. Cost/Hour: | \$0.00 | 0 | | |
| Operator Cost/Hour: | \$41.52 | NA | | |
| | 40.52 40.52 | | | |
| MATERIAL QUANTITIE | <u>ES</u> | | | |
| Initial Volume: 5,323 | | | | |
| Swell factor: 1.000 | w | | | |
| Loose volume: 5,323 LC | | | | |
| Source of estimated volume: Source of estimated swell factor: | Division of Reclamati Cat Handbook | on, Mining & Safety | | |
| HOURLY PRODUCTION | Ī | | | |
| Average push distance: | 200 feet | | | |
| Unadjusted hourly production: | 153.6 LCY/hr | | | |
| Materials consistency description: | Loose stockpile 1.2 | | | |
| Average push 0 gradient: | | | | |
| Average site altitude: 1,2 | 200 feet | | | |
| Material weight: 1,0 | 500 lbs/LCY | | | |

| Job Condition Correction FactorSourceOperator 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:1.438(CAT HB) | Weight description: | Гор Soil | |
|---|------------------------------|-----------------|---------------|
| 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:1.438(CAT HB) | Job Condition Correction Fac | ctor_ | Source |
| 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:1.438(CAT HB) | Operator Ski | 11: 0.750 | (AVG.) |
| 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) | Material consistenc | y: 1.200 | (CAT HB) |
| 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) | Dozing metho | od: 1.000 | (GEN.) |
| Spoil pile:0.800(FND-RF)Push gradient:1.000(CAT HB)Altitude:1.000(CAT HB)Material Weight:1.438(CAT HB) | Visibilit | y: <u>1.000</u> | (AVG.) |
| Push gradient:1.000(CAT HB)Altitude:1.000(CAT HB)Material Weight:1.438(CAT HB) | Job efficienc | ey: 0.830 | (1 SHIFT/DAY) |
| Altitude:1.000(CAT HB)Material Weight:1.438(CAT HB) | Spoil pil | le: 0.800 | (FND-RF) |
| Material Weight: 1.438 (CAT HB) | Push gradier | nt: 1.000 | (CAT HB) |
| | Altitud | le: 1.000 | (CAT HB) |
| | Material Weigh | nt: 1.438 | (CAT HB) |
| Blade type: 1.000 (PAT) | Blade typ | be: 1.000 | (PAT) |
| Net correction: 0.8593 | Net correctio | | |
| Adjusted unit 131.99 LCY/hr | production: | 131.99 LCY/hr | |
| Adjusted fleet 131.99 LCY/hr | 5 | 131.99 LCY/hr | |

| Fleet size: | 1 Dozer(s) | |
|------------------------------------|-----------------------------------|--|
| Unit cost: | \$1.065/LCY | |
| Total job time: Total job cost: | 40.33 Hours \$5,667 | |

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MOTOR GRADER WORK

| Task description: | | | | | | |
|--|---|--|---|---|----------------------------|---------------------|
| : Climax Mine | Ре | ermit Action: | 2016 Recla Cost Estima | | Permit/Jo | b#: <u>M1977493</u> |
| PROJECT IDENTIF | ICATION | | | | | |
| Task #: A03 | State: | Colorado | | Abb | reviation: | None |
| Date: 9/17/2018 | | Summit | |] | Filename: | M493-A03 |
| User: <u>10:48:12</u> | AM | | | | | |
| Agency or orga | nization name: | RMS | | | | |
| HOURLY EQUIPME | ENT COST | | | | | |
| Basic Machin | | | | Horsepower: | | 158 |
| Ripper Attachmer | nt: | | | Shift Basis: | | er day |
| | | | | Data Source: | (0 | CRG) |
| Cost Breakdown: | | | | | | |
| _ | <i></i> | | * * - | Utilization % | | |
| | ership Cost/Hour: | | \$30.73 | NA | _ | |
| | rating Cost/Hour: ership Cost/Hour: | | \$30.60 \$0.00 | 100 NA | _ | |
| | rating Cost/Hour: | | \$0.00 | NA | _ | |
| | erator Cost/Hour: | | \$28.69 | NA | _ | |
| Ope | | | +=0.02 | | _ | |
| * | Unit Cost/Hour: | | \$90.02 | | | |
| Total | Unit Cost/Hour: | \$90. | \$90.02 | | | |
| Total | | \$90. | | | | |
| Total | l Unit Cost/Hour: | \$90. | | | | |
| Total Total MATERIAL QUANT | l Unit Cost/Hour: | · · · · · · · · · · · · · · · · · · · | | | | acres |
| Total Total MATERIAL QUANT Total Area | l Unit Cost/Hour: Fleet Cost/Hour: <u>TTIES</u> | ed: <u>10.00</u> | 02 | | | acres |
| Total Total MATERIAL QUANT Total Area | l Unit Cost/Hour: Fleet Cost/Hour: TITIES to be graded or rippe e of estimated acreag | ed: <u>10.00</u> | 02 | | | acres |
| Total Total MATERIAL QUANT Total Area Sourc | l Unit Cost/Hour: Fleet Cost/Hour: TITIES to be graded or rippe e of estimated acreag | ed: <u>10.00</u> ge: <u>Climax</u> | 02 | mph | | acres |
| Total Total MATERIAL QUANT Total Area Sourc | l Unit Cost/Hour: Fleet Cost/Hour: TTIES to be graded or rippe e of estimated acreag TION | ed: <u>10.00</u> ge: <u>Climax</u> beed: | 02 Mine 1.50 | mph grading (0-2.5 n | nph) - 1.5 | acres |
| Total Total MATERIAL QUANT Total Area Sourc | l Unit Cost/Hour: Fleet Cost/Hour: <u>TTIES</u> to be graded or rippe e of estimated acreag <u>FION</u> Average Grader Sp Selected Applica Selected Blade An | ed: 10.00 ge: <u>Climax</u> peed: tion: ngle: | 02 Mine 1.50 Finish 0 | | | acres |
| Total Total MATERIAL QUANT Total Area Sourc HOURLY PRODUCT | l Unit Cost/Hour: Fleet Cost/Hour: TTIES to be graded or rippe e of estimated acreag FION Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler | ed: 10.00 ge: Climax beed: tion: ngle: ngth: | 02 Mine 1.50 Finish 0 12.00 | grading (0-2.5 m degrees feet | | acres |
| Total Total MATERIAL QUANT Total Area Sourc HOURLY PRODUCT Width o | I Unit Cost/Hour: Fleet Cost/Hour: <u>TITIES</u> to be graded or rippe e of estimated acreag <u>FION</u> Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler of blade overlap per p | ed: 10.00 ge: Climax peed: tion: ngle: pass: | 02 Mine 1.50 Finish 0 12.00 2.00 | grading (0-2.5 n degrees feet feet | | acres |
| Total Total MATERIAL QUANT Total Area Sourc HOURLY PRODUCT Width Net grading o | I Unit Cost/Hour: Fleet Cost/Hour: TTTIES to be graded or rippe e of estimated acreag FION Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler of blade overlap per p or ripping width per p | ed: 10.00 ge: Climax beed: ngle: pass: pass: | 02 Mine 1.50 Finish 0 12.00 2.00 10.00 | grading (0-2.5 n degrees feet feet feet feet | S | acres |
| Total Total MATERIAL QUANT Total Area Sourc HOURLY PRODUCT Width o Net grading o Unadjusted | I Unit Cost/Hour: Fleet Cost/Hour: TTIES to be graded or rippe e of estimated acreag FION Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler of blade overlap per p or ripping width per p Hourly Unit Produc | ed: 10.00 ge: Climax beed: ngle: pass: pass: | 02 Mine 1.50 Finish 0 12.00 2.00 10.00 1.8182 | grading (0-2.5 n degrees feet feet feet acres/h | our | acres |
| Total Total MATERIAL QUANT Total Area Sourc HOURLY PRODUCT Width Net grading o | I Unit Cost/Hour: Fleet Cost/Hour: TTIES to be graded or rippe e of estimated acreag FION Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler of blade overlap per p or ripping width per p Hourly Unit Produc | ed: 10.00 ge: Climax beed: ngle: pass: pass: | 02 Mine 1.50 Finish 0 12.00 2.00 10.00 1.8182 | grading (0-2.5 n degrees feet feet feet feet | our | acres |
| Total Total MATERIAL QUANT Total Area Sourc HOURLY PRODUCT Width Net grading o Unadjusted Job Condition Correction | I Unit Cost/Hour: Fleet Cost/Hour: TTIES to be graded or rippe e of estimated acreag <u>FION</u> Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler of blade overlap per p or ripping width per p I Hourly Unit Product <u>Factors</u> | ed: 10.00 ge: Climax peed: ngle: pass: pass: tion: Source | 02 Mine 1.50 Finish 0 12.00 2.00 10.00 1.8182 S | grading (0-2.5 n degrees feet feet feet acres/h | our | acres |
| Total Total MATERIAL QUANT Total Area Sourc HOURLY PRODUCT Width o Net grading o Unadjusted Job Condition Correction Altitude Adj: | I Unit Cost/Hour: Fleet Cost/Hour: TTIES to be graded or rippe e of estimated acreag FION Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler of blade overlap per p or ripping width per p I Hourly Unit Product <u>Factors</u> 1.00 | ed: 10.00 ge: Climax peed: ngle: ngth: pass: pass: tion: Source (CAT HB | 02 Mine 1.50 Finish 0 12.00 2.00 10.00 1.8182) | grading (0-2.5 n degrees feet feet feet acres/h | our | acres |
| Total Total MATERIAL QUANT Total Area Sourc HOURLY PRODUCT Width Net grading o Unadjusted Job Condition Correction Altitude Adj: Job Efficiency: | I Unit Cost/Hour: Fleet Cost/Hour: TTTIES to be graded or rippe e of estimated acreag FION Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler of blade overlap per p or ripping width per p I Hourly Unit Product <u>Factors</u> <u>1.00</u> 0.90 | ed: 10.00 ge: Climax beed: | 02 Mine 1.50 Finish 0 12.00 2.00 10.00 1.8182) | grading (0-2.5 n degrees feet feet feet acres/h | our | |
| Total Total MATERIAL QUANT Total Area Sourc HOURLY PRODUCT Width o Net grading o Unadjusted Job Condition Correction Altitude Adj: | I Unit Cost/Hour: Fleet Cost/Hour: TTIES to be graded or rippe e of estimated acreag FION Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler of blade overlap per p or ripping width per p I Hourly Unit Product <u>Factors</u> 1.00 | ed: 10.00 ge: Climax peed: ngle: ngth: pass: pass: tion: Source (CAT HB | 02 Mine 1.50 Finish 0 12.00 2.00 10.00 1.8182) | grading (0-2.5 n degrees feet feet feet acres/h | our | acres |
| Total Total MATERIAL QUANT Total Area Sourc HOURLY PRODUCT Width of Net grading of Unadjusted Job Condition Correction Altitude Adj: Job Efficiency: Net Correction: | I Unit Cost/Hour: Fleet Cost/Hour: TTIES to be graded or rippe e of estimated acreag TION Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler of blade overlap per p or ripping width per p I Hourly Unit Produce <u>Factors</u> <u>1.00</u> 0.900 djusted Hourly Unit | ed: 10.00 ge: Climax peed: | 02 Mine 1.50 Finish 0 12.00 2.00 10.00 1.8182 () .) 1.6364 | grading (0-2.5 n degree: feet feet feet acres/h Site Altitude: <u>12(</u> | s our <u>)0</u> feet | acres |
| Total Total MATERIAL QUANT Total Area Sourc HOURLY PRODUCT Width of Net grading of Unadjusted Job Condition Correction Altitude Adj: Job Efficiency: Net Correction: | I Unit Cost/Hour: Fleet Cost/Hour: TTIES to be graded or rippe e of estimated acreag TION Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler of blade overlap per p or ripping width per p I Hourly Unit Product <u>Factors</u> <u>1.00</u> 0.900 | ed: 10.00 ge: Climax peed: | 02 Mine 1.50 Finish 0 12.00 2.00 10.00 1.8182 () .) | grading (0-2.5 n degree: feet feet feet acres/h Site Altitude: <u>120</u> | s our <u>)0</u> feet | acres |
| Total Total MATERIAL QUANT Total Area Sourc HOURLY PRODUCT Width Net grading of Unadjusted Job Condition Correction Altitude Adj: Job Efficiency: Net Correction: A | I Unit Cost/Hour: Fleet Cost/Hour: TITIES to be graded or rippe e of estimated acreag FION Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler of blade overlap per p or ripping width per p I Hourly Unit Produce <u>Factors</u> <u>1.00</u> 0.900 djusted Hourly Unit Fleet | ed: 10.00 ge: Climax peed: | 02 Mine 1.50 Finish 0 12.00 2.00 10.00 1.8182 () .) 1.6364 | grading (0-2.5 n degree: feet feet feet acres/h Site Altitude: <u>12(</u> | s our <u>)0</u> feet | acres |
| Total Total MATERIAL QUANT Total Area Sourc HOURLY PRODUCT Width of Net grading of Unadjusted Job Condition Correction Altitude Adj: Job Efficiency: Net Correction: A A A A | I Unit Cost/Hour: Fleet Cost/Hour: TITIES to be graded or rippe e of estimated acreag FION Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler of blade overlap per p or ripping width per p I Hourly Unit Produce <u>Factors</u> <u>1.00</u> 0.900 djusted Hourly Unit Fleet | ed: 10.00 ge: Climax peed: ition: pass: pass: pass: tion: Source (CAT HB (1sh/d, fav multiplier Production: Production: | 02 Mine 1.50 Finish 0 12.00 2.00 10.00 1.8182 () .) 1.6364 | grading (0-2.5 n degree: feet feet feet acres/h Site Altitude: <u>12(</u> acres/Hour acres/Hour | our) <u>0</u> feet | Hours |

 Unit cost:
 \$55.01
 per acre
 Total job cost:
 \$550

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| Task description: | Open Pit, Grade west open p | Dpen Pit, Grade west open pit periphery | | | | |
|--|--|---|----------------------------|---------------------|--|--|
| te: Climax Mine | Permit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> | | |
| PROJECT IDENTIFI | CATION | | | | | |
| Task #: B01 Date: 9/17/2018 10:53:42 A User: JLE | State: <u>Colorado</u> County: Summit | | Abbreviation: Filename: | None M493-B01 | | |
| Agency or organ | nization name: DRMS | | | | | |
| HOURLY EQUIPME | NT COST | | | | | |
| Horsepower: 310 Blade Type: Sen Attachment: 3-s Shift Basis: 1 p | t D8T - 8SU) mi-Universal hank ripper er day RG) | - - - - | | | | |
| Cost Breakdown: Ownership Cost/Hour: | \$93.62 | <u>Utilization %</u> NA | | | | |
| Operating Cost/Hour: | \$73.35 | 100 | | | | |
| Ripper own. Cost/Hour: | \$8.93 | NA | | | | |
| Ripper op. Cost/Hour: | \$3.89 | 50 | | | | |
| Operator Cost/Hour: | \$41.52 | NA | | | | |
| <u></u> | 660 00 660 LCY | | | | | |
| Source of estimated volu Source of estimated swe factor: | | | | | | |
| HOURLY PRODUCT | TION | | | | | |
| Average push distance: Unadjusted hourly production: | 250 feet 377.8 LCY/hr | | | | | |
| Materials consistency description: | Rock, poorly ripped | or blasted 0.6 | | | | |
| Average push gradient: | -15 % | | | | | |
| Average site altitude: | 12,000 feet | | | | | |
| Material weight: | 3,300 lbs/LCY | | | | | |

| ob Condition Correction Factor | | Source |
|--------------------------------|-------|---------------|
| Operator Skill: | 0.750 | (AVG.) |
| Material consistency: | 0.600 | (CAT HB) |
| Dozing method: | 1.100 | (50% SL) |
| Visibility: | 1.000 | (AVG.) |
| Job efficiency: | 0.830 | (1 SHIFT/DAY) |
| Spoil pile: | 0.800 | (SSD-AC) |
| Push gradient: | 1.329 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.697 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Weight description: Decomposed rock - 75% Rock, 25% Earth

Net correction: 0.3045

| Adjusted unit production: | 115.04 LCY/hr |
|---------------------------|----------------------|
| Adjusted fleet | 230.08 LCY/hr |
| production: | 230.00 LC 1/m |

| Fleet size: | 2 Dozer(s) |
|-----------------|--------------|
| Unit cost: | \$1.924/LCY |
| | |
| Total job time: | 115.44 Hours |
| Total job cost: | \$51,095 |

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TRUCK/LOADER TEAM WORK

| Task description: | Open Pi | it, load and hau | ıl topsoil | | | |
|--|-------------------|------------------------------------|--------------------------------|---------------|------------------------|-----------------|
| Site: Climax Mine | | Permit Ac | ction: 2016 Recl Cost Estir | | Permit/Job#: | M1977493 |
| PROJECT IDEN | TIFICATION | | | | | |
| Task #: $B02$ Date: $9/17/$ 10:58 User: JLE | 2018 C | State: <u>Color</u> County: Sum | | | | one (493-B02 |
| | · ,. | | | | | |
| Agency or | organization nam | ne: DRMS | | | | |
| HOURLY EQUI | PMENT COST | - | | Shift ba | usis: <u>1 per day</u> | |
| | | | Equipment Desci | ription | | |
| Т | ruck Loader Tear | | .t 740 | | | |
| | | | АТ 950Н | | | |
| Suppo | ort Equipment -Lo | | t D6T XL | | | |
| Road Ma | untenance – Moto | | AT 12M | | | |
| itoud ini | | | ater Tanker, 5,000 |) Gal. | | |
| | | | | | | |
| Cost Breakdown: | Truck/Loa | | | Equipment | | nance Equipment |
| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | \$36.60 |
| %Utilization-riper: | NA | 0 | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$31.17 | \$40.90 | | NA | \$28.69 | |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | |
| Number of Units: | 4 | 1 | 1 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$710.09 | Support: | \$140.52 | Maint: | \$173.15 |
| Total work team cos | | 6 | | | | |
| Initial volume | : 26,560 | CC | Y Swell | factor: 1.000 | | |
| Loose volume | | | | | | |
| Sou | rce of estimated | | nax Mine | | | |
| | of estimated swel | | Handbook | | | |
| | Material Purcha | | | | | |
| | То | tal Cost: \$0.0 | 00 | | | _ |

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis:

| Material weight: | 1,600 | Pounds/LCY |
|-------------------|----------|------------|
| Description: | Top Soil | |
| Rated Payload: | 87,000 | Pounds |
| Payload Capacity: | 54.38 | LCY |

Truck Bed (volume) Basis:

| 24.20 | LCY |
|-------|----------------|
| 31.40 | LCY |
| 27.80 | LCY |
| 31.40 | LCY |
| | 31.40 27.80 |

Final Truck Volume Based on Number of Loader Passes: 31.61 LCY

Site Altitude (ft.): 12000 feet

| ing Tool Capacity | | | | |
|---------------------|-------|--------------------|--------------------|----|
| | | | Bucket Size Class: | NA |
| Rated Capacity: | 4.300 | LCY (heaped) | | |
| Bucket Fill Factor: | 1.050 | Other - moist loam | (100-110%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | | |

Job Condition Corrections:

| Loading Tool Cycle Time: | Number of Loading Tool Passes Required to Fill | 7 | passes |
|-------------------------------------|--|---|--------|
| Excavators and Front Shovels: | Truck: | | _ |
| Machine Cycle Time vs. Job Conditio | n Rating: NA | | |

Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: NA

Cycle Time Elements (min.):

| Load: | NA | Maneuver: | NA | Dump: | 0.100 |
|-------|----|-----------|----|-------|-------|
|-------|----|-----------|----|-------|-------|

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

| Cycle Time Factors | | Factor (min.) | Source |
|--------------------|---|---------------|----------|
| Material: | Mixed material 0.02 | 0.020 | (Cat HB) |
| Stockpile: | Dumped by truck 0.02 | 0.020 | (Cat HB) |
| Truck Ownership: | Common ownership of trucks and loaders - 0.04 | -0.040 | (Cat HB) |
| Operation: | Constant operation -0.04 | -0.040 | (Cat HB) |
| Dump Target: | Nominal target 0.00 | 0.000 | (Cat HB) |
| | Net Cycle Time Adjustment: | -0.040 | minutes |
| | Adjusted Loader Cycle Time: | 0.460 | minutes |
| | Net Load Time per Truck: | 2.860 | minutes |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |

| Truck M | laneuver and Dump Time: | 1.00 | Minutes | Adju | isted for site a | ltitude: | 1.667 | Minutes |
|--------------------------|----------------------------|---------------|-----------------|---|-------------------|-----------------|-------------------------------|-----------------------|
| | vel (Haul & Return) T | ime: | Road Conditi | on: <u>Firm, smoo</u> | oth, rolling, dir | t/lt. surfaced, | watered, | |
| maintained Haul Route | | | | | | | | |
| Seg # | Haul Distance | Grade (%) | Roll. Res | Total Res | Velocity | Travel | | |
| 505 " | (Ft) | | (%) | (%) | (fpm) | Time (min) | | |
| 1 | 2373.00 | 6.00 | 3.00 | 9.00 | 983 | 2.505 | | |
| 2 | 3382.20 | -12.00 | 3.00 | -9.00 | 1507 | 2.367 | | |
| | | | | Haul Time: | 4.872 | minu | ites | |
| Return Rou Seg # | Haul Distance | Grade (%) | Roll. Res | Total Res | Velocity | Travel | | |
| 505 " | (Ft) | | (%) | (%) | (fpm) | Time (min) | | |
| 1 | 3382.20 | 12.00 | 3.00 | 15.00 | 1139 | 3.010 | | |
| 2 | 2373.00 | -6.00 | 3.00 | -3.00 | 3706 | 0.677 | | |
| | | | | Return Time: | - | | utes | |
| | | | Total Tru | ck Cycle Time | : 14.08 | <u>6</u> min | utes | |
| | uction 491.27 | LCY/Hou | ır | Adjusted for j | ob efficiency: | 407.75 | LCY | /Hour |
| uck Unit Produ | 134.63 | LCY/Hou | ır | Adjusted for j | ob efficiency: | 111.74 | LCY. | /Hour |
| timal No. of Tr | rucks: 4 | Truck(s) | | Selected Num | ber of Trucks: | 4 | Truc | x (s) |
| | | Adjusted sing | le truck/loader | team production team production team production | on: 407. | .75 LC | CY/Hour CY/Hour CY/Hour | |
| JOB TIM | IE AND COST | | | | | | | |
| Fleet | size: 1 | Team(s) | Т | otal job time: | 65.1 | 4] | Hours | |
| Unit | cost: \$2.511 | /LCY | Г | Total job cost: | \$66,6 | 85 | | |

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| Task description: | Storke Complex, Spread bi | | | |
|------------------------------------|---------------------------|-----------------------------------|---------------|---------------------|
| : Climax Mine | Permit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
| PROJECT IDENTIFI | CATION | | | |
| Task #: B03 | State: Colorado | | Abbreviation: | None |
| Date: 9/17/2018 | County: Summit | | Filename: | M493-B03 |
| 12:32:56 F | PM | | | |
| User: JLE | | | | |
| Agency or organ | nization name: DRMS | | | |
| HOURLY EQUIPME | NT COST | | | |
| | D6T LGP | | | |
| Horsepower: 200 | | | | |
| •• | aight | _ | | |
| Attachment: NA Shift Basis: 1 p | | _ | | |
| | er day RG) | | | |
| | , | _ | | |
| Cost Breakdown: | | Utilization % | | |
| Ownership Cost/Hour: | \$50.71 | NA | | |
| Operating Cost/Hour: | \$42.03 | 100 | | |
| Ripper own. | \$0.00 | NA | | |
| Cost/Hour: | | | | |
| Ripper op. Cost/Hour: | \$0.00 | 0 | | |
| Operator Cost/Hour: | \$41.52 | NA | | |
| Total unit Cost/Hour: | \$134.26 | | | |
| Total Fleet Cost/Hour: | \$268.52 | | | |
| | | | | |
| MATERIAL QUANT | <u>ITIES</u> | | | |
| Initial Volume: 26,5 | | | | |
| Swell factor: 1.00 | | | | |
| Loose volume: <u>26,5</u> | 60 LCY | | | |
| Source of estimated volu | | ion, Mining & Safety | | |
| Source of estimated swe | ll Cat Handbook | | | |
| factor: | | | | |
| HOURLY PRODUCT | ION | | | |
| Average push distance: | 200 feet | | | |
| Unadjusted hourly | 153.6 LCY/hr | | | |
| production: | 10010 201711 | | | |
| • | | | | |
| Materials consistency description: | Consolidated stock | pile 1.0 | | |
| accomption. | | | | |
| Average push | 0 % | | | |
| gradient: | | | | |
| Average site altitude: | 12,000 feet | | | |
| Material weight: | 1,600 lbs/LCY | | | |
| | -,000 100 100 1 | | | |

| Weight description: | op Soil | |
|------------------------------|------------------|---------------|
| Job Condition Correction Fac | tor | Source |
| Operator Skil | 1: 0.750 | (AVG.) |
| Material consistency | y: 1.000 | (CAT HB) |
| Dozing metho | d: 1.000 | (GEN.) |
| Visibilit | y:1.000 | (AVG.) |
| Job efficienc | y: 0.830 | (1 SHIFT/DAY) |
| Spoil pil | e: 0.800 | (FND-RF) |
| Push gradien | it: 1.000 | (CAT HB) |
| Altitud | e: 0.940 | (CAT HB) |
| Material Weigh | it: 1.438 | (CAT HB) |
| Blade typ | e: 1.000 | (PAT) |
| Net correction | n: <u>0.6732</u> | |
| Adjusted unit production: | 103.40 LCY/hr | |
| Adjusted fleet production: | 206.8 LCY/hr | |

| Fleet size: | 2 Dozer(s) |
|------------------------------------|--------------------------|
| Unit cost: | \$1.298/LCY |
| Total job time: Total job cost: | 128.43 Hours \$34,487 |

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| Permit | | Permit | | | |
|-----------------|-------------|---------|--------------------------------|-----------|------|
| No: | M-1977-493 | Action: | 2016 Reclamation Cost Estimate | User: | JLE |
| Site | | | | | |
| Name: | Climax Mine | Date: | 9/17/2018 | Division: | DRMS |
| | | | | | |
| Task No. | B04 | | | | |
| | Install | | | | |
| Task Descriptio | n: signs | | | | |

Guide and Directional Sign, 12" x 18", ReflectorizedRS Means, 10 14 53.20 0600Steel Posts, galvanized, 10'-0", Upright boltedRS Means, 10 14 53.20 1500

| | Labor Hours | Unit | 2016 Bare Cost | Number | Total Hours | Total Cost |
|-------|----------------|------|-------------------|--------|----------------|---------------------|
| Signs | 0.457 | EA | \$70.25 | 41 | 18.737 | \$2 <i>,</i> 880.25 |
| Post | 0.16 | EA | \$42.66 | 41 | 6.56 | \$1,749.06 |

| TOTAL | 25.297 | \$4,629.31 |
|-------|--------|------------|
|-------|--------|------------|

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| | | Pe | rmit Action: | 2016 Reclamation | | |
|----------------------|---------------------|-----------|-----------------|------------------|--------------------|----------|
| Climax Mine | | | | Cost Estimate | Permit/Job#: M1977 | |
| | ͲΙΕΙΔΑͲΙΔ | N | | | | |
| PROJECT IDEN | IIFICATIO | | | | | |
| Task #: <u>C01</u> | | State: | Colorado | | Abbreviation: | None |
| Date: 9/20/ | | County: | Summit | | Filename: | M493-C01 |
| | 9:12 AM | | | | | |
| User: JLE | | | | | | |
| Agency or | organization n | name: DI | RMS | | | |
| | | | | | | |
| HOURLY EQUI | <u>PMENT CO</u> | <u>ST</u> | | | | |
| Basic Machine: | Cat D9T - 9 | SU | | | | |
| Horsepower: | 405 | | | - | | |
| Blade Type: | Semi-Unive | rsal | | - | | |
| Attachment: | 3-shank ripp | ber | | _ | | |
| Shift Basis: | 1 per day | | | _ | | |
| Data Source: | (CRG) | | | - | | |
| Cost Breakdown: | | | | | | |
| | | | | Utilization % | | |
| Ownership Cost/H | | | \$110.70 | NA | | |
| Operating Cost/H | lour: | | \$95.46 | 100 | | |
| Ripper of | | | \$12.36 | NA | | |
| Cost/H | | | | | | |
| Ripper op. Cost/H | | | \$3.94 | 50 | | |
| Operator Cost/H | lour: | | \$41.52 | NA | | |
| Total unit Cost/Ho | ur: \$263.9 | 90 | | | | |
| Total Fleet Cost/Ho | | | | | | |
| | <u> </u> | | | | | |
| MATERIAL QUA | ANTITIES | | | | | |
| Initial Volume: | 369,453 | | | | | |
| Swell factor: | 1.215 | | | | | |
| Loose volume: | 448,885 LCY | 7 | | | | |
| - | | | | | | |
| Source of estimate | | | 016 Estimate | (Rev. 2018) | | |
| Source of estimate | d swell | Cat Hand | lbook | | | |
| factor: | | | | | | |
| | | | | | | |
| HOURLY PROD | <u>UCTION</u> | | | | | |
| Average push dista | | 250 feet | | | | |
| Unadjusted hourly | | 546.0 LCY | /hr | | | |
| production: | _ | | | | | |
| | | | | | | |
| Materials consister | юу | Compa | cted fill or en | nbankment 0.9 | | |
| description: | | | | | | |
| A | 0.04 | | | | | |
| Average push | 0 % | | | | | |
| gradient: | $\frac{1120}{1120}$ |) faat | | | | |
| Average site altitud | de: 11,300 | reet | | | | |
| Material weight: | 3 300 | lbs/LCY | | | | |
| waterial weight. | 5,500 | 103/ LC I | | | | |

| Weight description: Deco | omposed rock - 75% Rock, 2 | 25% Earth | | | | |
|--|----------------------------|---------------|--|--|--|--|
| Job Condition Correction Factor Source | | | | | | |
| Operator Skill: | 0.750 | (AVG.) | | | | |
| Material consistency: | 0.900 | (CAT HB)) | | | | |
| Dozing method: | 1.100 | (50% SL) | | | | |
| 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: | 0.3436 | | | | | |

| Adjusted unit production: | 187.61 LCY/hr |
|----------------------------|---------------|
| Adjusted fleet production: | 750.44 LCY/hr |

| Fleet size: | 4 Dozer(s) |
|------------------------------------|---|
| Unit cost: | \$1.407/LCY |
| Total job time: Total job cost: | 598.16 Hours \$631,624 |

MOTOR GRADER WORK

| : Climax Mine | Pe | rmit Action: | 2016 Recla Cost Estima | | Permit/Jo | b#: <u>M197749</u> 3 |
|--|---|---|---|--|-------------------------------|----------------------|
| PROJECT IDENTIFIC | CATION | | | | | |
| Task #: C02 | State: | Colorado | | Abł | previation: | None |
| Date: $9/20/2018$ | County: | Summit | | | Filename: | M493-C02 |
| 11:21:38 A | | | | | | |
| User: JLE | | | | | | |
| Agency or organi | ization name: | RMS | | | | |
| HOURLY EQUIPMEN | NT COST | | | | | |
| Basic Machine: | | | | Horsepower: | | 158 |
| Ripper Attachment: | | | | Shift Basis: | | ber day |
| II | | | _ | Data Source: | | CRG) |
| Cost Breakdown: | | | | | ·` | , |
| <u>Cost Dicardowii.</u> | | | | Utilization % | | |
| Owners | ship Cost/Hour: | | \$30.73 | NA | | |
| | ting Cost/Hour: | | \$30.60 | 100 | | |
| | ship Cost/Hour: | | \$0.00 | NA | | |
| | ting Cost/Hour: | | \$0.00 | NT 4 | | |
| - | ator Cost/Hour: | | \$28.69 | NA | _ | |
| Total | Unit Cost/Hour: | | \$90.02 | | | |
| | | | | | | |
| Total F | Fleet Cost/Hour: | \$180 | .04 | | | |
| | | \$180 | .04 | | | |
| MATERIAL QUANTI | TIES | | .04 | | | |
| MATERIAL QUANTI | | | .04 | | | acres |
| MATERIAL QUANTI Total Area to | TIES | d: _229.00 | | te (Rev. 2018) | | acres |
| MATERIAL QUANTI Total Area to Source | TIES o be graded or rippe of estimated acreag | d: _229.00 | | te (Rev. 2018) | | acres |
| MATERIAL QUANTI Total Area to | TIES o be graded or rippe of estimated acreag | d: _229.00 | | te (Rev. 2018) | | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI | TIES o be graded or rippe of estimated acreag | d: 229.00 e: Climax | | te (Rev. 2018) mph | | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI | TIES o be graded or rippe of estimated acreag ION | d: <u>229.00</u> e: <u>Climax</u> eed: | 2016 Estimat 1.50 | | nph) - 1.5 | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI | TIES o be graded or rippe of estimated acreag ION Average Grader Sp | d:229.00 e:Climax eed: tion: | 2016 Estimat 1.50 | mph | | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI | TIES o be graded or rippe of estimated acreag ION Average Grader Sp Selected Applicat Selected Blade Ar Effective Blade Len | d:229.00 e: eed: tion: ngle: ggth: | 2016 Estimat 1.50 Finish 0 12.00 | mph grading (0-2.5 r degree feet | | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI | TIES o be graded or rippe of estimated acreag ION Average Grader Sp Selected Applicat Selected Blade Ar Effective Blade Len F blade overlap per p | d: 229.00 e: Climax eed: tion: ngle: ggth: pass: | 2016 Estimat 1.50 Finish 0 12.00 2.00 | mph grading (0-2.5 r degree feet feet | | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI Width of Net grading or | TIES o be graded or rippe of estimated acreag ION Average Grader Sp Selected Applicat Selected Blade Ar Effective Blade Len blade overlap per p ripping width per p | d: 229.00 e: Climax eed: igle: ogth: pass: | 2016 Estimat 1.50 Finish 0 12.00 2.00 10.00 | mph grading (0-2.5 r degree feet feet feet feet | es | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI Width of Net grading or | TIES o be graded or rippe of estimated acreag ION Average Grader Sp Selected Applicat Selected Blade Ar Effective Blade Len F blade overlap per p | d: <u>229.00</u> e: <u>Climax</u> eed: <u></u> ngle: <u></u> ngth: <u></u> pass: <u></u> pass: <u></u> | 2016 Estimat 1.50 Finish 0 12.00 2.00 | mph grading (0-2.5 r degree feet feet | es | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI Width of Net grading or | TIES o be graded or rippe of estimated acreag ION Average Grader Sp Selected Applicat Selected Blade Ar Effective Blade Len blade overlap per p ripping width per p Hourly Unit Product | d: <u>229.00</u> e: <u>Climax</u> eed: <u></u> ngle: <u></u> ngth: <u></u> pass: <u></u> pass: <u></u> | 2016 Estimat 1.50 Finish 0 12.00 2.00 10.00 1.8182 | mph grading (0-2.5 r degree feet feet feet feet | nour | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCT Width of Net grading or Unadjusted H Job Condition Correction H | TIES o be graded or rippe of estimated acreag ION Average Grader Sp Selected Applicat Selected Blade Ar Effective Blade Len blade overlap per p ripping width per p Hourly Unit Product Factors | d: 229.00 e: Climax eed: ngle: pass: pass: bass: bass: bass: | 2016 Estimat 1.50 Finish 0 12.00 2.00 10.00 1.8182 S | mph grading (0-2.5 r degree feet feet feet acres/h | nour | |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI Width of Net grading or Unadjusted H Job Condition Correction F Altitude Adj: _ | TIES o be graded or rippe of estimated acreag ION Average Grader Sp Selected Applicat Selected Blade Ar Effective Blade Len blade overlap per p ripping width per p Hourly Unit Product Factors 0.95 | d: 229.00 e: Climax eed: igle: oass: oass: oass: Source (CAT HB | 2016 Estimat 1.50 Finish 0 12.00 2.00 10.00 1.8182 S | mph grading (0-2.5 r degree feet feet feet acres/h | nour | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI Width of Net grading or Unadjusted H Job Condition Correction F Altitude Adj: Job Efficiency: | TIES be graded or rippe of estimated acreag ION Average Grader Sp Selected Applicat Selected Blade Ar Effective Blade Len blade overlap per p ripping width per p Hourly Unit Product Factors 0.95 0.90 | d:229.00 e: eed: ngle: ngth: pass: pass: pass: pass: tion: Source (CAT HB (1sh/d, fav | 2016 Estimat 1.50 Finish 0 12.00 2.00 10.00 1.8182 S | mph grading (0-2.5 r degree feet feet feet acres/h | nour | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI Width of Net grading or Unadjusted H Job Condition Correction F Altitude Adj: _ | TIES o be graded or rippe of estimated acreag ION Average Grader Sp Selected Applicat Selected Blade Ar Effective Blade Len blade overlap per p ripping width per p Hourly Unit Product Factors 0.95 | d: 229.00 e: Climax eed: igle: oass: oass: oass: Source (CAT HB | 2016 Estimat 1.50 Finish 0 12.00 2.00 10.00 1.8182 S | mph grading (0-2.5 r degree feet feet feet acres/h | nour | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI Width of Net grading or Unadjusted H Job Condition Correction F Altitude Adj: Job Efficiency: Net Correction: Adj | TIES be graded or rippe of estimated acreag ION Average Grader Sp Selected Applicat Selected Blade Ar Effective Blade Len blade overlap per p ripping width per p Hourly Unit Product Factors 0.95 0.90 0.8550 justed Hourly Unit I | d:229.00 e: eed: ogle: oget: oass: oass: oass: oass: oass: fion: (CAT HB (1sh/d, fav multiplier Production: | 2016 Estimat 1.50 Finish 0 12.00 2.00 10.00 1.8182 S) .) 1.5545 | mph grading (0-2.5 r degree feet feet feet acres/f Site Altitude: <u>11</u> | nour <u>300</u> feet | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI Width of Net grading or Unadjusted H Job Condition Correction F Altitude Adj: Job Efficiency: Net Correction: Adj | TIES be graded or rippe of estimated acreag ION Average Grader Sp Selected Applicat Selected Blade Arr Effective Blade Len blade overlap per p ripping width per p Hourly Unit Product Factors 0.95 0.90 0.8550 | d:229.00 e: eed: ogle: oget: oass: oass: oass: oass: oass: fion: (CAT HB (1sh/d, fav multiplier Production: | 2016 Estimat 1.50 Finish 0 12.00 2.00 10.00 1.8182 S) .) | mph grading (0-2.5 r degree feet feet feet acres/f | nour <u>300</u> feet | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI Width of Net grading or Unadjusted H Job Condition Correction H Altitude Adj: Job Efficiency: Net Correction: Adj Adj | TIES o be graded or rippe of estimated acreag ION Average Grader Sp Selected Applicat Selected Blade Arr Effective Blade Len blade overlap per p ripping width per p Hourly Unit Product Factors 0.95 0.90 0.8550 justed Hourly Unit I | d:229.00 e: eed: ogle: oget: oass: oass: oass: oass: oass: fion: (CAT HB (1sh/d, fav multiplier Production: | 2016 Estimat 1.50 Finish 0 12.00 2.00 10.00 1.8182 S) .) 1.5545 | mph grading (0-2.5 r degree feet feet feet acres/f Site Altitude: <u>11</u> | nour <u>300</u> feet | acres |
| MATERIAL QUANTI Total Area to Source HOURLY PRODUCTI Width of Net grading or Unadjusted H Job Condition Correction F Altitude Adj: Job Efficiency: Net Correction: Adj | TIES o be graded or rippe of estimated acreag ION Average Grader Sp Selected Applicat Selected Blade Arr Effective Blade Len blade overlap per p ripping width per p Hourly Unit Product Factors 0.95 0.90 0.8550 justed Hourly Unit I Iusted Hourly Fleet I II | d:229.00 e: eed: ion: ggh: pass: tion: Source (CAT HB (1sh/d, fav multiplier Production: Production: | 2016 Estimat 1.50 Finish 0 12.00 2.00 10.00 1.8182 S) .) 1.5545 | mph grading (0-2.5 r degree feet feet feet acres/f Site Altitude: <u>11</u> | nour <u>300</u> feet ir | Hours |

 Unit cost:
 \$57.91
 per acre
 Total job cost:
 \$13,262

TRUCK/LOADER TEAM WORK

| Task description: Mine Mill Comp. Load/Haul Topsoil/Biosolids, 1' Cover | | | | | | |
|--|---|-------------------------------|-----------|---------------|---------------------------------------|----------------|
| Site: Climax Mine | te: Climax Mine Permit Action: 2016 Rec. Cost Estin | | | Permit/Job#: | M1977493 | |
| PROJECT IDEN | TIFICATION | | | | | |
| Task #: C03 Date: 9/20/ 11:23 User: JLE | 2018 C 3:20 AM | State: Colora County: Summ | | | oreviation: <u>No</u> Filename: M4 | ne 193-C03 |
| Agency or | organization nam | ne: DRMS | | | | |
| HOURLY EQUI | PMENT COST | | | Shift ba | sis: <u>1 per day</u> | |
| Equipment DescriptionTruck Loader Team -Truck:Cat 740-Loader:CAT 950HSupport Equipment -Load Area:Cat D6T XL-Dump Area:NARoad Maintenance –Motor Grader:CAT 12M-Water Truck:Water Tanker, 5,000 Gal. | | | | | | |
| <u>Cost Breakdown</u> : | Truck/Loa | der Team | | Equipment | Maintena | ance Equipment |
| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | \$36.60 |
| %Utilization-riper: | NA | 0 | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | \$21.23 |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | \$83.13 |
| Number of Units: | 3 | 1 | 1 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$557.04 | Support: | \$140.52 | Maint: | \$173.15 |
| Total work team cos MATERIAL QUA | | | | | | |
| Initial volume | : 369.453 | CCY | Swell | factor: 1.000 | | |
| Loose volume | · · · · · · | | | 1.000 | | |
| | Source of estimated volume:1 Foot over 229-acre Mine Mill ComplexSource of estimated swell factor:Cat HandbookMaterial Purchase Cost:\$0.00 | | | | | |
| | 10 | tal Cost: \$0.00 |) | | | |

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis:

| Material weight: | 1,600 | Pounds/LCY |
|-------------------|----------|------------|
| Description: | Top Soil | |
| Rated Payload: | 87,000 | Pounds |
| Payload Capacity: | 54.38 | LCY |

Truck Bed (volume) Basis:

| 24.20 | LCY |
|-------|----------------|
| 31.40 | LCY |
| 27.80 | LCY |
| 31.40 | LCY |
| | 31.40 27.80 |

Final Truck Volume Based on Number of Loader Passes: 31.61 LCY

Site Altitude (ft.): 11300 feet

| Loading Tool Capacity | | | | |
|-----------------------|-------|--------------------|--------------------|----|
| | | | Bucket Size Class: | NA |
| Rated Capacity: | 4.300 | LCY (heaped) | | |
| Bucket Fill Factor: | 1.050 | Other - moist loam | (100-110%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | | |

Job Condition Corrections:

| | Truck | Loader | Source |
|-----------------|-------|--------|----------|
| Altitude Adj: | 0.600 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.498 | 0.830 | |

| Loading Tool Cycle Time: | Number of Loading Tool Passes Required to Fill | 7 | passes |
|-------------------------------|--|---|--------|
| Excavators and Front Shovels: | Truck: | 7 | - |
| Mashina Carla Tima an Ish Can | dition Detines NA | | |

 Machine Cycle Time vs. Job Condition Rating:
 NA

 Selected Value within this Basic Rating:
 NA

Track Loaders – Material Description:

Cycle Time Elements (min.):

| Load: NA Maneuver: NA | Dump: 0.100 |
|-----------------------|-------------|
|-----------------------|-------------|

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

| Cycle Time Factors | | Factor (min.) | Source |
|--------------------|---|---------------|----------|
| Material: | Mixed material 0.02 | 0.020 | (Cat HB) |
| Stockpile: | Conveyor or dozer piled 10 ft. high and up 0.00 | 0.000 | (Cat HB) |
| Truck Ownership: | Common ownership of trucks and loaders - 0.04 | -0.040 | (Cat HB) |
| Operation: | Constant operation -0.04 | -0.040 | (Cat HB) |
| Dump Target: | Nominal target 0.00 | 0.000 | (Cat HB) |
| | Net Cycle Time Adjustment: | -0.060 | minutes |
| | Adjusted Loader Cycle Time: | 0.440 | minutes |
| | Net Load Time per Truck: | 2.740 | minutes |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.740 | Minutes | Adjusted for site altitude: | 2.740 | Minutes |

| | Truck M | aneuver and Dump Time: | 1.00 | Minutes | Adju | sted for site al | titude: | 1.667 | Minutes |
|-----------------|-----------------------|------------------------------|----------------|----------------|---|-------------------|-------------------------|----------------------------|---------|
| | uck Trav aintained | el (Haul & Return) T 3.0 | <u>'ime:</u> | Road Conditi | on: <u>Firm, smoo</u> | th, rolling, dirt | /lt. surfaced, | watered, | |
| | aul Route Seg # | : Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | | |
| 1 | 1 | 8000.00 | 0.00 | 3.00 | 3.00 | 3005 | 3.455 | | |
| | | | | | Haul Time: | 3.455 | minut | es | |
| | eturn Rou Seg # | te: Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | | |
| 1 | 1 | 8000.00 | 0.00 | 3.00 | 3.00 | 3005 | 2.829 | - | |
| | | | | Total Tru | Return Time: ick Cycle Time: | | | | |
| Load Truck U | ding Too Produ | ction 507.03 | LCY/Hou | r | Adjusted for j | ob efficiency: | 420.84 | | Hour |
| Truck U | nit Produ | | LCY/Hou | r | Adjusted for j | ob efficiency: | 134.63 | LCY/I | Hour |
| Optimal N | No. of Tr | ucks: 3 | Truck(s) | | Selected Numb | per of Trucks: | 3 | Truck | (s) |
| | | | Adjusted singl | e truck/loader | team production team production team production | on: 403. | 89 LC | Y/Hour Y/Hour Y/Hour | |
| JC |)B TIM | E AND COST | | | | | | | |
| | Fleet s | size: 1 | Team(s) | Т | otal job time: | 914.7 | 3 H | Iours | |
| | Unit c | cost: \$2.156 | /LCY |] | Total job cost: | \$796,4 | 63 | | |

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| Climax Mine | Permit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|---|---------------------|-----------------------------------|---------------|---------------------|
| PROJECT IDENTIFICATION | | | | |
| | State: Colorado | | Abbreviation: | None |
| Date: 9/20/2018 Co | ounty: Summit | | Filename: | M493-C04 |
| 11:25:40 AM | | | | |
| User: JLE | | | | |
| Agency or organization name | e: DRMS | | | |
| HOURLY EQUIPMENT COST | | | | |
| Basic Machine: Cat D7R DS Set | ries II LGP | _ | | |
| Horsepower: 240 | | - | | |
| Blade Type: Straight Attachment: NA | | - | | |
| Attachment: NA Shift Basis: 1 per day | | - | | |
| Data Source: (CRG) | | - | | |
| Cost Breakdown: | | - | | |
| Cost Dicardo will. | | Utilization % | | |
| Ownership Cost/Hour: | \$66.14 | NA | | |
| Operating Cost/Hour: | \$63.91 | 100 | | |
| Ripper own. Cost/Hour: | \$0.00 | NA | | |
| Ripper op. Cost/Hour: | \$0.00 | 0 | | |
| Operator Cost/Hour: | \$41.52 | NA | | |
| · | | 1111 | | |
| Total unit Cost/Hour:\$171.57Total Fleet Cost/Hour:\$514.71 | | | | |
| | | | | |
| MATERIAL QUANTITIES | | | | |
| Initial Volume: 369,453 | | | | |
| Swell factor: 1.000 | | | | |
| Loose volume: 369,453 LCY | | | | |
| Source of estimated volume: 1 | over 76.2 acres. | | | |
| | at Handbook | | | |
| factor: | | | | |
| HOURLY PRODUCTION | | | | |
| | feet | | | |
| | .3 LCY/hr | | | |
| production: | | | | |
| | Y . 1 11 4 - | | | |
| Materials consistency | Loose stockpile 1.2 | | | |
| description: | | | | |
| Average push 0 % | | | | |
| gradient: | | | | |
| Average site altitude: 11,300 fee | et | | | |
| Material weight: 1,600 lbs/ | LCY | | | |

| Weight description: Top | Soil | |
|---------------------------------|--------------|---------------|
| Job Condition Correction Factor | | Source |
| 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: | 1.438 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 1.0634 | |
| Adjusted unit3 | 07.64 LCY/hr | |
| Adjusted fleet 9. production: | 22.92 LCY/hr | |

| Fleet size: | 3 Dozer(s) |
|------------------------------------|---------------------------|
| Unit cost: | \$0.558/LCY |
| Total job time: Total job cost: | 400.31 Hours \$206,041 |

| e: Climax Mine | Per | mit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M197749</u> 3 |
|-------------------------------------|-------------------|---------------------|-----------------------------------|---------------|----------------------|
| PROJECT IDENTIFI | CATION | | | | |
| Task #: D01A | State: | Colorado | | Abbreviation: | None |
| Date: 9/17/2018 | County: | Summit | | Filename: | M493-D01a |
| 12:46:41 P | M | | | | |
| User: JLE | | | | | |
| Agency or organ | nization name: DR | MS | | | |
| HOURLY EQUIPME | NT COST | | | | |
| Basic Machine: Cat | : D9T - 9SU | | | | |
| Horsepower: 405 | | | - | | |
| •1 | ni-Universal | | - | | |
| Attachment: NA | | | - | | |
| | er day | | - | | |
| | RG) | | - | | |
| Cost Breakdown: | | T | TT , 11 | | |
| Oumarchin Cost/II- | | \$110.70 | <u>Utilization %</u> | | |
| Ownership Cost/Hour: | | \$110.70 \$95.46 | <u>NA</u> 100 | | |
| Operating Cost/Hour: Ripper own. | | | 100 | | |
| Cost/Hour: | | \$0.00 | NA | | |
| Ripper op. Cost/Hour: | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | \$41.52 | NA | | |
| - | | | | | |
| Total unit Cost/Hour: | \$247.68 | | | | |
| Total Fleet Cost/Hour: | \$495.37 | | | | |
| MATERIAL QUANT | ITIES | | | | |
| | | | | | |
| Initial Volume: 18,9 | | _ | | | |
| Swell factor: 1.00 | | _ | | | |
| Loose volume: 18,9 | 83 LCY | _ | | | |
| Source of estimated volu | | | Drawing (A/6), North S | ide, 2h:1v | |
| Source of estimated swe | ll Cat Hand | book | | | |
| factor: | | | | | |
| | | | | | |
| HOURLY PRODUCT | <u>'ION</u> | | | | |
| Average push distance: | 200 feet | | | | |
| Unadjusted hourly | 700.0 LCY/ | hr | | | |
| production: | | | | | |
| - | | | | | |
| Materials consistency | Compac | cted fill or en | nbankment 0.9 | | |
| description: | | | | | |
| , . | 20.04 | | | | |
| Average push | -30 % | | | | |
| gradient: | 11,500 feet | | | | |
| Average site altitude: | 11,500 leet | | | | |
| Material weight: | 3,300 lbs/LCY | | | | |
| 0 | · · · · | | | | |

| Weight description: Dece | omposed rock - 75% Rock, 2 | 25% Earth |
|---------------------------------|----------------------------|---------------|
| Job Condition Correction Factor | _ | Source |
| Operator Skill: | 0.750 | (AVG.) |
| Material consistency: | 0.900 | (CAT HB)) |
| Dozing method: | 1.200 | (SLOT) |
| Visibility: | 1.000 | (AVG.) |
| Job efficiency: | 0.830 | (1 SHIFT/DAY) |
| Spoil pile: | 0.800 | (SSD-AC) |
| Push gradient: | 1.601 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.697 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.6002 | |

| Adjusted unit production: | 420.14 LCY/hr |
|----------------------------|---------------|
| Adjusted fleet production: | 840.28 LCY/hr |

| Fleet size: | 2 Dozer(s) |
|------------------------------------|-------------------------|
| Unit cost: | \$0.590/LCY |
| Total job time: Total job cost: | 22.59 Hours \$11,191 |

| e: Climax Mine | Permit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | ob#: <u>M1977493</u> |
|---|--|-----------------------------------|----------------------------|----------------------|
| PROJECT IDENTIF | ICATION | | | |
| Task #: D01B Date: 9/17/2013 12:47:42 JLE | State: <u>Colorado</u> 8 County: Summit | | Abbreviation: Filename: | None M493-D01b |
| Agency or orga | anization name: DRMS | | | |
| HOURLY EQUIPMI | ENT COST | | | |
| Horsepower: 40 Blade Type: Se Attachment: N Shift Basis: 1 | emi-Universal A per day | | | |
| Data Source: (C | CRG) | <u>Utilization %</u> | | |
| Ownership Cost/Hour Operating Cost/Hour | \$95.46 | <u>NA</u> 100 | | |
| Ripper own Cost/Hour | | NA | | |
| Ripper op. Cost/Hour Operator Cost/Hour | \$0.00 | 0 NA | | |
| Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN | \$247.68 \$495.37 | | | |
| Initial Volume: Swell factor: | 3,282 | | | |
| Source of estimated vo Source of estimated sw factor: | | Drawing (A/6), South S | ide, 2h:1v | |
| HOURLY PRODUC | | | | |
| Unadjusted hourly production: | 700.0 LCY/hr | | | |
| Materials consistency description: | Compacted fill or e | mbankment 0.9 | | |
| Average push gradient: | -30 % | | | |
| Average site altitude: | 11,500 feet | | | |
| Material weight: | 3,300 lbs/LCY | | _ | |

| Weight description: Deco | omposed rock - 75% Rock, 2 | 25% Earth |
|---------------------------------|----------------------------|---------------|
| Job Condition Correction Factor | | Source |
| Operator Skill: | 0.750 | (AVG.) |
| Material consistency: | 0.900 | (CAT HB)) |
| Dozing method: | 1.200 | (SLOT) |
| Visibility: | 1.000 | (AVG.) |
| Job efficiency: | 0.830 | (1 SHIFT/DAY) |
| Spoil pile: | 0.800 | (SSD-AC) |
| Push gradient: | 1.601 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.697 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.6002 | |

| Adjusted unit production: | 420.14 LCY/hr |
|----------------------------|---------------|
| Adjusted fleet production: | 840.28 LCY/hr |

| Fleet size: | 2 Dozer(s) | |
|-----------------|--------------|---|
| Unit cost: | \$0.590/LCY | |
| | | - |
| Total job time: | 134.81 Hours | |
| Total job cost: | \$66,783 | - |

| te: Climax Mine | | Permit Action: | 2016 Reclamation Cost Estimate | Permit/Job#: M1977493 | |
|--|-------------------------------|-------------------------------------|-----------------------------------|----------------------------|-------------------|
| PROJECT IDENTIE | TICATION | | | | |
| Task #: D01C Date: 9/17/201 12:49:36 User: JLE | 8 Cou | ate: <u>Colorado</u> nty: Summit | | Abbreviation: Filename: | None M493-D01c |
| Agency or org | anization name: | DRMS | | | |
| HOURLY EQUIPM | ENT COST | | | | |
| Horsepower: 4 Blade Type: S | emi-Universal | | - | | |
| | A per day CRG) | | - | | |
| Cost Breakdown: Ownership Cost/Hour | | \$110.70 | <u>Utilization %</u> NA | | |
| Operating Cost/Hour Ripper own | | \$95.46 | 100 | | |
| Cost/Hour | | \$0.00 | NA | | |
| Ripper op. Cost/Hour Operator Cost/Hour | | \$0.00 \$41.52 | 0 NA | | |
| Swell factor: 1.0 | <u>FITIES</u> 2,494 | | | | |
| Source of estimated vo Source of estimated sw factor: | | F Design (TR25), Handbook | Drawing (A/6), South S | ide, 2h:1v | |
| HOURLY PRODUC | TION | | | | |
| Average push distance Unadjusted hourly production: | | et LCY/hr | | | |
| Materials consistency description: | C | ompacted fill or e | mbankment 0.9 | | |
| Average push gradient: | 15 % | | | | |
| Average site altitude: | 11,500 feet | | | | |
| Material weight: | 3,300 lbs/LC | v | | | |

| Weight description: Deco | omposed rock - 75% Rock, | 25% Earth |
|---------------------------------|--------------------------|---------------|
| Job Condition Correction Factor | | Source |
| Operator Skill: | 0.750 | (AVG.) |
| Material consistency: | 0.900 | (CAT HB)) |
| Dozing method: | 1.200 | (SLOT) |
| Visibility: | 1.000 | (AVG.) |
| Job efficiency: | 0.830 | (1 SHIFT/DAY) |
| Spoil pile: | 0.800 | (SSD-AC) |
| Push gradient: | 0.666 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.697 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.2497 | |
| Adjusted unit | | |

| production: | 174.79 LCY/hr |
|----------------------------|----------------------|
| Adjusted fleet production: | 699.16 LCY/hr |

| Fleet size: | 4 Dozer(s) |
|------------------------------------|---------------------------|
| Unit cost: | \$1.417/LCY |
| Total job time: Total job cost: | 446.96 Hours \$442,815 |

| e: Climax Mine | P | ermit Action: | 2016 Reclamation Cost Estimate | Permit/Job#: M1977493 | |
|---|-----------------------------|------------------|-----------------------------------|-----------------------|-----------|
| PROJECT IDENTIF | ICATION | | | | |
| Task #: D01D | State: | Colorado | | Abbreviation: | None |
| Date: 9/17/2018 | | Summit | | Filename: | M493-D01d |
| 12:51:26 | PM | | | | |
| User: JLE | | | | | |
| Agency or orga | nization name: | RMS | | | |
| HOURLY EQUIPMI | ENT COST | | | | |
| Basic Machine: Ca | at D9T - 9SU | | _ | | |
| Horsepower: 40 | | | _ | | |
| •1 | emi-Universal | | - | | |
| Attachment: <u>N</u> Shift Basis: 1 | A per day | | - | | |
| | CRG) | | - | | |
| Cost Breakdown: | , | | - | | |
| <u>Cost Dreakdo wil</u> . | | | Utilization % | | |
| Ownership Cost/Hour: | | \$110.70 | NA | | |
| Operating Cost/Hour: | | \$95.46 | 100 | | |
| Ripper own. Cost/Hour: | | \$0.00 | NA | | |
| Ripper op. Cost/Hour: | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | \$41.52 | NA | | |
| - | | | 1121 | | |
| Total unit Cost/Hour: Total Fleet Cost/Hour: | \$247.68 \$495.37 | | | | |
| Total Fleet Cost/Hour. | \$ 4 93.37 | | | | |
| MATERIAL QUANT | TITIES | | | | |
| Initial Volume: 5,1 | 07 | | | | |
| Swell factor: 1.0 | | | | | |
| | 07 LCY | | | | |
| Source of estimated vol | lume: OSF De | | Drawing (B/7), East Sid | de 2h·1v | |
| Source of estimated sw | | | Stawing (B/7), East SR | | |
| factor: | | | | | |
| | | | | | |
| HOURLY PRODUC | <u>FION</u> | | | | |
| Average push distance: | 200 feet | | | | |
| Unadjusted hourly | 700.0 LCY | //hr | | | |
| production: | | | | | |
| Motoriala and item | | a at a d £11 | mbonlymert 0.0 | | |
| Materials consistency description: | Comp | acted fill or er | nbankment 0.9 | | |
| acsemption. | | | | | |
| Average push | -30 % | | | | |
| gradient: | | | | | |
| Average site altitude: | 11,500 feet | | | | |
| Material weight: | 3,300 lbs/LCY | | | | |
| material weight. | 5,500 108/LC I | | | | |
| ob Condition Correction Factor | | Source |
|--------------------------------|--------|---------------|
| Operator Skill: | 0.750 | (AVG.) |
| Material consistency: | 0.900 | (CAT HB)) |
| Dozing method: | 1.200 | (SLOT) |
| Visibility: | 1.000 | (AVG.) |
| Job efficiency: | 0.830 | (1 SHIFT/DAY) |
| Spoil pile: | 0.800 | (SSD-AC) |
| Push gradient: | 1.601 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.697 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.6002 | |

| production: | 420.14 LC Y/hr |
|----------------------------|----------------|
| Adjusted fleet production: | 840.28 LCY/hr |

| Fleet size: | 2 Dozer(s) |
|------------------------------------|-----------------------|
| Unit cost: | \$0.590/LCY |
| Total job time: Total job cost: | 6.08 Hours \$3,011 |

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| e: Climax Mine | Pe | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|--|---|-----------------------------|---|---------------|---------------------|
| PROJECT IDENTIFI | CATION | | | | |
| Task #: D01E | State: | Colorado | | Abbreviation: | None |
| Date: $8/31/2017$ | State: County: | Summit | <u> </u> | Filename: | M493-D01e |
| User: JLE | County. | Summe | | Filename. | W1495-D016 |
| Agency or organ | nization name: DF | RMS | | | |
| HOURLY EQUIPME | | | | | |
| | | | | | |
| | t D9T - 9SU | | | | |
| Horsepower: 405 | | | | | |
| | mi-Universal | | | | |
| Attachment: NA | | | | | |
| | er day | | | | |
| Data Source: (Cl | RG) | | | | |
| Cost Breakdown: | | | | | |
| | | | Utilization % | | |
| Ownership Cost/Hour: | | \$110.70 | NA | | |
| Operating Cost/Hour: | | \$95.46 | 100 | | |
| Ripper own. | | | | | |
| Cost/Hour: | | \$0.00 | NA | | |
| Ripper op. Cost/Hour: | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | \$41.52 | NA | | |
| operator cost/fiour. | | φ -1 .52 | NA | | |
| Total unit Cost/Hour: | \$247.68 | | | | |
| Total Fleet Cost/Hour: | \$990.73 | | | | |
| | | | | | |
| | ITIES | | | | |
| MATERIAL OUANT | | | | | |
| MATERIAL QUANT | | | | | |
| Initial Volume: 151 | ,653 | | | | |
| Initial Volume: 151, Swell factor: 1.00 | ,653)0 | _ | | | |
| Initial Volume: 151, Swell factor: 1.00 | ,653 | | | | |
| Initial Volume:151,Swell factor:1.00Loose volume:151, | ,653)0 , 653 LCY | — — — ign (TR25) T | Drawing (A) top of pile | Acteage | |
| Initial Volume:151,Swell factor:1.00Loose volume:151,Source of estimated volume151, | ,653 00 , 653 LCY ume: OSF Des | | Drawing (4), top of pile | e acreage | |
| Initial Volume: 151 Swell factor: 1.00 Loose volume: 151 Source of estimated volu Source of estimated swe | ,653 00 , 653 LCY ume: OSF Des | | Drawing (4), top of pile | e acreage | |
| Initial Volume:151,Swell factor:1.00Loose volume:151,Source of estimated volume151, | ,653 00 , 653 LCY ume: OSF Des | | Drawing (4), top of pile | e acreage | |
| Initial Volume: 151, Swell factor: 1.00 Loose volume: 151, Source of estimated volu Source of estimated swe factor: | ,653)0 , 653 LCY ume: <u>OSF Des</u> ell Cat Hand | | Drawing (4), top of pile | e acreage | |
| Initial Volume: 151 Swell factor: 1.00 Loose volume: 151 Source of estimated volu Source of estimated swe | ,653)0 , 653 LCY ume: <u>OSF Des</u> ell Cat Hand | | Drawing (4), top of pile | e acreage | |
| Initial Volume: 151, Swell factor: 1.00 Loose volume: 151, Source of estimated volu Source of estimated swe factor: HOURLY PRODUCT | ,653)0 , 653 LCY ume: <u>OSF Des</u> ell Cat Hand | | Drawing (4), top of pile | e acreage | |
| Initial Volume: 151, Swell factor: 1.00 Loose volume: 151, Source of estimated volu Source of estimated swe factor: HOURLY PRODUCT Average push distance: | ,653)0 , 653 LCY ume: <u>OSF Des</u> ell Cat Hand <u>CION</u> | lbook | Drawing (4), top of pile | e acreage | |
| Initial Volume: 151, Swell factor: 1.00 Loose volume: 151, Source of estimated volu Source of estimated swe factor: HOURLY PRODUCT Average push distance: Unadjusted hourly | ,653 00 , 653 LCY ume: <u>OSF Des</u> ell Cat Hand <u>CION</u> 200 feet | lbook | Drawing (4), top of pile | e acreage | |
| Initial Volume: 151, Swell factor: 1.00 Loose volume: 151, Source of estimated volu Source of estimated swe factor: HOURLY PRODUCT Average push distance: | ,653 00 , 653 LCY ume: <u>OSF Des</u> ell Cat Hand <u>CION</u> 200 feet | lbook | Drawing (4), top of pile | e acreage | |
| Initial Volume: 151, Swell factor: 1.00 Loose volume: 151, Source of estimated volu Source of estimated swe factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: | ,653 00 ,653 LCY ume: OSF Des Cat Hand CION 200 feet 700.0 LCY, | lbook /hr | | e acreage | |
| Initial Volume: 151, Swell factor: 1.00 Loose volume: 151, Source of estimated volu Source of estimated swe factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency | ,653 00 ,653 LCY ume: OSF Des Cat Hand CION 200 feet 700.0 LCY, | lbook /hr | Drawing (4), top of pile nbankment 0.9 | e acreage | |
| Initial Volume: 151, Swell factor: 1.00 Loose volume: 151, Source of estimated volu Source of estimated swe factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: | ,653 00 ,653 LCY ume: OSF Des Cat Hand CION 200 feet 700.0 LCY, | lbook /hr | | e acreage | |
| Initial Volume: 151, Swell factor: 1.00 Loose volume: 151, Source of estimated volu Source of estimated swe factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency description: | ,653 00 ,653 LCY ume: OSF Des Cat Hand <u>200 feet</u> 700.0 LCY, Compa | lbook /hr | | e acreage | |
| Initial Volume: 151, Swell factor: 1.00 Loose volume: 151, Source of estimated volu Source of estimated swe factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency description: Average push | ,653 00 ,653 LCY ume: OSF Des Cat Hand CION 200 feet 700.0 LCY, | lbook /hr | | e acreage | |
| Initial Volume: 151, Swell factor: 1.00 Loose volume: 151, Source of estimated volu Source of estimated swe factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency description: Average push gradient: | 653 00 653 LCY ume: OSF Des Cat Hand Cat Hand Cat Hand 200 feet 700.0 LCY Compa 0 % | lbook /hr | | e acreage | |
| Initial Volume: 151, Swell factor: 1.00 Loose volume: 151, Source of estimated volu Source of estimated swe factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency description: Average push | ,653 00 ,653 LCY ume: OSF Des Cat Hand <u>200 feet</u> 700.0 LCY, Compa | lbook /hr | | e acreage | |

| weight description: | Decomposed fock - 75% I | KOCK, 25% Earth |
|-----------------------------|-------------------------|-----------------|
| Job Condition Correction Fa | ctor_ | Source |
| Operator Sk | ill: 0.750 | (AVG.) |
| Material consistence | cy: 0.900 | (CAT HB)) |
| Dozing metho | od: 1.200 | (SLOT) |
| Visibili | ty: 1.000 | (AVG.) |
| Job efficience | cy: 0.830 | (1 SHIFT/DAY) |
| Spoil pi | le: 0.800 | (SSD-AC) |
| Push gradie | nt: 1.000 | (CAT HB) |
| Altitud | le: 1.000 | (CAT HB) |
| Material Weig | ht: 0.697 | (CAT HB) |
| Blade typ | be: 1.000 | (PAT) |
| Net correction | on: 0.3749 | |
| Adjusted unit production: | 262.43 LCY/hr | |
| Adjusted fleet production: | 1049.72 LCY/hr | |

Weight description: Decomposed rock - 75% Rock, 25% Earth

JOB TIME AND COST

| Fleet size: | 4 Dozer(s) |
|-------------|-------------|
| Unit cost: | \$0.944/LCY |

 Total job time:
 144.47 Hours

 Total job cost:
 \$143,131

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TRUCK/LOADER TEAM WORK

| Task description: | North 4 | 0 OSF. Load/Ha | aul Biosolids, 6" | Cover | | |
|---|--|------------------------------|----------------------------|-----------------|--------------------------------|----------------|
| Site: Climax Mine | Permit Action: 2016 Reclamation Cost Estimate | | | Permit/Job#: | M1977493 | |
| PROJECT IDEN | TIFICATION | | | | | |
| $\begin{array}{c} \text{Task #:} \underline{\text{D02A}}\\ \text{Date:} \underline{8/21/}\\ \text{User:} \underline{\text{JLE}} \end{array}$ | | State: Color County: Sumn | | | oreviation: No Filename: M4 | ne 93-D02a |
| Agency or | organization nan | ne: DRMS | | | | |
| HOURLY EQUI | PMENT COST | - | | Shift ba | sis: <u>1 per day</u> | |
| | ruck Loader Tea | | Equipment Descr 740 | iption | | |
| 1 | ruck Loader Tea | | 740 T 950H | | | |
| Suppo | ort Equipment -L | oad Area: Cat | D6T XL | | | |
| DeadM | -Du Dintenance –Moto | mp Area: NA | | | | |
| Koad Ma | | | T 12M ter Tanker, 5,000 | Gal. | | |
| | | | | | | |
| Cost Breakdown: | Truck/Loa | | | Equipment | | ance Equipment |
| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | \$36.60 |
| %Utilization-riper: Ripper own. | NA | 0 | NA | NA | NA | NA |
| cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | \$21.23 |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | \$83.13 |
| Number of Units: | 4 | 1 | 1 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$710.09 | Support: | \$140.52 | Maint: | \$173.15 |
| Total work team cos MATERIAL QUA | | 6 | | | | |
| Initial volume | : 130,680 | CCY | Swell | factor: 1.000 | | |
| Loose volume | | | | | | |
| Soi | rce of estimated | volume: 12" o | of Cover over 162 | acres, 50% Bios | olids and 50 % T | opsoil |
| | of estimated swe | | Handbook | | | 1 |
| | Material Purcha | | | | | |
| | То | tal Cost: \$0.0 | 0 | | | |

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis: Material weight: 1,600

Pounds/LCY

| Description: | Top Soil | | | | | |
|---|-----------------|---------------------------------|-----------------|---------------------|----------|---------|
| Rated Payload: | 87,000 | Pounds | | | | |
| Payload Capacity: | 54.38 | LCY | | | | |
| Truck Bed (volume) Basis: Struck Volume: | | LCY | | | | |
| Heaped Volume: | | LCY | | | | |
| Average Volume: Adjusted Volume: | | LCY LCY | | | | |
| Adjusted Volume. | 51.40 | | | | | |
| Final T Loading Tool Capacity | ruck Volume B | ased on Number of L | | 31.61 | LCY | |
| Rated Capacity: | 4.300 | LCY (heaped) | Duer | | | _ |
| Bucket Fill Factor: | 1.050 | Other - moist loan | n (100- | -110%) 1.050 | | - |
| Adjusted Capacity: | 4.515 | LCY | ii (100 | 110/0/ 1.050 | | _ |
| | | | | | | |
| Job Condition Corrections: | | Site | Altitude (ft.): | <u>11300</u> feet | | |
| | Truck | Loader | Source | | | |
| Altitude Adj: | 0.600 | 1.000 | (CAT HE | / | | |
| Job Efficiency: | 0.830 | 0.830 | (CAT HE | 3) | | |
| Net Correction: | 0.498 | 0.830 | | | | |
| Loading Tool Cycle Time: | Ν | umber of Loading To | ol Passes Requ | | 7 | passes |
| Excavators and Front Shovels | <u>s:</u> | | | Truck: | , | |
| Machine Cycle Time vs Selected Value w | | | | | | |
| Track Loaders – N | Material Descri | otion: | | | | |
| Cycle Time Elements (min.): | | | | | | |
| Load: NA | Ma | aneuver: NA | | Dump: 0.100 | | |
| Wheel and Track | Loaders - Una | djusted Basic Loader (| • | bad, dump, 0. 0. 0. | 500 min | utes |
| Cycle Time Factors | | | | Factor (min.) | Source | |
| Material: | Mixed materi | | | 0.020 | (Cat HB) | |
| Stockpile: | Dumped by the | | | 0.020 | (Cat HB) | |
| Truck Ownership: | Common own 0.04 | nership of trucks and l | oaders - | -0.040 | (Cat HB) | |
| Operation: | Constant oper | | | -0.040 | (Cat HB) | |
| Dump Target: | Nominal targ | | | 0.000 | (Cat HB) | |
| | | Net Cycle Time | | -0.040 | minutes | |
| | | Adjusted Loader Net Load Tim | | 0.460 2.860 | minutes | |
| | | INCLUAU I IIII | e per fluer. | 2.000 | | |
| Truck Cycle Time: | | | | | | |
| Truck Exchange Time | 0.60 | Minutes | Adjusted | for site altitude: | 1.000 | Minutes |
| Truck Load Time | 2.860 | Minutes | Adjusted | for site altitude: | 2.860 | Minutes |

Truck Maneuver and Dump Time: 1.00

Minutes

1.667

Minutes

Adjusted for site altitude:

<u>Truck Travel (Haul & Return) Time:</u> <u>maintained 3.0</u> Haul Route:

| Haul Rout | e: | | | | | | |
|------------------|---------------|------------------|--------------|-------------------|----------------|----------|----------|
| Seg # | Haul Distance | Grade (%) | Roll. Res | Total Res | Velocity | Travel | |
| | (Ft) | | (%) | (%) | (fpm) | Time | |
| | 10005.00 | 0.00 | 2.00 | 2.00 | - | (min) | |
| 1 | 12095.00 | 0.00 | 3.00 | 3.00 | 3005 | 4.817 | |
| Return Ro | ute | | | Haul Time: | 4.817 | minutes | |
| Seg # | Haul Distance | Grade (%) | Roll. Res | Total Res | Velocity | Travel | |
| SCg # | (Ft) | Offace (70) | (%) | (%) | (fpm) | Time | |
| | (11) | | (70) | (70) | (ipiii) | (min) | |
| 1 | 12095.00 | 0.00 | 3.00 | 3.00 | 3005 | 4.192 | |
| | | | | Return Time: | 4.192 | minutes | |
| | | | Total Tru | ck Cycle Time: | | | |
| Loading To | olunit | | | | | | |
| - | uction 491.27 | LCY/Hour | | Adjusted for jo | ob efficiency: | 407.75 | LCY/Hour |
| Truck Unit Prod | | | | 5 5 | 5 | | _ |
| | 130.46 | LCY/Hour | | Adjusted for jo | ob efficiency: | 108.28 | LCY/Hour |
| | | | | | | | |
| Optimal No. of T | rucks: 4 | Truck(s) | | Selected Numb | er of Trucks: | 4 | Truck(s) |
| | | Adjusted | hourly truck | team productio | n: 433. | 12 LCY/H | our |
| | | Adjusted single | truck/loader | team productio | | | our |
| | A | djusted multiple | truck/loader | team productio | n: 407. | 75 LCY/H | our |
| | | | | | | | |
| JOB TIN | IE AND COST | | | | | | |
| Fleet | size: 1 | Team(s) | Т | otal job time: | 320.4 | 9 Hour | s |
| Unit | cost: \$2.511 | /LCY | Т | `otal job cost: _ | \$328,1 | .02 | |

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

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TRUCK/LOADER TEAM WORK

| Task description: | North 4 | 0 OSF. Load/H | Haul Topsoil, 6" C | Cover | | |
|--|--|--|-------------------------------------|-------------------|---------------------------------------|-----------------|
| Site: Climax Mine | | Permit A | ction: 2016 Recl Cost Estir | | Permit/Job#: | M1977493 |
| PROJECT IDENT | IFICATION | | | | | |
| Task #: D02B Date: 9/17/2 1:01:3 JLE | 018 C | State: <u>Colo</u> County: Sum | orado mit | | previation: <u>No</u> Filename: Ma | one 493-D02b |
| Agency or o | rganization nam | ne: DRMS | | | | |
| HOURLY EQUIP | MENT COST | | | Shift ba | sis: <u>1 per day</u> | |
| | | - | Equipment Descr | ription | | |
| | ick Loader Tear t Equipment -Lo -Du | -Loader: Ca bad Area: Ca mp Area: NA | at 740 AT 950H at D6T XL A | - | | |
| Road Mai | ntenance – Moto | | AT 12M | | | |
| - <u></u> | -Wat | er Truck: W | ater Tanker, 5,000 | Gal. | | |
| Cost Breakdown: | Truck/Loa | der Team | | Equipment | Mainten | ance Equipment |
| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 |
| Operating cost/hour: | \$55.75 | \$30.84 | | NA | \$30.60 | \$36.60 |
| %Utilization-riper: | NA | 0 | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | \$21.23 |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | \$83.13 |
| Number of Units: | 2 | 1 | 1 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$403.99 | Support: | \$140.52 | Maint: | \$173.15 |
| Total work team cost/ | | | | | | |
| Initial volume: | 130,680 | CC | V Swell | factor: 1.000 | | |
| Loose volume: | 130,68 | | | 1.000 | | |
| Sour Source o | ce of estimated f estimated swel Material Purcha | volume: <u>12</u> " Il factor: <u>Cat</u> Ise Cost: <u>\$0</u> . | of Cover over 162 Handbook | 2 acres, 50% Bios | solids and 50 % T | ſopsoil |
| | To | tal Cost: \$0. | 00 | | | - |

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis:

| Material weight: | 1,600 | Pounds/LCY |
|-------------------|----------|------------|
| Description: | Top Soil | |
| Rated Payload: | 87,000 | Pounds |
| Payload Capacity: | 54.38 | LCY |

Truck Bed (volume) Basis:

| 24.20 | LCY |
|-------|----------------|
| 31.40 | LCY |
| 27.80 | LCY |
| 31.40 | LCY |
| | 31.40 27.80 |

Final Truck Volume Based on Number of Loader Passes: 31.61 LCY

Site Altitude (ft.): 11300 feet

| ading Tool Capacity | | | | |
|---------------------|-------|--------------------|--------------------|----|
| | | | Bucket Size Class: | NA |
| Rated Capacity: | 4.300 | LCY (heaped) | | |
| Bucket Fill Factor: | 1.050 | Other - moist loam | (100-110%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | | |

Job Condition Corrections:

| | Truck | Loader | Source |
|-----------------|-------|--------|----------|
| Altitude Adj: | 0.600 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| | | | |
| Net Correction: | 0.498 | 0.830 | |

| Loading Tool Cycle Time: | Number of Loading Tool Passes Required to Fill | 7 | passes |
|--------------------------------|--|---|--------|
| Excavators and Front Shovels: | Truck: | | _ |
| Machine Cycle Time vs. Job Con | dition Rating: NA | | |

Selected Value within this Basic Rating: NA

Track Loaders – Material Description:

Cycle Time Elements (min.):

| Load: | NA | Maneuver: | NA | Dump: | 0.100 |
|-------|----|-----------|----|-------|-------|
| | | | | | |

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

| Cycle Time Factors | | Factor (min.) | Source |
|--------------------|---|---------------|----------|
| Material: | Mixed material 0.02 | 0.020 | (Cat HB) |
| Stockpile: | Dumped by truck 0.02 | 0.020 | (Cat HB) |
| Truck Ownership: | Common ownership of trucks and loaders - 0.04 | -0.040 | (Cat HB) |
| Operation: | Constant operation -0.04 | -0.040 | (Cat HB) |
| Dump Target: | Nominal target 0.00 | 0.000 | (Cat HB) |
| | Net Cycle Time Adjustment: | -0.040 | minutes |
| | Adjusted Loader Cycle Time: | 0.460 | minutes |
| | Net Load Time per Truck: | 2.860 | minutes |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |

| Truc | k Maneuver | and Dump Time: | 1.00 | Minutes | Adju | sted for site al | titude: | 1.667 | Minutes |
|-----------------|------------------------|-------------------|----------------|------------------|---|-------------------|-------------------------|-------------------------------|---------|
| maintai | ined 3.0 | & Return) Ti | me: | Road Condit | ion: <u>Firm, smoo</u> | th, rolling, dir | t/lt. surfaced, | , watered, | |
| Haul R Seg # | | Distance | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | | |
| 1 | 2830.0 | 0 | 0.00 | 3.00 | 3.00 | 3005 | 1.734 | | |
| | | | | | Haul Time: | 1.734 | minu | ites | |
| Return Seg # | | Distance | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | | |
| 1 | 2830.0 | 0 | 0.00 | 3.00 | 3.00 | 3005 | 1.109 | | |
| | | | | Total Tru | Return Time: ack Cycle Time: | | | utes utes | |
| | Tool unit roduction | 491.27 | LCY/Hou | r | Adjusted for j | ob efficiency: | 407.75 | 5 LCY | /Hour |
| | - | 226.57 | LCY/Hour | r | Adjusted for j | ob efficiency: | 188.05 | 5 LCY | /Hour |
| Optimal No. c | of Trucks: | 2 | Truck(s) | | Selected Numb | per of Trucks: | 2 | Truc | k(s) |
| | | | Adjusted singl | e truck/loader | k team production r team production r team production | on: 376. | 10 LC | CY/Hour CY/Hour CY/Hour | |
| JOB 7 | TIME AND | OCOST | | | | | | | |
| FI | eet size: | 1 | Team(s) | 1 | Fotal job time: | 347.4 | 6 | Hours | |
| U | nit cost: | \$1.908 | /LCY | r | Total job cost: | \$249,3 | 57 | | |

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| | Permit Action: | 2016 Reclamation | | 1 |
|---|---------------------|------------------|------------------------------|----------|
| Climax Mine | | Cost Estimate | Permit/Job#: <u>M1977493</u> | |
| PROJECT IDENTIFICATIO | <u>DN</u> | | | |
| Task #: D03 | State: Colorado | | Abbreviation: | None |
| Date: 8/29/2017 | County: Summit | | Filename: | M493-D03 |
| 8:54:18 AM | | | | |
| User: JLE | | | | |
| Agency or organization | name: DRMS | | | |
| HOURLY EQUIPMENT CO | <u>)ST</u> | | | |
| | S XR Series II | _ | | |
| Horsepower: 240 | 1 | - | | |
| Blade Type: Semi-Univ | ersal | - | | |
| Attachment: NA Shift Basis: 1 per day | | - | | |
| Data Source: (CRG) | | - | | |
| Cost Breakdown: | | - | | |
| | | Utilization % | | |
| Ownership Cost/Hour: | \$61.41 | NA | | |
| Operating Cost/Hour: | \$54.22 | 100 | | |
| Ripper own. Cost/Hour: | \$0.00 | NA | | |
| Ripper op. Cost/Hour: | \$0.00 | 0 | | |
| Operator Cost/Hour: | \$41.52 | NA | | |
| Total unit Cost/Hour: \$157. | 15 | | | |
| Total Fleet Cost/Hour: \$137. | | | | |
| | 57 | | | |
| MATERIAL QUANTITIES | | | | |
| Initial Volume: 261,360 | | | | |
| Swell factor: 1.000 | | | | |
| Loose volume: 261,360 LC | Y | | | |
| Source of estimated volume: | 12" over 162 acres | | | |
| Source of estimated swell | Cat Handbook | | | |
| factor: | | | | |
| HOURLY PRODUCTION | | | | |
| Average push distance: | 200 feet | | | |
| Unadjusted hourly | 410.8 LCY/hr | | | |
| production: | | | | |
| Materials consistency | Loose stockpile 1.2 | | | |
| description: | | | | |
| · · · | | | | |
| Average push 0 % | | | | |
| gradient: Average site altitude: 11,50 | 0 feet | | | |
| 11,00 | | | | |
| Material weight: 1,600 | lbs/LCY | | | |

| Weight description:Top | o Soil | |
|---------------------------------|---------------|---------------|
| Job Condition Correction Factor | <u>.</u> | Source |
| 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: | 0.800 | (FND-RF) |
| Push gradient: | 1.000 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 1.438 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.9453 | |
| Adjusted unit3 | 88.33 LCY/hr | |
| Adjusted fleet 1 production: | 553.32 LCY/hr | |
| | | |

| Fleet size: | 4 Dozer(s) | |
|-----------------|---------------------|--|
| Unit cost: | \$0.405/LCY | |
| | | |
| Total ich times | 1(0 1(11 | |
| Total job time: | 168.26 Hours | |

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| Task description: | <u> </u> | | es 2:1, 11,840 ft Top 1 | | |
|-------------------------------------|-------------------------|----------------|-----------------------------------|---------------|---------------------|
| e: Climax Mine | Pe | ermit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
| DDA IFAT INFNITI | CATION | | | | |
| PROJECT IDENTIFI | | | | | |
| Task #: <u>E01A</u> | State: | Colorado | | Abbreviation: | None |
| Date: 8/31/2017 | County: | Summit | | Filename: | M493-E01a |
| User: JLE | | | | | |
| Agency or organ | ization name: DI | RMS | | | |
| HOURLY EQUIPMEN | NT COST | | | | |
| Basic Machine: Cat | D9T - 9SU | | | | |
| Horsepower: 405 | | | - | | |
| • 1 | ni-Universal | | - | | |
| | nank ripper | | - | | |
| | er day | | - | | |
| Data Source: (CR | (G) | | - | | |
| Cost Breakdown: | | | | | |
| | | 0110 50 | <u>Utilization %</u> | | |
| Ownership Cost/Hour: | | \$110.70 | NA 100 | | |
| Operating Cost/Hour: Ripper own. | | \$95.46 | 100 | | |
| Cost/Hour: | | \$12.36 | NA | | |
| Ripper op. Cost/Hour: | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | \$41.52 | NA | | |
| - | ** * * | | | | |
| Total unit Cost/Hour: | \$260.05 | | | | |
| Total Fleet Cost/Hour: | \$1,040.18 | | | | |
| MATERIAL QUANTI | TIES | | | | |
| | | | | | |
| Swell factor: 1.000 | 8,114 | | | | |
| | 8,114 LCY | | | | |
| | | | | | |
| Source of estimated volu | me: TR25, D and Fill | rawing (C/8) ' | Top Bench at 11,840 F | eet, Cut | |
| Source of estimated swel | | lbook | | | |
| factor: | | | | | |
| | | | - | | |
| HOURLY PRODUCT | | | | | |
| Average push distance: | 200 feet | | | | |
| Unadjusted hourly | 700.0 LCY | /hr | | | |
| production: | | | | | |
| Materials consistency | Pool | well ripped or | · blasted 0.8 | | |
| description: | RUCK, | wen rippeu of | 0105100 0.0 | | |
| Sector Prion. | | | | | |
| Average push | -30 % | | | | |
| gradient: | | | | | |
| Average site altitude: | 11,800 feet | | | | |
| Material weight: | 3,300 lbs/LCY | | | | |
| iviaicitai weigili. | 5,500 108/ LC I | | | | |

| Weight description: Dece | omposed rock - 75% Rock, | 25% Earth |
|---------------------------------|--------------------------|---------------|
| Job Condition Correction Factor | _ | Source |
| Operator Skill: | 0.750 | (AVG.) |
| Material consistency: | 0.800 | (CAT HB) |
| Dozing method: | 1.200 | (SLOT) |
| Visibility: | 1.000 | (AVG.) |
| Job efficiency: | 0.830 | (1 SHIFT/DAY) |
| Spoil pile: | 0.900 | (SSD-FC) |
| Push gradient: | 1.601 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.697 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.6002 | |

| Adjusted unit production: | 420.14 LCY/hr |
|----------------------------|----------------|
| Adjusted fleet production: | 1680.56 LCY/hr |

| Fleet size: | 4 Dozer(s) |
|-----------------|----------------|
| Unit cost: | \$0.619/LCY |
| Total job time: | 1,337.72 Hours |
| Total job cost: | \$1,391,472 |

| Task description: | McNulty, Regra | de slopes 2:1 | l, 11,840 ft Top Bench | NW Side | | |
|-------------------------------------|-------------------------|----------------|-----------------------------------|----------------------|-----------|--|
| e: Climax Mine | Ре | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Job#:M1977493 | | |
| PROJECT IDENTIF | ICATION | | | | | |
| Task #: E01B | State: | Colorado | | Abbreviation: | None | |
| Date: 9/17/2018 1:05:43 PJ | County: | Summit | | Filename: | M493-E01b | |
| User: JLE | | | | | | |
| Agency or orga | nization name: DF | RMS | | | | |
| HOURLY EQUIPME | <u>ENT COST</u> | | | | | |
| | t D9T - 9SU | | - | | | |
| Horsepower: 40 | 5 mi-Universal | | - | | | |
| 7 1 | | | - | | | |
| | shank ripper ber day | | - | | | |
| | RG) | | - | | | |
| Cost Breakdown: | , | | - | | | |
| | | | Utilization % | | | |
| Ownership Cost/Hour: | | \$110.70 | NA | | | |
| Operating Cost/Hour: | | \$95.46 | 100 | | | |
| Ripper own. Cost/Hour: | | \$12.36 | NA | | | |
| Ripper op. Cost/Hour: | | \$0.00 | 0 | | | |
| Operator Cost/Hour: | | \$41.52 | NA | | | |
| - | | | 1 12 1 | | | |
| Total unit Cost/Hour: | \$260.05 | | | | | |
| Total Fleet Cost/Hour: | \$1,040.18 | | | | | |
| MATERIAL QUANT | <u>TTIES</u> | | | | | |
| Initial Volume: 1,56 | 59,209 | | | | | |
| Swell factor: 1.00 | | _ | | | | |
| | 69,209 LCY | | | | | |
| Source of estimated vol | | awing (C/Q) ' | Top Bench at 11,840 F | eet Cut | | |
| Source of commanded vor | and Fill | u, wing (C/) | 10p Denen at 11,0401 | ooi, Cui | | |
| Source of estimated swe factor: | | book | | | | |
| | | | | | | |
| HOURLY PRODUCT | <u>FION</u> | | | | | |
| Average push distance: | 200 feet | | | | | |
| Unadjusted hourly | 700.0 LCY | /hr | | | | |
| production: | | | | | | |
| Matanial | | | hlastad 0.0 | | | |
| Materials consistency | Rock, v | well ripped or | r blasted 0.8 | | | |
| description: | | | | , | | |
| Average push | | | | | | |
| | -30 % | | | | | |
| gradient: Average site altitude: | -30 % | | | | | |

_

| Material weight: | 3,300 |) lbs/LCY | |
|-------------------------------|--------|------------------------|---------------|
| Weight description: | Deco | mposed rock - 75% Rock | c, 25% Earth |
| Job Condition Correction Fa | actor | | Source |
| Operator Sk | cill: | 0.750 | (AVG.) |
| Material consisten | icy: | 0.800 | (CAT HB) |
| Dozing meth | od: | 1.200 | (SLOT) |
| Visibil | ity: | 1.000 | (AVG.) |
| Job efficien | icy: | 0.830 | (1 SHIFT/DAY) |
| Spoil p | ile: | 0.900 | (SSD-FC) |
| Push gradie | ent: | 1.601 | (CAT HB) |
| Altitude: Material Weight: | | 1.000 | (CAT HB) |
| | | 0.697 | (CAT HB) |
| Blade type: | | 1.000 | (PAT) |
| Net correcti | on: | 0.6002 | |
| Adjusted unit production: | 420 | 0.14 LCY/hr | |
| Adjusted fleet production: | 16 | 80.56 LCY/hr | |
| JOB TIME AND COST | - | | |
| Fleet size: 4 | Dozei | r(s) | |
| |).619/ | <u> </u> | |

 Total job time:
 933.74 Hours

 Total job cost:
 \$971,264

Page 50 of 199

| Task description: | McNu | lty, Regra | de top level | at11,840 ft Top Bencl | 1 | |
|--|---|------------------------|---------------------|-----------------------------------|------------------------------|-------------------|
| te: Climax Mine | | Per | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Job#: <u>M1977493</u> | |
| PROJECT IDENTI | FICATIO | N | | | | |
| Task #: E01C Date: 9/17/20 1:06:46 JLE | 18 PM | State: County: | Colorado Summit | | Abbreviation: Filename: | None M493-E01c |
| Agency or or | ganization na | ame: DR | RMS | | | |
| HOURLY EQUIPM | IENT COS | T | | | | |
| Horsepower: 4 Blade Type: 5 Attachment: 5 Shift Basis: 5 | Cat D9T - 9S 405 Semi-Univer 3-shank rippe 1 per day (CRG) | sal | | - - - - | | |
| <u>Cost Breakdown</u> : | | | | - | | |
| Ownership Cast/II | | | \$110.70 | Utilization % | | |
| Ownership Cost/Hou Operating Cost/Hou | | | \$110.70 \$95.46 | <u>NA</u> 100 | | |
| Ripper ow | n. | | \$12.36 | NA | | |
| Cost/Hou | | | | | | |
| Ripper op. Cost/Hou Operator Cost/Hou | | | \$0.00 \$41.52 | 0 | | |
| - | | | Φ1 .52 | NA | | |
| Total unit Cost/Hour: | | | | | | |
| Total Fleet Cost/Hour | r: \$1,040. | 18 | | | | |
| MATERIAL QUAN | TITIES | | | | | |
| | 13,066 .000 | | | | | |
| Loose volume: 6 | 13,066 LCY | | | | | |
| Source of estimated v | olume: | TR25, Dr 190 acre | awing 4, Top | o, 11,840 Feet, grade to | 2' over | |
| Source of estimated s factor: | well | Cat Hand | book | | | |
| HOURLY PRODU | CTION | | | | | |
| Average push distanc Unadjusted hourly production: | | 200 feet 700.0 LCY/ | 'nr | | | |
| Materials consistency description: | 7 | Rock, v | well ripped or | blasted 0.8 | | |
| Average push gradient: | 0 % | | | | | |
| Average site altitude: | 11,800 | feet | | | | |

| Material weight: | 3,30 | 0 lbs/LCY | |
|-----------------------------|-------|--------------------------|---------------|
| Weight description: | Deco | omposed rock - 75% Rock, | 25% Earth |
| Job Condition Correction Fa | actor | | Source |
| Operator Sl | cill: | 0.750 | (AVG.) |
| Material consisten | icy: | 0.800 | (CAT HB) |
| Dozing meth | | 1.200 | (SLOT) |
| Visibil | ity: | 1.000 | (AVG.) |
| Job efficien | icy: | 0.830 | (1 SHIFT/DAY) |
| Spoil p | ile: | 0.900 | (SSD-FC) |
| Push gradie | ent: | 1.000 | (CAT HB) |
| Altitude: | | 1.000 | (CAT HB) |
| Material Weight: | | 0.697 | (CAT HB) |
| Blade ty | pe: | 1.000 | (PAT) |
| Net correcti | on: | 0.3749 | |
| Adjusted unit production: | 26 | 52.43 LCY/hr | |
| Adjusted fleet production: | 10 | 49.72 LCY/hr | |
| JOB TIME AND COST | - | | |
| | Doze | <u> </u> | |
| Unit cost: \$0 |).991 | /LCY | |

 Total job time:
 584.03 Ho

 Total job cost:
 \$607,497

584.03 Hours

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TRUCK/LOADER TEAM WORK

| Task description: | McNulty | y OSF. Lo | ad/Haul T | `opsoil, 6" C | lover | | |
|--|-------------------------------------|-------------|--------------------|-------------------------|----------------------|-----------------------|--------------------------------|
| Site: Climax Mine | | Pern | nit Action: | 2016 Recl Cost Estin | | Permit/Job#: | M1977493 |
| PROJECT IDENT | TFICATION | | | | | | |
| Task #: E02A Date: 9/17/2 1:08:0 User: | 018 C | | Colorado Summit | | | | Ione 1493-E02a |
| | | 551 | 10 | | | | |
| Agency or o | organization nam | ie: DRN | 4S | | | | |
| HOURLY EQUIP | MENT COST | • | | | Shift ba | sis: <u>1 per day</u> | |
| | | | | pment Descr | iption | | |
| Tr | uck Loader Tean | | Cat 740 | 011 | | | |
| Suppor | t Equipment -Lo | -Loader: | CAT 95 Cat D6T | | | | |
| Suppor | | mp Area: | NA | AL | | | |
| Road Mai | ntenance – Moto | - | CAT 12 | М | | | |
| | -Wat | er Truck: | Water T | anker, 5,000 | Gal. | | |
| | | | | | | | |
| <u>Cost Breakdown</u> : | Truck/Load | | I. | | Equipment | | mance Equipment Water Truck |
| | Truck | Loader | Lo | ad Area | Dump Area | Motor Grader | water Truck |
| %Utilization-machine: | 100 | | 100 | 100 | NA | 100 |) 100 |
| Ownership cost/hour: | \$66.13 | \$2 | 26.14 | \$52.66 | NA | \$30.73 | \$\$25.30 |
| Operating cost/hour: | \$55.75 | \$3 | 30.84 | \$46.34 | NA | \$30.60 | \$36.60 |
| %Utilization-riper: | NA | | 0 | NA | NA | NA | NA NA |
| Ripper own. cost/hour: | NA | \$ | 60.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$ | 50.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$31.17 | \$4 | 0.90 | \$41.52 | NA | \$28.69 | \$21.23 |
| Unit Subtotals: | \$153.05 | \$9 | 97.89 | \$140.52 | NA | \$90.02 | \$83.13 |
| Number of Units: | 2 | | 1 | 1 | 0 | 1 | . 1 |
| Group Subtotals: | Work: | \$403.99 | | Support: | \$140.52 | Maint | \$173.15 |
| Total work team cost/ MATERIAL QUA | | | | | | | |
| Initial volume | 260 553 | | CCV | Swall | faator: 1000 | | |
| Initial volume: Loose volume: | <u>260,553</u> 260,55 | 3 | CCY LCY | Swell | factor: <u>1.000</u> | | |
| | · · · · · | | | | | 11.1 1.50.51 | |
| | ce of estimated | | | | 3 acres, 50% Bios | olids and 50 % | Topsoil |
| | f estimated swel Material Purcha | _ | Cat Hand \$0.00 | UUUK | | | |
| | | tal Cost: _ | \$0.00 | | | | |
| | | _ | | | | | |

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis:

| Material weight: | 1,600 | Pounds/LCY |
|-------------------|----------|------------|
| Description: | Top Soil | |
| Rated Payload: | 87,000 | Pounds |
| Payload Capacity: | 54.38 | LCY |

Truck Bed (volume) Basis:

| 24.20 | LCY |
|-------|----------------|
| 31.40 | LCY |
| 27.80 | LCY |
| 31.40 | LCY |
| | 31.40 27.80 |

Final Truck Volume Based on Number of Loader Passes: 31.61 LCY

Site Altitude (ft.): 11500 feet

| Loading Tool Capacity | | | | |
|-----------------------|-------|--------------------|--------------------|----|
| | | | Bucket Size Class: | NA |
| Rated Capacity: | 4.300 | LCY (heaped) | | |
| Bucket Fill Factor: | 1.050 | Other - moist loam | (100-110%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | | |
| | | | | |

Job Condition Corrections:

| | Truck | Loader | Source |
|-----------------|-------|--------|----------|
| Altitude Adj: | 0.600 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| | | | |
| Net Correction: | 0.498 | 0.830 | |

| Loading Tool Cycle Time: | Number of Loading Tool Passes Required to Fill | 7 | passes |
|-----------------------------------|--|---|--------|
| Excavators and Front Shovels: | Truck: | 1 | |
| Machine Cycle Time vs. Job Condit | on Rating: NA | | |

Machine Cycle Time Vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: NA

Cycle Time Elements (min.):

| Load: | NA | Maneuver: | NA | Dump: | 0.100 |
|-------|----|-----------|----|-------|-------|
|-------|----|-----------|----|-------|-------|

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

| Cycle Time Factors | | Factor (min.) | Source |
|--------------------|---|---------------|----------|
| Material: | Mixed material 0.02 | 0.020 | (Cat HB) |
| Stockpile: | Dumped by truck 0.02 | 0.020 | (Cat HB) |
| Truck Ownership: | Common ownership of trucks and loaders - 0.04 | -0.040 | (Cat HB) |
| Operation: | Constant operation -0.04 | -0.040 | (Cat HB) |
| Dump Target: | Nominal target 0.00 | 0.000 | (Cat HB) |
| | Net Cycle Time Adjustment: | -0.040 | minutes |
| | Adjusted Loader Cycle Time: | 0.460 | minutes |
| | Net Load Time per Truck: | 2.860 | minutes |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |

| Tr | uck Mane | euver and Dump Time: | 1.00 | Minutes | Adju | sted for site al | titude: | 1.667 | Minutes |
|----------------------|-------------------------|---|---------------|-----------------|---|-------------------|-------------------------|----------------------------|---------|
| main | tained 3.0 | <u>Haul & Return) T</u> <u>)</u> | ime: | Road Conditi | ion: <u>Firm, smoo</u> | th, rolling, dirt | /lt. surfaced, | watered, | |
| Haul Seg | | aul Distance Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | | |
| 1 | 3 | 100.00 | 0.00 | 3.00 | 3.00 | 3005 | 1.824 | | |
| | D. | | | | Haul Time: | 1.824 | minu | tes | |
| Seg | | aul Distance Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | | |
| 1 | 3 | 100.00 | 0.00 | 3.00 | 3.00 | 3005 | 1.199 | | |
| | | | | Total Tru | Return Time: ack Cycle Time: | | | | |
| Loadir Truck Unit | ng Tool ur Productio | on 491.27 | LCY/Hou | r | Adjusted for j | ob efficiency: | 407.75 | LCY | /Hour |
| Truck Offic | riouucii | 221.80 | LCY/Hou | r | Adjusted for j | ob efficiency: | 184.09 | LCY | /Hour |
| Optimal No | o. of Truck | as:2 | Truck(s) | | Selected Numb | per of Trucks: | 2 | Truc | k(s) |
| | | | Adjusted sing | le truck/loader | t team production r team production r team production | on: 368. | 18 LC | Y/Hour Y/Hour Y/Hour | |
| JOB | B TIME | AND COST | | | | | | | |
| | Fleet size | :1 | Team(s) | Т | Total job time: | 707.6 | 7 H | Hours | |
| | Unit cost | : \$1.949 | /LCY | - - | Fotal job cost: | \$507,8 | 66 | | |

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TRUCK/LOADER TEAM WORK

| Task description: | McNult | y OSF. Load/Ha | ul Biosolids, 6" | Cover | | |
|----------------------------------|-------------------------------------|--------------------------------------|-------------------------------|------------------------|-----------------------|-------------------------------|
| Site: Climax Mine | | Permit Act | ion: 2016 Recl Cost Estin | | Permit/Job#: | M1977493 |
| PROJECT IDENT | TIFICATION | | | | | |
| | 2018 C | State: <u>Colora</u> County: Summ | | | Filename: M4 | ne 193-E02b |
| User: JLE | | | | | | |
| Agency or o | organization nam | ne: DRMS | | | | |
| HOURLY EQUIP | MENT COST | _ | | Shift ba | sis: <u>1 per day</u> | |
| | |] | Equipment Descr | iption | | |
| Tr | uck Loader Tear | | 740 | | | |
| Sumo | rt Equipment -Lo | | T 950H D6T XL | | | |
| Suppo | | imp Area: NA | DOIAL | | | |
| Road Mai | intenance – Moto | | Т 12М | | | |
| | -Wat | ter Truck: Wat | ter Tanker, 5,000 | Gal. | | |
| | Truck/Loa | 1 | C | E | Maintan | F |
| <u>Cost Breakdown</u> : | Truck/Loa | Loader | Load Area | Equipment Dump Area | Motor Grader | ance Equipment Water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | \$36.60 |
| %Utilization-riper: | NA | 0 | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | \$21.23 |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | \$83.13 |
| Number of Units: | 5 | 1 | 1 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$863.14 | Support: | \$140.52 | Maint: | \$173.15 |
| Total work team cost | /hour: <u>\$1,176.8</u> | 31 | | | | |
| MATERIAL QUA | NTITIES | | | | | |
| Initial volume: Loose volume: | | CCY 53 CCY | | factor: <u>1.000</u> | | |
| | | | | 5 00/ D' | 1.1 1.50.04 | 1 |
| | rce of estimated of estimated swell | | of Cover over 323 Handbook | 3 acres, 50% Bios | collids and 50 % T | opsoil |
| Source | Material Purcha | | | | | |
| | | tal Cost: $$0.00$ | | | | |

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis:

| Material weight: Description: | 1,600 Top Soil | Pc | ounds/LCY | | | |
|---|-----------------------|---------------------------|----------------------|--------------------------|-----------|---------|
| Rated Payload: | 87,000 | Po | ounds | | | |
| Payload Capacity: | 54.38 | | CY | | | |
| | 51.50 | EC | | | | |
| Truck Bed (volume) Basis: | | | | | | |
| Struck Volume: | 24.20 | LCY | | | | |
| Heaped Volume: | 31.40 | LCY | | | | |
| Average Volume: | 27.80 | LCY | | | | |
| Adjusted Volume: | 31.40 | LCY | | | | |
| Final 7 | Fruck Volume | Based on Number | r of Loader Passes: | 31.61 | LCY | |
| Loading Tool Capacity | | | Derel | ant Sine Classe | T A | |
| Dete 1 Constitution | 4 200 | LOV (harris | | ket Size Class: <u>N</u> | VA | |
| Rated Capacity: Bucket Fill Factor: | 4.300 | LCY (heape Other - moi | | -110%) 1.050 | | = |
| Adjusted Capacity: | 1.050 4.515 | LCY | st Ioam (100- | -110%) 1.050 | | - |
| Aujusicu Capacity. | 4.313 | | | | | |
| Job Condition Corrections: | - | | Site Altitude (ft.): | <u>11500</u> feet | | |
| | Truck | Loader | Source | | | |
| Altitude Adj: | 0.600 | 1.000 | (CAT HE | , | | |
| Job Efficiency: | 0.830 | 0.830 | (CAT HE | 3) | | |
| Net Correction: | 0.498 | 0.830 | | | | |
| Loading Tool Cycle Time: | | Number of Loadin | ng Tool Passes Requ | | 7 | passes |
| Excavators and Front Shovel | <u>s:</u> | | | Truck: | | |
| Machine Cycle Time vs Selected Value w | | | | | | |
| Track Loaders – | Material Desci | ription: | | | | |
| Cycle Time Elements (min.): | | | | | | |
| Load: NA | N | Ianeuver: NA | | Dump: 0.10 | 0 | |
| Wheel and Track | Loaders - Un | adjusted Basic Lo | oader Cycle Time (lo | bad, dump, (| 0.500 min | utes |
| Cycle Time Factors | | | | Factor (min.) | Source | |
| Material: | Mixed mate | rial 0.02 | | 0.020 | (Cat HB) | |
| Stockpile: | Dumped by | | | 0.020 | (Cat HB) | |
| Truck Ownership: | Common ov 0.04 | wnership of trucks | and loaders - | -0.040 | (Cat HB) | |
| Operation: | Constant op | eration -0.04 | | -0.040 | (Cat HB) | _ |
| Dump Target: | Nominal tar | | | 0.000 | (Cat HB) | |
| | | | Time Adjustment: | -0.040 | minutes | |
| | | • | ader Cycle Time: | 0.460 | minutes | |
| | | Net Load | d Time per Truck: | 2.860 | minutes | |
| <u>Truck Cycle Time:</u> | | | | | | |
| Truck Exchange Time | | | | | | |
| Truck Exchange Time | : 0.60 | Minutes | Adjusted | for site altitude: | 1.000 | Minutes |

| | Truck/Loader Worksheet Cont'd | | | Task # 2 | A01 | Р | Page 57 of 199 | | | |
|-------|-------------------------------|--------|----------------------|---------------|-----------------|---|-------------------|-------------------------|----------------------------|--------------|
| | Truck M | aneuve | er and Dump Time: | 1.00 | Minutes | Adju | isted for site al | titude: | 1.667 | Minutes |
| | maintained | 3.0 | ıl & Return) T | ime: | Road Conditi | on: <u>Firm, smoo</u> | th, rolling, dir | t/lt. surfaced, | watered, | |
| | Haul Route Seg # | | Distance | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | | |
| | 1 | 1770 | 0.00 | 0.00 | 3.00 | 3.00 | 3005 | 6.683 | | |
| | Return Rou | ite: | | | | Haul Time: | 6.683 | minu | tes | |
| | Seg # | | Distance | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | | |
| | 1 | 1770 | 0.00 | 0.00 | 3.00 | 3.00 | 3005 | 6.057 | | |
| т | ooding Too | 1 | | | Total Tru | Return Time: ack Cycle Time: | | | | |
| | oading Too Produ | ction | 491.27 | LCY/Hou | r | Adjusted for j | ob efficiency: | 407.75 | LCY | Hour |
| Iruck | Unit Produ | ction | 103.81 | LCY/Hou | r | Adjusted for j | ob efficiency: | 86.16 | | Hour |
| Optim | al No. of Tr | ucks: | 5 | Truck(s) | | Selected Numb | per of Trucks: | 5 | Truck | x (s) |
| | | | | Adjusted sing | le truck/loader | team production team production team production | on: 407. | 75 LC | Y/Hour Y/Hour Y/Hour | |
| | JOB TIM | E AN | D COST | | | | | | | |
| | Fleet s | size: | 1 | Team(s) | Т | otal job time: | 639.0 | 00 F | Iours | |
| | Unit c | cost: | \$2.886 | /LCY | J | Total job cost: | \$751,9 | 77 | | |

| Climax Mine | | Per | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|--|--------------------------------------|----------------------|--------------------|-----------------------------------|----------------------------|---------------------|
| PROJECT IDENTIFI | CATION | I | | | | |
| Task #: E03 Date: 9/17/2018 1:11:31 PM User: JLE | И | State: County: | Colorado Summit | | Abbreviation: Filename: | None M493-E03 |
| Agency or organ | nization na | me: DR | MS | | | |
| HOURLY EQUIPME | NT COS | <u>T</u> | | | | |
| Horsepower: 240 Blade Type: Sen Attachment: NA Shift Basis: 1 p | ni-Univers | | II | | | |
| Cost Breakdown: | | | | <u>Utilization %</u> | | |
| Ownership Cost/Hour: | | | \$61.41 | <u>Utilization %</u> NA | | |
| Operating Cost/Hour: | | | \$54.22 | 100 | | |
| Ripper own. Cost/Hour: | | | \$0.00 | NA | | |
| Ripper op. Cost/Hour: | | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | | \$41.52 | NA | | |
| Total unit Cost/Hour: Total Fleet Cost/Hour: //ATERIAL QUANT | \$157.15 \$628.59 ITIES | | | | | |
| Initial Volume: 521, Swell factor: 1.00 | 106 | | _ | | | |
| | | 1.0.1 | _ | | | |
| Source of estimated volu Source of estimated swe factor: | | 12" over Cat Hand | | | | |
| HOURLY PRODUCT | <u>'ION</u> | | | | | |
| Average push distance: | | 00 feet | | | | |
| Unadjusted hourly production: | | 10.8 LCY/ | hr | | | |
| Materials consistency description: | | Loose s | tockpile 1.2 | | | |
| Average push gradient: | 0 % | <u></u> | | | | |
| Average site altitude: | 11,500 | teet | | | | |
| Material weight: | 1,600 lb | s/I CY | | | | |

| Weight description: To | op Soil | |
|---------------------------------|----------------|---------------|
| Job Condition Correction Factor | or_ | Source |
| 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 | : 0.800 | (FND-RF) |
| Push gradient | : 1.000 | (CAT HB) |
| Altitude | : 1.000 | (CAT HB) |
| Material Weight | : 1.438 | (CAT HB) |
| Blade type | : 1.000 | (PAT) |
| Net correction | : 0.9453 | |
| production: | 388.33 LCY/hr | |
| Adjusted fleet production: | 1553.32 LCY/hr | |

| Fleet size: | 4 Dozer(s) |
|------------------------------------|---------------------------|
| Unit cost: | \$0.405/LCY |
| Total job time: Total job cost: | 335.48 Hours \$210,880 |

| Postmining Channel | Constructi | on | | | Task No. | E04 | | | | | |
|--------------------|------------|---------------------|--------------------------|------------------|----------------|----------------------|---------------------------|--------------------------------|-----------------|---|---------------|
| | | | | | | | | | # | Variable | |
| Date : | 17-Sep-18 | Permit | M1977493 | | Climax Mir | ne | | | # | Formula | |
| User: | JLE | | | State : Colorado | | | County: | Lake/Summit | | | |
| Agency Name: Colo | | | | U I | | | | | | | |
| Permit Action: | 2016 Recla | mation C | ost Estimate | 8 | Task Desc | cription: Cons | truct Post-N | Iining Channels | | | |
| Channel ID | Length | Depth | Width (bottom) | Side Slopes | Width (Top) | Excavated Vol./LF | Excavated Vol. (total) | Riprap Thickness (2xD50) | Perimeter, P | Area for Geotextile (excl. anchor trenches) | Riprap Vol. |
| | (ft) | (ft) | (ft) | (XH:1V) | (ft) | (CY) | (CY) | (ft) | (ft) | (sf) | (CY) |
| Perimeter/Top | | | | | | | | | | | |
| Surface Channel | 29,550 | 4.5 | 10.0 | 3.0 | 37.0 | 3.9167 | 115,738 | 0.5 | 38.46 | 1,136,508 | 21,046 |
| Down Drain | | | | | | | | | | | |
| Channel | 5,250 | 4.5 | 10.0 | 3.0 | 37.0 | 3.9167 | 20,563 | 0.85 | 38.46 | 201,918 | 6,357 |
| | | | | | 0.0 | 0.0000 | 0 | | 0.00 | 0 | 0 |
| | | | | | 0.0 | 0.0000 | 0 | | 0.00 | 0 | 0 |
| Totals | 34,800 | | | | | | 136,300 | | | 1,338,425 | 27,403 |
| Materials Needed: | | Geotexti 15% was | lle (SY incl. stage): | 171,021 | | Riprap (CY): | | 27,403 | | Excavation (CY): | 136,300 |
| Material Costs: | | Geot | textile (SY): | \$ 0.94 | |] | Riprap (CY): | \$ 30.50 | Exca | vation (CY): | \$ - |
| Labor Cost: | | | · · · · | \$ 0.26 | | | | \$ 12.40 | | · · · · | \$ 2.40 |
| Equipment Cost: | | | | \$ - | | | | \$ 14.05 | | | \$ 1.39 |
| Means Reference | | 33 32 1 | 1916 1500 | | | 31 37 1310 010 | 00 | | 31 23 16 | 42 0310 | |
| Totals: | | Geotexti | le (\$): | \$ 205,225.22 | | Riprap (\$): | | \$ 1,560,606.86 | Excavation (| CY): | \$ 516,577.00 |
| Hours: | | Geotexti | le (Hrs): | 547.3 | | Riprap (Hrs) | : | 3,535.9 | Excavation (| Hrs): | 3,407.50 |
| | | SY/HR | 312.5 | | | CY/HR | 7.750 | | CY/HR | 40.00 | |
| Total Post-Mining | | | | 7,490.65 | | | | | | | |
| Total Post-Mining | Channel Re | construc | tion Cost: | \$ 2,282,409.08 | | | | | | | |

REVEGETATION WORK

| te: Climax Mine | | Pe | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|-----------------|-------------|---------|--------------|-----------------------------------|---------------|---------------------|
| <u>PROJECT</u> | IDENTIFIC | ATION | | | | |
| Task #: | F01 | State: | Colorado | | Abbreviation: | None |
| Date: | 9/17/2018 | County: | Summit | | Filename: | M493-F01 |
| 2 | 1:32:00 PM | | | | | |
| 2 | 1.52.001141 | | | | | |

FERTILIZING

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------|-----------------|------|-------------------------------|------------|
| | | | \$ | \$ |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$0.00 |

Application

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

TILLING

| Description | Cost /Acre |
|-------------------------|------------|
| | \$ |
| Total Tilling Cost/Acre | \$0.00 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|-----------------|--------------------------------|------------------------|------------|
| | | | \$ |
| Totals Seed Mix | 0.00 | 0.00 | \$0.00 |

Application

| Description | Cost /Acre |
|-------------|------------|
| | |

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

MULCHING and MISCELLANEOUS

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---|-----------------|------|-------------|-------------|
| Geo-grid soil reinforcement 6' x 150' (MEANS 32 32 2313 7255) | 1.00 | ACRE | \$23,522.40 | \$23,522.40 |
| Total Mulch Materials Cost/Acre | | | | \$23,522.40 |

Application

| Description | Cost /Acre |
|---|------------|
| Geo-grid soil reinforcement 6' x 150' (MEANS 32 32 2313 7255) | \$1,306.80 |
| | |
| Total Mulch Application Cost/Acre | \$1,306.80 |

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre | | |
|-------------|--------------|---------------|------------------|---------------------------|------------|--|--|
| | | | | | \$ | | |
| | | | | | | | |
| | | Totals 1 | Nursery Stoc | k Cost / Acre | \$0.00 | | |

| | No. of Acres: | 113.5 | Cost /Acre: | \$24,829.20 |
|---------------------|------------------|-------|--------------|-------------|
| Estimate | ed Failure Rate: | 0% | Cost /Acre*: | \$0.00 |
| *Selected Replanti | ng Work Items: | NONE | | |
| Initial Job Cost: | \$2,818,114.20 | | | |
| Reseeding Job Cost: | \$0.00 | | | |
| Total Job Cost: | \$2,818,114 | | | |
| Job Hours: | 1,757.89 | | | |

Task # A01

TRUCK/LOADER TEAM WORK

| Task description: | Tenmile | TSF, Load and | Haul Subsoil fo | or Wet Cover Ar | ea | |
|------------------------------------|---|---|-----------------------------|-----------------|-----------------------|------------------------------|
| Site: Climax Mine | | Permit Activ | on: 2016 Recl Cost Estin | | Permit/Job#: | M1977493 |
| PROJECT IDEN | TIFICATION | | | | | |
| 1:34: | /2018 C 42 PM | State: <u>Colorad</u> county: Summi | | | | lone 1493-F02 |
| User: JLE | | | | | | |
| Agency or | organization nam | e: DRMS | | | | |
| HOURLY EQUI | PMENT COST | | | | sis: <u>1 per day</u> | |
| т | ruck Loader Tean | | quipment Descr | iption | | |
| 1 | ruck Loader Tean | | '950H | | | |
| Supp | ort Equipment -Lo | | D6T XL | | | |
| | | mp Area: NA | | | | |
| Road M | aintenance – Moto | | 12M er Tanker, 5,000 | Cal | | |
| | - vv at | er fruck. Wate | er Taliker, 5,000 | Uai. | | |
| Cost Breakdown: | Truck/Load | ler Team | Support | Equipment | Mainte | nance Equipment |
| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$\$\$\$\$\$\$\$\$\$\$\$\$\$ |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | |
| %Utilization-riper: | NA | 0 | NA | NA | NA | NA NA |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | \$83.13 |
| Number of Units: | 5 | 1 | 1 | 0 | 1 | |
| Group Subtotals: | Work: | \$863.14 | Support: | \$140.52 | Maint: | \$173.15 |
| Total work team cos MATERIAL QU | | 1 | | | | |
| Initial volume | : 457,783 | CCY | Swell | factor: 1.000 | | |
| Loose volume | , | | | 1.000 | | |
| | urce of estimated y of estimated swel Material Purcha | volume: <u>30" of</u> l factor: <u>Cat H</u> | | .5 acres | | |

HOURLY PRODUCTION

| <u>Truck Capacity:</u> Truck Devload (weight) Desi | | | | | |
|---|---|---|--|--|--|
| Truck Payload (weight) Basi Material weight: | 2,650 | Pounds | ICV | | |
| Description: | | l rock - 25% Rock, 75% | | | |
| Rated Payload: | 87,000 | Pounds | | | |
| Payload Capacity: | 32.83 | LCY | | | |
| Tayload Capacity. | 52.05 | | | | |
| Truck Bed (volume) Basis: | | | | | |
| Struck Volume: | 24.20 | LCY | | | |
| Heaped Volume: | 31.40 | LCY | | | |
| Average Volume: | 27.80 | LCY | | | |
| Adjusted Volume: | 31.40 | LCY | | | |
| Final | Truck Volume | Based on Number of L | oader Passes. | 31.61 | LCY |
| Loading Tool Capacity | | | ouder i usses. | | |
| <i>Q</i> | | | Buck | et Size Class: <u>N</u> | Α |
| Rated Capacity: | 4.300 | LCY (heaped) | | | |
| Bucket Fill Factor: | 1.050 | Other - moist loa | m (100- | 110%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | | | |
| Job Condition Corrections | <u>:</u> | Site | Altitude (ft.): | <u>11000</u> feet | |
| | Truck | Loader | Source | | |
| Altitude Adj: | 0.600 | 1.000 | (CAT HB | 5) | |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB | 5) | |
| Net Correction: | 0.498 | 0.830 | | | |
| Loading Tool Cycle Time: | | Number of Loading To | ol Passes Requ | ired to Fill | 7 passes |
| Excavators and Front Shove | | 6 | | Truck: | 7 |
| Machine Cycle Time v | | | | | |
| Selected Value | within this Bas | ic Rating: NA | | | |
| Track Loaders – | Material Desc | ription: | | | |
| | | | | | |
| Cycle Time Elements (min.). | : | | | | |
| Cycle Time Elements (min.): Load: <u>NA</u> | | Maneuver: NA | | Dump: 0.100 | |
| Load: NA | N | Maneuver: NA | Cycle Time (lo | ed dump | minutes |
| Load: NA | N | | • | ed dump | |
| Load: NA Wheel and Trac | N | | • | ad, dump, 0. | minutes |
| Load: NA | N | adjusted Basic Loader | • | ad, dump, | 500 minutes |
| Load: <u>NA</u> Wheel and Trac Cycle Time Factors | N k Loaders - Un | adjusted Basic Loader erial 0.02 | • | ad, dump, 0. naneuver): 0. Factor (min.) | 500 minutes |
| Load: NA Wheel and Trac Cycle Time Factors Material: | k Loaders - Un Mixed mate Dumped by | adjusted Basic Loader erial 0.02 | n | Pad, dump, naneuver): 0. Factor (min.) 0.020 0.020 | 500 minutes 500 Cat HB Cat HB |
| Load: NA Wheel and Trac Cycle Time Factors Material: Stockpile: | k Loaders - Un Mixed mate Dumped by Common ov 0.04 | erial 0.02 truck 0.02 wnership of trucks and | n | pad, dump, naneuver):0. Factor (min.) 0.020 | 500 minutes 500 Source (Cat HB) |
| Load: NA Wheel and Trac Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | k Loaders - Un Mixed mate Dumped by Common ov 0.04 Constant op | erial 0.02 truck 0.02 wnership of trucks and peration -0.04 | n | Pad, dump, naneuver): 0. Factor (min.) 0.020 0.020 -0.040 -0.040 | 500 minutes 500 Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) |
| Load: NA Wheel and Trac Cycle Time Factors Material: Stockpile: Truck Ownership: | k Loaders - Un Mixed mate Dumped by Common ov 0.04 | erial 0.02 truck 0.02 wnership of trucks and peration -0.04 rget 0.00 | loaders - | Pad, dump, naneuver): 0. Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 | Source(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB) |
| Load: NA Wheel and Trac Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | k Loaders - Un Mixed mate Dumped by Common ov 0.04 Constant op | erial 0.02 truck 0.02 wnership of trucks and peration -0.04 rget 0.00 Net Cycle Time | n loaders - Adjustment: | Pad, dump, naneuver):0. Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 -0.040 | Source(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)minutes |
| Load: NA Wheel and Trac Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | k Loaders - Un Mixed mate Dumped by Common ov 0.04 Constant op | erial 0.02 truck 0.02 wnership of trucks and peration -0.04 rget 0.00 | n loaders - Adjustment: Cycle Time: | Pad, dump, naneuver): 0. Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 | Source(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB) |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

| Truck Travel | (Haul & Return) Time: |
|--------------|-----------------------|
| maintained 3 | 0 |

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

Haul R

| Haul Route Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|---------------------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|
| 1 | 7656.00 | 8.00 | 3.00 | 11.00 | 857 | 9.027 |
| 2 | 4593.60 | -5.00 | 3.00 | -2.00 | 3005 | 1.576 |

| Ret | turn Rou | ite. | | | Haul Time: | 10.603 | minutes |
|-----|----------|-----------------------|-----------|---------------|------------------|-------------------|-------------------------|
| | eg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
| 1 | | 4593.60 | 5.00 | 3.00 | 8.00 | 2155 | 2.278 |
| 2 | | 7656.00 | -8.00 | 3.00 | -5.00 | 3706 | 2.130 |

| | |] | Return Time: Fotal Truck Cycle Time: | 4.408 20.538 | minutes minutes | |
|--|--------|---------------------|---|-----------------|--------------------|----------|
| Loading Tool unit Production Truck Unit Production | 491.27 | LCY/Hour | Adjusted for job | efficiency: | 407.75 | LCY/Hour |
| | 92.33 | LCY/Hour | Adjusted for job | efficiency: | 76.64 | LCY/Hour |
| Optimal No. of Trucks: | 5 | Truck(s) | Selected Number | of Trucks: | 5 | Truck(s) |
| | | Adjusted hou | rly truck team production: | 383.18 | LCY/Ho | our |
| | A | 0 | k/loader team production: | | LCY/Ho | our |
| | Adjı | isted multiple true | k/loader team production: | 383.18 | LCY/Ho | our |
| JOB TIME ANI | COST | | | | | |
| JUD HIML ANI | 00001 | | | | | |

| Fleet size: | 1 | Team(s) | Total job time: | 1,194.69 | Hours |
|-------------|---------|---------|-----------------|-------------|-------|
| Unit cost: | \$3.071 | /LCY | Total job cost: | \$1,405,924 | |

Task # A01

TRUCK/LOADER TEAM WORK

| Task description: Tenmile TSF, Load and Haul Topsoil for Wet Cover Area | | | | | | | |
|---|--------------------|-----------------------|-----------------|------------------------------|---------------|------------------------|----------------|
| Site: Climax Mine | | | Permit Act | ion: 2016 Recl Cost Estin | | Permit/Job#: | M1977493 |
| PROJECT II | DENTI | FICATION | | | | | |
| | F02A | | State: Colora | | | previation: <u>No</u> | |
| | 9/17/20 1:36:42 | | County: Summ | it | | Filename: M4 | 493-F02a |
| | I.30.42 ILE | r IVI | | | | | |
| Agenc | cy or or | ganization nam | e: DRMS | | | | |
| HOURLY EQ | MIDN | IENT COST | | | Shift be | sis: <u>1 per day</u> | |
| HOUKLI EQ | | | | Zauinmant Dagar | | isis. <u>1 pei uay</u> | |
| . <u></u> | Tru | ck Loader Tean | | Equipment Descr 740 | ipuon | | |
| | IIu | | | Г 950Н | | | |
| S | Support | Equipment -Lo | | D6T XL | | | |
| | | | mp Area: NA | | | | |
| Roa | d Main | tenance – Moto | | <u>Γ 12M</u> | 0.1 | | |
| | | -wat | er Truck: Wat | er Tanker, 5,000 | Gal. | | |
| Cost Breakdow | vn: | Truck/Load | ler Team | Support | Equipment | Mainten | ance Equipment |
| | | Truck | Loader | Load Area | Dump Area | Motor | Water Truck |
| | | 100 | 100 | 100 | | Grader | 100 |
| %Utilization-machi | | 100 | 100 | 100 | NA | 100 | 100 |
| Ownership cost/ho | | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 |
| Operating cost/ho | | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | \$36.60 |
| %Utilization-rip Ripper ov | | NA | 0 | NA | NA | NA | NA |
| cost/ho | | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Ripper op. cost/ho | | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Operator cost/ho | our: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | \$21.23 |
| Unit Subtota | als: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | \$83.13 |
| Number of Un | its: | 5 | 1 | 1 | 0 | 1 | 1 |
| Group Subtota | als: | Work: | \$863.14 | Support: | \$140.52 | Maint: | \$173.15 |
| Total work team | n cost/h | our: <u>\$1,176.8</u> | 1 | | | | |
| | | | | | | | |
| MATERIAL | QUAN | <u>NTITIES</u> | | | | | |
| Initial vol | lume: | 91,557 | CCY | Swell | factor: 1.000 | | |
| Loose vol | lume: | 91,55 | 7 LCY | | | | |
| | Sourc | e of estimated | volume: 6" of | cover over 113.5 | 5 acres | | |
| So | | estimated swel | | Iandbook | | | |
| | Ν | Aaterial Purcha | | | | | |
| | | Tot | al Cost: \$0.00 |) | | | |

HOURLY PRODUCTION

| Truck Capacity: | | | | | | |
|---|--------------------|---------------------|-------------|------------------------|----------------------|---------------|
| Truck Payload (weight) Basi Material weight: | <u>s:</u> 1,600 | т | Pounds/LC | V | | |
| Description: | Top Soil | I | ounus/LC | 1 | | |
| Rated Payload: | 87,000 | I | Pounds | | | |
| Payload Capacity: | 54.38 | | LCY | | | |
| Tayload Capacity. | 54.50 | 1 | | | | |
| Truck Bed (volume) Basis: | | | | | | |
| Struck Volume: | 24.20 | LCY | | | | |
| Heaped Volume: | 31.40 | LCY | | | | |
| Average Volume: | 27.80 | LCY | | | | |
| Adjusted Volume: | 31.40 | LCY | | | | |
| Final | Truck Volume | Based on Numb | er of Load | er Passes: | 31.61 | LCY |
| Loading Tool Capacity | | | | | | |
| | | | | Bucke | t Size Class: | NA |
| Rated Capacity: | 4.300 | LCY (heap | | | | |
| Bucket Fill Factor: | 1.050 | Other - me | oist loam | (100-1 | 10%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | | | | |
| Job Condition Corrections | <u>:</u> | | Site Al | titude (ft.): <u>1</u> | <u>1000</u> feet | |
| | Truck | Loader | | Source | | |
| Altitude Adj: | 0.600 | 1.000 | | (CAT HB) | | |
| Job Efficiency: | 0.830 | 0.830 | | (CAT HB) | | |
| Net Correction: | 0.498 | 0.830 | | | | |
| Loading Tool Cycle Time: | 1 | Number of Load | ling Tool I | Passes Requir | ed to Fill | 7 pass |
| Excavators and Front Shove | els: | | | | Truck: | 1 |
| Machine Cycle Time v | | U | | | | |
| Selected Value | within this Basi | c Rating: <u>NA</u> | Α | | | |
| Track Loaders – | Material Descr | iption: | | | | |
| Cycle Time Elements (min.) | : | | | | | |
| Load: NA | M | laneuver: NA | A | _ | Dump: 0.1 | 00 |
| Wheel and Trac | k Loaders - Una | adjusted Basic I | Loader Cyc | | d, dump, meuver): | 0.500 minutes |
| Cycle Time Factors | | | | | Factor (min.) | Source |
| Material: | Mixed mater | rial 0.02 | | | 0.020 | (Cat HB) |
| Stockpile: | Dumped by | | | | 0.020 | (Cat HB) |
| Truck Ownership: | | nership of truc | ks and load | lers - | -0.040 | (Cat HB) |
| Operation: | Constant ope | eration -0.04 | | | -0.040 | (Cat HB) |
| Dump Target: | | | | | 0.000 | (Cat HB) |
| Dump rurget. | | | e Time Ad | iustment [.] | -0.040 | minutes |
| | | Adjusted I | | | 0.040 | minutes |
| | | | ad Time p | | 2.860 | minutes |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

| Truck Travel | (Haul & Return) Time: |
|--------------|-----------------------|
| maintained 3 | 0 |

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

maintained 3.0

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|
| 1 | 7656.00 | 8.00 | 3.00 | 11.00 | 857 | 9.027 |
| 2 | 4593.60 | -5.00 | 3.00 | -2.00 | 3005 | 1.576 |

| | | | | Haul Time: | 10.603 | minutes |
|------------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|
| Return Rou | ite: | | | | | |
| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
| 1 | 4593.60 | 5.00 | 3.00 | 8.00 | 2155 | 2.278 |
| 2 | 7656.00 | -8.00 | 3.00 | -5.00 | 3706 | 2.130 |

| | | | Return Time: Total Truck Cycle Time: | 4.408 20.538 | minutes | |
|--|--------|------------------|---|-----------------|---------|----------|
| Loading Tool unit Production Truck Unit Production | 491.27 | LCY/Hour | Adjusted for job e | efficiency: | 407.75 | LCY/Hour |
| | 92.33 | LCY/Hour | Adjusted for job e | efficiency: | 76.64 | LCY/Hour |
| Optimal No. of Trucks: | 5 | Truck(s) | Selected Number of | of Trucks: | 5 | Truck(s) |
| | | Adjusted h | ourly truck team production: | 383.18 | LCY/He | our |
| | Ad | ljusted single t | ruck/loader team production: | 383.18 | LCY/He | our |
| | Adju | sted multiple t | ruck/loader team production: | 383.18 | LCY/He | our |
| | ~~~~ | | | | | |

| Fleet size: | 1 | Team(s) | Total job time: | 238.94 | Hours |
|-------------|---------|---------|-----------------|-----------|-------|
| Unit cost: | \$3.071 | /LCY | Total job cost: | \$281,186 | _ |

| Permit | | ermit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> | |
|----------------|---|-----------------|-----------------------------------|---------------|---------------------|----------|
| PROJE C | T IDENTIFI | CATION | | | | |
| Task # | #: F03 | State: | Colorado | | Abbreviation: | None |
| Date | | County: | Summit | | Filename: | M493-F03 |
| | 1:38:55 PM | 1 | | | | |
| Use | r: JLE | | | | | |
| 1 | Agency or organ | ization name: D | RMS | | | |
| HOURL | Y EQUIPME | NT COST | | | | |
| | | D8T - 8SU | | _ | | |
| | sepower: 310 | | | - | | |
| | V I | ni-Universal | | - | | |
| | achment: <u>NA</u> | | | - | | |
| | ift Basis: <u>1 pe</u> a Source: (CR | er day | | - | | |
| | | | | - | | |
| Cost Breal | <u>kdown</u> : | | [| Utilization % | | |
| | hip Cost/Hour: | | \$93.62 | NA | | |
| Operati | ing Cost/Hour: | | \$73.35 | 100 | | |
| | Ripper own. | | \$0.00 | NA | | |
| Diaman | Cost/Hour: | | | | | |
| | op. Cost/Hour: or Cost/Hour: | | \$0.00 \$41.52 | 0 | | |
| Operat | or Cost/Hour: | | \$41.32 | NA | | |
| | it Cost/Hour: | \$208.49 | | | | |
| Total Fle | eet Cost/Hour: | \$833.97 | | | | |
| MATER | IAL QUANTI | TIES | | | | |
| Initial V | | | | | | |
| | 1 factor: 1.00 | | | | | |
| | | | | | | |
| | | | 112 5 | | | |
| | f estimated volu f estimated swel | | 113.5 acres | | | |
| factor: | of estimated swel | II Cat Hall | JOOOK | | | |
| | | | | | | |
| HOURL | Y PRODUCT | <u>ION</u> | | | | |
| | push distance: | 250 feet | | | | |
| | ted hourly | 377.8 LCY | /hr | | | |
| producti | on: | | | | | |
| Material | s consistency | Loosa | stockpile 1.2 | | | |
| descripti | | 10086 | Stockpile 1.2 | | | |
| | | | | | | |
| Average | | 0 % | | | | |
| gradient | | | | | | |
| Average | site altitude: | 11,000 feet | | | | |
| | | | | | | |

| Weight description:D | ecomposed rock - 25% Rock, | 75% Earth |
|-------------------------------|----------------------------|---------------|
| Job Condition Correction Fact | <u>or</u> | Source |
| 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 | .: 0.800 | (FND-RF) |
| Push gradient | : 1.000 | (CAT HB) |
| Altitude | : 1.000 | (CAT HB) |
| Material Weight | : 0.868 | (CAT HB) |
| Blade type | : 1.000 | (PAT) |
| Net correction | : 0.5706 | |
| Adjusted unit production: | 215.57 LCY/hr | |
| Adjusted fleet production: | 862.28 LCY/hr | |

| Fleet size: | 4 Dozer(s) |
|------------------------------------|---------------------------|
| Unit cost: | \$0.967/LCY |
| Total job time: Total job cost: | 530.90 Hours \$442,756 |
BULLDOZER WORK

| : Climax Mine | Pe | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|------------------------------------|-----------------------|---------------|-----------------------------------|---------------|---------------------|
| PROJECT IDENTIF | ICATION | | | | |
| Task #: F03A | State: | Colorado | | Abbreviation: | None |
| Date: 9/17/2018 | | Summit | | Filename: | M493-F03a |
| 1:47:14 P | | | | | |
| User: JLE | | | | | |
| Agency or orga | nization name: | RMS | | | |
| HOURLY EQUIPME | NT COST | | | | |
| | t D8T - 8SU | | | | |
| Horsepower: 31 | | | | | |
| 1 | mi-Universal | | | | |
| Attachment: NA | | | | | |
| | ber day | | | | |
| | RG) | | | | |
| | | | | | |
| Cost Breakdown: | | | Utilization % | | |
| Ownership Cost/Hour: | | \$93.62 | NA | | |
| Operating Cost/Hour: | | \$73.35 | 100 | | |
| Ripper own. | | | | | |
| Cost/Hour: | | \$0.00 | NA | | |
| Ripper op. Cost/Hour: | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | \$41.52 | NA | | |
| - | · · · · | | 1471 | | |
| Total unit Cost/Hour: | \$208.49 | | | | |
| Total Fleet Cost/Hour: | \$833.97 | | | | |
| MATERIAL QUANT | TTEC | | | | |
| | | | | | |
| Initial Volume: 91,5 | | | | | |
| Swell factor: 1.00 | | | | | |
| Loose volume: 91, | 557 LCY | | | | |
| Source of estimated vol | ume: 30" over | 113.5 acres | | | |
| Source of estimated swe | | | | | |
| factor: | | | | | |
| HOURLY PRODUC | FION | | | | |
| Average push distance: | | | | | |
| Unadjusted hourly | 250 feet 377.8 LCY | /hr | | | |
| production: | | / 111 | | | |
| Materials consistency description: | Loose | stockpile 1.2 | | | |
| Average push gradient: | 0 % | | | | |
| Average site altitude: | 11,000 feet | | | | |
| Material weight: | 1,600 lbs/LCY | | | | |
| Material weight. | 1,000 105/ LC 1 | | | | |

| Weight description: To | p Soil | |
|---------------------------------|----------------|---------------|
| Job Condition Correction Factor |) <u>r</u> | Source |
| 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: | 0.800 | (FND-RF) |
| Push gradient: | 1.000 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 1.438 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.9453 | |
| Adjusted unit production: | 357.13 LCY/hr | |
| Adjusted fleet production: | 1428.52 LCY/hr | |

| Fleet size: | 4 Dozer(s) |
|------------------------------------|-------------------------|
| Unit cost: | \$0.584/LCY |
| Total job time: Total job cost: | 64.09 Hours \$53,451 |

Task # A01

TRUCK/LOADER TEAM WORK

| Task description: | Tenmile | TSF, Load and | Haul Subsoil fo | or Dry Cover Ar | ea | |
|--|---|---------------------------------------|------------------------|-----------------|-----------------------|---------------------------------|
| Site: Climax Mine | ite: Climax Mine Permit Action: 2016 Reclamation Cost Estimate | | | Permit/Job#: | | |
| PROJECT IDEN | FIFICATION | | | | | Ŧ |
| $\begin{array}{rrr} \text{Task #:} & F04 \\ \text{Date:} & 9/17/2 \\ \hline 1:48:^2 \end{array}$ | 2018 C 43 PM | State: <u>Colora</u> County: Summi | | | | None M493-F04 |
| User: JLE | | | | | | |
| Agency or | organization nam | ne: DRMS | | | | |
| HOURLY EQUIP | MENT COST | | | | sis: <u>1 per day</u> | |
| T | uck Loader Tear | | Equipment Descr 740 | iption | | |
| 11 | uck Loader Tear | | 7 950H | | | |
| Suppo | rt Equipment -Lo | | D6T XL | | | |
| Road Ma | -Du intenance –Moto | mp Area: NA | T 12M | | | |
| Koad Ma | | | er Tanker, 5,000 | Gal. | | |
| | | | | | | |
| <u>Cost Breakdown</u> : | Truck/Loa Truck | der Team Loader | Support Load Area | Equipment | Mainte Motor | enance Equipment Water Truck |
| | IFUCK | Loader | Load Area | Dump Area | Grader | water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 0 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | 3 \$25.30 |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | 9 \$36.60 |
| %Utilization-riper: | NA | 0 | NA | NA | NA | A NA |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | |
| Number of Units: | 5 | 1 | 1 | 0 | | 1 1 |
| Group Subtotals: | Work: | \$863.14 | Support: | \$140.52 | Maint | : \$173.15 |
| Total work team cost | /hour: <u>\$1,176.8</u> | 1 | | | | |
| MATERIAL QUA | NTITIES | | | | | |
| Initial volume: | 274,670 | CCY | Swell | factor: 1.000 | | |
| Loose volume: | | | 5.0011 | 1.000 | | |
| Sou | rce of estimated | volume: 6" ov | er 340.5 acres | | | |
| | of estimated swel | | andbook | | | |
| | Material Purcha | | | | | |
| | To | tal Cost: \$0.00 | | | | |

| <u>Truck Capacity:</u> Truck Payload (weight) Basi | | | | | |
|--|--|--|--|---|--|
| Material weight: | 2,650 | Pounds/ | ICV | | |
| Description: | | 1 rock - 25% Rock, 75% | | | |
| Rated Payload: | 87,000 | Pounds | Latin | | |
| Payload Capacity: | 32.83 | LCY | | | |
| r uyroud Cupuchy. | 32.03 | | | | |
| Truck Bed (volume) Basis: | | | | | |
| Struck Volume: | 24.20 | LCY | | | |
| Heaped Volume: | 31.40 | LCY | | | |
| Average Volume: | 27.80 | LCY | | | |
| Adjusted Volume: | 31.40 | LCY | | | |
| Final | Truck Volume | Based on Number of Lo | oader Passes: | 31.61 | LCY |
| Loading Tool Capacity | | | | | |
| | | | Buck | et Size Class: <u>N</u> | A |
| Rated Capacity: | 4.300 | LCY (heaped) | | | |
| Bucket Fill Factor: | 1.050 | Other - moist loar | m (100- | 110%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | | | |
| Job Condition Corrections | <u>:</u> | Site | Altitude (ft.): | <u>11000</u> feet | |
| | Truck | Loader | Source | | |
| Altitude Adj: | 0.600 | 1.000 | (CAT HB | 5) | |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB | | |
| Net Correction: | 0.498 | 0.830 | | | |
| Loading Tool Cycle Time: | | Number of Loading Too | ol Passes Requ | ired to Fill | 7 passes |
| Excavators and Front Shove | <u>ls:</u> | | | Truck: | 7 |
| Machine Cycle Time v | | | | | |
| • | | | | | |
| Selected Value | within this Bas | tic Rating: NA | | | |
| Selected Value Track Loaders – | within this Bas Material Desc | tic Rating: NA | | | |
| Selected Value Track Loaders – Cycle Time Elements (min.) | within this Bas Material Desc : | ription: | | | |
| Selected Value | within this Bas Material Desc : | tic Rating: NA | | Dump:0.100 |) |
| Selected Value Track Loaders – Cycle Time Elements (min.) Load: <u>NA</u> | within this Bas Material Desc | ription: | • | ad dump |) .500 minutes |
| Selected Value Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> | within this Bas Material Desc | ription: <u>NA</u> | • | ad, dump, 0 naneuver): | minutes |
| Selected Value Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Trac | within this Bas Material Desc | tic Rating: <u>NA</u> rription: Maneuver: <u>NA</u> nadjusted Basic Loader (| • | ad, dump, | .500 minutes |
| Selected Value Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Trac Cycle Time Factors | within this Bas Material Desc : k Loaders - Un | ription: <u>NA</u> Maneuver: <u>NA</u> nadjusted Basic Loader (| • | ad, dump, 0 naneuver): 0 Factor (min.) | .500 minutes |
| Selected Value Track Loaders – Cycle Time Elements (min.) Load: <u>NA</u> Wheel and Trac <u>Cycle Time Factors</u> Material: | within this Bas Material Desc : | ription: <u>NA</u> Maneuver: <u>NA</u> nadjusted Basic Loader (| n | Pad, dump, 0 naneuver): 0 Factor (min.) 0.020 0.020 | Source (Cat HB) (Cat HB) |
| Selected Value Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Trac <u>Cycle Time Factors</u> <u>Material:</u> Stockpile: | within this Bas Material Desc : k Loaders - Un Mixed mate Dumped by Common ov 0.04 | tic Rating: NA rription: NA Maneuver: NA nadjusted Basic Loader (rrial 0.02 / truck 0.02 wnership of trucks and h | n | pad, dump, naneuver): 0 Factor (min.) 0.020 | .500 minutes Source (Cat HB) |
| Selected Value v Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Trac <u>Cycle Time Factors</u> <u>Material:</u> Stockpile: Truck Ownership: <u>Operation:</u> | within this Bas Material Desc: k Loaders - Un Mixed mate Dumped by Common ov 0.04 Constant op | tic Rating: NA Pription: NA Maneuver: NA hadjusted Basic Loader (Perial 0.02 V truck 0.02 Wnership of trucks and have peration -0.04 | n | Pad, dump, naneuver): 0 Factor (min.) 0.020 0.020 -0.040 -0.040 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) |
| Selected Value Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Trac <u>Cycle Time Factors</u> <u>Material:</u> <u>Stockpile:</u> Truck Ownership: | within this Bas Material Desc : k Loaders - Un Mixed mate Dumped by Common ov 0.04 | A series and the series of the | oaders - | Pad, dump, naneuver): 0 Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 | source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) |
| Selected Value v Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Trac <u>Cycle Time Factors</u> <u>Material:</u> <u>Stockpile:</u> Truck Ownership: <u>Operation:</u> | within this Bas Material Desc: k Loaders - Un Mixed mate Dumped by Common ov 0.04 Constant op | A series and the series of the | oaders - | Pad, dump, naneuver):0 Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 -0.040 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) |
| Selected Value v Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Trac <u>Cycle Time Factors</u> <u>Material:</u> Stockpile: Truck Ownership: <u>Operation:</u> | within this Bas Material Desc: k Loaders - Un Mixed mate Dumped by Common ov 0.04 Constant op | A series and the series of the | oaders - Adjustment: Cycle Time: | Pad, dump, naneuver): 0 Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 | source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

| Truck Travel | (Haul & Return) Time: |
|--------------|-----------------------|
| maintained 3 | 0 |

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

maintained 3.(

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|-----------------------|-----------|---------------|------------------|-------------------|-------------------------|
| 1 | 7656.00 | 8.00 | 3.00 | 11.00 | 857 | 9.027 |
| 2 | 2745.60 | -5.00 | 3.00 | -2.00 | 3005 | 0.978 |

| Return Ro | oute: | | | Haul Time: | 10.00 | 5 minutes |
|-----------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|
| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
| 1 | 2745.60 | 5.00 | 3.00 | 8.00 | 2155 | 1.421 |
| 2 | 7656.00 | -8.00 | 3.00 | -5.00 | 3706 | 2.130 |

| | | | Return Time: _ Total Truck Cycle Time: _ | 3.551 19.083 | minutes minutes | |
|--|--------|-------------------|---|-----------------|-----------------|----------|
| Loading Tool unit Production Truck Unit Production | 491.27 | _ LCY/Hour | Adjusted for job | efficiency: | 407.75 | LCY/Hour |
| | 99.37 | LCY/Hour | Adjusted for job | efficiency: | 82.48 | LCY/Hour |
| Optimal No. of Trucks: | 5 | Truck(s) | Selected Number | of Trucks: | 5 | Truck(s) |
| | | Adjusted h | ourly truck team production: | 412.40 | LCY/Ho | our |
| | А | 5 | ruck/loader team production: | 407.75 | LCY/Ho | our |
| | Adj | usted multiple th | ruck/loader team production: | 407.75 | LCY/Ho | our |
| JOB TIME ANI | D COST | | | | | |

| Fleet size: | 1 | Team(s) | Total job time: | 673.62 | Hours |
|-------------|---------|---------|-----------------|-----------|-------|
| Unit cost: | \$2.886 | /LCY | Total job cost: | \$792,720 | |

Task # A01

TRUCK/LOADER TEAM WORK

| Task description: | Tenmile | TSF, Load and | Haul Topsoil/B | ioS. for Dry Cov | ver Area | |
|--|--|--|---|------------------------|------------------------------|----------------------------------|
| Site: Climax Mine | | Permit Action: 2016 Reclamation Cost Estimate | | | Permit/Job#: <u>M1977493</u> | |
| User: <u>JLE</u> Agency of HOURLY EQUI | A /2018 C :10 PM • organization nam | E | it Equipment Descr | Shift ba | | None M493-F04a |
| Road M | aintenance –Moto -Wat | and Area: Cat mp Area: NA or Grader: CAT er Truck: Wate | T 950H D6T XL T 12M er Tanker, 5,000 | | Mein | |
| <u>Cost Breakdown</u> : | Truck/Loa Truck | Loader | Load Area | Equipment Dump Area | Motor Grader | tenance Equipment Water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | | 00 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.7 | 73 \$25.30 |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.0 | 50 \$36.60 |
| %Utilization-riper: | NA | 0 | NA | NA | N | IA NA |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.0 | 00 \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.0 | |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.0 | |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.0 | 02 \$83.13 |
| Number of Units: | 5 | 1 | 1 | 0 | | 1 1 |
| Group Subtotals: | Work: | \$863.14 | Support: | \$140.52 | Mair | nt: \$173.15 |
| Total work team cos MATERIAL QU | | 1 | | | | |
| Initial volume | e: 274,670 | CCY | Swell | factor: 1.000 | | |
| Loose volume | . , | | Swell | 1actor. 1.000 | | |
| So | urce of estimated of estimated swe Material Purcha | volume: 6" ov ll factor: Cat H | | | | |

| Truck Capacity: | | | | | |
|--|-------------------|---------------------|----------------------|--------------------------|-------------|
| Truck Payload (weight) Bas Material weight: | <u>1,600</u> | Dour | nds/LCY | | |
| Description: | Top Soil | rour | IUS/LC I | | |
| Rated Payload: | 87,000 | Pour | nds | | |
| Payload Capacity: | 54.38 | LCY | | | |
| i dyfodd Capacity. | 54.50 | Let | | | |
| Truck Bed (volume) Basis: | | | | | |
| Struck Volume: | 24.20 | LCY | | | |
| Heaped Volume: | 31.40 | LCY | | | |
| Average Volume: | 27.80 | LCY | | | |
| Adjusted Volume: | 31.40 | LCY | | | |
| Final | Truck Volume | Based on Number o | f Loader Passes: | 31.61 | LCY |
| Loading Tool Capacity | | | | | |
| | | | | tet Size Class: N | A |
| Rated Capacity: | 4.300 | LCY (heaped) | | | |
| Bucket Fill Factor: | 1.050 | Other - moist | loam (100- | -110%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | | | |
| Job Condition Corrections | <u>:</u> | | Site Altitude (ft.): | <u>11000</u> feet | |
| | Truck | Loader | Source | | |
| Altitude Adj: | 0.600 | 1.000 | (CAT HI | 3) | |
| Job Efficiency: | 0.830 | 0.830 | (CAT HI | 3) | |
| Net Correction: | 0.498 | 0.830 | | | |
| Loading Tool Cycle Time: | 1 | Number of Loading | Tool Passes Requ | ired to Fill | 7 passes |
| Excavators and Front Shove | els: | | | Truck: | / |
| Machine Cycle Time | | U | | | |
| Selected Value | within this Basic | c Rating: NA | | | |
| Track Loaders – | Material Descr | ption: | | | |
| Cycle Time Elements (min.) | : | | | | |
| Load: NA | M | aneuver: NA | | Dump: 0.100 | |
| Wheel and Trac | ek Loaders - Una | djusted Basic Load | • | oad, dump, 0. naneuver): | 500 minutes |
| Cycle Time Factors | | | | Factor (min.) | Source |
| Material: | | ial 0.02 | | 0.020 | (Cat HB) |
| Stockpile: | | | | 0.020 | (Cat HB) |
| Truck Ownership: | Common ow | mership of trucks a | nd loaders - | -0.040 | (Cat HB) |
| | 0.04 | | | | |
| Operation: | - | | | -0.040 | (Cat HB) |
| Dump Target: | Nominal targ | | | 0.000 | (Cat HB) |
| | | | me Adjustment: | -0.040 | minutes |
| | | | ler Cycle Time: | 0.460 | minutes |
| | | Net Load 7 | Fime per Truck: | 2.860 | minutes |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

| Truck Travel | (Haul & Return) Time: |
|--------------|-----------------------|
| maintained 3 | 0 |

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

Return Time: 3.551 minutes

maintained 3.0

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|
| 1 | 7656.00 | 8.00 | 3.00 | 11.00 | 857 | 9.027 |
| 2 | 2745.60 | -5.00 | 3.00 | -2.00 | 3005 | 0.978 |

| Return Ro | nute: | | | Haul Time: | 10.00 | 5 minutes |
|-----------|-----------------------|-----------|---------------|------------------|-------------------|-------------------------|
| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
| 1 | 2745.60 | 5.00 | 3.00 | 8.00 | 2155 | 1.421 |
| 2 | 7656.00 | -8.00 | 3.00 | -5.00 | 3706 | 2.130 |

| | | | Total Truck Cycle Time: | 19.083 | minutes | |
|--|--------|--------------------|-----------------------------|-------------|---------|----------|
| Loading Tool unit Production Truck Unit Production | 491.27 | _ LCY/Hour | Adjusted for job | efficiency: | 407.75 | LCY/Hour |
| | 99.37 | LCY/Hour | Adjusted for job | efficiency: | 82.48 | LCY/Hour |
| Optimal No. of Trucks: | 5 | Truck(s) | Selected Number | of Trucks: | 5 | Truck(s) |
| | | Adjusted ho | urly truck team production: | 412.40 | LCY/H | our |
| | A | djusted single tru | ick/loader team production: | 407.75 | LCY/H | our |
| | Adj | usted multiple tru | ick/loader team production: | 407.75 | LCY/H | our |
| JOB TIME ANI | O COST | | | | | |

| Fleet size: | 1 | Team(s) | Total job time: | 673.62 | Hours |
|-------------|---------|---------|-----------------|-----------|-------|
| Unit cost: | \$2.886 | /LCY | Total job cost: | \$792,720 | |

BULLDOZER WORK

| e: Climax Mine | P | ermit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|------------------------------------|------------------|---------------|-----------------------------------|---------------|---------------------|
| PROJECT IDENTIF | ICATION | | | | |
| Task #: F05 | State: | Colorado | | Abbreviation: | None |
| Date: $9/20/2018$ | | Summit | | Filename: | M493-F05 |
| User: JLE | County. | Summe | | T nename. | |
| Agency or orga | nization name: D | RMS | | | |
| HOURLY EQUIPME | ENT COST | | | | |
| Basic Machine: Ca | t D8T - 8SU | | | | |
| Horsepower: 31 | | | | | |
| 1 <u> </u> | mi-Universal | | - | | |
| Attachment: NA | | | | | |
| | ber day | | | | |
| | RG) | | | | |
| Data Source: (C | NU) | | | | |
| Cost Breakdown: | | | | | |
| | | 1 | Utilization % | | |
| Ownership Cost/Hour: | | \$93.62 | NA | | |
| Operating Cost/Hour: | | \$73.35 | 100 | | |
| Ripper own. | | | 100 | | |
| Cost/Hour: | | \$0.00 | NA | | |
| | | | | | |
| Ripper op. Cost/Hour: | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | \$41.52 | NA | | |
| | ¢000.40 | | | | |
| Total unit Cost/Hour: | \$208.49 | | | | |
| Total Fleet Cost/Hour: | \$833.97 | | | | |
| MATERIAL QUANT | TTIES | | | | |
| Initial Volume: 91, | 557 | | | | |
| Swell factor: 1.00 | | | | | |
| | 557 LCY | | | | |
| | | | | | |
| Source of estimated vol | ume: 6" Over | 340.5 acres | | | |
| Source of estimated swe factor: | | | | | |
| | | | | | |
| HOURLY PRODUCT | | | | | |
| Average push distance: | | | | | |
| Unadjusted hourly production: | 377.8 LCY | /hr | | | |
| Materials consistency description: | Loose | stockpile 1.2 | | | |
| Average push gradient: | 0 % | | | | |
| Average site altitude: | 11,000 feet | | | | |
| Material weight: | 2,650 lbs/LCY | | | | |
| | | | | | |

| Weight description: Dece | omposed rock - 25% Roc | k, 75% Earth |
|---------------------------------|------------------------|---------------|
| Job Condition Correction Factor | | Source |
| 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: | 0.800 | (FND-RF) |
| Push gradient: | 1.000 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.868 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.5706 | |

| Adjusted unit production: | 215.57 LCY/hr |
|----------------------------|---------------|
| Adjusted fleet production: | 862.28 LCY/hr |

| Fleet size: | 4 Dozer(s) |
|-------------|-------------|
| Unit cost: | \$0.967/LCY |

| Total job time: | 106.18 Hours |
|-----------------|--------------|
| Total job cost: | \$88,552 |

BULLDOZER WORK

| e: Climax Mine | Pe | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|--|----------------------------------|---------------|-----------------------------------|---------------|---------------------|
| PROJECT IDENTIFIC | ATION | | | | |
| Task #: F05A | State: | Colorado | | Abbreviation: | None |
| Date: $9/17/2018$ | County: | Summit | | Filename: | M493-F05a |
| 1:54:00 PM | | | | | |
| User: JLE | | | | | |
| Agency or organiz | zation name: | RMS | | | |
| HOURLY EQUIPMEN | <u>T COST</u> | | | | |
| Basic Machine: Cat I | 08T - 8SU | | | | |
| Horsepower: 310 | | | - | | |
| | -Universal | | - | | |
| Attachment: NA | | | - | | |
| Shift Basis: 1 per | | | - | | |
| Data Source: (CRC | 5) | | - | | |
| Cost Breakdown: | | | | | |
| | | | Utilization % | | |
| Ownership Cost/Hour: | | \$93.62 | NA | | |
| Operating Cost/Hour: | | \$73.35 | 100 | | |
| Ripper own. | | \$0.00 | NA | | |
| Cost/Hour: _ Ripper op. Cost/Hour: | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | \$0.00 | | | |
| | | \$41.32 | NA | | |
| Total unit Cost/Hour: | \$208.49 | | | | |
| Total Fleet Cost/Hour: | \$833.97 | | | | |
| MATERIAL QUANTI | <u>TIES</u> | | | | |
| Initial Volume: 91,55 | 7 | | | | |
| Swell factor: 1.000 | , | | | | |
| | 7 LCY | | | | |
| · | | | | | |
| Source of estimated volun Source of estimated swell | ne: <u>6" Over 3</u> Cat Hand | 340.5 acres | | | |
| factor: | Cat Hand | DOOK | | | |
| HOURLY PRODUCTI | ON | | | | |
| Average push distance: | 250 feet | | | | |
| Unadjusted hourly | 377.8 LCY | /hr | | | |
| production: | | | | | |
| Materials consistency | Loose | stockpile 1.2 | | | |
| description: | | | | | |
| Average puch | 0 % | | | | |
| Average push gradient: | 0 70 | | | | |
| Average site altitude: | 11,000 feet | | | | |
| M 1 1 . | 1 (00 11. 7 (0)) | | | | |
| Material weight: | 1,600 lbs/LCY | | | | |

| Weight description: Top | Soil | |
|-----------------------------------|---------------|---------------|
| Job Condition Correction Factor | | Source |
| 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: | 0.800 | (FND-RF) |
| Push gradient: | 1.000 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 1.438 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.9453 | |
| production: | 57.13 LCY/hr | |
| Adjusted fleet 1 production: 1 | 428.52 LCY/hr | |

| Fleet size: | 4 Dozer(s) |
|------------------------------------|-------------------------|
| Unit cost: | \$0.584/LCY |
| Total job time: Total job cost: | 64.09 Hours \$53,451 |

SAFEGUARDING UNDERGROUND OPENINGS

| e: <u>Climax Mine</u> | | Ре | ermit Action: | 2016 Reclamation Cost Estimate | Permit/Job#: <u>M1977493</u> | |
|-----------------------|---------------|-------------------------|---------------|-----------------------------------|------------------------------|----------|
| | PROJEC | T IDENTIFI | CATION | | | |
| | Task #: | G01 | State: | Colorado | Abbreviation: | None |
| | Date: | 9/17/2018 3:44:51 PM | County: | Summit | Filename: | M493-G01 |
| | | | | | | |

UNIT COSTS

| Opening Description | Dimensions | Closure Method | Quantity | Unit | Unit Cost | Total Cost |
|------------------------|--------------|----------------|----------|------|--------------|----------------|
| Bulkhead closure | North and | USER PROVIDED | 2.00 | 2 | \$794,474.89 | \$1,588,949.78 |
| cost | South Portal | ITEM | | | | |

Job Hours: 0.00

Total Cost: \$1,588,949.78

| AM06 Cost Unadjusted (\$) | Location Adjustment | Adjusted AM06 Cost (\$) | Unadjusted Cost in 2017 (\$) |
|------------------------------|------------------------|-------------------------------|---------------------------------|
| \$ | | \$ | \$ |
| 1,175,926.00 | 50% | 587,963.00 | 1,588,949.78 |

| | | <u>PUMPIN</u> | <u>NG WORK</u> | | |
|--|-------------------------------------|--|--------------------------------------|----------------------------------|--------------------|
| Task description: | Tenm | ile Tunnel; Dredge a | and Pump Sludge to T | Funnel | |
| e: Climax Mine | | Permit Action | n: 2016 Reclamation Cost Estimate | ı Permit/Job | #: <u>M1977493</u> |
| PROJECT IDENTI | FICATIO | N | | | |
| Task #: G02 Date: 9/26/201 User: JLE | | State: Colorado County: Summit |) | Abbreviation: Filename: | None M493-G02 |
| Agency or org | anization n | ame: DRMS | | | |
| HOURLY EQUIPM | ENT COS | <u>ST</u> | | | |
| | Descri | otion | | Quantity | |
| Make and Model: Attachment 1 | Trash p | oump - 70MT, 6 in. 1 hose - 6 in. diam., 25 | 5 ft. | 2 1 | |
| Attachment 2 | | rge hose - 6 in. D., 25 | ft. | 388 | |
| Labor Unit 1 | : Pump of | operator | | 2 | |
| Weight:(| 70 1 per day 0.80 US Tons) | | | | |
| Cost Breakdown: | | | Utilization % | | |
| Ownership Cos | t/Hour: | \$124.58 | NA | | |
| Operating Cos | | \$44.15 | 100 | | |
| Operator Cos | | \$55.60 | NA | | |
| Total Unit Cos | | \$224.33 | | | |
| Total Fleet Co | st/Hour: | \$224.33 | | | |
| PUMPING QUANT | <u>ITIES</u> | | | | |
| Initial Pond V | olume: | 38,519.00 | | Conversion factor: | 201.9735 |
| Final Pond V | | 7,779,817.25 | gallons | | |
| Total Pond Inflow S | Surface Area: | 3,210,319 | Sq. ft. | Unit inflow rate in gph/sq. ft.: | 0.3516 |
| Total Pond Inflow V | | 5,210,519 | Sq. n. | gpu/sq. n | 0.5510 |
| | Hour: | 1,128,748.16 | gallons | | |
| Source | of estimate | ed volume: AM06 | Cost Estimate | | |
| PUMPING TIME | | | | | |
| | wimum Du | nn Conssituu | 80.000 | anh/auma | |
| | | np Capacity: uction Head: | 80,000 | gph/pump feet | |
| | | charge Head: | 305 | feet | |
| | | Total Head: | 305 | feet | |
| | | np Capacity: | 71,700 | gph/pump | |
| | | Site Altitude: | 11,000 | feet | |
| A 1* | | na Canadit | 142 400 | h | |
| | | ng Capacity: mping Time: | <u>143,400</u> 54.25 | gph hours | |
| | | ial Pumping: | 61,237,478 | gallons | |
| Inflow | ~~~ | | | | |
| | | | 481.29 | Hours | |
| Net Un | adjusted Pu | mping Time: | <u>481.29</u> 0.8800 | Hours (3% rule) | |
| Net Un Alti | adjusted Pu tude Adjust | | 481.29 0.8800 0.9167 | (3% rule) (55 min./hr.) | |

| | | | Total job time: | 388.26 | Hours |
|------------|------------|---------|-----------------|----------|-------|
| Unit cost: | \$0.001262 | /Gallon | Total job cost: | \$87,098 | |

SAFEGUARDING UNDERGROUND OPENINGS

| e: | : Climax Mine | | Permit Action: 2016 Reclamation Cost Estimate | | P | Permit/Job#: <u>M1977493</u> | | |
|----|---------------|-------------------------|--|----------|---------|------------------------------|----------|--|
| | PROJEC | T IDENTIFI | CATION | | | | | |
| | Task #: | G03 | State: | Colorado | Abbrevi | ation: | None | |
| | Date: | 9/17/2018 3:48:36 PM | County: | Summit | File | name: | M493-G03 | |
| | User: | JLE | | | | | | |

UNIT COSTS

| Opening Description | Dimensions | Closure Method | Quantity | Unit | Unit Cost | Total Cost |
|------------------------------|------------|-----------------------|----------|------|--------------|------------|
| Construction of Checkdams | NA | USER PROVIDED ITEM | 1.00 | 1 | \$9,088.09 | \$9,088.09 |

Job Hours: 0.00

Total Cost: \$9,088.09

Task # A01

TRUCK/LOADER TEAM WORK

| Task description: | 3 Dam, 1 | Load and Haul | Topsoil to 3 Dan | n Rise | | |
|--|---|--------------------------------------|------------------------------|---------------|---------------------------------------|-------------------------------|
| Site: Climax Mine | | Permit Act | ion: 2016 Recl Cost Estin | | Permit/Job#: | M1977493 |
| DDA IECT IDENT | TELCATION | | | | | |
| PROJECT IDENT Task #: H01A Date: 9/17/2 3:49:5 JLE | .018 C | State: <u>Colora</u> County: Summ | | | oreviation: <u>No</u> Filename: M4 | one 493-H01a |
| Agency or o | organization nam | e: DRMS | | | | |
| HOURLY EQUIP | C | | | | sis: <u>1 per day</u> | |
| | | | Equipment Descr | iption | | |
| Ir | uck Loader Tear | | <u>740</u> Г 950Н | | | |
| Suppor | rt Equipment -Lo | | D6T XL | | | |
| Duppo. | | mp Area: NA | Dorne | | | |
| Road Mai | intenance – Moto | | Г 12М | | | |
| | -Wat | er Truck: Wat | er Tanker, 5,000 | Gal. | | |
| | | | ~ | | | — . |
| <u>Cost Breakdown</u> : | Truck/Load | der Team Loader | Support Load Area | Equipment | Mainten Motor | ance Equipment Water Truck |
| | TTUCK | Loader | Loau Alea | Dump Area | Grader | water fluck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | \$36.60 |
| %Utilization-riper: | NA | 0 | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | \$21.23 |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | \$83.13 |
| Number of Units: | 4 | 1 | 1 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$710.09 | Support: | \$140.52 | Maint: | \$173.15 |
| Total work team cost | <u> </u> | 6 | | | | |
| Initial volume: | 7,260 | CCY | Swell | factor: 1.000 | | |
| Loose volume: | 7,260 | | | 1.000 | | |
| | · · · · | | | | | |
| | rce of estimated y of estimated swel | | ver 9 acres | | | |
| Source | Material Purcha | - | Handbook | | | |
| | | tal Cost: $\frac{$0.00}{$0.00}$ | | | | |

| <u>Truck Capacity:</u> | | | | | | | |
|---|------------------|--------------------|-------------|-----------------|-------------------------|------------------|---------|
| Truck Payload (weight) Basi Material weight: | <u>1,600</u> | | Pounds/L | CV | | | |
| Description: | Top Soil | | r ounus/ L | | | | |
| Rated Payload: | 87,000 | | Pounds | | | | |
| Payload Capacity: | 54.38 | | LCY | | | | |
| Tayload Capacity. | 54.50 | | Lei | | | | |
| Truck Bed (volume) Basis: | | | | | | | |
| Struck Volume: | 24.20 | LCY | | | | | |
| Heaped Volume: | 31.40 | LCY | | | | | |
| Average Volume: | 27.80 | LCY | | | | | |
| Adjusted Volume: | 31.40 | LCY | | | | | |
| Final | Truck Volume | Based on Nur | nber of Lo | ader Passes: | 31.61 | LCY | |
| Loading Tool Capacity | | | | | | | |
| | | 1 - | | Buck | et Size Class: | NA | |
| Rated Capacity: | 4.300 | LCY (he | | | | | |
| Bucket Fill Factor: | 1.050 | | moist loam | (100- | 110%) 1.050 | | |
| Adjusted Capacity: | 4.515 | LCY | | | | | |
| Job Condition Corrections | <u>:</u> | | Site A | Altitude (ft.): | <u>10900</u> feet | | |
| | Truck | Load | er | Source | | | |
| Altitude Adj: | 0.600 | 1.000 | 0 | (CAT HB |) | | |
| Job Efficiency: | 0.830 | 0.830 | 0 | (CAT HB |) | | |
| Net Correction: | 0.498 | 0.830 | 0 | | | | |
| Loading Tool Cycle Time: | 1 | Number of Lo | ading Tool | l Passes Requ | ired to Fill | 7 | passes |
| Excavators and Front Shove | els: | | | | Truck: | 1 | |
| Machine Cycle Time v | | | NA | | | | |
| Selected Value | within this Basi | c Rating: <u>N</u> | NA | | | | |
| Track Loaders – | Material Descr | iption: | | | | | |
| Cycle Time Elements (min.) | : | | | | | | |
| Load: NA | M | laneuver: 1 | NA | | Dump: 0. | 100 | |
| Wheel and Trac | k Loaders - Una | adjusted Basio | c Loader C | • | ad, dump, naneuver): | 0.500 | minutes |
| Cycle Time Factors | | | | | Factor (min.) |) Sourc | e |
| Material: | | rial 0.02 | | | 0.020 | (Cat H | |
| Stockpile: | | | | | 0.020 | (Cat H | |
| Truck Ownership: | Common ow | nership of tru | ucks and lo | aders - | -0.040 | (Cat H | |
| Omanation | 0.04 | protion 0.04 | | | 0.040 | | |
| Operation: | | | | | -0.040 | (Cat H | |
| Dump Target: | Nominal targ | | ala Tima A | djustment: | 0.000 | (Cat H | |
| | | | | ycle Time: | 0.040 | minute minute | |
| | | | | per Truck: | 2.860 | minute | |
| | | INCLI | | per riuer. | 2.000 | mmuu | -0 |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

| Truck Travel (Haul & Return) | Time: |
|------------------------------|-------|
| maintained 3.0 | |

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

<u>maintained 3.(</u>

| Haul Distance | Grade (%) | Roll. Res | Total Res | Velocity | Travel |
|---------------|-----------------|----------------------|--|--|--|
| (Ft) | × / | (%) | (%) | (fnm) | Time |
| (11) | | (/0) | (70) | (ipiii) | (min) |
| 4857.00 | 8.00 | 3.00 | 11.00 | 857 | 5.761 |
| 2258.00 | 0.00 | 3.00 | 3.00 | 3005 | 1.728 |
| | (Ft) 4857.00 | (Ft) 4857.00 8.00 | (Ft) (%) 4857.00 8.00 3.00 | (Ft) (%) (%) 4857.00 8.00 3.00 11.00 | (Ft) (%) (%) (fpm) 4857.00 8.00 3.00 11.00 857 |

| Return Rou | 1401 | | | Haul Time: | 7.489 | minutes |
|------------|-----------------------|-----------|---------------|------------------|-------------------|-------------------------|
| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
| 1 | 2745.60 | 5.00 | 3.00 | 8.00 | 2155 | 1.421 |
| 2 | 7656.00 | -8.00 | 3.00 | -5.00 | 3706 | 2.130 |

| | | | Return Time: | 3.551 16.567 | minutes minutes | |
|--|--------|------------------|--|----------------------------|----------------------------|----------|
| Loading Tool unit Production Truck Unit Production | 491.27 | LCY/Hour | Adjusted for job e | efficiency: | 407.75 | LCY/Hour |
| | 114.46 | LCY/Hour | Adjusted for job e | efficiency: | 95.01 | LCY/Hour |
| Optimal No. of Trucks: | 4 | Truck(s) | Selected Number | of Trucks: | 4 | Truck(s) |
| | | djusted single t | ourly truck team production: ruck/loader team production: ruck/loader team production: | 380.02 380.02 380.02 | LCY/Ho LCY/Ho LCY/Ho | our |

| Fleet size: | 1 | Team(s) | Total job time: | 19.10 | Hours |
|-------------|---------|---------|-----------------|----------|-------|
| Unit cost: | \$2.694 | /LCY | Total job cost: | \$19,558 | |

Task # A01

TRUCK/LOADER TEAM WORK

| Task description:3 Dam, Load and Haul Biosolids to 3 Dam Rise | | | | | | | |
|---|------------------|--------------------------------------|-------------------|-----------------|-----------------------|----------------|--|
| Site: Climax Mine | | Permit Action: | | amation nate | Permit/Job#: | M1977493 | |
| PROJECT IDEN | | | | | · .• | | |
| Task #: <u>H01B</u> Date: <u>9/26/</u> 2 | | State: <u>Colora</u> County: Summ | | | Filename: M4 | ne 193-H01b | |
| User: JLE | | Sounty. Summ | nı | | | 95-11010 | |
| | · | | | | | | |
| Agency or | organization nan | ne: DRMS | | | | | |
| HOURLY EQUIP | MENT COST | _ | | | sis: <u>1 per day</u> | | |
| T | ruck Loader Tear | | Equipment Descr | iption | | | |
| 11 | luck Loader Teal | | Г 950Н | | | | |
| Suppo | rt Equipment -L | | D6T XL | | | | |
| | | mp Area: NA | | | | | |
| Road Ma | intenance – Moto | | <u>Γ 12M</u> | C 1 | | | |
| | -wai | ter Truck: Wat | ter Tanker, 5,000 | Gal. | | | |
| Cost Breakdown: | Truck/Loa | der Team | Support | Equipment | Mainten | ance Equipment | |
| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck | |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 | |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 | |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | \$36.60 | |
| %Utilization-riper: | NA | 0 | NA | NA | NA | NA | |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 | |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 | |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | \$21.23 | |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | \$83.13 | |
| Number of Units: | 5 | 1 | 1 | 0 | 1 | 1 | |
| Group Subtotals: | Work: | \$863.14 | Support: | \$140.52 | Maint: | \$173.15 | |
| Total work team cost | | 31 | | | | | |
| Initial volume: 7,260 Co | | | Swell | factor: 1.000 | | | |
| Loose volume: | , | | | | | | |
| Sou | rce of estimated | volume: 6" or | ver 9 acres | | | | |
| | of estimated swe | | Handbook | | | | |
| Source | Material Purcha | | | | | | |
| | То | tal Cost: \$0.00 | \$0.00 | | | | |

| Truck Capacity: | | | | | |
|--|--------------------|----------------------|-------------------|-------------------------|---------------|
| Truck Payload (weight) Bas Material weight: | 1,600 | Pounds | s/I CY | | |
| Description: | Top Soil | 1 Ound | | | |
| Rated Payload: | 87,000 | Pounds | s | | |
| Payload Capacity: | 54.38 | LCY | - | | |
| 5 1 5 | | | | | |
| Truck Bed (volume) Basis: | | | | | |
| Struck Volume: | | .CY | | | |
| Heaped Volume: | | .CY | | | |
| Average Volume: | | LCY CV | | | |
| Adjusted Volume: | 31.40 I | LCY | | | |
| Final | Truck Volume B | ased on Number of l | Loader Passes: | 31.61 | LCY |
| Loading Tool Capacity | | | | | |
| t | | | Buck | et Size Class: | NA |
| Rated Capacity: | 4.300 | LCY (heaped) | | | |
| Bucket Fill Factor: | 1.050 | Other - moist loa | am (100- | 110%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | | | |
| Job Condition Corrections | <u>:</u> | Sit | e Altitude (ft.): | <u>10900</u> feet | |
| | Truck | Loader | Source | | |
| Altitude Adj: | 0.600 | 1.000 | (CAT HB |) | |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB | | |
| Net Correction: | 0.498 | 0.830 | | | |
| Loading Tool Cycle Time: | . Nı | umber of Loading To | ool Passes Requ | | 7 passes |
| Excavators and Front Shove | els: | | | Truck: | , |
| Machine Cycle Time v | | | | | |
| | - Material Descrip | | | | |
| Cycle Time Elements (min.) | - | | | | |
| Load: NA | Ma | neuver: NA | | Dump: 0.1 | 100 |
| Wheel and Trac | ek Loaders - Unad | ljusted Basic Loader | • | ad, dump, naneuver): | 0.500 minutes |
| Cycle Time Factors | 1 | | | Factor (min.) | Source |
| Material: | | al 0.02 | | 0.020 | (Cat HB) |
| Stockpile: | | | | 0.020 | (Cat HB) |
| Truck Ownership: | | ership of trucks and | loaders - | 0.040 | |
| - | 0.04 | - | | -0.040 | (Cat HB) |
| Operation: | | | | -0.040 | (Cat HB) |
| Dump Target: | Nominal targe | | | 0.000 | (Cat HB) |
| | | Net Cycle Time | | -0.040 | minutes |
| | | Adjusted Loader | | 0.460 | minutes |
| | | Net Load Tir | ne per Truck: | 2.860 | minutes |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

| Truck Tra maintaine | | ul & Return) T | <u>ime:</u> 1 | Road Conditi | ion: <u>Firm, smoo</u> t | th, rolling, dirt | /lt. surfaced, wate | ered, |
|---------------------------------------|--|----------------|---------------|------------------|---------------------------------|-------------------|---------------------|----------|
| Haul Rou | | | | | | | | |
| Seg # | | Distance | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time | |
| 1 | 1203 | 8.00 | 5.00 | 3.00 | 8.00 | 1123 | (min) 10.841 | |
| | | | | | Haul Time: | 10.841 | minutes | |
| Return Re | | | | | | | | |
| Seg # | Haul (Ft) | Distance | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time | |
| 1 | 1203 | 8.00 | -5.00 | 3.00 | -2.00 | 3706 | (min) 3.349 | |
| | | | | Total Tru | Return Time: ack Cycle Time: | | | |
| Loading To Proo Truck Unit Proo | duction | 491.27 | LCY/Hour | | Adjusted for jo | ob efficiency: | 407.75 | LCY/Hour |
| | uuction | 96.18 | LCY/Hour | | Adjusted for jo | ob efficiency: | 79.83 | LCY/Hour |
| Optimal No. of 7 | Trucks: | 5 | Truck(s) | | Selected Numb | er of Trucks: | 5 | Truck(s) |
| | Adjusted hourly truck team production:399.14LCY/HourAdjusted single truck/loader team production:399.14LCY/HourAdjusted multiple truck/loader team production:399.14LCY/Hour | | | | | | our | |
| JOB TI | ME AN | D COST | | | | | | |
| Flee | t size: | 1 | Team(s) | Т | Total job time: | 18.19 | Hour | 8 |
| Uni | t cost: _ | \$2.948 | /LCY |] | Fotal job cost: | \$21,40 |)5 | |

BULLDOZER WORK

| e: <u>Climax Mine</u> | Pe | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | ob#: <u>M1977493</u> |
|--|----------------------|--------------------|-----------------------------------|----------------------------|----------------------|
| PROJECT IDENTIFICATI | ON | | | | |
| | | 0.1 1 | | | N |
| Task #: <u>H02</u> Date: <u>9/17/2018</u> | State: | Colorado Summit | | Abbreviation: Filename: | None M493-H02 |
| 3:53:51 PM | County: | Summe | | Fileliallie. | M493-H02 |
| User: JLE | | | | | |
| Agency or organization | name: DF | RMS | | | |
| HOURLY EQUIPMENT C | OST | | | | |
| | | CD | | | |
| Horsepower: 240 | DS Series II L | JOP | - | | |
| Blade Type: Straight | | | - | | |
| Attachment: NA | | | - | | |
| Shift Basis: 1 per day | | | - | | |
| Data Source: (CRG) | | | - | | |
| Cost Breakdown: | | | - | | |
| USI DICAKUUWII. | | | Utilization % | | |
| Ownership Cost/Hour: | | \$66.14 | NA | | |
| Operating Cost/Hour: | | \$63.91 | 100 | | |
| Ripper own. | | | | | |
| Cost/Hour: | | \$0.00 | NA | | |
| Ripper op. Cost/Hour: | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | \$41.52 | NA | | |
| Total unit Cost/Hour: \$171 | 57 | | | | |
| Total Fleet Cost/Hour: \$171 | | | | | |
| <u> </u> | | | | | |
| MATERIAL QUANTITIES | | | | | |
| Initial Volume: 14,520 | | | | | |
| Swell factor: 1.000 | | | | | |
| Loose volume: 14,520 LC | Y | | | | |
| | 107 0 | | | | |
| Source of estimated volume: Source of estimated swell | 12" Over Cat Hand | | | | |
| factor: | | IDOOK | | | |
| HOURLY PRODUCTION | | | | | |
| Average push distance: | 200 feet | | | | |
| Unadjusted hourly production: | 289.3 LCY | /hr | | | |
| Materials consistency description: | Loose | stockpile 1.2 | | | |
| Average push 0 % gradient: | | | | | |
| Average site altitude: 11,0 | 00 feet | | | | |
| Material weight: 1,60 | 0 lbs/LCY | | | | |

| Weight description:To | p Soil | |
|---------------------------------|---------------|---------------|
| Job Condition Correction Factor | <u>or</u> | Source |
| 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: | 0.800 | (FND-RF) |
| Push gradient: | 1.000 | (CAT HB) |
| Altitude | 1.000 | (CAT HB) |
| Material Weight: | 1.438 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | | |
| production: | 273.48 LCY/hr | |
| Adjusted fleet production: | 273.48 LCY/hr | |

| Fleet size: | 1 Dozer(s) |
|------------------------------------|-----------------------------------|
| Unit cost: | \$0.627/LCY |
| Total job time: Total job cost: | 53.09 Hours \$9,109 |

BULLDOZER WORK

| Task description: Por | nd Shop, Grading | | | |
|---|-----------------------------------|-----------------------------------|----------------------------|---------------------|
| e: <u>Climax Mine</u> | Permit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
| PROJECT IDENTIFICATI | ON | | | |
| Task #: I01 Date: 9/17/2018 3:54:47 PM User: JLE | State: Colorado County: Summit | | Abbreviation: Filename: | None M493-I01 |
| Agency or organization | name: DRMS | | | |
| HOURLY EQUIPMENT C | <u>OST</u> | | | |
| Basic Machine: Horsepower:Cat D8T - 310Blade Type: Attachment:Semi-Uni 3-shank ri 1 per day (CRG) | versal | | | |
| Cost Breakdown: | | Utilization % | | |
| Ownership Cost/Hour: | \$93.62 | NA | | |
| Operating Cost/Hour: | \$73.35 | 100 | | |
| Ripper own. Cost/Hour: | \$8.93 | NA | | |
| Ripper op. Cost/Hour: | \$3.89 | 50 | | |
| Operator Cost/Hour: | \$41.52 | NA | | |
| Total unit Cost/Hour:\$221Total Fleet Cost/Hour:\$221 MATERIAL QUANTITIES Initial Volume:1,613Swell factor:1.125Loose volume: 1,815 LCY | | | | |
| Source of estimated volume: Source of estimated swell factor: | Climax Cat Handbook | | | |
| HOURLY PRODUCTION | | | | |
| Average push distance: Unadjusted hourly production: | 250 feet 377.8 LCY/hr | | | |
| Materials consistency description: | Compacted fill or e | mbankment 0.9 | | |
| Average push0 %gradient: | 00 feet | | | |
| | 0 lbs/LCY | | | |

Weight description:

| Job Condition Correction Factor | | Source |
|---------------------------------|--------------|---------------|
| Operator Skill: | 0.750 | (AVG.) |
| Material consistency: | 0.900 | (CAT HB)) |
| Dozing method: | 1.100 | (50% SL) |
| 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: | 0.902 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.4447 | |
| Adjusted unit 16 | 58.01 LCY/hr | |

168.01 LCY/hr

Earth - Dry packed

JOB TIME AND COST

Adjusted fleet

production:

| Fleet size: | 1 Dozer(s) |
|------------------------------------|------------------------|
| Unit cost: | \$1.317/LCY |
| Total job time: Total job cost: | 10.80 Hours \$2,390 |

Task # A01

TRUCK/LOADER TEAM WORK

| Task description: | Pond Sh | op, Load and Ha | aul topsoil to Po | ond Shop | | |
|---|-------------------------------------|---------------------------------------|-----------------------------|---------------|-----------------------|----------------|
| Site: Climax Mine | | Permit Acti | on: 2016 Recl Cost Estin | | Permit/Job#: | M1977493 |
| PROJECT IDENT | TIFICATION | Stata: Calora | do | 4 1.1 | monistion. No | |
| $\begin{array}{c} \text{Task #:} & \underline{102} \\ \text{Date:} & \underline{9/17/2} \\ \underline{3:55:5} \\ \end{array}$ | | State: <u>Colora</u> County: Summi | | | | one 493-I02 |
| User: JLE Agency or c | organization nam | e: DRMS | | | | |
| | - | | | Chift h | | |
| HOURLY EQUIP | VIENI COSI | | Equipment Descr | | sis: <u>1 per day</u> | |
| Tr | uck Loader Tear | n -Truck: Cat 7 | 740 | iption | | |
| | t Equipment -Lo | | C 950H D6T XL | | | |
| Suppor | 1 1 | mp Area: NA | DOIAL | | | |
| Road Mai | ntenance – Moto | r Grader: CAT | T 12M | | | |
| | -Wat | er Truck: Wate | er Tanker, 5,000 | Gal. | | |
| Cost Breakdown: | Truck/Load | der Team | Support | Equipment | Mainten | ance Equipment |
| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | \$36.60 |
| %Utilization-riper: | NA | 0 | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | \$21.23 |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | \$83.13 |
| Number of Units: | 2 | 1 | 1 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$403.99 | Support: | \$140.52 | Maint: | \$173.15 |
| Total work team cost/ | | | | | | |
| Initial volume: | 538 | CCY | Swell | factor: 1.000 | | |
| Loose volume: | 538 | LCY | Swell | 1.000 | | |
| Sour | ce of estimated | volume: 6" ove | er 9 acres | | | |
| | f estimated swel Material Purcha | | andbook | | | |
| | | tal Cost: $\frac{$0.00}{$0.00}$ | | | | |

| Truck Capacity: | | | | | |
|--|-------------------------------------|----------------------------------|-------------------|-------------------|----------------------|
| Truck Payload (weight) Bas Material weight: | <u>1,600</u> | Pounds | s/I СУ | | |
| Description: | Top Soil | 1 Ound | | | |
| Rated Payload: | 87,000 | Pounds | 3 | | |
| Payload Capacity: | 54.38 | LCY | , , | | |
| 5 1 5 | | | | | |
| Truck Bed (volume) Basis: | | | | | |
| Struck Volume: | | LCY | | | |
| Heaped Volume: | | LCY | | | |
| Average Volume: | | LCY | | | |
| Adjusted Volume: | 31.40 I | LCY | | | |
| Final | Truck Volume B | ased on Number of I | Loader Passes: | 31.61 | LCY |
| Loading Tool Capacity | | | | | |
| t | | | Buck | et Size Class: | NA |
| Rated Capacity: | 4.300 | LCY (heaped) | | | |
| Bucket Fill Factor: | 1.050 | Other - moist loa | am (100- | 110%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | | | |
| Job Condition Corrections | <u>:</u> | Sit | e Altitude (ft.): | <u>10900</u> feet | |
| | Truck | Loader | Source | | |
| Altitude Adj: | 0.600 | 1.000 | (CAT HB |) | |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB |) | |
| Net Correction: | 0.498 | 0.830 | | | |
| Loading Tool Cycle Time: | N | umber of Loading To | ool Passes Requ | | 7 passes |
| Excavators and Front Shove | els: | | | Truck: | , |
| Machine Cycle Time v Selected Value | vs. Job Condition within this Basic | | | | |
| | | | | | |
| Cycle Time Elements (min.) | Material Descrip | | | | |
| Load: NA | | neuver: NA | | Dump: 0.1 | .00 |
| Wheel and Trac | k Loaders - Unac | ljusted Basic Loader | Cycle Time (lo | ad, dump, | 0.500 minutes |
| | 1 | | r | naneuver): | |
| Cycle Time Factors | | -10.02 | | Factor (min.) | Source (Cat UD) |
| Material: Stockpile: | | | | 0.020 | (Cat HB) (Cat HB) |
| Truck Ownership: | | uck 0.02 ership of trucks and | loadors | 0.020 | (Cat HB) |
| Truck Ownership. | 0.04 | lership of trucks and | Ioauers - | -0.040 | (Cat HB) |
| Operation: | | ration -0.04 | | -0.040 | (Cat HB) |
| Dump Target: | | | | 0.000 | (Cat HB) |
| | | Net Cycle Time | Adjustment: | -0.040 | minutes |
| | | Adjusted Loader | | 0.460 | minutes |
| | | | ne per Truck: | 2.860 | minutes |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

| Truck Trave maintained | <u>el (Haul & Return)</u> 3.0 | Time: I | Road Conditi | on: <u>Firm, smoo</u> t | th, rolling, dirt | t/lt. surfaced, w | atered, |
|---|--------------------------------------|--|------------------|--------------------------------|-------------------|-------------------------|----------|
| Haul Route | | | | | | | |
| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | |
| 1 | 2624.00 | 8.00 | 3.00 | 11.00 | 857 | 3.155 | |
| Return Rou | te: | | | Haul Time: | 3.155 | minutes | 3 |
| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | |
| 1 | 2624.00 | -8.00 | 3.00 | -5.00 | 3706 | 0.744 | |
| | | | Total Tru | Return Time: ck Cycle Time: | | | |
| Loading Too Produ ruck Unit Produ | ction 491.27 | LCY/Hour | | Adjusted for jo | ob efficiency: | 407.75 | LCY/Hour |
| ruek enterreuu | 201.18 | LCY/Hour | | Adjusted for jo | ob efficiency: | 166.98 | LCY/Hour |
| ptimal No. of Tr | ucks: 2 | Truck(s) | | Selected Numb | er of Trucks: | 2 | Truck(s) |
| | | Adjusted Adjusted single Adjusted multiple | truck/loader | | n: 333. | 97 LCY/ | Hour |
| JOB TIM | E AND COST | | | | | | |
| Fleet s | ize: 1 | Team(s) | Т | otal job time: | 1.61 | Но | urs |
| Unit c | ost: \$2.149 | /LCY | Т | Total job cost: | \$1,15 | 56 | |

BULLDOZER WORK

| Climer Mina | Pe | ead topsoil | 2016 Reclamation | Do | h#. M1077402 |
|---|------------------------------|--------------------|----------------------|----------------------------|---------------------|
| e: Climax Mine | | | Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
| PROJECT IDENTIFIC | <u>CATION</u> | | | | |
| Task #: 103 Date: 9/17/2018 3:57:18 PM User: JLE | State: County: | Colorado Summit | | Abbreviation: Filename: | None M493-I03 |
| Agency or organ | ization name: DI | RMS | | | |
| HOURLY EQUIPMEN | NT COST | | | | |
| Horsepower: 240 Blade Type: Stra | ight | .GP | | | |
| | nank ripper er day EG) | | | | |
| Cost Breakdown: | | | <u>Utilization %</u> | | |
| Ownership Cost/Hour: Operating Cost/Hour: | | \$66.14 \$63.91 | NA 100 | | |
| Ripper own. Cost/Hour: | | \$6.02 | NA | | |
| Ripper op. Cost/Hour: Operator Cost/Hour: | | \$2.06 \$41.52 | 50 NA | | |
| Total unit Cost/Hour: Total Fleet Cost/Hour: | \$179.65 \$179.65 | | | | |
| MATERIAL QUANTI | TIES | | | | |
| Initial Volume: 538 Swell factor: 1.000 Loose volume: 538 I | | | | | |
| Source of estimated volu Source of estimated swel factor: | | lbook | | | |
| HOURLY PRODUCT | ION | | | | |
| Average push distance: Unadjusted hourly production: | 200 feet 289.3 LCY | /hr | | | |
| Materials consistency description: | Compa | acted fill or er | nbankment 0.9 | | |
| | | | | | |
| Average push gradient: Average site altitude: | 0 % | | | | |

| Weight description: | Гор Soil | | |
|------------------------------|------------|-------------|---------------|
| Job Condition Correction Fac | ctor_ | | Source |
| Operator Ski | 11: | 0.750 | (AVG.) |
| Material consistence | y: | 0.900 | (CAT HB)) |
| Dozing metho | od: | 1.100 | (50% SL) |
| Visibilit | ty: | 1.000 | (AVG.) |
| Job efficienc | ey: | 0.830 | (1 SHIFT/DAY) |
| Spoil pi | le: | 0.800 | (FND-RF) |
| Push gradier | nt: | 1.000 | (CAT HB) |
| Altitud | le: | 1.000 | (CAT HB) |
| Material Weigl | nt: | 1.438 | (CAT HB) |
| Blade typ | be: | 1.000 (PAT) | |
| Net correctio | on: 0.7090 |) | |
| Adjusted unit production: | 205.11 LC | Y/hr | |
| Adjusted fleet production: | 205.11 LC | Y/hr | |

| Fleet size: | 1 Dozer(s) |
|------------------------------------|-------------|
| Unit cost: | \$0.876/LCY |
| Total job time: Total job cost: | 2.62 Hours |

Task # A01

TRUCK/LOADER TEAM WORK

| Task description: | Mayflov | wer TSF, Load ai | nd Haul Subsoi | l to TSF | | |
|-------------------------------------|---------------------------------------|---------------------------------|-----------------------------|------------------------|-----------------------|-------------------------------|
| Site: Climax Mine | | Permit Acti | on: 2016 Recl Cost Estin | | Permit/Job#: | M1977493 |
| PROJECT IDE | NTIFICATION | | | | | |
| Task #: | | State: Colorad | | | | one |
| | | County: Summi | it | | Filename: M4 | 493-J01a |
| User: JLE | 8:22 PM | | | | | |
| Agency of | or organization nan | ne: DRMS | | | | |
| HOURLY EQU | IPMENT COST | - | | Shift ba | sis: <u>1 per day</u> | |
| | | E | Equipment Descr | iption | | |
| | Truck Loader Tear | m -Truck: Cat 7 | 740 | -F | | |
| ~ | | | 950H | | | |
| Sup | port Equipment -L | oad Area: Cat I Imp Area: NA | D6T XL | | | |
| Road N | Aaintenance – Moto | 1 | 12M | | | |
| | | | er Tanker, 5,000 | Gal. | | |
| | | | - | | | |
| Cost Breakdown: | Truck/Loa | der Team Loader | Support Load Area | Equipment Dump Area | Mainten Motor | ance Equipment Water Truck |
| | TTUCK | Loader | Load Alea | Dump Alea | Grader | water fruck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | \$36.60 |
| %Utilization-riper: | | 0 | NA | NA | NA | NA |
| Ripper own. | | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| cost/hour: Ripper op. cost/hour: | | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | | \$40.90 | \$41.52 | NA | \$28.69 | \$21.23 |
| Unit Subtotals: | | \$97.89 | \$140.52 | NA | \$90.02 | \$83.13 |
| Number of Units: | | 1 | φ1+0.52 1 | 0 | \$70.02 | 1 |
| Group Subtotals: | | \$863.14 | Support: | | Maint: | \$173.15 |
| Total work team co | ost/hour: <u>\$1,176.8</u> | 31 | | | | |
| MATERIAL QU | TANTITIES | | | | | |
| | | CON | G 11 | 6 | | |
| Initial volum Loose volum | | 26 CCY LCY | Swell | factor: <u>1.000</u> | | |
| | | | | | | |
| | ource of estimated | | er 9 acres | | | |
| Sourc | e of estimated swe Material Purcha | | andbook | | | |
| | | tal Cost: $\frac{$0.00}{$0.00}$ | | | | |

| <u> Truck Capacity:</u> | | | | | |
|--|---|---|---------------------------------------|--|---|
| Truck Payload (weight) Basi | <u>s:</u> | | | | |
| Material weight: | 2,650 | Pounds/ | | | |
| Description: | Decomposed r | rock - 25% Rock, 75% | Earth | | |
| Rated Payload: | 87,000 | Pounds | | | |
| Payload Capacity: | 32.83 | LCY | | | |
| | | | | | |
| | | | | | |
| Truck Bed (volume) Basis: | | | | | |
| Struck Volume: | 24.20 | LCY | | | |
| Heaped Volume: | 31.40 | LCY | | | |
| Average Volume: | | LCY | | | |
| Adjusted Volume: | | LCY | | | |
| <u> </u> | | | | | |
| | | | | | |
| Final | Fruck Volume E | Based on Number of Lo | oader Passes: | 31.61 | LCY |
| Loading Tool Capacity | | | | | |
| | | | Buck | et Size Class: | NA |
| Rated Capacity: | 4.300 | LCY (heaped) | Buch | | |
| Bucket Fill Factor: | 1.050 | Other - moist loar | m (100- | 110%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | III (100- | 11070) 1.050 | , |
| Augusted Capacity. | 4.010 | | | | |
| Job Condition Corrections: | | Site | Altitude (ft.): | 11000 feet | |
| tob Condition Corrections: | • | | Annuac (n.). | <u>11000</u> Icci | |
| | | | | | |
| | Truck | Loader | Source | | |
| Altitude Adj: | Truck 0.600 | Loader 1.000 | Source (CAT HB) |) | |
| Altitude Adj: Job Efficiency: | | | | | |
| Job Efficiency: | 0.600 0.830 | 1.000 0.830 | (CAT HB | | |
| , , | 0.600 | 1.000 | (CAT HB | | |
| Job Efficiency: Net Correction: | 0.600 0.830 0.498 | 1.000 0.830 0.830 | (CAT HB (CAT HB |) | |
| Job Efficiency: Net Correction: | 0.600 0.830 0.498 | 1.000 0.830 | (CAT HB (CAT HB |) ired to Fill | 7 passes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: | 0.600 0.830 0.498 N | 1.000 0.830 0.830 | (CAT HB (CAT HB |) | 7 passes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove | 0.600 0.830 0.498 N | 1.000 0.830 0.830 Jumber of Loading Too | (CAT HB (CAT HB |) ired to Fill | 7 passes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v | 0.600 0.830 0.498 N ls: s. Job Condition | 1.000 0.830 0.830 Jumber of Loading Too Rating: <u>NA</u> | (CAT HB (CAT HB |) ired to Fill | 7 passes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v. Selected Value v | 0.600 0.830 0.498 N ls: s. Job Condition within this Basic | 1.000 0.830 0.830 Jumber of Loading Too a Rating: NA c Rating: NA | (CAT HB (CAT HB |) ired to Fill | 7 passes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v | 0.600 0.830 0.498 N ls: s. Job Condition within this Basic | 1.000 0.830 0.830 Jumber of Loading Too a Rating: NA c Rating: NA | (CAT HB (CAT HB |) ired to Fill | 7 passes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – | 0.600 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri | 1.000 0.830 0.830 Jumber of Loading Too a Rating: NA c Rating: NA | (CAT HB (CAT HB |) ired to Fill | 7 passes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): | 0.600 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri | 1.000 0.830 0.830 Mumber of Loading Too a Rating: NA c Rating: NA ption: | (CAT HB (CAT HB |) ired to Fill Truck: | / |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v. Selected Value v | 0.600 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri | 1.000 0.830 0.830 Jumber of Loading Too a Rating: NA c Rating: NA | (CAT HB (CAT HB |) ired to Fill | / |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v. Selected Value v. Track Loaders – Cycle Time Elements (min.): Load: NA | 0.600 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri | 1.000 0.830 0.830 Jumber of Loading Too a Rating: NA c Rating: NA ption: | (CAT HB (CAT HB ol Passes Requi |) ired to Fill Truck: Dump:0.10 | / |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v. Selected Value v. Track Loaders – Cycle Time Elements (min.): Load: NA | 0.600 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri | 1.000 0.830 0.830 Mumber of Loading Too a Rating: NA c Rating: NA ption: | (CAT HB (CAT HB ol Passes Requi |) ired to Fill Truck: Dump: ad, dump, | 00 |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v. Selected Value v. Track Loaders – Cycle Time Elements (min.): Load: NA | 0.600 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri | 1.000 0.830 0.830 Jumber of Loading Too a Rating: NA c Rating: NA ption: | (CAT HB (CAT HB ol Passes Requi |) ired to Fill Truck: Dump:0.10 | 00 |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v. Selected Value v. Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track | 0.600 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri | 1.000 0.830 0.830 Jumber of Loading Too a Rating: NA c Rating: NA ption: | (CAT HB (CAT HB ol Passes Requi | Dump: 0.10 | 00 0.500 minutes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v. Selected Value v. Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Cycle Time Factors | 0.600 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri Material Descri | 1.000 0.830 0.830 Jumber of Loading Too a Rating: NA c Rating: NA ption: | (CAT HB (CAT HB ol Passes Requi | Dump: 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 | 00 0.500 minutes Source |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v. Selected Value v. Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Cycle Time Factors Material: | 0.600 0.830 0.498 N ls: s. Job Condition within this Basic Material Descri Material Descri Material Descri Material Descri | 1.000 0.830 0.830 Jumber of Loading Too a Rating: NA c Rating: NA ption: | (CAT HB (CAT HB ol Passes Requi | Dump: 0.10 Dump: 0.10 ad, dump, aneuver): Factor (min.) 0.020 | 00 0.500 minutes Source (Cat HB) |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v. Selected Value v. Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Cycle Time Factors Material: Stockpile: | 0.600 0.830 0.498 N ls: s. Job Condition within this Basic Material Descri Material Descri Material Descri Mixed material Dumped by t | 1.000 0.830 0.830 Jumber of Loading Too a Rating: NA c Rating: NA ption: | (CAT HB (CAT HB ol Passes Requi |) ired to Fill Truck: Dump: ad, dump, aneuver): Factor (min.) 0.020 0.020 | 00 0.500 minutes <u>Source</u> (Cat HB) (Cat HB) |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v. Selected Value v. Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Cycle Time Factors Material: | 0.600 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri Material Descri Material Descri Mixed material Dumped by t Common ow | 1.000 0.830 0.830 Jumber of Loading Too a Rating: NA c Rating: NA ption: | (CAT HB (CAT HB ol Passes Requi | Dump: 0.10 Dump: 0.10 ad, dump, aneuver): Factor (min.) 0.020 | 00 0.500 minutes Source (Cat HB) |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: | 0.600 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri Material Descri Mixed materi Dumped by t Common ow 0.04 | 1.000 0.830 0.830 Jumber of Loading Too A Rating: NA Parameters NA ption: | (CAT HB (CAT HB ol Passes Requi |) ired to Fill Truck: Dump: ad, dump, aneuver): Factor (min.) 0.020 0.020 -0.040 | 00 0.500 minutes 0.500 [Cat HB] (Cat HB) (Cat HB) (Cat HB) |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | 0.600 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri Material Descri Material Descri Mixed materi Dumped by t Common ow 0.04 Constant ope | 1.000 0.830 0.830 Jumber of Loading Too analysis NA ption: aneuver: NA djusted Basic Loader O ial 0.02 ruck 0.02 nership of trucks and I oration -0.04 | (CAT HB (CAT HB ol Passes Requi |) ired to Fill Truck: Dump:0.10 ad, dump, laneuver): Factor (min.) 0.020 0.020 -0.040 -0.040 | 00 0.500 minutes 0.500 (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: | 0.600 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri Material Descri Mixed materi Dumped by t Common ow 0.04 | 1.000 0.830 0.830 Jumber of Loading Too analysis NA ption: aneuver: NA djusted Basic Loader O ial 0.02 ruck 0.02 nership of trucks and 1 eration -0.04 get 0.00 | (CAT HB (CAT HB ol Passes Requi |) ired to Fill Truck: Dump: ad, dump, aneuver): Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 | 00 0.500 minutes 0.500 (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | 0.600 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri Material Descri Material Descri Mixed materi Dumped by t Common ow 0.04 Constant ope | 1.000 0.830 0.830 Jumber of Loading Too analysis NA ption: aneuver: NA djusted Basic Loader O ial 0.02 ruck 0.02 nership of trucks and I oration -0.04 | (CAT HB (CAT HB ol Passes Requi |) ired to Fill Truck: Dump:0.10 ad, dump, laneuver): Factor (min.) 0.020 0.020 -0.040 -0.040 | 00 0.500 minutes 0.500 (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

| Truck Travel | (Haul & Return) Time: |
|--------------|-----------------------|
| maintained 3 | 0 |

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

maintained 3.0

| Haul Route | | 1 | 1 | | | 1 |
|------------|---------------|-----------|-----------|-----------|----------|--------|
| Seg # | Haul Distance | Grade (%) | Roll. Res | Total Res | Velocity | Travel |
| U | (Ft) | | (%) | (%) | (fpm) | Time |
| | (11) | | (70) | (70) | (ipiii) | (min) |
| 1 | 3115.00 | 6.30 | 3.00 | 9.30 | 983 | 3.271 |
| 2 | 11300.00 | -7.70 | 3.00 | -4.70 | 2721 | 4.281 |

| | | | | Haul Time: | 7.552 | minutes |
|-----------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|
| Return Ro | ute: | | | | | |
| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
| 1 | 11300.00 | 7.70 | 3.00 | 10.70 | 1610 | 7.101 |
| 2 | 3115.00 | -6.30 | 3.00 | -3.30 | 3706 | 0.874 |

| | | | Return Time: Total Truck Cycle Time: | 7.975 21.054 | minutes minutes | |
|--|--------|-------------------|--|-----------------|----------------------------|----------|
| Loading Tool unit Production Truck Unit Production | 491.27 | LCY/Hour | Adjusted for job | efficiency: | 407.75 | LCY/Hour |
| | 90.07 | LCY/Hour | Adjusted for job | efficiency: | 74.76 | LCY/Hour |
| Optimal No. of Trucks: | 5 | Truck(s) | Selected Number | of Trucks: | 5 | Truck(s) |
| | | Adjusted single t | ourly truck team production: ruck/loader team production: ruck/loader team production: | 373.79 | LCY/Ho LCY/Ho LCY/Ho | our |

| Fleet size: | 1 | Team(s) | Total job time: | 526.57 | Hours |
|-------------|---------|---------|-----------------|-----------|-------|
| Unit cost: | \$3.148 | /LCY | Total job cost: | \$619,671 | |

Task # A01

TRUCK/LOADER TEAM WORK

| Task description: | Mayflov | ver TSF, Load a | nd Haul Topsoi | l to TSF | | | |
|--|--------------------------------------|---------------------------------------|-----------------------------|------------------------|-----------------------|-------------------------------|--|
| Site: Climax Mine | | Permit Acti | on: 2016 Recl Cost Estin | | Permit/Job#: | mit/Job#: <u>M1977493</u> | |
| PROJECT IDENT | TIFICATION | | _ | | | | |
| Task #: <u>J01B</u> Date: <u>9/17/2</u> <u>3:59:5</u> User: JLE | 2018 C 57 PM | State: <u>Colora</u> County: Summi | | | | one 493-J01b | |
| Agency or o | organization nam | ne: DRMS | | | | | |
| HOURLY EQUIP | <u>MENT COST</u> | | Equipment Descr | | sis: <u>1 per day</u> | | |
| Tr | uck Loader Tear | | | ipuoli | | | |
| | | | °950H | | | | |
| Suppo | rt Equipment -Lo | bad Area: Cat I mp Area: NA | D6T XL | | | | |
| Road Ma | -Du intenance – Moto | | 12M | | | | |
| | -Wat | | er Tanker, 5,000 | Gal. | | | |
| | - | | <i>a</i> | - | | | |
| <u>Cost Breakdown</u> : | Truck/Loa Truck | der Team Loader | Support Load Area | Equipment Dump Area | Mainter Motor | ance Equipment Water Truck | |
| | TTUCK | Louder | Loud / Hou | Dumprieu | Grader | | |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 | |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 | |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | \$36.60 | |
| %Utilization-riper: | NA | 0 | NA | NA | NA | NA | |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 | |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 | |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | \$21.23 | |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | \$83.13 | |
| Number of Units: | 5 | 1 | 1 | 0 | 1 | 1 | |
| Group Subtotals: | Work: | \$863.14 | Support: | \$140.52 | Maint: | \$173.15 | |
| Total work team cost | | 1 | | | | | |
| | | COV | 0 11 | C | | | |
| Initial volume: Loose volume: | | CCY 26 LCY | Swell | factor: <u>1.000</u> | | | |
| | / | | | | | | |
| | rce of estimated | | er 9 acres | | | | |
| Source | of estimated swel Material Purcha | | andbook | | | | |
| | | tal Cost: $\frac{$0.00}{$0.00}$ | | | | | |

| Truck Capacity: | | | | | | |
|--|----------------|-----------------------|--------------|------------------------|------------------|----------|
| Truck Payload (weight) Basi | | | - | | | |
| Material weight: | 1,600 | | Pounds/LC | Y | | |
| Description: | Top Soil | | | | | |
| Rated Payload: | 87,000 | | Pounds | | | |
| Payload Capacity: | 54.38 | | LCY | | | |
| | | | | | | |
| Truck Bed (volume) Basis: | 24.20 | LOW | | | | |
| Struck Volume: | 24.20 | LCY | | | | |
| Heaped Volume: | 31.40 | LCY | | | | |
| Average Volume: | 27.80 | LCY | | | | |
| Adjusted Volume: | 31.40 | LCY | | | | |
| Final | Truck Volume | Based on Num | ber of Load | er Passes: | 31.61 | LCY |
| Loading Tool Capacity | | | | | | |
| Datad Canaaituu | 4 200 | LCV (bac | and) | Bucke | t Size Class: | NA |
| Rated Capacity: Bucket Fill Factor: | 4.300 | LCY (hea Other - m | | (100.1 | 10%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | ioist ioain | (100-1 | 10%) 1.030 | |
| Aujusteu Capacity. | 4.515 | | | | | |
| Job Condition Corrections | <u>:</u> | | Site Al | titude (ft.): <u>1</u> | <u>1000</u> feet | |
| | Truck | Loader | • | Source | | |
| Altitude Adj: | 0.600 | 1.000 | | (CAT HB) | | |
| Job Efficiency: | 0.830 | 0.830 | | (CAT HB) | | |
| Net Correction: | 0.498 | 0.830 | | | | |
| Loading Tool Cycle Time: | | Number of Loa | ding Tool I | Passes Requir | red to Fill | 7 passes |
| Excavators and Front Shove | | | 8 | | Truck: | 7 passes |
| Machine Cycle Time v | | n Rating: NA | ٨ | | | |
| Selected Value | | | | | | |
| | | | • | | | |
| Track Loaders – | | ription: | | | | |
| Cycle Time Elements (min.) | : | | | | | |
| Load: NA | N | Ianeuver: N | A | | Dump: 0.1 | 100 |
| Wheel and Trac | k Loaders - Un | adjusted Basic | Loader Cvo | ele Time (loa | d. dump. | minutes |
| | | | | | aneuver): | 0.500 |
| Cycle Time Factors | | | | | Factor (min.) | |
| Material: | Mixed mate | | | | 0.020 | (Cat HB) |
| Stockpile: | Dumped by | | | | 0.020 | (Cat HB) |
| Truck Ownership: | | wnership of truc | eks and load | lers - | -0.040 | (Cat HB) |
| | 0.04 | | | | | |
| Operation: | - | eration -0.04 | | | -0.040 | (Cat HB) |
| Dump Target: | Nominal tar | - | | - | 0.000 | (Cat HB) |
| | | | le Time Ad | | -0.040 | minutes |
| | | | Loader Cyc | | 0.460 | minutes |
| | | Net Lo | oad Time p | er Truck: | 2.860 | minutes |
Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

7.975

minutes

| Truck Travel (Haul & Return) Time: | |
|------------------------------------|--|
| maintained 3.0 | |
| Haul Route | |

Seg # Travel Grade (%) Roll. Res Total Res Velocity Haul Distance Time (Ft) (%) (%) (fpm) (min) 983 3115.00 6.30 3.00 9.30 3.271 1 2 11300.00 -7.70 3.00 -4.70 2721 4.281

| | | | | Haul Time: | 7.552 | minutes |
|------------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|
| Return Rou | ite: | | | | | |
| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
| 1 | 11300.00 | 7.70 | 3.00 | 10.70 | 1610 | 7.101 |
| 2 | 3115.00 | -6.30 | 3.00 | -3.30 | 3706 | 0.874 |

| | | Т | otal Truck Cycle Time: | 21.054 | minutes | |
|--|--------|----------------------|--|-----------------------------------|----------------------------|----------|
| Loading Tool unit Production _ Truck Unit Production | 491.27 | _ LCY/Hour | Adjusted for job e | fficiency: | 407.75 | LCY/Hour |
| | 90.07 | LCY/Hour | Adjusted for job e | fficiency: | 74.76 | LCY/Hour |
| Optimal No. of Trucks: | 5 | Truck(s) | Selected Number of | of Trucks: | 5 | Truck(s) |
| | | Adjusted single truc | rly truck team production: k/loader team production: k/loader team production: | 373.79 373.79 373.79 | LCY/He LCY/He LCY/He | our |
| JOB TIME AND | COST | | | | | |

Return Time:

| Fleet size: | 1 | Team(s) | Total job time: | 526.57 | Hours |
|-------------|---------|---------|-----------------|-----------|-------|
| Unit cost: | \$3.148 | /LCY | Total job cost: | \$619,671 | |

| e: Climax Mine | Pe | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|-------------------------------------|-------------------|---------------|-----------------------------------|---------------|---------------------|
| PROJECT IDENTIFI | CATION | | | | |
| Task #: J02A | State: | Colorado | | Abbreviation: | None |
| Date: $9/17/2018$ | County: | Summit | | Filename: | M493-J02a |
| 4:02:35 PM | | | | | |
| User: JLE | | | | | |
| Agency or organ | nization name: DF | RMS | | | |
| HOURLY EQUIPME | NT COST | | | | |
| Basic Machine: Cat | : D8T - 8SU | | | | |
| Horsepower: 310 | | | | | |
| • 1 | ni-Universal | | | | |
| Attachment: NA Shift Basis: 1 p | er day | | | | |
| | RG) | | | | |
| Cost Breakdown: | , | | - | | |
| Cost Dreakdown: | | [| Utilization % | | |
| Ownership Cost/Hour: | | \$93.62 | NA | | |
| Operating Cost/Hour: | | \$73.35 | 100 | | |
| Ripper own. | | \$0.00 | NA | | |
| Cost/Hour: Ripper op. Cost/Hour: | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | \$41.52 | NA | | |
| - | | ψ41.52 | NA | | |
| Total unit Cost/Hour: | \$208.49 | | | | |
| Total Fleet Cost/Hour: | \$416.99 | | | | |
| MATERIAL QUANT | ITIES | | | | |
| Initial Volume: 196, | 827 | | | | |
| Swell factor: 1.00 | | | | | |
| | 827 LCY | | | | |
| Source of estimated volu | ime: 12" Over | 244 Acres | | | |
| Source of estimated voit | | | | | |
| factor: | | | | | |
| HOURLY PRODUCT | <u>'ION</u> | | | | |
| Average push distance: | 250 feet | | | | |
| Unadjusted hourly production: | 377.8 LCY, | /hr | | | |
| Materials consistency description: | Loose | stockpile 1.2 | | | |
| Average push gradient: | 0 % | | | | |
| Average site altitude: | 11,000 feet | | | | |
| Material weight: | 2,650 lbs/LCY | | | | |

| Weight description:Dec | composed rock - 25% Rock, 7 | 5% Earth |
|---------------------------------|-----------------------------|---------------|
| Job Condition Correction Factor | <u>r</u> | Source |
| 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: | 0.868 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.5187 | |
| Adjusted unit 1 production: | 95.96 LCY/hr | |
| Adjusted fleet | 91.92 LCY/hr | |

391.92 LCY/hr

JOB TIME AND COST

production:

| Fleet size: | 2 Dozer(s) |
|------------------------------------|--------------------------------------|
| Unit cost: | \$1.064/LCY |
| Total job time: Total job cost: | 502.21 Hours \$209,416 |

| : <u>Climax Mine</u> | Pe | ermit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|--|------------------|---------------|-----------------------------------|---------------|---------------------|
| PROJECT IDENTIFI | CATION | | | | |
| Task #: J02B | State: | Colorado | | Abbreviation: | None |
| Date: $9/17/2018$ | County: | Summit | | Filename: | M493-J02b |
| 4:03:33 PM | | | | | |
| User: JLE | | - | | | |
| Agency or organ | ization name: DI | RMS | | | |
| HOURLY EQUIPME | NT COST | | | | |
| | D8T - 8SU | | | | |
| Horsepower: 310 | | | | | |
| 1 | ni-Universal | | | | |
| Attachment: NA | | | | | |
| Shift Basis: 1 pe | er day | | | | |
| Data Source: (CR | | | | | |
| Cost Breakdown: | | | Utilization % | | |
| Ownership Cost/Hour: | | \$93.62 | NA | | |
| Operating Cost/Hour: | | \$73.35 | 100 | | |
| Ripper own. | | \$0.00 | NA | | |
| Cost/Hour: | | | INA | | |
| Ripper op. Cost/Hour: | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | \$41.52 | NA | | |
| Total unit Cost/Hour: | \$208.49 | | | | |
| Total Fleet Cost/Hour: | \$416.99 | | | | |
| | • ••••• | | | | |
| MATERIAL QUANTI | <u>ITIES</u> | | | | |
| Initial Volume: 196, | 827 | | | | |
| Swell factor: 1.00 | | | | | |
| Loose volume: 196, | 827 LCY | | | | |
| Source of estimated volu | 12" Orra | 244 Acres | | | |
| Source of estimated volu Source of estimated swel | | | | | |
| factor: | | IUUUK | | | |
| HOURLY PRODUCT | ION | | | | |
| Average push distance: | 250 feet | | | | |
| Unadjusted hourly production: | 377.8 LCY | /hr | | | |
| Materials consistency description: | Loose | stockpile 1.2 | | | |
| Average push gradient: | 0 % | | | | |
| Average site altitude: | 11,000 feet | | | | |
| Material weight: | 1,600 lbs/LCY | | | | |

| Weight description: Te | op Soil | |
|-------------------------------|---------------|---------------|
| Job Condition Correction Fact | or | Source |
| Operator Skill | | (AVG.) |
| Material consistency | 1.200 | (CAT HB) |
| Dozing method | 1: 1.000 | (GEN.) |
| Visibility | 1.000 | (AVG.) |
| Job efficiency | 0.830 | (1 SHIFT/DAY) |
| Spoil pile | e: 0.800 | (FND-RF) |
| Push gradient | t: 1.000 | (CAT HB) |
| Altitude | 2: 1.000 | (CAT HB) |
| Material Weight | t: 1.438 | (CAT HB) |
| Blade type | 2: 1.000 | (PAT) |
| Net correction | n: 0.8593 | |
| Adjusted unit production: | 324.64 LCY/hr | |
| Adjusted fleet production: | 649.28 LCY/hr | |

JOB TIME AND COST

| Fleet size: | 2 Dozer(s) | |
|------------------------------------|---------------------------|--|
| Unit cost: | \$0.642/LCY | |
| Total job time: Total job cost: | 303.15 Hours \$126,408 | |

MOTOR GRADER WORK

| Task description: | | , | de the Top S | urrace | | |
|--|--|--|--|--|--|---------------------|
| e: Climax Mine | Ре | ermit Action: | 2016 Recla Cost Estima | | Permit/Job | o#: <u>M1977493</u> |
| PROJECT IDENTIFI | CATION | | | | | |
| Task #: J03 Date: 9/17/2018 | State: County: | Colorado Summit | | | reviation: Filename: | None M493-J03 |
| 4:05:18 PM User: JLE | <u>//</u> | | | | - | |
| Agency or organ | nization name: | RMS | | | | |
| HOURLY EQUIPME | NT COST | | | | | |
| Basic Machine | e: CAT 12M | | | Horsepower: | | 158 |
| Ripper Attachment | | | _ | Shift Basis: | | er day |
| | | | | Data Source: | | CRG) |
| Cost Breakdown: | | | | Utilization % | | |
| Owner | rship Cost/Hour: | | \$30.73 | NA | | |
| Opera | ating Cost/Hour: | | \$30.60 | 100 | - | |
| | rship Cost/Hour: | | \$0.00 | NA | _ | |
| | ating Cost/Hour: | | \$0.00 | NT A | - | |
| - | rator Cost/Hour: | | \$28.69 \$90.02 | NA | - | |
| | | * 4 0 0 | | | | |
| | | | 04 | | | |
| Total | Fleet Cost/Hour: | \$180 | .04 | | | |
| MATERIAL QUANTI | | \$180 | .04 | | | |
| MATERIAL QUANTI | | | | | | acres |
| MATERIAL QUANTI Total Area t | <u>ITIES</u> | ed: 244.00 | | | | acres |
| MATERIAL QUANTI Total Area t | TTIES to be graded or rippe to of estimated acreag | ed: 244.00 | | | | acres |
| MATERIAL QUANTI Total Area t Source | TTIES to be graded or rippe to of estimated acreag | ed: <u>244.00</u> ge: <u>Climax</u> | 1.50 | mph | | acres |
| MATERIAL QUANTI Total Area t Source | TTIES to be graded or rippe to of estimated acreag TION Average Grader Sp Selected Applica | ed:244.00 ge:limax peed: tion: | 1.50 | | | acres |
| MATERIAL QUANTI Total Area t Source HOURLY PRODUCT | TTIES to be graded or rippe to of estimated acreag TION Average Grader Sp Selected Applica Selected Blade An | ed:244.00 ge:limax peed: tion: ngle: | 1.50 Finish 0 | mph grading (0-2.5 m degrees | nph) - 1.5 | acres |
| MATERIAL QUANTI Total Area t Source HOURLY PRODUCT | ITIES to be graded or rippe to of estimated acreag TON Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler | ed:244.00 ge: ceed: ngle: ngth: | 1.50 Finish 0 12.00 | mph grading (0-2.5 m degrees feet | nph) - 1.5 | acres |
| MATERIAL QUANTI Total Area t Source HOURLY PRODUCT Width o | TTIES to be graded or rippe to of estimated acreag TON Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler f blade overlap per p | ed: 244.00 ge: Climax peed: tion: ngle: pass: | 1.50 Finish 0 12.00 2.00 | mph grading (0-2.5 m degrees feet feet | nph) - 1.5 | acres |
| MATERIAL QUANTI Total Area t Source HOURLY PRODUCT Width o Net grading or | ITIES to be graded or rippe to of estimated acreag TON Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler | ed: 244.00 ge: Climax beed: ngle: pass: pass: | 1.50 Finish 0 12.00 | mph grading (0-2.5 m degrees feet | aph) - 1.5 | acres |
| MATERIAL QUANTI Total Area t Source HOURLY PRODUCT Width o Net grading or | ITIES to be graded or rippe to of estimated acreag TON Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler f blade overlap per p r ripping width per p Hourly Unit Produc | ed: 244.00 ge: Climax beed: ngle: pass: pass: | 1.50 Finish 0 12.00 2.00 10.00 1.8182 | mph grading (0-2.5 m degrees feet feet feet feet | 1994) - 1.5 3 our | acres |
| MATERIAL QUANTI Total Area t Source HOURLY PRODUCT Width o Net grading o Unadjusted | ITIES to be graded or rippe to of estimated acreag TON Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler f blade overlap per p r ripping width per p Hourly Unit Produc | ed:244.00 ge:limax peed: ngle: pass: pass: pass: tion: | 1.50 Finish 0 12.00 2.00 10.00 1.8182 | mph grading (0-2.5 m degrees feet feet feet feet acres/h | 1994) - 1.5 3 our | acres |
| MATERIAL QUANTI Total Area t Source HOURLY PRODUCT Width o Net grading o Unadjusted | ITIES to be graded or rippe to of estimated acreag TON Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler f blade overlap per p r ripping width per p Hourly Unit Produc | ed: 244.00 ge: Climax beed: ngle: pass: pass: | 1.50 Finish 0 12.00 2.00 10.00 1.8182 | mph grading (0-2.5 m degrees feet feet feet feet acres/h | 1994) - 1.5 3 our | acres |
| MATERIAL QUANTI Total Area t Source HOURLY PRODUCT Width o Net grading of Unadjusted | ITIES to be graded or rippe to of estimated acreag TON Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler f blade overlap per p r ripping width per p Hourly Unit Product Factors | ed:244.00 ge: peed: ngle: pass: pass: pass: tion: Source | 1.50 Finish 0 12.00 2.00 10.00 1.8182) | mph grading (0-2.5 m degrees feet feet feet feet acres/h | 1994) - 1.5 3 our | acres |
| MATERIAL QUANTI Total Area t Source HOURLY PRODUCT Width o Net grading o Unadjusted Job Condition Correction 1 Altitude Adj: | ITIES to be graded or rippe to of estimated acreag TON Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler f blade overlap per p r ripping width per p Hourly Unit Product Factors 0.95 | ed:244.00 ge: peed: ngle: ngth: pass: pass: tion: Source (CAT HB | 1.50 Finish 0 12.00 2.00 10.00 1.8182) | mph grading (0-2.5 m degrees feet feet feet feet acres/h | 1994) - 1.5 3 our | acres |
| MATERIAL QUANTI Total Area t Source HOURLY PRODUCT Width of Net grading of Unadjusted I Job Condition Correction I Altitude Adj: Job Efficiency: Net Correction: | ITIES to be graded or rippe to of estimated acreage ION Average Grader Sp Selected Applica Selected Blade Ar Effective Blade Ler f blade overlap per p Hourly Unit Product Factors 0.95 0.90 0.8550 | ed:244.00 ge: peed: ngle: ngth: pass: pass: tion: Source (CAT HB (1sh/d, fav multiplier | 1.50 Finish 0 12.00 2.00 10.00 1.8182) .) | mph grading (0-2.5 m degrees feet feet feet acres/h Site Altitude: <u>110</u> | uph) - 1.5 5 our 1 <u>00</u> feet | acres |
| MATERIAL QUANTI Total Area t Source HOURLY PRODUCT Width of Net grading of Unadjusted Job Condition Correction I Altitude Adj: Job Efficiency: Net Correction: Add | ITIES to be graded or rippe to of estimated acreag TON Average Grader Sp Selected Applica Selected Blade An Effective Blade Ler f blade overlap per p r ripping width per p Hourly Unit Produc Factors 0.95 0.90 | ed:244.00 ge: peed: ngle: ngth: pass: pass: pass: tion: Source (CAT HB (1sh/d, fav multiplier Production: | 1.50 Finish 0 12.00 2.00 10.00 1.8182) | mph grading (0-2.5 m degrees feet feet feet feet acres/h | nph) - 1.5 3 our 1 <u>00</u> feet | acres |
| MATERIAL QUANTI Total Area t Source HOURLY PRODUCT Width or Net grading or Unadjusted Job Condition Correction I Altitude Adj: Job Efficiency: Net Correction: Add Adj | ITIES to be graded or rippe to of estimated acreage ION Average Grader Sp Selected Applicat Selected Blade And Effective Blade Lear f blade overlap per pr r ripping width per pr Hourly Unit Product Factors 0.95 0.90 0.8550 | ed:244.00 ge: peed: ngle: ngth: pass: pass: pass: tion: Source (CAT HB (1sh/d, fav multiplier Production: | 1.50 Finish 0 12.00 2.00 10.00 1.8182) .) .) 1.5545 | mph grading (0-2.5 m degrees feet feet feet acres/h Site Altitude: <u>110</u> | nph) - 1.5 3 our 1 <u>00</u> feet | acres |
| MATERIAL QUANTI Total Area t Source HOURLY PRODUCT Width of Net grading of Unadjusted Job Condition Correction I Altitude Adj: Job Efficiency: Net Correction: Add | ITIES to be graded or rippe to of estimated acreage ION Average Grader Sp Selected Application Selected Blade And Effective Blade Ler f blade overlap per prime Hourly Unit Product Factors 0.95 0.90 0.8550 Hjusted Hourly Unit Fleet T | ed:244.00 ge: tion: ngle: ngth: pass: pass: tion: Source (CAT HB (1sh/d, fav multiplier Production: Production: | 1.50 Finish 0 12.00 2.00 10.00 1.8182) .) .) 1.5545 | mph grading (0-2.5 m degrees feet feet feet acres/h Site Altitude: <u>110</u> | our 000 feet | ACTES |

Unit cost: \$57.91 per acre

Total job cost: **\$14,130**

| Postmining Channel | Constructi | on | | | Task No. | K01 | | | | | |
|---------------------|------------|--------------------|--------------------------|------------------|---------------------------------|----------------------|---------------------------|--------------------------------|-----------------|---|---------------|
| | | | | | | | | | 1 | Variable | |
| Date : | 17-Sep-18 | Permit | M1977493 | | Climax Mi | ne | | | 30.0 | Formula | |
| 0.5011 | JLE | | | State : Colorado | | | County: | Lake/Summit | | | |
| Agency Name: Colo | | | | | | | | | | | |
| Permit Action: | 2016 Recla | mation C | ost Estimate | e | Task Desc | cription: East S | Side Channe | l Construction | | | |
| Channel ID | Length | Depth | Width (bottom) | Side Slopes | Width (Top) | Excavated Vol./LF | Excavated Vol. (total) | Riprap Thickness (2xD50) | Perimeter, P | Area for Geotextile (excl. anchor trenches) | Riprap Vol. |
| | (ft) | (ft) | (ft) | (XH:1V) | (I 0 p) (ft) | (CY) | (CY) | (ft) | (ft) | (sf) | (CY) |
| Camp Extension | 4,500 | 6.0 | 6.0 | 2.0 | 30.0 | 4.0000 | 18,000 | 1 | 32.83 | 147,748 | 5,472 |
| Robinson | , | | | | | | | | | , - | - / |
| Extension | 5,200 | 6.0 | 6.0 | 2.0 | 30.0 | 4.0000 | 20,800 | 1 | 32.83 | 170,731 | 6,323 |
| Tenmile Extension | 11,000 | 6.0 | 10.0 | 2.0 | 34.0 | 4.8889 | 53,778 | 2 | 36.83 | 405,161 | 30,012 |
| Mayflower Extension | 8,600 | 6.0 | 16.0 | 2.0 | 40.0 | 6.2222 | 53,511 | 3 | 42.83 | 368,362 | 40,929 |
| Totals | 29,300 | | | | | | 146,089 | | | 1,092,002 | 82,737 |
| Materials Needed: | | Geotexti 15% wa | ile (SY incl. stage): | 139,534 | | Riprap (CY) | | 82,737 | | Excavation (CY): | 146,089 |
| Material Costs: | | Geo | textile (SY): | \$ 0.94 | | | Riprap (CY): | \$ 30.50 | Exca | vation (CY): | \$ - |
| Labor Cost: | | | | \$ 0.26 | | | | \$ 12.40 | | | \$ 2.40 |
| Equipment Cost: | | | | \$ - | | | | \$ 14.05 | | | \$ 1.39 |
| Means Reference | | 33 32 | 1916 1500 | | | 31 37 1310 010 | 00 | | 31 23 16 | 42 0310 | |
| Totals: | | Geotext | ile (\$): | \$ 167,440.23 | | Riprap (\$): | | \$ 4,711,846.64 | Excavation (| CY): | \$ 553,676.89 |
| Hours: | | | ile (Hrs): | 446.5 | 5 | Riprap (Hrs) | | 10,675.7 | Excavation (| | 3,652.22 |
| | | SY/HR | 312.5 | | | CY/HR | 7.750 | | CY/HR | 40.00 | |
| Total Post-Mining | Channel Re | construct | tion hours: | 14,774.41 | | | | | | | |
| Total Post-Mining | Channel Re | construc | ction Cost: | \$ 5,432,963.76 | | | | | | | |

DEMOLITION WORK

| Climax Mine | | | Permit Action: | | 2016 ReclamationCost EstimatePermit/Job# | | | #: <u>M1977493</u> | |
|--|------------------------------------|-----------------|----------------|-----------------------------------|--|----------|--------------------------|--------------------|---------------------------|
| ROJECT | IDENTI | FICATION | | | | | | | |
| Task K #: | K02 | S | tate: | Colorado | | Abbrevia | tion: | None | |
| | /17/2018 :09:01 PM | | inty: | Summit | | Filen | ame: | M493-K | 02 |
| | | | | | | | - | | |
| | LE ency or org | ganization nam | ie: | DRMS | | | | | |
| | ency or org | ganization nam | ie: | DRMS | | | <u>]</u> | Location a | adjustment: |
| Age | ency or org | ganization nam | | DRMS molition Men Selection | u Quantity | Unit | <u>]</u> Unit Cost | | adjustment: Total Cost |
| Age <u>NIT COST</u> <u>00.00 %</u> Structure | ency or org S e or iption | | De | molition Men | Quantity | | Unit | | |

| | | | | Total Cost | |
|------------|----------|---------------|----------------|---------------|----------------|
| | | Subtotal | | (adjusted for | |
| Job Hours: | 1,312.94 | (unadjusted): | \$4,941,648.00 | location): | \$4,941,648.00 |

| Task description: | Mayf | lower Acid | l, Grade Site | | | |
|---|--|-----------------------|--------------------|-----------------------------------|----------------------------|---------------------|
| e: Climax Mine | | Pe | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
| PROJECT IDENT | <u>IFICATIO</u> | N | | | | |
| Task #: L01 Date: 9/17/20 4:14:02 User: JLE | | State: County: | Colorado Summit | | Abbreviation: Filename: | None M493-L01 |
| Agency or o | rganization n | ame: DI | RMS | | | |
| HOURLY EQUIP | MENT CO | <u>ST</u> | | | | |
| Basic Machine: Horsepower: Blade Type: Attachment: Shift Basis: Data Source: | Cat D8T - 8 310 Semi-Unive 3-shank ripp 1 per day (CRG) | rsal | | | | |
| Cost Breakdown: | | | | Utilization % | | |
| Ownership Cost/Ho Operating Cost/Ho | | | \$93.62 \$73.35 | NA 100 | | |
| Ripper ov Cost/Ho | | | \$8.93 | NA | | |
| Ripper op. Cost/Ho Operator Cost/Ho | ur: | | \$1.95 \$41.52 | 25 NA | | |
| Total unit Cost/Hour Total Fleet Cost/Hou | | | | | | |
| MATERIAL QUA | NTITIES | | | | | |
| Swell factor: | 33,873 1.000 33,873 LCY | | | | | |
| Source of estimated Source of estimated factor: | | Climax Cat Hand | lbook | | | |
| HOURLY PRODU | CTION | | | | | |
| Average push distan Unadjusted hourly production: | | 250 feet 377.8 LCY | /hr | | | |
| Materials consistenc description: | у | Compa | cted fill or en | nbankment 0.9 | | |
| Average push gradient: | 0 % | | | | | |
| Average site altitude | : 11,000 | feet | _ | | | |
| Material weight: | 2,550 | bs/LCY | | | _ | |

Weight description:

| Job Condition Correction Factor | | Source |
|---------------------------------|--------------|---------------|
| Operator Skill: | 0.750 | (AVG.) |
| Material consistency: | 0.900 | (CAT HB)) |
| Dozing method: | 1.100 | (50% SL) |
| 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: | 0.902 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.4447 | |
| Adjusted unit 16 | 58.01 LCY/hr | |

336.02 LCY/hr

Earth - Dry packed

JOB TIME AND COST

Adjusted fleet

production:

| Fleet size: | 2 Dozer(s) |
|------------------------------------|--------------------------|
| Unit cost: | \$1.306/LCY |
| Total job time: Total job cost: | 100.81 Hours \$44,227 |

Task # A01

TRUCK/LOADER TEAM WORK

| Task description: | Mayflov | ver Acid, L | load an | nd Haul Subsoi | l to site | | | |
|--|--------------------|-------------|-------------------|------------------------------|------------------------|----------------------|------------|------------------------------|
| Site: Climax Mine | | Perm | it Actio | on: 2016 Recla Cost Estim | | Permit/Jol | b#: | M1977493 |
| PROJECT IDEN | TIFICATION | | | | | | | |
| Task #: <u>L02</u> A Date: <u>9/17/</u> _4:15: | <u> </u> | | Colorad Summit | | | Filename: | Non M49 | ie 93-L02a |
| User: JLE | | | | | | | | |
| Agency or | organization nam | ne: DRM | S | | | | | |
| HOURLY EQUI | PMENT COST | | | | | sis: <u>1 per da</u> | <u>ly</u> | |
| т | ······ | | Ec | uipment Descri | iption | | | |
| 1 | ruck Loader Tear | -Loader: | | | | | | |
| Supp | ort Equipment -Lo | | | 6T XL | | | | |
| | | mp Area: | NA | | | | | |
| Road Ma | aintenance – Moto | | CAT | | | | | |
| | -Wat | er Truck: | Water | r Tanker, 5,000 | Gal. | | | |
| Cost Ducaledorum | Transla /I. e.e. | | | Common and | F | Mai | | |
| <u>Cost Breakdown</u> : | Truck/Loa Truck | Loader | | Load Area | Equipment Dump Area | Motor | ntena | nce Equipment Water Truck |
| | THUCK | Louder | | Loud / fieu | Dump riidu | Grader | | |
| %Utilization-machine: | 100 | | 100 | 100 | NA | | 100 | 100 |
| Ownership cost/hour: | \$66.13 | \$20 | 5.14 | \$52.66 | NA | \$30 |).73 | \$25.30 |
| Operating cost/hour: | \$55.75 | \$30 | 0.84 | \$46.34 | NA | \$30 | 0.60 | \$36.60 |
| %Utilization-riper: | NA | | 0 | NA | NA |] | NA | NA |
| Ripper own. cost/hour: | NA | \$0 | 0.00 | \$0.00 | NA | \$0 | 0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0 | 0.00 | \$0.00 | NA | \$0 | 0.00 | \$0.00 |
| Operator cost/hour: | \$31.17 | \$40 | 0.90 | \$41.52 | NA | \$28 | 8.69 | \$21.23 |
| Unit Subtotals: | \$153.05 | \$97 | 7.89 | \$140.52 | NA | \$90 | 0.02 | \$83.13 |
| Number of Units: | 3 | | 1 | 1 | 0 | | 1 | 1 |
| Group Subtotals: | Work: | \$557.04 | | Support: | \$140.52 | Ma | int: | \$173.15 |
| Total work team cos MATERIAL QU | <u>.</u> | | | | | | | |
| Initial volume | : 605 | | CCY | Swell f | factor: 1.000 | | | |
| Loose volume | | ; | LCY | ~ | | | | |
| Sou | urce of estimated | voluma | 6" 010 | r 3/4 of an acre, | Climay | | | |
| | of estimated swel | | | ndbook | Cilliax | | | |
| Source | Material Purcha | | \$0.00 | | | | | |
| | То | tal Cost: | \$0.00 | | | | | |

HOURLY PRODUCTION

| Truck Capacity: | | | | | |
|--|--|--|----------------------------------|---|---|
| Truck Payload (weight) Basi | <u>s:</u> | | | | |
| Material weight: | 2,650 | Pounds/L | CY | | |
| Description: | Decomposed | l rock - 25% Rock, 75% I | Earth | | |
| Rated Payload: | 87,000 | Pounds | | | |
| Payload Capacity: | 32.83 | LCY | | | |
| | | | | | |
| | | | | | |
| Truck Bed (volume) Basis: | | | | | |
| Struck Volume: | 24.20 | LCY | | | |
| Heaped Volume: | 31.40 | LCY | | | |
| Average Volume: | 27.80 | LCY | | | |
| Adjusted Volume: | 31.40 | LCY | | | |
| | | | | | |
| T . 1 | T 1 1 7 1 | | 1 5 | | |
| Final | I ruck Volume | Based on Number of Loa | ider Passes: | 31.61 | LCY |
| Loading Tool Capacity | | | | | |
| | | | Bucket | Size Class: N | IA |
| Rated Capacity: | 4.300 | LCY (heaped) | | | - |
| Bucket Fill Factor: | 1.050 | Other - moist loam | (100-11 | 0%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | (100 11 | | |
| j | | | | | |
| Job Condition Corrections | • | Site A | Altitude (ft.): <u>1(</u> |)400 feet | |
| | _ | 1 | | <u>, 100</u> 1001 | |
| | Truck | Loader | Source | | |
| Altitude Adj: | 0.600 | 1.000 | (CAT HB) | | |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) | | |
| Net Competions | 0.409 | 0.920 | | | |
| Net Correction: | 0.498 | 0.830 | | | |
| | | | | | |
| Loading Tool Cycle Time: | | Number of Loading Tool | Passes Require | ed to Fill | nasses |
| | | Number of Loading Tool | Passes Require | | 7 passes |
| | | Number of Loading Tool | Passes Require | ed to Fill Truck: | 7 passes |
| Excavators and Front Shove | <u>ls:</u> | | Passes Require | | 7 passes |
| | <u>ls:</u> s. Job Conditic | on Rating: <u>NA</u> | Passes Require | | 7 passes |
| Excavators and Front Shove Machine Cycle Time v Selected Value | <u>ls:</u> s. Job Conditic within this Bas | on Rating: <u>NA</u> ic Rating: <u>NA</u> | Passes Require | | 7 passes |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – | <u>ls:</u> s. Job Conditic within this Bas Material Desc | on Rating: <u>NA</u> ic Rating: <u>NA</u> | Passes Require | | 7 passes |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – | <u>ls:</u> s. Job Conditic within this Bas Material Desc | on Rating: <u>NA</u> ic Rating: <u>NA</u> | Passes Require | | 7 passes |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.) | <u>ls:</u> s. Job Conditic within this Bas Material Desc : | on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: | Passes Require | Truck: | / · · · |
| Selected Value | <u>ls:</u> s. Job Conditic within this Bas Material Desc : | on Rating: <u>NA</u> ic Rating: <u>NA</u> | Passes Require | | / · · · |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> | ils: s. Job Conditic within this Bas Material Desc : | on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: | | Truck: |) |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> | ils: s. Job Conditic within this Bas Material Desc : | on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: | ycle Time (load | Truck: Dump:0.100 | / · · · |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.) Load: <u>NA</u> Wheel and Trac | ils: s. Job Conditic within this Bas Material Desc : | on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: | ycle Time (load | Truck: Dump:0.100 l, dump,0 neuver):0 |) .500 minutes |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.) Load: <u>NA</u> Wheel and Trac Cycle Time Factors | ils: s. Job Conditic within this Bas Material Desc : k Loaders - Un | on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: Maneuver: <u>NA</u> adjusted Basic Loader C | ycle Time (load | Truck: Dump:0.100 1, dump,0 neuver):0 Factor (min.) |) .500 minutes Source |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Trac <u>Cycle Time Factors</u> Material: | s. Job Conditic within this Bas Material Desc : k Loaders - Un Mixed mate | on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: Maneuver: <u>NA</u> adjusted Basic Loader C | ycle Time (load | Truck: Dump: d, dump, neuver): Factor (min.) 0.020 |) .500 minutes Source (Cat HB) |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Trac <u>Cycle Time Factors</u> <u>Material:</u> Stockpile: | ils: s. Job Conditic within this Bas Material Desc : k Loaders - Un Mixed mate Dumped by | on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: Maneuver: <u>NA</u> adjusted Basic Loader Cy erial 0.02 truck 0.02 | ycle Time (loac ma | Truck: Dump:0.100 1, dump,0 neuver):0 Factor (min.) |) .500 minutes Source |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Trac <u>Cycle Time Factors</u> Material: | ils: s. Job Conditic within this Bas Material Desc : k Loaders - Un Mixed mate Dumped by Common ov | on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: Maneuver: <u>NA</u> adjusted Basic Loader C | ycle Time (loac ma | Truck: Dump: d, dump, neuver): Factor (min.) 0.020 |) minutes .500 Minutes .500 (Cat HB) (Cat HB) |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Trac Cycle Time Factors Material: Stockpile: Truck Ownership: | ils: s. Job Conditic within this Bas Material Desc : k Loaders - Un Mixed mate Dumped by Common ov 0.04 | on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: <u>NA</u> Maneuver: <u>NA</u> adjusted Basic Loader C erial 0.02 truck 0.02 wnership of trucks and loa | ycle Time (loac ma | Truck: Dump:0 d, dump,0 neuver):0 Factor (min.) 0.020 0.020 -0.040 |) minutes .500 Minutes (Cat HB) (Cat HB) (Cat HB) (Cat HB) |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Trac Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | s. Job Condition within this Bas Material Desc : k Loaders - Un Mixed mate Dumped by Common ov 0.04 Constant op | on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: <u>NA</u> Maneuver: <u>NA</u> adjusted Basic Loader C erial 0.02 truck 0.02 wnership of trucks and loa peration -0.04 | ycle Time (loac ma | Truck: Dump:0.100 l, dump,0 neuver):0 Factor (min.) 0.020 0.020 -0.040 -0.040 |) minutes .500 Minutes (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Trac Cycle Time Factors Material: Stockpile: Truck Ownership: | ils: s. Job Conditic within this Bas Material Desc : k Loaders - Un Mixed mate Dumped by Common ov 0.04 | on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: <u>NA</u> Maneuver: <u>NA</u> adjusted Basic Loader C: erial 0.02 truck 0.02 wnership of trucks and loa peration -0.04 rget 0.00 | ycle Time (load ma aders - | Truck: Dump:0.100 d, dump,0 neuver):0 Factor (min.) 0.020 -0.040 -0.040 0.000 |) .500 minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Trac Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | s. Job Condition within this Bas Material Desc : k Loaders - Un Mixed mate Dumped by Common or 0.04 Constant op | on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: <u>NA</u> Maneuver: <u>NA</u> adjusted Basic Loader Cy erial 0.02 truck 0.02 wnership of trucks and loa peration -0.04 rget 0.00 Net Cycle Time A | ycle Time (load ma aders - | Truck: Dump: 0.100 d, dump, 0 neuver): 0 Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 -0.040 |) .500 minutes Source (Cat HB) (Cat HB) |
| Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Trac Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | s. Job Condition within this Bas Material Desc : k Loaders - Un Mixed mate Dumped by Common or 0.04 Constant op | on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: <u>NA</u> Maneuver: <u>NA</u> adjusted Basic Loader C: erial 0.02 truck 0.02 wnership of trucks and loa peration -0.04 rget 0.00 | ycle Time (load ma aders - | Truck: Dump:0.100 d, dump,0 neuver):0 Factor (min.) 0.020 -0.040 -0.040 0.000 |) .500 minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

| Truck Travel (Haul & Return) Time: | |
|------------------------------------|--|
| maintained 3.0 | |
| Haul Route | |

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

| Haul Distance | Grade (%) | Roll. Res | Total Res | Velocity | Travel |
|---------------|----------------------------------|---|--|---|--|
| (Ft) | | (%) | (%) | (fpm) | Time |
| (1) | | (/0) | (/0) | (ipiii) | (min) |
| 1656.00 | 4.00 | 3.00 | 7.00 | 1281 | 1.447 |
| 2568.00 | -8.00 | 3.00 | -5.00 | 2721 | 1.013 |
| | Haul Distance (Ft) 1656.00 | Haul Distance (Ft)Grade (%)1656.004.00 | Haul Distance (Ft)Grade (%) (%)Roll. Res (%)1656.004.003.00 | Haul Distance (Ft)Grade (%)Roll. Res (%)Total Res (%)1656.004.003.007.00 | Haul Distance (Ft)Grade (%)Roll. Res (%)Total Res (%)Velocity (fpm)1656.004.003.007.001281 |

| | | | | Haul Time: | 2.460 | minutes |
|--------------------|-----------------------|-----------|---------------|------------------|-------------------|-------------------------|
| Return Ro Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
| 1 | 2568.00 | 8.00 | 3.00 | 11.00 | 1610 | 1.681 |
| 2 | 1656.00 | -4.00 | 3.00 | -1.00 | 3706 | 0.490 |

| | | | Return Time: | 2.171 10.158 | minutes minutes | |
|--|--------|------------------|---|----------------------------|----------------------------|----------|
| Loading Tool unit Production Truck Unit Production | 491.27 | LCY/Hour | Adjusted for job | efficiency: | 407.75 | LCY/Hour |
| | 186.69 | LCY/Hour | Adjusted for job | efficiency: | 154.95 | LCY/Hour |
| Optimal No. of Trucks: | 3 | Truck(s) | Selected Number | of Trucks: | 3 | Truck(s) |
| | | ljusted single (| nourly truck team production: truck/loader team production: truck/loader team production: | 464.85 407.75 407.75 | LCY/Ho LCY/Ho LCY/Ho | our |

JOB TIME AND COST

| Fleet size: | 1 | Team(s) | Total job time: | 1.48 | Hours |
|-------------|---------|---------|-----------------|---------|-------|
| Unit cost: | \$2.135 | /LCY | Total job cost: | \$1,292 | _ |

TRUCK/LOADER TEAM WORK

| Task description: | Mayflov | ver Acid, Load a | nd Haul Topsoi | il | | | |
|--|---|-------------------------------------|----------------------------------|----------------------|-------------------------------------|-----------------|--|
| Site: Climax Mine | Permit Action: 2016 Reclamation ax Mine Cost Estimate | | | Permit/Job#: | M1977493 | | |
| PROJECT IDENT | TIFICATION | | | | | | |
| Task #: L02B Date: 9/17/2 4:17:3 | | State:ColoradoCounty:Summit | | | Abbreviation:NoneFilename:M493-L02b | | |
| User: JLE | | | | | | | |
| Agency or o | organization nam | ne: DRMS | | | | | |
| HOURLY EQUIP | MENT COST | | | | sis: <u>1 per day</u> | | |
| T | uck Loader Tear | | Equipment Descr | iption | | | |
| 110 | | | 740 7950H | | | | |
| Suppor | t Equipment -Lo | | D6T XL | | | | |
| | | mp Area: NA | 1014 | | | | |
| Road Mai | ntenance –Moto -Wat | | <u>7 12M</u> er Tanker, 5,000 | Gal | | | |
| | vv at | er fruek. Wat | er Tulker, 5,000 | Gui. | | | |
| Cost Breakdown: | Truck/Loa | der Team | Support | Equipment | Mainte | nance Equipment | |
| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck | |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 | |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 | |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | | |
| %Utilization-riper: | NA | 0 | NA | NA | NA | . NA | |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | | |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | | |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | | |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | | |
| Number of Units: | 3 | 1 | 1 | 0 | 1 | | |
| Group Subtotals: | Work: | \$557.04 | Support: | \$140.52 | Maint: | \$173.15 | |
| Total work team cost/ | | | | | | | |
| | | | | | | | |
| Initial volume: | 605 | CCY | Swell | factor: <u>1.000</u> | | | |
| Loose volume: | 605 | LCY | | | | | |
| | ce of estimated | | er 3/4 acre, Clim | nax | | | |
| | f estimated swel | | landbook | | | | |
| | Material Purcha | se Cost: \$0.00 tal Cost: \$0.00 | | | | | |
| | 10 | φ0.00 | | | | | |

HOURLY PRODUCTION

| Truck Capacity: | | | | | | |
|--|----------------|--------------------|-------------|-----------------------|------------------|---------------|
| Truck Payload (weight) Bas | | _ | | | | |
| Material weight: | 1,600 | Po | ounds/LCY | | | |
| Description: | Top Soil | | | | | |
| Rated Payload: | 87,000 | | ounds | | | |
| Payload Capacity: | 54.38 | L0 | CY | | | |
| | | | | | | |
| Truck Bed (volume) Basis: | | | | | | |
| Struck Volume: | 24.20 | LCY | | | | |
| Heaped Volume: | 31.40 | LCY | | | | |
| Average Volume: | 27.80 | LCY | | | | |
| Adjusted Volume: | 31.40 | LCY | | | | |
| Final | Truck Volume | Based on Numbe | r of Loade | r Passes: | 31.61 | LCY |
| Loading Tool Capacity | | | | | | |
| | 4 200 | LOV (harr | . 1) | Bucket | Size Class: | NA |
| Rated Capacity: Bucket Fill Factor: | 4.300 | LCY (heap | | (100.11 | 00/) 1.050 | |
| | | Other - moi | ist loam | (100-1) | 1.050 | |
| Adjusted Capacity: | 4.515 | | | | | |
| Job Condition Corrections | <u>::</u> | | Site Alti | tude (ft.): <u>1(</u> | <u>)400</u> feet | |
| | Truck | Loader | | Source | | |
| Altitude Adj: | 0.600 | 1.000 | | (CAT HB) | | |
| Job Efficiency: | 0.830 | 0.830 | | (CAT HB) | | |
| Net Correction: | 0.498 | 0.830 | | | | |
| Loading Tool Cycle Time | | Number of Loadi | ng Tool Pa | sses Requir | ed to Fill | - passes |
| Excavators and Front Shove | | | U | 1 | Truck: | 7 passes |
| Machine Cycle Time | | on Rating: NA | | | | |
| Selected Value | | | | | | |
| | | | | | | |
| Track Loaders - | | | | | | |
| Cycle Time Elements (min.) | | | | | | |
| Load: NA | N | Maneuver: NA | | | Dump: 0.1 | 100 |
| Wheel and Trac | k Loaders - Un | adjusted Basic Lo | oader Cycl | | · • | 0.500 minutes |
| | 1 | | | ma | neuver): | |
| Cycle Time Factors Material: | | | | | Factor (min.) | |
| | | | | | 0.020 | (Cat HB) |
| Stockpile: | | | 11 1 | | 0.020 | (Cat HB) |
| Truck Ownership: | | wnership of trucks | s and loade | ers - | -0.040 | (Cat HB) |
| O an a second d' | 0.04 | | | | 0.040 | |
| Operation: | ^ | eration -0.04 | | | -0.040 | (Cat HB) |
| Dump Target: | Nominal tar | - | Time A 1' | | 0.000 | (Cat HB) |
| | | Net Cycle | | | -0.040 | minutes |
| | | Adjusted Lo | | | 0.460 | minutes |
| | | Net Loa | d Time per | I TUCK: | 2.860 | minutes |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

| Truck Travel (Haul & Return) Time: | |
|------------------------------------|--|
| maintained 3.0 | |

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

Haul Route

| Haul Route | • | 1 | | | | |
|------------|---------------|-----------|-----------|-----------|----------|--------|
| Seg # | Haul Distance | Grade (%) | Roll. Res | Total Res | Velocity | Travel |
| Ũ | (Ft) | | (%) | (%) | (fpm) | Time |
| | (11) | | (70) | (/0) | (ipiii) | (min) |
| 1 | 1656.00 | 4.00 | 3.00 | 7.00 | 1281 | 1.447 |
| 2 | 2568.00 | -8.00 | 3.00 | -5.00 | 2721 | 1.013 |

| Determ Dee | -4 | | | Haul Time: | 2.460 | minutes |
|---------------------|-----------------------|-----------|---------------|------------------|-------------------|-------------------------|
| Return Rou Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
| 1 | 2568.00 | 8.00 | 3.00 | 11.00 | 1610 | 1.681 |
| 2 | 1656.00 | -4.00 | 3.00 | -1.00 | 3706 | 0.490 |

| | | | Return Time: | 2.171 10.158 | minutes minutes | |
|--|--------|------------------|--|-----------------------------------|----------------------------|----------|
| Loading Tool unit Production Truck Unit Production | 491.27 | LCY/Hour | Adjusted for job e | efficiency: | 407.75 | LCY/Hour |
| | 186.69 | LCY/Hour | Adjusted for job e | efficiency: | 154.95 | LCY/Hour |
| Optimal No. of Trucks: | 3 | Truck(s) | Selected Number | of Trucks: | 3 | Truck(s) |
| | | ljusted single t | ourly truck team production: ruck/loader team production: ruck/loader team production: | 464.85 407.75 407.75 | LCY/He LCY/He LCY/He | our |

JOB TIME AND COST

| Fleet size: | 1 | Team(s) | Total job time: | 1.48 | Hours |
|-------------|---------|---------|-----------------|---------|-------|
| Unit cost: | \$2.135 | /LCY | Total job cost: | \$1,292 | |

| e: <u>Climax Mine</u> | Permit Act | | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Job#: | |
|------------------------------------|---------------|---------------|----------------|-----------------------------------|---------------|-----------|
| PROJECT IDENTIFI | CATIO | <u>DN</u> | | | | |
| Task #: L03A | | State: | Colorado | | Abbreviation: | None |
| Date: 9/17/2018 | | County: | Summit | | Filename: | M493-L03a |
| 4:19:16 PM | Ν | - | | | | |
| User: JLE | | | | | | |
| Agency or organ | nization | name: DR | MS | | | |
| HOURLY EQUIPME | NT CO |)ST | | | | |
| Basic Machine: Cat | t D7R D | S Series II L | GP | | | |
| Horsepower: 240 | | | | | | |
| | aight | | | | | |
| Attachment: NA | | | | | | |
| Shift Basis: 1 p | er day | | | | | |
| Data Source: (Cl | RG) | | | | | |
| Cost Breakdown: | | | | | | |
| Cost Diverted will | | | | Utilization % | | |
| Ownership Cost/Hour: | | | \$66.14 | NA | | |
| Operating Cost/Hour: | | | \$63.91 | 100 | | |
| Ripper own. | | | \$0.00 | NA | | |
| Cost/Hour: | | | | INA | | |
| Ripper op. Cost/Hour: | | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | | \$41.52 | NA | | |
| Total unit Cost/Hour: | \$171. | 57 | | | | |
| Total Fleet Cost/Hour: | \$171. | | | | | |
| | | | | | | |
| MATERIAL QUANT | <u>111ES</u> | | | | | |
| Initial Volume: 605 | | | _ | | | |
| Swell factor: 1.00 | | | _ | | | |
| Loose volume: 605 | LCY | | _ | | | |
| Source of estimated volu | ime: | 6" Over ? | /4 acres, Clir | nax | | |
| Source of estimated voit | | Cat Hand | | | | |
| factor: | | | | | | |
| HOURLY PRODUCT | <u>'ION</u> | | | | | |
| Average push distance: | | 250 feet | | | | |
| Unadjusted hourly production: | _ | 230.4 LCY/ | ĥr | | | |
| Materials consistency description: | | Looses | tockpile 1.2 | | | |
| Average push gradient: | 0 % | | | | | |
| Average site altitude: | 10,40 | 0 feet | | | | |
| Material weight: | 2,650 | lbs/LCY | | | | |

| Weight description: De | composed rock - 25% Rock, 7 | 75% Earth |
|---------------------------------|-----------------------------|---------------|
| Job Condition Correction Factor |) <u>r</u> | Source |
| 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: | 0.868 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.5187 | |
| Adjusted unit production: | 119.51 LCY/hr | |
| Adjusted fleet | 119.51 LCY/hr | |

JOB TIME AND COST

| 1 Dozer(s) |
|-------------------|
| \$1.436/LCY |
| |
| 5.06 Hours |
| \$869 |
| |

| : Climax Mine | | Pe | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Job#: <u>M1977493</u> | | |
|--|--------------|---------------|-----------------|-----------------------------------|------------------------------|-----------|--|
| PROJECT IDENTIF | ICATIO | ON | | | | | |
| Task #: L03B | | State: | Colorado | | Abbreviation: | None | |
| Date: 9/17/2018 | | County: | Summit | | Filename: | M493-L03b | |
| 4:20:37 P | М | 2 | | | | | |
| User: JLE | | | | | | | |
| Agency or orga | nization | name: DF | RMS | | | | |
| HOURLY EQUIPME | ENT CO | <u>)ST</u> | | | | | |
| Basic Machine: Ca | t D7R D | S Series II L | GP | | | | |
| Horsepower: 24 | | | _ | | | | |
| | aight | | | | | | |
| Attachment: NA | | | | | | | |
| Shift Basis: 1 | oer day | | | | | | |
| Data Source: (C | RG) | | | | | | |
| Cost Breakdown: | | | I | | | | |
| Ownership Cost/Hour: | | | \$66.14 | <u>Utilization %</u> NA | | | |
| Operating Cost/Hour: | | | \$63.91 | 100 | | | |
| Ripper own. | | | | | | | |
| Cost/Hour: | | | \$0.00 | NA | | | |
| Ripper op. Cost/Hour: | | | \$0.00 | 0 | | | |
| Operator Cost/Hour: | | | \$41.52 | NA | | | |
| - | | | | | | | |
| Total unit Cost/Hour: | \$171. | | | | | | |
| Total Fleet Cost/Hour: | \$171. | 5/ | | | | | |
| MATERIAL QUANT | <u>TTIES</u> | | | | | | |
| Initial Volume: 605 | | | | | | | |
| Swell factor: 1.0 | | | | | | | |
| | LCY | | | | | | |
| Source of estimated vol | | 6" 0 | | nov | | | |
| Source of estimated vol Source of estimated swe | | Cat Hand | 3/4 acres, Clir | пах | | | |
| factor: | -11 | | JOOK | | | | |
| HOURLY PRODUC | <u>FION</u> | | | | | | |
| Average push distance: | | 250 feet | | | | | |
| Unadjusted hourly production: | _ | 230.4 LCY | /hr | | | | |
| Materials consistency description: | | Loose | stockpile 1.2 | | | | |
| Average push gradient: | 0 % | | | | | | |
| Average site altitude: | 10,40 | 0 feet | | | | | |
| | | lbs/LCY | | | | | |

| Weight description: To | p Soil | |
|---------------------------------|---------------|---------------|
| Job Condition Correction Factor |) <u>r</u> | Source |
| 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: | 1.438 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.8593 | |
| production: | 197.98 LCY/hr | |
| Adjusted fleet | 197.98 LCY/hr | |

JOB TIME AND COST

| Fleet size: | 1 Dozer(s) |
|------------------------------------|---------------------|
| Unit cost: | \$0.867/LCY |
| Total job time: Total job cost: | 3.06 Hours \$524 |

TRUCK/LOADER TEAM WORK

| Task description: | Robinso | on TSF, Load and | Haul Topsoil | | | |
|------------------------|---|---------------------------------------|---------------|---------------|-----------------------|----------------|
| Site: Climax Mine | Climax Mine Permit Action: 2016 Reclamation Cost Estimate Cost Estimate | | | Permit/Job#: | M1977493 | |
| PROJECT IDENT | TIFICATION | | | | | |
| Task #: <u>M01</u> | 010 | State: Colorad | | | previation: No | |
| Date: 9/17/2 4:21:5 | | County: Summit | | | Filename: M4 | 493-M01 |
| User: JLE | | . <u></u> | | | | |
| Agency or | organization nam | ne: DRMS | | | | |
| Agency of C | ngamzation nan | | | | | |
| HOURLY EQUIP | MENT COST | , | | Shift ba | sis: <u>1 per day</u> | |
| | | | uipment Descr | | | |
| Tr | uck Loader Tear | | | iption | | |
| | | -Loader: CAT | | | | |
| Suppo | rt Equipment -Lo | | 6T XL | | | |
| Pood Ma | -Du intenance –Moto | mp Area: NA or Grader: CAT | 12M | | | |
| Koau Ma | | | Tanker, 5,000 | Gal | | |
| | | | 1411101,0,000 | - Cull | | |
| Cost Breakdown: | Truck/Loa | | | Equipment | | ance Equipment |
| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | \$36.60 |
| %Utilization-riper: | NA | 0 | NA | NA | NA | NA |
| Ripper own. | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| cost/hour: | | · · · · · · · · · · · · · · · · · · · | | | | |
| Ripper op. cost/hour: | NA #21.17 | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | \$21.23 |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | \$83.13 |
| Number of Units: | 2 | 1 | 1 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$403.99 | Support: | \$140.52 | Maint: | \$173.15 |
| Total work team cost | /hour: <u>\$717.66</u> | | | | | |
| | | | | | | |
| MATERIAL QUA | <u>NTITIES</u> | | | | | |
| Initial volume: | 100,000 | CCY | Swell | factor: 1.000 | | |
| Loose volume: | 100,00 | 00 LCY | | | | |
| Sou | rce of estimated | volume: Climax | Estiamte | | | |
| | of estimated swel | ll factor: Cat Ha | | | | |
| | Material Purcha | | | | | |
| | To | tal Cost: \$0.00 | | | | |

HOURLY PRODUCTION

| Truck Capacity: | | | | | | |
|--|------------------|-------------------------|-------------|------------------------|---------------|---------------|
| Truck Payload (weight) Bas | | _ | | - | | |
| Material weight: | 1,600 | | ounds/LC | Ý | | |
| Description: | Top Soil | | | | | |
| Rated Payload: | 87,000 | | ounds | | | |
| Payload Capacity: | 54.38 | I | .CY | | | |
| T. I. D. 1/ . I D | | | | | | |
| Truck Bed (volume) Basis: | 24.20 | LCV | | | | |
| Struck Volume: | 24.20 | LCY | | | | |
| Heaped Volume: | 31.40 | LCY | | | | |
| Average Volume: | 27.80 | LCY | | | | |
| Adjusted Volume: | 31.40 | LCY | | | | |
| Final | Truck Volume | Based on Numb | er of Loade | er Passes: | 31.61 | LCY |
| Loading Tool Capacity | | | | | | |
| Datad Canaaituu | 4 200 | LCV (hear | and) | Bucket | Size Class: | NA |
| Rated Capacity: Bucket Fill Factor: | 4.300 | LCY (heap Other - mo | | (100.1) | 10%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | nst i0am | (100-1 | 10%) 1.050 | |
| Aujusted Capacity: | 4.515 | | | | | |
| Job Condition Corrections | : | | Site Alt | itude (ft.): <u>1(</u> | 0400 feet | |
| | Truck | Loader | | Source | | |
| Altitude Adj: | 0.600 | 1.000 | | (CAT HB) | | |
| Job Efficiency: | 0.830 | 0.830 | | (CAT HB) | | |
| Net Correction: | 0.498 | 0.830 | | | | |
| Loading Tool Cycle Time: | | Number of Load | ing Tool Pa | asses Requir | ed to Fill | 7 passes |
| Excavators and Front Shove | | | | | Truck: | 7 passes |
| | | | | | | |
| Machine Cycle Time v | | | | | | |
| Selected Value | | | <u> </u> | | | |
| Track Loaders - | - Material Desci | ription: | | | | |
| Cycle Time Elements (min.) | : | | | | | |
| Load: NA | N | Ianeuver: NA | 1 | - | Dump: 0.1 | .00 |
| Wheel and Trac | k Loaders - Un | adjusted Basic L | loader Cycl | le Time (loa | d, dump, | 0.500 minutes |
| | | | | ma | neuver): | |
| Cycle Time Factors | | | | | Factor (min.) | Source |
| Material: | | | | | 0.020 | (Cat HB) |
| Stockpile: | | | | | 0.020 | (Cat HB) |
| Truck Ownership: | | wnership of truck | ks and load | ers - | -0.040 | (Cat HB) |
| | 0.04 | | | | | |
| Operation: | | eration -0.04 | | | -0.040 | (Cat HB) |
| Dump Target: | Nominal tar | - | | | 0.000 | (Cat HB) |
| | | | Time Adj | | -0.040 | minutes |
| | | | Loader Cyc | | 0.460 | minutes |
| | | Net Lo | ad Time pe | r Truck: | 2.860 | minutes |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

| | el (Haul & Return | <u>) Time:</u> | Road Conditi | on: <u>Firm, smoo</u> | th, rolling, dirt | /lt. surfaced, wa | <u>itered,</u> |
|--|-----------------------|--|------------------|--------------------------------|-------------------|-------------------------|----------------|
| maintained | | | | | | | |
| Haul Route Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | |
| 1 | 4270.00 | 0.00 | 3.00 | 3.00 | 3005 | 2.213 | |
| Return Rou | ite: | | | Haul Time: | 2.213 | minutes | |
| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | |
| 1 | 4270.00 | 0.00 | 3.00 | 3.00 | 3005 | 1.588 | |
| | | | Total Tru | Return Time: ck Cycle Time: | | | |
| Loading Too Produ Truck Unit Produ | iction 491.27 | LCY/Hour | | Adjusted for j | ob efficiency: | 407.75 | LCY/Hour |
| | 203.30 | LCY/Hour | | Adjusted for jo | ob efficiency: | 168.74 | LCY/Hour |
| Optimal No. of Tr | ucks: 2 | Truck(s) | | Selected Numb | per of Trucks: | 2 | Truck(s) |
| | | Adjusted Adjusted single Adjusted multiple | e truck/loader | | on: 337. | 48 LCY/ | Hour |
| JOB TIM | E AND COST | | | | | | |
| Fleet | size: <u>1</u> | Team(s) | Т | otal job time: | 296.3 | 2 Hou | ırs |
| Unit o | cost: \$2.127 | /LCY | Т | otal job cost: | \$212,6 | 56 | |

| : Climax Mine | Ре | ermit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|-------------------------|-------------------|---------------|-----------------------------------|---------------|---------------------|
| PROJECT IDENTIF | TICATION | | | | |
| Task #: M02 | State: | Colorado | | Abbreviation: | None |
| Date: 9/17/201 | 8 County: | Summit | | Filename: | M493-M02 |
| 4:23:31 H | PM | | | | |
| User: JLE | | | | | |
| Agency or orga | anization name: D | RMS | | | |
| HOURLY EQUIPM | ENT COST | | | | |
| Basic Machine: C | at D6T LGP | | | | |
| | 00 | | | | |
| · · | traight | | | | |
| | A | | | | |
| | per day | | | | |
| | CRG) | | | | |
| | 1 | | | | |
| Cost Breakdown: | | [| Utilization % | | |
| Ownership Cost/Hour | | \$50.71 | <u>Otinization %</u> NA | | |
| Operating Cost/Hour | | \$42.03 | 100 | | |
| Ripper own | | | | | |
| Cost/Hour | | \$0.00 | NA | | |
| Ripper op. Cost/Hour | | \$0.00 | 0 | | |
| Operator Cost/Hour | | \$41.52 | NA | | |
| - | | + | 1471 | | |
| Total unit Cost/Hour: | \$134.26 | | | | |
| Total Fleet Cost/Hour: | \$268.52 | | | | |
| MATERIAL QUAN | FITIFS | | | | |
| | | | | | |
| | 0,000 | | | | |
| | 00 | | | | |
| Loose volume: <u>10</u> | 0,000 LCY | | | | |
| Source of estimated vo | lume: Climax's | Estimate | | | |
| Source of estimated sw | vell Cat Hand | lbook | | | |
| factor: | | | | | |
| HOURLY PRODUC | TION | | | | |
| Average push distance | : 150 feet | | | | |
| Unadjusted hourly | 212.5 LCY | /hr | | | |
| production: | | | | | |
| | - | | | | |
| Materials consistency | Loose | stockpile 1.2 | | | |
| description: | | | | | |
| Average push | 0 % | | | | |
| gradient: | 0 /0 | | | | |
| Average site altitude: | 11,100 feet | | | | |
| - | | | | | |
| Material weight: | 1,600 lbs/LCY | | | | |

| Weight description: To | p Soil | |
|--------------------------------|----------------------|---------------|
| Job Condition Correction Facto | <u>)r</u> | Source |
| 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: | 0.940 | (CAT HB) |
| Material Weight: | 1.438 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |
| Net correction: | 0.8078 | |
| production: | 171.66 LCY/hr | |
| Adjusted fleet production: | 343.32 LCY/hr | |

JOB TIME AND COST

| Fleet size: | 2 Dozer(s) |
|------------------------------------|--------------------------|
| Unit cost: | \$0.782/LCY |
| Total job time: Total job cost: | 291.27 Hours \$78,213 |

TRUCK/LOADER TEAM WORK

| Task description: | 1 Dam, 1 | Load and Haul | Topsoil/Biosolid | S | | |
|---|---|--------------------------------------|------------------------------|---------------|-----------------------|------------------|
| Site: Climax Mine | | Permit Act | ion: 2016 Recl Cost Estin | | Permit/Job# | : M1977493 |
| PROJECT IDENT | TIFICATION | | | | | |
| Task #: N01 Date: 9/17/2 4:24:4 | 2018 C | State: <u>Colora</u> County: Summ | | | | None M493-N01 |
| User: JLE | | | | | | |
| Agency or o | organization nam | e: DRMS | | | | |
| HOURLY EQUIP | MENT COST | | | Shift ba | sis: <u>1 per day</u> | |
| . <u></u> | | | Equipment Descr | ription | | |
| Tr | uck Loader Tean | | 740 | | | |
| | ut Equipment I a | | Г 950H D6T XL | | | |
| Suppor | rt Equipment -Lo Dut- | mp Area: NA | DOIAL | | | |
| Road Mai | intenance – Moto | | Г 12М | | | |
| | -Wat | er Truck: Wat | ter Tanker, 5,000 | Gal. | | |
| | | | | | | |
| Cost Breakdown: | Truck/Load | | | Equipment | | enance Equipment |
| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 10 | 0 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.7 | \$25.30 |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.6 | \$36.60 |
| %Utilization-riper: | NA | 0 | NA | NA | N. | A NA |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.0 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.0 | 0 \$0.00 |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.6 | \$9 \$21.23 |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.0 | 2 \$83.13 |
| Number of Units: | 3 | 1 | 1 | 0 | | 1 1 |
| Group Subtotals: | Work: | \$557.04 | Support: | \$140.52 | Main | t: \$173.15 |
| Total work team cost/ MATERIAL QUA | | | | | | |
| Initial volume: | | CCY | Swall | factor: 1.000 | | |
| Loose volume: | | | | 1actor. 1.000 | | |
| | | | | | | |
| | rce of estimated y of estimated swel | | ax Estiamte | | | |
| | Material Purcha | | Handbook | | | |
| | | tal Cost: $\frac{$0.00}{$0.00}$ | | | | |

HOURLY PRODUCTION

Truck Exchange Time:

0.60

Minutes

| <u> Truck Capacity:</u> | | | | | |
|---|--|--|---|--|--|
| Truck Payload (weight) Basi | | _ | | | |
| Material weight: | 1,600 | Pou | inds/LCY | | |
| Description: | Top Soil | D | 1 | | |
| Rated Payload: | 87,000 | Pou | | | |
| Payload Capacity: | 54.38 | LC' | Ŷ | | |
| Truck Bed (volume) Basis: | | | | | |
| Struck Volume: | 24.20 | LCY | | | |
| Heaped Volume: | 31.40 | LCY | | | |
| Average Volume: | 27.80 | LCY | | | |
| Adjusted Volume: | 31.40 | LCY | | | |
| Final | Truck Volume | Based on Number | of Loader Passes: | 31.61 | LCY |
| Loading Tool Capacity | | | | | |
| Rated Capacity: | 4.300 | LCY (heaped | | et Size Class: | NA |
| Bucket Fill Factor: | 1.050 | Other - moist | | 110%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | `````````````````````````````````````` | , | |
| Job Condition Corrections | <u>:</u> | | Site Altitude (ft.): | <u>11000</u> feet | |
| | Truck | Loader | Source | | |
| | | | | | |
| Altitude Adj: | 0.600 | 1.000 | (CAT HB | | |
| Altitude Adj: Job Efficiency: | 0.600 | 1.000 0.830 | (CAT HB (CAT HB | | |
| | | | | | |
| Job Efficiency: Net Correction: | 0.830 0.498 | 0.830 | (CAT HB | ired to Fill | 7 passe |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: | 0.830 0.498 | 0.830 0.830 | (CAT HB | 3) | 7 passe |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v | 0.830 0.498 s. Job Conditio | 0.830 0.830 Number of Loading on Rating: <u>NA</u> | (CAT HB | ired to Fill | 7 passe |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v | 0.830 0.498 dis: s. Job Condition within this Bas | 0.830 0.830 Number of Loading on Rating: <u>NA</u> ic Rating: <u>NA</u> | (CAT HB | ired to Fill | 7 passe |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v | 0.830 0.498 dis: s. Job Condition within this Bas | 0.830 0.830 Number of Loading on Rating: <u>NA</u> ic Rating: <u>NA</u> | (CAT HB | ired to Fill | 7 passe |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – | 0.830 0.498 dis: s. Job Condition within this Bas Material Desc | 0.830 0.830 Number of Loading on Rating: <u>NA</u> ic Rating: <u>NA</u> | (CAT HB | ired to Fill | 7 passe |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – | 0.830 0.498 d.s. Job Condition within this Bas Material Desc | 0.830 0.830 Number of Loading on Rating: <u>NA</u> ic Rating: <u>NA</u> | (CAT HB | ired to Fill Truck: | 7 passe |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA | 0.830 0.498 dis: s. Job Conditic within this Bas Material Desc : | 0.830 0.830 Number of Loading on Rating: NA ic Rating: NA ription: | g Tool Passes Requ | ired to Fill Truck: Dump: | |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA | 0.830 0.498 dis: s. Job Conditic within this Bas Material Desc : | 0.830 0.830 Number of Loading on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: <u>NA</u> | g Tool Passes Requ | ired to Fill Truck: Dump:0. | 100 0.500 minutes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Trac | 0.830 0.498 ds: s. Job Conditic within this Bas Material Desc Material Desc Material Desc Material Desc Material Desc | 0.830 0.830 Number of Loading on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: <u>NA</u> Maneuver: <u>NA</u> adjusted Basic Loa | g Tool Passes Requ | Dump: 0. bad, dump, naneuver): 0.020 | 100 0.500 minutes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Trac Cycle Time Factors | 0.830 0.498 olds: s. Job Conditic within this Bas Material Desc Material De | 0.830 0.830 Number of Loading on Rating: NA ic Rating: NA ription: | (CAT HB g Tool Passes Requ der Cycle Time (lo | Dump: 0. | 100 0.500 minutes) Source |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Trac Cycle Time Factors Material: | 0.830 0.498 olds: s. Job Conditic within this Bas Material Desc Material De | 0.830 0.830 Number of Loading on Rating: <u>NA</u> ic Rating: <u>NA</u> ription: <u>NA</u> Maneuver: <u>NA</u> adjusted Basic Loa | (CAT HB g Tool Passes Requ der Cycle Time (lo | Dump: 0. bad, dump, naneuver): 0.020 | 100 minutes 0.500 Source (Cat HB) (Cat HB) |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Trac Cycle Time Factors Material: Stockpile: | 0.830 0.498 dis: s. Job Condition within this Bas Material Desc Material Desc Material Desc Material Desc Mixed mater Dumped by Common or 0.04 | 0.830 0.830 Number of Loading on Rating: NA ic Rating: NA ription: | (CAT HB g Tool Passes Requ der Cycle Time (lo | Dump: 0. bad, dump, naneuver): Factor (min. 0.020 0.020 | 100 minutes 0.500 minutes) Source (Cat HB) (Cat HB) |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Trac Cycle Time Factors Material: Stockpile: Truck Ownership: | 0.830 0.498 dis: s. Job Condition within this Bas Material Desc Material Desc Material Desc Material Desc Mixed mater Dumped by Common or 0.04 | 0.830 0.830 0.830 Number of Loading on Rating: NA ic Rating: NA ription: | g Tool Passes Requ | ired to Fill Truck: Dump: Dump: pad, dump, naneuver): Factor (min. 0.020 0.020 -0.040 -0.040 0.000 | 100 minutes 0.500 minutes) Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Trac Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | 0.830 0.498 ds: s. Job Condition within this Bas Material Desc Material Desc Material Desc Mixed mate Dumped by Common or 0.04 Constant op | 0.830 0.830 0.830 Number of Loading on Rating: NA ic Rating: NA ription: | g Tool Passes Requ | ired to Fill Truck: Dump: pad, dump, naneuver): Factor (min. 0.020 0.020 0.020 0.040 040 | 100 minutes 0.500 minutes) Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Trac Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | 0.830 0.498 ds: s. Job Condition within this Bas Material Desc Material Desc Material Desc Mixed mate Dumped by Common or 0.04 Constant op | 0.830 0.830 Number of Loading on Rating: NA ic Rating: NA ription: | g Tool Passes Requ | ired to Fill Truck: Dump: Dump: pad, dump, naneuver): Factor (min. 0.020 0.020 -0.040 -0.040 0.000 | 100 minutes 0.500 minutes) Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) |

1.000

Minutes

Adjusted for site altitude:

| , | Truck/Loa | der Wor | ksheet Cont'c | l | Task # . | A01 | | Pa | age 135 o | f 199 |
|--------|---------------------------------|----------|-------------------|-----------------|------------------|---|-------------------|-------------------------|-------------------------------|---------|
| | | Truck I | Load Time: | 2.860 | Minutes | Adju | sted for site al | titude: | 2.860 | Minut |
| | Truck N | laneuver | and Dump Time: | 1.00 | Minutes | Adju | sted for site al | titude: | 1.667 | Minut |
| | | | & Return) T | ime: | Road Conditi | ion: <u>Firm, smoo</u> | th, rolling, dirt | t/lt. surfaced | , watered | 1 |
| | <u>maintainec</u> Haul Rout | | | | | | | | | |
| | Seg # | | Distance | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | | |
| - | 1 | 5280.0 | 00 | 0.00 | 3.00 | 3.00 | 3005 | 2.549 | | |
| L | | | | | | Haul Time: | 2.549 | minu | utes | |
| | Return Ro Seg # | | Distance | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | | |
| | 1 | 5280.0 | 00 | 0.00 | 3.00 | 3.00 | 3005 | 1.924 | | |
| | | | | | Total Tru | Return Time: ick Cycle Time: | | | nutes | |
| | oading Too Prod Unit Prod | uction | 491.27 | LCY/Hour | | Adjusted for j | ob efficiency: | 407.75 | 5 L0 | CY/Hour |
| TTUCK | Unit Flou | | 189.64 | LCY/Hour | | Adjusted for j | ob efficiency: | 157.40 |) L(| CY/Hour |
| Optima | l No. of T | rucks: | 3 | Truck(s) | | Selected Numb | er of Trucks: | 3 | Tı | ruck(s) |
| | | | | Adjusted single | e truck/loader | team production team production team production | on: 407. | 75 LC | CY/Hour CY/Hour CY/Hour | |
| 5 | JOB TIM | 1E ANI | D COST | | | | | | | |
| | Fleet | size: | 1 | Team(s) | Т | Total job time: | 85.68 | 8 | Hours | |
| | Unit | cost: | \$2.135 | /LCY |] | Fotal job cost: | \$74,60 | 02 | | |

| Task description: | 1 Dam, Spread | Copsoil/Bios | olids | | |
|---|------------------------|--------------------|-----------------------------------|----------------------------|------------------|
| Site: Climax Mine | Pe | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#:M1977493 |
| PROJECT IDENTIF | ICATION | | | | |
| Task #: N02 Date: 9/17/2018 4:26:13 Pl User: JLE | State: County: | Colorado Summit | | Abbreviation: Filename: | None M493-N02 |
| Agency or organ | nization name: DF | MS | | | |
| | | | | | |
| HOURLY EQUIPME | | | | | |
| Horsepower: 20 | | | | | |
| Blade Type: Str Attachment: NA | aight A | | - | | |
| Shift Basis: 1 p | ber day | | - | | |
| Data Source: (C | RG) | | | | |
| Cost Breakdown: | | 1 | | | |
| Ownership Cost/Hour: | | \$50.71 | <u>Utilization %</u> NA | | |
| Operating Cost/Hour: | | \$42.03 | 100 | | |
| Ripper own. | | \$0.00 | NA | | |
| Cost/Hour: Ripper op. Cost/Hour: | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | \$41.52 | NA | | |
| Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 34,9 Swell factor: 1.00 | 936 | | | | |
| Loose volume: <u>34,9</u> Source of estimated vol Source of estimated swe factor: | | | | | |
| HOURLY PRODUCT | <u> TION</u> | | | | |
| Average push distance: Unadjusted hourly production: | 150 feet 212.5 LCY/ | hr | | | |
| Materials consistency description: | Loose | tockpile 1.2 | | | |
| Average push gradient: Average site altitude: | 0 % | | | | |
| | | | | | |
| Material weight: | 1,600 lbs/LCY | | | | |
| Weight description: | Top Soil | | | | |

| Job Condition Correction Factor | | Source |
|---------------------------------|-------|---------------|
| 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: | 0.940 | (CAT HB) |
| Material Weight: | 1.438 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Net correction: 0.8078

| Adjusted unit production: | 171.66 LCY/hr | | | |
|----------------------------|----------------------|--|--|--|
| Adjusted fleet production: | 343.32 LCY/hr | | | |

JOB TIME AND COST

| Fleet size: | 2 Dozer(s) |
|-------------|-------------|
| Unit cost: | \$0.782/LCY |

| Total job time: | 101.76 Hours |
|-----------------|--------------|
| Total job cost: | \$27,325 |

BULLDOZER RIPPING WORK

| Т | ask descrij | otion: | Roads; rip swit | tchback acces | s roads from | McNulty OSE | F to LBM | |
|-----------|----------------|-------------------------|-----------------|---------------|---------------------------|---------------|-------------|---------------------|
| Site: | Climax N | Лine | Р | ermit Action: | 2016 Recla Cost Estima | | Permit/Jo | b#: <u>M1977493</u> |
| PF | ROJECT | IDENTIFIC | ATION | | | | | |
| | Task #: | O01 | State: | Colorado | | Ab | breviation: | None |
| | Date: | 9/18/2018 7:06:31 AM | County: | Summit | | | Filename: | M493-O01 |
| | User: | JLE | | | | | | |
| | Age | ency or organization | ation name: D | RMS | | | | |
| <u>H(</u> | <u>OURLY I</u> | EQUIPMENT | Г COST | | | | | |
| | B | asic Machine: | Cat D10T - 10 | SU | _ | Horsepower | : | 574 |
| | Rippe | r Attachment: | 1-Shank Rippe | er | _ | Shift Basis | · r | ber day |
| | | | | | | Data Source | :(0 | CRG) |
| Co | st Breakdo | own: | | | | | | |
| | | | | | | Utilization % | | |
| | | | ip Cost/Hour: | | \$129.20 | NA | | |
| | | - | ng Cost/Hour: | | \$121.82 | 100 | | |
| | | Ripper Ownersh | | | \$18.04 | NA | | |
| | | Ripper Operation | - | | \$10.15 | 100 | | |
| | | Operat | or Cost/Hour: | | \$41.52 | NA | | |
| | | Total Ur | nit Cost/Hour: | | \$320.73 | | | |
| | | Total Fle | et Cost/Hour: | \$320 | .73 | | | |

| | MATERIAL Q | <u>UANTITIES</u> | | Selec | ted estimating me | thod: Area | l | | |
|---------|-------------------|------------------|---------------------|-----------|-------------------|----------------|--------------|-----------|------------|
| | Alternate Methods | <u>s:</u> | | | | | | | |
| Seismic | : NA | | Bank Vol | ume: | NA | BCY | | NA | |
| Area | a: 10.00 | acres | Rip Depth | ı (ft): | 1.00 | Volume: | 16,133 | | BCY or CCY |
| | | Source of estin | nated quantity: | RMS | Estimate based or | n Climax's roa | ad lengths p | provided. | _ |
| | HOURLY PRO | DUCTION | | | | | | | |
| | Seismic: | | | | | 6 / | | | |
| | | | Seismic Velocity: | | NA | feet/seco | ond | | |
| | Area: | | | | | | | | |
| | | Average | e Ripping Depth: | | 4.49 | mph | | | |
| | | Average | e Ripping Width: | | 6.74 | degrees | | | |
| | | Average | Ripping Length: | | 500.00 | feet | | | |
| | | Avera | age Dozer Speed: | | 88.00 | feet | | | |
| | | Average | Maneuver Time: | 0.25 feet | | | | | |
| | | Product | ion per unit area: | | 0.783 | acres/ho | ur | | |
| | Job Condition Con | rrection Factors | | | | | | | |
| | Una | djusted Hourly | Unit Production: | | 0.783 | Acres/h | ſ | | |
| | | | Site Altitude: | | 13,000 | feet | | | |
| | | | Altitude Adj: | | 0.89 | (CAT H | B) | | |
| | | | Job Efficiency: | | 0.83 | (1 shift/o | day) | | |
| | | | Net Correction: | | 0.74 | multiplie | er | | |
| | | Adjusted 1 | Hourly Unit Produc | tion: | 0.58 | Acres/hr | | | |
| | | Adjusted H | Hourly Fleet Produc | tion: | 0.58 | Acres/hr | | | |
| | JOB TIME AN | D COST | | | | | | | |
| | Fleet size: | 1 | Grader(s) | | Total job time: | 1′ | 7.30 | Hours | 5 |
| | Unit cost: | \$554.838 | Per acre | | Total job cost: | \$5 | 5,548 | | |

BULLDOZER RIPPING WORK

| Task descr | iption: | Roads; rip other | r site roads | | | | |
|--------------|---|---|---------------|-----------------------------|------------------|-----------|---------------------|
| Site: Climax | Mine | Pe | ermit Action: | 2016 Recla Cost Estima | | Permit/Jo | b#: <u>M1977493</u> |
| PROJECT | IDENTIFIC | ATION | | | | | |
| Task #: | O02 | State: | Colorado | | Abbr | eviation: | None |
| Date: | 9/18/2018 7:07:27 AM | County: | Summit | | F | ilename: | M493-O02 |
| User: | JLE | | | | | | |
| Aş | gency or organiz | ation name: DI | RMS | | | | |
| HOURLY | EQUIPMEN | Г COST | | | | | |
| | Basic Machine: | Cat D8T - 8SU | | | Horsepower: | | 310 |
| - | er Attachment: | 3-Shank Ripper | | _ | Shift Basis: | 1 | ber day |
| | | . | | _ | Data Source: | | CRG) |
| Cost Breakd | own: | | | | | | |
| | | | | | Utilization % | | |
| | Ownersh | in Cost/Hours | | \$93.62 | NT A | | |
| | 0 | ip Cost/Hour. | | \$75.02 | NA | - | |
| | | ng Cost/Hour: | | \$73.35 | 100 | | |
| | Operatin Ripper Ownersh | ng Cost/Hour: ip Cost/Hour: | | \$73.35 \$8.93 | | | |
| | Operation | ng Cost/Hour: ip Cost/Hour: | | \$73.35 | 100 | | |
| | Operation Ripper Ownersh Ripper Operation | ng Cost/Hour: ip Cost/Hour: | | \$73.35 \$8.93 | 100 NA | | |
| | Operatin Ripper Ownersh Ripper Operatin Operat | ng Cost/Hour: ip Cost/Hour: ng Cost/Hour: | | \$73.35 \$8.93 \$7.78 | 100 NA 100 | | |

| | MATERIAL Q | UANTITIES | Sele | cted estimating me | ethod: Area | ı | | |
|--------|-------------------|---------------------|---------------------|--------------------|----------------|--------------|-----------|------------|
| | Alternate Method | <u>s:</u> | | | | | | |
| Seismi | e: NA | | Bank Volume: | NA | BCY | | NA | |
| Area | a: 22.74 | acres | Rip Depth (ft): | 1.00 | Volume: | 36,687 | | BCY or CCY |
| | | Source of estimated | quantity: DRMS | Estimate based or | n Climax's roa | ad lengths p | provided. | _ |
| | HOURLY PRO | DUCTION | | | | | | |
| | Seismic: | | | | | | | |
| | | Seism | ic Velocity: | NA | feet/seco | ond | | |
| | Area: | | | | | | | |
| | | Average Rip | ping Depth: | 2.56 | mph | | | |
| | | Average Rip | ping Width: | 7.08 | degrees | | | |
| | | Average Ripp | ing Length: | 500.00 | feet | | | |
| | | | ozer Speed: | 88.00 | feet | | | |
| | | Average Man | euver Time: | 0.25 | feet | | | |
| | | Production p | er unit area: | 0.822 | acres/ho | our | | |
| | Job Condition Con | rrection Factors | | | | | | |
| | Una | djusted Hourly Unit | Production: | 0.822 | Acres/h | r | | |
| | | S | ite Altitude: | 13,000 | feet | | | |
| | | A | ltitude Adj: | 0.93 | (CAT H | (B) | | |
| | | Job | Efficiency: | 0.83 | (1 shift/ | day) | | |
| | | Net | Correction: | 0.77 | multipli | er | | |
| | | Adjusted Hour | ly Unit Production: | 0.63 | Acres/hr | | | |
| | | Adjusted Hourl | y Fleet Production: | 1.27 | Acres/hr | | | |
| | JOB TIME AN | D COST | | | | | | |
| | Fleet size: | Gr | ader(s) | Total job time: | 1' | 7.92 | Hours | S |
| | Unit cost: | \$354.918 Pe | r acre | Total job cost: | \$8 | 3,071 | | |

TRUCK/LOADER TEAM WORK

| Task description: | Roads, | Load and Haul T | opsoil/Biosolids | s | | | |
|--|-------------------------|--|--------------------|-----------------------------------|------------------|----------------------------------|--|
| Site: Climax Mine | | Permit Action | | 2016 Reclamation Cost Estimate | | Permit/Job#: M1977493 | |
| PROJECT IDEN | TIFICATION | | 1. | 411 | • .• | N | |
| Task #: 003 Date: 9/18/2018 7:08:49 AM | | State: <u>Colorad</u> County: Summi | | | | None M493-O03 | |
| User: JLE | | | | | | | |
| Agency or | organization nam | ne: DRMS | | | | | |
| HOURLY EQUIPMENT COST Shift basis: <u>1 per day</u> Equipment Description | | | | | | | |
| T | ruck Loader Tear | | | iption | | | |
| | | | 950H | | | | |
| Suppo | ort Equipment -Lo | oad Area: Cat I mp Area: NA | D6T XL | | | | |
| Road Ma | intenance – Moto | | 12M | | | | |
| | -Wat | er Truck: Wate | er Tanker, 5,000 | Gal. | | | |
| | True als /I a a | 4 T | Course and | E | Main | •••••• E: | |
| <u>Cost Breakdown</u> : | Truck/Loa Truck | Loader | Load Area | Equipment Dump Area | Motor | tenance Equipment Water Truck | |
| 0/11/11 / 1 · | 100 | 100 | 100 | | Grader | 100 | |
| %Utilization-machine: | 100 | 100 | 100 | NA | | $\frac{100}{72}$ | |
| Ownership cost/hour: Operating cost/hour: | \$66.13 \$55.75 | \$26.14 \$30.84 | \$52.66 \$46.34 | NA NA | \$30.7 \$30.6 | | |
| %Utilization-riper: | | \$30.84 0 | | NA | | A NA | |
| Ripper own. | | | | | | | |
| cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.0 | 00 \$0.00 | |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.0 | | |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.6 | | |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.0 | 02 \$83.13 | |
| Number of Units: | 3 | 1 | 1 | 0 | | 1 1 | |
| Group Subtotals: | Work: | \$557.04 | Support: | \$140.52 | Mair | nt: \$173.15 | |
| Total work team cos | t/hour: <u>\$870.71</u> | | | | | | |
| MATERIAL QUA | ANTITIES | | | | | | |
| Initial volume: 52,821 CCY Swell factor: 1.000 | | | | | | | |
| Loose volume | : 52,82 | 1 LCY | | | | | |
| Sou | rce of estimated | volume: 1 Ft o | ver 32.74 acres | | | | |
| Source of estimated swell factor: Cat Handbook | | | | | | | |
| | Material Purcha | | | | | | |
| | То | tal Cost: \$0.00 | | | | | |
HOURLY PRODUCTION

| Truck Capacity: | | | | | |
|--------------------------------|------------------|------------------------|---------------------|-----------------------------|---------------|
| Truck Payload (weight) Bas | | _ | | | |
| Material weight: | 1,600 | Pound | ds/LCY | | |
| Description: | Top Soil | 2 | | | |
| Rated Payload: | 87,000 | Pound | ls | | |
| Payload Capacity: | 54.38 | LCY | | | |
| Truck Bed (volume) Basis: | | | | | |
| Struck Volume: | 24.20 | LCY | | | |
| Heaped Volume: | 31.40 | LCT | | | |
| Average Volume: | 27.80 | LCT | | | |
| Adjusted Volume: | 31.40 | LCY | | | |
| F '1 | T. 1 W.1 | D | | 21 (1 | |
| Final Loading Tool Capacity | Truck Volume | Based on Number of | Loader Passes: | 31.61 | LCY |
| Loading 1001 Capacity | | | Buck | tet Size Class: N | VA |
| Rated Capacity: | 4.300 | LCY (heaped) | | | |
| Bucket Fill Factor: | 1.050 | Other - moist lo | oam (100- | 110%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | (100 | 110,0) 11000 | |
| Job Condition Corrections | : | S | ite Altitude (ft.): | <u>11000</u> feet | |
| | Truck | Loader | Source | | |
| Altitude Adj: | 0.600 | 1.000 | (CAT HE | 2) | |
| Job Efficiency: | 0.830 | 0.830 | (CAT HE | | |
| JOU Efficiency. | 0.850 | 0.050 | |) | |
| Net Correction: | 0.498 | 0.830 | | | |
| Loading Tool Cycle Time: |] | Number of Loading 7 | Fool Passes Requ | ired to Fill | 7 passes |
| Excavators and Front Shove | els: | | | Truck: | 1 |
| Machine Cycle Time v | vs. Job Conditio | n Rating: <u>NA</u> | | | |
| Selected Value | within this Basi | c Rating: NA | | | |
| Track Loaders - | Material Desci | ription: | | | |
| Cycle Time Elements (min.) | | 1 | | | |
| Load: NA | N | Ianeuver: NA | | Dump: 0.10 | 0 |
| Wheel and Trac | ek Loaders - Un | adjusted Basic Loade | • | · · · (| 0.500 minutes |
| Cycle Time Factors | 1 | | 1. | naneuver): Factor (min.) | Source |
| Material: | | rial 0.02 | | 0.020 | (Cat HB) |
| Stockpile: | | | | 0.020 | (Cat HB) |
| Truck Ownership: | | vnership of trucks an | d loaders | 0.020 | (Cat IID) |
| THUCK OWNERShip. | 0.04 | and ship of trucks all | a 10aucis - | -0.040 | (Cat HB) |
| Operation: | | eration -0.04 | | -0.040 | (Cat HB) |
| Dump Target: | | | | 0.000 | (Cat HB) |
| Dump raiget. | i tonniai tai | • | ne Adjustment: | -0.040 | minutes |
| | | Adjusted Loade | | 0.460 | minutes |
| | | | ime per Truck: | 2.860 | minutes |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

| | | & Return) T | ime: | Road Condition | on: <u>Firm, smoo</u> t | th, rolling, dirt | /lt. surfaced, wa | atered, |
|---------------------------------------|----------------|-------------|-----------------|------------------|--|-------------------|-------------------------|----------|
| <u>maintaine</u> | | | | | | | | |
| Haul Rou Seg # | | Distance | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | |
| 1 | 5280.0 | 00 | 0.00 | 3.00 | 3.00 | 3005 | 2.549 | |
| Return Ro | oute: | | | | Haul Time: | 2.549 | minutes | |
| Seg # | Haul I (Ft) | Distance | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | |
| 1 | 5280.0 | 00 | 0.00 | 3.00 | 3.00 | 3005 | 1.924 | |
| | | | | Total Tru | Return Time: ck Cycle Time: | | | |
| Loading To Proc Truck Unit Proc | duction | 491.27 | LCY/Hour | | Adjusted for jo | ob efficiency: | 407.75 | LCY/Hour |
| | | 189.64 | LCY/Hour | | Adjusted for jo | ob efficiency: | 157.40 | LCY/Hour |
| Optimal No. of T | Frucks: | 3 | Truck(s) | | Selected Numb | er of Trucks: | 3 | Truck(s) |
| | | | Adjusted single | e truck/loader | team productio team productio team productio | n: 407. | 75 LCY/ | Hour |
| JOB TI | ME ANI | D COST | | | | | | |
| Fleet | t size: | 1 | Team(s) | Т | otal job time: | 129.5 | 4 Hou | ırs |
| Unit | t cost: | \$2.135 | /LCY | Т | otal job cost: _ | \$112,7 | 92 | |

BULLDOZER WORK

| : Climax Mine | Pe | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|---|--|--------------------|-----------------------------------|---------------|---------------------|
| PROJECT IDENTIFI | CATION | | | | |
| Task #: 004 | State: | Colorado | | Abbreviation: | None |
| Date: $9/18/2018$ | County: | Summit | | Filename: | M493-004 |
| 7:12:53 AN | | | | | |
| User: JLE | | | | | |
| Agency or organ | ization name: | RMS | | | |
| HOURLY EQUIPME | NT COST | | | | |
| Basic Machine: Cat | D6T LGP | | | | |
| Horsepower: 200 | | | | | |
| | ight | | _ | | |
| Attachment: NA | | | | | |
| | er day | | | | |
| Data Source: (CR | (G) | | | | |
| Cost Breakdown: | | 1 | | | |
| Ownership Cost/Hour: | | \$50.71 | <u>Utilization %</u> NA | | |
| Operating Cost/Hour: | | \$42.03 | 100 | | |
| Ripper own. | | \$0.00 | NA | | |
| Cost/Hour: | | | | | |
| Ripper op. Cost/Hour: | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | \$41.52 | NA | | |
| Total unit Cost/Hour: | \$134.26 | | | | |
| Total Fleet Cost/Hour: | \$268.52 | | | | |
| MATERIAL QUANTI | TIES | | | | |
| Initial Volume: 52,82 | | | | | |
| Swell factor: 1.00 | | | | | |
| Loose volume: 52,8 2 | 21 LCY | | | | |
| Source of estimated volu | ma: 1 East or | | 9 | | |
| Source of estimated swel | | | 8 | | |
| factor: | | Jooon and a second | | | |
| HOURLY PRODUCT | ION | | | | |
| | | | | | |
| Average push distance: Unadjusted hourly | 150 feet 212.5 LCY | /hr | | | |
| production: | 212.3 LC 1 | /111 | | | |
| | | | | | |
| Materials consistency description: | Loose | stockpile 1.2 | | | |
| Average push gradient: | 0 % | | | | |
| Average site altitude: | 11,100 feet | | | | |
| Motorial weight. | $1.600 \text{ lb}_{\alpha}/\text{L}CV$ | | | | |
| Material weight: | 1,600 lbs/LCY | | | | |

| Weight description:T | op Soil | |
|-------------------------------|----------------------|---------------|
| Job Condition Correction Fact | tor | Source |
| Operator Skill | 1: 0.750 | (AVG.) |
| Material consistency | /: 1.200 | (CAT HB) |
| Dozing method | 1: 1.000 | (GEN.) |
| Visibility | /:1.000 | (AVG.) |
| Job efficiency | <i>v</i> : 0.830 | (1 SHIFT/DAY) |
| Spoil pile | e: 0.800 | (FND-RF) |
| Push gradien | t: 1.000 | (CAT HB) |
| Altitude | e: 0.940 | (CAT HB) |
| Material Weight | t: 1.438 | (CAT HB) |
| Blade type | e: 1.000 | (PAT) |
| Net correction | n: 0.8078 | |
| Adjusted unit production: | 171.66 LCY/hr | |
| Adjusted fleet production: | 343.32 LCY/hr | |

| Fleet size: | 2 Dozer(s) |
|------------------------------------|--------------------------|
| Unit cost: | \$0.782/LCY |
| Total job time: Total job cost: | 153.85 Hours \$41,313 |

Robinson Lake Rehabilitation

Task: P01

Date: June 13, 2018

*Climax's estimate to remove 300,000 cubic yards of sediment from the lake

| General | |
|---|--------------------|
| Clearing and Grubbing | \$10,000 |
| Haul Roads | \$30,000 |
| Subtotal | \$40,000 |
| Pre-Excavation Work and Water Management | |
| Diversions and Dewatering | \$379,070 |
| Subtotal | \$379,070 |
| Sediment and Subsoil Removal | |
| Develop Access into Robinson Lake | \$15,000 |
| Develop Access into Fill Area | \$10,000 |
| Excavate and Haul Sediments to Fill Area (300K cy) | \$1,620,000 |
| Excavate, Haul and Place Native Materials (10% over-exc.) | \$162,000 |
| Subtotal | \$1,807,000 |
| Finish Work | |
| Final Re-contouring at Robinson Lake | \$45,000 |
| Final Re-contouring at Fill Area | \$22,500 |
| Regrade and Re-establish Cover on Face of 2-Dam to Pre-existing Condition | \$40,000 |
| Subtotal | \$107,500 |
| Total | <u>\$2,333,570</u> |

TRUCK/LOADER TEAM WORK

| Task description: | 5 Dam, 1 | Load and Haul | Subsoil to site | | | |
|----------------------------|---------------------------------------|--------------------------------------|------------------------------|---------------|------------------------|----------------|
| Site: Climax Mine | | Permit Act | ion: 2016 Recl Cost Estin | | Permit/Job#: | M1977493 |
| PROJECT IDEN | TIFICATION | | | | | |
| Task #:Q01A Date:9/18/2 | 1 | State: <u>Colora</u> County: Summ | | Abl | Filename: M4 | ne 93-Q01a |
| A genev or | organization nam | e: DRMS | | | | |
| Agency of | organization nam | | | | | |
| HOURLY EQUIE | MENT COST | | | Shift ba | usis: <u>1 per day</u> | |
| | |] | Equipment Descr | iption | | |
| T | ruck Loader Tear | n -Truck: Cat | 740 | • | | |
| | | | Г 950Н | | | |
| Suppo | ort Equipment -Lo | mp Area: Cat | D6T XL | | | |
| Road Ma | intenance – Moto | 1 | Г 12М | | | |
| 100001110 | | | ter Tanker, 5,000 | Gal. | | |
| | | | | | | |
| <u>Cost Breakdown</u> : | Truck/Loa | | | Equipment | | ance Equipment |
| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | \$36.60 |
| %Utilization-riper: | NA | 0 | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | \$21.23 |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | \$83.13 |
| Number of Units: | 5 | 1 | 1 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$863.14 | Support: | \$140.52 | Maint: | \$173.15 |
| Total work team cost | <u> </u> | 1 | | | | |
| Initial volume | | CCY | Swall | factor: 1.000 | | |
| Loose volume | · · · · · · | | | 1000 | | |
| | · · · · · · · · · · · · · · · · · · · | | | | | |
| | rce of estimated of estimated swel | | ver 59 acres Handbook | | | |
| Source | Material Purcha | | | | | |
| | | tal Cost: $\$0.00$ | | | | |

HOURLY PRODUCTION

| Truck Capacity: | | | | | |
|--|--|--|---------------------------------------|---|---|
| Truck Payload (weight) Basi Material weight: | <u>s:</u> 2,650 | Pounds | JCV | | |
| Description: | | rock - 25% Rock, 75% | | | |
| Rated Payload: | 87,000 | Pounds | | | |
| Payload Capacity: | 32.83 | LCY | , | | |
| r ayloud Capacity. | 32.03 | | | | |
| Truck Bed (volume) Basis: | | | | | |
| Struck Volume: | 24.20 | LCY | | | |
| Heaped Volume: | 31.40 | LCY | | | |
| Average Volume: | 27.80 | LCY | | | |
| Adjusted Volume: | 31.40 | LCY | | | |
| Final ' | Truck Volume I | Based on Number of I | Loader Passes: | 31.61 | LCY |
| Loading Tool Capacity | | | | | |
| Loading Tool Capacity | | | | | * . |
| | | 1 | Buck | et Size Class: <u>N</u> | NA |
| Rated Capacity: | 4.300 | LCY (heaped) | | 44000 4 2 7 2 | |
| Bucket Fill Factor: | 1.050 | Other - moist loa | am (100- | 110%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | | | |
| Iob Condition Corrections | <u>.</u> | Site | e Altitude (ft.): | <u>10400</u> feet | |
| | Truck | Loader | Source | | |
| A 1/1/ 1 A 11 | | | | | |
| Altitude Adj: | 0.600 | 1.000 | (CAT HB | 5) | |
| Altitude Adj: Job Efficiency: | 0.600 0.830 | 1.000 0.830 | | | |
| | | | (CAT HB | | |
| Job Efficiency: Net Correction: | 0.830 0.498 | 0.830 0.830 | (CAT HB (CAT HB | | nasses |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: | 0.830 0.498 | 0.830 | (CAT HB (CAT HB |) ired to Fill | 7 passes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: | 0.830 0.498 | 0.830 0.830 | (CAT HB (CAT HB | | 7 passes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v | 0.830 0.498 N ls: s. Job Condition | 0.830 0.830 Number of Loading To n Rating: <u>NA</u> | (CAT HB (CAT HB |) ired to Fill | 7 passes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v. Selected Value v | 0.830 0.498 N ls: s. Job Condition within this Basic | 0.830 0.830 Number of Loading To n Rating: <u>NA</u> c Rating: <u>NA</u> | (CAT HB (CAT HB |) ired to Fill | 7 passes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – | 0.830 0.498 N ls: s. Job Condition within this Basic Material Descri | 0.830 0.830 Number of Loading To n Rating: <u>NA</u> c Rating: <u>NA</u> | (CAT HB (CAT HB |) ired to Fill | 7 passes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – | 0.830 0.498 N ls: s. Job Condition within this Basic Material Descri | 0.830 0.830 Number of Loading To n Rating: <u>NA</u> c Rating: <u>NA</u> | (CAT HB (CAT HB |) ired to Fill | 7 passes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): | 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri | 0.830 0.830 Number of Loading To n Rating: <u>NA</u> c Rating: <u>NA</u> iption: | (CAT HB (CAT HB | ired to Fill Truck: | |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – | 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri | 0.830 0.830 Number of Loading To n Rating: <u>NA</u> c Rating: <u>NA</u> | (CAT HB (CAT HB |) ired to Fill | |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v. Selected Value v. Track Loaders – Cycle Time Elements (min.): Load: NA | 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri- | 0.830 0.830 Number of Loading To n Rating: <u>NA</u> c Rating: <u>NA</u> iption: | CAT HB (CAT HB) col Passes Requ | Dump: 0.10 | |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track | 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri- | 0.830 0.830 Number of Loading To n Rating: <u>NA</u> c Rating: <u>NA</u> iption: <u>NA</u> Ianeuver: <u>NA</u> | CAT HB (CAT HB) col Passes Requ |) ired to Fill Truck: Dump: dump, naneuver): | 0 0.500 minutes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v. Selected Value v. Track Loaders – Cycle Time Elements (min.): Load: NA | 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri- | 0.830 0.830 Number of Loading To n Rating: <u>NA</u> c Rating: <u>NA</u> iption: <u>NA</u> Ianeuver: <u>NA</u> adjusted Basic Loader | CAT HB (CAT HB) col Passes Requ | ired to Fill Truck: Dump:0.10 | 0 0.500 minutes Source |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Cycle Time Factors | 0.830 0.498 N ls: s. Job Condition within this Basic Material Descri- M k Loaders - Una | 0.830 0.830 Number of Loading To n Rating: NA c Rating: NA iption: NA iption: NA idjusted Basic Loader rial 0.02 | CAT HB (CAT HB) col Passes Requ |) ired to Fill Truck: Dump: 0.10 vad, dump, naneuver): Factor (min.) | 0 0.500 minutes |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v. Selected Value v. Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Cycle Time Factors Material: | 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri- M k Loaders - Una Mixed mater Dumped by Common ow | 0.830 0.830 Number of Loading To n Rating: NA c Rating: NA iption: NA iption: NA idjusted Basic Loader rial 0.02 | CAT HB (CAT HB) col Passes Requ | Dump: 0.10 Dump: 0.10 Dad, dump, (Pad, dump, (Pactor (min.) 0.020 0.020 | 0minutes 0.500minutes 0.500 |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: | 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri- Material Descri- Materia | 0.830 0.830 Number of Loading To n Rating: NA c Rating: NA iption: NA iption: NA adjusted Basic Loader rial 0.02 truck 0.02 vnership of trucks and | CAT HB (CAT HB) col Passes Requ |) ired to Fill Truck: Dump: ad, dump, naneuver): Factor (min.) 0.020 0.020 -0.040 | 0 0.500 minutes Source (Cat HB) (Cat HB) (Cat HB) |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Tract Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri- Material Descri- Dumped by Material Descri- Common ow 0.04 Constant oper | 0.830 0.830 Number of Loading To n Rating: NA c Rating: NA iption: NA iption: NA adjusted Basic Loader rial 0.02 truck 0.02 vnership of trucks and eration -0.04 | CAT HB (CAT HB) col Passes Requ |) ired to Fill Truck: Dump: Dump: 0.10 vad, dump, naneuver): Factor (min.) 0.020 0.020 -0.040 -0.040 | 0 |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: | 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri- Material Descri- Materia | 0.830 0.830 Number of Loading To n Rating: NA c Rating: NA iption: NA iption: NA adjusted Basic Loader rial 0.02 truck 0.02 ruck 0.02 rearship of trucks and eration -0.04 get 0.00 | Cycle Time (lo n loaders - |) ired to Fill Truck: Dump: Dump: 0.10 vad, dump, naneuver): Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 | 0 0.500 minutes (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) |
| Job Efficiency: Net Correction: Loading Tool Cycle Time: Excavators and Front Shove Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Tract Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | 0.830 0.498 N Is: s. Job Condition within this Basic Material Descri- Material Descri- Dumped by Material Descri- Common ow 0.04 Constant oper | 0.830 0.830 Number of Loading To n Rating: NA c Rating: NA iption: NA iption: NA adjusted Basic Loader rial 0.02 truck 0.02 vnership of trucks and eration -0.04 | CAT HB (CAT HB) ool Passes Requ |) ired to Fill Truck: Dump: Dump: 0.10 vad, dump, naneuver): Factor (min.) 0.020 0.020 -0.040 -0.040 | 0 |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

| Truck Travel | (Haul & Return) Time: |
|----------------|-----------------------|
| maintained 3 (|) |

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

Haul R

| Haul Route | | 1 | | | | — 1 |
|------------|---------------|-----------|-----------|-----------|----------|------------|
| Seg # | Haul Distance | Grade (%) | Roll. Res | Total Res | Velocity | Travel |
| | (Ft) | | (%) | (%) | (fpm) | Time |
| | (1) | | (/0) | (/0) | (1911) | (min) |
| 1 | 2956.80 | 5.00 | 3.00 | 8.00 | 1123 | 2.754 |
| 2 | 10771.20 | -7.00 | 3.00 | -4.00 | 3005 | 3.695 |

| | | | | Haul Time: | 6.449 | minutes |
|-----------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|
| Return Ro | ute: | | | | | |
| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
| 1 | 10771.20 | 7.00 | 3.00 | 10.00 | 1736 | 6.301 |
| 2 | 2956.80 | -5.00 | 3.00 | -2.00 | 3706 | 0.831 |

| | | | Return Time: | 7.132 19.108 | minutes minutes | |
|--|--------|----------|--|-----------------|--------------------|----------|
| Loading Tool unit Production Truck Unit Production | 491.27 | LCY/Hour | Adjusted for job | efficiency: | 407.75 | LCY/Hour |
| | 99.24 | LCY/Hour | Adjusted for job | efficiency: | 82.37 | LCY/Hour |
| Optimal No. of Trucks: | 5 | Truck(s) | Selected Number | of Trucks: | 5 | Truck(s) |
| | | 5 | ourly truck team production: ruck/loader team production: | 411.86 407.75 | LCY/Ho | |

Adjusted multiple truck/loader team production: LCY/Hour 407.75

| Fleet size: | 1 | Team(s) | Total job time: | 116.72 | Hours |
|-------------|---------|---------|-----------------|-----------|-------|
| Unit cost: | \$2.886 | /LCY | Total job cost: | \$137,358 | |

TRUCK/LOADER TEAM WORK

| Task description: | 5 Dam, 1 | Load and haul to | opsoil to site | | | |
|--|--------------------------|--------------------------------------|------------------------------|----------------------|--------------------------------------|----------------|
| Site: Climax Mine | | Permit Act | ion: 2016 Recl Cost Estin | | Permit/Job#: | M1977493 |
| | TIFICATION | | | | | |
| $\frac{PROJECT IDEN}{Task #: Q01E} \\ Date: \frac{9/18/2}{9/18/2} \\ User: \frac{7:17:2}{JLE}$ | 3 | State: <u>Colora</u> County: Summ | | | reviation: <u>No</u> Filename: M4 | ne 193-Q01b |
| Agency or | organization nam | e: DRMS | | | | |
| HOURLY EQUIE | - | | | | sis: <u>1 per day</u> | |
| | 1.1.1.55 | | Equipment Descr | iption | | |
| T | ruck Loader Tear | | 740 Г 950Н | | | |
| Suppo | ort Equipment -Lo | | D6T XL | | | |
| Suppo | | mp Area: NA | DOT AL | | | |
| Road Ma | intenance – Moto | | Г 12М | | | |
| | -Wat | er Truck: Wat | er Tanker, 5,000 | Gal. | | |
| | | | | | | |
| <u>Cost Breakdown</u> : | Truck/Loa | | | Equipment | | ance Equipment |
| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 100 | 100 |
| Ownership cost/hour: | \$66.13 | \$26.14 | \$52.66 | NA | \$30.73 | \$25.30 |
| Operating cost/hour: | \$55.75 | \$30.84 | \$46.34 | NA | \$30.60 | \$36.60 |
| %Utilization-riper: | NA | 0 | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | \$0.00 | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$31.17 | \$40.90 | \$41.52 | NA | \$28.69 | \$21.23 |
| Unit Subtotals: | \$153.05 | \$97.89 | \$140.52 | NA | \$90.02 | \$83.13 |
| Number of Units: | 5 | 1 | 1 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$863.14 | Support: | \$140.52 | Maint: | \$173.15 |
| Total work team cost | t/hour: \$1,176.8 | 1 | | | | |
| MATERIAL QUA | ANTITIES | | | | | |
| Initial volume | | | Swell | factor: <u>1.000</u> | | |
| Loose volume | : 47,59 | 3 LCY | | | | |
| | rce of estimated | | ver 59 acres | | | |
| Source | of estimated swel | | Iandbook | | | |
| | Material Purcha | | | | | |
| | 10 | tal Cost: \$0.00 | J | | | |

HOURLY PRODUCTION

| Truck Capacity: | | | | | | |
|-----------------------------|------------------|-----------------|-------------|-----------------|-------------------|---------------|
| Truck Payload (weight) Basi | | | ~ | ~~ . | | |
| Material weight: | 1,600 | | Pounds/L | CY | | |
| Description: | Top Soil | | | | | |
| Rated Payload: | 87,000 | | Pounds | | | |
| Payload Capacity: | 54.38 | | LCY | | | |
| | | | | | | |
| Truck Bed (volume) Basis: | | | | | | |
| Struck Volume: | 24.20 | LCY | | | | |
| Heaped Volume: | 31.40 | LCY | | | | |
| Average Volume: | 27.80 | LCY | | | | |
| Adjusted Volume: _ | 31.40 | LCY | | | | |
| Final | Truck Volume | Based on Nun | nber of Lo: | ader Passes: | 31.61 | LCY |
| Loading Tool Capacity | | | | | | |
| | 1 200 | | 1 | Buck | et Size Class: | NA |
| Rated Capacity: | 4.300 | LCY (he | | (100 | 1100() 1.050 | |
| Bucket Fill Factor: | 1.050 | | moist loam | (100- | 110%) 1.050 | |
| Adjusted Capacity: | 4.515 | LCY | | | | |
| Job Condition Corrections | <u>:</u> | | Site A | Altitude (ft.): | <u>10400</u> feet | |
| | Truck | Loade | er | Source | | |
| Altitude Adj: | 0.600 | 1.000 |) | (CAT HB | 5) | |
| Job Efficiency: | 0.830 | 0.830 |) | (CAT HB | 5) | |
| Net Correction: | 0.498 | 0.830 |) | | | |
| Loading Tool Cycle Time: | | Number of Lo | ading Too! | Passes Requ | ired to Fill | 7 passes |
| Excavators and Front Shove | | | U | 1 | Truck: | 7 passes |
| Machine Cycle Time v | s. Job Conditio | n Rating: N | NA | | | |
| Selected Value | within this Basi | ic Rating: N | NA | | | |
| Track Loaders – | Material Desci | ription: | | | | |
| Cycle Time Elements (min.) | | <u> </u> | | | | |
| Load: NA | N | Ianeuver: N | NA | | Dump: 0.10 |)0 |
| Wheel and Trac | k Loaders - Un | adiusted Basic | c Loader C | vcle Time (lo | ad, dump. | n 500 minutes |
| | | | | | naneuver): | 0.500 |
| Cycle Time Factors | | | | | Factor (min.) | Source |
| Material: | Mixed mate | | | | 0.020 | (Cat HB) |
| Stockpile: | Dumped by | | | | 0.020 | (Cat HB) |
| Truck Ownership: | | wnership of tru | icks and lo | aders - | -0.040 | (Cat HB) |
| | 0.04 | | | | | |
| Operation: | | eration -0.04 | | | -0.040 | (Cat HB) |
| Dump Target: | Nominal tar | - | | | 0.000 | (Cat HB) |
| | | | cle Time A | | -0.040 | minutes |
| | | | d Loader C | | 0.460 | minutes |
| | | Net I | Load Time | per Truck: | 2.860 | minutes |

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 1.000 | Minutes |
|----------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.860 | Minutes | Adjusted for site altitude: | 2.860 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.667 | Minutes |

| Truck Travel | (Haul & Return) Time: |
|----------------|-----------------------|
| maintained 3 (|) |

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

maintained 3.0

| Haul Route | | 1 | 1 | 1 | | 1 |
|------------|---------------|-----------|-----------|-----------|----------|--------|
| Seg # | Haul Distance | Grade (%) | Roll. Res | Total Res | Velocity | Travel |
| Ū | (Ft) | | (%) | (%) | (fpm) | Time |
| | (11) | | (/0) | (/0) | (ipili) | (min) |
| 1 | 2956.80 | 5.00 | 3.00 | 8.00 | 1123 | 2.754 |
| 2 | 10771.20 | -7.00 | 3.00 | -4.00 | 3005 | 3.695 |

| | | | | Haul Time: | 6.449 | minutes |
|------------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|
| Return Rou | ite: | | | | | |
| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
| 1 | 10771.20 | 7.00 | 3.00 | 10.00 | 1736 | 6.301 |
| 2 | 2956.80 | -5.00 | 3.00 | -2.00 | 3706 | 0.831 |

| | | | Return Time: Total Truck Cycle Time: | 7.132 19.108 | minutes minutes | |
|--|--------|-------------------|---|--------------|----------------------------|----------|
| Loading Tool unit Production Truck Unit Production | 491.27 | LCY/Hour | Adjusted for job | efficiency: | 407.75 | LCY/Hour |
| | 99.24 | LCY/Hour | Adjusted for job | efficiency: | 82.37 | LCY/Hour |
| Optimal No. of Trucks: | 5 | Truck(s) | Selected Numbe | r of Trucks: | 5 | Truck(s) |
| | | Adjusted single t | ourly truck team production ruck/loader team production ruck/loader team production | : 407.75 | LCY/He LCY/He LCY/He | our |

| Fleet size: | 1 | Team(s) | Total job time: | 116.72 | Hours |
|-------------|---------|---------|-----------------|-----------|-------|
| Unit cost: | \$2.886 | /LCY | Total job cost: | \$137,358 | _ |

BULLDOZER WORK

| Task description: | 5 Dam, Spread Subsoil | | | |
|--|---|-----------------------------------|----------------------------|---------------------|
| Site: Climax Mine | Permit Action: | 2016 Reclamation Cost Estimate | Permit/Jol | b#: <u>M1977493</u> |
| PROJECT IDENTIFICA | TION | | | |
| Task #:Q02ADate:9/18/20187:19:29 AMUser:JLEAgency or organizat | State: <u>Colorado</u> County: Summit ion name: <u>DRMS</u> | | Abbreviation: Filename: | None M493-Q02a |
| HOURLY EQUIPMENT | COST | | | |
| Basic Machine: Cat D8 Horsepower: 310 | T - 8SU Iniversal | - - - - | | |
| Cost Breakdown: | . | Utilization % | | |
| Ownership Cost/Hour: Operating Cost/Hour: | \$93.62 \$73.35 | <u>NA</u> 100 | | |
| Ripper own. | | | | |
| Cost/Hour: | \$0.00 | NA | | |
| Ripper op. Cost/Hour: Operator Cost/Hour: | \$0.00 \$41.52 | 0 NA | | |
| | 208.49 416.99 ES | | | |
| Initial Volume: 47,593 | | | | |
| Swell factor: 1.000 | | | | |
| Loose volume: 47,593 I | .CY | | | |
| Source of estimated volume Source of estimated swell factor: | 6" Over 59 acres Cat Handbook | | | |
| HOURLY PRODUCTIO | N | | | |
| Average push distance: Unadjusted hourly production: | 250 feet 377.8 LCY/hr | | | |
| Materials consistency description: | Loose stockpile 1.2 | | | |
| gradient: | % | | | |
| Average site altitude: 10 | 0,400 feet | | | |

| Material weight: | 2,650 lbs | /LCY | |
|--|-----------|----------------------|---------------|
| Weight description: | Decompo | osed rock - 25% Rock | r, 75% Earth |
| ob Condition Correction | Factor | | Source |
| Operator | | 0.750 | (AVG.) |
| Material consist | ency: | 1.200 | (CAT HB) |
| Dozing me | thod: | 1.000 | (GEN.) |
| Visit | oility: | 1.000 | (AVG.) |
| Job effici | ency: | 0.830 | (1 SHIFT/DAY) |
| Spoil | pile: | 0.800 | (FND-RF) |
| Push grad | dient: | 1.000 | (CAT HB) |
| Alti | tude: | 1.000 | (CAT HB) |
| Material We | eight: | 0.868 | (CAT HB) |
| Blade | type: | 1.000 | (PAT) |
| Net correc Adjusted unit production: Adjusted fleet | 195.96 | LCY/hr | |

| Fleet size: | 2 Dozer(s) |
|----------------|--------------|
| Unit cost: | \$1.064/LCY |
| | |
| Total ich time | 121 11 Hours |

| Total job time: | 121.44 Hours |
|-----------------|--------------|
| Total job cost: | \$50,637 |

BULLDOZER WORK

| Task description: | 5 Dam, Spread | Topsoil | | | |
|---|-----------------------|---------------|-----------------------------------|---------------|---------------------|
| Site: Climax Mine | Pe | ermit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
| PROJECT IDENTIFI | CATION | | | | |
| Task #: Q02B | State: | Colorado | | Abbreviation: | None |
| Date: $9/18/2018$ | County: | Summit | | Filename: | M493-Q02b |
| 7:20:39 AN | | | | | |
| User: JLE | | | | | |
| Agency or organ | ization name: DI | RMS | | | |
| HOURLY EQUIPME | NT COST | | | | |
| Basic Machine: Cat | D8T - 8SU | | | | |
| Horsepower: 310 | | | - | | |
| | ni-Universal | | - | | |
| Attachment: NA | | | - | | |
| Shift Basis: 1 pe | er day | | - | | |
| Data Source: (CR | \$G) | | - | | |
| Cost Breakdown: | | | | | |
| | | | Utilization % | | |
| Ownership Cost/Hour: | | \$93.62 | NA | | |
| Operating Cost/Hour: | | \$73.35 | 100 | | |
| Ripper own. | | \$0.00 | NA | | |
| Cost/Hour: | | | | | |
| Ripper op. Cost/Hour: | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | \$41.52 | NA | | |
| Total unit Cost/Hour: | \$208.49 | | | | |
| Total Fleet Cost/Hour: | \$416.99 | | | | |
| | | | | | |
| MATERIAL QUANTI | <u>(TIES</u> | | | | |
| Initial Volume: 47,59 | 93 | | | | |
| Swell factor: 1.000 | 0 | | | | |
| Loose volume: 47,5 | 93 LCY | | | | |
| Source of estimated volu | ime: 6" Over : | 50 acres | | | |
| Source of estimated swel | | | | | |
| factor: | | 1000K | | | |
| HOURLY PRODUCT | ION | | | | |
| | | | | | |
| Average push distance: Unadjusted hourly | 250 feet 377.8 LCY | /hr | | | |
| production: | 577.8 LC I | /111 | | | |
| Materials consistency | Loose | stockpile 1.2 | | | |
| description: | | | | | |
| Average push | 0 % | | | | |
| gradient: | 10 400 fr -+ | | | | |
| Average site altitude: | 10,400 feet | | | | |

| Material weight: | 1,600 lbs/ | LCY | |
|---|----------------------|---------------|---------------|
| Weight description: | Top Soil | | |
| lob Condition Correction | Factor | | Source |
| Operator | Skill: | 0.750 | (AVG.) |
| Material consist | ency: | 1.200 | (CAT HB) |
| Dozing me | ethod: | 1.000 | (GEN.) |
| Visil | oility: | 1.000 | (AVG.) |
| Job effici | ency: | 0.830 | (1 SHIFT/DAY) |
| Spoi | l pile: | 0.800 | (FND-RF) |
| Push gra | dient: | 1.000 | (CAT HB) |
| Alt | itude: | 1.000 | (CAT HB) |
| Material W | eight: | 1.438 | (CAT HB) |
| Blade | type: | 1.000 | (PAT) |
| Net corre Adjusted unit production: | | 593 LCY/hr | |
| Adjusted fleet production: | 649.28 LCY/hr | | |

| Unit cost: | \$0.642/LCY |
|-----------------|-------------|
| Total job time: | 73.30 Hours |
| Total job cost: | \$30,566 |

REVEGETATION WORK

| te: Climax I | Mine | Pe | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|----------------|------------|--------------|--------------|-----------------------------------|---------------|---------------------|
| PROJECT | IDENTIFIC | ATION | | | | |
| Task #: | R01 | State: | Colorado | | Abbreviation: | None |
| Date: | 9/18/2018 | County: | Summit | | Filename: | M493-R01 |
| | 7:21:45 AM | | | | | |
| User: | JLE | | | | | |

FERTILIZING

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------|-----------------|------|-------------------------------|------------|
| | | | \$ | \$ |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$0.00 |

Application

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

TILLING

| Description | Cost /Acre |
|--|------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$106.29 |
| | |
| Total Tilling Cost/Acre | \$106.29 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|-----------------------------|--------------------------------|------------------------|------------|
| Alpine Bluegrass | 0.11 | 2.53 | \$1.46 |
| Arizona Fescue - Redondo | 0.45 | 5.17 | \$5.45 |
| Mountain Brome - Bromar | 1.70 | 2.73 | \$7.57 |
| Cinquefoil, Slender | 0.04 | 3.90 | \$17.18 |
| Currant, Wax | 0.16 | 0.55 | \$9.72 |
| Rocky Mountain Fescue | 0.17 | 2.73 | \$1.08 |
| Lupine, Silver | 1.74 | 1.02 | \$124.67 |
| Slender Wheatgrass - Native | 0.68 | 2.48 | \$1.96 |
| Vetch, American | 1.33 | 0.60 | \$136.09 |
| Flax, Lewis Blue | 0.45 | 2.99 | \$7.61 |
| Spike Muhly | 0.09 | 3.31 | \$0.89 |
| Timothy - Climax | 0.25 | 7.17 | \$0.40 |
| Tufted Hairgrass | 0.17 | 9.76 | \$1.86 |
| Penstemon, Rocky Mountain | 0.27 | 4.23 | \$8.16 |
| Yarrow, Western | 0.05 | 3.04 | \$2.14 |
| Totals Seed Mix | 7.66 | 52.20 | \$326.23 |

Application

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

MULCHING and MISCELLANEOUS

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---|-----------------|------|-------------|------------|
| Straw, delivered {MEANS 31 25 14.16 1200} | 2.00 | TON | \$288.00 | \$576.00 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$576.00 |

Application

| Description | | Cost /Acre |
|--|--|------------|
| Crimping, with tractor {DMG survey data} | | \$68.78 |
| Power mulcher (MEANS 32 91 13.16 0350) | | \$92.78 |
| | | |
| | Total Mulch Application Cost/Acre | \$161.56 |

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|-------------|--------------|---------------|------------------|---------------------------|------------|
| | | | | | \$ |
| | | | | | |
| | | Totals | Nursery Stoc | k Cost / Acre | \$0.00 |

| No. of Acre | es: 1466 | Cost /Acre: | \$1,402.08 |
|---------------------------------------|------------|--------------|------------|
| Estimated Failure Rat | e: 50% | Cost /Acre*: | \$558.23 |
| *Selected Replanting Work Item | s: SEEDING | | |
| Initial Job Cost: \$2,055,449. | 28 | | |
| Reseeding Job Cost: \$409,182.59 |) | | |
| Total Job Cost: \$2,464,632 | | | |
| Job Hours: 1,466.00 | | | |

REVEGETATION WORK

| te: | Climax N | line | Ре | ermit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|-----------|----------|-------------------|---------|---------------|-----------------------------------|---------------|---------------------|
| <u>PR</u> | OJECT | IDENTIFICA | TION | | | | |
| | Task #: | R02 | State: | Colorado | | Abbreviation: | None |
| | Date: | 9/18/2018 | County: | Summit | | Filename: | M493-R02 |
| | | 7:23:04 AM | | | | | |
| | User: | JLE | | | | | |

FERTILIZING

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------|-----------------|------|-------------------------------|------------|
| | | | \$ | \$ |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$0.00 |

Application

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

TILLING

| Description | Cost /Acre |
|--|------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$106.29 |
| | |
| Total Tilling Cost/Acre | \$106.29 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|-----------------------------|--------------------------------|------------------------|------------|
| Alpine Bluegrass | 0.22 | 5.05 | \$2.93 |
| Arizona Fescue - Redondo | 0.90 | 10.33 | \$10.91 |
| Mountain Brome - Bromar | 3.40 | 5.46 | \$15.13 |
| Cinquefoil, Slender | 0.08 | 7.80 | \$34.37 |
| Currant, Wax | 0.32 | 1.10 | \$19.43 |
| Rocky Mountain Fescue | 0.34 | 5.46 | \$2.15 |
| Lupine, Silver | 3.48 | 2.04 | \$249.34 |
| Slender Wheatgrass - Native | 1.36 | 4.96 | \$3.92 |
| Vetch, American | 2.66 | 1.20 | \$272.17 |
| Flax, Lewis Blue | 0.90 | 5.97 | \$15.21 |
| Spike Muhly | 0.18 | 6.61 | \$1.77 |
| Timothy - Climax | 0.50 | 14.35 | \$0.80 |
| Tufted Hairgrass | 0.34 | 19.51 | \$3.73 |
| Penstemon, Rocky Mountain | 0.54 | 8.46 | \$16.31 |
| Yarrow, Western | 0.10 | 6.08 | \$4.28 |
| Totals Seed Mix | 15.32 | 104.40 | \$652.45 |

Application

| Description | | Cost /Acre |
|--|---|------------|
| Hydro seeding (MEANS 32 92 19.14 0200) | | \$919.12 |
| | | |
| | Total Seed Application Cost/Acre | \$919.12 |

MULCHING and MISCELLANEOUS

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---|-----------------|------|-------------|------------|
| Hydromulch, 1 ton/ac. rate {Materials Only} | 1.00 | ACRE | \$496.58 | \$496.58 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$496.58 |

Application

| Description | | Cost /Acre |
|--|-----------------------------------|------------|
| Hydromulching (MEANS 32 92 19.13 1100) | | \$629.20 |
| | | |
| | Total Mulch Application Cost/Acre | \$629.20 |

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|-------------|--------------|---------------|------------------|---------------------------|------------|
| | | Totals | Nursery Stoc | ek Cost / Acre | \$0.00 |

| No. of Acres: | 263 | Cost /Acre: | \$2,803.64 |
|---|---------|--------------|------------|
| Estimated Failure Rate: | 50% | Cost /Acre*: | \$1,571.57 |
| *Selected Replanting Work Items: | SEEDING | | |
| Initial Job Cost: \$737,357.32 | | | |
| Reseeding Job Cost: \$206,661.46 | | | |
| Total Job Cost: \$944,019 | | | |
| Job Hours: 263.00 | | | |

REVEGETATION WORK

| e: <u>Climax N</u> | Aine | Pe | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|--------------------|------------|---------|--------------|-----------------------------------|---------------|---------------------|
| PROJECT | IDENTIFIC | ATION | | | | |
| Task #: | R03 | State: | Colorado | | Abbreviation: | None |
| Date: | 9/18/2018 | County: | Summit | | Filename: | M493-R03 |
| | 7:24:36 AM | | | | | |
| User: | JLE | | | | | |

FERTILIZING

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------|-----------------|------|------------------------|------------|
| | | | \$ | \$ |
| | | | Total Fertilizer | |
| | | | Materials Cost/Acre | \$0.00 |

Application

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

TILLING

| Description | Cost /Acre |
|--|------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$106.29 |
| | |
| Total Tilling Cost/Acre | \$106.29 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|-----------------------------|--------------------------------|------------------------|------------|
| Alpine Bluegrass | 0.22 | 5.05 | \$2.93 |
| Alpine Fescue | 0.65 | 19.40 | \$11.60 |
| Cinquefoil, Slender | 0.03 | 2.92 | \$12.89 |
| Currant, Wax | 0.20 | 0.69 | \$12.15 |
| Rocky Mountain Fescue | 0.34 | 5.46 | \$2.15 |
| Lupine, Silver | 0.35 | 0.21 | \$25.08 |
| Slender Wheatgrass - Native | 1.37 | 5.00 | \$3.95 |
| Flax, Lewis Blue | 0.43 | 2.85 | \$7.27 |
| Spike Muhly | 0.09 | 3.31 | \$0.89 |
| Timothy, Alpine - Native | 0.17 | 5.07 | \$4.21 |
| Tufted Hairgrass | 0.17 | 9.76 | \$1.86 |
| Yarrow, Western | 0.05 | 3.04 | \$2.14 |
| Totals Seed Mix | 4.07 | 62.76 | \$87.10 |

Application

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

MULCHING and MISCELLANEOUS

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---|-----------------|------|-------------|------------|
| Straw, delivered {MEANS 31 25 14.16 1200} | 2.00 | TON | \$288.00 | \$576.00 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$576.00 |

Application

| 1 | Description | Cost /Acre |
|---|-------------|------------|
| | | |

| Crimping, with tractor {DMG survey data} | | \$68.78 |
|--|--|----------|
| Power mulcher (MEANS 32 91 13.16 0350) | | \$92.78 |
| | | |
| | Total Mulch Application Cost/Acre | \$161.56 |

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|-------------|--------------|---------------|------------------|---------------------------|------------|
| | | | | | \$ |
| | | Total | s Nursery Stoc | k Cost / Acre | \$0.00 |

| No. of Acres: | 227 | Cost /Acre: | \$1,162.95 |
|---------------------------------------|---------|--------------|------------|
| Estimated Failure Rate: | 50% | Cost /Acre*: | \$319.10 |
| *Selected Replanting Work Items: | SEEDING | | |
| Initial Job Cost: \$263,989.65 | | | |

| minu 500 Cost. | φ205,202.05 |
|---------------------|-------------|
| Reseeding Job Cost: | \$36,217.85 |
| Total Job Cost: | \$300,208 |
| Job Hours: | 227.00 |
| | |

REVEGETATION WORK

| e: <u>Climax I</u> | Mine | Pe | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|--------------------|------------|---------|--------------|-----------------------------------|---------------|---------------------|
| PROJECT | IDENTIFIC | ATION | | | | |
| Task #: | R04 | State: | Colorado | | Abbreviation: | None |
| Date: | 9/18/2018 | County: | Summit | | Filename: | M493-R04 |
| | 7:29:22 AM | | | | | |
| User: | JLE | | | | | |

FERTILIZING

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------|-----------------|------|-------------------------------|------------|
| | | | \$ | \$ |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$0.00 |

Application

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

TILLING

| Description | Cost /Acre |
|--|------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$106.29 |
| | |
| Total Tilling Cost/Acre | \$106.29 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|-----------------------------|--------------------------------|------------------------|------------|
| Alpine Bluegrass | 0.44 | 10.10 | \$5.86 |
| Alpine Fescue | 1.30 | 38.80 | \$23.19 |
| Cinquefoil, Slender | 0.06 | 5.85 | \$25.77 |
| Currant, Wax | 0.40 | 1.38 | \$24.29 |
| Rocky Mountain Fescue | 0.68 | 10.93 | \$4.30 |
| Lupine, Silver | 0.70 | 0.41 | \$50.16 |
| Slender Wheatgrass - Native | 2.74 | 10.00 | \$7.89 |
| Flax, Lewis Blue | 0.86 | 5.70 | \$14.53 |
| Spike Muhly | 0.18 | 6.61 | \$1.77 |
| Timothy, Alpine - Native | 0.34 | 10.15 | \$8.42 |
| Tufted Hairgrass | 0.34 | 19.51 | \$3.73 |
| Yarrow, Western | 0.10 | 6.08 | \$4.28 |
| Totals Seed Mix | 8.14 | 125.52 | \$174.20 |

Application

| Description | | Cost /Acre |
|--|----------------------------------|------------|
| Hydro seeding (MEANS 32 92 19.14 0200) | | \$919.12 |
| | | |
| | Total Seed Application Cost/Acre | \$919.12 |

MULCHING and MISCELLANEOUS

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---|-----------------|------|-------------|------------|
| Hydromulch, 1 ton/ac. rate {Materials Only} | 1.00 | ACRE | \$496.58 | \$496.58 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$496.58 |

Application

| | | Cost / A amo |
|---------|-----|--------------|
| Descrip | ION | Cost /Acre |

Hydromulching (MEANS 32 92 19.13 1100)

\$629.20

Total Mulch Application Cost/Acre

\$629.20

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|-------------|--------------|---------------|------------------|---------------------------|----------------|
| | | Totals 1 | Nursery Stoc | ek Cost / Acre | \$ 0.00 |

| | No. of Acres: | 475 | Cost /Acre: | \$2,325.39 |
|---------------------|------------------|---------|--------------|------------|
| Estimate | ed Failure Rate: | 50% | Cost /Acre*: | \$1,093.32 |
| *Selected Replanti | ng Work Items: | SEEDING | | |
| Initial Job Cost: | \$1,104,560.25 | | | |
| Reseeding Job Cost: | \$259,663.50 | | | |
| Total Job Cost: | \$1,364,224 | | | |
| Job Hours: | 475.00 | | | |

REVEGETATION WORK

| te: Climax | Mine | Pe | rmit Action: | 2016 Reclamation Cost Estimate | Permit/Jo | b#: <u>M1977493</u> |
|------------|--------------------|---------|--------------|-----------------------------------|---------------|---------------------|
| PROJEC | <u> FIDENTIFIC</u> | ATION | | | | |
| Task # | R05 | State: | Colorado | | Abbreviation: | None |
| Date | 9/18/2018 | County: | Summit | | Filename: | M493-R05 |
| | 7:33:49 AM | | | | | |
| User | JLE | | | | | |

FERTILIZING

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------|-----------------|------|-------------------------------|------------|
| | | | \$ | \$ |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$0.00 |

Application

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

TILLING

| Description | Cost /Acre |
|-------------------------|------------|
| | \$ |
| Total Tilling Cost/Acre | \$0.00 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|-------------------------------------|--------------------------------|------------------------|------------|
| Aquatic Sedge | 0.38 | 10.05 | \$68.10 |
| Black Sedge | 0.44 | 3.92 | \$194.87 |
| Merten's Rush | 0.00 | 1.47 | \$0.59 |
| Cinquefoil, Slender | 0.24 | 23.40 | \$103.10 |
| Mannagrass, Northwest | 0.22 | 1.83 | \$2.33 |
| Elephant Head | 0.16 | 4.02 | \$79.87 |
| Reedgrass, Canadian (or Blue Joint) | 0.12 | 12.34 | \$25.05 |
| Reedgrass, Northern - Native | 0.18 | 18.51 | \$24.93 |
| Larkspur, Showy | 0.18 | 2.28 | \$8.48 |
| Timothy, Alpine - Native | 0.40 | 11.94 | \$9.90 |
| Tufted Hairgrass | 0.26 | 14.92 | \$2.85 |
| Monkey Flower | 0.24 | 24.44 | \$35.88 |
| Totals Seed Mix | 2.82 | 129.12 | \$555.93 |

Application

| Description | | Cost /Acre |
|-------------------------|----------------------------------|------------|
| Broadcast seeding [DMG] | | \$267.22 |
| | | |
| | Total Seed Application Cost/Acre | \$267.22 |

MULCHING and MISCELLANEOUS

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---------------------------------|-----------------|------|-------------|------------|
| | | | \$ | \$ |
| Total Mulch Materials Cost/Acre | | | | \$0.00 |

Application

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

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|-------------|--------------|---------------|------------------|---------------------------|------------|
| | | | | | \$ |
| | | | | | |
| | | Totals | Nursery Stoc | ek Cost / Acre | \$0.00 |

| | No. of Acres: | 25 | Cost /Acre: | \$823.15 |
|---------------------|-----------------|---------|--------------|----------|
| Estimate | d Failure Rate: | 50% | Cost /Acre*: | \$823.15 |
| *Selected Replantin | ng Work Items: | SEEDING | | |
| Initial Job Cost: | \$20,578.75 | | | |
| Reseeding Job Cost: | \$10,289.38 | | | |
| Total Job Cost: | \$30,868 | | | |
| Job Hours: | 25.00 | | | |

Task # A01

SAFEGUARDING UNDERGROUND OPENINGS

| te: | Climax N | Aine | Pe | ermit Action: | 2016 Reclamation Cost Estimate | _ P | ermit/Job#: | M1977493 |
|-----|------------|-------------------------|---------|---------------|-----------------------------------|--------|-------------|----------|
|] | PROJEC | T IDENTIFI | CATION | | | | | |
| | Task #: | S01 | State: | Colorado | Abbrevi | ation: | None | |
| | Date: | 9/18/2018 7:35:02 AM | County: | Summit | Filer | name: | M493-S01 | , |
| | | 7.55.021101 | | | | | | |

UNIT COSTS

| Opening Description | Dimensions | Closure Method | Quantity | Unit | Unit Cost | Total Cost |
|------------------------|------------|--|----------|------|--------------|------------|
| Storke Portal | 12' x14' | Shaft closure - concrete cap, poured- in-place (per Cubic Feet) | 336.00 | CF | \$3.89 | \$1,307.04 |
| Seal No. 3 Gallery | 8' x 8' | Shaft closure - concrete cap, poured- in-place (per Cubic Feet) | 128.00 | CF | \$3.89 | \$497.92 |

Job Hours: ______ 30.00

Total Cost: \$1,804.96

Task # A01

EQUIPMENT MOBILIZATION/DEMOBILIZATION

| Task description | on: Mo | obilization - Yea | rl | | | | |
|--|--|---|---|---------------------------------|---|---|--|
| Climax Mir | ie | Permi | | Reclamati Estimate | | Permit/Job#: M | 1977493 |
| PROJECT ID | ENTIFICAT | <u>ION</u> | | | | | |
| Task #: | 701 | State: C | olorado | | Abbre | eviation: None | |
| | 5/30/2018 | | ummit | | | lename: M493 | -T01 |
| | LE | | | | | | - |
| Agenc | y or organization | n name: DRMS | 5 | | | | |
| FOLIDMENT | г тра мерор | T RIG COST | | | | | |
| | IKANSPUR | <u>1 KIG CUS1</u> | | | | | |
| | | | | | Shift ba | | |
| | | | | (| Cost Data Sour | ce: CRG Da | ta |
| Tri | ick Tractor Desc | ription: GENE | ERIC ON-HIGH | WAY TRU | JCK TRACTO | DR, 6X4, DIESEL | POWERED. |
| | | | | | (2ND HALF, | | , <u> </u> |
| Tr | uck Trailer Desc | cription: | ENERIC FOLD | | | ROP DECK EQUI | PMENT |
| | | 1 | | | (25T, 50T, AN | | |
| | | | | | | | |
| Cost Breakdown | <u>1:</u> | | | | | | |
| Available Rig | | 0-25 Tons | 26-50 Tons | | - Tons | | |
| | nip Cost/Hour: | \$16.63 | \$18.37 | | 22.33 | | |
| <u> </u> | ng Cost/Hour: | \$44.38 | \$46.13 | | 50.07 | | |
| | tor Cost/Hour: | \$27.66 | \$27.66 | | 27.66 | | |
| | per Cost/Hour: | \$0.00 | \$25.39 | | 25.39 | | |
| Total U | nit Cost/Hour: | \$88.67 | \$117.55 | \$1 | 25.45 | | |
| | BLE EQUIP | | U 1D' | 771 | 11 100 . | Return Trip | DOT Perm |
| Machine | Weight/ | Owner ship | Haul Rig Cost/hr/unit | Fleet | Haul Trip Cost/hr/ | Cost/hr/ fleet | Cost/ fleet |
| Description | Unit (TONS) | Cost/hr/ unit | Cost/nr/unit | Size | | | Cost neer |
| Cat 740 | (TONS) 36.49 | \$66.13 | \$117.55 | 15 | fleet \$2,755.20 | \$1,763.25 | \$3,750.00 |
| CAT 950H | 20.13 | \$26.14 | \$88.67 | 3 | \$2,755.20 | \$1,765.25 \$266.01 | \$750.00 |
| | 23.25 | \$52.66 | | | | | |
| | | חם / רוג | \$88.67 | 3 | \$423.99 | \$266.01 | \$750.00 |
| Cat D6T XL Cat D8T - 8SU | | | \$88.67 \$125.45 | 3 4 | \$423.99 \$912.00 | \$266.01 \$501.80 | \$750.00 \$1.000.00 |
| Cat D6T XL Cat D8T - 8SU Cat D9T - 9SU | 53.08 66.13 | \$32.00 \$102.55 \$123.06 | \$88.67 \$125.45 \$125.45 | | \$423.99 \$912.00 \$994.04 | \$266.01 \$501.80 \$501.80 | \$750.00 \$1,000.00 \$1,000.00 |
| Cat D8T - 8SU Cat D9T - 9SU Cat D7R DS | 53.08 | \$102.55 | \$125.45 | 4 | \$912.00 | \$501.80 | \$1,000.00 |
| Cat D8T - 8SU Cat D9T - 9SU Cat D7R DS Series II LGP | 53.08 66.13 34.57 | \$102.55 \$123.06 \$66.14 | \$125.45 \$125.45 \$117.55 | 4 4 5 | \$912.00 \$994.04 \$918.45 | \$501.80 \$501.80 \$587.75 | \$1,000.00 \$1,000.00 \$1,250.00 |
| Cat D8T - 8SU Cat D9T - 9SU Cat D7R DS Series II LGP Cat D10T - 10S | 53.08 66.13 34.57 U 93.31 | \$102.55 \$123.06 \$66.14 \$145.47 | \$125.45 \$125.45 \$117.55 \$125.45 | 4 4 5 1 | \$912.00 \$994.04 \$918.45 \$270.92 | \$501.80 \$501.80 \$587.75 \$125.45 | \$1,000.00 \$1,000.00 \$1,250.00 \$250.00 |
| Cat D8T - 8SU Cat D9T - 9SU Cat D7R DS Series II LGP Cat D10T - 10S CAT 12M | 53.08 66.13 34.57 U 93.31 16.01 | \$102.55 \$123.06 \$66.14 \$145.47 \$30.73 | \$125.45 \$125.45 \$117.55 \$125.45 \$88.67 | 4 4 5 1 3 | \$912.00 \$994.04 \$918.45 \$270.92 \$358.20 | \$501.80 \$501.80 \$587.75 \$125.45 \$266.01 | \$1,000.00 \$1,000.00 \$1,250.00 \$250.00 \$750.00 |
| Cat D8T - 8SU Cat D9T - 9SU Cat D7R DS Series II LGP Cat D10T - 10S CAT 12M Trash pump - | 53.08 66.13 34.57 U 93.31 | \$102.55 \$123.06 \$66.14 \$145.47 | \$125.45 \$125.45 \$117.55 \$125.45 | 4 4 5 1 | \$912.00 \$994.04 \$918.45 \$270.92 | \$501.80 \$501.80 \$587.75 \$125.45 | \$1,000.00 \$1,000.00 \$1,250.00 \$250.00 |
| Cat D8T - 8SU Cat D9T - 9SU Cat D7R DS Series II LGP Cat D10T - 10S CAT 12M Trash pump - 70MT, 6 in. | 53.08 66.13 34.57 U 93.31 16.01 0.80 | \$102.55 \$123.06 \$66.14 \$145.47 \$30.73 \$6.59 | \$125.45 \$125.45 \$117.55 \$125.45 \$88.67 \$88.67 | 4 5 1 3 1 | \$912.00 \$994.04 \$918.45 \$270.92 \$358.20 \$95.26 | \$501.80 \$501.80 \$587.75 \$125.45 \$266.01 \$88.67 | \$1,000.00 \$1,000.00 \$1,250.00 \$250.00 \$750.00 \$250.00 |
| Cat D8T - 8SU Cat D9T - 9SU Cat D7R DS Series II LGP Cat D10T - 10S CAT 12M Trash pump - 70MT, 6 in. Drill/Broadcast | 53.08 66.13 34.57 U 93.31 16.01 | \$102.55 \$123.06 \$66.14 \$145.47 \$30.73 | \$125.45 \$125.45 \$117.55 \$125.45 \$88.67 | 4 4 5 1 3 | \$912.00 \$994.04 \$918.45 \$270.92 \$358.20 | \$501.80 \$501.80 \$587.75 \$125.45 \$266.01 | \$1,000.00 \$1,000.00 \$1,250.00 \$250.00 \$750.00 |
| Cat D8T - 8SU Cat D9T - 9SU Cat D7R DS Series II LGP Cat D10T - 10S CAT 12M Trash pump - 70MT, 6 in. Drill/Broadcast Seeder with | 53.08 66.13 34.57 U 93.31 16.01 0.80 | \$102.55 \$123.06 \$66.14 \$145.47 \$30.73 \$6.59 | \$125.45 \$125.45 \$117.55 \$125.45 \$88.67 \$88.67 | 4 5 1 3 1 | \$912.00 \$994.04 \$918.45 \$270.92 \$358.20 \$95.26 | \$501.80 \$501.80 \$587.75 \$125.45 \$266.01 \$88.67 | \$1,000.00 \$1,000.00 \$1,250.00 \$250.00 \$750.00 \$250.00 |
| Cat D8T - 8SU Cat D9T - 9SU Cat D7R DS Series II LGP Cat D10T - 10S CAT 12M Trash pump - 70MT, 6 in. Drill/Broadcast | 53.08 66.13 34.57 U 93.31 16.01 0.80 | \$102.55 \$123.06 \$66.14 \$145.47 \$30.73 \$6.59 | \$125.45 \$125.45 \$117.55 \$125.45 \$88.67 \$88.67 | 4 5 1 3 1 | \$912.00 \$994.04 \$918.45 \$270.92 \$358.20 \$95.26 | \$501.80 \$501.80 \$587.75 \$125.45 \$266.01 \$88.67 | \$1,000.00 \$1,000.00 \$1,250.00 \$250.00 \$750.00 \$250.00 |
| Cat D8T - 8SU Cat D9T - 9SU Cat D7R DS Series II LGP Cat D10T - 10S CAT 12M Trash pump - 70MT, 6 in. Drill/Broadcast Seeder with Tractor | 53.08 66.13 34.57 U 93.31 16.01 0.80 25.00 | \$102.55 \$123.06 \$66.14 \$145.47 \$30.73 \$6.59 \$15.54 | \$125.45 \$125.45 \$117.55 \$125.45 \$88.67 \$88.67 \$88.67 | 4 4 5 1 3 1 4 | \$912.00 \$994.04 \$918.45 \$270.92 \$358.20 \$95.26 \$416.84 | \$501.80 \$501.80 \$587.75 \$125.45 \$266.01 \$88.67 \$354.68 | \$1,000.00 \$1,000.00 \$1,250.00 \$250.00 \$750.00 \$250.00 \$1,000.00 |

Subtotals: \$7,683.33

ROADABLE EQUIPMENT:

| Machine Description | Total Cost/hr/ unit | Fleet Size | Haul Trip Cost/hr/ fleet | Return Trip Cost/hr/ fleet |
|--------------------------------|------------------------|------------|-----------------------------|-------------------------------|
| Water Tanker, 5,000 Gal. | \$83.13 | 3 | \$249.39 | \$249.39 |
| Fuel Tanker, 6x4, 210 HP | \$59.64 | 4 | \$238.56 | \$238.56 |
| Light Duty Pickup, 4x4, 3/4 T. | \$77.14 | 5 | \$385.70 | \$385.70 |
| | | Subtotals: | \$873.65 | \$873.65 |

EQUIPMENT HAUL DISTANCE and Time

| Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed: | DENVER 88.00 65.00 | _ miles _ mph |
|---|--------------------------|------------------|
| Total Non-Roadable Mob/Demob Cost * | \$212,693.72 | |
| Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig: | \$2,365.58 | _ |

Transportation Cycle Time:

| | Non- Roadable Equipment | Roadable Equipment |
|-------------------------|-------------------------------|-----------------------|
| Haul Time (Hours): | 1.35 | 1.35 |
| Return Time (Hours): | 1.35 | 1.35 |
| Loading Time (Hours): | 5.08 | NA |
| Unloading Time (Hours): | 5.08 | NA |
| Subtotals: | 12.87 | 2.71 |

JOB TIME AND COST

| Total job time: | 25.74 | Hours | |
|-----------------|-------|-------|--|
| | | | |

Total job cost: \$215,059

Task # A01

EQUIPMENT MOBILIZATION/DEMOBILIZATION

| Task desc | ription: <u>M</u> | obilization - Yea | r 2 | | | | | |
|---|--|----------------------|----------------------|---------------------------|---|---|----------------|--------------------------|
| : <u>Climax</u> | x Mine | Permit | |)16 Reclan ost Estimat | | Permit/Job# | #: <u>M1</u> | 977493 |
| PROJEC | T IDENTIFICAT | ION | | | | | | |
| Task # Date User | : 9/18/2018 7:38:50 AM | | olorado ummit | | | | None M493-7 | Г02 |
| А | gency or organizatio | n name: DRMS | 5 | | | | | |
| FOLIPM | ENT TRANSPOR | T RIG COST | | | | | | |
| | Truck Tractor Deso Truck Trailer Deso | - | | 400 I | Shift ba Cost Data Sou RUCK TRACT HP (2ND HALF OOSENECK, D ER (25T, 50T, A | rce: <u>CR</u> OR, 6X4, D , 2006) ROP DECK | | POWERED, |
| Cost Break | down: | | | | | | | |
| Available | e Rig Capacities | 0-25 Tons | 26-50 To | ns | 51+ Tons | | | |
| | nership Cost/Hour: | \$16.63 | \$18.37 | | \$22.33 | | | |
| | perating Cost/Hour: | \$44.38 | \$46.13 | | \$50.07 | | | |
| C | Deprator Cost/Hour: | \$27.66 | \$27.66 | | \$27.66 | | | |
| | Helper Cost/Hour: | \$0.00 | \$25.39 | | \$25.39 | | | |
| | atal Unit Cost/Hour: | \$88.67 MENT: | \$117.55 |) | \$125.45 | | | |
| Machine | Weight/ | Owner ship | Haul Rig | Fleet | Haul Trip | Return Tr | rin | DOT Permit |
| Descriptio | | Cost/hr/ unit | Cost/hr/ur | | Cost/hr/ fleet | Cost/hr/ f | | Cost/ fleet |
| Cat 740 | 36.49 | \$66.13 | \$117.55 | 15 | \$2,755.20 | \$1,763.25 | | \$3,750.00 |
| CAT 950H | | \$26.14 | \$88.67 | 3 | \$344.43 | \$266.01 | | \$750.00 |
| Cat D6T X | | \$52.66 | \$88.67 | 3 | \$423.99 | \$266.01 | | \$750.00 |
| Cat D8T - | | \$102.55 \$123.06 | \$125.45 \$125.45 | 4 | \$912.00 \$994.04 | \$501.80 \$501.80 | | \$1,000.00 \$1,000.00 |
| Cat D9T - Cat D7R I | | \$123.06 | \$125.45 | 4 5 | \$994.04 | \$501.80 | | \$1,000.00 |
| Series II L | | ψ00.17 | ψ117.55 | | ψ210.45 | φ.σ.σσ | | ¢1,200.00 |
| Cat D10T | - 10SU 93.31 | \$145.47 | \$125.45 | 1 | \$270.92 | \$125.45 | | \$250.00 |
| CAT 12M | | \$30.73 | \$88.67 | 3 | \$358.20 | \$266.01 | | \$750.00 |
| Trash pum 70MT, 6 in | - | \$6.59 | \$88.67 | 1 | \$95.26 | \$88.67 | | \$250.00 |
| Drill/Broad Seeder wit Tractor Power Mu (Bowie LI | h lcher 6.00 | \$15.54 \$8.33 | \$88.67 \$88.67 | 4 | \$416.84 \$194.00 | \$354.68 \$177.34 | | \$1,000.00 \$500.00 |

Subtotals: \$7,683.33 \$4,898.77 \$11,250.00

ROADABLE EQUIPMENT:

| Machine Description | Total Cost/hr/ unit | Fleet Size | Haul Trip Cost/hr/ fleet | Return Trip Cost/hr/ fleet |
|--------------------------------|------------------------|------------|-----------------------------|-------------------------------|
| Water Tanker, 5,000 Gal. | \$83.13 | 3 | \$249.39 | \$249.39 |
| Fuel Tanker, 6x4, 210 HP | \$59.64 | 4 | \$238.56 | \$238.56 |
| Light Duty Pickup, 4x4, 3/4 T. | \$77.14 | 5 | \$385.70 | \$385.70 |
| | | Subtotals: | \$873.65 | \$873.65 |

EQUIPMENT HAUL DISTANCE and Time

| Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed: | DENVER 88.00 65.00 | miles mph |
|---|--------------------------|--------------|
| Total Non-Roadable Mob/Demob Cost * | \$212,693.72 | |
| Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig: | \$2,365.58 | |

Transportation Cycle Time:

| | Non- Roadable Equipment | Roadable Equipment |
|-------------------------|-------------------------------|-----------------------|
| Haul Time (Hours): | 1.35 | 1.35 |
| Return Time (Hours): | 1.35 | 1.35 |
| Loading Time (Hours): | 5.08 | NA |
| Unloading Time (Hours): | 5.08 | NA |
| Subtotals: | 12.87 | 2.71 |

JOB TIME AND COST

| Total job time: | 25.74 | Hours | |
|-----------------|-------|-------|--|
| | | | |

Total job cost: \$215,059

Task # A01

EQUIPMENT MOBILIZATION/DEMOBILIZATION

| Task descr | iption: Mo | bilization - Yea | r 3 | | | | |
|---|--|----------------------|----------------------|---------------------------|--|---|---|
| : Climax | Mine | Permit | |)16 Reclam ost Estimat | | Permit/Job#: | : <u>M1977493</u> |
| PROJECT | <u>IDENTIFICATI</u> | <u>ION</u> | | | | | |
| Task #: Date: User: | 9/18/2018 7:40:43 AM | | olorado ummit | | | | None M493-T03 |
| Ag | gency or organization | n name: DRMS | 5 | | | | |
| FUIIDMI | ENT TRANSPOR | T DIC COST | | | | | |
| | Truck Tractor Desc Truck Trailer Desc | - | | 400 H LDING GO | Shift ba Cost Data Sou RUCK TRACT P (2ND HALF, DOSENECK, DI R (25T, 50T, A) | Irce: <u>CR(</u> OR, 6X4, DII , 2006) ROP DECK I | er day <u>G Data</u> ESEL POWERED, EQUIPMENT |
| Cost Breakd | lown: | | | | | | |
| Available | Rig Capacities | 0-25 Tons | 26-50 To | ns 5 | 51+ Tons | | |
| | nership Cost/Hour: | \$16.63 | \$18.37 | | \$22.33 | | |
| - | erating Cost/Hour: | \$44.38 | \$46.13 | | \$50.07 | | |
| | perator Cost/Hour: | \$27.66 | \$27.66 | | \$27.66 | | |
| | Helper Cost/Hour: al Unit Cost/Hour: | \$0.00 \$88.67 | \$25.39 \$117.55 | : | \$25.39 \$125.45 | | |
| NON ROA Machine | DABLE EQUIP Weight/ | MENT: Owner ship | Haul Rig | Fleet | Haul Trip | Return Tri | ip DOT Permit |
| Descriptio | | Cost/hr/ unit | Cost/hr/un | | Cost/hr/ fleet | Cost/hr/ fl | |
| Cat 740 | 36.49 | \$66.13 | \$117.55 | 15 | \$2,755.20 | \$1,763.25 | \$3,750.00 |
| CAT 950H | 20.13 | \$26.14 | \$88.67 | 3 | \$344.43 | \$266.01 | \$750.00 |
| Cat D6T X | | \$52.66 | \$88.67 | 3 | \$423.99 \$912.00 | \$266.01 | \$750.00 |
| Cat D8T - 8 Cat D9T - 9 | | \$102.55 \$123.06 | \$125.45 \$125.45 | 4 | \$912.00 | \$501.80 \$501.80 | \$1,000.00 |
| Cat D7R D | | \$66.14 | \$125.45 | 5 | \$918.45 | \$587.75 | \$1,000.00 |
| Series II LC | | | | | | | . , |
| Cat D10T - | | \$145.47 | \$125.45 | 1 | \$270.92 | \$125.45 | \$250.00 |
| CAT 12M Trash pump 70MT, 6 in | | \$30.73 \$6.59 | \$88.67 \$88.67 | 3 | \$358.20 \$95.26 | \$266.01 \$88.67 | \$750.00 \$250.00 |
| Drill/Broad Seeder with Tractor Power Mule (Bowie LD) | cast 25.00 cher 6.00 | \$15.54 | \$88.67 \$88.67 | 4 | \$416.84 | \$354.68 | \$1,000.00 |

Subtotals: \$7,683.33 \$4,898.77 \$11,250.00
ROADABLE EQUIPMENT:

| Machine Description | Total Cost/hr/ | Fleet Size | Haul Trip | Return Trip Cost/hr/ fleet |
|--------------------------------|----------------|------------|----------------|-------------------------------|
| | unit | | Cost/hr/ fleet | COSt/III/ Heet |
| Water Tanker, 5,000 Gal. | \$83.13 | 3 | \$249.39 | \$249.39 |
| Fuel Tanker, 6x4, 210 HP | \$59.64 | 4 | \$238.56 | \$238.56 |
| Light Duty Pickup, 4x4, 3/4 T. | \$77.14 | 5 | \$385.70 | \$385.70 |
| | | Subtotals: | \$873.65 | \$873.65 |

EQUIPMENT HAUL DISTANCE and Time

| Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed: | DENVER 88.00 65.00 | miles mph |
|---|--------------------------|-----------|
| Total Non-Roadable Mob/Demob Cost * | \$212,693.72 | |
| Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig: | \$2,365.58 | |

Transportation Cycle Time:

| | Non- | |
|-------------------------|-----------|-----------|
| | Roadable | Roadable |
| | Equipment | Equipment |
| Haul Time (Hours): | 1.35 | 1.35 |
| Return Time (Hours): | 1.35 | 1.35 |
| Loading Time (Hours): | 5.08 | NA |
| Unloading Time (Hours): | 5.08 | NA |
| Subtotals: | 12.87 | 2.71 |

JOB TIME AND COST

| Total job time: | 25.74 | Hours |
|-----------------|-------|-------|
| | | |

Total job cost: \$215,059

EQUIPMENT MOBILIZATION/DEMOBILIZATION

| Task descript | ion: <u>Mo</u> | bilization - Year | r 4 | | | | | |
|--|--------------------|-------------------|--------------------|---------------------|----------------------------|---------------------|-------------------|----------------------|
| e: Climax Mi | ine | Permit | | Reclama Estimate | | Permit/Job# | #: <u>M</u> | 1977493 |
| PROJECT I | DENTIFICATI | <u>ION</u> | | | | | | |
| Task #: | T04 | State: Co | olorado | | Abbre | eviation: | None | |
| | 9/18/2018 | | ımmit | | | | M493- | T04 |
| User: | 7:42:33 AM JLE | | | | | _ | | |
| Agen | cy or organization | n name: DRMS | | | | | | |
| EOUIPMEN | T TRANSPOR | T RIG COST | | | | | | |
| | ruck Tractor Desc | | DIC ON HIGH | | Shift ba Cost Data Sour | rce: CR | per day RG Dat | a |
| 1 | ruck Tractor Desc | inpuoli: GENE | RIC ON-HIGH | | P (2ND HALF, | | IESEL | POWERED, |
| Т | Truck Trailer Desc | ription: G | ENERIC FOLD | | | , | EOUI | PMENT |
| - | | | | | R (25T, 50T, AN | | -(| |
| Cost Breakdow | vn: | | | | | | | |
| Available Ri | ig Capacities | 0-25 Tons | 26-50 Tons | 51 | + Tons | | | |
| | ship Cost/Hour: | \$16.63 | \$18.37 | | \$22.33 | | | |
| | ting Cost/Hour: | \$44.38 | \$46.13 | | \$50.07 | | | |
| ^ | rator Cost/Hour: | \$27.66 | \$27.66 | | \$27.66 | | | |
| | elper Cost/Hour: | \$0.00 | \$25.39 | | \$25.39 | | | |
| | Unit Cost/Hour: | \$88.67 | \$117.55 | | 125.45 | | | |
| | ABLE EQUIP | | | l | | | | DOED |
| Machine | Weight/ | Owner ship | Haul Rig | Fleet | Haul Trip | Return Tr | | DOT Permit |
| Description | Unit (TONS) | Cost/hr/ unit | Cost/hr/unit | Size | Cost/hr/ fleet | Cost/hr/ f | leet | Cost/ fleet |
| Cat 740 | 36.49 | \$66.13 | \$117.55 | 15 | \$2,755.20 | \$1,763.25 | | \$3,750.00 |
| CAT 950H | 20.13 | \$26.14 | \$88.67 | 3 | \$344.43 | \$266.01 | | \$750.00 |
| Cat D6T XL | 23.25 | \$52.66 | \$88.67 | 3 | \$423.99 | \$266.01 | | \$750.00 |
| Cat D8T - 8SU | J 53.08 | \$102.55 | \$125.45 | 4 | \$912.00 | \$501.80 | | \$1,000.00 |
| Cat D9T - 9SU | | \$123.06 | \$125.45 | 4 | \$994.04 | \$501.80 | | \$1,000.00 |
| Cat D7R DS | 34.57 | \$66.14 | \$117.55 | 5 | \$918.45 | \$587.75 | | \$1,250.00 |
| Series II LGP | | ¢145.47 | ¢105.45 | 1 | ¢070.02 | ¢105.45 | | ¢ 35 0.00 |
| Cat D10T - 10 | | \$145.47 | \$125.45 | 1 | \$270.92 | \$125.45 | | \$250.00 |
| CAT 12M Trash pump - 70MT, 6 in. | 16.01 0.80 | \$30.73 \$6.59 | \$88.67 \$88.67 | 3 | \$358.20 \$95.26 | \$266.01 \$88.67 | | \$750.00 \$250.00 |
| Drill/Broadcas Seeder with Tractor | | \$15.54 | \$88.67 | 4 | \$416.84 | \$354.68 | | \$1,000.00 |
| Power Mulche (Bowie LD-90 | | \$8.33 | \$88.67 | 2 | \$194.00 | \$177.34 | | \$500.00 |

Subtotals: \$7,683.33 \$4,898.77 \$11,250.00

ROADABLE EQUIPMENT:

| Machine Description | Total Cost/hr/ | Fleet Size | Haul Trip | Return Trip |
|--------------------------------|----------------|------------|----------------|----------------|
| | unit | | Cost/hr/ fleet | Cost/hr/ fleet |
| Water Tanker, 5,000 Gal. | \$83.13 | 3 | \$249.39 | \$249.39 |
| Fuel Tanker, 6x4, 210 HP | \$59.64 | 4 | \$238.56 | \$238.56 |
| Light Duty Pickup, 4x4, 3/4 T. | \$77.14 | 5 | \$385.70 | \$385.70 |
| | | Subtotals: | \$873.65 | \$873.65 |

EQUIPMENT HAUL DISTANCE and Time

| Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed: | DENVER 88.00 65.00 | miles mph |
|---|--------------------------|--------------|
| Total Non-Roadable Mob/Demob Cost * | \$212,693.72 | |
| Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig: | \$2,365.58 | _ |

Transportation Cycle Time:

| | Non- Roadable Equipment | Roadable Equipment |
|-------------------------|-------------------------------|-----------------------|
| Haul Time (Hours): | 1.35 | 1.35 |
| Return Time (Hours): | 1.35 | 1.35 |
| Loading Time (Hours): | 5.08 | NA |
| Unloading Time (Hours): | 5.08 | NA |
| Subtotals: | 12.87 | 2.71 |

JOB TIME AND COST

| Total job time: | 25.74 | Hours |
|-----------------|-------|-------|
| | | |

Total job cost: \$215,059

PROJECT IDENTIFICATION

| Task #: | U01 | State: | Colorado | Abbreviation: | None |
|---------|------------|---------|----------|---------------|----------|
| Date: | 9/18/2018 | County: | Summit | Filename: | M493-T04 |
| | 7:42:33 AM | | | | |
| User: | JLE | _ | | | |

Agency or organization name: DRMS

| Task | Description | Hours | Cost |
|------|---|----------|----------------|
| A01 | Storke Complex - Load and haul biosolids to 10 acre area. | 13.21 | \$13,524.00 |
| A02 | Storke Complex, Spread biosolids | 40.33 | \$5,667.00 |
| A03 | Storke Complex, Grading at Storke disturbed areas | 6.11 | \$550.00 |
| B01 | Open Pit, Grade west open pit periphery | 115.44 | \$51,095.00 |
| B02 | Open Pit, load and haul topsoil | 65.14 | \$66,685.00 |
| B03 | Storke Complex, Spread biosolids | 128.43 | \$34,487.00 |
| B04 | Install Signs | 25.29 | \$4,629.31 |
| C01 | Mine Mill Comp. Grade 1' cut/fill across 76.2 acres | 199.04 | \$210,174.00 |
| C02 | Mine Mill Comp. Finish grade Mine/Mill Complex | 24.5 | \$4,413.00 |
| C03 | Mine Mill Comp. Load/Haul Topsoil/Biosolids, 1' Cover | 304.38 | \$265,024.00 |
| C04 | Mine Mill Comp. Spread Topsoil and Biosolids | 133.2 | \$68,561.00 |
| D01a | N40_OSF, X-section A/6, Low Grade Ore, Grade 2H:1V - North | 22.59 | \$11,191.00 |
| D01b | N40_OSF, X-section A/6, Overburden Cut/Fill toe, South Side | 134.81 | \$66,783.00 |
| D01c | N40_OSF, X-section A/6, Low Grade Ore, Cut/Push to 2:1, Sout | 446.96 | \$442,815.00 |
| D01d | N40_OSF, X-section A/6, Low Grade Ore, Cut/Fill - East | 6.08 | \$3,011.00 |
| D01e | N40_OSF, Grade top of OSF/Low Grade Ore Pile, | 144.47 | \$143,131.00 |
| D02a | North 40 OSF. Load/Haul Biosolids, 6" Cover | 320.49 | \$328,102.00 |
| D02b | North 40 OSF. Load/Haul Topsoil, 6" Cover | 347.46 | \$249,357.00 |
| D03 | North 40 OSF, Spread Biosolids and Topsoil | 168.26 | \$105,767.00 |
| E01a | McNulty OSF, Regrade slopes 2:1, 11,840 ft Top Bench | 1,337.72 | \$1,391,472.00 |
| E01b | McNulty, Regrade slopes 2:1, 11,840 ft Top Bench NW Side | 933.74 | \$971,264.00 |
| E01c | McNulty, Regrade top level at11,840 ft Top Bench | 584.03 | \$607,497.00 |
| E02a | McNulty OSF. Load/Haul Topsoil, 6" Cover | 707.67 | \$507,866.00 |
| E02b | McNulty OSF. Load/Haul Biosolids, 6" Cover | 639 | \$751,977.00 |
| E03 | North 40 OSF, Spread Biosolids and Topsoil | 335.48 | \$210,880.00 |
| E04 | Construct Post-Mining Channels | 7,490.65 | \$2,282,409.08 |

| F01 | Tenmile TSF, Place geogrid on wet cover area, 113.5 acres | 1,757.89 | \$2,818,114.00 |
|------|--|-----------|----------------|
| F02 | Tenmile TSF, Load and Haul Subsoil for Wet Cover Area | 1,194.69 | \$1,405,924.00 |
| F02a | Tenmile TSF, Load and Haul Topsoil for Wet Cover Area | 238.94 | \$281,186.00 |
| F03 | Tenmile TSF, Spread Subsoil | 530.9 | \$442,756.00 |
| F03a | Tenmile TSF, Spread Biosolids and Topsoil | 64.09 | \$53,451.00 |
| F04 | Tenmile TSF, Load and Haul Subsoil for Dry Cover Area | 673.62 | \$792,720.00 |
| F04a | Tenmile TSF, Load and Haul Topsoil/BioS. for Dry Cover Area | 673.62 | \$792,720.00 |
| F05 | Tenmile TSF, Spread Subsoil, Dry Cover | 106.18 | \$88,552.00 |
| F05a | Tenmile TSF, Spread Topsoil/Subsoil, Dry Cover | 64.09 | \$53,451.00 |
| G01 | Tenmile Tunnel, Bulkhead Closure | 0 | \$1,588,949.78 |
| G02 | Tenmile Tunnel; Dredge and Pump Sludge to Tunnel | 388.25 | \$87,098.00 |
| G03 | Tenmile Tunnel, Install Checkdams | 0 | \$9,088.09 |
| H01a | 3 Dam, Load and Haul Topsoil to 3 Dam Rise | 19.1 | \$19,558.00 |
| H01b | 3 Dam, Load and Haul Biosolids to 3 Dam Rise | 18.19 | \$21,405.00 |
| H02 | 3 Dam, Spread Topsoil and Biosolids over 3 Dam Rise | 53.09 | \$9,109.00 |
| I01 | Pond Shop, Grading | 10.8 | \$2,390.00 |
| I02 | Pond Shop, Load and Haul topsoil to Pond Shop | 1.61 | \$1,156.00 |
| I03 | Pond Shop, Spread topsoil | 2.62 | \$471.00 |
| J01a | Mayflower TSF, Load and Haul Subsoil to TSF | 526.57 | \$619,671.00 |
| J01b | Mayflower TSF, Load and Haul Topsoil to TSF | 526.57 | \$619,671.00 |
| J02a | Mayflower TSF, Spread Subsoil | 502.21 | \$209,416.00 |
| J02b | Mayflower TSF, Spread Topsoil | 303.15 | \$126,408.00 |
| J03 | Mayflower TSF, Finish Grade the Top Surface | 78.47 | \$14,130.00 |
| K01 | East Side Channel Construction | 14,774.41 | \$5,432,963.76 |
| K02 | East Side Channel, Install East Side Pipeline | 1,312.94 | \$4,941,648.00 |
| L01 | Mayflower Acid, Grade Site | 100.81 | \$44,227.00 |
| L02a | Mayflower Acid, Load and Haul Subsoil to site | 1.48 | \$1,292.00 |
| L02b | Mayflower Acid, Load and Haul Topsoil | 1.48 | \$1,292.00 |
| L03a | Mayflower Acid, Spread Subsoil | 5.06 | \$869.00 |
| L03b | Mayflower Acid, Spread Topsoil | 3.06 | \$524.00 |
| M01 | Robinson TSF, Load and Haul Topsoil | 296.32 | \$212,656.00 |
| M02 | Robinson TSF, Spread Topsoil/Biosolids | 291.27 | \$78,213.00 |
| N01 | 1 Dam, Load and Haul Topsoil/Biosolids | 85.68 | \$74,602.00 |
| N02 | 1 Dam, Spread Topsoil/Biosolids | 101.76 | \$27,325.00 |
| O01 | Roads; rip switchback access roads from McNulty OSF to LBM | 17.29 | \$5,548.00 |
| O02 | Roads; rip other site roads | 17.91 | \$8,071.00 |
| O03 | Roads, Load and Haul Topsoil/Biosolids | 129.54 | \$112,792.00 |
| O04 | Roads, Spread Topsoil/Biosolids | 153.85 | \$41,313.00 |

| P01 | Robinson Lake, sediment removal | 0 | \$2,333,570.00 |
|------|--|----------------|-----------------|
| Q01a | 5 Dam, Load and Haul Subsoil to site | 116.72 | \$137,358.00 |
| Q01b | 5 Dam, Load and haul topsoil to site | 116.72 | \$137,358.00 |
| Q02a | 5 Dam, Spread Subsoil | 121.44 | \$50,637.00 |
| Q02b | 5 Dam, Spread Topsoil | 73.3 | \$30,566.00 |
| R01 | Revegetation, Seeding Standard Mixture | 1,466.00 | \$2,464,632.00 |
| R02 | Revegetation, Seeding Standard Mixture - Steep Slope | 263 | \$944,019.00 |
| R03 | Revegetation, Seeding Alpine | 227 | \$300,208.00 |
| R04 | Revegetation, Seeding Alpine - Steep Slope | 475 | \$1,364,224.00 |
| R05 | Revegetation, Seeding - Wetland | 25 | \$30,868.00 |
| S01 | Seal Underground Mine Opening | 30 | \$1,804.96 |
| T01 | Mobilization - Year 1 | 25.73 | \$215,059.00 |
| T02 | Mobilization - Year 2 | 25.73 | \$215,059.00 |
| T03 | Mobilization - Year 3 | 25.73 | \$215,059.00 |
| T04 | Mobilization - Year 4 | 25.73 | \$215,059.00 |
| | | | \$ |
| | <u>Subtotals:</u> | 42719.09 | 38,494,542.98 |
| | Total AM06 Disturbed Acres: | 7908 | |
| | <u>Approximate Hours/CostPer Acre:</u> | 5.4 | \$ 4,867.80 |
| | Buffer Zone Acres: | 550 | |
| | <u>Task U01 Total:</u> | <u>2971.11</u> | \$ 2,677,288.65 |

| Hydrologic Protection | | Climax Mine | M-1977-493 | | | | Date_ | <u>18-Sep-18</u> | |
|--|----------------|------------------|-----------------|-------------------|-------------------|------------------|-------------------------|--------------------|--------------------|
| | | | | | | | | | |
| Task No. V01 | | 2016 Reclamation | n Cost Estimate | | | | Assume: 10,000 a | c-ft per year trea | tment_ |
| | | | | | | | | | |
| | | | | \$ Total Cost / | \$ Total Cost - 5 | Total Cost - 8 | \$ Total Cost - 10 | \$ Total Cost - 15 | \$ Total Cost - 20 |
| Specific Task | Quantity | Unit | \$/Unit | Year | Years | Years | Years | Years | Years |
| Labor (water/maintenance/electrician) (8 FTE per Year) | 8 | FTE | \$ 60,000.0 | 0 \$ 480,000.00 | \$ 2,400,000.00 | \$ 3,840,000.00 | \$ 4,800,000.00 | \$ 7,200,000.00 | \$ 9,600,000.00 |
| Site Supervisor (1 FTE per Year) | 1 | FTE | \$ 80,000.0 | 0 \$ 80,000.00 | \$ 400,000.00 | \$ 640,000.00 | \$ 800,000.00 | \$ 1,200,000.00 | \$ 1,600,000.00 |
| Lime (11,300 Ton per Year) | 11300 | Ton | \$ 150.0 | 0 \$ 1,695,000.00 | \$ 8,475,000.00 | \$13,560,000.00 | \$16,950,000.00 | \$ 25,425,000.00 | \$ 33,900,000.00 |
| Sulfuric Acid (4 Load per Year) | 4 | Loads | \$ 7,500.0 | 0 \$ 30,000.00 | \$ 150,000.00 | \$ 240,000.00 | \$ 300,000.00 | \$ 450,000.00 | \$ 600,000.00 |
| Other Reagents (polymer) (40k Lbs per Year) | 40000 | lbs | \$ 2.2 | 5 \$ 90,000.00 | \$ 450,000.00 | \$ 720,000.00 | \$ 900,000.00 | \$ 1,350,000.00 | \$ 1,800,000.00 |
| Power | 1 | Year | \$ 675,000.0 | 0 \$ 675,000.00 | \$ 3,375,000.00 | \$ 5,400,000.00 | \$ 6,750,000.00 | \$10,125,000.00 | \$13,500,000.00 |
| Natural Gas | 1 | Year | \$ 315,000.0 | 0 \$ 315,000.00 | \$ 1,575,000.00 | \$ 2,520,000.00 | \$ 3,150,000.00 | \$ 4,725,000.00 | \$ 6,300,000.00 |
| Vehicle | 1 | Unit | \$ 15,000.0 | 0 \$ 15,000.00 | \$ 75,000.00 | \$ 120,000.00 | \$ 150,000.00 | \$ 225,000.00 | \$ 300,000.00 |
| Loader (1 Loader) | 1 | Unit | \$ 60,000.0 | 0 \$ 60,000.00 | \$ 300,000.00 | \$ 480,000.00 | \$ 600,000.00 | \$ 900,000.00 | \$ 1,200,000.00 |
| Outside Services | 1 | Year | \$ 50,000.0 | 0 \$ 50,000.00 | \$ 250,000.00 | \$ 400,000.00 | \$ 500,000.00 | \$ 750,000.00 | \$ 1,000,000.00 |
| Pump Maintenance | 1 | Year | \$ 200,000.0 | 0 \$ 200,000.00 | \$ 1,000,000.00 | \$ 1,600,000.00 | \$ 2,000,000.00 | \$ 3,000,000.00 | \$ 4,000,000.00 |
| Road Maintenance | 1 | Year | \$ 150,000.0 | 0 \$ 150,000.00 | \$ 750,000.00 | \$ 1,200,000.00 | \$ 1,500,000.00 | \$ 2,250,000.00 | \$ 3,000,000.00 |
| Building Maintenance | 1 | Year | \$ 150,000.0 | 0 \$ 150,000.00 | \$ 750,000.00 | \$ 1,200,000.00 | \$ 1,500,000.00 | \$ 2,250,000.00 | \$ 3,000,000.00 |
| Electrical Maintenance | 1 | Year | \$ 100,000.0 | 0 \$ 100,000.00 | \$ 500,000.00 | \$ 800,000.00 | \$ 1,000,000.00 | \$ 1,500,000.00 | \$ 2,000,000.00 |
| | | | TOTAL | \$ 4,090,000.00 | \$ 20,450,000.00 | \$ 32,720,000.00 | \$40,900,000.00 | \$ 61,350,000.00 | \$ 81,800,000.00 |
| | | | | | | | | | |
| | | | | | | | Proposed Amoun | <u>t</u> | |
| Reduced Amount to Treat | Cost Per Year | *8 Year Plan | 10 Years | 15 Years | 20 Years | 8 Year Full | <u>10 year Full</u> | | |
| 8,100 Acre-Feet (5 Years) | \$3,312,900.00 | \$ 16,564,500.00 | \$ 16,564,500.0 | 0 \$16,564,500.00 | \$ 16,564,500.00 | \$ 26,503,200.00 | <u>\$ 33,129,000.00</u> | | |
| 3570 Acre Feet (3 Years) | \$1,460,130.00 | \$ 4,380,390.00 | \$ 7,300,650.0 | 0 \$14,601,300.00 | \$ 21,901,950.00 | | | | |
| Total | | \$ 20,944,890.00 | \$ 23,865,150.0 | 0 \$31,165,800.00 | \$ 38,466,450.00 | | | | |

SITE MAINTENANCE

| k description: | Maintenanc | e and Environr | nental Control | | | |
|----------------|---|--|---|---|--|---|
| imax Mine | | Permit Action: | 2016 Reclamation Cost Estimate | Permit | t/Job#: <u>M1977493</u> | |
| IDENTIFICATION | <u>1</u> | | | | | |
| W01 | State: | Colorado | | Abbreviation: | None | |
| 9/18/2018 | County: | Summit | | Filename: | M493-W01 | |
| 8:42:08 AM | | | | | | |
| JLE | | | | | | |
| j | imax Mine IDENTIFICATION W01 9/18/2018 8:42:08 AM | imax Mine IDENTIFICATION W01 State: 9/18/2018 County: 8:42:08 AM | Imax Mine Permit Action: IDENTIFICATION State: Colorado 9/18/2018 County: Summit 8:42:08 AM State: Summit | imax Mine Permit Action: 2016 Reclamation Cost Estimate IDENTIFICATION State: Colorado 9/18/2018 County: Summit 8:42:08 AM State: Colorado | imax Mine Permit Action: 2016 Reclamation Cost Estimate Permit IDENTIFICATION Colorado Abbreviation: Filename: 9/18/2018 County: Summit 8:42:08 AM Filename: Filename: | Permit Action: 2016 Reclamation Cost Estimate Permit/Job#: M1977493 IDENTIFICATION State: Colorado Abbreviation: None 9/18/2018 County: Summit Filename: M493-W01 8:42:08 AM County: Summit M1977493 |

UNIT COSTS

| Maintenance Item | Hours per Year | Menu Selection | Quantity | Unit | Unit Cost | Total Cost |
|----------------------|-------------------|----------------|----------|------|--------------|--------------|
| Rill and Gully | 80.00 | USER PROVIDED | 1.00 | 1 | \$33,585.00 | \$33,585.00 |
| Maintenance | | ITEM | | | | |
| Road Maintenance | 80.00 | USER PROVIDED | 1.00 | 1 | \$31,687.00 | \$31,687.00 |
| | | ITEM | | | | |
| Dust Control | 80.00 | USER PROVIDED | 1.00 | 1 | \$37,637.00 | \$37,637.00 |
| | | ITEM | | | | |
| Interceptor Drainage | 80.00 | USER PROVIDED | 1.00 | 1 | \$418,268.00 | \$418,268.00 |
| Control | | ITEM | | | | |

Job Hours: 0.00

Total Cost: \$521,177.00

DEMOLITION WORK

| Site: C | limax Mine | | Permit Action: | 2016 Reclamation Cost Estimate | Permit | /Job#: | M1977493 |
|---------------------------|-------------------------|-------------------|--------------------|-----------------------------------|----------------------------|--------------|----------|
| ROJECI | IDENTIFICATI | <u>ON</u> | | | | | |
| Task #: Date: User: | X01 9/20/2018 JLE | State: County: | Colorado Summit | | Abbreviation: Filename: | None M493 | -X01 |
| | Agency or organ | ization name: | DRMS | | | | |

UNIT COSTS

| Structure or Item Description | Dimensions | Demolition Menu Selection | Quantity | Unit | Unit Cost | Total Cost |
|------------------------------------|------------|---|--------------|------|--------------|--------------|
| Demolish 6 CRUSHER SWCH HSE | 80x38x15 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 45,600.00 | CF | \$0.19 | \$8,572.80 |
| Demolish MILL LIME SILO | 60x16x16 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 15,360.00 | CF | \$0.19 | \$2,887.68 |
| Demolish 6 CRUSHER SECONDARY | 160x90x87 | Plant (3S) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul | 1,252,800.00 | CF | \$0.27 | \$334,497.60 |
| Demolish 6 CRUSHER PRIMARY | 60x110x72 | Plant (3S) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul | 475,200.00 | CF | \$0.27 | \$126,878.40 |
| Demolish 6 CRUSHER OFFICE | 30x72x16 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 34,560.00 | CF | \$0.19 | \$6,497.28 |
| Demolish COVERED STORAGE | 60x25x14 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 21,000.00 | CF | \$0.19 | \$3,948.00 |
| Demolish TENMILE TUNNEL SHOP | 34x26x16 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 14,144.00 | CF | \$0.19 | \$2,659.07 |
| Demolish TENMILE TUNL OFC | 50x20x12 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 12,000.00 | CF | \$0.19 | \$2,256.00 |
| Demolish TENMILE TUNL CMP HSE | 18x18x12 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 3,888.00 | CF | \$0.19 | \$730.94 |
| Demolish TENMILE TUNL DMP HSE | 40x12x10 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 4,800.00 | CF | \$0.19 | \$902.40 |

| Demolish POND SHOP | 60x40x20 | Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 48,000.00 | CF | \$0.21 | \$9,984.00 |
|---|------------|---|-----------|----|---------|-------------|
| Demolish POND SHOP DOCKS | 200x20x3 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 12,000.00 | CF | \$0.19 | \$2,256.00 |
| Demolish TENMILE COHEREX STA | 22x40x10 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 8,800.00 | CF | \$0.19 | \$1,654.40 |
| Demolish 6 CRUSHER SWCH HSE- Floor | 80x38 | Demo. and on-site disposal in existing pit, 10 in. thick - Max. 10,000 ft. haul | 3,040.00 | SF | \$1.38 | \$4,201.28 |
| Demolish 6 CRUSHER SWCH HSE- Footing | 1.5Tx2W | Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 10,000 ft. haul | 236.00 | LF | \$5.23 | \$1,234.28 |
| Demolish 6 CRUSHER OFFICE - Floor | 30x72x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 2,160.00 | SF | \$1.11 | \$2,388.96 |
| Demolish 6 CRUSHER OFFICE - Footings | 1.5Tx2W | Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft Max. 10,000 ft. haul | 204.00 | LF | \$3.49 | \$711.96 |
| Demolish 6 CRUSHER PRIMARY - Floor | 60x110x12" | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul | 6,600.00 | SF | \$1.66 | \$10,949.40 |
| Demolish 6 CRUSHER SECONDARY - Floor | 160x90X12" | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul | 14,400.00 | SF | \$1.66 | \$23,889.60 |
| Demolish 6 CRUSHER SECONDARY - Footing | 2Tx3W | Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft Max. 10,000 ft. haul | 500.00 | LF | \$10.46 | \$5,230.00 |
| Demolish COVERED STORAGE - Floor | 60x25x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 1,500.00 | SF | \$1.11 | \$1,659.00 |
| Demolish COVERED STORAGE - Footing | 1.5Tx2W | Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft Max. 10,000 ft. haul | 170.00 | LF | \$3.49 | \$593.30 |
| Demolish MILL LIME SILO - Floor | 60x16x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 960.00 | SF | \$1.11 | \$1,061.76 |
| Demolish MILL LIME SILO - Footing | 1Tx2W | Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft Max. 10,000 ft. haul | 152.00 | LF | \$3.49 | \$530.48 |
| Demolish POND SHOP - Floor | 60x40x8" | Demo. and on-site disposal in existing pit, | 2,400.00 | SF | \$1.11 | \$2,654.40 |

| | | 8 in. thick - Max. 10,000 ft. haul | | | | |
|---|------------|---|---------------|----|--------|----------------|
| Demolish POND SHOP - Footing | 1.5Tx2W | Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 10,000 ft. haul | 200.00 | LF | \$5.23 | \$1,046.00 |
| Demolish TENMILE COHEREX STA - Floor | 22x40x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 880.00 | SF | \$1.11 | \$973.28 |
| Demolish TENMILE COHEREX STA - Footing | 1.5Tx2W | Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 10,000 ft. haul | 124.00 | LF | \$5.23 | \$648.52 |
| Demolish TENMILE TUNL CMP HSE - Floor | 18x16X8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 324.00 | SF | \$1.11 | \$358.34 |
| Demolish TENMILE TUNL CMP HSE - Footing | 1.5Tx2W | Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 10,000 ft. haul | 72.00 | LF | \$5.23 | \$376.56 |
| Demolish TENMILE TUNL DMP HSE - Floor | 40x12x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 480.00 | SF | \$1.11 | \$530.88 |
| Demolish TENMILE TUNL DMP HSE - Footing | 1.5Tx2W | Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 10,000 ft. haul | 104.00 | LF | \$5.23 | \$543.92 |
| Demolish TENMILE TUNNEL SHOP - Floor | 34x26x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 884.00 | SF | \$1.11 | \$977.70 |
| Demolish TENMILE TUNNEL SHOP - Footing | 1.5Tx2W | Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 10,000 ft. haul | 120.00 | LF | \$5.23 | \$627.60 |
| Demolish DOMESTIC WATER PLANT- SUPERSTRUCTURE | 45X81X24 | Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 87,480.00 | CF | \$0.21 | \$18,195.84 |
| Demolish DOMESTIC WATER PLANT- SUPERSTRUCTURE - Floor | 45x81x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 3,645.00 | SF | \$1.11 | \$4,031.37 |
| Demolish DOMESTIC WATER PLANT- SUPERSTRUCTURE - Footing | 1Tx2W | Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft Max. 10,000 ft. haul | 252.00 | LF | \$3.49 | \$879.48 |
| Demolish 3 MILL - SUPERSTRUCTURE | 725X180X80 | Plant (3S) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul | 10,440,000.00 | CF | \$0.27 | \$2,787,480.00 |
| Demolish 3 MILL - Floor | 725x18x12" | Demo. and on-site disposal in existing pit, | 130,500.00 | SF | \$1.66 | \$216,499.50 |

| | | 12 in. thick - Max. 10,000 ft. haul | | | | |
|--|-----------|---|------------|----|---------|-------------|
| Demolish 3 MILL - Footing | 2Tx3W | Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft Max. 10,000 ft. haul | 1,810.00 | LF | \$10.46 | \$18,932.60 |
| Demolish GATEHOUSE - Superstructure | 64x40x10 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 25,600.00 | CF | \$0.19 | \$4,812.80 |
| Demolish GATEHOUSE - Floor | 64x40x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 2,560.00 | SF | \$1.11 | \$2,831.36 |
| Demolish GATEHOUSE - Footing | 1.5Tx2W | Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 10,000 ft. haul | 206.00 | LF | \$5.23 | \$1,077.38 |
| Demolish PHILLIPSON MAPP GAS HOUSE - Superstructure | 20x45x8 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 7,200.00 | CF | \$0.19 | \$1,353.60 |
| Demolish PHILLIPSON MAPP GASS HSE - Floor | 20x45x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 900.00 | SF | \$1.11 | \$995.40 |
| Demolish PHILLIPSON MAPP GASS HOUSE - Footing | 1.5Tx2W | Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 10,000 ft. haul | 130.00 | LF | \$5.23 | \$679.90 |
| Demolish OPEN PIT FUEL TANKS | 100x25x8 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 20,000.00 | CF | \$0.19 | \$3,760.00 |
| Demolish OPEN PIT FUEL TANKS - Floor | 100x25x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 2,500.00 | SF | \$1.11 | \$2,765.00 |
| Demolish OPEN PIT FUEL TANKS - Footing | 1.5Tx2W | Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 10,000 ft. haul | 250.00 | LF | \$5.23 | \$1,307.50 |
| Demolish DOMESTIC WATER TANK | 44x44x40 | Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 77,440.00 | CF | \$0.21 | \$16,107.52 |
| Demolish DOMESTIC WATER TANK - Floor | 44x44x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 1,936.00 | SF | \$1.11 | \$2,141.22 |
| Demolish DOMESTIC WATER TANK - Footing | 1.5Tx2W | Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 10,000 ft. haul | 176.00 | LF | \$5.23 | \$920.48 |
| Demolish PHILLIPSON WAREHOUSE | 76x94x42 | Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 300,048.00 | CF | \$0.21 | \$62,409.98 |

| Demolish PHILLIPSON WAREHOUSE - Floor | 76x94x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 7,144.00 | SF | \$1.11 | \$7,901.26 |
|--|-------------------|---|------------------|----------|-------------------|--------------|
| Demolish PHILLIPSON WAREHOUSE - Footing | 1.5Tx3W | Demo. and on-site disposal in existing pit, 1.5 ft. x 3 ft Max. 10,000 ft. haul | 340.00 | LF | \$7.85 | \$2,669.00 |
| Demolish OPEN PIT PHASE 1 SHOP | 146x56x52 | Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 425,152.00 | CF | \$0.21 | \$88,431.62 |
| Demolish OPEN PIT PHASE 1 SHOP - Floor | 146x56x12" | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul | 8,176.00 | SF | \$1.66 | \$13,563.98 |
| Demolish OPEN PIT PHASE 1 SHOP - Footing Demolish OPEN PIT OFFICES | 2Tx3W 40x80x25 | Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft Max. 10,000 ft. haul Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 404.00 80,000.00 | LF CF | \$10.46 \$0.21 | \$4,225.84 |
| Demolish OPEN PIT OFFICES - Floor | 40x80x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 3,200.00 | SF | \$1.11 | \$3,539.20 |
| Demolish OPEN PIT OFFICES - Footing | 1.5Tx2W | Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 10,000 ft. haul | 240.00 | LF | \$5.23 | \$1,255.20 |
| Demolish OPEN PIT PHASE 2 SHOP | 400x80x70 | Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 2,464,000.00 | CF | \$0.21 | \$512,512.00 |
| Demolish OPEN PIT PHASE 2 SHOP - Floor | 400x80x12" | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul | 35,200.00 | SF | \$1.66 | \$58,396.80 |
| Demolish OPEN PIT PHASE 2 SHOP - Footing | 2Tx3W | Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft Max. 10,000 ft. haul | 1,040.00 | LF | \$10.46 | \$10,878.40 |
| Demolish OPEN PIT WASH BAY | 90x105x60 | Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 567,000.00 | CF | \$0.21 | \$117,936.00 |
| Demolish OPEN PIT WASH BAY - Floor | 90x105x12" | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul | 9,450.00 | SF | \$1.66 | \$15,677.55 |
| Demolish OPEN PIT WASH BAY - Footing | 2Tx3w | Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft Max. 10,000 ft. haul | 390.00 | LF | \$10.46 | \$4,079.40 |

| | | | | Total Cost | |
|------------|----------|---------------|----------------|---------------|----------------|
| | | Subtotal | | (adjusted for | |
| Job Hours: | 50960.26 | (unadjusted): | \$4,569,798.97 | location): | \$4,382,437.21 |

Task # A01

DEMOLITION WORK

| Site: C | limax Mine | | Permit Action: | 2016 Reclamation Cost Estimate | Permit | /Job#: <u>N</u> | A1977493 |
|---------|----------------------|-----------|----------------|-----------------------------------|---------------|-----------------|----------|
| ROJECT | <u> IDENTIFICATI</u> | <u>ON</u> | | | | | |
| Task #: | X02 | State: | Colorado | | Abbreviation: | None | |
| Date: | 9/20/2018 | County: | Summit | | Filename: | M493-X | K02 |
| | 9:51:59 AM | | | | | | |
| User: | JLE | | | | | | |

UNIT COSTS

Location adjustment: 95.90 %

| Structure or Item Description | Dimensions | Demolition Menu Selection | Quantity | Unit | Unit Cost | Total Cost |
|---|------------|---|-----------|------|--------------|------------|
| CHALK MTN PUMP HOUSE- SUPERSTRUCTURE | 25x25x20 | Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 12,500.00 | CF | \$0.21 | \$2,600.00 |
| CHALK MTN PUMP HOUSE- SUPERSTRUCTURE - Floor | 25x25x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 625.00 | SF | \$1.11 | \$691.25 |
| CHALK MTN PUMP HOUSE- SUPERSTRUCTURE - Footing | 1.5Tx2W | Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 10,000 ft. haul | 100.00 | LF | \$5.23 | \$523.00 |
| OPEN PIT SHOP SUB- SUPERSTRUCTURE | 25x25x15 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 9,375.00 | CF | \$0.19 | \$1,762.50 |
| OPEN PIT SHOP SUB- SUPERSTRUCTURE - Floor | 25x25x8" | Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul | 625.00 | SF | \$1.11 | \$691.25 |
| CHALK MOUNTAIN / ROBINSON LAKE SUB | 20x8x8 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 1,280.00 | CF | \$0.19 | \$240.64 |
| CAVR SUBSTATION- SUPERSTRUCTURE | 28x20x15 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 8,400.00 | CF | \$0.19 | \$1,579.20 |
| CAVR SUBSTATION- SUPERSTRUCTURE - Floor | 10x20x12" | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul | 200.00 | SF | \$1.66 | \$331.80 |
| OLD HOSPITAL SUB- SUPERSTRUCTURE | 60x30x8 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 14,400.00 | CF | \$0.19 | \$2,707.20 |
| OLD HOSPITAL SUB- SUPERSTRUCTURE - Floor | 44x8x12" | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul | 325.00 | SF | \$1.66 | \$539.18 |
| DOMESTIC WATER SUB- WOOD STRUCTURE | 20x20x8 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 3,200.00 | CF | \$0.19 | \$601.60 |
| DOMESTIC WATER SUB- WOOD STRUCTURE - Floor | 8x4x12" | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul | 32.00 | SF | \$1.66 | \$53.09 |
| IRECO PLANT SUB- SUPERSTRUCTURE | 20x20x8 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 3,200.00 | CF | \$0.19 | \$601.60 |
| IRECO PLANT SUB- SUPERSTRUCTURE - Floor | 12x12x6" | Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul | 144.00 | SF | \$0.83 | \$119.38 |

| TAILING | 8x8x8 | Bldg. (SN) demo./on- | 512.00 | CF | \$0.19 | \$96.26 |
|------------------|----------|---------------------------|----------|----|----------|------------|
| DELIVERY HOUSE | | site disposal in existing | | | | · |
| SUBSTATION | | pit or cut - Max. 10,000 | | | | |
| | | ft. haul | | | | |
| TAILING | 8x8x18" | Demo. and on-site | 64.00 | SF | \$1.66 | \$106.18 |
| DELIVERY HOUSE | | disposal in existing pit, | | | | |
| SUBSTATION - | | 12 in. thick - Max. | | | | |
| Containment Cell | | 10,000 ft. haul | | | | |
| OPEN PIT UTIL | 21 Poles | Utility Poles, Wood 35' | 21.00 | EA | \$258.00 | \$5,418.00 |
| LINES- 21 POLES | | - 45' high (each pole) | | | | |
| OPEN PIT UTIL | 4977 LF | Disposal of utility pole | 4,977.00 | LF | \$0.01 | \$49.77 |
| LINES-21 POLES - | | cross arms and | | | | |
| Line | | hardware surplus | | | | |
| | | material | | | | |
| TAILING UTILITY | 25 Poles | Utility Poles, Wood 35' | 25.00 | EA | \$258.00 | \$6,450.00 |
| LINE- 25 POLES | | - 45' high (each pole) | | | | |
| TAILING UTILITY | 5925 LF | Disposal of utility pole | 5,295.00 | LF | \$0.01 | \$52.95 |
| LINE- 25 POLES - | | cross arms and | | | | |
| Line | | hardware surplus | | | | |
| | | material | | | | |

| | | | | Total Cost | |
|------------|--------|---------------|-------------|---------------|-------------|
| | | Subtotal | | (adjusted for | |
| Job Hours: | 359.07 | (unadjusted): | \$25,214.85 | location): | \$24,181.04 |

DEMOLITION WORK

| Task description | on: Dem | olition 3- New Structure | es | | | | |
|---|--------------------|---|-----------------------------------|----------------|------------------------------------|----------------|--|
| Site: Climax Mine | | Permit Action: | 2016 Reclamation Cost Estimate | | Permit/Job#: <u>M1977493</u> | | |
| PROJECT IDENTI | FICATION | | | | | | |
| Task #: X03 Date: 9/20/2018 10:06:14 | | State: <u>Colorado</u> ounty: Summit | | Abbrev File | iation: <u>None</u> ename: M493 | -X03 | |
| User: JLE | or organization na | me: DRMS | | | | | |
| UNIT COSTS | or organization na | | | Loca | tion adjustment | : 95.90 % | |
| Structure or Item | | Demolition Menu | | | Unit Cost | Total Cost | |
| Description | Dimensions | Selection | Quantity | Unit | | | |
| Explosives Shed (Powder Storage) | 13x8x8 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 640.00 | CF | \$0.19 | \$120.32 | |
| Train Shack at Ten Mile North Portal | 50x20x14 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 10,769.23 | CF | \$0.19 | \$2,024.62 | |
| Mayflower Coherex Station | 7x8x19 | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 1,064.00 | CF | \$0.19 | \$200.03 | |
| Mayflower Coherex Station - Floor | 36x30x2 | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul | 2,160.00 | SF | \$1.66 | \$3,583.44 | |
| Mayflower Coherex Station - Floor 2 | 50x30x1 | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul | 1,500.00 | SF | \$1.66 | \$2,488.50 | |
| Supply Canal No. 2 Pipeline - Pipe grouting | 393 CF | USER PROVIDED ITEM | 393.00 | CF | \$34.00 | \$13,362.00 | |
| Mill Return Pipeline - Pipe grouting | 56 CF | USER PROVIDED ITEM | 56.00 | CF | \$34.00 | \$1,904.00 | |
| Supply Canal No. 2 Pipeline - 3 Dam, Concrete Footing | 80x2x8 | Slab on grade, concrete, demolition only - Rod reinforcing | 47.41 | CY | \$156.50 | \$7,419.67 | |
| Mayflower Flood Bypass Tunnel | 10x10x35((x2) | USER PROVIDED ITEM | 2.00 | Each | \$265,000.00 | \$530,000.00 | |
| New Mill Bldg | 1105x805x320 | Plant (3S) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 11,497,500.00 | CF | \$0.27 | \$3,069,832.50 | |
| 3 Dam Pumpstation | 63x30x30 | Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 56,700.00 | CF | \$0.21 | \$11,793.60 | |

| Coarse Ore Dome Unknown USER I ITEM | | USER PROVIDED ITEM | 1.00 | LS | \$250,000.00 | \$250,000.00 |
|---|---|---|------------|----|--------------|--------------|
| New Scale House | site disposal in existing pit or cut - Max. 10,000 ft. ha | | 20,480.00 | CF | \$0.21 | \$4,259.84 |
| 5-Dam Powerline | 2500 LF | Disposal of utility pole and hardware surplus material | 2,500.00 | LF | \$0.02 | \$50.00 |
| 5 Dam Utility Poles 13 | | Utility Poles, Wood 35' - 45' high (each pole) | 13.00 | EA | \$258.00 | \$3,354.00 |
| Raw Water Tank 64x64x66 | | Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 270,336.00 | CF | \$0.21 | \$56,229.89 |
| Raw Water Tank - Floor | 64x64x12" | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul | 8,192.00 | SF | \$1.66 | \$13,590.53 |
| Mill Water Tank | | | 270,336.00 | CF | \$0.21 | \$56,229.89 |
| Mill Water Tank - Floor66x64x12"Demo. and on disposal in exi pit, 12 in. thick | | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul | 8,192.00 | SF | \$1.66 | \$13,590.53 |
| Mayflower Cyclone Station | 22x26x18 | Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul | 10,296.00 | CF | \$0.21 | \$2,141.57 |
| Mayflower Cyclone Station - Floor | 22x26x12" | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul | 1,144.00 | SF | \$1.66 | \$1,897.90 |

| | | | | Total Cost | |
|------------|----------|---------------|----------------|-------------------|----------------|
| | | Subtotal | | (adjusted for | |
| Job Hours: | 36693.04 | (unadjusted): | \$4,044,072.83 | location): | \$3,878,265.84 |

Task # A01

DEMOLITION WORK

| Site: <u>C</u> | limax Mine | Permit Action | 2016 Reclamation Cost Estimate | Permi | t/Job#: <u>M1977493</u> |
|----------------|---------------------|-----------------|-----------------------------------|---------------|-------------------------|
| OJECT | <u>IDENTIFICATI</u> | <u>ON</u> | | | |
| Task #: | Y01 | State: Colorado | | Abbreviation: | None |
| Date: | 9/20/2018 | County: Summit | | Filename: | M493-Y01 |
| | 11:41:56 AM | - | | | |
| | | | | | |

UNIT COSTS

Location adjustment: 95.90 %

| Structure or Item Description | Dimensions | Demolition Menu Selection | Quantity | Unit | Unit Cost | Total Cost |
|---|------------|--|-----------|------|--------------|-------------|
| POLYCHLORINATED | 156 | USER | 156.00 | EA | \$601.25 | \$93,795.00 |
| BIPHENYL | Capacitors | PROVIDED ITEM | | | | |
| RADIATION SOURCES | 25 | USER PROVIDED ITEM | 25.00 | EA | \$1,000.00 | \$25,000.00 |
| Reagents (Various see Climax Estimate) | 19816 | Hazardous waste removal - Bulk liquids, large quantities (over 2,500 gal.) | 19,816.00 | GAL | \$2.38 | \$47,162.08 |
| pH Adjustment | 56 | USER PROVIDED ITEM | 56.00 | Ton | \$1.50 | \$84.00 |
| Flocculent | 2063 | USER PROVIDED ITEM | 2,063.00 | lbs | \$1.50 | \$3,094.50 |

| | | | | Total Cost | |
|------------|------|---------------|--------------|-------------------|--------------|
| | | Subtotal | | (adjusted for | |
| Job Hours: | 0.00 | (unadjusted): | \$169,135.58 | location): | \$162,201.02 |