

April 23, 2020

Cita Cisse CEMEX, Inc. P.O. Box 529 Lyons, CO 80540

Re: Dowe Flats Mine, Permit No. M-1993-041, Technical Revision No. 4 (TR-04), Adequacy Review No. 3 - Bond Estimate

Mr. Cisse:

The Division of Reclamation, Mining and Safety (Division) has completed its adequacy review of all materials submitted for Technical Revision No. 4 (TR-04). The Division has calculated the required financial warranty for the site based on the proposed reclamation plan (see enclosed bond estimate).

Please review the enclosed bond estimate and submit any comments at your earliest convenience. If the Division receives no comments from you by the TR-04 decision date of **May 10, 2020**, and no extension has been requested by that time, TR-04 will be approved and a notice of surety increase will be issued in the amount of \$10,034,774.00. You will have 60 days from the date of the notice of surety increase to post the additional required financial warranty.

If you have any questions, you may contact me by telephone at 303-866-3567, ext. 8129, or by email at amy.eschberger@state.co.us.

Sincerely,

Amy Eschberger

Chry Erchbiger

Environmental Protection Specialist

Encl: Division's bond estimate

CC: Uwe Lubjuhn, CEMEX, Inc.

Scott Harcus, CEMEX, Inc.

Robin Bay, Habitat Management, Inc.

Michael Cunningham, DRMS



COST SUMMARY WORK

| | ask description. | Cost Summary | | | | |
|-------|------------------------|----------------|---------------------|--------------|----------|--|
| Site: | Dowe Flats Mine | Permit Action: | TR-04 Bond Estimate | Permit/Job#: | M1993041 | |
| | | | | | | |

PROJECT IDENTIFICATION

| Task #: | 000 | State: | Colorado | Abbreviation: | None |
|---------|-----------|---------|----------|---------------|----------|
| Date: | 4/21/2020 | County: | Boulder | Filename: | M041-000 |
| User: | AME | _ | | | |

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

| Task | | Form | Fleet | Task | |
|------|--|----------|-------|----------|-------------|
| | Description | Used | Size | Hours | Cost |
| 001 | Demolition of structures | DEMOLISH | 1 | 40.00 | \$77,080 |
| 002 | Demolition of conveyor supports 6x2x6(457), onsite disposal | NA | 1 | 30.00 | \$14,214 |
| 003 | Demolition of conveyor system 9,718x4x4, off-site disposal | NA | 1 | 20.00 | \$144,781 |
| 004 | Demolition of conveyor walkways 2,558x3x4, off- site disposal | NA | 1 | 20.00 | \$28,582 |
| 005 | Demolition of conveyor structures 6-20(44), off- site disposa | NA | 1 | 20.00 | \$53,203 |
| 006 | Demolition of conveyor buried section 160', off- site disposa | NA | 1 | 10.00 | \$1,663 |
| 007 | Backfill Hi-Cal/2nd Ridge pit with in-pit stockpiles | SCRAPER1 | 1 | 1,018.42 | \$1,308,442 |
| 008 | Backfill Hi-Cal/2nd Ridge pit with crusher stockpiles | TRUCK1 | 1 | 2,343.94 | \$4,258,626 |
| 009 | Backfill Hi-Cal/2nd Ridge pit with Mt. George stockpile | TRUCK1 | 1 | 1,059.92 | \$1,925,743 |
| 010 | Backfill 3rd Ridge pit with in-pit stockpiles | SCRAPER1 | 1 | 89.66 | \$115,188 |
| 011 | Backfill 3rd Ridge pit with Mt. George stockpile | TRUCK1 | 1 | 445.37 | \$809,172 |
| 012 | 3rd Ridge pit wetland excavation | SCRAPER1 | 1 | 500.17 | \$642,609 |
| 013 | Backfill 4th Ridge pit with in-pit stockpiles | DOZER | 2 | 0.25 | \$132 |
| 014 | Wetland topsoil stripping | SCRAPER1 | 1 | 10.47 | \$13,450 |
| 015 | Crusher area topsoil stripping | SCRAPER1 | 1 | 8.75 | \$11,239 |
| 016 | Hi-Cal/2nd Ridge pit rough grade | GRADER | 2 | 16.27 | \$6,449 |
| 017 | Hi-Cal/2nd Ridge pit final grade | GRADER | 2 | 35.25 | \$13,973 |
| 018 | 3rd Ridge pit rough grade | GRADER | 2 | 4.51 | \$1,791 |
| 019 | 3rd Ridge pit final grade | GRADER | 2 | 9.79 | \$3,881 |
| 020 | 4th Ridge pit rough grade | GRADER | 1 | 2.12 | \$421 |
| 021 | 4th Ridge pit final grade | GRADER | 1 | 4.59 | \$912 |
| 022 | Rip office/maintenance/equipment/fuel areas | GRADER | 1 | 1.65 | \$343 |
| 023 | Rip roads and other disturbances | GRADER | 2 | 13.83 | \$5,716 |
| 024 | Retopsoil Hi-Cal/2nd Ridge pit with NE/N stockpile | SCRAPER1 | 1 | 20.55 | \$26,403 |
| 025 | Retopsoil Hi-Cal/2nd Ridge pit with NE/middle stockpile | SCRAPER1 | 1 | 45.69 | \$58,706 |
| 026 | Retopsoil Hi-Cal/2nd Ridge pit with NW stockpile | SCRAPER1 | 1 | 4.27 | \$5,480 |
| 027 | Retopsoil Hi-Cal/2nd Ridge pit with High-Cal stockpile | SCRAPER1 | 1 | 6.46 | \$8,302 |
| 028 | Retopsoil 3rd Ridge pit with NE/middle stockpile | SCRAPER1 | 1 | 0.64 | \$817 |
| 029 | Retopsoil 3rd Ridge pit with NE/S stockpile | SCRAPER1 | 1 | 10.46 | \$13,442 |

| 030 | 3rd Ridge wetland area excavation | SCRAPER1 | 1 | 8.18 | \$10,513 |
|-----|--|----------|--------|---------|--------------|
| 031 | Retopsoil 4th Ridge pit wetland area excavation | SCRAPER1 | 1 | 3.66 | \$4,699 |
| 032 | Retopsoil wetland area excavation | SCRAPER1 | 1 | 5.49 | \$7,050 |
| 033 | Retopsoil crusher area with reclaimed area stripping | SCRAPER1 | 1 | 9.17 | \$11,781 |
| 034 | Retopsoil crusher area with SE stockpile | SCRAPER1 | 1 | 24.92 | \$32,015 |
| 035 | Retopsoil office/maint/equip/fuel areas with SE stockpile | SCRAPER1 | 1 | 4.68 | \$6,009 |
| 036 | Retopsoil roads and other disturbances with NE/S stockpile | SCRAPER1 | 1 | 25.51 | \$32,771 |
| 037 | Retopsoil roads and other disturbances with SE stockpile | SCRAPER1 | 1 | 27.11 | \$34,831 |
| 038 | Retopsoil roads and other disturbances with wetland excav | SCRAPER1 | 1 | 0.34 | \$431 |
| 039 | Revegetate Hi-Cal/2nd Ridge pit (107.3 ac) | REVEGE | 1 | 107.30 | \$210,869 |
| 040 | Revegetate 3rd Ridge pit minus wetland (25 ac) | REVEGE | 1 | 25.00 | \$49,131 |
| 041 | Revegetate 4th Ridge pit (2.3 ac) | REVEGE | 1 | 2.30 | \$4,520 |
| 042 | Revegetate wetland area (20 ac) | REVEGE | 1 | 20.00 | \$160,810 |
| 043 | Revegetate crusher area (47.4 ac) | REVEGE | 1 | 47.40 | \$93,152 |
| 044 | Revegetate Mt. George stockpile area (22.9 ac) | REVEGE | 1 | 22.90 | \$45,004 |
| 045 | Revegetate topsoil stockpile areas (27.7 ac) | REVEGE | 1 | 27.70 | \$54,437 |
| 046 | Revegetate office/maint/equip/fuel areas (3.8 ac) | REVEGE | 1 | 3.80 | \$7,468 |
| 047 | Revegetate conveyor corridor (4.6 ac) | REVEGE | 1 | 4.60 | \$9,040 |
| 048 | Revegetate roads and other disturbances (63.4 ac) | REVEGE | 1 | 63.40 | \$124,596 |
| 049 | Mobilization/Demobilization | MOBILIZE | 1 | 47.00 | \$398,572 |
| | | SUBTO | OTALS: | 6273.49 | \$10,848,460 |

INDIRECT COSTS

OVERHEAD AND PROFIT:

 Liability insurance:
 2.02 Total =
 \$219,139

 Performance bond:
 1.05 Total =
 \$113,909

 Job superintendent:
 300.00 Total =
 \$20,817

 Profit:
 10.00 Total =
 \$1,084,846

TOTAL O & P = $\frac{\$1,388,711}{\$1,438,711}$

CONTRACT AMOUNT (direct + O & P) = $\boxed{\$12,287,171}$

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500 Total = \$500

Engineering work and/or contract/bid preparation: Reclamation management and/or administration: 5.00 Total = \$522,205

\$614,359

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$2,575,774

TOTAL BOND AMOUNT (direct + indirect) = \$13,424,234

DEMOLITION WORK

| | Task description: | Demolition | of structures | | | | |
|--------------|------------------------|------------|----------------|---------------------|---------------|-----------------------|--|
| Site: | Dowe Flats Mine | | Permit Action: | TR-04 Bond Estimate | Permit/J | Job#: <u>M1993041</u> | |
| PROJE | CT IDENTIFICATION | <u> </u> | | | | | |
| Task # | : 001 | State: | Colorado | A | Abbreviation: | None | |
| Date | : 4/21/2020 | County: | Boulder | | Filename: | M041-001 | |
| User | : AME | | | | | | |
| | Agency or organization | ion name: | DRMS | | | | |

<u>UNIT COSTS</u> <u>Location adjustment: 103.60 %</u>

| Structure or Item Description | Dimensions | Demolition Menu Selection | Quantity | Unit | Unit Cost | Total Cost | |
|---|------------------|---|-----------|------|--------------|-------------------|--|
| Demolish Crusher 35 x 31 x 1 Slab | | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 200 ft. push | 1,085.00 | SF | \$1.79 | \$1,936.83 | |
| Demolish Crusher 23 x 35 x 30 Metal Roof | | Bldg. (MC) demo./off- site disposal in approved landfill - Max. 5 mile haul | 24,150.00 | CF | \$0.59 | \$14,190.54 | |
| Demolish Office Trailer | 50 x 12 x 9 | Bldg. (SN) demo./off- site disposal in approved landfill - Max. 5 mile haul | 5,400.00 | CF | \$0.30 | \$1,625.40 | |
| Demolish Break Room Trailer 50 x 12 x 9 | | Bldg. (SN) demo./off- site disposal in approved landfill - Max. 5 mile haul | 5,400.00 | CF | \$0.30 | \$1,625.40 | |
| Demolish Trailer 10 x 14 x 1 (2x) Steps (2) | | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 200 ft. push | 280.00 | SF | \$1.79 | \$499.83 | |
| Demolish Office & Breakroom Slabs (2) | 51 x 13 x 1 (2x) | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 200 ft. push | 1,326.00 | SF | \$1.79 | \$2,367.04 | |
| Demolish Maintenance Buildings (2) 40 x 68 / 25 x 13 | | Bldg. (MC) demo./off- site disposal in approved landfill - Max. 5 mile haul | 84,850.00 | CF | \$0.59 | \$49,857.86 | |
| Demolish 25 x 13 Maintenance Building Slab | | Demo. and on-site disposal in existing pit, 12 in. thick - Max. 200 ft. push | 325.00 | SF | \$1.79 | \$580.16 | |
| Fuel Island (2) 30 disposal i or cut - N | | Bldg. (SC) demo./on-site disposal in existing pit or cut - Max. 200 ft. push | 2,680.00 | CF | \$0.25 | \$668.66 | |
| Remove Fuel Tank | 28 x 16 x 16 | Haul tank to certified salvage dump - 9,000 to 12,000 gal. tank | 1.00 | EA | \$1,050.00 | \$1,050.00 | |

| | | Subtotal | | | |
|------------|-------|---------------|-------------|---------------|-------------|
| Job Hours: | 40.00 | (unadjusted): | \$74,401.72 | (adjusted for | \$77,080.18 |

SCRAPER TEAM WORK

| Task description: | Backfill H | i-Cal/2nd Ridge p | it with in-pit sto | ckpiles | | |
|--|------------------------------|-------------------|--------------------|--------------------------------|-----------------------|-------------|
| Site: Dowe Flats Mine | | Permit Action: | TR-04 Bond Es | timate Peri | mit/Job#: <u>M199</u> | 3041 |
| PROJECT IDENT | <u> </u> | | | | | |
| Task #: _ 007 | | State: Colorado | | Abbre | viation: None | |
| Date: 4/21/20 User: AME |)20 Co | unty: Boulder | | Fil | ename: M041- | 007 |
| | | DD14G | | | | |
| Agency or o | organization name: | DRMS | | | | |
| HOURLY EQUIP | MENT | | COSTS | hift basis: 1 per d | <u>ay</u> | |
| | | Equipme | ent Description | | | |
| | | | G w/push-pull | | | |
| Suppo | rt Equipment -Loa | | T - 9SU | | | |
| Suppo | * * | p Area: NA | | | | |
| Road Ma | intenance –Motor | | | | | |
| | -Water | Truck: Water | Γanker, 3,500 Gal | | | |
| Cost Breakdown: | Scraper Wo | rk Team | Support Equi | nment | Maintenance | Equipment |
| Cost Bituitus Will | Scraper | Dozer | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | NA | NA | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$121.49 | NA | NA | \$82.71 | \$13.5 |
| Operating cost/hour: | \$190.35 | \$105.84 | NA | NA | \$35.04 | \$14.47 |
| %Utilization-ripper: | NA | NA | NA | NA | 50 | NA NA |
| Ripper own. cost/hour: | NA | \$0.00 | NA | NA | \$4.44 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | NA | NA | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | \$39.98 | NA | NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$267.31 | NA | NA | \$169.53 | \$27.98 |
| Number of Units: | 2 | 1 | 0 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$1,087.27 | Support: | \$0.00 | Maint: | \$197.51 |
| Total work team cost | /hour: \$1,284.78 | | | | | |
| MATERIAL QUA | <u>NTITIES</u> | | | | | |
| Initial volume: Loose volume: | 894,130 1,041,661 | CCY LCY | Swell fac | tor: 1.165 | | |
| Sou | rce of estimated vo | | bond estimate | | | |
| | of estimated swell: | | | | | |
| HOURLY PROD | UCTION | | | | | |
| HOURETTROD | <u> </u> | | Comomon D | ovil (volume) Dog | i.a. | |
| 36. 11. 15 | 2 000 11 7 07 | | | owl (volume) Bas | | CV |
| Material weight: Material description: | 2,900 lbs/LCY Decomposed roc | k 50% Pook | | Volume: 24.00 Volume: 34.00 | | CY CY |
| iviateriai description: | 50% Earth | K - JU70 KUCK, | пеарец | volume. 34.00 | L | C 1 |
| Rated Payload: | 81,600 pounds | | Average | | | CY |
| Payload Capacity: | 28.14 LCY | | Adjusted (| Capacity: 28.14 | L | CY |

| ~ | • | m . | |
|------|-----|------------|-----|
| Cyc | I A | 111 | me. |
| CYC. | ı | 11 | m. |

Job Condition Correction: Site Altitude: 5350 feet

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|------------------|------------------|----------------|----------------------|
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.65 |

Haul Time: **0.65** minutes

Return Route:

| 1100011111 | | | | | | |
|------------|--------------------|-------|-----------|-----------|----------------|-------------|
| Seg# | Haul Distance (Ft) | Grade | Roll. Res | Total Res | Velocity (fpm) | Travel Time |
| | | (%) | (%) | (%) | | (min) |
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.49 |

Return Time: 0.49 minutes Total Scraper team cycle time: 2.74 minutes Adjusted for job conditions: 1,022.82 LCY/Hour Selected Number of Scrapers: Scraper(s) Adjusted single scraper team (unit) hourly production: 1,022.82 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,022.82 LCY/Hour

Unadjusted unit production/hour: 1,232.32 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

| Fleet size: | 1 | Team(s) | Total job time: | 1,018.42 | Hours |
|-------------|---------|---------|-----------------|-------------|-------|
| Unit cost: | \$1.256 | /LCY | Total job cost: | \$1,308,442 | = |

TRUCK/LOADER TEAM WORK

| Dowe Flats Mine Permi | it Action: TR-04 Bond Estimate | e Permit/Job#: | M1993041 |
|---|--|-------------------------------|------------------|
| PROJECT IDENTIFICATION | | | |
| | Colorado Boulder | Abbreviation: Filename: | None M041-008 |
| Agency or organization name: DRM | ИS | | |
| | | Shift basis: 1 per day | |
| Agency or organization name: DRM | Equipment Description | Shift basis: <u>1 per day</u> | |
| Agency or organization name: DRM HOURLY EQUIPMENT COST | | Shift basis: <u>1 per day</u> | |
| Agency or organization name:DRM_HOURLY EQUIPMENT COST_ Truck Loader Team -Truck: | Equipment Description Cat 777F | Shift basis: 1 per day | |
| Agency or organization name:DRM_HOURLY EQUIPMENT COST Truck Loader Team -Truck: -Loader: | Equipment Description Cat 777F CAT 992K | Shift basis: 1 per day | |
| Agency or organization name:DRM. HOURLY EQUIPMENT COST Truck Loader Team -Truck: | Equipment Description Cat 777F CAT 992K Cat D9T - 9SU | Shift basis: <u>1 per day</u> | |

| Cost Breakdown: | Truck/Loa | ader Team | Support I | Equipment | Maintenan | ce Equipment |
|------------------------|-----------|------------|-----------|-----------|--------------|--------------|
| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 50 | 50 |
| Ownership cost/hour: | \$159.52 | \$207.81 | \$121.49 | NA | \$82.71 | \$13.51 |
| Operating cost/hour: | \$130.41 | \$170.58 | \$105.84 | NA | \$35.04 | \$14.47 |
| %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: | \$24.79 | \$35.93 | \$39.98 | NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$314.71 | \$414.31 | \$267.31 | NA | \$163.14 | \$27.98 |
| Number of Units: | 3 | 1 | 1 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$1,358.44 | Support: | \$267.31 | Maint: | \$191.12 |

Total work team cost/hour: \$1,816.87

MATERIAL QUANTITIES

Initial volume: _ 2,444,646 **CCY** Swell factor: 1.165

Loose volume: 2,848,013 LCY

> Source of estimated volume: Operator bond estimate Source of estimated swell factor: Cat Handbook

> > Material Purchase Cost:

\$0.00

Total Cost: \$0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,900 Pounds/LCY Decomposed rock - 50% Rock, 50% Earth Description: Rated Payload: 200,000 Pounds Payload Capacity: 68.97 LCY

| Truck Bed (volume) Bas Struck Volume | | 0.60 L | .CY | | | | |
|--|---|---|--|--|---|--|---------------------|
| Heaped Volume | | | .CY | | | | |
| Average Volume | | | .CY | | | | |
| Adjusted Volume | : 68 | 3.97 I | .CY | | | | |
| Ī | Final Truc | ck Volume I | Based on Number of | f Loader Passes: | 65.60 | LCY | |
| Loading Tool Capacity | | , | | | | | |
| | | | | Buck | et Size Class: N | JA . | |
| Rated Capacit | | 16.000 | LCY (heaped) | | | | _ |
| Bucket Fill Factor | | 1.025 | | ixture (100%-105 | %) 1.025 | | _ |
| Adjusted Capacit | y: | 16.400 | LCY | | | | |
| Job Condition Correct | ions: | | Si | te Altitude (ft.): <u>5</u> | 350 feet | | |
| | Tr | uck | Loader | Source | | | |
| Altitude Adj: | | 000 | 1.000 | (CAT HB) | | | |
| Job Efficiency: | 0.8 | 330 | 0.830 | (CAT HB) |) | | |
| Net Correction: | 0.8 | 330 | 0.830 | | | | |
| Loading Tool Cycle Ti | mo• | Number | of Loading Tool Pa | sses Required to F | ill Truck | 4 1 | passes |
| Loading Tool Cycle 11 | mc. | runnoci | of Loading 10011 a | | | | |
| Executors and Front SI | hovole: | | | 1 | | | passes |
| Excavators and Front SI | | | | 1 | | | passes |
| Machine Cycle Ti | me vs. Jol | | | 1 | | | passes |
| Machine Cycle Ti Selected Va | me vs. Jol | n this Basic | Rating: NA | 1 | | | passes |
| Machine Cycle Tir Selected Va Track Loade | me vs. Job alue within ers – Mate | n this Basic | Rating: NA | 1 | | | passes |
| Machine Cycle Tii Selected Va Track Loade Cycle Time Elements (n | me vs. Job alue within ers – Mate | n this Basic erial Descrip | Rating: NA otion: | 1 | | | passes |
| Machine Cycle Tir Selected Va Track Loade | me vs. Job alue within ers – Mate | n this Basic erial Descrip | Rating: NA | | Dump: 0.100 | | passes |
| Machine Cycle Tii Selected Va Track Loade Cycle Time Elements (n | me vs. Joh due within ers – Mate nin.): | n this Basic erial Descrip Ma | Rating: NA otion: NA | | Dump: 0.100 | | |
| Machine Cycle Tir Selected Va Track Loade Cycle Time Elements (n Load: NA | me vs. Jol alue within ers – Mate nin.): | n this Basic erial Descrip Ma | Rating: NA otion: NA | | Dump: 0.100 |) | |
| Machine Cycle Tin Selected Va Track Loade Cycle Time Elements (n Load: <u>NA</u> Wheel and Track Load Cycle Time Fact | me vs. Joh due within ers – Mate nin.): ders - Una ors | n this Basic erial Descrip Ma djusted Bas xed materia | Rating: NA otion: NA nneuver: NA ic Loader Cycle Tir | | Dump: 0.100 naneuver): 0 Factor (min.) 0.020 | 0.625 min Source (Cat HB) | |
| Machine Cycle Tin Selected Va Track Loade Cycle Time Elements (n Load: NA Wheel and Track Load Cycle Time Fact Mater Stockp | me vs. Joh alue within ers – Mate nin.): lers - Una ors ial: Mi ile: Du | n this Basic erial Descrip Ma djusted Base xed materia mped by tru | Rating: NA otion: NA nneuver: NA ic Loader Cycle Tir 1 0.02 ick 0.02 | ne (load, dump, m | Dump: 0.100 naneuver): 0 Factor (min.) 0.020 0.020 | Source (Cat HB) (Cat HB) | |
| Machine Cycle Tin Selected Va Track Loade Cycle Time Elements (n Load: NA Wheel and Track Loade Cycle Time Fact Material Stockp | me vs. Joh alue within ers – Mate nin.): lers - Una ors ial: Mi ile: Du nip: Co | n this Basic erial Descrip Ma djusted Base xed materia mped by tru mmon own | Rating: NA otion: naneuver: NA otic Loader Cycle Tir 1 0.02 ock 0.02 ership of trucks and | ne (load, dump, m | Dump: 0.100 naneuver): 0 Factor (min.) 0.020 0.020 -0.040 | Source (Cat HB) (Cat HB) (Cat HB) | |
| Machine Cycle Tin Selected Va Track Loade Cycle Time Elements (n Load: NA Wheel and Track Loade Cycle Time Fact Mater Stockp Truck Ownersh Operation | me vs. Joh lue within ers – Mate nin.): lers - Una ors ial: Mi ile: Du iip: Co on: Co | n this Basic erial Descrip Ma djusted Base xed materia mped by tru mmon own nstant opera | Rating: NA ption: Inneuver: NA ptic Loader Cycle Tire It 0.02 ptick 0.02 ptick 0.02 ptick 0.02 ptick of trucks and attion -0.04 | ne (load, dump, m | Dump: 0.100 naneuver): 0 Factor (min.) 0.020 0.020 -0.040 -0.040 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) | |
| Machine Cycle Tin Selected Va Track Loade Cycle Time Elements (n Load: NA Wheel and Track Loade Cycle Time Fact Material Stockp | me vs. Joh lue within ers – Mate nin.): lers - Una ors ial: Mi ile: Du iip: Co on: Co | n this Basic erial Descrip Ma djusted Base xed materia mped by tru mmon own | Rating: NA otion: neuver: NA ic Loader Cycle Tir 1 0.02 ick 0.02 ership of trucks and ation -0.04 t 0.00 | me (load, dump, m | Dump: 0.100 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) | |
| Machine Cycle Tin Selected Va Track Loade Cycle Time Elements (n Load: NA Wheel and Track Loade Cycle Time Fact Mater Stockp Truck Ownersh Operation | me vs. Joh lue within ers – Mate nin.): lers - Una ors ial: Mi ile: Du iip: Co on: Co | n this Basic erial Descrip Ma djusted Base xed materia mped by tru mmon own nstant opera | Rating: NA otion: neuver: NA ic Loader Cycle Tir 1 0.02 ick 0.02 ership of trucks and ation -0.04 t 0.00 Net Cycle Tir | me (load, dump, m | Dump: 0.100 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) minutes | |
| Machine Cycle Tin Selected Va Track Loade Cycle Time Elements (n Load: NA Wheel and Track Loade Cycle Time Fact Mater Stockp Truck Ownersh Operation | me vs. Joh lue within ers – Mate nin.): lers - Una ors ial: Mi ile: Du iip: Co on: Co | n this Basic erial Descrip Ma djusted Base xed materia mped by tru mmon own nstant opera | Rating: NA ption: Aneuver: NA ptic Loader Cycle Tire 10.02 ptick 0.02 pership of trucks and ation -0.04 t 0.00 Net Cycle Tire Adjusted Loader | ne (load, dump, m | Dump: 0.100 naneuver): 0 Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 -0.040 0.585 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes | |
| Machine Cycle Tin Selected Va Track Loade Cycle Time Elements (n Load: NA Wheel and Track Load Cycle Time Fact Mater Stockp Truck Ownersh Operation | me vs. Joh lue within ers – Mate nin.): lers - Una ors ial: Mi ile: Du iip: Co on: Co | n this Basic erial Descrip Ma djusted Base xed materia mped by tru mmon own nstant opera | Rating: NA ption: Aneuver: NA ptic Loader Cycle Tire 10.02 ptick 0.02 pership of trucks and ation -0.04 t 0.00 Net Cycle Tire Adjusted Loader | me (load, dump, m | Dump: 0.100 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) minutes | |
| Machine Cycle Tin Selected Va Track Loade Cycle Time Elements (n Load: NA Wheel and Track Loade Cycle Time Fact Mater Stockp Truck Ownersh Operation | me vs. Jol alue within ers – Mate nin.): ders - Una ors ial: Mi ile: Du nip: Co on: Co get: No | n this Basic erial Descrip Ma djusted Base xed materia mped by tru mmon own nstant opera | Rating: NA ption: Aneuver: NA ptic Loader Cycle Tire 10.02 ptick 0.02 pership of trucks and ation -0.04 t 0.00 Net Cycle Tire Adjusted Loader | ne (load, dump, m loaders -0.04 | Dump: 0.100 naneuver): 0 Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 -0.040 0.585 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes | |
| Machine Cycle Tin Selected Va Track Loade Cycle Time Elements (no Load: NA Wheel and Track Load: Materical Stockponton Truck Ownersh Operation Dump Targ | me vs. Johalue within ers – Matenin.): ders - Una ors lial: Mi ile: Du lip: Co on: Co get: No | n this Basic erial Descrip Ma djusted Base exed materia mped by trummon own ostant operational targe | Rating: NA otion: neuver: NA iic Loader Cycle Tin 1 0.02 iick 0.02 ership of trucks and ation -0.04 t 0.00 Net Cycle Tin Adjusted Loade Net Load T | ne (load, dump, mage) loaders -0.04 ne Adjustment: er Cycle Time: ime per Truck: Adjusted | Dump: 0.100 naneuver): 0 Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 -0.040 0.585 1.855 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes | utes — — — |

<u>Truck Travel (Haul & Return) Time:</u> Road Condition: <u>Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0</u>

| TI | r 1 | 1 | | |
|----|------|----|----------|------|
| _ | [ลบ] | ıv | α | ıta. |
| | | | | |

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|
| 1 | 5000.00 | 0.00 | 3.00 | 3.00 | 2409 | 2.512 |

Haul Time: 2.512 minutes

Return Route:

| recturn r | Return Route. | | | | | | |
|-----------|-----------------------|-----------|------------------|---------------|-------------------|-------------------------|--|
| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | |
| 1 | 5000.00 | 0.00 | 3.00 | 3.00 | 3503 | 1.699 | |

Return Time: 1.699 minutes
Total Truck Cycle Time: 8.066 minutes

Loading Tool unit

Production ____1,482.49 ___ LCY/Hour Adjusted for job efficiency: ____1,230.46 ___ LCY/Hour

Truck Unit Production

487.97 LCY/Hour Adjusted for job efficiency: 405.02 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 1,215.06 LCY/Hour Adjusted single truck/loader team production: 1,215.06 LCY/Hour Adjusted multiple truck/loader team production: 1,215.06 LCY/Hour

JOB TIME AND COST

Fleet size: _____1 Team(s) Total job time: _____2,343.94 Hours

Unit cost: \$1.495 /LCY Total job cost: **\$4,258,626**

TRUCK/LOADER TEAM WORK

| Task description: | Backfill | Hi-Cal/2nd Ridg | ge pit with Mt. G | eorge stockpile | | |
|------------------------------|------------------|-----------------|-------------------|-----------------|----------------------|----------------|
| Site: Dowe Flats Mine | | Permit Action | on: TR-04 Bond | l Estimate | Permit/Job#:! | M1993041 |
| PROJECT IDEN | TIFICATION | | | | | |
| Task #: 009 | | State: Colora | ado | Ab | breviation: N | one |
| Date: 4/21/2 | 020 | County: Bould | er | | Filename: N | 1041-009 |
| User: AME | | | | | | |
| Agency or | organization nar | ne: DRMS | | | | |
| HOURLY EQUI | PMENT COST | <u>r</u> | | Shift bas | is: <u>1 per day</u> | |
| | |] | Equipment Descri | ption | | |
| T | ruck Loader Tea | m -Truck: Cat | 777F | | | |
| | | | Г 992К | | | |
| Suppo | ort Equipment -L | | D9T - 9SU | | | |
| | | imp Area: NA | T 1 () (| | | |
| Road Ma | aintenance –Mot | | Γ 16M | Cal | | |
| - | - w a | ter Truck: Wat | ter Tanker, 3,500 | Gal. | | |
| Cost Breakdown: | Truck/Loa | ader Team | Support 1 | Equipment | Maintena | ance Equipment |
| | Truck | Loader | Load Area | Dump Area | Motor Grader | |
| %Utilization-machine: | 100 | 100 | 100 | NA | 50 | 50 |
| Ownership cost/hour: | \$159.52 | \$207.81 | \$121.49 | NA | \$82.71 | \$13.51 |
| Operating cost/hour: | \$130.41 | \$170.58 | \$105.84 | NA | \$35.04 | \$14.47 |
| %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 |

\$39.98

\$267.31

Support:

NA

NA

\$267.31

0

Total work team cost/hour: \$1,816.87

MATERIAL QUANTITIES

Initial volume: 1,059,491 **CCY** Swell factor: 1.165

\$35.93

\$414.31

1

Loose volume: 1,234,307 LCY

\$24.79

\$314.71

Work:

3

Source of estimated volume: Operator bond estimate Source of estimated swell factor: Cat Handbook

\$1,358.44

Material Purchase Cost: \$0.00

\$0.00 Total Cost:

HOURLY PRODUCTION

Truck Capacity:

Operator cost/hour:

Unit Subtotals: Number of Units:

Group Subtotals:

Truck Payload (weight) Basis:

Material weight: 2,900 Pounds/LCY Description: Decomposed rock - 50% Rock, 50% Earth

Rated Payload: 200,000 Pounds Payload Capacity: 68.97 **LCY**

\$45.39

\$163.14

Maint:

1

\$0.00

\$27.98

\$191.12

1

| Cycle Time Elements (n Load: NA Wheel and Track Load Cycle Time Fact Mater Stockp Truck Ownersh Operati Dump Tars Truck Cycle Time: Truck Exchange | ors ial: Mixed ile: Dumpe nip: Comm on: Consta get: Nomin | material 0.0 ed by truck 0 non ownersh ant operation nal target 0.0 | 02 0.02 ip of trucks and 1 -0.04 00 Net Cycle Tim Adjusted Loade | loaders -0.04 ne Adjustment: er Cycle Time: ime per Truck: Adjusted | Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 -0.040 0.585 1.855 for site altitude: for site altitude: | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes minutes 0.800 1.855 | utes Minut _ Minut |
|--|---|--|---|---|--|---|--------------------|
| Load: NA Wheel and Track Load Cycle Time Fact Mater Stockp Truck Ownersh Operati Dump Targ | ors ial: Mixed ile: Dumpe iip: Comm on: Consta | material 0.0 ed by truck (non ownershing ant operation nal target 0.0 | 02 0.02 ip of trucks and 1 -0.04 00 Net Cycle Tim Adjusted Loade Net Load Ti | loaders -0.04 ne Adjustment: er Cycle Time: | Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 -0.040 0.585 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes | utes |
| Load: NA Wheel and Track Load Cycle Time Fact Mater Stockp Truck Ownersh Operati | ors ial: Mixed ile: Dumpe iip: Comm on: Consta | material 0.0 ed by truck (non ownershant operation | 02 0.02 ip of trucks and 1 -0.04 00 Net Cycle Tim Adjusted Loade | loaders -0.04 ne Adjustment: er Cycle Time: | Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 -0.040 0.585 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes | utes |
| Load: NA Wheel and Track Load Cycle Time Fact Mater Stockp Truck Ownersh Operati | ors ial: Mixed ile: Dumpe iip: Comm on: Consta | material 0.0 ed by truck (non ownershant operation | 02 0.02 ip of trucks and 1 -0.04 00 Net Cycle Tim Adjusted Loade | loaders -0.04 ne Adjustment: er Cycle Time: | Factor (min.) 0.020 0.020 -0.040 -0.040 0.000 -0.040 0.585 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes | utes |
| Load: NA Wheel and Track Load Cycle Time Fact Mater Stockp Truck Ownersh Operati | ors ial: Mixed ile: Dumpe iip: Comm on: Consta | material 0.0 ed by truck (non ownershant operation | 02 0.02 ip of trucks and 1 -0.04 00 Net Cycle Tim | loaders -0.04 ne Adjustment: | 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) minutes | utes |
| Load: NA Wheel and Track Load Cycle Time Fact Mater Stockp Truck Ownersh Operati | ors ial: Mixed ile: Dumpe iip: Comm on: Consta | material 0.0 ed by truck (non ownershant operation | 0.02 ip of trucks and 1 -0.04 | | Factor (min.) 0.020 0.020 -0.040 -0.040 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) | utes |
| Load: NA Wheel and Track Load Cycle Time Fact Mater Stockp Truck Ownersh | ors ial: Mixed ile: Dumpe | material 0.0 ed by truck 0 | 0.02 ip of trucks and | | Factor (min.) 0.020 0.020 -0.040 | Source (Cat HB) (Cat HB) (Cat HB) | utes |
| Load: NA Wheel and Track Load Cycle Time Fact Mater Stockp | ors ial: Mixed ile: Dumpe | material 0.0 | 02 0.02 | | Factor (min.) 0.020 0.020 | Source (Cat HB) (Cat HB) | utes |
| Load: NA Wheel and Track Load Cycle Time Fact Mater | ors ial: Mixed | material 0.0 |)2 | ne (load, dump, n | Factor (min.) | Source (Cat HB) | utes |
| Load: NA Wheel and Track Load Cycle Time Fact | ors | | | me (load, dump, m | Factor (min.) | Source | utes — |
| Load: NA | lers - Unadjus | sted Basic L | oader Cycle Tir | ne (load, dump, m | naneuver):(| 0.625 minu | utes |
| | | | | | | | |
| Cycle Time Elements (n | | Maneu | ver: NA | | Dump: 0.10 | 0 | |
| | | r | | | | | |
| | ers – Material | | · | | | | |
| Excavators and Front Si Machine Cycle Ti Selected Va | | | - | | | | |
| Loading Tool Cycle Ti | | Number of L | oading Tool Pas | sses Required to F | fill Truck: | 4 | passes |
| Net Correction: | 0.830 | | 0.830 | | | | |
| • | 0.030 | | 0.050 | (CITI III) | <i>,</i> | | |
| Job Efficiency: | 0.830 | | 0.830 | (CAT HB) | | | |
| Altitude Adj: | 1.000 | | Loader 1.000 | Source (CAT HB) | <u> </u> | | |
| Job Condition Correct | | | | te Altitude (ft.): <u>5</u> | 350 feet | | |
| Adjusted Capacit | y: <u>16.</u> | .400 | LCY | | | | |
| Bucket Fill Facto | | | | ixture (100%-105 | %) 1.025 | | _ |
| Rated Capacit | | | LCY (heaped) | | | | _ |
| | | | | Buck | et Size Class: N | NA | |
| Loading Tool Capacity | | | | | | | |
|] | Final Truck V | olume Base | d on Number of | f Loader Passes: | 65.60 | LCY | |
| | | LC1 | | | | | |
| Adjusted Volume | | | | | | | |
| Adjusted Volume | . 60.70 | | | | | | |
| Average Volume | | | | | | | |
| | | | | | | | |

<u>Truck Travel (Haul & Return) Time:</u> Road Condition: <u>Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0</u>

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|
| 1 | 5500.00 | 0.00 | 3.00 | 3.00 | 2409 | 2.719 |

Haul Time: 2.719 minutes

Return Route:

| 11000111111 | , | | | | | |
|-------------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|
| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
| 1 | 5500.00 | 0.00 | 3.00 | 3.00 | 3503 | 1.842 |

Return Time: 1.842 minutes
Total Truck Cycle Time: 8.416 minutes

Loading Tool unit

Production 1,482.49 LCY/Hour Adjusted for job efficiency: 1,230.46 LCY/Hour

Truck Unit Production

467.68 LCY/Hour Adjusted for job efficiency: 388.17 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 1,164.52 LCY/Hour Adjusted single truck/loader team production: 1,164.52 LCY/Hour Adjusted multiple truck/loader team production: 1,164.52 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 1,059.92 Hours

Unit cost: \$1.560 /LCY Total job cost: **\$1,925,743**

SCRAPER TEAM WORK

| Task description: | Backfill 3r | d Ridge pit with i | in-pit stockpiles | | | |
|--|------------------------------|--------------------|-------------------|--------------------------------|-----------------------|-------------|
| Site: Dowe Flats Mine | | Permit Action: | TR-04 Bond Es | stimate Peri | mit/Job#: <u>M199</u> | 3041 |
| PROJECT IDENT | <u> </u> | | | | | |
| Task #: 010 | S | State: Colorado | | Abbrev | viation: None | |
| Date: 4/21/20 |)20 Co | unty: Boulder | | Fil | ename: M041- | 010 |
| User: AME | | | | | | |
| Agency or o | organization name: | DRMS | | | | |
| HOURLY EQUIP | PMENT_ | | COSTS | hift basis: 1 per d | <u>ay</u> | |
| | | | ent Description | | | |
| | | | G w/push-pull | | | |
| Suppo | rt Equipment -Loa | | T - 9SU | | | |
| Бирро | 1 1 | p Area: NA | | | | |
| Road Ma | intenance –Motor | | | | | |
| | -Water | Truck: Water | Γanker, 3,500 Gal | | | |
| Cost Breakdown: | Scraper Wo | rk Team | Support Equi | nment | Maintenance | Equipment |
| Cost Bituitus Will | Scraper | Dozer | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | NA | NA | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$121.49 | NA | NA | \$82.71 | \$13.51 |
| Operating cost/hour: | \$190.35 | \$105.84 | NA | NA | \$35.04 | \$14.47 |
| %Utilization-ripper: | NA | NA | NA | NA | 50 | NA NA |
| Ripper own. cost/hour: | NA | \$0.00 | NA | NA | \$4.44 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | NA | NA | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | \$39.98 | NA | NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$267.31 | NA | NA | \$169.53 | \$27.98 |
| Number of Units: | 2 | 1 | 0 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$1,087.27 | Support: | \$0.00 | Maint: | \$197.51 |
| Total work team cost MATERIAL QUA | | | | | | |
| | | CCV | C11 fo o | 1 1 <i>65</i> | | |
| Initial volume: Loose volume: | 78,714 91,702 | CCY LCY | Swell fac | tor: 1.165 | | |
| | rce of estimated vo | | bond estimate | | | |
| | of estimated swell | | | | | |
| HOURLY PROD | UCTION | | | | | |
| | | | Scraper R | owl (volume) Basi | ie: | |
| Material | 2 000 11-71 037 | | | | | CV |
| Material weight: Material description: | 2,900 lbs/LCY Decomposed roc | k - 50% Rock | | Volume: 24.00 Volume: 34.00 | | CY CY |
| material description. | 50% Earth | n 50/0 Rock, | Treaped | , Junic. 57.00 | L | . 1 |
| Rated Payload: | 81,600 pounds | | Average | | | CY |
| Payload Capacity: | 28.14 LCY | | Adjusted (| Capacity: 28.14 | L | CY |

| ~ | • | m . | |
|------|-----|------------|-----|
| Cyc | I A | 111 | me. |
| CYC. | ı | 11 | m. |

Job Condition Correction: Site Altitude: 5350 feet

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| | | | |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|------------------|------------------|----------------|----------------------|
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.65 |

Haul Time: **0.65** minutes

1,022.82

LCY/Hour

Return Route:

| 1100011111 | TTO WITH TO WITH | | | | | | | | |
|------------|--------------------|-------|-----------|-----------|----------------|-------------|--|--|--|
| Seg# | Haul Distance (Ft) | Grade | Roll. Res | Total Res | Velocity (fpm) | Travel Time | | | |
| | | (%) | (%) | (%) | | (min) | | | |
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.49 | | | |

Return Time: 0.49 minutes

Total Scraper team cycle time: 2.74 minutes

Adjusted for job conditions: 1,022.82 LCY/Hour Selected Number of Scrapers: 2 Scraper(s)

Adjusted single scraper team (unit) hourly production: 1,022.82 LCY/Hour

Unadjusted unit production/hour: $\underline{1,232.32}$ LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 89.66
 Hours

 Unit cost:
 \$1.256
 /LCY
 Total job cost:
 \$115,188

Adjusted multiple scraper team (fleet) hourly production:

TRUCK/LOADER TEAM WORK

| | Task description: Backfill | | Backfill 3rd Ridge | 3rd Ridge pit with Mt. George stockpile | | | | |
|-------|----------------------------------|-------------------------|--------------------|---|--------------------|----------------------|------------------|--|
| Site: | ite: Dowe Flats Mine Perm | | t Action: | Action: TR-04 Bond Estimate Permit/Jobs | | M1993041 | | |
| | <u>PROJECT</u> | DENTIFIC | CATION | | | | | |
| | Task #: | 011 | State: | Colorado | | Abbreviation: | None | |
| | Date: | 4/21/2020 | County: | Boulder | | Filename: | M041-011 | |
| | User: | AME | | | <u> </u> | _ | | |
| | | ency or organi EQUIPMEN | | | Shi | ift basis: 1 per day | | |
| _ | | Truck I | oader Team -Truck: | Cat 777 | · | | | |
| | | Truck 1 | -Loader: | CAT 99 | | | | |
| | | Support Equ | ipment -Load Area: | Cat D9 | | | | |
| | | | -Dump Area: | NA | | | | |
| - | J | Road Maintena | nce –Motor Grader: | CAT 16 | 5M | | | |
| | | | -Water Truck: | Water 7 | Canker, 3,500 Gal. | | | |
| | Cost Break | down: | Truck/Loader Team | | Support Equipment | Maint | enance Equipment | |

| Cost Breakdown: | <u>Cost Breakdown:</u> Truck/Loader Team | | Support l | Equipment | Maintenance Equipment | |
|------------------------|--|------------|-----------|-----------|-----------------------|-------------|
| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | 100 | NA | 50 | 50 |
| Ownership cost/hour: | \$159.52 | \$207.81 | \$121.49 | NA | \$82.71 | \$13.51 |
| Operating cost/hour: | \$130.41 | \$170.58 | \$105.84 | NA | \$35.04 | \$14.47 |
| %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: | \$24.79 | \$35.93 | \$39.98 | NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$314.71 | \$414.31 | \$267.31 | NA | \$163.14 | \$27.98 |
| Number of Units: | 3 | 1 | 1 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$1,358.44 | Support: | \$267.31 | Maint: | \$191.12 |

Total work team cost/hour: \$1,816.87

MATERIAL QUANTITIES

Initial volume: 470,392 CCY Swell factor: 1.165

Loose volume: 548,007 LCY

Source of estimated volume: Operator bond estimate

Source of estimated swell factor: Cat Handbook

Material Purchase Cost: \$0.00

Total Cost: \$0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,900 Pounds/LCY
Description: Decomposed rock - 50% Rock, 50% Earth

Rated Payload: 200,000 Pounds Payload Capacity: 68.97 LCY

| Truck Bed (volume) Basis Struck Volume: | 60.60 | LCY | | | | | | |
|--|--|--|---|---|---|--|---|------|
| Heaped Volume: | 78.80 | LCY | | | | | | |
| Average Volume: | 69.70 | LCY | | | | | | |
| Adjusted Volume: | 68.97 | LCY | | | | | | |
| Fi | nal Truck Volu | me Based on | Number of | Loader Passes: | 65.60 | LC | CY | |
| Loading Tool Capacity | | | | | | | | |
| | | | | Buc | ket Size Class: | NA | | |
| Rated Capacity | | | (heaped) | | | | | |
| Bucket Fill Factor | | | | xture (100%-10: | 5%) 1.025 | | | |
| Adjusted Capacity | 16.400 | LCY | • | | | | | |
| Job Condition Correction | ns: | | Sit | e Altitude (ft.): | 5350 feet | | | |
| | Truck | Lo | oader | Source | | | | |
| Altitude Adj: | 1.000 | 1. | .000 | (CAT HI | 3) | | | |
| Job Efficiency: | 0.830 | 0. | .830 | (CAT HE | 3) | | | |
| Net Correction: | 0.830 | 0. | .830 | | | | | |
| | | | | | | | | |
| T 1' M 1 C 1 M' | N.T. | 1 CT 1 | T 1D | D : 1. | E'11 /F 1 | 4 | | |
| Loading Tool Cycle Tin | ne: Nun | nber of Loadin | ng Tool Pas | ses Required to | Fill Truck: | 4 | pa | sses |
| Loading Tool Cycle Tin Excavators and Front Sho | | nber of Loadin | ng Tool Pas | ses Required to | Fill Truck: | 4 | pa | sses |
| Excavators and Front Sho | vels: | | | ses Required to | Fill Truck: | 4 | pa | sses |
| Excavators and Front Sho Machine Cycle Tim | vels: e vs. Job Cond | ition Rating: | ng Tool Pas NA | ses Required to | Fill Truck: | 4 | pa | sses |
| Excavators and Front Sho Machine Cycle Tim Selected Value | vels: e vs. Job Cond ie within this F | ition Rating: Basic Rating: | NA | ses Required to | Fill Truck: | 4 | pa | sses |
| Excavators and Front Sho Machine Cycle Tim Selected Valu Track Loader | vels: e vs. Job Cond ne within this F s – Material De | ition Rating: Basic Rating: | NA | ses Required to | Fill Truck: | 4 | pa | sses |
| Excavators and Front Sho Machine Cycle Tim Selected Valu Track Loader Cycle Time Elements (mi | vels: e vs. Job Cond ne within this F s – Material De | ition Rating: Basic Rating: escription: | NA NA | ses Required to | | | pa | sses |
| Excavators and Front Sho Machine Cycle Tim Selected Valu Track Loader | vels: e vs. Job Cond ne within this F s – Material De | ition Rating: Basic Rating: | NA | ses Required to | | 0.100 | pa | sses |
| Excavators and Front Sho Machine Cycle Tim Selected Valu Track Loader Cycle Time Elements (mi | vels: e vs. Job Cond te within this E s – Material De n.): | ition Rating: Basic Rating: escription: Maneuver: | NA NA | | Dump: _0 | .100 | pa | |
| Excavators and Front Sho Machine Cycle Tim Selected Value Track Loader Cycle Time Elements (mi Load: NA | vels: e vs. Job Cond ne within this E ne Material De ne De ne Section 2 | ition Rating: Basic Rating: escription: Maneuver: | NA NA | | Dump: _0 | 0.625 | | |
| Excavators and Front Sho Machine Cycle Tim Selected Value Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade | e vs. Job Cond the within this E s – Material De n.): | ition Rating: Basic Rating: escription: Maneuver: | NA NA | | Dump: 0 | 0.625 | | |
| Excavators and Front Sho Machine Cycle Tim Selected Value Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Factor Materia Stockpile | e vs. Job Cond to within this Es – Material Defa.): ers - Unadjusted to see Mixed material between the conditions and the conditions are seen to be within the conditions are seen to be a seen | ition Rating: Basic Rating: escription: Maneuver: Basic Loade | NA NA | | Dump: 0 maneuver): Factor (min | 0.625 .) So (Ca | minut | |
| Excavators and Front Sho Machine Cycle Tim Selected Value Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Factor Materia Stockpile Truck Ownershi | e vs. Job Conduction within this Fig. — Material Defin.): The second of | ition Rating: Basic Rating: escription: Maneuver: Basic Loade terial 0.02 by truck 0.02 ownership of | NA NA NA Trucks and | ne (load, dump, 1 | Dump: _0 maneuver): Factor (min. 0.020 0.020 -0.040 | 0.625) So (Ca (Ca | minut ource at HB) at HB) | |
| Excavators and Front Sho Machine Cycle Tim Selected Value Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Factor Materia Stockpile Truck Ownership Operation | e vs. Job Cond the within this E the Americal De the Material De the Material De the Material De the Material De the Mixed material De the Mixed material Dumped by the Common the Constant of | ition Rating: Basic Rating: escription: Maneuver: Basic Loade aterial 0.02 by truck 0.02 ownership of operation -0.0 | NA NA NA Trucks and | ne (load, dump, 1 | Dump:0 maneuver): Factor (min. | 0.625 .) So (Ca | minut ource tt HB) tt HB) tt HB) | |
| Excavators and Front Sho Machine Cycle Tim Selected Value Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Factor Materia Stockpile Truck Ownershi | e vs. Job Cond the within this E the Americal De the Material De the Material De the Material De the Material De the Mixed material De the Mixed material Dumped by the Common the Constant of | ition Rating: Basic Rating: escription: Maneuver: Basic Loade aterial 0.02 by truck 0.02 ownership of operation -0.0 arget 0.00 | NA NA NA Trucks and | ne (load, dump, 1 | Dump: _0 maneuver): Factor (min. 0.020 0.020 -0.040 -0.040 0.000 | 0.625 a) So (Ca (Ca (Ca (Ca (Ca | minut ource at HB) at HB) at HB) at HB) | |
| Excavators and Front Sho Machine Cycle Tim Selected Value Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Factor Materia Stockpile Truck Ownership Operation | e vs. Job Cond the within this E the Americal De the Material De the Material De the Material De the Material De the Mixed material De the Mixed material Dumped by the Common the Constant of | ition Rating: Basic Loade Dy truck 0.02 Dy truck 0.02 Dy truck 0.02 Dy truck 0.00 Ret | NA NA NA Trucks and 104 t Cycle Time | loaders -0.04 | Dump:0 maneuver): Factor (min. 0.020 0.020 -0.040 -0.040 0.000 -0.040 | 0.625 D) So (Ca (Ca (Ca (Ca mi | minut ource at HB) at HB) at HB) at HB) at HB) nutes | |
| Excavators and Front Sho Machine Cycle Tim Selected Value Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Factor Materia Stockpile Truck Ownership Operation | e vs. Job Cond the within this E the Americal De the Material De the Material De the Material De the Material De the Mixed material De the Mixed material Dumped by the Common the Constant of | ition Rating: Basic Loade Description: Basic Loade De | NA NA NA Trucks and 104 t Cycle Timusted Loade | loaders -0.04 e Adjustment: | Dump: 0 maneuver): Factor (min. 0.020 | 0.625 O.625 O.625 O.626 O.626 O.626 O.626 O.626 O.626 O.626 O.626 O.627 O. | minut ource at HB) at HB) at HB) at HB) nutes nutes | |
| Excavators and Front Sho Machine Cycle Tim Selected Value Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Factor Materia Stockpile Truck Ownership Operation | e vs. Job Cond the within this E the Americal De the Material De the Material De the Material De the Material De the Mixed material De the Mixed material Dumped by the Common the Constant of | ition Rating: Basic Loade Description: Basic Loade De | NA NA NA Trucks and 104 t Cycle Timusted Loade | loaders -0.04 | Dump:0 maneuver): Factor (min. 0.020 0.020 -0.040 -0.040 0.000 -0.040 | 0.625 O.625 O.625 O.626 O.626 O.626 O.626 O.626 O.626 O.626 O.626 O.627 O. | minut ource at HB) at HB) at HB) at HB) at HB) nutes | |
| Excavators and Front Sho Machine Cycle Tim Selected Value Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Factor Materia Stockpile Truck Ownership Operation | e vs. Job Cond the within this E the Americal De the Material De the Material De the Material De the Material De the Mixed material De the Mixed material Dumped by the Common the Constant of | ition Rating: Basic Loade Description: Basic Loade De | NA NA NA Trucks and 104 t Cycle Timusted Loade | loaders -0.04 e Adjustment: | Dump: 0 maneuver): Factor (min. 0.020 | 0.625 O.625 O.625 O.626 O.626 O.626 O.626 O.626 O.626 O.626 O.626 O.627 O. | minut ource at HB) at HB) at HB) at HB) nutes nutes | |
| Excavators and Front Sho Machine Cycle Tim Selected Value Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Factor Materia Stockpile Truck Ownership Operation Dump Targe | e vs. Job Cond the within this E s – Material De th.): Ts - Unadjusted s l: Mixed ma the Dumped b the Common the Constant of the Nominal the | ition Rating: Basic Loade Description: Basic Loade Descr | NA NA NA NA Trucks and 104 t Cycle Timusted Loade Net Load Ti | loaders -0.04 e Adjustment: or Cycle Time: me per Truck: | Dump: 0 maneuver): Factor (min. 0.020 | 0.625 O.625 O.625 O.626 O.626 O.626 O.626 O.626 O.627 O.627 O.627 O.628 O. | minut ource at HB) at HB) at HB) at HB) nutes nutes nutes | |
| Excavators and Front Sho Machine Cycle Tim Selected Value Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Factor Materia Stockpile Truck Ownership Operation Dump Targe | e vs. Job Conding within this Fig. — Material Defin.): The series of th | ition Rating: Basic Loade Description: Basic Loade Descr | NA NA NA Trucks and 104 t Cycle Timusted Loade Net Load Times | loaders -0.04 e Adjustment: er Cycle Time: me per Truck: | Dump: 0 maneuver): Factor (min. 0.020 | 0.625 c) So (Ca (Ca (Ca mi | minut ource at HB) at HB) at HB) at HB) nutes nutes nutes | es |

<u>Truck Travel (Haul & Return) Time:</u> Road Condition: <u>Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0</u>

Haul Route:

| Huui Rou | Huai Route. | | | | | | | | |
|----------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|--|--|--|
| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | | | |
| 1 | 4000.00 | 0.00 | 3.00 | 3.00 | 2409 | 2.096 | | | |

Task # 011

Haul Time: 2.096 minutes

Return Route:

| Ttotalli Ito | Retain Roads. | | | | | | | | |
|--------------|-----------------------|-----------|------------------|---------------|-------------------|-------------------------|--|--|--|
| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) | | | |
| 1 | 4000.00 | 0.00 | 3.00 | 3.00 | 3503 | 1.414 | | | |

Return Time: 1.414 minutes
Total Truck Cycle Time: 7.365 minutes

Loading Tool unit

Production ____1,482.49 ___ LCY/Hour Adjusted for job efficiency: ____1,230.46 ___ LCY/Hour

Truck Unit Production

534.42 LCY/Hour Adjusted for job efficiency: 443.57 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 1,330.70 LCY/Hour Adjusted single truck/loader team production: 1,230.46 LCY/Hour Adjusted multiple truck/loader team production: 1,230.46 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 445.37 Hours

Unit cost: \$1.477 /LCY Total job cost: \$809,172

Rated Payload: 81,600 pounds
Payload Capacity: 30.79 LCY

SCRAPER TEAM WORK

| Task description: | 3rd Ridge | pit wetla | nd excav | ation | | | | |
|------------------------------|-----------------------------|-----------|----------|-------------------|---------------------|-------------|----------|-------------|
| Site: Dowe Flats Mine | | Permit | Action: | TR-04 Bond Es | timate Per | mit/Job#: _ | M19930 |)41 |
| PROJECT IDEN | FIFICATION | | | | | | | |
| I ROJECT IDEN | I II I CATION | | | | | | | |
| Task #: 012 | | | Colorado | | | | None | |
| Date: 4/21/20 User: AME |) <u>20</u> Co | unty: _l | Boulder | | Fil | ename:l | M041-01 | .2 |
| | organization name: | DRM | C | | | | | |
| Agency of G | ngamzanon name. | DKW | .3 | | | | | |
| HOURLY EQUIP | PMENT_ | | | COSTS | hift basis: 1 per d | <u>ay</u> | | |
| | | | | ent Description | | | | |
| | | Scraper: | | G w/push-pull | | | | |
| Suppo | rt Equipment -Loa | -Dozer: | Cat D97 | 1 - 980 | | | | |
| Бирро | | p Area: | NA | | | | | |
| Road Ma | intenance –Motor | | CAT 16 | | | | | |
| | -Water | Truck: | Water T | Canker, 3,500 Gal | • | | | |
| Cost Breakdown: | Scraper Wo | rk Team | | Support Equi | oment | Mainte | enance E | quipment |
| , | Scraper | Doz | zer | Load Area | Dump Area | Motor G | | Water Truck |
| %Utilization-machine: | 100 | | 100 | NA | NA | | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$ | 121.49 | NA | NA | \$3 | 82.71 | \$13.51 |
| Operating cost/hour: | \$190.35 | \$ | 105.84 | NA | NA | \$3 | 35.04 | \$14.47 |
| %Utilization-ripper: | NA | | NA | NA | NA | | 50 | NA |
| Ripper own. cost/hour: | NA | | \$0.00 | NA | NA | | \$4.44 | \$0.00 |
| Ripper op. cost/hour: | NA | | \$0.00 | NA | NA | | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | | \$39.98 | NA | NA | \$4 | 45.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$ | 267.31 | NA | NA | \$10 | 69.53 | \$27.98 |
| Number of Units: | 2 | | 1 | 0 | 0 | | 1 | 1 |
| Group Subtotals: | Work: | \$1,08 | 7.27 | Support: | \$0.00 | N | Iaint: | \$197.51 |
| Total work team cost | /hour: \$1,284.78 | | | | | | | |
| | | | | | | | | |
| MATERIAL QUA | <u>ANTITIES</u> | | | | | | | |
| Initial volume: | 470,392 | | CCY | Swell fac | tor: 1.125 | | | |
| Loose volume: | 529,191 | | LCY | | | | | |
| | rce of estimated vo | _ | | bond estimate | | | | |
| Source of | of estimated swell | factor: | Cat Hand | lbook | | | | |
| HOURLY PRODU | UCTION | | | | | | | |
| HOURETTROD | <u>ecron</u> | | | C D | l (l | · | | |
| | | | | - | owl (volume) Bas | 18: | | |
| Material weight: | 2,650 lbs/LCY | ls 250/ 1 | Pools | | Volume: 24.00 | | LC | |
| Material description: | Decomposed roc 75% Earth | K - 23% I | XOCK, | неареа | Volume: 34.00 | | LC | 1 |

LCY

LCY

Average Volume: 29.00

Adjusted Capacity: 29.00

| \sim | 1 | ш. | |
|--------|-------|----|-----|
| 7) | ICIA | 11 | me: |
| \sim | , 010 | 11 | m. |

Job Condition Correction: Site Altitude: 5350 feet

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| | | | |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|---------------------------|--------------|-----------|---------------|----------------|----------------------|
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.64 |

Haul Time: **0.64** minutes

Return Route:

| 1100011111 | | | | | | |
|------------|--------------------|-------|-----------|-----------|----------------|-------------|
| Seg# | Haul Distance (Ft) | Grade | Roll. Res | Total Res | Velocity (fpm) | Travel Time |
| | | (%) | (%) | (%) | | (min) |
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.49 |

Return Time: 0.49 minutes

Total Scraper team cycle time: 2.73 minutes

Adjusted for job conditions: 1,058.02 LCY/Hour Selected Number of Scrapers: 2 Scraper(s)

Adjusted single scraper team (unit) hourly production: 1,058.02 LCY/Hour

Adjusted multiple scraper team (fleet) hourly production: 1,058.02

Unadjusted unit production/hour: 1,274.73 LCY/Hour

Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

| Fleet size: | 1 | Team(s) | Total job time: | 500.17 | Hours |
|-------------|---------|---------|-----------------|-----------|-------|
| Unit cost: | \$1.214 | /LCY | Total job cost: | \$642,609 | |

LCY/Hour

BULLDOZER WORK

| Task description: | Backfil | ll 4th Ridge pit with i | n-pit stockpiles | | |
|--|--------------------|-------------------------|----------------------|---------------|----------|
| e: Dowe Flats Min | e | Permit Action: | TR-04 Bond Estimate | Permit/Job#: | M1993041 |
| PROJECT IDEN | NTIFICATION | <u>N</u> | | | |
| Task #: 013 | | State: Colorado | | Abbreviation: | None |
| Date: $\frac{-312}{4/21/2}$ | 2020 | County: Boulder | | Filename: | M041-013 |
| User: AME | | | | <u> </u> | |
| Agency or | r organization na | me: DRMS | | | |
| HOURLY EQUI | PMENT COS | <u>5T</u> | | | |
| Basic Machine: | Cat D9T - 9S | U | | | |
| Horsepower: | 405 | | | | |
| Blade Type: | Semi-Univers | sal | <u> </u> | | |
| Attachment: | NA | | | | |
| Shift Basis: Data Source: | 1 per day (CRG) | | | | |
| | (CKU) | | | | |
| Cost Breakdown: | | | 1 | | |
| 0 1: 0 47 | т | Ф121 40 | <u>Utilization %</u> | | |
| Ownership Cost/I | | \$121.49 \$105.84 | NA 100 | | |
| Operating Cost/F Ripper own. Cost/F | | \$0.00 | NA | | |
| Ripper own. Cost/F | | \$0.00 | 0 | | |
| Operator Cost/F | | \$39.98 | NA NA | | |
| Operator Cost 1 | | ψ37.70 | IVA | | |
| Total unit Cost/Hou | | | | | |
| Total Fleet Cost/Ho | our: \$534.61 | | | | |
| MATERIAL QU | JANTITIES | | | | |
| | | | | | |
| Initial Volume: Swell factor: | 185 1.125 | | | | |
| Loose volume: | 208 LCY | | | | |
| - | | | | | |
| Source of estimated | _ | Operator bond estima | te | | |
| Source of estimated | swell factor: | Cat Handbook | | | |
| HOURLY PROI | HCTION | | | | |
| | | | | | |
| Average push dista | | 00 feet | | | |
| Unadjusted hourly | production: 4 | 37.8 LCY/hr | | | |
| Materials consisten | cy description: | Consolidated stock | pile 1.0 | | |
| Average push gradi Average site altitud | | pet | | | |
| Material weight: | _2,650 lb | os/LCY | | _ | |
| Weight description | Decomp | oosed rock - 25% Rock | , 75% Earth | | |
| Job Condition Corr | | | Source | | |
| | erator Skill: | 1.000 | (EXCL.) | | |
| | onsistency: | 1.000 | (CAT HB) | | |
| Dozi | ng method: | 1.200 | (SLOT) | | |
| | Visibility: | 1.000 | (AVG.) | | |

Job efficiency:

0.830

(1 SHIFT/DAY)

| Spoil pile: | 1.000 | (DOZ-OC) |
|------------------|-------|----------|
| Push gradient: | 1.115 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.868 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Page 2 of 2

Net correction: 0.9639

Adjusted unit production: 422.00 LCY/hr
Adjusted fleet production: 844 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.633/LCY

Total job time: 0.25 Hours
Total job cost: \$132

SCRAPER TEAM WORK

| Task description: | Wetland to | opsoil stripping | | | | | | | |
|--|----------------------------|--------------------|-------------------------|---------------------|-----------------------|-------------|--|--|--|
| Site: Dowe Flats Mine | | Permit Action: | TR-04 Bond Es | timate Perr | mit/Job#: <u>M199</u> | 3041 | | | |
| PROJECT IDENT Task #: 014 | | State: Colorado | | | viation: None | | | | |
| Date: 4/21/2020 County: Boulder Filename: M041-014 | | | | | | | | | |
| User: AME | | | | | | | | | |
| Agency or o | organization name | DRMS | | | | | | | |
| HOURLY EQUIP | MENT | | COSTS | hift basis: 1 per d | <u>ay</u> | | | | |
| | | | ent Description | | | | | | |
| | | | G w/push-pull | | | | | | |
| Suppo | rt Equipment -Loa | | 1 - 930 | | | | | | |
| | -Dum | p Area: NA | | | | | | | |
| Road Ma | intenance – Motor | | 5M Γanker, 3,500 Gal | | | | | | |
| | - w ater | r Truck: Water I | i anker, 5,500 Gai | • | | | | | |
| Cost Breakdown: | Scraper Wo | rk Team | Support Equi | pment | Maintenance | | | | |
| | Scraper | Dozer | Load Area | Dump Area | Motor Grader | Water Truck | | | |
| %Utilization-machine: | 100 | 100 | NA | NA | 50 | 50 | | | |
| Ownership cost/hour: | \$174.06 | \$121.49 | NA | NA | \$82.71 | \$13.51 | | | |
| Operating cost/hour: | \$190.35 | \$105.84 | NA | NA | \$35.04 | \$14.47 | | | |
| %Utilization-ripper: | NA | NA | NA | NA | 50 | NA | | | |
| Ripper own. cost/hour: | NA | \$0.00 | NA | NA | \$4.44 | \$0.00 | | | |
| Ripper op. cost/hour: | NA | \$0.00 | NA | NA | \$1.96 | \$0.00 | | | |
| Operator cost/hour: | \$45.58 | \$39.98 | NA | NA | \$45.39 | \$0.00 | | | |
| Unit Subtotals: | \$409.98 | \$267.31 | NA | NA | \$169.53 | \$27.98 | | | |
| Number of Units: | 2 | 1 | 0 | 0 | 1 | 1 | | | |
| Group Subtotals: | Work: | \$1,087.27 | Support: | \$0.00 | Maint: | \$197.51 | | | |
| Total work team cost | /hour: \$1,284.78 | | | | | | | | |
| MATERIAL QUA | <u>NTITIES</u> | | | | | | | | |
| Initial volume: | 11,293 | CCY | Swell fact | tor: 1.125 | | | | | |
| Loose volume: | 12,705 | LCY | | | | | | | |
| | rce of estimated vo | | bond estimate | | | | | | |
| Source (| or estimated swell | ractor. Cat Hand | IDOOK | | | | | | |
| HOURLY PRODU | <u>UCTION</u> | | | | | | | | |
| | | | Scraper Be | owl (volume) Basi | is: | | | | |
| Material weight: | 2,650 lbs/LCY | | Struck | Volume: 24.00 | L | CY | | | |
| Material description: | Decomposed roc | ek - 25% Rock, | | Volume: 34.00 | | CY | | | |
| Datad Davilar 1 | 75% Earth | | A | Volume: 20.00 | т | CV | | | |
| Rated Payload: Payload Capacity: | 81,600 pounds 30.79 LCY | | Average Adjusted (| | | CY CY | | | |

| \sim | - | — | |
|----------|-----|----------|-----|
| ('\) | CLO | 111 | me: |
| \sim y | CIC | | m. |

Job Condition Correction: Site Altitude: 5350 feet

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| | | | |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|------------------|------------------|----------------|----------------------|
| 1 | 500.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.46 |

Haul Time: **0.46** minutes

Return Route:

| | Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|---|------|--------------------|--------------|------------------|------------------|----------------|----------------------|
| 1 | [| 500.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.32 |

Return Time:0.32minutesTotal Scraper team cycle time:2.38minutesAdjusted for job conditions:1,213.61LCY/HourSelected Number of Scrapers:2Scraper(s)Adjusted single scraper team (unit) hourly production:1,213.61LCY/HourAdjusted multiple scraper team (fleet) hourly production:1,213.61LCY/Hour

Unadjusted unit production/hour: 1,462.18 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 10.47
 Hours

 Unit cost:
 \$1.059
 /LCY
 Total job cost:
 \$13,450

SCRAPER TEAM WORK

| Task description: | Crusher a | rea topso | il strippi | ng | | | | | |
|--|---|---------------------|----------------------|------------------------------|--------------------------------|----------------|-------------|--|--|
| Site: Dowe Flats Mine | | Permit | Action: | TR-04 Bond Es | timate Per | mit/Job#: M199 | 93041 | | |
| PROJECT IDENT | FIFICATION | | | | | | | | |
| Task #: 015 State: Colorado Abbreviation: None | | | | | | | | | |
| Date: 4/21/2020 County: Boulder Filename: M041-015 | | | | | | | | | |
| User: AME | | | | | | | | | |
| Agency or o | organization name: | DRM | S | | | | | | |
| HOURLY EQUIP | <u>PMENT</u> | | | COSTS | hift basis: 1 per d | <u>lay</u> | | | |
| | | | | ent Description | | | | | |
| | | Scraper: -Dozer: | Cat 637 Cat D9 | G w/push-pull | | | | | |
| Suppo | rt Equipment -Loa | | NA | 1 - 930 | | | | | |
| | -Dum | p Area: | NA | | | | | | |
| Road Ma | intenance – Motor | | CAT 16 | | | | | | |
| | -Water | Truck: | Water | Tanker, 3,500 Gal | | | | | |
| Cost Breakdown: | Scraper Wo | rk Team | | Support Equi | pment | Maintenance | e Equipment | | |
| | Scraper | Doz | zer | Load Area | Dump Area | Motor Grader | Water Truck | | |
| %Utilization-machine: | 100 | | 100 | NA | NA | 50 | 50 | | |
| Ownership cost/hour: | \$174.06 | \$ | 121.49 | NA | NA | \$82.71 | \$13.51 | | |
| Operating cost/hour: | \$190.35 | | 105.84 | NA | NA | \$35.04 | \$14.47 | | |
| %Utilization-ripper: | NA | 4 | NA | NA | NA | 50 | NA NA | | |
| Ripper own. cost/hour: | NA | | \$0.00 | NA | NA | \$4.44 | \$0.00 | | |
| Ripper op. cost/hour: | NA | | \$0.00 | NA | NA | \$1.96 | \$0.00 | | |
| Operator cost/hour: | \$45.58 | | \$39.98 | NA | NA | \$45.39 | \$0.00 | | |
| Unit Subtotals: | \$409.98 | \$ | 267.31 | NA | NA | \$169.53 | \$27.98 | | |
| Number of Units: | 2 | | 1 | 0 | 0 | 1 | 1 | | |
| Group Subtotals: | Work: | \$1,08 | 7.27 | Support: | \$0.00 | Maint: | \$197.51 | | |
| Total work team cost | | | | | | | | | |
| MATERIAL QUA | <u>INTITIES</u> | | | | | | | | |
| Initial volume: | 9,437 | | CCY | Swell fac | tor: 1.125 | | | | |
| Loose volume: | 10,617 | | LCY | | | | | | |
| | rce of estimated vo of estimated swell | _ | Operator Cat Hand | bond estimate lbook | | | | | |
| HOURLY PROD | UCTION | | | | | | | | |
| | | | | Scraper B | owl (volume) Bas | is: | | | |
| Material weight: | 2,650 lbs/LCY | | | <u> </u> | Volume: 24.00 | | .CY | | |
| Material description: | Decomposed roc 75% Earth | k - 25% I | Rock, | | Volume: 24.00 Volume: 34.00 | | .CY | | |
| Rated Payload: | 81,600 pounds | | | Average | | | .CY | | |
| Payload Capacity: | 30.79 LCY | | | Adjusted Capacity: 29.00 LCY | | | L Y | | |

| ~ | • | m . | |
|------|-----|------------|-----|
| Cyc | I A | 111 | me. |
| CYC. | ı | 11 | m. |

<u>Job Condition Correction:</u> Site Altitude: 5350 feet

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| | | | |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|------------------|------------------|----------------|----------------------|
| 1 | 500.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.46 |

Haul Time: **0.46** minutes

Return Route:

| 11000111111 | J 4. C . | | | | | |
|-------------|--------------------|-------|-----------|-----------|----------------|-------------|
| Seg# | Haul Distance (Ft) | Grade | Roll. Res | Total Res | Velocity (fpm) | Travel Time |
| | | (%) | (%) | (%) | | (min) |
| 1 | 500.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.32 |

Return Time: 0.32 minutes

Total Scraper team cycle time: 2.38 minutes

Adjusted for job conditions: 1,213.61 LCY/Hour Selected Number of Scrapers: 2 Scraper(s)

Adjusted single scraper team (unit) hourly production: 1,213.61 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,213.61 LCY/Hour

Unadjusted unit production/hour: 1,462.18 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 8.75
 Hours

 Unit cost:
 \$1.059
 /LCY
 Total job cost:
 \$11,239

| Task description: | Hi-Cal/2nd R | idge pit rough ; | grade | | |
|-------------------------------------|---|------------------|-------------------------|---------------------------------------|---------------------------|
| e: Dowe Flats Mine | | Permit Action: | TR-04 Bond E | stimate Pern | nit/Job#: M1993041 |
| PROJECT IDEN | TIFICATION | | | | |
| Task #: 016 Date: 4/21/20 User: AME | Stat O20 Count | - | | Abbrev File | viation: None M041-016 |
| Agency or | organization name: _ | DRMS | | | |
| HOURLY EQUIP | MENT COST | | | | |
| Basic Mac Ripper Attach | | | _ | Horsepower: Shift Basis: Data Source: | 297 1 per day (CRG) |
| Cost Breakdown: | | | | Data Source. | (CRG) |
| | 1. 6 4/11 | | Ф0 2 7 1 | Utilization % | |
| | wnership Cost/Hour: Operating Cost/Hour: | | \$82.71 \$70.09 | NA 100 | |
| | wnership Cost/Hour: | | \$0.09 | NA | |
| | Operating Cost/Hour: | | \$0.00 | 1171 | |
| rr · | Operator Cost/Hour: | | \$45.39 | NA | |
| ר | Cotal Unit Cost/Hour: | | \$198.18 | | |
| Т | otal Fleet Cost/Hour: | \$390 | 6.36 | | |
| MATERIAL OIL | | | | | |
| MATERIAL QUA | <u> </u> | | | | |
| Total A | area to be graded or ri | pped: 107.30 | | | acres |
| S | ource of estimated acr | reage: Operate | or bond estimate | e | |
| HOURLY PROD | UCTION | | | | |
| | Average Grader | | 3.25 | mph | |
| | Selected Appl | | | blading (0-6 mph) | 3.25 |
| | Selected Blade | | 45 | degrees | |
| W | Effective Blade dth of blade overlap p | | 11.30 2.00 | feet feet | |
| | ing or ripping width p | | 9.30 | feet | |
| | isted Hourly Unit Pro | | 3.6636 | acres/hour | |
| Job Condition Correct | - | | | te Altitude: <u>5350</u> fee | |
| | | Source | | | |
| Altitude Ac | | (CAT HE | | | |
| Job Efficienc | | (1sh/d, fav | | | |
| Net Correctio | n: 0.9000 | multiplier | | | |
| | Adjusted Hourly U Adjusted Hourly Fl | | 3.2973 6.5945 | acres/Hour acres/Hour | |
| JOB TIME AND | COST | | | | |
| Fleet size: | 2 Grader | r(s) | Total job time | : 16.27 | Hours |
| Unit cost: | \$60.10 per acr | ·a | Total job cost | : \$6,449 | |
| Unit cost: | \$60.10 per acr | e | rotai job cost | . <u>\$0,449</u> | |

| Task description: | Hi-Cal/2nd Ridg | e pit final gr | ade | | |
|------------------------|--|-------------------|---------------------|---------------------------|----------------------------|
| : Dowe Flats Mine | Peri | mit Action: | TR-04 Bond E | stimate Per | rmit/Job#: <u>M1993041</u> |
| PROJECT IDENT | IFICATION | | | | |
| Task #: 017 | State: | Colorado | | Abbre | eviation: None |
| Date: 4/21/202 | | Boulder | | | ilename: M041-017 |
| User: AME | | | | | |
| A gancy or or | ganization name: DR | RMS | | | |
| Agency of of | gamzation nameDr | CIVIO | | | |
| HOURLY EQUIPM | MENT COST | | | | |
| Basic Mach | ine: CAT 16M | | | Horsepower: | 297 |
| Ripper Attachme | ent: | | | Shift Basis: | 1 per day |
| | | | | Data Source: | (CRG) |
| Cost Breakdown: | | | | | |
| | | | | Utilization % | |
| | nership Cost/Hour: | | \$82.71 | NA | |
| | perating Cost/Hour: | | \$70.09 | 100 | |
| | rnership Cost/Hour: | | \$0.00 | NA | |
| | perating Cost/Hour: | | \$0.00 | NI A | |
| | operator Cost/Hour: tal Unit Cost/Hour: | | \$45.39 \$198.18 | NA | |
| 10 | | | \$170.10 | | |
| Tot | al Fleet Cost/Hour: | \$396 | 5.36 | | |
| MATERIAL QUAN | NTTTIES ea to be graded or rippe | ed: <u>107.30</u> | | | acres |
| Sou | arce of estimated acreag | ge: Operate | or bond estimate | 2 | |
| HOURLY PRODU | CTION | | | | |
| <u>IIOCILLI I RODE</u> | Average Grader Sp | reed: | 1.50 | mph | |
| | Selected Applica | | | grading (0-2.5 mp | h) - 1.5 |
| | Selected Pipplica Selected Blade Ai | | 45 | degrees | <u>,</u> |
| | Effective Blade Ler | | 11.30 | feet | |
| Widt | th of blade overlap per p | | 2.00 | feet | |
| _ | ng or ripping width per j | · — | 9.30 | feet | |
| Unadjus | ted Hourly Unit Produc | tion: | 1.6909 | acres/hou | ır |
| Job Condition Correcti | on Factors | | Sit | e Altitude: <u>5350</u> f | eet |
| | | Source | | | |
| Altitude Adj: | | (CAT HE | | | |
| Job Efficiency: | | (1sh/d, fav | | | |
| Net Correction: | 0.9000 | multiplier | | | |
| | Adjusted Hourly Unit | Production: | 1.5218 | acres/Hour | |
| | Adjusted Hourly Fleet | | 3.0436 | acres/Hour | |
| | J J | | | | |
| JOB TIME AND C | <u>OST</u> | | | | |
| Fleet size: | 2 Grader(s) | | Total job time: | 35.25 | Hours |
| Unit cost: \$2 | 130.23 per acre | | Total job cost: | \$13,97 | 3 |

| Task description: | 3rd Ridge pit rou | ıgh grade | | | | |
|------------------------|--|-------------------|------------------|----------------------------|-----------|----------|
| : Dowe Flats Mine | Peri | mit Action: | TR-04 Bond E | Estimate Per | mit/Job#: | M1993041 |
| PROJECT IDENTI | FICATION | | | | | |
| Task #: 018 | State: | Colorado | | Abbre | eviation: | None |
| Date: 4/21/202 | 0 County: | Boulder | | Fi | lename: | M041-018 |
| User: AME | | | | | | |
| Agency or org | ganization name: DR | RMS | | | | <u></u> |
| HOURLY EQUIPM | IENT COST | | | | | |
| Basic Machi | ne: CAT 16M | | | Horsepower: | , | 297 |
| Ripper Attachme | ent: | | _ | Shift Basis: | 1 p | er day |
| | | | | Data Source: | ((| CRG) |
| Cost Breakdown: | | | | | | |
| Cost Dicardown. | | | | Utilization % | | |
| Ow | nership Cost/Hour: | | \$82.71 | NA | | |
| | perating Cost/Hour: | | \$70.09 | 100 | | |
| Ripper Ow | nership Cost/Hour: | | \$0.00 | NA | | |
| | erating Cost/Hour: | | \$0.00 | | | |
| | perator Cost/Hour: | | \$45.39 | NA | | |
| To | tal Unit Cost/Hour: | | \$198.18 | | | |
| Tot | al Fleet Cost/Hour: | \$396 | 5.36 | | | |
| Total Are | ea to be graded or rippe | ed: 29.80 | | | | acres |
| Sou | rce of estimated acreag | ge: Operate | or bond estimate | e | | |
| HOURLY PRODUC | <u>CTION</u> | | | | | |
| | Average Grader Sp | eed: | 3.25 | mph | | |
| | Selected Applica | | | blading (0-6 mph) | - 3.25 | |
| | Selected Blade Aı | | 45 | degrees | | |
| XX7' 1. | Effective Blade Ler | | 11.30 | feet | | |
| | h of blade overlap per p g or ripping width per p | | 2.00 9.30 | feet | | |
| _ | g of ripping widin per p ed Hourly Unit Produc | | 3.6636 | feet acres/hou | ır | |
| ŭ | • | uon. | | | | |
| Job Condition Correcti | on Factors | C. | Si | te Altitude: <u>5350</u> f | eet | |
| Altitude Adj: | 1.00 | Source (CAT HE | 3) | | | |
| Job Efficiency: | 0.90 | (1sh/d, fav | <u> </u> | | | |
| Net Correction: | 0.9000 | multiplier | | | | |
| | | - | | /TT | | |
| | Adjusted Hourly Unit | | 3.2973 | acres/Hour | | |
| | Adjusted Hourly Fleet | r roduction: | 6.5945 | acres/Hour | | |
| JOB TIME AND C | <u>OST</u> | | | | | |
| Fleet size: | 2 Grader(s) | | Total job time | : 4.52 | | Hours |
| Unit cost: \$ | 60.10 per acre | | Total job cost | : \$1,791 | | |
| оти созг ф | per acre | | Total job cost | . <u> </u> | <u> </u> | |

| Task description: | 3rd Ridge pit final grade | | | |
|------------------------|----------------------------------|---------------------|----------------------------|---------------------------|
| e: Dowe Flats Mine | Permit Action | : TR-04 Bond Es | etimate Perr | mit/Job#: <u>M1993041</u> |
| PROJECT IDENT | <u>IFICATION</u> | | | |
| Task #: 019 | State: Colorad | o | Abbrev | viation: None |
| Date: 4/21/202 | 0 County: Boulder | | Fil | ename: M041-019 |
| User: AME | | | | |
| Agency or or | ganization name: DRMS | | | |
| HOURLY EQUIPM | MENT COST | | | |
| Basic Mach | ine: CAT 16M | | Horsepower: | 297 |
| Ripper Attachm | | | Shift Basis: | 1 per day |
| 11 | | | Data Source: | (CRG) |
| Cost Breakdown: | | | | _ |
| Cost Dicardowii. | | | Utilization % | |
| Ow | nership Cost/Hour: | \$82.71 | NA | |
| | perating Cost/Hour: | \$70.09 | 100 | |
| | nership Cost/Hour: | \$0.00 | NA | |
| | perating Cost/Hour: | \$0.00 | | |
| | perator Cost/Hour: | \$45.39 | NA | |
| То | tal Unit Cost/Hour: | \$198.18 | | |
| Tot | al Fleet Cost/Hour: \$3 | 396.36 | | |
| | | | | |
| MATERIAL QUAN | <u>NTITIES</u> | | | |
| Total Ar | ea to be graded or ripped: 29.8 | 0 | | acres |
| Sou | rce of estimated acreage: Open | rator bond estimate | | |
| HOURLY PRODU | CTION | | | |
| HOURETTRODE | Average Grader Speed: | 1.50 | mph | |
| | Selected Application: | | rading (0-2.5 mph |) - 1.5 |
| | Selected Blade Angle: | 45 | degrees | <i>)</i> |
| | Effective Blade Length: | 11.30 | feet | |
| Widt | th of blade overlap per pass: | 2.00 | feet | |
| _ | g or ripping width per pass: | 9.30 | feet | |
| Unadjus | ted Hourly Unit Production: | 1.6909 | acres/hour | • |
| Job Condition Correcti | on Factors | Site | e Altitude: <u>5350</u> fe | et |
| | Sour | | | |
| Altitude Adj: | , | | | |
| Job Efficiency: | | | | |
| Net Correction: | 0.9000 multipli | ier | | |
| | Adjusted Hourly Unit Production | n: 1.5218 | acres/Hour | |
| | Adjusted Hourly Fleet Production | n: 3.0436 | acres/Hour | |
| JOB TIME AND C | <u>OST</u> | | | |
| Fleet size: | 2 Grader(s) | Total job time: | 9.79 | Hours |
| Unit cost: \$ | 130.23 per acre | Total job cost: | \$3,881 | |
| φ. φ. | per dere | roun job cost. | Ψυ,001 | |

| Task description: | 4th Ridge pit rough gra | ıde | | |
|--------------------------|---|----------------------|-------------------------------|------------------------|
| : Dowe Flats Mine | Permit Act | ion: TR-04 Bond E | Estimate Permit | /Job#: <u>M1993041</u> |
| PROJECT IDENTI | FICATION . | | | |
| Task #: 020 | State: Colo | rado | Abbrevia | tion: None |
| Date: 4/21/202 | O County: Boul | der | Filena | ame: M041-020 |
| User: AME | | | | |
| Agency or org | ganization name: DRMS | | | |
| HOURLY EQUIPM | IENT COST | | | |
| Basic Machi | ne: CAT 16M | | Horsepower: | 297 |
| Ripper Attachme | ent: | | Shift Basis: | 1 per day |
| | | | Data Source: | (CRG) |
| Cost Breakdown: | | | | |
| | | | Utilization % | |
| | nership Cost/Hour: | \$82.71 | NA 100 | |
| | perating Cost/Hour: | \$70.09 | 100 NA | |
| | nership Cost/Hour: perating Cost/Hour: | \$0.00 \$0.00 | NA | |
| | perator Cost/Hour: | \$45.39 | NA | |
| | tal Unit Cost/Hour: | \$198.18 | <u> </u> | |
| Tota | al Fleet Cost/Hour: | \$198.18 | | |
| 100 | | Ψ1/0110 | | |
| MATERIAL QUAN | <u>VTITIES</u> | | | |
| Total Are | ea to be graded or ripped: 7 | .00 | | acres |
| | | | | |
| Sou | rce of estimated acreage:C | perator bond estimat | e | |
| HOURLY PRODUC | CTION | | | |
| | Average Grader Speed: | 3.25 | mph | |
| | Selected Application: | | blading (0-6 mph) - 3 | .25 |
| | Selected Blade Angle: | 45 | degrees | |
| | Effective Blade Length: | 11.30 | feet | |
| | h of blade overlap per pass: | 2.00 | feet | |
| _ | g or ripping width per pass: _ ed Hourly Unit Production: | 9.30 3.6636 | feet acres/hour | |
| · · | <u>-</u> | | | |
| Job Condition Correction | | | te Altitude: <u>5350</u> feet | |
| Altitude Adj: | · · | ource AT HB) | | |
| Job Efficiency: | , | /d, fav.) | | |
| Net Correction: | | iplier | | |
| | Adjusted Hourly Unit Produc | etion: 3.2973 | acres/Hour | |
| | Adjusted Hourly Fleet Produc | | acres/Hour | |
| | | | | |
| JOB TIME AND CO | <u>OST</u> | | | |
| Fleet size: | 1 Grader(s) | Total job time | 2.12 | Hours |
| Unit cost: \$6 | 60.10 per acre | Total job cost | : \$421 | |

| Task description: | 4th Ridge pit final gr | ade | | |
|--------------------------|---|----------------------|------------------------------|--------------------|
| : Dowe Flats Mine | Permit A | Action: TR-04 Bond | Estimate Per | mit/Job#: M1993041 |
| PROJECT IDENTI | FICATION | | | |
| Task #: 021 | State: Co | olorado | Abbre | viation: None |
| Date: 4/21/202 | 0 County: Bo | oulder | Fil | ename: M041-021 |
| User: AME | | | | |
| Agency or org | ganization name:DRMS | | | |
| HOURLY EQUIPM | IENT COST | | | |
| Basic Machi | ne: CAT 16M | | Horsepower: | 297 |
| Ripper Attachme | | | Shift Basis: | 1 per day |
| ** | | | Data Source: | (CRG) |
| Cost Breakdown: | | | | |
| COSt DIEARGOWII. | | | Utilization % | |
| Ow | nership Cost/Hour: | \$82.71 | NA | |
| | perating Cost/Hour: | \$70.09 | 100 | |
| | nership Cost/Hour: | \$0.00 | NA | |
| | perating Cost/Hour: | \$0.00 | | |
| O | perator Cost/Hour: | \$45.39 | NA | |
| To | tal Unit Cost/Hour: | \$198.18 | | |
| Tot | al Fleet Cost/Hour: | \$198.18 | | |
| 100 | <u></u> | ψίλοιτο | | |
| MATERIAL QUAN | NTITIES | | | |
| | | 7.00 | | |
| 10tal Are | ea to be graded or ripped: | 7.00 | | acres |
| Sou | rce of estimated acreage: | Operator bond estima | te | |
| HOURI V BRODU | CTION | | | |
| HOURLY PRODUC | | 1.50 | 1. | |
| | Average Grader Speed Selected Application | | mph grading (0-2.5 mph | .) 15 |
| | Selected Application Selected Blade Angle | | degrees | .) - 1.3 |
| | Effective Blade Length | | feet | |
| Widt | h of blade overlap per pass | | feet | |
| | g or ripping width per pass | | feet | |
| • | ed Hourly Unit Production | | acres/hou | r |
| Job Condition Correction | • | | ite Altitude: <u>5350</u> fe | |
| | | Source | | |
| Altitude Adj: | 1.00 | CAT HB) | | |
| Job Efficiency: | | sh/d, fav.) | | |
| Net Correction: | | ultiplier | | |
| | | - | 77.7 | |
| | Adjusted Hourly Unit Prod | | acres/Hour | |
| | Adjusted Hourly Fleet Prod | luction: 1.5218 | acres/Hour | |
| JOB TIME AND C | <u>OST</u> | | | |
| Fleet size: | 1 Grader(s) | Total job time | e: 4.60 | Hours |
| TT 1. | 20.22 | TT - 1111 | , ho | |
| Unit cost: \$1 | 30.23 per acre | Total job cos | t: \$912 | |

| Task description: | Rip office/mainter | iance/equip | oment/fuer area | as | |
|---|--|--|--|--|---------------------------|
| : Dowe Flats Mine | Permit Action: TR-04 Bond E | | | stimate Pern | nit/Job#: <u>M1993041</u> |
| PROJECT IDENTIFI | [CATION | | | | |
| Task #: 022 Date: 4/21/2020 User: AME | State: County: | Colorado Boulder | | Abbrev File | name: None M041-022 |
| Agency or organ | nization name: DRM | MS | | | |
| HOURLY EQUIPME | NT COST | | | | |
| Basic Machine | | | | Horsepower: | 297 |
| Ripper Attachment: | : Multi-Shank Ripp | per | | Shift Basis: | 1 per day |
| | | | | Data Source: | (CRG) |
| Cost Breakdown: | | | ı | TT: 11 o/ | |
| Owner | rship Cost/Hour: | | \$82.71 | Utilization % NA | |
| | ating Cost/Hour: | | \$70.09 | 100 | |
| Ripper Owner | rship Cost/Hour: | | \$4.44 | NA | |
| | ating Cost/Hour: | | \$3.92 | 100 | |
| * | rator Cost/Hour: | | \$45.39 | NA | |
| Total | Unit Cost/Hour: | | \$206.54 | | |
| Total I | Fleet Cost/Hour: | \$206 | 5.54 | | |
| MATERIAL QUANT | to be graded or ripped | : 3.80 | | | acres |
| Source | e of estimated acreage | : Operato | or bond estimate | e | |
| HOURLY PRODUCT | <u>'ION</u> | | | | |
| | | | | | |
| | Average Grader Spe | | 1.50 | mph | |
| | Selected Applicati | on: | Rip | ping (0-3 mph) - 1.: | 50 |
| | Selected Applicati Selected Blade Ang | on: gle: | Rip 0 | ping (0-3 mph) - 1.: degrees | 50 |
| Width o | Selected Applicati | on: gle: gth: | Rip | ping (0-3 mph) - 1.: | 50 |
| Net grading o | Selected Applicati Selected Blade Ang Effective Blade Leng of blade overlap per pa or ripping width per pa | on: gle: gth: ass: | Rip 0 16.00 2.00 14.00 | Ding (0-3 mph) - 1.: | |
| Net grading o | Selected Applicati Selected Blade Ang Effective Blade Leng of blade overlap per pa | on: gle: gth: ass: | Rip 0 16.00 2.00 | ping (0-3 mph) - 1.: degrees feet feet | |
| Net grading o | Selected Applicati Selected Blade Ang Effective Blade Leng of blade overlap per pa or ripping width per pa Hourly Unit Producti | on: gle: gth: ass: on: | Rip 0 16.00 2.00 14.00 2.5455 | Ding (0-3 mph) - 1.: | |
| Net grading o Unadjusted Job Condition Correction | Selected Applicati Selected Blade Ang Effective Blade Leng of blade overlap per pa or ripping width per pa Hourly Unit Producti Factors | on: gle: gth: ass: on: Source | Rip 0 16.00 2.00 14.00 2.5455 Sit | Ding (0-3 mph) - 1.: degrees feet feet feet acres/hour | |
| Net grading of Unadjusted Job Condition Correction Altitude Adj: | Selected Applicating Selected Blade Anguard Effective Blade Length of blade overlap per participating width per participating width per participation. Hourly Unit Production Factors. | on:gle:gth:sss:sss:sss:ssscon: | Rip 0 16.00 2.00 14.00 2.5455 Sit | Ding (0-3 mph) - 1.: degrees feet feet feet acres/hour | |
| Net grading o Unadjusted Job Condition Correction | Selected Applicati Selected Blade Ang Effective Blade Leng of blade overlap per pa or ripping width per pa Hourly Unit Producti Factors | on: gle: gth: ass: on: Source (CAT HE | Rip 0 16.00 2.00 14.00 2.5455 Sit | Ding (0-3 mph) - 1.: degrees feet feet feet acres/hour | |
| Net grading of Unadjusted Job Condition Correction Altitude Adj: Job Efficiency: Net Correction: | Selected Applicating Selected Blade Anguard Effective Blade Lengular Blade Lengular Blade Overlap per participation with per participation with the period of the period blade and the period blade | on: gle: gth: ass: on: Source (CAT HE (1sh/d, fav multiplier | Rip 0 16.00 2.00 14.00 2.5455 Sit | degrees feet feet feet acres/hour te Altitude: 5350 feet | |
| Net grading of Unadjusted Job Condition Correction Altitude Adj: Job Efficiency: Net Correction: Additional | Selected Applicating Selected Blade Ang Effective Blade Leng of blade overlap per participation of the selection of blade overlap per participation of the selection of blade overlap per participation of the selection of the sel | on: gle: gth: ass: on: Source (CAT HE (1sh/d, fav multiplier | Rip 0 16.00 2.00 14.00 2.5455 Sit 8) 7.) | ping (0-3 mph) - 1.: degrees feet feet feet acres/hour te Altitude: 5350 fee | |
| Net grading of Unadjusted Job Condition Correction Altitude Adj: Job Efficiency: Net Correction: Additional | Selected Applicating Selected Blade Anguard Effective Blade Lengular Blade Lengular Blade Overlap per participation with per participation with the period of the period blade and the period blade | on: gle: gth: ass: on: Source (CAT HE (1sh/d, fav multiplier | Rip 0 16.00 2.00 14.00 2.5455 Sit | degrees feet feet feet acres/hour te Altitude: 5350 feet | |
| Net grading of Unadjusted Job Condition Correction Altitude Adj: Job Efficiency: Net Correction: Additional | Selected Applicati Selected Blade Ang Effective Blade Leng of blade overlap per pa or ripping width per pa Hourly Unit Producti Factors 1.00 0.90 0.9000 djusted Hourly Unit Pleet P | on: gle: gth: ass: on: Source (CAT HE (1sh/d, fav multiplier | Rip 0 16.00 2.00 14.00 2.5455 Sit 8) 7.) | ping (0-3 mph) - 1.: degrees feet feet feet acres/hour te Altitude: 5350 fee | |
| Net grading of Unadjusted Job Condition Correction Altitude Adj: Job Efficiency: Net Correction: Add Add | Selected Applicati Selected Blade Ang Effective Blade Leng of blade overlap per pa or ripping width per pa Hourly Unit Producti Factors 1.00 0.90 0.9000 djusted Hourly Unit P djusted Hourly Fleet P | on: gle: gth: ass: on: Source (CAT HE (1sh/d, fav multiplier | Rip 0 16.00 2.00 14.00 2.5455 Sit 8) 7.) | ping (0-3 mph) - 1.: degrees feet feet feet acres/hour te Altitude: 5350 feet acres/Hour acres/Hour | |

| Task description: | Rip roads and other dist | urbances | | |
|---------------------------|--|-----------------------|-----------------------------|------------------------|
| e: Dowe Flats Mine | Permit Action | on: TR-04 Bond E | stimate Pern | nit/Job#: M1993041 |
| PROJECT IDENTIF | <u>TICATION</u> | | | |
| Task #: 023 | State: Colora | ado | Abbrev | iation: None |
| Date: 4/21/2020 | County: Bould | er | File | ename: <u>M041-023</u> |
| User: AME | | | | |
| Agency or orga | nnization name: DRMS | | | |
| HOURLY EQUIPME | ENT COST | | | |
| Basic Machin | e: CAT 16M | | Horsepower: | 297 |
| Ripper Attachmen | nt: Multi-Shank Ripper | | Shift Basis: | 1 per day |
| | | | Data Source: | (CRG) |
| Cost Breakdown: | | | | |
| | | | Utilization % | |
| | ership Cost/Hour: | \$82.71 | NA | |
| | rating Cost/Hour: | \$70.09 | 100 | |
| | ership Cost/Hour: | \$4.44 | NA 100 | |
| | rating Cost/Hour:erator Cost/Hour: | \$3.92 \$45.39 | 100 NA | |
| <u> -</u> | l Unit Cost/Hour: | \$206.54 | IVA | |
| 1014 | TOIR COSTITUTE. | Ψ200.34 | | |
| Total | Fleet Cost/Hour: | \$413.08 | | |
| MATERIAL QUANT Total Area | | .40 | | acres |
| | | perator bond estimate |) | |
| HOURLY PRODUC | TION | | | |
| <u> </u> | Average Grader Speed: | 1.50 | mph | |
| | Selected Application: | Ripp | oing (0-3 mph) - 1.5 | 50 |
| | Selected Blade Angle: | 0 | degrees | |
| ***** | Effective Blade Length: | 16.00 | feet | |
| | of blade overlap per pass: | 2.00 14.00 | feet | |
| | or ripping width per pass: d Hourly Unit Production: | 2.5455 | feet acres/hour | |
| Job Condition Correction | | | e Altitude: <u>5350</u> fee | |
| | | urce | | |
| Altitude Adj: | 1.00 (CA | Г НВ) | | |
| Job Efficiency: | | d, fav.) | | |
| Net Correction: | 0.9000 multi | plier | | |
| A | Adjusted Hourly Unit Product | ion: 2.2909 | acres/Hour | |
| Α | Adjusted Hourly Fleet Product | ion: 4.5818 | acres/Hour | |
| JOB TIME AND CO | <u>8T</u> | | | |
| Fleet size: | 2 Grader(s) | Total job time: | 13.84 | Hours |
| Unit cost: \$90 | 0.16 per acre | Total job cost: | \$5,716 | |
| | · • | • | | |

SCRAPER TEAM WORK

| Task description: | Retopsoil l | Hi-Cal/2r | ıd Ridge | pit with NE/N s | tockpile | | |
|----------------------------------|--|--------------------|----------------------------------|---------------------------|--------------------------------|-----------------------------|--|
| Site: Dowe Flats Mine | | Permit | ermit Action: TR-04 Bond Estimat | | stimate Per | mit/Job#: <u>M199</u> | 3041 |
| PROJECT IDENT | FIFICATION | | | | | | |
| | | 74.4 | 7-1d- | | A 1-1 | wietien. Neue | |
| Task #: 024 Date: 4/21/20 | | - | Colorado Boulder | | | viation: None lename: M041- | 024 |
| User: AME | | <u></u> | 3001001 | | | | <u>. </u> |
| Agency or o | organization name: | DRM | S | | | | |
| HOURLY EQUIP | PMENT_ | | | COSTS | hift basis: 1 per d | lay | |
| | | | Equipme | ent Description | | | |
| | -S | Scraper: | Cat 637 | G w/push-pull | | | |
| | | -Dozer: | | T - 9SU | | | |
| Suppo | rt Equipment -Loa | d Area: p Area: | NA NA | | | | |
| Road Ma | intenance –Motor | | CAT 16 | 5M | | | |
| | -Water | Truck: | Water | Γanker, 3,500 Gal | | | |
| G (P 11 | C W | 1 75 | | G . F | | 3.6 | . |
| Cost Breakdown: | Scraper Wo | | ver . | Support Equi Load Area | pment Dump Area | Maintenance Motor Grader | Equipment Water Truck |
| | _ | Dozer | | | - | | |
| % Utilization-machine: | 100 | | 100 | NA | NA | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$121.49 | | NA | NA | \$82.71 | \$13.51 |
| Operating cost/hour: | \$190.35 | \$ | 105.84 | NA | NA | \$35.04 | \$14.47 |
| % Utilization-ripper: | NA | | NA | NA | NA | 50 | NA |
| Ripper own. cost/hour: | NA | | \$0.00 | NA | NA | \$4.44 | \$0.00 |
| Ripper op. cost/hour: | NA | | \$0.00 | NA | NA | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | | \$39.98 | NA | NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$ | 267.31 | NA | NA | \$169.53 | \$27.98 |
| Number of Units: | 2 | | 1 | 0 | 0 | 1 | φ10 7.5 1 |
| Group Subtotals: | Work: | \$1,08 | 7.27 | Support: | \$0.00 | Maint: | \$197.51 |
| Total work team cost | /hour: \$1,284.78 | | | | | | |
| MATERIAL QUA | NTITIES | | | | | | |
| | | | COV | C - 11 C - | 1.215 | | |
| Initial volume: Loose volume: | 16,231 19,721 | | CCY LCY | Swell fac | tor: 1.215 | | |
| | | 1 | | 1 1 2 2 | | | |
| | rce of estimated vo of estimated swell | | Operator Cat Hand | bond estimate | | | |
| Source | or estimated swent | _ | Cut Huin | accon | | | |
| HOURLY PRODU | <u>UCTION</u> | | | | | | |
| | | | | Scraper B | owl (volume) Bas | is: | |
| Material weight: | 1,600 lbs/LCY | | | | Volume: 24.00 | | CY |
| Material description: | Top Soil | | | | Volume: 24.00 Volume: 34.00 | | CY |
| Rated Payload: | 81,600 pounds | | | Average | Volume: 29.00 | L | CY |
| Payload Capacity: | pacity: 51.00 LCY Adjusted Capacity: 29.00 | | | CY | | | |

Site Altitude: 5350 feet

| Cy | cle | Time | e: |
|--------|-----|--------|----|
| \sim | CIC | 1 1111 | · |

Scraper Loading Time: $\frac{1.00}{0.60}$ Minutes Maneuver and Spread Time: $\frac{0.60}{0.60}$ Minutes

Job Condition Correction:

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|--------------|-----------|---------------|----------------|----------------------|
| 1 | 1500.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.75 |

Haul Time: **0.75** minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|----------------------|
| 1 | 1500.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.66 |

Return Time: **0.66** minutes Total Scraper team cycle time: 3.01 minutes Adjusted for job conditions: 959.60 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: LCY/Hour 959.60 Adjusted multiple scraper team (fleet) hourly production: 959.60 LCY/Hour

Unadjusted unit production/hour: 1,156.15 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

| Fleet size: | 1 | Team(s) | Total job time: | 20.55 | Hours |
|-------------|---------|---------|-----------------|----------|-------|
| Unit cost: | \$1.339 | /LCY | Total job cost: | \$26,403 | |

SCRAPER TEAM WORK

| Task description: | Retopsoil H | Ii-Cal/2 | nd Ridge | pit with NE/mid | dle stockpile | | | |
|---|--|-------------------|-------------------------------|---------------------------------|--|------------|------------------|--------------|
| Site: Dowe Flats Mine P | | Permi | t Action: | TR-04 Bond Es | timate Peri | nit/Job#: | M1993041 | |
| PROJECT IDEN | <u> </u> | | | | | | | |
| Task #: 025 Date: 4/21/20 User: AME | | | Colorado Boulder | | | | None M041-025 | |
| Agency or o | organization name: | DRM | IS | | | | | |
| HOURLY EQUIP | PMENT_ | | | COSTS | hift basis: 1 per d | <u>ay</u> | | |
| | | craper: Dozer: | | nt Description G w/push-pull | | | | |
| | ort Equipment -Loac -Dump intenance –Motor (-Water | Area: Grader: | NA NA CAT 16 Water T | M Sanker, 3,500 Gal | | | | |
| Cost Breakdown: | Scraper Wor | | · · · · · · · · | Support Equip | | Mainte | nance Eq | — uipment |
| | • | | zer | Load Area | Dump Area | Motor Gr | ader | Water Truck |
| %Utilization-machine: | 100 | 100 | | NA | NA | | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$121.49 | | NA | NA | \$8 | 32.71 | \$13.51 |
| Operating cost/hour: | \$190.35 | \$105.84 | | NA | NA | \$3 | 35.04 | \$14.47 |
| %Utilization-ripper: | NA | NA | | NA | NA | | 50 | NA |
| Ripper own. cost/hour: | NA | \$0.00 | | NA | NA | \$ | 64.44 | \$0.00 |
| Ripper op. cost/hour: | NA | | \$0.00 | NA | NA | | 81.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | | \$39.98 | NA | NA | | 15.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$267.31 | | NA | NA | \$16 | 59.53 | \$27.98 |
| Number of Units: | 2 | 1 | | 0 | 0 | | 1 | 1 |
| Group Subtotals: | Work: | \$1,087.27 | | Support: | \$0.00 | M | laint: | \$197.51 |
| Total work team cost | | | | | | | | |
| Initial volume: Loose volume: | | | | | tor: 1.215 | | | |
| | rce of estimated vol of estimated swell fa | _ | Operator Cat Hand | bond estimate book | | | | <u> </u> |
| HOURLY PROD | <u>UCTION</u> | | | . | 1/ 1 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | | | |
| | | | | | owl (volume) Bas | <u>1S:</u> | | |
| Material weight: | 1,600 lbs/LCY | | | | Volume: 24.00 | | LCY | |
| Material description: Rated Payload: | Top Soil 81,600 pounds | | | Heaped Average | Volume: 34.00 Volume: 29.00 | | LCY LCY | |
| Payload Capacity: | 51.00 LCY | | | | Adjusted Capacity: 29.00 LO | | | |

| Cy | cle | Time | e: |
|--------|-----|--------|----|
| \sim | CIC | T 1111 | · |

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| | | | |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|----------------------|
| 1 | 2000.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.93 |

Haul Time: **0.93** minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 2000.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.83 |

Return Time: **0.83** minutes Total Scraper team cycle time: 3.36 minutes Adjusted for job conditions: 859.64 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: LCY/Hour 859.64 Adjusted multiple scraper team (fleet) hourly production: 859.64 LCY/Hour

Unadjusted unit production/hour: 1,035.71 LCY/Hour Optimal Number of Scrapers per push dozer:

| Fleet size: | 1 | Team(s) | Total job time: | 45.69 | Hours |
|-------------|---------|---------|-----------------|----------|-------|
| Unit cost: | \$1.495 | /LCY | Total job cost: | \$58,706 | |

| Task description: | Retopsoil H | Ii-Cal/2 | nd Ridge | pit with NW sto | ckpile | | |
|---|---|-------------------|----------------------|--------------------------------------|--------------------------------|-------------------------|---------------|
| Site: Dowe Flats Mine | | Permi | t Action: | TR-04 Bond Es | timate Peri | mit/Job#: M19 | 993041 |
| PROJECT IDEN | TIFICATION | | | | | | |
| Task #: 026 Date: 4/21/20 User: AME | | | Colorado Boulder | | | viation: None mame: M04 | e 1-026 |
| Agency or o | organization name: | DRM | IS | | | | |
| HOURLY EQUIP | <u>PMENT</u> | | | COSTS | hift basis: 1 per d | <u>ay</u> | |
| | | craper: Dozer: | | nt Description G w/push-pull Γ - 9SU | | | |
| | ort Equipment -Loac -Dump iintenance –Motor (-Water | Area: Grader: | NA NA CAT 16 | 5M Canker, 3,500 Gal | | | |
| Cost Breakdown: | Scraper Wor | | water 1 | Support Equi | | Maintenand | ce Equipment |
| | Scraper | Do | zer | Load Area | Dump Area | Motor Grader | r Water Truck |
| %Utilization-machine: | 100 | 100 | | NA | NA | 50 | 0 50 |
| Ownership cost/hour: | \$174.06 | \$121.49 | | NA | NA | \$82.7 | 1 \$13.51 |
| Operating cost/hour: | \$190.35 | \$ | 105.84 | NA | NA | \$35.04 | 4 \$14.47 |
| % Utilization-ripper: | NA | | NA | NA | NA | 50 | 0 NA |
| Ripper own. cost/hour: | NA | | \$0.00 | NA | NA | \$4.44 | 4 \$0.00 |
| Ripper op. cost/hour: | NA | | \$0.00 | NA | NA | \$1.90 | 6 \$0.00 |
| Operator cost/hour: | \$45.58 | | \$39.98 | NA | NA | \$45.39 | 9 \$0.00 |
| Unit Subtotals: | \$409.98 | \$ | 267.31 | NA | NA | \$169.53 | 3 \$27.98 |
| Number of Units: | 2 | | 1 | 0 | 0 | - | 1 |
| Group Subtotals: | Work: | \$1,08 | 37.27 | Support: | \$0.00 | Maint | : \$197.51 |
| Total work team cost | _ | | | | | | |
| Initial volume: Loose volume: | 3,369 4,093 | | CCY LCY | Swell fact | tor: 1.215 | | |
| | of estimated swell far | _ | Operator Cat Hand | bond estimate book | | | |
| HOURLY PROD | <u>UCTION</u> | | | | | | |
| | | | | Scraper B | owl (volume) Bas | <u>is:</u> | |
| Material weight: | 1,600 lbs/LCY | | | | Volume: 24.00 | | LCY |
| Material description: Rated Payload: | Top Soil 81,600 pounds | | | Heaped Average | Volume: 34.00 Volume: 29.00 | | LCY LCY |
| Payload Capacity: | 51.00 LCY | | | Adjusted (| | | LCY |

| Cy | cle | Time | e: |
|--------|-----|--------|----|
| \sim | CIC | T 1111 | · |

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|--------------|-----------|------------------|----------------|-------------------|
| 1 | 1500.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.75 |

Haul Time: **0.75** minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|---------------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 1500.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.66 |

Return Time: **0.66** minutes Total Scraper team cycle time: 3.01 minutes Adjusted for job conditions: 959.60 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: LCY/Hour 959.60 Adjusted multiple scraper team (fleet) hourly production: 959.60 LCY/Hour

Unadjusted unit production/hour: 1,156.15 LCY/Hour Optimal Number of Scrapers per push dozer:

| Fleet size: | 1 | Team(s) | Total job time: | 4.27 | Hour |
|-------------|---------|---------|-----------------|----------------|------|
| Unit cost: | \$1.339 | /LCY | Total job cost: | \$5.480 | |
| Ullit Cost. | \$1.339 | /LC I | Total job cost. | ФЭ,40 U | |

| Task description: | Retopsoil H | Ii-Cal/2 | nd Ridge | pit with High-C | al stockpile | | | |
|---|---|-------------------|------------------------------------|--|--------------------------------|------------|------------------|--------------|
| Site: Dowe Flats Mine | Site: Dowe Flats Mine Perm | | Permit Action: TR-04 Bond Estimate | | | mit/Job#: | M1993041 | |
| PROJECT IDEN | TIFICATION | | | | | | | |
| Task #: 027 Date: 4/21/20 User: AME | | | Colorado Boulder | | | | None M041-027 | · |
| Agency or o | organization name: | DRM | IS | | | | | |
| HOURLY EQUIP | PMENT | | | COSTS | hift basis: 1 per d | <u>ay</u> | | |
| | | craper: Dozer: | | nt Description G w/push-pull Γ - 9SU | | | | |
| | ort Equipment -Loac -Dump iintenance –Motor (-Water | Area: Grader: | NA NA CAT 16 Water T | 5M Canker, 3,500 Gal | | | | <u> </u> |
| Cost Breakdown: | Scraper Wor | | 7, 6,001 | Support Equi | | Mainte | nance Eq | — uipment |
| | Scraper | Do | zer | Load Area | Dump Area | Motor Gr | ader | Water Truck |
| %Utilization-machine: | 100 | 100 | | NA | NA | | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$121.49 | | NA | NA | \$8 | 32.71 | \$13.51 |
| Operating cost/hour: | \$190.35 | \$ | 105.84 | NA | NA | \$3 | 35.04 | \$14.47 |
| %Utilization-ripper: | NA | | NA | NA | NA | | 50 | NA |
| Ripper own. cost/hour: | NA | | \$0.00 | NA | NA | | 54.44 | \$0.00 |
| Ripper op. cost/hour: | NA | | \$0.00 | NA | NA | | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | | \$39.98 | NA | NA | | 15.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$ | 267.31 | NA | NA | \$16 | 59.53 | \$27.98 |
| Number of Units: | 2 | | 1 | 0 | 0 | | 1 | 1 |
| Group Subtotals: | Work: | \$1,08 | 37.27 | Support: | \$0.00 | M | Iaint: | \$197.51 |
| Total work team cost MATERIAL QUA | · | | | | | | | |
| Initial volume: Loose volume: | 5,775 7,017 | | CCY LCY | Swell fac | tor: 1.215 | | | |
| | of estimated swell f | _ | Operator Cat Hand | bond estimate book | | | | <u> </u> |
| HOURLY PROD | <u>UCTION</u> | | | | | | | |
| | | | | _ | owl (volume) Basi | <u>1S:</u> | | |
| Material weight: | 1,600 lbs/LCY | | | | Volume: 24.00 | | LCY | |
| Material description: Rated Payload: | Top Soil 81,600 pounds | | | Heaped Average | Volume: 34.00 Volume: 29.00 | | - LCY | |
| Payload Capacity: | 51.00 LCY | | | Adjusted (| | | LCY | |

<u>Job Condition Correction:</u>

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|----------------------|
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.57 |

Haul Time: **0.57** minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.49 |

Return Time: **0.49** minutes Total Scraper team cycle time: 2.66 minutes Adjusted for job conditions: 1,085.86 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: LCY/Hour 1,085.86 Adjusted multiple scraper team (fleet) hourly production: 1,085.86 LCY/Hour

Unadjusted unit production/hour: 1,308.27 LCY/Hour Optimal Number of Scrapers per push dozer:

| Fleet size: | 1 | Team(s) | Total job time: | 6.46 | Hours |
|-------------|---------|---------|-----------------|---------|-------|
| Unit cost: | \$1.183 | /LCY | Total job cost: | \$8,302 | |

| Task description: | Retopsoil 3 | ord Ridg | e pit with | NE/middle stoc | kpile | | | |
|---|---|--------------------|----------------------|--------------------------------------|--------------------------------|-------------|------------------|-------------|
| Site: Dowe Flats Mine | Site: Dowe Flats Mine Perm | | t Action: | TR-04 Bond Es | timate Peri | mit/Job#: _ | M199304 | 1 |
| PROJECT IDEN | FIFICATION | | | | | | | |
| Task #: 028 Date: 4/21/20 User: AME | | | Colorado Boulder | | | | None M041-028 | 1 |
| Agency or | organization name: | DRM | IS | | | | | |
| HOURLY EQUIF | PMENT_ | | | COSTS | hift basis: <u>1 per d</u> | <u>ay</u> | | |
| | | craper: | | nt Description G w/push-pull Γ - 9SU | | | | |
| | ort Equipment -Load | d Area: p Area: | NA NA CAT 16 | | | | | |
| Cost Breakdown: | -Water Scraper Wor | | Water T | Canker, 3,500 Gal Support Equi | | Mainte | nance Eq | |
| · | Scraper | Dozer | | Load Area | Dump Area | Motor Gr | | Water Truck |
| %Utilization-machine: | 100 | 100 | | NA | NA | | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$121.49 | | NA | NA | \$8 | 32.71 | \$13.51 |
| Operating cost/hour: | \$190.35 | \$105.84 | | NA | NA | \$3 | 35.04 | \$14.47 |
| %Utilization-ripper: | NA | | NA | NA | NA | | 50 | NA |
| Ripper own. cost/hour: | NA | | \$0.00 | NA | NA | \$ | 64.44 | \$0.00 |
| Ripper op. cost/hour: | NA | | \$0.00 | NA | NA | | 51.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | | \$39.98 | NA | NA | | 15.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$ | 267.31 | NA | NA | \$16 | 59.53 | \$27.98 |
| Number of Units: | 2 | | 1 | 0 | 0 | | 1 | 1 |
| Group Subtotals: | Work: | \$1,08 | 37.27 | Support: | \$0.00 | M | laint: | \$197.51 |
| Total work team cost | | | | | | | | |
| Initial volume: Loose volume: | 450 547 | | CCY LCY | Swell fac | tor: 1.215 | | | |
| | rce of estimated vo of estimated swell f | _ | Operator Cat Hand | bond estimate lbook | | | | <u> </u> |
| HOURLY PROD | <u>UCTION</u> | | | Scraner R | owl (volume) Bas | ie: | | |
| Material weight: Material description: | 1,600 lbs/LCY Top Soil | | | Struck Heaped | Volume: 24.00 Volume: 34.00 | <u></u> | LCY LCY | |
| Rated Payload: Payload Capacity: | 81,600 pounds 51.00 LCY | | | Average Adjusted (| | | LCY LCY | |

| me | Γir | 7 | ما | Cvc | 1 |
|----|-------|---|----|-----|---|
| me | 1 1 T | | ıe | vc | ١ |

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|----------------------|
| 1 | 2000.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.93 |

Haul Time: **0.93** minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 2000.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.83 |

0.83 minutes Return Time: Total Scraper team cycle time: 3.36 minutes Adjusted for job conditions: 859.64 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: LCY/Hour 859.64 Adjusted multiple scraper team (fleet) hourly production: 859.64 LCY/Hour

Unadjusted unit production/hour: 1,035.71 LCY/Hour Optimal Number of Scrapers per push dozer:

| Fleet size: | 1 | Team(s) | Total job time: | 0.64 | Hours |
|-------------|---------|---------|-----------------|-------|-------|
| Unit cost: | \$1.495 | /LCY | Total job cost: | \$817 | |

| Task description: | Retopsoil 3 | Brd Ridge | e pit with | NE/S stockpile | | | |
|--|--|--------------------|---------------------|---------------------------|--------------------------------|-----------------------------|-----------------------|
| Site: Dowe Flats Mine | | Permit | Action: | TR-04 Bond Es | timate Peri | mit/Job#: <u>M199</u> | 3041 |
| PROJECT IDENT | FIFICATION | | | | | | |
| | _ | Tenta. C | 7-1d- | | A 1-1 | wistian. Nama | |
| Task #: <u>029</u> Date: <u>4/21/20</u> | | | Colorado Boulder | | | viation: None ename: M041- | 029 |
| User: AME | <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u> | <u> </u> | Journal | | | <u> </u> | 029 |
| Agency or o | organization name: | DRM | S | | | | |
| HOURLY EQUIP | PMENT_ | | | COSTS | hift basis: <u>1 per d</u> | <u>ay</u> | |
| | | | Eauipme | ent Description | | | |
| | -\$ | Scraper: | Cat 637 | 'G w/push-pull | | | |
| | | -Dozer: | Cat D9 | Γ - 9SU | | | |
| Suppo | rt Equipment -Loa | d Area: p Area: | NA NA | | | | |
| Road Ma | intenance –Motor | | CAT 16 | 5M | | | |
| | -Water | Truck: | Water 7 | Γanker, 3,500 Gal | | | |
| C 4D 11 | C W | 1 70 | | G .F.: | | 3.6 1 4 | F |
| Cost Breakdown: | Scraper Wo Scraper | rk Team Doz | er | Support Equi Load Area | pment Dump Area | Maintenance Motor Grader | Equipment Water Truck |
| 0/11/11 | _ | | | | - | | |
| % Utilization-machine: | 100 | 100 | | NA NA | NA NA | 50 \$22.71 | 5(|
| Ownership cost/hour: | \$174.06 \$190.35 | \$121.49 | | NA NA | NA NA | \$82.71 \$35.04 | \$13.51 \$14.47 |
| Operating cost/hour: %Utilization-ripper: | \$190.55 NA | \$105.84 NA | | NA NA | NA NA | 50 | \$14.47 NA |
| Ripper own. cost/hour: | NA NA | | \$0.00 | NA NA | NA NA | \$4.44 | \$0.00 |
| Ripper op. cost/hour: | NA NA | | \$0.00 | NA NA | NA NA | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | (| \$39.98 | NA NA | NA NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | | 267.31 | NA NA | NA NA | \$169.53 | \$27.98 |
| Number of Units: | 2 | Ψ | 1 | 0 | 0 | \$10 <i>9.33</i> | Ψ27.90 |
| Group Subtotals: | Work: | \$1,08 | | Support: | \$0.00 | Maint: | \$197.51 |
| Total work team cost | | \$1,00 | 1.21 | Support. | φ0.00 | Maint. | \$197.31 |
| Total Work team cost | /110u1. <u>φ1,204.70</u> | | | | | | |
| MATERIAL QUA | <u> ANTITIES</u> | | | | | | |
| Initial volume: | 8,263 | | CCY | Swell fac | tor: 1.215 | | |
| Loose volume: | 10,040 | | LCY | | | | |
| | rce of estimated vo | | Operator | bond estimate | | | |
| Source of | of estimated swell | factor: | Cat Hand | dbook | | | |
| HOURLY PRODU | UCTION | | | | | | |
| 1100111111011 | 2 2 2 2 2 1 | | | Scraper R | owl (volume) Bas | is· | |
| Motorial maiste | 1 600 lba/I CV | | | - | | | CY |
| Material weight: Material description: | 1,600 lbs/LCY Top Soil | | | | Volume: 24.00 Volume: 34.00 | | CY CY |
| Rated Payload: | 81,600 pounds | | | Average | | | CY |
| Payload Capacity: | 51.00 LCY | | | Adjusted (| | | CY |

| Cy | cle | Time | e: |
|--------|-----|--------|----|
| \sim | CIC | T 1111 | · |

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|--------------|-----------|------------------|----------------|-------------------|
| 1 | 1500.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.75 |

Haul Time: **0.75** minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|------------------|---------------|----------------|----------------------|
| 1 | 1500.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.66 |

Return Time: **0.66** minutes Total Scraper team cycle time: 3.01 minutes Adjusted for job conditions: 959.60 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: LCY/Hour 959.60 Adjusted multiple scraper team (fleet) hourly production: 959.60 LCY/Hour

| Unadjusted unit production/hour: | 1,156.15 | LCY/Hou |
|--|----------|---------|
| Optimal Number of Scrapers per push dozer: | | |

| Fleet size: | 1 | Team(s) | Total job time: | 10.46 | Hours |
|-------------|---------|---------|-----------------|----------|-------|
| Unit cost: | \$1.339 | /LCY | Total job cost: | \$13,442 | |

| Task description: | 3rd Ridge v | vetland | area exca | vation | | | | |
|--|---------------------------|-------------------|---------------------|-------------------|--------------------------------|------------|-----------------|-------------|
| Site: Dowe Flats Mine Permi | | Permi | t Action: | TR-04 Bond Es | timate Peri | mit/Job#: | M19930 |)41 |
| PROJECT IDEN | <u> </u> | | | | | | | |
| Task #: 030 Date: 4/21/20 | | | Colorado Boulder | | | viation: _ | None M041-03 | 20 |
| User: AME | <u> </u> | ility. | Bouldel | | FII | ename | W1041-03 | 10 |
| Agency or o | organization name: | DRM | IS | | | | | |
| HOURLY EQUIP | PMENT_ | | | COSTS | hift basis: 1 per d | <u>ay</u> | | |
| | | | Equipme | nt Description | | | | |
| | | craper: | | G w/push-pull | | | | <u> </u> |
| Suppo | rt Equipment -Load | Dozer: l Area: | Cat D97 | 1 - 9SU | | | | |
| | -Dump | Area: | NA | | | | | |
| Road Ma | intenance – Motor C | | CAT 16 | | | | | |
| | -Water | Truck: | water 1 | Canker, 3,500 Gal | • | | | |
| Cost Breakdown: | Scraper Wor | k Team | | Support Equip | pment | | | quipment |
| | Scraper | Do | zer | Load Area | Dump Area | Motor C | Brader | Water Truck |
| %Utilization-machine: | 100 | | 100 | NA | NA | | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$ | 5121.49 | NA | NA | \$ | 882.71 | \$13.51 |
| Operating cost/hour: | \$190.35 | \$ | 5105.84 | NA | NA | \$ | 35.04 | \$14.47 |
| %Utilization-ripper: | NA | | NA | NA | NA | | 50 | NA |
| Ripper own. cost/hour: | NA | | \$0.00 | NA | NA | | \$4.44 | \$0.00 |
| Ripper op. cost/hour: | NA | | \$0.00 | NA | NA | | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | | \$39.98 | NA | NA | · | 645.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$ | 267.31 | NA | NA | \$1 | 69.53 | \$27.98 |
| Number of Units: | 2 | | 1 | 0 | 0 | | 1 | 1 |
| Group Subtotals: | Work: | \$1,08 | 37.27 | Support: | \$0.00 | l | Maint: | \$197.51 |
| Total work team cost | /hour: \$1,284.78 | | | | | | | |
| | | | | | | | | |
| MATERIAL QUA | ANTITIES | | | | | | | |
| Initial volume: | 7,313 | | CCY | Swell fact | tor: 1.215 | | | |
| Loose volume: | 8,885 | | LCY | | | | | |
| | rce of estimated vol | _ | | bond estimate | | | | |
| Source | of estimated swell fa | actor: _ | Cat Hand | lbook | | | | |
| HOURLY PROD | UCTION | | | | | | | |
| | | | | Scraper Re | owl (volume) Basi | is: | | |
| Matarial wai -1-4. | 1 600 lba/I CV | | | <u>-</u> | | <u>-</u> | I C | V |
| Material weight: Material description: | 1,600 lbs/LCY Top Soil | | | | Volume: 24.00 Volume: 34.00 | | LC | |
| Rated Payload: | 81,600 pounds | | | Average | | | — LC | |
| Payload Capacity: | 51.00 LCY | | | Adjusted C | | | | |

|--|

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

<u>Job Condition Correction:</u>

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|----------------------|
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.57 |

Haul Time: **0.57** minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.49 |

0.49 minutes Return Time: Total Scraper team cycle time: 2.66 minutes Adjusted for job conditions: 1,085.86 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: 1,085.86 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,085.86 LCY/Hour

Unadjusted unit production/hour: 1,308.27 LCY/Hour Optimal Number of Scrapers per push dozer:

| Fleet size: | 1 | Team(s) | Total job time: | 8.18 | Hours |
|-------------|---------|---------|-----------------|----------|-------|
| Unit cost: | \$1.183 | /LCY | Total job cost: | \$10,513 | |
| Omi cost. | ψ1.105 | /LC I | Total job cost. | \$10,515 | |

| Task description: | Retopsoil 4 | 4th Ridge pit wet | land area excava | tion | | |
|------------------------------------|----------------------------|-------------------|-------------------|----------------------------------|----------------------|-------------|
| Site: Dowe Flats Mine | Permit Action: | TR-04 Bond Es | stimate Per | mit/Job#: M1993 | 3041 | |
| PROJECT IDENT | FIFICATION | | | | | |
| Task #: 031 | | State: Colorado | | | viation: None | |
| Date: 4/21/20 | <u>)20</u> Co | unty: Boulder | | Fil | ename: <u>M041-0</u> | 031 |
| User: AME | | | | | | |
| Agency or o | organization name: | DRMS | | | | |
| HOURLY EQUIP | MENT_ | | COSTS | hift basis: 1 per d | ay | |
| | | Equipm | ent Description | | | |
| | | | 7G w/push-pull | | | |
| Suppo | rt Equipment -Loa | | T - 9SU | | | |
| Зирро | | p Area: NA | | | | |
| Road Ma | intenance –Motor | | | | | |
| - | -Water | Truck: Water | Tanker, 3,500 Gal | l. | | |
| Cost Breakdown: | Scraper Wo | rk Toom | Support Equi | nmont | Maintenance | Equipment |
| Cost Breakdown. | Scraper Wo | Dozer | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | NA | NA | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$121.49 | NA | NA | \$82.71 | \$13.5 |
| Operating cost/hour: | \$190.35 | \$105.84 | NA | NA | \$35.04 | \$14.4 |
| %Utilization-ripper: | NA | NA | NA | NA | 50 | N.A |
| Ripper own. cost/hour: | NA | \$0.00 | NA | NA | \$4.44 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | NA | NA | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | \$39.98 | NA | NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$267.31 | NA | NA | \$169.53 | \$27.98 |
| Number of Units: | 2 | 1 | 0 | 0 | 1 | |
| Group Subtotals: | Work: | \$1,087.27 | Support: | \$0.00 | Maint: | \$197.51 |
| Total work team cost MATERIAL QUA | | | | | | |
| Initial volume: | 3,764 | CCY | Swell fac | tor: 1.215 | | |
| Loose volume: | 4,573 | LCY | | | | |
| Sou | rce of estimated vo | olume: Operato | r bond estimate | | | |
| Source of | of estimated swell | factor: Cat Han | dbook | | | |
| HOURLY PRODU | <u>UCTION</u> | | | | | |
| | | | Scraper B | owl (volume) Bas | <u>is:</u> | |
| Material weight: | 1,600 lbs/LCY | | | Volume: 24.00 | | CY |
| Material description: | Top Soil | | | Volume: 34.00 | | CY |
| Rated Payload: Payload Capacity: | 81,600 pounds 51.00 LCY | | | Volume: 29.00 Capacity: 29.00 | | CY CY |

| Cy | cle | Time | e: |
|--------|-----|--------|----|
| \sim | CIC | T 1111 | · |

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

<u>Job Condition Correction:</u>

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 500.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.39 |

Haul Time: 0.39 minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 500.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.32 |

0.32 minutes Return Time: Total Scraper team cycle time: 2.31 minutes Adjusted for job conditions: 1,250.39 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: 1,250.39 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,250.39 LCY/Hour

Unadjusted unit production/hour: 1,506.49 LCY/Hour Optimal Number of Scrapers per push dozer:

| Fleet size: | 1 | Team(s) | Total job time: | 3.66 | Hours |
|-------------|---------|---------|-----------------|---------|-------|
| Unit cost: | \$1.028 | /LCY | Total job cost: | \$4,699 | |

| Task description: | Retopsoil | wetland a | rea exca | vation | | | |
|---|---------------------------|--------------------|---------------|---------------------------|--------------------------------|-----------------------------|--------------------|
| Site: Dowe Flats Mine Perm | | | Action: | TR-04 Bond Es | stimate Per | mit/Job#: <u>M199</u> | 3041 |
| PROJECT IDEN | <u> </u> | | | | | | |
| Task #: 032 | _ | State: (| Colorado | | A bbra | viation: None | |
| Date: $\frac{0.32}{4/21/20}$ | | | Boulder | | | lename: M041- | 032 |
| User: AME | | , <u> </u> | | | | | |
| Agency or o | organization name: | DRM | S | | | | |
| HOURLY EQUIP | MENT | | | COSTS | hift basis: 1 per d | la <u>y</u> | |
| | | | Equipme | ent Description | | | |
| | -\$ | Scraper: | Cat 637 | 'G w/push-pull | | | |
| | | -Dozer: | Cat D9 | Γ - 9SU | | | |
| Suppo | rt Equipment -Loa Dum- | a Area: p Area: | NA NA | | | | |
| Road Ma | intenance –Motor | | CAT 16 | 6M | | | |
| | -Water | Truck: | Water 7 | Γanker, 3,500 Gal | | | |
| G 4B 11 | C W | 1 70 | | G (F) | | 361 | E |
| Cost Breakdown: | Scraper Wo Scraper | rk Team Doz | ver . | Support Equi Load Area | pment Dump Area | Maintenance Motor Grader | Water Truck |
| 0/ 11/11 - 1/2 1/2 | _ | | | | - | | |
| % Utilization-machine: | 100 | <u> </u> | 100 121.49 | NA NA | NA NA | \$82.71 | \$12.51 |
| Ownership cost/hour: | \$174.06 \$190.35 | | 105.84 | NA NA | NA NA | \$35.04 | \$13.51 \$14.47 |
| Operating cost/hour: %Utilization-ripper: | \$190.55 NA | Ф | NA | NA NA | NA NA | 50 | \$14.47 NA |
| Ripper own. cost/hour: | NA NA | | \$0.00 | NA NA | NA NA | \$4.44 | \$0.00 |
| Ripper op. cost/hour: | NA NA | | \$0.00 | NA NA | NA NA | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | | \$39.98 | NA NA | NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | | 267.31 | NA NA | NA NA | \$169.53 | \$27.98 |
| Number of Units: | 2 | Ψ | 1 | 0 | 0 | 1 | \$27.90 |
| Group Subtotals: | Work: | \$1,08 | | Support: | \$0.00 | Maint: | \$197.51 |
| Total work team cost | | Ψ1,00 | 1.21 | Support. | Ψ0.00 | wianit. | \$177.51 |
| Total work team cost | /110u1. \$1,204./6 | | | | | | |
| MATERIAL QUA | ANTITIES | | | | | | |
| Initial volume: | 5,647 | | CCY | Swell fac | tor: 1.215 | | |
| Loose volume: | 6,861 | | LCY | | | | |
| | rce of estimated vo | | Operator | bond estimate | | | |
| Source of | of estimated swell | factor: | Cat Hand | dbook | | | |
| HOURLY PROD | UCTION | | | | | | |
| | <u> </u> | | | Scraper B | owl (volume) Bas | is: | |
| Material weight: | 1,600 lbs/LCY | | | | Volume: 24.00 | | CY |
| Material description: | Top Soil | | | | Volume: 24.00 Volume: 34.00 | | CY |
| Rated Payload: | 81,600 pounds | | | Average | Volume: 29.00 | L | CY |
| Payload Capacity: | 51.00 LCY | - | | Adjusted (| Capacity: 29.00 | L | CY |

|--|

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| | | | |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 500.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.39 |

Haul Time: **0.39** minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|----------------------|
| 1 | 500.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.32 |

0.32 minutes Return Time: Total Scraper team cycle time: 2.31 minutes Adjusted for job conditions: 1,250.39 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: 1,250.39 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,250.39 LCY/Hour

Unadjusted unit production/hour: 1,506.49 LCY/Hour Optimal Number of Scrapers per push dozer:

| Fleet size: _ | 1 | Team(s) | Total job time: | 5.49 | Hours |
|---------------|---------|---------|-----------------|---------|-------|
| Unit cost: | \$1.028 | /LCY | Total job cost: | \$7.050 | |

| Task description: | _Retopsoil c | rusher a | rea with | reclaimed area s | stripping | | | |
|-------------------------------------|---|-------------------|----------------------|--|------------------------------------|-------------|------------------|-------------|
| Site: Dowe Flats Mine | | Permi | t Action: | TR-04 Bond Es | timate Perr | nit/Job#: _ | M199304 | 41 |
| PROJECT IDEN | <u> </u> | | | | | | | |
| Task #: 033 Date: 4/21/20 User: AME | | | Colorado Boulder | | | | None M041-033 | 3 |
| Agency or o | organization name: | DRM | IS | | | | | |
| HOURLY EQUIP | PMENT_ | | | COSTS | hift basis: 1 per d | <u>ay</u> | | |
| | | craper: Dozer: | | nt Description G w/push-pull Γ - 9SU | | | | _ |
| | rt Equipment -Loac -Dump intenance –Motor (-Water | Area: Grader: | NA NA CAT 16 | | | | | |
| Cost Breakdown: | Scraper Wor | | water 1 | Canker, 3,500 Gal Support Equi | | Mainte | enance Eq | |
| | Scraper | Do | zer | Load Area | Dump Area | Motor G | rader | Water Truck |
| %Utilization-machine: | 100 | | 100 | NA | NA | | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$ | 121.49 | NA | NA | \$8 | 82.71 | \$13.51 |
| Operating cost/hour: | \$190.35 | \$ | 105.84 | NA | NA | \$3 | 35.04 | \$14.47 |
| %Utilization-ripper: | NA | | NA | NA | NA | | 50 | NA |
| Ripper own. cost/hour: | NA | | \$0.00 | NA | NA | | \$4.44 | \$0.00 |
| Ripper op. cost/hour: | NA | | \$0.00 | NA | NA | | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | | \$39.98 | NA | NA | | 45.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$ | 267.31 | NA | NA | \$16 | 69.53 | \$27.98 |
| Number of Units: | 2 | | 1 | 0 | 0 | | 1 | 1 |
| Group Subtotals: | Work: | \$1,08 | 37.27 | Support: | \$0.00 | N | Iaint: | \$197.51 |
| Total work team cost | | <u> </u> | | | | | | |
| Initial volume: Loose volume: | 9,437 11,466 | | CCY LCY | Swell fact | tor: 1.215 | | | |
| | rce of estimated voi of estimated swell fa | _ | Operator Cat Hand | bond estimate lbook | | | | <u> </u> |
| HOURLY PROD | <u>UCTION</u> | | | Canana D | ovel (volumes) Poss | | | |
| Material weight: | 1,600 lbs/LCY | | | <u>-</u> | owl (volume) Basi Volume: 24.00 | 18. | LCY | 7 |
| Material description: | Top Soil | | | | Volume: 24.00 Volume: 34.00 | | LCY | |
| Rated Payload: | 81,600 pounds | | | Average | | | LCY | |
| Payload Capacity: | 51.00 LCY | | | Adjusted (| | | LCY | |

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

<u>Job Condition Correction:</u>

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| | | | |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 500.00 | 0.00 | 3.00 | 3.00 | 2800 | 0.39 |

Haul Time: 0.39 minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|----------------------|
| 1 | 500.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.32 |

0.32 minutes Return Time: Total Scraper team cycle time: 2.31 minutes Adjusted for job conditions: 1,250.39 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: 1,250.39 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,250.39 LCY/Hour

Unadjusted unit production/hour: 1,506.49 LCY/Hour Optimal Number of Scrapers per push dozer:

| Fleet size: | 1 | Team(s) | Total job time: | 9.17 | Hours |
|-------------|---------|---------|-----------------|-----------------|-------|
| Unit cost: | \$1.028 | /LCY | Total job cost: | \$11,781 | |

| Task description: | Retopsoil c | rusher are | a with | SE stockpile | | | |
|--|--|---------------|--------------------|--|---|-----------------------------|----------------|
| Site: Dowe Flats Mine | <u>: </u> | Permit A | ction: | TR-04 Bond Es | timate Peri | mit/Job#: <u>M1993</u> | 3041 |
| PROJECT IDEN | TIFICATION | | | | | | |
| Task #: 034 Date: 4/21/2 User: AME | | | lorado ulder | | | viation: None ename: M041-0 |)34 |
| Agency or | organization name: | DRMS | | | | | |
| HOURLY EQUI | PMENT_ | | | COSTS | hift basis: 1 per d | <u>ay</u> | |
| | | craper: | | nt Description G w/push-pull Γ - 9SU | | | |
| | aintenance –Motor (| Area: Grader: | NA NA CAT 16 | | | | |
| Cost Breakdown: | -Water Scraper Wor | | Water T | Canker, 3,500 Gal Support Equi | | Maintenance | Equipment |
| | Scraper | Doze | : | Load Area | Dump Area | Motor Grader | Water Truck |
| % Utilization-machine: | 100 | | 100 | NA | NA | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$12 | 1.49 | NA | NA | \$82.71 | \$13.5 |
| Operating cost/hour: | \$190.35 | \$10 | 5.84 | NA | NA | \$35.04 | \$14.4 |
| % Utilization-ripper: | NA | | NA | NA | NA | 50 | NA |
| Ripper own. cost/hour: | NA | | 0.00 | NA | NA | \$4.44 | \$0.00 |
| Ripper op. cost/hour: | NA | | 0.00 | NA | NA | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | | 9.98 | NA | NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$26 | 7.31 | NA | NA | \$169.53 | \$27.98 |
| Number of Units: | 2 | | 1 | 0 | 0 | 1 | |
| Group Subtotals: | Work: | \$1,087. | 27 | Support: | \$0.00 | Maint: | \$197.51 |
| Total work team cos MATERIAL QUA | | | | | | | |
| Initial volume: Loose volume: | 16,054 19,506 | L | CY CY | Swell fact | for: 1.215 | | |
| | arce of estimated vo of estimated swell f | | perator at Hand | bond estimate lbook | | | |
| HOURLY PROD | <u>UCTION</u> | | | Scraper R | owl (volume) Basi | is: | |
| Material weight: Material description: Rated Payload: Payload Capacity: | 1,600 lbs/LCY Top Soil 81,600 pounds 51.00 LCY | | | <u>-</u> | Volume: 24.00 Volume: 34.00 Volume: 29.00 | LO LO LO | CY CY CY |

| Cy | cle | Time | e: |
|--------|-----|--------|----|
| \sim | CIC | T 1111 | · |

Scraper Loading Time: $\frac{1.00}{0.60}$ Minutes Maneuver and Spread Time: $\frac{0.60}{0.60}$ Minutes

<u>Job Condition Correction:</u>

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 2500.00 | 0.00 | 3.00 | 3.00 | 2800 | 1.10 |

Haul Time: 1.10 minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 2500.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.99 |

0.99 minutes Return Time: Total Scraper team cycle time: 3.69 minutes Adjusted for job conditions: 782.76 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: 782.76 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 782.76 LCY/Hour

Unadjusted unit production/hour: 943.09 LCY/Hour Optimal Number of Scrapers per push dozer:

| Fleet size: | 1 | Team(s) | Total job time: | 24.92 | Hours |
|-------------|---------|---------|-----------------|----------|-------|
| Unit cost: | \$1.641 | /LCY | Total job cost: | \$32,015 | |

| Task description: | Retopsoil (| office/ma | int/equip | o/fuel areas with | SE stockpile | | |
|------------------------------|--------------------------|-----------|-----------|-------------------|--------------------------------|-----------------------|-------------|
| Site: Dowe Flats Mine | | Permit | t Action: | TR-04 Bond Es | stimate Per | mit/Job#: <u>M199</u> | 3041 |
| PROJECT IDENT | <u> </u> | | | | | | |
| Task #: 035 | | State: (| Colorado | | Δhhre | viation: None | |
| Date: $\frac{633}{4/21/20}$ | | | Boulder | | | lename: M041- | 035 |
| User: AME | | | | | | | |
| Agency or o | organization name: | DRM | IS | | | | |
| HOURLY EQUIP | <u>PMENT</u> | | | COSTS | hift basis: 1 per c | la <u>y</u> | |
| | | | Equipme | ent Description | | | |
| | | Scraper: | | G w/push-pull | | | |
| Suppo | rt Equipment -Loa | Dozer: | NA | T - 9SU | | | |
| Бирро | * * | p Area: | NA | | | | |
| Road Ma | intenance –Motor | | CAT 16 | | | | |
| | -Water | Truck: | Water 7 | Fanker, 3,500 Gal | l . | | |
| Cost Breakdown: | Scraper Wo | rk Team | | Support Equi | nment | Maintenance | Fauinment |
| Cost Bi talka wiii. | Scraper | Doz | zer | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | | 100 | NA | NA | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$ | 121.49 | NA | NA | \$82.71 | \$13.51 |
| Operating cost/hour: | \$190.35 | \$ | 105.84 | NA | NA | \$35.04 | \$14.47 |
| %Utilization-ripper: | NA | | NA | NA | NA | 50 | NA |
| Ripper own. cost/hour: | NA | | \$0.00 | NA | NA | \$4.44 | \$0.00 |
| Ripper op. cost/hour: | NA | | \$0.00 | NA | NA | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | | \$39.98 | NA | NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$ | 267.31 | NA | NA | \$169.53 | \$27.98 |
| Number of Units: | 2 | | 1 | 0 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$1,08 | 37.27 | Support: | \$0.00 | Maint: | \$197.51 |
| Total work team cost | /hour: \$1,284.78 | | | | | | |
| | | | | | | | |
| MATERIAL QUA | ANTITIES | | | | | | |
| Initial volume: | 2,044 | | CCY | Swell fac | tor: 1.215 | | |
| Loose volume: | 2,483 | | LCY | | | | |
| | rce of estimated vo | | | bond estimate | | | |
| Source of | of estimated swell | tactor: | Cat Hand | dbook | | | |
| HOURLY PRODU | UCTION | | | | | | |
| | | | | Scraper R | owl (volume) Bas | is: | |
| Material weight: | 1,600 lbs/LCY | | | - | Volume: 24.00 | | .CY |
| Material description: | Top Soil | | | | Volume: 24.00 Volume: 34.00 | | .CY |
| Rated Payload: | 81,600 pounds | | | Average | | | CY |
| Payload Capacity: | 51.00 LCY | | | Adjusted (| | L | CY |

| Cycl | e Tir | ne |
|------|-------|----|
| ∵ycl | e Tir | ne |

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

<u>Job Condition Correction:</u>

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|--------------|-----------|---------------|----------------|----------------------|
| 1 | 5000.00 | 0.00 | 3.00 | 3.00 | 2800 | 2.00 |

Haul Time: 2.00 minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 5000.00 | 0.00 | 3.00 | 3.00 | 2949 | 1.84 |

Return Time: **1.84** minutes Total Scraper team cycle time: 5.44 minutes Adjusted for job conditions: 530.96 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: LCY/Hour 530.96 Adjusted multiple scraper team (fleet) hourly production: 530.96 LCY/Hour

Unadjusted unit production/hour: 639.71 LCY/Hour Optimal Number of Scrapers per push dozer:

| Fleet size: | 1 | Team(s) | Total job time: | 4.68 | Hours |
|-------------|---------|---------|-----------------|---------|-------|
| Unit cost: | \$2.420 | /LCY | Total job cost: | \$6,009 | |

| Task description: | Retopsoil | roads and other d | listurbances with | NE/S stockpile | | |
|----------------------------------|----------------------------|-------------------|---------------------------|----------------------------------|-----------------------------|-----------------------|
| Site: Dowe Flats Mine | | Permit Action: | TR-04 Bond Es | stimate Peri | mit/Job#: <u>M1993</u> | 3041 |
| PROJECT IDEN | <u> </u> | | | | | |
| Task #: 036 | | State: Colorado | | | viation: None | |
| Date: 4/21/20 | <u>)20</u> Co | unty: Boulder | | Fil | ename: <u>M041-0</u> | 036 |
| User: AME | | | | | | |
| Agency or o | organization name: | DRMS | | | | |
| HOURLY EQUIP | PMENT_ | | COSTS | hift basis: 1 per d | <u>ay</u> | |
| | | Equipme | ent Description | | | |
| | | | 7G w/push-pull | | | |
| | | | T - 9SU | | | |
| Suppo | rt Equipment -Loa Dum- | p Area: NA | | | | |
| Road Ma | intenance –Motor | L | 6M | | | |
| | -Water | Truck: Water | Tanker, 3,500 Gal | l. | | |
| | | | | | | |
| Cost Breakdown: | Scraper Wo | | Support Equi Load Area | | Maintenance Motor Grader | Equipment Water Truck |
| | Scraper | Dozer | Load Area | Dump Area | Motor Grader | water fruck |
| %Utilization-machine: | 100 | 100 | NA | NA | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$121.49 | NA | NA | \$82.71 | \$13.51 |
| Operating cost/hour: | \$190.35 | \$105.84 | NA | NA | \$35.04 | \$14.47 |
| % Utilization-ripper: | NA | NA | NA | NA | 50 | NA |
| Ripper own. cost/hour: | NA | \$0.00 | NA | NA | \$4.44 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | NA | NA | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | \$39.98 | NA | NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$267.31 | NA | NA | \$169.53 | \$27.98 |
| Number of Units: | 2 | 1 | 0 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$1,087.27 | Support: | \$0.00 | Maint: | \$197.51 |
| Total work team cost | | <u> </u> | | | | |
| Initial volume: | 16,433 | CCY | Swell fac | etor: 1.215 | | |
| Loose volume: | 19,966 | LCY | | | | |
| Sou | rce of estimated vo | olume: Operator | r bond estimate | | | |
| | of estimated swell | | | | | |
| HOURLY PROD | <u>UCTION</u> | | a - | | | |
| | | | Scraper B | owl (volume) Bas | <u>1S:</u> | |
| Material weight: | 1,600 lbs/LCY | | | Volume: <u>24.00</u> | | CY |
| Material description: | Top Soil | | | Volume: 34.00 | | CY |
| Rated Payload: Payload Capacity: | 81,600 pounds 51.00 LCY | | | Volume: 29.00 Capacity: 29.00 | | CY CY |

| Cy | cle | Time | e: |
|--------|-----|--------|----|
| \sim | CIC | T 1111 | · |

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction:

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| | | | |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|--------------|-----------|---------------|----------------|----------------------|
| 1 | 2500.00 | 0.00 | 3.00 | 3.00 | 2800 | 1.10 |

Haul Time: 1.10 minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 2500.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.99 |

0.99 minutes Return Time: Total Scraper team cycle time: 3.69 minutes Adjusted for job conditions: 782.76 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: 782.76 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 782.76 LCY/Hour

Unadjusted unit production/hour: 943.09 LCY/Hour Optimal Number of Scrapers per push dozer:

| Fleet size: | 1 | Team(s) | Total job time: | 25.51 | Hours |
|-------------|---------|---------|-----------------|----------|-------|
| Unit cost: | \$1.641 | /LCY | Total job cost: | \$32,771 | |

| Task description: | Retopsoil ro | ads and other d | isturbances with | SE stockpile | | |
|-------------------------------------|---|---|----------------------------|------------------------|-----------------------------|-----------------------|
| Site: Dowe Flats Mine | | Permit Action: | TR-04 Bond Es | timate Peri | mit/Job#: M199 | 3041 |
| PROJECT IDEN | TIFICATION | | | | | |
| Task #: 037 Date: 4/21/20 User: AME | | ate: Colorado nty: Boulder | | | viation: None ename: M041- | 037 |
| Agency or | organization name: | DRMS | | | | |
| HOURLY EQUIP | PMENT | | COSTSI | hift basis: 1 per d | <u>ay</u> | |
| | -L ort Equipment -Load -Dump iintenance –Motor G | raper: Cat 637 Dozer: Cat D9' Area: NA Area: NA rader: CAT 16 | 6M | | | |
| | -Water T | Truck: Water | Tanker, 3,500 Gal | • | | |
| Cost Breakdown: | Scraper Work Scraper | Team Dozer | Support Equip Load Area | Dump Area | Maintenance Motor Grader | Equipment Water Truck |
| % Utilization-machine: | 100 | 100 | NA | NA | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$121.49 | NA | NA | \$82.71 | \$13.51 |
| Operating cost/hour: | \$190.35 | \$105.84 | NA | NA | \$35.04 | \$14.47 |
| %Utilization-ripper: | NA | NA | NA | NA | 50 | NA |
| Ripper own. cost/hour: | NA | \$0.00 | NA | NA | \$4.44 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | NA | NA | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | \$39.98 | NA | NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$267.31 | NA | NA | \$169.53 | \$27.98 |
| Number of Units: | 2 | 1 | 0 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$1,087.27 | Support: | \$0.00 | Maint: | \$197.51 |
| Total work team cost | | | | | | |
| Initial volume: Loose volume: | 17,466 21,221 | CCY LCY | Swell fact | or: 1.215 | | |
| | arce of estimated volution of estimated swell fa | | bond estimate dbook | | | |
| HOURLY PROD | <u>UCTION</u> | | | | | |
| | | | Scraper Bo | owl (volume) Bas | is: | |
| Material weight: | 1,600 lbs/LCY | | | Volume: 24.00 | | CY |
| Material description: | Top Soil | | Heaped | | | CY |
| Rated Payload: | 81,600 pounds | | Average | | | CY |
| Payload Capacity: | 51.00 LCY | | Adjusted C | Capacity: 29.00 | L | CY |

| Cy | cle | Time | e: |
|--------|-----|--------|----|
| \sim | CIC | T 1111 | · |

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

<u>Job Condition Correction:</u>

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 2500.00 | 0.00 | 3.00 | 3.00 | 2800 | 1.10 |

Haul Time: 1.10 minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 2500.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.99 |

Return Time: 0.99 minutes Total Scraper team cycle time: 3.69 minutes Adjusted for job conditions: 782.76 LCY/Hour Selected Number of Scrapers: Scraper(s) 2 Adjusted single scraper team (unit) hourly production: 782.76 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 782.76 LCY/Hour

Unadjusted unit production/hour: 943.09 LCY/Hour Optimal Number of Scrapers per push dozer:

| Fleet size: | 1 | Team(s) | Total job time: | 27.11 | Hours |
|-------------|---------|---------|-----------------|----------|-------|
| Unit cost: | \$1.641 | /LCY | Total job cost: | \$34.831 | |

| Task description: | Retopsoil ro | ads and other d | isturbances with | wetland excav | | |
|------------------------------------|--|--|-------------------------|------------------------|----------------------------|-------------|
| Site: Dowe Flats Mine | | Permit Action: | TR-04 Bond Es | timate Peri | mit/Job#: M199 | 3041 |
| PROJECT IDEN | TIFICATION | | | | | |
| Task #: 038 Date: 4/21/2 User: AME | | ate: Colorado nty: Boulder | | | viation: None ename: M041- | 038 |
| Agency or | organization name: | DRMS | | | | |
| HOURLY EQUIP | <u>PMENT</u> | | COSTSI | nift basis: 1 per d | <u>ay</u> | |
| | -L ort Equipment -Load -Dump | raper: Cat 637 Dozer: Cat D9 Area: NA Area: NA | | | | |
| Road Ma | nintenance –Motor G -Water T | | 5М Гапкег, 3,500 Gal | | | |
| Cost Breakdown: | Scraper Work | . Team | Support Equip | oment | Maintenance | Fauinment - |
| Oost Breamao war. | Scraper | Dozer | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | 100 | NA | NA | 50 | 50 |
| Ownership cost/hour: | \$174.06 | \$121.49 | NA | NA | \$82.71 | \$13.51 |
| Operating cost/hour: | \$190.35 | \$105.84 | NA | NA | \$35.04 | \$14.47 |
| %Utilization-ripper: | NA | NA | NA | NA | 50 | NA |
| Ripper own. cost/hour: | NA | \$0.00 | NA | NA | \$4.44 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | NA | NA | \$1.96 | \$0.00 |
| Operator cost/hour: | \$45.58 | \$39.98 | NA | NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$409.98 | \$267.31 | NA | NA | \$169.53 | \$27.98 |
| Number of Units: | 2 | 1 | 0 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$1,087.27 | Support: | \$0.00 | Maint: | \$197.51 |
| Total work team cos | | | | | | |
| Initial volume: Loose volume: | 216 262 | CCY LCY | Swell fact | or: 1.215 | | |
| | arce of estimated volution of estimated swell fa | | bond estimate dbook | | | |
| HOURLY PROD | <u>UCTION</u> | | Saranar Da | owl (volume) Basi | ie: | |
| Material weight: | 1,600 lbs/LCY | | <u> </u> | Volume: 24.00 | L | CY |
| Material description: | Top Soil | | Heaped | | | CY |
| Rated Payload: | 81,600 pounds | | Average | | | CY |
| Payload Capacity: | 51.00 LCY | | Adjusted C | Capacity: 29.00 | L | CY |

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{1.00} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

<u>Job Condition Correction:</u>

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.830 | 0.830 | |

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|--------------|-----------|---------------|----------------|----------------------|
| 1 | 2500.00 | 0.00 | 3.00 | 3.00 | 2800 | 1.10 |

Haul Time: 1.10 minutes

Return Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|--------------------|--------------|-----------|---------------|----------------|-------------------|
| 1 | 2500.00 | 0.00 | 3.00 | 3.00 | 2949 | 0.99 |

0.99 minutes Return Time: Total Scraper team cycle time: 3.69 minutes Adjusted for job conditions: 782.76 LCY/Hour Selected Number of Scrapers: Scraper(s) 2 Adjusted single scraper team (unit) hourly production: 782.76 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 782.76 LCY/Hour

Unadjusted unit production/hour: 943.09 LCY/Hour Optimal Number of Scrapers per push dozer:

| Fleet size: | 1 | Team(s) | Total job time: | 0.34 | Hours |
|-------------|---------|---------|-----------------|-------|-------|
| Unit cost: | \$1.641 | /LCY | Total job cost: | \$431 | |

REVEGETATION WORK

| rask descrip | otion: | Revegetate HI-C | ai/2nd Kidge | e pit (107.3 ac) | | | |
|------------------------------|------------------|-----------------|------------------------------------|------------------|--------------------------|----------|---|
| Site: Dowe Flats Mine | | Pe | Permit Action: TR-04 Bond Estimate | | te Permit/Job#: M1993041 | | |
| PROJECT : | <u>IDENTIFIC</u> | ATION | | | | | |
| Task #: | 039 | State: | Colorado | | Abbreviation: | None | _ |
| Date: | 4/21/2020 | County: | Boulder | | Filename: | M041-039 | |

User: AME

Agency or organization name: <u>DRMS</u>

FERTILIZING

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------|-----------------|-------|-------------------------------|------------|
| Triple superphosphate, 0-46-0 | 67.00 | pound | \$0.43 | \$28.48 |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$28.48 |

Application

| Description | | Cost /Acre |
|---|---|------------|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | | \$36.15 |
| | | |
| | Total Fertilizer Application Cost/Acre | \$36.15 |

TILLING

| Description | Cost /Acre |
|--|------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$101.93 |
| | |
| Total Tilling Cost/Acre | \$101.93 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|--------------------------------|--------------------------------|------------------------|------------|
| Beardless Wheatgrass - Whitmar | 5.50 | 17.93 | \$64.49 |
| Arizona Fescue - Redondo | 1.50 | 17.22 | \$13.88 |
| Indian Ricegrass - Paloma | 4.80 | 15.54 | \$53.40 |
| Bluebunch Wheatgrass - Secar | 4.80 | 15.43 | \$52.20 |
| Blue Grama - Native | 0.50 | 8.16 | \$6.86 |
| Canby Bluegrass - Canbar | 0.50 | 10.63 | \$5.13 |
| Buffalograss - Native/Plains | 7.30 | 7.04 | \$88.09 |
| Prairie Clover, Purple - Kaneb | 0.28 | 1.91 | \$15.83 |
| Aster, Smooth | 0.15 | 2.61 | \$21.98 |
| Little Bluestem - Pastura | 2.50 | 14.92 | \$33.71 |
| Alfalfa - Ladak (inoculated) | 0.40 | 1.93 | \$1.02 |

| Sideoats Grama - Vaughn | 2.30 | 7.55 | \$19.26 |
|----------------------------------|-------|--------|----------|
| Coneflower, Prairie | 0.08 | 2.17 | \$2.64 |
| Streambank Wheatgrass - Sodar | 1.50 | 4.89 | \$8.55 |
| Thickspike Wheatgrass - Critana | 1.00 | 3.54 | \$6.88 |
| Coreopsis, Plains | 0.08 | 2.54 | \$11.46 |
| Western Wheatgrass - Arriba | 3.80 | 9.60 | \$24.70 |
| Needle and Thread | 3.50 | 9.24 | \$146.48 |
| Needlegrass, Green - Lodorm | 2.30 | 9.56 | \$27.08 |
| Prairie Junegrass | 0.08 | 4.25 | \$2.08 |
| Flax, Lewis Blue | 0.28 | 1.86 | \$4.62 |
| Globemallow, Scarlet (or copper) | 0.15 | 1.70 | \$20.33 |
| Penstemon, Palmer | 0.13 | 2.87 | \$7.09 |
| Yarrow, Western | 0.03 | 1.82 | \$1.25 |
| Goldeneye - Showy | 0.08 | 0.92 | \$4.80 |
| | | | |
| Totals Seed Mix | 43.54 | 175.82 | \$643.77 |

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 | \$295.00 | \$590.00 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$590.00 |

Application

| Description | | Cost /Acre |
|--|--|------------|
| Crimping, with tractor {DMG survey data} | | \$70.17 |
| | | |
| | Total Mulch Application Cost/Acre | \$70.17 |

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 Acres: | 107.3 | Cost /Acre: | \$1,702.50 | |
|----------------------------------|---------|--------------|------------|---|
| Estimated Failure Rate: | 30% | Cost /Acre*: | \$875.77 | Ī |
| *Selected Replanting Work Items: | SEEDING | | | |
| Initial Ioh Cost: \$182.678.25 | | | | |

| Reseeding Job Cost: | \$28,191.04 |
|---------------------|-------------|
| Total Job Cost: | \$210,869 |
| Job Hours: | 107.30 |

REVEGETATION WORK

| Task description: | | Revegetate 3rd | Ridge pit mi | nus wetland (25 ac) | | | |
|------------------------------|------------------|----------------|--------------|---------------------|---------------|--------------------|--|
| Site: Dowe Flats Mine | | Pe | rmit Action: | TR-04 Bond Estimate | Permit/Job | #: <u>M1993041</u> | |
| PROJECT | <u>IDENTIFIC</u> | <u>CATION</u> | | | | | |
| Task #: | 040 | State: | Colorado | | Abbreviation: | None | |
| Date: | 4/22/2020 | County: | Boulder | | Filename: | M041-040 | |
| User: | AME | | | | - | | |

Agency or organization name: DRMS

Materials

FERTILIZING

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------|-----------------|-------|-------------------------------|------------|
| Triple superphosphate, 0-46-0 | 67.00 | pound | \$0.43 | \$28.48 |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$28.48 |

Application

| Description | | Cost /Acre |
|---|---|------------|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | | \$36.15 |
| | | |
| | Total Fertilizer Application Cost/Acre | \$36.15 |

TILLING

| Description | Cost /Acre |
|--|------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$101.93 |
| | |
| Total Tilling Cost/Acre | \$101.93 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|--------------------------------|--------------------------------|------------------------|------------|
| Beardless Wheatgrass - Whitmar | 5.50 | 17.93 | \$64.49 |
| Arizona Fescue - Redondo | 1.50 | 17.22 | \$13.88 |
| Indian Ricegrass - Paloma | 4.80 | 15.54 | \$53.40 |
| Bluebunch Wheatgrass - Secar | 4.80 | 15.43 | \$52.20 |
| Blue Grama - Native | 0.50 | 8.16 | \$6.86 |
| Canby Bluegrass - Canbar | 0.50 | 10.63 | \$5.13 |
| Buffalograss - Native/Plains | 7.30 | 7.04 | \$88.09 |
| Prairie Clover, Purple - Kaneb | 0.28 | 1.91 | \$15.83 |
| Aster, Smooth | 0.15 | 2.61 | \$21.98 |
| Little Bluestem - Pastura | 2.50 | 14.92 | \$33.71 |
| Alfalfa - Ladak (inoculated) | 0.40 | 1.93 | \$1.02 |

| Sideoats Grama - Vaughn | 2.30 | 7.55 | \$19.26 |
|----------------------------------|-------|--------|----------|
| Coneflower, Prairie | 0.08 | 2.17 | \$2.64 |
| Streambank Wheatgrass - Sodar | 1.50 | 4.89 | \$8.55 |
| Thickspike Wheatgrass - Critana | 1.00 | 3.54 | \$6.88 |
| Coreopsis, Plains | 0.08 | 2.54 | \$11.46 |
| Western Wheatgrass - Arriba | 3.80 | 9.60 | \$24.70 |
| Needle and Thread | 3.50 | 9.24 | \$146.48 |
| Needlegrass, Green - Lodorm | 2.30 | 9.56 | \$27.08 |
| Prairie Junegrass | 0.08 | 4.25 | \$2.08 |
| Flax, Lewis Blue | 0.28 | 1.86 | \$4.62 |
| Globemallow, Scarlet (or copper) | 0.15 | 1.70 | \$20.33 |
| Penstemon, Palmer | 0.13 | 2.87 | \$7.09 |
| Yarrow, Western | 0.03 | 1.82 | \$1.25 |
| Goldeneye - Showy | 0.08 | 0.92 | \$4.80 |
| Totals Seed Mix | 43.54 | 175.82 | \$643.77 |

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 | \$295.00 | \$590.00 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$590.00 |

Application

| Description | | Cost /Acre |
|--|--|------------|
| Crimping, with tractor {DMG survey data} | | \$70.17 |
| | | |
| | Total Mulch Application Cost/Acre | \$70.17 |

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 Acres: | 25 | Cost /Acre: | \$1,702.50 |
|----------------------------------|---------|--------------|------------|
| Estimated Failure Rate: | 30% | Cost /Acre*: | \$875.77 |
| *Selected Replanting Work Items: | SEEDING | | |
| Initial Iob Cost: \$42.562.50 | | | |

| Reseeding Job Cost: | \$6,568.28 |
|---------------------|------------|
| Total Job Cost: | \$49,131 |
| Job Hours: | 25.00 |

REVEGETATION WORK

| Task description: | Revegetate 4th Ridge pit (2 | 3 ac) | | |
|--------------------------------|---------------------------------|---------------------|-------------|------------------|
| Site: Dowe Flats Mine | Permit Action: | TR-04 Bond Estimate | Permit/Job# | : M1993041 |
| PROJECT IDENTIFIC | <u>CATION</u> | | | |
| Task #: 041 Date: 4/22/2020 | State: Colorado County: Boulder | | | None M041-041 |

User: AME

Agency or organization name: <u>DRMS</u>

FERTILIZING

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------|-----------------|-------|-------------------------------|------------|
| Triple superphosphate, 0-46-0 | 67.00 | pound | \$0.43 | \$28.48 |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$28.48 |

Application

| Description | | Cost /Acre |
|---|---|------------|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | | \$36.15 |
| | | |
| | Total Fertilizer Application Cost/Acre | \$36.15 |

TILLING

| Description | Cost /Acre |
|--|------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$101.93 |
| | |
| Total Tilling Cost/Acre | \$101.93 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|--------------------------------|--------------------------------|------------------------|------------|
| Beardless Wheatgrass - Whitmar | 5.50 | 17.93 | \$64.49 |
| Arizona Fescue - Redondo | 1.50 | 17.22 | \$13.88 |
| Indian Ricegrass - Paloma | 4.80 | 15.54 | \$53.40 |
| Bluebunch Wheatgrass - Secar | 4.80 | 15.43 | \$52.20 |
| Blue Grama - Native | 0.50 | 8.16 | \$6.86 |
| Canby Bluegrass - Canbar | 0.50 | 10.63 | \$5.13 |
| Buffalograss - Native/Plains | 7.30 | 7.04 | \$88.09 |
| Prairie Clover, Purple - Kaneb | 0.28 | 1.91 | \$15.83 |
| Aster, Smooth | 0.15 | 2.61 | \$21.98 |
| Little Bluestem - Pastura | 2.50 | 14.92 | \$33.71 |
| Alfalfa - Ladak (inoculated) | 0.40 | 1.93 | \$1.02 |

| Sideoats Grama - Vaughn | 2.30 | 7.55 | \$19.26 |
|----------------------------------|-------|--------|----------|
| Coneflower, Prairie | 0.08 | 2.17 | \$2.64 |
| Streambank Wheatgrass - Sodar | 1.50 | 4.89 | \$8.55 |
| Thickspike Wheatgrass - Critana | 1.00 | 3.54 | \$6.88 |
| Coreopsis, Plains | 0.08 | 2.54 | \$11.46 |
| Western Wheatgrass - Arriba | 3.80 | 9.60 | \$24.70 |
| Needle and Thread | 3.50 | 9.24 | \$146.48 |
| Needlegrass, Green - Lodorm | 2.30 | 9.56 | \$27.08 |
| Prairie Junegrass | 0.08 | 4.25 | \$2.08 |
| Flax, Lewis Blue | 0.28 | 1.86 | \$4.62 |
| Globemallow, Scarlet (or copper) | 0.15 | 1.70 | \$20.33 |
| Penstemon, Palmer | 0.13 | 2.87 | \$7.09 |
| Yarrow, Western | 0.03 | 1.82 | \$1.25 |
| Goldeneye - Showy | 0.08 | 0.92 | \$4.80 |
| | | | |
| Totals Seed Mix | 43.54 | 175.82 | \$643.77 |

Application

| Description | Cost /Acre |
|----------------------------------|--------------|
| Drill Seeding (DRMS Survey Cost) | \$232.00 |
| | |
| Total Seed Application Cost/A | cre \$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 | \$295.00 | \$590.00 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$590.00 |

Application

| Description | | Cost /Acre |
|--|--|------------|
| Crimping, with tractor {DMG survey data} | | \$70.17 |
| | | |
| | Total Mulch Application Cost/Acre | \$70.17 |

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 Acres: | 2.3 | Cost /Acre: | \$1,702.50 |
|----------------------------------|---------|--------------|------------|
| Estimated Failure Rate: | 30% | Cost /Acre*: | \$875.77 |
| *Selected Replanting Work Items: | SEEDING | | |
| Initial Job Cost: \$3.915.75 | | | |

| Reseeding Job Cost: | \$604.28 |
|---------------------|----------|
| Total Job Cost: | \$4,520 |
| Job Hours: | 2.30 |

| Task description:l | | Revegetate wetland area (20 ac) | | | | | |
|--------------------|------------------------|---------------------------------|---------------------|--------------|----------|--|--|
| Site: | Dowe Flats Mine | Permit Action: | TR-04 Bond Estimate | Permit/Job#: | M1993041 | | |
| DI | POIECT IDENTIFICA | TION | | | | | |

PROJECT IDENTIFICATION

Task #:042State:ColoradoAbbreviation:NoneDate:4/22/2020County:BoulderFilename:M041-042

User: AME

Agency or organization name: <u>DRMS</u>

FERTILIZING

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------|-----------------|-------|-------------------------------|------------|
| Triple superphosphate, 0-46-0 | 67.00 | pound | \$0.43 | \$28.48 |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$28.48 |

Application

| Description | | Cost /Acre |
|---|---|------------|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | | \$36.15 |
| | | |
| | Total Fertilizer Application Cost/Acre | \$36.15 |

TILLING

| Description | Cost /Acre |
|--|------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$101.93 |
| | |
| Total Tilling Cost/Acre | \$101.93 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|----------------------|--------------------------------|------------------------|------------|
| Baltic Rush | 2.00 | 562.00 | \$562.00 |
| Alkali Bulrush | 2.00 | 19.74 | \$81.00 |
| Common Rush | 2.00 | 336.34 | \$336.34 |
| Softstem Bulrush | 8.00 | 101.01 | \$1,048.40 |
| Hardstem Bulrush | 10.00 | 92.98 | \$1,497.00 |
| Three Square Bulrush | 10.00 | 68.87 | \$1,717.50 |
| Milkweed, Swamp | 0.25 | 0.39 | \$74.80 |
| Totals Seed Mix | 34.25 | 1,181.32 | \$5,317.04 |

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 | \$295.00 | \$590.00 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$590.00 |

Application

| Description | | Cost /Acre |
|--|--|------------|
| Crimping, with tractor {DMG survey data} | | \$70.17 |
| | | |
| | Total Mulch Application Cost/Acre | \$70.17 |

NURSERY STOCK PLANTING

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

JOB TIME AND COST

 No. of Acres:
 20
 Cost /Acre:
 \$6,375.77

 Estimated Failure Rate:
 30%
 Cost /Acre*:
 \$5,549.04

*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$127,515.40

Reseeding Job Cost: \$33,294.24

Total Job Cost: \$160,810

20.00

| Task description: | Revegetate crusher area (47.4 ac) | | | | | |
|------------------------------|-----------------------------------|---------------------|--------------|----------|--|--|
| Site: Dowe Flats Mine | Permit Action: | TR-04 Bond Estimate | Permit/Job#: | M1993041 | | |
| PROJECT IDENTIFICA | <u>ATION</u> | | | | | |

Task #:043State:ColoradoAbbreviation:NoneDate:4/22/2020County:BoulderFilename:M041-043

User: AME

Agency or organization name: DRMS

FERTILIZING

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------|-----------------|-------|-------------------------------|------------|
| Triple superphosphate, 0-46-0 | 67.00 | pound | \$0.43 | \$28.48 |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$28.48 |

Application

| Description | | Cost /Acre |
|---|---|------------|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | | \$36.15 |
| | | |
| | Total Fertilizer Application Cost/Acre | \$36.15 |

TILLING

| Description | Cost /Acre |
|--|------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$101.93 |
| | |
| Total Tilling Cost/Acre | \$101.93 |

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|--------------------------------|--------------------------------|------------------------|------------|
| Beardless Wheatgrass - Whitmar | 5.50 | 17.93 | \$64.49 |
| Arizona Fescue - Redondo | 1.50 | 17.22 | \$13.88 |
| Indian Ricegrass - Paloma | 4.80 | 15.54 | \$53.40 |
| Bluebunch Wheatgrass - Secar | 4.80 | 15.43 | \$52.20 |
| Blue Grama - Native | 0.50 | 8.16 | \$6.86 |
| Canby Bluegrass - Canbar | 0.50 | 10.63 | \$5.13 |
| Buffalograss - Native/Plains | 7.30 | 7.04 | \$88.09 |
| Prairie Clover, Purple - Kaneb | 0.28 | 1.91 | \$15.83 |
| Aster, Smooth | 0.15 | 2.61 | \$21.98 |
| Little Bluestem - Pastura | 2.50 | 14.92 | \$33.71 |
| Alfalfa - Ladak (inoculated) | 0.40 | 1.93 | \$1.02 |

| Sideoats Grama - Vaughn | 2.30 | 7.55 | \$19.26 |
|----------------------------------|-------|--------|----------|
| Coneflower, Prairie | 0.08 | 2.17 | \$2.64 |
| Streambank Wheatgrass - Sodar | 1.50 | 4.89 | \$8.55 |
| Thickspike Wheatgrass - Critana | 1.00 | 3.54 | \$6.88 |
| Coreopsis, Plains | 0.08 | 2.54 | \$11.46 |
| Western Wheatgrass - Arriba | 3.80 | 9.60 | \$24.70 |
| Needle and Thread | 3.50 | 9.24 | \$146.48 |
| Needlegrass, Green - Lodorm | 2.30 | 9.56 | \$27.08 |
| Prairie Junegrass | 0.08 | 4.25 | \$2.08 |
| Flax, Lewis Blue | 0.28 | 1.86 | \$4.62 |
| Globemallow, Scarlet (or copper) | 0.15 | 1.70 | \$20.33 |
| Penstemon, Palmer | 0.13 | 2.87 | \$7.09 |
| Yarrow, Western | 0.03 | 1.82 | \$1.25 |
| Goldeneye - Showy | 0.08 | 0.92 | \$4.80 |
| | | | |
| Totals Seed Mix | 43.54 | 175.82 | \$643.77 |

| 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 | \$295.00 | \$590.00 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$590.00 |

Application

| Description | | Cost /Acre |
|--|--|------------|
| Crimping, with tractor {DMG survey data} | | \$70.17 |
| | | |
| | Total Mulch Application Cost/Acre | \$70.17 |

NURSERY STOCK PLANTING

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

| No. of Acres: | 47.4 | Cost /Acre: | \$1,702.50 |
|----------------------------------|---------|--------------|------------|
| Estimated Failure Rate: | 30% | Cost /Acre*: | \$875.77 |
| *Selected Replanting Work Items: | SEEDING | | |
| Initial Job Cost: \$80.698.50 | | | |

| Reseeding Job Cost: | \$12,453.45 |
|---------------------|-------------|
| Total Job Cost: | |
| Job Hours: | 47.40 |

| Task description: | k description: Revegetate Mt. George stockpile area (22.9 ac) | | | | |
|------------------------------|---|---------------------|--------------|----------|--|
| Site: Dowe Flats Mine | Permit Action: | TR-04 Bond Estimate | Permit/Job#: | M1993041 | |
| PROJECT IDENTIFICA | <u>ATION</u> | | | | |

Task #:044State:ColoradoAbbreviation:NoneDate:4/22/2020County:BoulderFilename:M041-044

User: AME

Agency or organization name: <u>DRMS</u>

FERTILIZING

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------|-----------------|-------|-------------------------------|------------|
| Triple superphosphate, 0-46-0 | 67.00 | pound | \$0.43 | \$28.48 |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$28.48 |

Application

| Description | | Cost /Acre |
|---|---|------------|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | | \$36.15 |
| | | |
| | Total Fertilizer Application Cost/Acre | \$36.15 |

TILLING

| Description Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | | Cost /Acre \$101.93 |
|--|-------------------------|------------------------|
| Disc marrowing, or deep (ME/M to 32 91 13.23 0100) | Total Tilling Cost/Acre | \$101.93 |

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|--------------------------------|--------------------------------|------------------------|------------|
| Beardless Wheatgrass - Whitmar | 5.50 | 17.93 | \$64.49 |
| Arizona Fescue - Redondo | 1.50 | 17.22 | \$13.88 |
| Indian Ricegrass - Paloma | 4.80 | 15.54 | \$53.40 |
| Bluebunch Wheatgrass - Secar | 4.80 | 15.43 | \$52.20 |
| Blue Grama - Native | 0.50 | 8.16 | \$6.86 |
| Canby Bluegrass - Canbar | 0.50 | 10.63 | \$5.13 |
| Buffalograss - Native/Plains | 7.30 | 7.04 | \$88.09 |
| Prairie Clover, Purple - Kaneb | 0.28 | 1.91 | \$15.83 |
| Aster, Smooth | 0.15 | 2.61 | \$21.98 |
| Little Bluestem - Pastura | 2.50 | 14.92 | \$33.71 |
| Alfalfa - Ladak (inoculated) | 0.40 | 1.93 | \$1.02 |

| Sideoats Grama - Vaughn | 2.30 | 7.55 | \$19.26 |
|----------------------------------|-------|--------|----------|
| Coneflower, Prairie | 0.08 | 2.17 | \$2.64 |
| Streambank Wheatgrass - Sodar | 1.50 | 4.89 | \$8.55 |
| Thickspike Wheatgrass - Critana | 1.00 | 3.54 | \$6.88 |
| Coreopsis, Plains | 0.08 | 2.54 | \$11.46 |
| Western Wheatgrass - Arriba | 3.80 | 9.60 | \$24.70 |
| Needle and Thread | 3.50 | 9.24 | \$146.48 |
| Needlegrass, Green - Lodorm | 2.30 | 9.56 | \$27.08 |
| Prairie Junegrass | 0.08 | 4.25 | \$2.08 |
| Flax, Lewis Blue | 0.28 | 1.86 | \$4.62 |
| Globemallow, Scarlet (or copper) | 0.15 | 1.70 | \$20.33 |
| Penstemon, Palmer | 0.13 | 2.87 | \$7.09 |
| Yarrow, Western | 0.03 | 1.82 | \$1.25 |
| Goldeneye - Showy | 0.08 | 0.92 | \$4.80 |
| | | | |
| Totals Seed Mix | 43.54 | 175.82 | \$643.77 |

| 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 | \$295.00 | \$590.00 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$590.00 |

Application

| Description | | Cost /Acre |
|--|--|------------|
| Crimping, with tractor {DMG survey data} | | \$70.17 |
| | | |
| | Total Mulch Application Cost/Acre | \$70.17 |

NURSERY STOCK PLANTING

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

JOB TIME AND COST

| No. of Acres: | 22.9 | Cost /Acre: | \$1,702.50 |
|----------------------------------|---------|--------------|------------|
| Estimated Failure Rate: | 30% | Cost /Acre*: | \$875.77 |
| *Selected Replanting Work Items: | SEEDING | | |

Initial Job Cost: \$38,987.25

| Reseeding Job Cost: | \$6,016.54 |
|---------------------|------------|
| Total Job Cost: | \$45,004 |
| Job Hours: | 22.90 |

| Task description: | Revegetate topsoil stockpile areas (27.7 ac) | | | | Revegetate topsoil stockpile areas (27.7 ac) | | | |
|------------------------------|--|---------------------|--------------|----------|--|--|--|--|
| Site: Dowe Flats Mine | Permit Action: | TR-04 Bond Estimate | Permit/Job#: | M1993041 | | | | |
| PROJECT IDENTIFICA | ATION | | | | | | | |

Task #:045State:ColoradoAbbreviation:NoneDate:4/22/2020County:BoulderFilename:M041-045

User: AME

Agency or organization name: DRMS

FERTILIZING

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------|-----------------|-------|-------------------------------|------------|
| Triple superphosphate, 0-46-0 | 67.00 | pound | \$0.43 | \$28.48 |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$28.48 |

Application

| Description | | Cost /Acre |
|---|---|------------|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | | \$36.15 |
| | | |
| | Total Fertilizer Application Cost/Acre | \$36.15 |

TILLING

| Description | Cost /Acre |
|--|------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$101.93 |
| | |
| Total Tilling Cost/Acre | \$101.93 |

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|--------------------------------|--------------------------------|------------------------|------------|
| Beardless Wheatgrass - Whitmar | 5.50 | 17.93 | \$64.49 |
| Arizona Fescue - Redondo | 1.50 | 17.22 | \$13.88 |
| Indian Ricegrass - Paloma | 4.80 | 15.54 | \$53.40 |
| Bluebunch Wheatgrass - Secar | 4.80 | 15.43 | \$52.20 |
| Blue Grama - Native | 0.50 | 8.16 | \$6.86 |
| Canby Bluegrass - Canbar | 0.50 | 10.63 | \$5.13 |
| Buffalograss - Native/Plains | 7.30 | 7.04 | \$88.09 |
| Prairie Clover, Purple - Kaneb | 0.28 | 1.91 | \$15.83 |
| Aster, Smooth | 0.15 | 2.61 | \$21.98 |
| Little Bluestem - Pastura | 2.50 | 14.92 | \$33.71 |
| Alfalfa - Ladak (inoculated) | 0.40 | 1.93 | \$1.02 |

| Sideoats Grama - Vaughn | 2.30 | 7.55 | \$19.26 |
|----------------------------------|-------|--------|----------|
| Coneflower, Prairie | 0.08 | 2.17 | \$2.64 |
| Streambank Wheatgrass - Sodar | 1.50 | 4.89 | \$8.55 |
| Thickspike Wheatgrass - Critana | 1.00 | 3.54 | \$6.88 |
| Coreopsis, Plains | 0.08 | 2.54 | \$11.46 |
| Western Wheatgrass - Arriba | 3.80 | 9.60 | \$24.70 |
| Needle and Thread | 3.50 | 9.24 | \$146.48 |
| Needlegrass, Green - Lodorm | 2.30 | 9.56 | \$27.08 |
| Prairie Junegrass | 0.08 | 4.25 | \$2.08 |
| Flax, Lewis Blue | 0.28 | 1.86 | \$4.62 |
| Globemallow, Scarlet (or copper) | 0.15 | 1.70 | \$20.33 |
| Penstemon, Palmer | 0.13 | 2.87 | \$7.09 |
| Yarrow, Western | 0.03 | 1.82 | \$1.25 |
| Goldeneye - Showy | 0.08 | 0.92 | \$4.80 |
| | | | |
| Totals Seed Mix | 43.54 | 175.82 | \$643.77 |

| 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 | \$295.00 | \$590.00 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$590.00 |

Application

| Description | | Cost /Acre |
|--|--|------------|
| Crimping, with tractor {DMG survey data} | | \$70.17 |
| | | |
| | Total Mulch Application Cost/Acre | \$70.17 |

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 |

JOB TIME AND COST

| No. of Acres: | 27.7 | Cost /Acre: | \$1,702.50 |
|----------------------------------|---------|--------------|------------|
| Estimated Failure Rate: | 30% | Cost /Acre*: | \$875.77 |
| *Selected Replanting Work Items: | SEEDING | | |
| | | | |

Initial Job Cost: **\$47,159.25**

| Reseeding Job Cost: | \$7,277.65 |
|---------------------|------------|
| Total Job Cost: | \$54,437 |
| Job Hours: | 27.70 |

| rask descrip | ouon: | Kevegetate offic | e/maint/equi | p/fuel areas (3.8 ac) | | |
|-----------------------|-----------|------------------|--------------|-----------------------|---------------|--------------|
| Site: Dowe Fla | ats Mine | Pe | rmit Action: | TR-04 Bond Estimate | Permit/Jol | o#: M1993041 |
| PROJECT | IDENTIFIC | 'ATION | | | | |
| Task #: | 046 | State: | Colorado | | Abbreviation: | None |
| Date: | 4/22/2020 | County: | Boulder | | Filename: | M041-046 |

User: AME

Agency or organization name: DRMS

FERTILIZING

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------|-----------------|-------|-------------------------------|------------|
| Triple superphosphate, 0-46-0 | 67.00 | pound | \$0.43 | \$28.48 |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$28.48 |

Application

| Description | | Cost /Acre |
|---|---|------------|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | | \$36.15 |
| | | |
| | Total Fertilizer Application Cost/Acre | \$36.15 |

TILLING

| Description | Cost /Acre |
|--|------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$101.93 |
| | |
| Total Tilling Cost/Acre | \$101.93 |

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|--------------------------------|--------------------------------|------------------------|------------|
| Beardless Wheatgrass - Whitmar | 5.50 | 17.93 | \$64.49 |
| Arizona Fescue - Redondo | 1.50 | 17.22 | \$13.88 |
| Indian Ricegrass - Paloma | 4.80 | 15.54 | \$53.40 |
| Bluebunch Wheatgrass - Secar | 4.80 | 15.43 | \$52.20 |
| Blue Grama - Native | 0.50 | 8.16 | \$6.86 |
| Canby Bluegrass - Canbar | 0.50 | 10.63 | \$5.13 |
| Buffalograss - Native/Plains | 7.30 | 7.04 | \$88.09 |
| Prairie Clover, Purple - Kaneb | 0.28 | 1.91 | \$15.83 |
| Aster, Smooth | 0.15 | 2.61 | \$21.98 |
| Little Bluestem - Pastura | 2.50 | 14.92 | \$33.71 |
| Alfalfa - Ladak (inoculated) | 0.40 | 1.93 | \$1.02 |

| Sideoats Grama - Vaughn | 2.30 | 7.55 | \$19.26 |
|----------------------------------|-------|--------|----------|
| Coneflower, Prairie | 0.08 | 2.17 | \$2.64 |
| Streambank Wheatgrass - Sodar | 1.50 | 4.89 | \$8.55 |
| Thickspike Wheatgrass - Critana | 1.00 | 3.54 | \$6.88 |
| Coreopsis, Plains | 0.08 | 2.54 | \$11.46 |
| Western Wheatgrass - Arriba | 3.80 | 9.60 | \$24.70 |
| Needle and Thread | 3.50 | 9.24 | \$146.48 |
| Needlegrass, Green - Lodorm | 2.30 | 9.56 | \$27.08 |
| Prairie Junegrass | 0.08 | 4.25 | \$2.08 |
| Flax, Lewis Blue | 0.28 | 1.86 | \$4.62 |
| Globemallow, Scarlet (or copper) | 0.15 | 1.70 | \$20.33 |
| Penstemon, Palmer | 0.13 | 2.87 | \$7.09 |
| Yarrow, Western | 0.03 | 1.82 | \$1.25 |
| Goldeneye - Showy | 0.08 | 0.92 | \$4.80 |
| | | | |
| Totals Seed Mix | 43.54 | 175.82 | \$643.77 |

| 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 | \$295.00 | \$590.00 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$590.00 |

Application

| Description | | Cost /Acre |
|--|--|------------|
| Crimping, with tractor {DMG survey data} | | \$70.17 |
| | | |
| | Total Mulch Application Cost/Acre | \$70.17 |

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 Acres: | 3.8 | Cost /Acre: | \$1,702.50 |
|----------------------------------|---------|--------------|------------|
| Estimated Failure Rate: | 30% | Cost /Acre*: | \$875.77 |
| *Selected Replanting Work Items: | SEEDING | | |
| Initial Job Cost: \$6.469.50 | | | |

| Reseeding Job Cost: | \$998.38 |
|---------------------|----------|
| Total Job Cost: | \$7,468 |
| Job Hours: | 3.80 |

| Task description: | Revegetate con | veyor corrido | or (4.6 ac) | | |
|------------------------------|----------------|---------------|---------------------|-------------------------|---------------------|
| Site: Dowe Flats Mine | P | ermit Action: | TR-04 Bond Estimate | Permit/Job | »#: <u>M1993041</u> |
| PROJECT IDENT | IFICATION | | | | |
| Task #: 047 Date: 4/22/20 | State: County: | | | Abbreviation: Filename: | None M041-047 |
| | | • | | | |

User: AME

Agency or organization name: DRMS

FERTILIZING

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------|-----------------|-------|-------------------------------|------------|
| Triple superphosphate, 0-46-0 | 67.00 | pound | \$0.43 | \$28.48 |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$28.48 |

Application

| Description | | Cost /Acre |
|---|---|------------|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | | \$36.15 |
| | | |
| | Total Fertilizer Application Cost/Acre | \$36.15 |

TILLING

| Description | Cost /Acre |
|--|------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$101.93 |
| | |
| Total Tilling Cost/Acre | \$101.93 |

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|--------------------------------|--------------------------------|------------------------|------------|
| Beardless Wheatgrass - Whitmar | 5.50 | 17.93 | \$64.49 |
| Arizona Fescue - Redondo | 1.50 | 17.22 | \$13.88 |
| Indian Ricegrass - Paloma | 4.80 | 15.54 | \$53.40 |
| Bluebunch Wheatgrass - Secar | 4.80 | 15.43 | \$52.20 |
| Blue Grama - Native | 0.50 | 8.16 | \$6.86 |
| Canby Bluegrass - Canbar | 0.50 | 10.63 | \$5.13 |
| Buffalograss - Native/Plains | 7.30 | 7.04 | \$88.09 |
| Prairie Clover, Purple - Kaneb | 0.28 | 1.91 | \$15.83 |
| Aster, Smooth | 0.15 | 2.61 | \$21.98 |
| Little Bluestem - Pastura | 2.50 | 14.92 | \$33.71 |
| Alfalfa - Ladak (inoculated) | 0.40 | 1.93 | \$1.02 |

| Sideoats Grama - Vaughn | 2.30 | 7.55 | \$19.26 |
|----------------------------------|-------|--------|----------|
| Coneflower, Prairie | 0.08 | 2.17 | \$2.64 |
| Streambank Wheatgrass - Sodar | 1.50 | 4.89 | \$8.55 |
| Thickspike Wheatgrass - Critana | 1.00 | 3.54 | \$6.88 |
| Coreopsis, Plains | 0.08 | 2.54 | \$11.46 |
| Western Wheatgrass - Arriba | 3.80 | 9.60 | \$24.70 |
| Needle and Thread | 3.50 | 9.24 | \$146.48 |
| Needlegrass, Green - Lodorm | 2.30 | 9.56 | \$27.08 |
| Prairie Junegrass | 0.08 | 4.25 | \$2.08 |
| Flax, Lewis Blue | 0.28 | 1.86 | \$4.62 |
| Globemallow, Scarlet (or copper) | 0.15 | 1.70 | \$20.33 |
| Penstemon, Palmer | 0.13 | 2.87 | \$7.09 |
| Yarrow, Western | 0.03 | 1.82 | \$1.25 |
| Goldeneye - Showy | 0.08 | 0.92 | \$4.80 |
| | | | |
| Totals Seed Mix | 43.54 | 175.82 | \$643.77 |

| 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 | \$295.00 | \$590.00 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$590.00 |

Application

| Description | | Cost /Acre |
|--|--|------------|
| Crimping, with tractor {DMG survey data} | | \$70.17 |
| | | |
| | Total Mulch Application Cost/Acre | \$70.17 |

NURSERY STOCK PLANTING

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

| No. of Acres: | 4.6 | Cost /Acre: | \$1,702.50 | |
|----------------------------------|---------|--------------|------------|--|
| Estimated Failure Rate: | 30% | Cost /Acre*: | \$875.77 | |
| *Selected Replanting Work Items: | SEEDING | | | |
| Initial Job Cost: \$7.831.50 | | | | |

| Reseeding Job Cost: | \$1,208.56 |
|---------------------|------------|
| Total Job Cost: | \$9,040 |
| Job Hours: | 4.60 |

| Task description: Revegetate roads and other disturbances (63.4 ac) | | | | | | |
|---|--------------|---------------|---------------|---------------------|-----------------|----------|
| Site: Dowe | Flats Mine | Pe | ermit Action: | TR-04 Bond Estimate | Permit/Job#: | M1993041 |
| <u>PROJEC</u> | CT IDENTIFI | <u>CATION</u> | | | | |
| Task : | #: 048 | State: | Colorado | | Abbreviation: 1 | None |
| Dat | e: 4/22/2020 | County: | Boulder | | Filename: | M041-048 |

User: AME

Agency or organization name: DRMS

FERTILIZING

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------|-----------------|-------|-------------------------------|------------|
| Triple superphosphate, 0-46-0 | 67.00 | pound | \$0.43 | \$28.48 |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$28.48 |

Application

| Description | | Cost /Acre |
|---|---|------------|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | | \$36.15 |
| | | |
| | Total Fertilizer Application Cost/Acre | \$36.15 |

TILLING

| Description | Cost /Acre |
|--|------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$101.93 |
| | |
| Total Tilling Cost/Acre | \$101.93 |

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|--------------------------------|--------------------------------|------------------------|------------|
| Beardless Wheatgrass - Whitmar | 5.50 | 17.93 | \$64.49 |
| Arizona Fescue - Redondo | 1.50 | 17.22 | \$13.88 |
| Indian Ricegrass - Paloma | 4.80 | 15.54 | \$53.40 |
| Bluebunch Wheatgrass - Secar | 4.80 | 15.43 | \$52.20 |
| Blue Grama - Native | 0.50 | 8.16 | \$6.86 |
| Canby Bluegrass - Canbar | 0.50 | 10.63 | \$5.13 |
| Buffalograss - Native/Plains | 7.30 | 7.04 | \$88.09 |
| Prairie Clover, Purple - Kaneb | 0.28 | 1.91 | \$15.83 |
| Aster, Smooth | 0.15 | 2.61 | \$21.98 |
| Little Bluestem - Pastura | 2.50 | 14.92 | \$33.71 |
| Alfalfa - Ladak (inoculated) | 0.40 | 1.93 | \$1.02 |

| Sideoats Grama - Vaughn | 2.30 | 7.55 | \$19.26 |
|----------------------------------|-------|--------|----------|
| Coneflower, Prairie | 0.08 | 2.17 | \$2.64 |
| Streambank Wheatgrass - Sodar | 1.50 | 4.89 | \$8.55 |
| Thickspike Wheatgrass - Critana | 1.00 | 3.54 | \$6.88 |
| Coreopsis, Plains | 0.08 | 2.54 | \$11.46 |
| Western Wheatgrass - Arriba | 3.80 | 9.60 | \$24.70 |
| Needle and Thread | 3.50 | 9.24 | \$146.48 |
| Needlegrass, Green - Lodorm | 2.30 | 9.56 | \$27.08 |
| Prairie Junegrass | 0.08 | 4.25 | \$2.08 |
| Flax, Lewis Blue | 0.28 | 1.86 | \$4.62 |
| Globemallow, Scarlet (or copper) | 0.15 | 1.70 | \$20.33 |
| Penstemon, Palmer | 0.13 | 2.87 | \$7.09 |
| Yarrow, Western | 0.03 | 1.82 | \$1.25 |
| Goldeneye - Showy | 0.08 | 0.92 | \$4.80 |
| | | | |
| Totals Seed Mix | 43.54 | 175.82 | \$643.77 |

| 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 | \$295.00 | \$590.00 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$590.00 |

Application

| Description | | Cost /Acre |
|--|--|------------|
| Crimping, with tractor {DMG survey data} | | \$70.17 |
| | | |
| | Total Mulch Application Cost/Acre | \$70.17 |

NURSERY STOCK PLANTING

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

| No. of Acres: | 63.4 | Cost /Acre: | \$1,702.50 |
|---------------------------------------|---------|--------------|------------|
| Estimated Failure Rate: | 30% | Cost /Acre*: | \$875.77 |
| *Selected Replanting Work Items: | SEEDING | | |
| Initial Job Cost: \$107,938.50 | | | |

Task # 048

| Reseeding Job Cost: | \$16,657.15 |
|---------------------|-------------|
| Total Job Cost: | \$124,596 |
| Job Hours: | 63.40 |

EQUIPMENT MOBILIZATION/DEMOBILIZATION

| Tasl | k description: | Mobilization/De | emobilization | l | | |
|--|-------------------|-----------------|---------------|-------------------|---------------|-------------------|
| Site: Dowe Fl40.00 Mine Permit Action: TR-04 Bond Estimate Permit/Job#: M1993041 | | | | | | |
| PRO | JECT IDENTIFIC | ATION | | | | |
| Т | Γask #: 049 | State: | Colorado | | Abbreviation: | None |
| | Date: 4/22/2020 | County: | Boulder | | Filename: | M041-049 |
| | User: AME | | | | | |
| <u>EQU</u> | Agency or organiz | | RMS ST | | | |
| | | | | S | hift basis: | 1 per day |
| | | | | Cost Dat | a Source: | CRG Data |
| | Truck Tractor | Description: G | ENERIC ON | -HIGHWAY TRUCK TR | ACTOR, 6X4 | , DIESEL POWERED, |

Cost Breakdown:

| Available Rig Capacities | 0-25 Tons | 26-50 Tons | 51+ Tons |
|--------------------------|-----------|------------|----------|
| Ownership Cost/Hour: | \$17.20 | \$29.63 | \$38.69 |
| Operating Cost/Hour: | \$26.56 | \$47.02 | \$55.69 |
| Operator Cost/Hour: | \$23.63 | \$23.63 | \$23.63 |
| Helper Cost/Hour: | \$0.00 | \$23.53 | \$23.53 |
| Total Unit Cost/Hour: | \$67.39 | \$123.81 | \$141.54 |

NON ROADABLE EQUIPMENT:

Truck Trailer Description:

| Machine | Weight/ | Owner ship | Haul Rig | Fleet | Haul Trip | Return Trip | DOT Permit |
|------------------|---------|---------------|-------------|-------|------------|----------------|-------------|
| Description | Unit | Cost/hr/ unit | Cost/hr/uni | Size | Cost/hr/ | Cost/hr/ fleet | Cost/ fleet |
| _ | (TONS) | | t | | fleet | | |
| Cat 637G w/push- | 59.59 | \$174.06 | \$141.54 | 10 | \$3,156.00 | \$1,415.40 | \$2,500.00 |
| pull | | | | | | | |
| CAT 992K | 107.88 | \$207.81 | \$141.54 | 4 | \$1,397.40 | \$566.16 | \$1,000.00 |
| Cat D9T - 9SU | 60.01 | \$121.49 | \$141.54 | 6 | \$1,578.18 | \$849.24 | \$1,500.00 |
| CAT 16M | 28.73 | \$87.15 | \$123.81 | 8 | \$1,687.68 | \$990.48 | \$2,000.00 |
| Drill/Broadcast | 25.00 | \$18.15 | \$67.39 | 4 | \$342.16 | \$269.56 | \$1,000.00 |
| Seeder with | | | | | | | |
| Tractor | | | | | | | |

Subtotals: \$8,161.42 \$4,090.84 \$8,000.00

400 HP (2ND HALF, 2006)
GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT

TRAILER (25T, 50T, AND 100T)

ROADABLE EQUIPMENT:

| Machine Description | Total Cost/hr/ unit | Fleet Size | Haul Trip Cost/hr/ fleet | Return Trip Cost/hr/ fleet |
|--------------------------------|------------------------|------------|-----------------------------|-------------------------------|
| Cat 777F | \$314.72 | 6 | \$1,888.32 | \$1,888.32 |
| Water Tanker, 3,500 Gal. | \$42.46 | 3 | \$127.38 | \$127.38 |
| Light Duty Pickup, 4x4, 3/4 T. | \$12.96 | 2 | \$25.92 | \$25.92 |

| Subtotals: | \$2,041.62 | \$2.041.62 |
|------------|------------|------------|
| | | |

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:
Total one-way travel distance:
Average Travel Speed:

LONGMONT
miles
40.00
mph

Total Non-Roadable Mob/Demob Cost *
 '* two round trips with haul rig:
Total Roadable Mob/Demob Cost **
 ** one round trip, no haul rig:

\$397,551.45

\$1,020.81

Transportation Cycle Time:

| | Non- | |
|-------------------------|-----------|-----------|
| | Roadable | Roadable |
| | Equipment | Equipment |
| Haul Time (Hours): | 0.25 | 0.25 |
| Return Time (Hours): | 0.25 | 0.25 |
| Loading Time (Hours): | 11.50 | NA |
| Unloading Time (Hours): | 11.50 | NA |
| Subtotals: | 23.50 | 0.50 |
| | | |

JOB TIME AND COST

Total job cost: 47.00 Hours

Total job cost: \$398,572