COST SUMMARY WORK

| Task descrip | otion: | Cost Summary - | - Amendmen | t 4 | | | |
|-----------------------|-----------------|----------------------|------------|-----|-----------------------|-----------|--|
| Site: Pikeview Quarry | | Permit Action: AM-04 | | | Permit/Job#: M1977211 | | |
| PROJECT | <u>IDENTIFI</u> | <u>CATION</u> | | | | | |
| Task #: | 4000 | State: | Colorado | | Abbreviation: | None | |
| Date: | 3/5/2020 | County: | El Paso | | Filename: | M211-4000 | |
| User: | TC1 | | | | | | |

TASK LIST (DIRECT COSTS)

Agency or organization name: DRMS

| Tr1- | | Form | Fleet | Task | |
|------|--|---------------------|----------|--------------|-------------|
| Task | Description | Used | Size | Hours | Cost |
| 4010 | Demo Maintenance Shop, Office & Outbuilding | DEMOLISH | 1 | 40.00 | \$33,989 |
| 4B10 | Drill/blast granite for backfill (\$0.66/ton or \$1.40/CY) | NA | 1 | 49.00 | \$345,733 |
| 4B20 | Rip weathered granite for backfill | RIPPER | 2 | 241.20 | \$141,304 |
| 4B30 | Load/Haul/Dump Ripped & Blasted Material | TRUCK1 | 1 | 1,339.12 | \$982,390 |
| 4B31 | Push ripped/blasted material transported w/ Loader & Trucks | DOZER | 2 | 511.70 | \$273,564 |
| 4CH0 | Construct Riprap Ditches | POSTMINING | 1 | 4,048.67 | \$1,657,488 |
| 4CH1 | Grade 11,750 ft of Terrace Channel | GRADER | 1 | 4.35 | \$493 |
| 4E20 | Load/Haul/Dump Lower Borrow Area Material | TRUCK1 | 1 | 5,839.11 | \$4,283,630 |
| 4EP0 | Install erosion control blankets on steep slopes | REVEGE | 1 | 100.00 | \$542,264 |
| 4EP1 | Apply Mulch on flatter slopes | REVEGE | 1 | 90.00 | \$65,394 |
| 4GF0 | Revegetate 32.18 USFS acres (excl. trees & mulch) | REVEGE | 1 | 90.00 | \$106,705 |
| 4GP0 | Revegetate 106.92 private acres (excl. trees & mulch) | REVEGE | 1 | 300.00 | \$270,257 |
| 4M00 | MOB / DEMOB | MOBILIZE | 1 | 13.00 | \$33,821 |
| 4RD2 | Load/Haul/Dump 2500 tons of gravel | TRUCK1 | 1 | 3.55 | \$39,465 |
| 4SP0 | Private area to be planted w/ shrubs | REVEGE | 1 | 40.00 | \$52,710 |
| 4TF0 | USFS area to be planted w/ trees & watered sep. | REVEGE | 1 | 20.00 | \$4,635 |
| 4TP0 | Private area to be planted w/ trees & watered sep. | REVEGE | 1 | 25.00 | \$7,540 |
| 4TS0 | Import 54,763 CY Topsoil @ \$20/CY | NA | 1 | 40.00 | \$1,095,260 |
| 4TS1 | Place topsoil in USFS area from North Stockpile | TRUCK1 | 1 | 27.51 | \$23,331 |
| 4TS2 | Place topsoil in private area from various stockpiles | TRUCK1 | 1 | 134.76 | \$155,483 |
| 4TW0 | Purchase water for trees (5 gal/tree @ \$2.50/gal x 2 season) | NA | 1 | 20.00 | \$82,900 |
| 4TW1 | Water trees on USFS land | SITEMAINTE NANCE | 1 | 100.00 | \$1,779 |
| 4TW2 | Water trees on private land | SITEMAINTE NANCE | 1 | 100.00 | \$2,176 |
| | | TALS: | 13176.97 | \$10,202,311 | |

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:2.02Total =\$206,087Performance bond:1.05Total =\$107,124Job superintendent:6,343.67Total =\$440,187

Profit: 10.00 Total = \$1,020,231

TOTAL O & P = \$1,773,629

CONTRACT AMOUNT (direct + O & P) = \$11,975,940

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$0 Total = \$0

Engineering work and/or contract/bid preparation: 4.25 Total = \$508,977

Reclamation management and/or administration: 5.00 \$598,797

CONTINGENCY: 3.00 Total = \$306,069

TOTAL INDIRECT COST = \$3,187,473

TOTAL BOND AMOUNT (direct + indirect) = \$13,389,784

DEMOLITION WORK

| Site: P | ikeview Quarry | | Permit Action: | AM-04 | Permit | /Job#: <u>M1977211</u> |
|---------|------------------|-----------|----------------|-------|---------------|------------------------|
| ROJECT | TIDENTIFICATIO | <u> N</u> | | | | |
| Task #: | 4010 | State: | Colorado | | Abbreviation: | None |
| Date: | 3/5/2020 1:05:51 | County: | El Paso | | Filename: | M211-4010 |
| | PM | | | | | |
| User: | TC1 | | | | _ | |

UNIT COSTS

Location adjustment: 93.10 %

| Structure or Item Description | Dimensions | Demolition Menu Selection | Quantity | Unit | Unit Cost | Total Cost |
|----------------------------------|-------------------|--|------------|------|--------------|-------------|
| Maintenance Shop | 18' x 80' x 80' | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 200 ft. push | 115,200.00 | CF | \$0.18 | \$20,966.40 |
| Maintenance Shop Floor | 0.5' x 80' x 80' | Demo. and on-site disposal in existing pit, 6 in. thick - Max. 200 ft. push | 6,400.00 | SF | \$0.89 | \$5,712.64 |
| Office | 9' x 42' x 72' | Bldg. (SC) demo./on- site disposal in existing pit or cut - Max. 200 ft. push | 27,216.00 | CF | \$0.25 | \$6,790.39 |
| Office Floor | 0.33' x 42' x 72' | Demo. and on-site disposal in existing pit, 4 in. thick - Max. 200 ft. push | 3,024.00 | SF | \$0.60 | \$1,799.28 |
| Office Outbuilding | 9' x 15' x 37' | Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 200 ft. push | 4,995.00 | CF | \$0.18 | \$909.09 |
| Office Outbuilding Floor | 0.33' x 15' x 37' | Demo. and on-site disposal in existing pit, 4 in. thick - Max. 200 ft. push | 555.00 | SF | \$0.60 | \$330.23 |

| | | | | Total Cost | |
|------------|-------|---------------|-------------|---------------|-------------|
| | | Subtotal | | (adjusted for | |
| Job Hours: | 40.00 | (unadjusted): | \$36,508.03 | location): | \$33,988.98 |

BULLDOZER RIPPING WORK

| Task d | lescription: | R | ip weathered g | ranite for b | ackfill | | | | |
|-------------|--|-------------|--------------------------------------|---------------------|---------------------------|---------------------|-------------------------|-------------------|-------------|
| Site: Pike | eview Quarr | y | Per | mit Action: | AM-04 | | Permit/Jol | b#: <u>M19772</u> | 11 |
| PROJI | ECT IDEN | TIFICAT | CION | | | | | | |
| D | Sk #: 4B20 Date: 2/21/ User: TC1 |) /2020 | State: County: _ | Colorado El Paso | | | reviation: Filename: | None M211-4B20 | |
| | Agency or | organizati | on name: DR | MS | | | | | |
| HOUR | LY EQUI | • | | | | | | | = |
| | Basic Ma | | Cat D9T - 9SU | | | Horsepower: | | 405 | |
|] | Ripper Attac | | 1-Shank Ripper | | _ | Shift Basis: | 1 p | per day | = |
| | | | | | | Data Source: | ((| CRG) | - |
| Cost Br | eakdown: | | | | 1 | | | | |
| | (| Oumarchin | Cost/Hour: | | \$121.49 | Utilization % NA | | | |
| | | | Cost/Hour: | | \$105.84 | 100 | _ | | |
| | Ripper (| Ownership | Cost/Hour: | | \$15.98 | NA | _ | | |
| | Ripper | | Cost/Hour: | | \$9.64 | 100 | _ | | |
| | | - | Cost/Hour: Cost/Hour: | | \$39.98 \$292.92 | NA | _ | | |
| | | | | | | | | | |
| | | Total Fleet | Cost/Hour: | \$585 | 1.83 | | | | |
| MATE | ERIAL QUA | ANTITIF | 'S | Salaa | tad actimating | method: Seis | mia | | |
| | | | <u></u> | Selec | ted estimating | method. Seis | SHIIC | | |
| · | te Methods: | | | | | | | | |
| | 5,000 | BCY | | nk Volume: | 363,000 | BCY | NA | Midrange | BCY or C |
| rea: NA | | acres | | Depth (ft): | NA | Volume: | | | BC 1 OI C |
| | S | ource of es | timated quantity | y: <u>See12/1</u> | 11/2019 PAR I | Resp. Exh L, p. 1 | L-2 | | = |
| HOUR | RLY PROD | UCTION | _ | | | | | | |
| Seismic | <u>::</u> | | | | | | | | |
| | | | Seismic Veloc | city: | 5,000 | feet/sec | cond | | |
| Area: | | Aver | age Ripping De | nth: | NA | feet/pa | cc | | |
| | | | age Ripping Wi | | NA | feet/pa | | | |
| | | Avera | ge Ripping Len | gth: | NA | feet/pa | | | |
| | | | erage Dozer Spe | | NA | feet/mi | | | |
| | | | ge Maneuver Ti | | NA NA | minute | | | |
| | | | action per unit a | rea: | NA | acres/h | our | | |
| Job Con | ndition Corre | ction Facto | <u>ors</u> | | | | | | |
| | Unadj | usted Hour | ly Unit Product | ion: | 906.60 | Cu. yd: | s./hr | | |
| | | | Site Altitu | ıde: | 7,200 | feet | | | |
| | | | Altitude A | - | 1.00 | (CAT) | | | |
| | | | Job Efficier | | 0.83 | (1 shift | • | | |
| | | | Net Correct | | 0.83 | multipl | | | |
| | | • | ed Hourly Unit F d Hourly Fleet F | | 752.48 1,504.96 | Cu. yds./hi | | | |
| JOB T | IME AND | COST | | | | | | | |
| Fle | eet size: | 2 | Grader(s) | | Total job tim | e: <u>2</u> | 241.20 | Hours | |
| Ur | nit cost: | \$0.389 | Per cu. yd. | | Total job cos | st: \$1 | 41.304 | | |

TRUCK/LOADER TEAM WORK

| Task description: | | • | | & Blasted Ma | neriai | | |
|---|-------------------------|--------------------------|--------------------|------------------------|--------------------|-----------------------|----------------|
| Site: Pikeview Quarr | 'y | Perm | it Actio | n: <u>AM-04</u> | | Permit/Job#: _ | M1977211 |
| PROJECT IDEN | TIFICATION | | | | | | |
| Task #: $\begin{array}{c} \text{Task #:} \\ \text{Date:} \\ \text{User:} \end{array} \begin{array}{c} 4B30 \\ \hline 2/21/ \\ \text{TC1} \end{array}$ | | | Colorad El Paso | 0 | Abl | oreviation: No M2 | ne 211-4B30 |
| Agency or | organization nar | ne: DRM | 1S | | | | |
| | | | | | G1 : G . 1 | | |
| HOURLY EQUII | PMENT COST | <u>.</u> | Б | | | sis: <u>1 per day</u> | |
| Т | ruck Loader Tea | m -Truck: | Cat 74 | uipment Descr | iption | | |
| 1 | Tuck Loader Tea | -Loader: | CAT | | | | |
| Suppo | ort Equipment -L | | NA | | | | |
| | | ımp Area: | NA | 10) (| | | |
| Road Ma | aintenance –Moto | or Grader: ter Truck: | CAT | 12M : Tanker, 5,000 | Gal | | |
| - | - vv a | ter Truck. | vv atci | Tanker, 3,000 | Gai. | | |
| Cost Breakdown: | Truck/Loa | der Team | | Support | Equipment | Maintena | ınce Equipmen |
| | Truck | Loader | | Load Area | Dump Area | Motor Grader | Water Truck |
| Utilization-machine: | 100 | | 100 | NA | NA | 25 | 2 |
| Ownership cost/hour: | \$68.27 | \$52 | 2.71 | NA | NA | \$33.62 | \$27.4 |
| Operating cost/hour: | \$59.78 | \$6 | 1.51 | NA | NA | \$8.55 | \$10.0 |
| %Utilization-riper: | NA | | 0 | NA | NA | NA | N/ |
| pper own. cost/hour: | NA | | 0.00 | NA | NA | \$0.00 | \$0.0 |
| Ripper op. cost/hour: | NA | | 0.00 | NA | NA | \$0.00 | \$0.0 |
| Operator cost/hour: | \$24.79 | | 5.93 | NA | NA | \$45.39 | \$0.0 |
| Unit Subtotals: | \$152.84 | \$150 | 0.14 | NA | NA | \$87.56 | \$37.3 |
| Number of Units: | 3 | **** | 1 | 0 | 0 | 1 | *** |
| Group Subtotals: | Work: | \$608.66 | | Support: | \$0.00 | Maint: | \$124.95 |
| Total work team cos | t/hour: \$733.61 | | | | | | |
| MATERIAL QUA | ANTITIES | | | | | | |
| Initial volume Loose volume | | 42 | CCY LCY | Swell | factor: 1.000 | | |
| | urce of estimated | | | 3AR Reen Thi | D-2 p. L-2; Haul | distance Wksht± | ! 3 |
| | of estimated swe | _ | | ndbook | 1 D 2 p. L 2, Hauf | distance Wkshti | 13 |
| | Material Purcha | ase Cost: | \$0.00 | | | | |
| | To | otal Cost: _ | \$0.00 | | | | |
| HOURLY PRO | DUCT ION | | | | | | |
| Truck Capacity: | | | | | | | |
| Truck Payload (weig | | | | | | | |
| Material v | | D' | | Pounds/LCY | 7 | | |
| Descr | ription: Gravel | - Pitrun | | | | | |

Pounds

LCY

Rated Payload:

Payload Capacity:

87,000

26.77

Struck Volume: 24.20 LCY
Heaped Volume: 31.40 LCY
Average Volume: 27.80 LCY
Adjusted Volume: 26.77 LCY

Final Truck Volume Based on Number of Loader Passes: 24.75 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity: 7.500 LCY (heaped)

Bucket Fill Factor: 0.825 Blasted rock - avg. blasted (75 - 90%) 0.825

Adjusted Capacity: 6.188 LCY

Job Condition Corrections:

Site Altitude (ft.): 7200 feet

| | Truck | Loader | Source |
|-----------------|-------|--------|----------|
| Altitude Adj: | 0.960 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.797 | 0.830 | |

| Loading Tool Cycle Time: Number of | of Loading Tool Passes Required to Fill | 4 | passes |
|--|---|---|--------|
| Excavators and Front Shovels: | Truck: | · | - |
| Machine Cycle Time vs. Job Condition Rating: Selected Value within this Basic Rating: | | | |
| Track Loaders – Material Description: | | | |
| Cycle Time Elements (min.): | | | |

Load: NA Maneuver: NA Dump: 0.100

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

0.550 minutes

| Cycle Time Factors | | Factor (min.) | Source |
|--------------------|---|---------------|----------|
| Material: | Bank or broken material 0.04 | 0.040 | (Cat HB) |
| Stockpile: | No adjustment - factor not applicable 0.00 | 0.000 | (Cat HB) |
| Truck Ownership: | Common ownership of trucks and loaders - 0.04 | -0.040 | (Cat HB) |
| Operation: | Constant operation -0.04 | -0.040 | (Cat HB) |
| Dump Target: | Nominal target 0.00 | 0.000 | (Cat HB) |
| | Net Cools Time A director and | 0.040 | |

Net Cycle Time Adjustment: -0.040 minutes
Adjusted Loader Cycle Time: 0.510 minutes
Net Load Time per Truck: 1.630 minutes

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 0.625 | Minutes |
|-------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 1.630 | Minutes | Adjusted for site altitude: | 1.630 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.042 | Minutes |

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

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

| Haul | l Rout | e: |
|------|--------|----|
| | | |

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|-----------------------|-----------|------------------|---------------|-------------------|-------------------------|
| 1 | 2000.00 | -12.00 | 3.00 | -9.00 | 1507 | 1.458 |

Haul Time: **1.458** minutes Return Route: Haul Distance Grade (%) Roll. Res Total Res Velocity Travel Seg# Time (fpm) (Ft) (%) (%) (min) 2000.00 3.00 15.00 1139 12.00 1.796

Return Time: 1.796 minutes
Total Truck Cycle Time: 6.551 minutes

Loading Tool unit

Production 658.54 LCY/Hour Adjusted for job efficiency: 546.59 LCY/Hour Truck Unit Production 226.69 LCY/Hour Adjusted for job efficiency: 188.16 LCY/Hour

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

Adjusted hourly truck team production: 564.47 LCY/Hour Adjusted single truck/loader team production: 546.59 LCY/Hour Adjusted multiple truck/loader team production: 546.59 LCY/Hour

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 1,339.12
 Hours

 Unit cost:
 \$1.342
 /LCY
 Total job cost:
 \$982,390

BULLDOZER WORK

| Pikeview Quarry | Per | rmit Action: | AM-04 | Permit/Iol | b#: M1977211 |
|----------------------------------|---|----------------|----------------------|---------------|--------------|
| Zmorion Quuity | | retion. | | | |
| PROJECT IDENTIF | <u>ICATION</u> | | | | |
| Task #: 4B31 | State: | Colorado | | Abbreviation: | None |
| Date: 3/5/2020 12:25:30 | County: PM | El Paso | | Filename: | M211-4B31 |
| User: TC1 | | | | | |
| Agency or orga | nization name:DF | RMS | | | |
| HOURLY EQUIPME | ENT COST | | | | |
| | at D9T - 9SU | | | | |
| Horsepower: 40 | | | _ | | |
| | emi-Universal | | _ | | |
| Attachment: N. | A | | | | |
| | per day | | _ | | |
| Data Source: (C | CRG) | | _ | | |
| Cost Breakdown: | | Í. | **** | | |
| | | | <u>Utilization %</u> | | |
| Ownership Cost/Hour: | | \$121.49 | NA 100 | | |
| Operating Cost/Hour: Ripper own. | | \$105.84 | 100 | | |
| Cost/Hour: | | \$0.00 | NA | | |
| Ripper op. Cost/Hour: | | \$0.00 | 0 | | |
| Operator Cost/Hour: | | \$39.98 | NA | | |
| Swell factor: 1.0 | 1,942 00 1,942 LCY lume: Table D-1 | | 20% Swell, 2/7/2020 | | |
| Average push distance: | | | | | |
| Unadjusted hourly | 910.5 LCY | /hr | | | |
| production: | | | | | |
| Materials consistency d | escription: Rock, | well ripped or | blasted 0.8 | | |
| Average push | -30 % | | | | |
| gradient: Average site altitude: | 7,200 feet | <u></u> | | | |
| Material weight: | 2,800 lbs/LCY | | | | |
| Weight description: | Granite - Broken | | | | |
| - | - | | | | |
| ob Condition Correction | Factor | | Source | | |

| Operator Skill: | 0.750 | (AVG.) |
|-----------------------|-------|---------------|
| Material consistency: | 0.800 | (CAT HB) |
| Dozing method: | 1.200 | (S-BY-S) |
| Visibility: | 1.000 | (AVG.) |
| Job efficiency: | 0.830 | (1 SHIFT/DAY) |
| Spoil pile: | 1.000 | (DOZ-OC) |
| Push gradient: | 1.601 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.821 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Net correction: 0.7855

Adjusted unit production:
Adjusted fleet 715.20 LCY/hr

production: 1430.4 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.374/LCY

Total job time: 511.70 Hours
Total job cost: \$273,564

Post-Mining Drainage Channel Construction (Ditches)

| Task description: | Construct Riprap Ditches |
|-------------------|--------------------------|
| | |

Site: Pikeview Quarry Permit Action: AM-04 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #:4CH0State:ColoradoAbbreviation:NoneDate:2/28/2020County:El PasoFilename:M211-4CH0

User: TC1

Agency or organization name: DRMS

| Channel | Length (ft) | Depth (ft) | Width (bottom) (ft) | Side Slopes (XH:1V) | Width (top) (ft) | Excavated Vol./LF (CY) | Excavated Vol. (total) (CY) |
|--------------|-------------|---------------|---------------------|---------------------------|------------------|------------------------------|-----------------------------|
| WS-5; 30% | 350 | 2.00 | 20.00 | 3.00 | 32.00 | 1.9259 | 674 |
| WS-5; 17% | 500 | 2.00 | 20.00 | 3.00 | 32.00 | 1.9259 | 963 |
| WS-3 | 1,650 | 2.00 | 10.00 | 2.60 | 20.40 | 1.1259 | 1,858 |
| WS-7 | 1,550 | 2.00 | 10.00 | 3.00 | 22.00 | 1.1852 | 1,837 |
| WS-9 | 1,435 | 2.50 | 20.00 | 3.00 | 35.00 | 2.5463 | 3,654 |
| WS-10 | 750 | 2.50 | 20.00 | 3.00 | 35.00 | 2.5463 | 1,910 |
| WS-11 | 1,050 | 2.50 | 20.00 | 3.00 | 35.00 | 2.5463 | 2,674 |
| Totals: | 7,285 | | | | | | 13,569 |

| Riprap | | Perimeter, | Area for | Riprap Vol. |
|---------|-----------|------------|------------|-------------|
| | Riprap | P | Geotextile | (CY) |
| | Thickness | (ft) | (excl. | |
| | (2xD50) | | anchor | |
| | (ft) | | trenches) | |
| | | | (sf) | |
| | 4.00 | 32.65 | 11,427 | 1,693 |
| | 3.00 | 32.65 | 16,325 | 1,814 |
| | 3.50 | 21.14 | 34,885 | 4,522 |
| | 4.00 | 22.65 | 35,106 | 5,201 |
| | 1.50 | 35.81 | 51,389 | 2,855 |
| | 4.00 | 35.81 | 26,859 | 3,979 |
| | 4.50 | 35.81 | 37,602 | 6,267 |
| Totals: | | | 213,593 | 26,331 |

Materials Needed:

Geotextile (SY incl. 15%

wastage): 27,292
Riprap (CY): 26,331
Excavation (CY): 13,569

1510

Costs:

| Material Costs: | Geotextile (SY): | \$1.77 | Riprap (CY): | \$31.50 | Excavation (CY): | \$0.00 |
|-----------------|------------------|--------|--------------|---------|------------------|--------|
| Labor Cost: | · | \$0.27 | | \$12.70 | • | \$2.46 |
| Equipment Cost: | · | \$0.00 | | \$14.65 | • | \$1.39 |
| Means Reference | 31 32 1916 | | 31 37 1310 | | 31 23 1642 0310 | |

0100

Loader Worksheet Cont'd Task # 4CH0 Page 2 of 2

Totals:

Geotextile (SY): \$55,676.62 Riprap (CY): \$1,549,570.74 Excavation (CY): \$52,241.11

Hours:

Geotextile (SY):
87.50 SY/HR
Riprap (CY):
7.75 CY/HR
Excavation (CY):
40.00 CY/HR
311.91
3,397.53
3,397.53

Total Post-Mining Channel Reconstruction hours: 4,048.67 Hours
Total Post-Mining Channel Reconstruction Cost: \$1,657,488

MOTOR GRADER WORK

| Task description: | Grade 11,750 ft of Terrace | e Channel | | |
|------------------------------|--|-------------------|-----------------------------|-----------------------------|
| e: Pikeview Quarry | Permit Action | n: <u>AM-04</u> | Pe | ermit/Job#: <u>M1977211</u> |
| PROJECT IDENTIFI | CATION | | | |
| Task #: 4CH1 | State: Colorado | 0 | Abbrev | iation: None |
| Date: 2/28/2020 User: TC1 | County: El Paso | | File | ename: M211-4CH1 |
| Agency or organ | nization name: DRMS | | | |
| HOURLY EQUIPME | NT COST | | | |
| Basic Machine | e: CAT 12M | | Horsepower: | 158 |
| Ripper Attachment | : | | Shift Basis: | 1 per day |
| | | | Data Source: | (CRG) |
| Cost Breakdown: | | | | |
| | | | Utilization % | |
| | rship Cost/Hour: | \$33.62 | NA 100 | |
| | ating Cost/Hour:rship Cost/Hour: | \$34.22 \$0.00 | 100 NA | |
| | ating Cost/Hour: | \$0.00 | NA | |
| | rator Cost/Hour: | \$45.39 | NA | |
| Total | Unit Cost/Hour: | \$113.22 | | |
| Total 1 | Fleet Cost/Hour: \$1 | 13.22 | | |
| MATERIAL QUANT | to be graded or ripped: 6.60 | | | acres |
| Source | e of estimated acreage: Exhi | bit G-1 (2/7/20) | ~11,750 ft of 24.5-f | t wide channels |
| HOURLY PRODUCT | TION . | | | |
| | Average Grader Speed: | 1.75 | mph | |
| | Selected Application: | Ditch build | ing/cleaning (0-3 m | iph) - 1.75 |
| | Selected Blade Angle: | 30 | degrees | |
| Width | Effective Blade Length: | 10.40 | feet | |
| | of blade overlap per pass: or ripping width per pass: | 8.40 | feet feet | |
| | Hourly Unit Production: | 1.7818 | acres/hour | • |
| Job Condition Correction | | | ite Altitude: <u>7200</u> f | |
| | Sourc | ce | | |
| Altitude Adj: | 1.00 (CAT I | HB) | | |
| Job Efficiency: | 0.85 (1sh/d, n | | | |
| Net Correction: | 0.8500 multipli | er | | |
| Ad | ljusted Hourly Unit Production | i: 1.5145 | acres/Hour | |
| | justed Hourly Fleet Production | | acres/Hour | |
| JOB TIME AND COS | <u>T</u> | | | |
| Fleet size: | Grader(s) | Total job time | 4.36 | Hours |
| Unit cost: \$74 | .76 per acre | Total job cos | : \$493 | |

TRUCK/LOADER TEAM WORK

| Task description: | Load/Ha | ul/Dump Lowe | r Borrow Area | Material | | |
|--|---------------------------------|-----------------------------|----------------------------|--------------------|-------------------|-----------------|
| Site: Pikeview Quarry | | Permit Act | ion: AM-04 | | Permit/Job#: | M1977211 |
| PROJECT IDENTI | FICATION | | | | | |
| Task #: 4E20 Date: 3/5/2020 User: TC1 | | State: Colora ounty: El Pas | | Abl | breviation: No M2 | one 211-4E20 |
| Agency or org | ganization name | e: DRMS | | | | |
| HOURLY EQUIPM | IENT COST | | | Shift ba | sis: 1 per day | |
| | | | Equipment Descr | iption | | |
| Truc | ck Loader Team | | | | | |
| Support | Equipment -Lo | | Г 980Н | | | |
| Support | | np Area: NA | | | | |
| Road Main | tenance –Motor | Grader: CA | Г 12М | | | |
| | -Wate | er Truck: Wat | ter Tanker, 5,000 | Gal. | | |
| Cost Breakdown: | Truck/Load | er Team | Support | Equipment | Maintens | ance Equipment |
| Cost Dicardown. | | Loader | Load Area | Dump Area | Motor | Water Truck |
| %Utilization-machine: | 100 | 100 | NA | NA | Grader 25 | 25 |
| Ownership cost/hour: | \$68.27 | \$52.71 | NA NA | NA NA | \$33.62 | \$27.40 |
| Operating cost/hour: | \$59.78 | \$61.51 | NA | NA | \$8.55 | \$10.00 |
| %Utilization-riper: | NA | 0 | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | \$0.00 | NA | NA | \$0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | NA | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$24.79 | \$35.93 | NA | NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$152.84 | \$150.14 | NA | NA | \$87.56 | \$37.39 |
| Number of Units: | 3 | 1 | 0 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$608.66 | Support: | \$0.00 | Maint: | \$124.95 |
| Total work team cost/ho | <u> </u> | | | | | |
| Initial volume: Loose volume: | 2,602,892 3,253,6 1 | CCY LCY | | factor: 1.250 | | |
| - | | | | | | _ |
| | e of estimated vestimated swell | | 0 3AR Resp Tbl Handbook | D-2w/25% swell; | Haul dist google | earth |
| | Iaterial Purchas | | | | | |
| | | al Cost: \$0.00 | | | | |
| HOURLY PRODU | ICTION | | | | | |
| | | | | | | |
| Truck Capacity: Truck Payload (weight) | Basis: | | | | | |
| Material wei | | | Pounds/LCY | | | |
| Descript | | osed rock - 25% | 6 Rock, 75% Ear Pounds | th (to achieve 259 | % swell) | |
| Rated Paylo Payload Capao | | | Pounds LCY | | | |
| | | | | | | |

Truck Bed (volume) Basis:

Struck Volume: 24.20 LCY
Heaped Volume: 31.40 LCY
Average Volume: 27.80 LCY
Adjusted Volume: 31.40 LCY

Final Truck Volume Based on Number of Loader Passes: 30.94 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity: 7.500 LCY (heaped)

Bucket Fill Factor: 0.825 Blasted rock - avg. blasted (75 - 90%) 0.825

Adjusted Capacity: 6.188 LCY

Job Condition Corrections:

Site Altitude (ft.): 7200 feet

| | Truck | Loader | Source |
|-----------------|-------|--------|----------|
| Altitude Adj: | 0.960 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.797 | 0.830 | |

Maneuver:

| Loading Tool Cycle Time: | Number of | Loading Tool Passes Requi | | 5 | passes |
|---|-----------|---------------------------|--------|---|--------|
| Excavators and Front Shovels: | | | Truck: | | _ |
| Machine Cycle Time vs. Job Conditi Selected Value within this Ba | _ | NA NA | | | |
| Track Loaders – Material Desc | | NA | | | |
| Cycle Time Elements (min.): | | | | | |

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

0.550 minutes

| Cycle Time Factors | | Factor (min.) | Source |
|--------------------|---|---------------|----------|
| Material: | Bank or broken material 0.04 | 0.040 | (Cat HB) |
| Stockpile: | No adjustment - factor not applicable 0.00 | 0.000 | (Cat HB) |
| Truck Ownership: | Common ownership of trucks and loaders - 0.04 | -0.040 | (Cat HB) |
| Operation: | Constant operation -0.04 | -0.040 | (Cat HB) |
| Dump Target: | Nominal target 0.00 | 0.000 | (Cat HB) |
| | Not Cycle Time Adjustment | 0.040 | minutes |

NA

Net Cycle Time Adjustment:

Adjusted Loader Cycle Time:
Net Load Time per Truck:

-0.040 minutes
minutes

2.140 minutes

Dump:

0.100

Truck Cycle Time:

Load:

NA

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 0.625 | Minutes |
|-------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 2.140 | Minutes | Adjusted for site altitude: | 2.140 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.042 | Minutes |

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

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

| L | [au] | D | | 140 |
|---|------|----|----|-----|
| г | ıau. | ΙK | Oυ | ue. |

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|-----------------------|-----------|------------------|---------------|-------------------|-------------------------|
| 1 | 2000.00 | 12.00 | 3.00 | 15.00 | 634 | 3.226 |

Haul Time: 3.226 minutes Return Route: Haul Distance Grade (%) Roll. Res Total Res Velocity Travel Seg# Time (fpm) (Ft) (%) (%) (min) 2000.00 3.00 -9.00 3706 -12.00 0.580

Return Time: 0.580 minutes
Total Truck Cycle Time: 7.613 minutes

Loading Tool unit

Production 671.34 LCY/Hour Adjusted for job efficiency: 557.21 LCY/Hour Truck Unit Production

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

Adjusted hourly truck team production: 607.15 LCY/Hour Adjusted single truck/loader team production: 557.21 LCY/Hour Adjusted multiple truck/loader team production: 557.21 LCY/Hour

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 5,839.11
 Hours

 Unit cost:
 \$1.317
 /LCY
 Total job cost:
 \$4,283,630

REVEGETATION WORK

| Task description: | Install erosion control bla | nkets on s | steep slope | es | | |
|----------------------|-----------------------------------|-----------------|-------------|--------------------|----------------------------|----------------------|
| Pikeview Quarry | Permit Action: AM-04 Permit/Job#: | | | #: <u>M1977211</u> | | |
| PROJECT IDENTIFIC | CATION | | | | | |
| Task #: 4EP0 | State: Colorado | 0 | | Abl | oreviation: | None |
| Date: 3/5/2020 | County: El Paso | - | | | | M211-4EP0 |
| User: TC1 | | | | | | |
| Agency or organ | nization name: DRMS | | | | | |
| FERTILIZING | | | | | | |
| Materials | | | T | | | |
| Description | | Units / Acre | Unit | Cos | t / Unit | Cost /Acre |
| | | icic | | • | | ¢ |
| | | | | \$ | | \$ |
| | | | | Tot | al Fertilizer Materials | |
| | | | | | Cost/Acre | \$0.00 |
| TILLING Description | | Total | Fertilizer | Application | n Cost/Acre | \$0.00 Cost /Acre |
| | | | | | | \$ |
| | | | ŗ | Fotal Tillin | g Cost/Acre | \$0.00 |
| SEEDING | | | | | | |
| | | | | Rate – | | |
| Seed Mix | | | | PLS | Seeds | Cost /Acre |
| | | | | LBS / | per SQ. FT | |
| | | | | Acre | | |
| | | | | | | \$ |
| | | Totals S | eed Mix | 0.00 | 0.00 | \$0.00 |
| Application | | | | | | |
| Description | | | | | | Cost /Acre |
| | | | | | | \$ |

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

MULCHING and MISCELLANEOUS

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---|-----------------|------|-------------|------------|
| Polyprop. mesh, staples Material (MEANS 31 25 14.16 0200) | 1.00 | ACRE | \$8,373.20 | \$8,373.20 |
| Total Mulch Materials Cost/Acre | | | | \$8,373.20 |

Application

| Description | Cost /Acre |
|---|------------|
| Polypropylene Mesh, 100 SY per Roll, 4' wide, Stapled (no material) (MEANS) | \$1,936.00 |
| | |
| Total Mulch Application Cost/Acre | \$1,936.00 |

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 52.6 Cost /Acre: \$10,309.20 Estimated Failure Rate: 0% Cost /Acre*: \$0.00

*Selected Replanting Work Items: NONE

Initial Job Cost: \$542,263.92

Reseeding Job Cost: \$0.00

Total Job Cost: Job Hours: \$542,264

100.00

REVEGETATION WORK

| : Pikeview Quarry | Permit Action: AM-04 Permit/Job#: | | | : <u>M1977211</u> | | |
|------------------------|-----------------------------------|---------------|------------|-------------------|----------------|-------------------|
| PROJECT IDENTIFICAT | <u>ION</u> | | | | | |
| Task #: 4EP1 3/4/2020 | | orado Paso | | Ab | | None M211-4EP1 |
| User: 3/4/2020 TC1 | County: El I | raso | | | riieliailie: | W1211-4EP1 |
| Agency or organization | on name: DRMS | | | | | |
| | | | | | | |
| <u>FERTILIZING</u> | | | | | | |
| Materials | | Units / | | | | |
| Description | | Acre | Unit | Cos | st / Unit | Cost /Acre |
| | | | | \$ | | \$ |
| | | | | To | tal Fertilizer | |
| | | | | | Materials | 40.00 |
| | | | | | Cost/Acre | \$0.00 |
| Application | | | | | | |
| | | | | | | Cost /A sms |
| Description | | | | | | Cost /Acre |
| | | | | | | \$ |
| | | Total | Fertilizer | Application | on Cost/Acre | \$0.00 |
| | | | | | | φ σ σ σ |
| <u> </u> | | | | | | |
| Description | | | | | | Cost /Acre |
| Description | | | | | | \$ |
| | | | | | | Ф |
| | | | , | Total Tillir | ng Cost/Acre | \$0.00 |
| | | | | | | |
| SEEDING | | | | T | | |
| Seed Mix | | | | Rate – PLS | Seeds | Cost /Acre |
| Securitary . | | | | LBS / | per SQ. FT | |
| | | | | Acre | LI | |
| | | | | | | \$ |
| | | Totals (| Seed Mix | 0.00 | 0.00 | #0.00 |
| | | 1 Utais k | Jeeu Mila | 0.00 | | \$0.00 |
| Application | | | | | | |
| Description | | | | | | Cost /Acre |
| | | | | | | _ |

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

MULCHING and MISCELLANEOUS

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---|-----------------|------|-------------|------------|
| 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 |
| Power mulcher (MEANS 32 91 13.16 0350) | | \$95.83 |
| | | |
| | Total Mulch Application Cost/Acre | \$166.00 |

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:
 86.5
 Cost /Acre:
 \$756.00

 Estimated Failure Rate:
 0%
 Cost /Acre*:
 \$0.00

*Selected Replanting Work Items: NONE

Initial Job Cost: \$65,394.00

Reseeding Job Cost: \$0.00

Total Job Cost: Job Hours: \$90.00

REVEGETATION WORK

| Task description: | ask description: Revegetate 32.18 USFS acres (excl. trees & mulch) | | | | | | |
|------------------------------|--|----------------------|--------------|----------------------|---|-------------------|--|
| Pikeview Quarry | Permit A | Permit Action: AM-04 | | | Permit/Job# | : <u>M1977211</u> | |
| ROJECT IDENTI | FICATION | | | | | | |
| Task #: 4GF0 | State: Col | orado | | Abh | oreviation: | None | |
| Date: $\frac{4310}{2/28/20}$ | | Paso | | _ | | M211-4GF0 | |
| User: TC1 | | | | = | _ | | |
| Agency or or | ganization name: DRMS | | | | | | |
| ERTILIZING | | | | | | | |
| <u> Iaterials</u> | | | | | | | |
| Description | | Units / Acre | Unit | Cost | t / Unit | Cost /Acre | |
| | | | | \$ | | \$ | |
| | | | | Tota | al Fertilizer Materials Cost/Acre | \$0.00 | |
| Description | | | | | | Cost /Acre | |
| | | Total | Fertilizer A | pplication | n Cost/Acre | \$0.00 | |
| <u>TILLING</u> | | | | | | | |
| Description | | | | | | Cost /Acre | |
| Chisel plowing {DN | MG} | | | | | \$94.63 | |
| | | | A | 4al T211 | ~ C ~ ~ 4/ 4 | | |
| | | | To | otai Tillinį | g Cost/Acre | \$94.63 | |
| <u>EEDING</u> | | | | | | | |
| | | | | Rate – | | | |
| Seed Mix | | | | PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre | |
| Arizona Fescue - Ro | edondo | | | 1.60 | 18.37 | \$14.80 | |
| Blue Grama - Nativ | re | | | 0.20 | 3.26 | \$2.75 | |

Indian Ricegrass - Native

Little Bluestem - Native

Sideoats Grama - Vaughn

Bottlebrush Squirreltail

Rocky Mountain Fescue

Slender Wheatgrass - San Luis

Canada Wildrye

Nodding Brome

\$19.50

\$73.71

\$21.71

\$8.50

\$11.73

\$74.64

\$22.95

\$2.90

3.00

6.80

1.60

1.00

1.40

4.60

0.40

5.40

9.71

9.55

2.49

4.60

20.28

6.43

19.71

17.95

| Thickspike Wheatgrass - Critana | 4.60 | 16.26 | \$31.63 |
|---------------------------------|-------|--------|------------|
| Needle and Thread | 3.80 | 10.03 | \$159.03 |
| Needlegrass, Green - Lodorm | 1.40 | 5.82 | \$16.49 |
| Parry's Oatgrass | 4.80 | 9.92 | \$105.60 |
| Sunflower (or daisy), Oxe-eye | 15.80 | 44.04 | \$537.20 |
| Totals Seed Mix | 56.40 | 198.41 | \$1,103.11 |

Application

| Description | | Cost /Acre |
|--|--------------------------------|------------|
| Hydro seeding (MEANS 32 92 19.14 0200) | | \$947.43 |
| | | |
| То | tal Seed Application Cost/Acre | \$947.43 |

MULCHING and MISCELLANEOUS

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|--|-----------------|------|-------------|------------|
| Tackifier, >=10 acres {Materials Only} | 1.00 | ACRE | \$453.02 | \$453.02 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$453.02 |

Application

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

NURSERY STOCK PLANTING

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

JOB TIME AND COST

 No. of Acres:
 32.18
 Cost /Acre:
 \$2,598.19

 Estimated Failure Rate:
 35%
 Cost /Acre*:
 \$2,050.54

*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$83,609.75

Reseeding Job Cost: \$23,095.23

Total Job Cost: \$106,705

Job Hours: 90.00

REVEGETATION WORK

| T | ask description: | Revegetate 106.92 | 2 private acres (ex | kcl. trees & 1 | mulch) | | |
|--------|-------------------------|-------------------|-----------------------------------|----------------|--------------------------------|--|-------------------|
| _ | Pikeview Quarry | Perr | Permit Action: AM-04 Permit/Job#: | | | | : <u>M1977211</u> |
| ŀ | ROJECT IDENTIFIC | <u>CATION</u> | | | | | |
| | Task #: 4GP0 | State: | Colorado | | Ab | breviation: | None |
| | Date: 2/28/2020 | County: | El Paso | | _ | | M211-4GP0 |
| | User: TC1 | | | | _ | | |
| | Agency or organi | ization name:DRM | MS | | | | |
| ŀ | <u>ERTILIZING</u> | | | | | | |
| /Ia | aterials | | | | | | |
| | Description | | Units / Acre | Unit | Cos | t / Unit | Cost /Acre |
| | | | | | \$ | | \$ |
| | | | | | Tot | tal Fertilizer Materials Cost/Acre | \$0.00 |
| ۱ ا | oplication Description | | | | | | Cost /Acre |
| | | | | | | | \$ |
| | | | Total | Fertilizer A | Applicatio | on Cost/Acre | \$0.00 |
| ľ | ILLING | | | | | | |
| | Description | | | | | | Cost /Acre |
| ľ | Chisel plowing {DMG} | } | | | | | \$94.63 |
| | | | | To | otal Tillin | g Cost/Acre | \$94.63 |
| SE | EEDING | | | | | | |
| Г | | | | | | | |
| | | | | | Rate – | | |
| | Seed Mix | | | | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |

| 11010 | | |
|-------|--|--|
| 1.00 | 16.32 | \$15.98 |
| 2.00 | 9.18 | \$8.65 |
| 2.00 | 11.94 | \$27.13 |
| 4.00 | 13.13 | \$33.50 |
| 4.00 | 16.07 | \$25.92 |
| 8.00 | 17.08 | \$22.40 |
| 2.00 | 9.64 | \$5.10 |
| 8.00 | 16.53 | \$29.20 |
| 4.00 | 5.42 | \$147.22 |
| 8.00 | 20.20 | \$52.00 |
| | 2.00 2.00 4.00 4.00 8.00 2.00 8.00 4.00 | 2.00 9.18 2.00 11.94 4.00 13.13 4.00 16.07 8.00 17.08 2.00 9.64 8.00 16.53 4.00 5.42 |

| Rabbitbrush, Rubber | 2.00 | 29.80 | \$128.59 |
|-----------------------------|-------|--------|----------|
| Needlegrass, Green - Lodorm | 2.00 | 8.31 | \$23.55 |
| | | | |
| Totals Seed Mix | 47.00 | 173.62 | \$519.24 |

Application

| Description | | Cost /Acre |
|--|---|------------|
| Hydro seeding (MEANS 32 92 19.14 0200) | | \$947.43 |
| | | |
| | Total Seed Application Cost/Acre | \$947.43 |

MULCHING and MISCELLANEOUS

Materials

| Description Taskifing 10 ages (Materials Only) | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|--|-----------------|------|-------------|------------|
| Tackifier, >=10 acres {Materials Only} | 1.00 | ACRE | \$453.02 | \$453.02 |
| Total Mulch Materials Cost/Acre | | | | \$453.02 |

Application

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

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|-------------|--------------|---------------|------------------|---------------------------|------------|
| | | | | | \$ |
| | | | | | |
| | | Totals 2 | Nursery Stoc | k Cost / Acre | \$0.00 |

JOB TIME AND COST

No. of Acres: 106.92 Cost /Acre: \$2,014.32
Estimated Failure Rate: 35% Cost /Acre*: \$1,466.67

*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$215,371.09

Reseeding Job Cost: \$54,885.72

Total Job Cost: \$270,257

Job Hours: 300.00

EQUIPMENT MOBILIZATION/DEMOBILIZATION

| Task description: | MOB / DEMOB | | | | |
|---|--|------------|---|-----------------------|--|
| ite: Pikeview Quarry | ikeview Quarry Permit Action: AM-04 | | | b#: <u>M1977211</u> | |
| PROJECT IDENTIFICAT | <u> TION</u> | | | | |
| Task #:4M00 | State: C | Colorado | Abbreviation: | None | |
| Date: 3/5/2020 User: TC1 | County: E | l Paso | Filename: | M211-4M00 | |
| Agency or organizati EQUIPMENT TRANSPO | | S | | | |
| | | | | 1 per day CRG Data | |
| Truck Tractor De | scription: GENI | | AY TRUCK TRACTOR, 6X4, 400 HP (2ND HALF, 2006) | DIESEL POWERED, | |
| Truck Trailer De | Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER (25T, 50T, AND 100T) | | | | |
| Cost Breakdown: | | | | | |
| Available Rig Capacities | 0-25 Tons | 26-50 Tons | 51+ Tons | | |
| Ownership Cost/Hour: | \$17.20 | \$29.63 | \$38.69 | | |
| Operating Cost/Hour: | \$26.56 | \$47.02 | \$55.69 | | |

\$23.63

\$23.53

\$123.81

\$23.63

\$23.53

\$141.54

NON ROADABLE EQUIPMENT:

Total Unit Cost/Hour:

Operator Cost/Hour:

Helper Cost/Hour:

\$23.63

\$0.00

\$67.39

| 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 D9T - 9SU | 60.01 | \$121.49 | \$141.54 | 2 | \$526.06 | \$283.08 | \$250.00 |
| Cat 365C L 13'-7" | 77.56 | \$121.37 | \$141.54 | 1 | \$262.91 | \$141.54 | \$250.00 |
| Stick | | | | | | | |
| CAT 980H | 33.12 | \$52.71 | \$123.81 | 1 | \$176.52 | \$123.81 | \$250.00 |
| Cat 740 | 36.49 | \$68.27 | \$123.81 | 4 | \$768.32 | \$495.24 | \$1,000.00 |
| ATLAS COPCO | 0.00 | \$70.87 | \$67.39 | 1 | \$138.26 | \$67.39 | \$250.00 |
| ROC D7-11,4.0 in. | | | | | | | |
| Power Mulcher | 6.00 | \$9.74 | \$67.39 | 1 | \$77.13 | \$67.39 | \$250.00 |
| (Bowie LD-90) | | | | | | | |
| CAT 12M | 16.01 | \$33.62 | \$67.39 | 1 | \$101.01 | \$67.39 | \$250.00 |
| Hydroseeder with | 28.00 | \$23.59 | \$123.81 | 1 | \$147.40 | \$123.81 | \$250.00 |
| Tractor | | | | | | | |

Subtotals: \$2,197.61 \$1,369.65 \$2,750.00

ROADABLE EQUIPMENT:

| Machine Description | Total Cost/hr/ unit | Fleet Size | Haul Trip Cost/hr/ fleet | Return Trip Cost/hr/ fleet |
|--------------------------------|------------------------|------------|-----------------------------|-------------------------------|
| ANFO Bulk Delivery Truck | \$211.13 | 1 | \$211.13 | \$211.13 |
| Cap Delivery Truck | \$28.12 | 1 | \$28.12 | \$28.12 |
| Light Duty Pickup, 4x4, 3/4 T. | \$12.96 | 2 | \$25.92 | \$25.92 |
| Water Tanker, 5,000 Gal. | \$67.39 | 1 | \$67.39 | \$67.39 |

| Subtotals: | \$332,56 | \$332.56 |
|------------|-------------|-------------|
| ounnoiais. | 10-7-74-211 | 10-7-74-711 |

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: COLORADO SPRINGS
Total one-way travel distance: 10.00 miles
Average Travel Speed: 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:

\$33,654.95

\$166.28

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): | 3.00 | NA |
| Unloading Time (Hours): | 3.00 | NA |
| Subtotals: | 6.50 | 0.50 |
| | | |

JOB TIME AND COST

Total job cost: 13.00 Hours

Total job cost: \$33,821

TRUCK/LOADER TEAM WORK

| Task description: | Load/Ha | ul/Dump 2500 t | tons of gravel | | | |
|---|--|-------------------------------------|----------------------|------------------------|-----------------------------|------------------------------|
| Site: Pikeview Quarry | 7 | Permit Act | ion: AM-04 | | Permit/Job#: | M1977211 |
| PROJECT IDENT | TIFICATION | | | | | |
| Task #: 4RD2 Date: 3/5/20 User: TC1 Agency or or | | State: Colora ounty: El Pas e: DRMS | | Abi | breviation: No Filename: M2 | ne 111-4RD2 |
| HOURLY EQUIP | | | | Shift ba | sis: 1 per day | |
| | | H | Equipment Descri | | | |
| Tr | ruck Loader Team | -Truck: Cat | 740 | F | | |
| Cunno | rt Equipment -Lo | | Г 980Н | | | |
| Suppo | | np Area: NA | | | | |
| Road Ma | intenance –Motor | | Г 12М | | | |
| - | -Wate | er Truck: Wat | ter Tanker, 5,000 | Gal. | | |
| Cost Breakdown: | Truck/Load Truck | er Team Loader | Support Load Area | Equipment Dump Area | Maintena Motor Grader | nce Equipment Water Truck |
| %Utilization-machine: | 100 | 100 | NA | NA | 100 | 25 |
| Ownership cost/hour: | \$68.27 | \$52.71 | NA | NA | \$33.62 | \$27.40 |
| Operating cost/hour: | \$59.78 | \$61.51 | NA | NA | \$34.22 | \$10.00 |
| %Utilization-riper: | NA | 0 | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | \$0.00 | NA | NA | \$0.00 | \$0.00 |
| Ripper op. cost/hour: | NA | \$0.00 | NA | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$24.79 | \$35.93 | NA | NA | \$45.39 | \$0.00 |
| Unit Subtotals: | \$152.84 | \$150.14 | NA | NA | \$113.22 | \$37.39 |
| Number of Units: | 3 | 1 | 0 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$608.66 | Support: | \$0.00 | Maint: | \$150.61 |
| Total work team cost | /hour: \$759.27 | | | | | |
| MATERIAL QUA | NTITIES | | | | | |
| Initial volume: Loose volume: | 1,961 1,961 | CCY LCY | | factor: 1.000 | | |
| | rce of estimated v of estimated swell Material Purchas Tota | factor: Cat H | Handbook | Haul distance W | ksht#3 | |
| HOURLY PROI | <u>OUCTION</u> | | | | | |
| Truck Capacity: | | | | | | |
| Truck Payload (weigh Material w | reight: 2,550 | D | Pounds/LCY | • | | |
| Descri Rated Pay | | Dry | Pounds | | | |
| Payload Cap | | | LCY | | | |

Truck Bed (volume) Basis: Struck Volume: 24.20 **LCY** Heaped Volume: 31.40 **LCY** 27.80 Average Volume: LCY Adjusted Volume: 31.40 LCY Final Truck Volume Based on Number of Loader Passes: 26.25 LCY Loading Tool Capacity Bucket Size Class: NA Rated Capacity: 7.500 LCY (heaped) Bucket Fill Factor: 0.875 Loose material - 1/2" to 3/4" (85 - 90%) 0.875 Adjusted Capacity: 6.563 LCY **Job Condition Corrections:** Site Altitude (ft.): 7200 feet Loader **Truck** Source 1.000 Altitude Adj: 0.960 (CAT HB) Job Efficiency: 0.830 0.830 (CAT HB) Net Correction: 0.797 0.830 **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes Truck: Excavators and Front Shovels: Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.550 maneuver):

| Cycle Time Factors | | Factor (min.) | Source |
|--------------------|---|---------------|----------|
| Material: | Bank or broken material 0.04 | 0.040 | (Cat HB) |
| Stockpile: | No adjustment - factor not applicable 0.00 | 0.000 | (Cat HB) |
| Truck Ownership: | Common ownership of trucks and loaders - 0.04 | -0.040 | (Cat HB) |
| Operation: | Constant operation -0.04 | -0.040 | (Cat HB) |
| Dump Target: | Nominal target 0.00 | 0.000 | (Cat HB) |
| | Net Cycle Time Adjustment: | -0.040 | minutes |
| | | | |

Adjusted Loader Cycle Time:
Net Load Time per Truck:

0.510

minutes

minutes

1.630

Truck Cycle Time:

| Truck Exchange Time: | 0.60 | Minutes | Adjusted for site altitude: | 0.625 | Minutes |
|-------------------------------|-------|---------|-----------------------------|-------|---------|
| Truck Load Time: | 1.630 | Minutes | Adjusted for site altitude: | 1.630 | Minutes |
| Truck Maneuver and Dump Time: | 1.00 | Minutes | Adjusted for site altitude: | 1.042 | Minutes |

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

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

| TT 1 | D . |
|------|--------|
| Hanl | Route: |
| Haui | NOUIC. |

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|-----------------------|-----------|------------------|---------------|-------------------|-------------------------|
| 1 | 2000.00 | 12.00 | 3.00 | 15.00 | 634 | 3.226 |

Haul Time: 3.226 minutes Return Route: Haul Distance Grade (%) Roll. Res Total Res Velocity Travel Seg# Time (fpm) (Ft) (%) (%) (min) 2000.00 3.00 -9.00 3706 -12.00 0.580

Return Time: 0.580 minutes
Total Truck Cycle Time: 7.103 minutes

Loading Tool unit

Production 698.45 LCY/Hour Adjusted for job efficiency: 579.71 LCY/Hour Truck Unit Production 221.75 LCY/Hour Adjusted for job efficiency: 184.05 LCY/Hour

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

Adjusted hourly truck team production: 552.15 LCY/Hour Adjusted single truck/loader team production: 552.15 LCY/Hour Adjusted multiple truck/loader team production: 552.15 LCY/Hour

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 3.55
 Hours

 Unit cost:
 \$1.375
 /LCY
 Total job cost:
 \$39,465

REVEGETATION WORK

| Task description: | Private area to be plante | ed w/ shrub | os | | | |
|------------------------------|----------------------------|-------------|------------|--------------|---------------|--------------------|
| Pikeview Quarry | Permit Acti | ion: AM-0 | 04 | | Permit/Job# | #: <u>M1977211</u> |
| PROJECT IDENTIFI | CATION | | | | | |
| Task #: _ 4SP0 | State: Colora | | | | | None |
| Date: 2/28/2020 User: TC1 | County: El Paso | 0 | | _ | Filename: | M211-4SP0 |
| · | nization name: DRMS | | | | | |
| Agency of organ | iization name. <u>DRWS</u> | | | | | |
| <u>FERTILIZING</u> | | | | | | |
| Materials | | Units / | | | | |
| Description | | Acre | Unit | Cos | t / Unit | Cost /Acre |
| | | | | \$ | | \$ |
| | | | | Tot | al Fertilizer | |
| | | | | | Materials | ΦΩ ΩΩ |
| | | | | | Cost/Acre | \$0.00 |
| Application Description | | | | | | Cost /Acre |
| Description | | | | | | \$ |
| | | | | | | Ψ |
| | | Total | Fertilizer | Application | n Cost/Acre | \$0.00 |
| TILLING | | | | | | |
| Description | | | | | | Cost /Acre |
| | | | | | | \$ |
| | | | ŗ | Fotal Tillin | g Cost/Acre | \$0.00 |
| SEEDING | | | | | | |
| <u> </u> | | | | Rate – | | 1 |
| Seed Mix | | | | PLS | Seeds | Cost /Acre |
| | | | | LBS / | per SQ. FT | |
| | | | | Acre | | |
| | | | | | | \$ |
| | | Totals S | Seed Mix | 0.00 | 0.00 | \$0.00 |
| Application | | | | <u>I</u> | 1 | T *** * |
| Description | | | | | | Cost /Acre |
| | | | | | | \$ |
| i e | | | | | | Ψ |

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

MULCHING and MISCELLANEOUS

Materials

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

Application

| Description | Cost /Acre |
|-----------------------------------|------------|
| | \$ |
| Total Mulch Application Cost/Acre | 40.00 |
| Total Mulch Application Cost/Acre | \$0.00 |

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|--------------------|--------------|--------------------------------------|------------------|---------------------------|------------|
| Mahogany, Mountain | 168 | Tubling, 3 cu. in. container (MEANS) | \$1.09 | \$0.00 | \$183.12 |
| Oak, Gambel's | 168 | Tubling, 3 cu. in. container (MEANS) | \$1.09 | \$0.00 | \$183.12 |
| Rose, Wood's | 200 | Tubling, 3 cu. in. container (MEANS) | \$1.09 | \$0.00 | \$218.00 |
| | | Tota | ls Nursery Stoo | ek Cost / Acre | \$584.24 |

JOB TIME AND COST

No. of Acres: 69.4 Cost /Acre: \$584.24 Estimated Failure Rate: 30% Cost /Acre*: \$584.24

*Selected Replanting Work Items: NURSERY

Initial Job Cost: \$40,546.26

Reseeding Job Cost: \$12,163.88

Total Job Cost: \$52,710

Job Hours: 40.00

REVEGETATION WORK

| Task description: | USFS area to be planted w/ trees & water | ed sep. | | | |
|--------------------|--|----------------|------------------------------|------------|--|
| : Pikeview Quarry | Permit Action: AM-04 | | Permit/Job#: M1977 | | |
| PROJECT IDENTIFIC | CATION | | | | |
| Task #: 4TF0 | State: Colorado | A | bbreviation: | None | |
| Date: 3/4/2020 | County: El Paso | | Filename: | M211-4TF0 | |
| User: 12:31:24 P | <u> </u> | | - | | |
| | institution and DDMS | | | | |
| Agency or organ | ization name: DRMS | | | | |
| FERTILIZING | | | | | |
| Materials | | | | | |
| Description | Units / Acre Unit | C | ost / Unit | Cost /Acre | |
| 2 05011-p11011 | nere sin | \$ | | \$ | |
| | | | | | |
| | | T | otal Fertilizer Materials | | |
| | | | Cost/Acre | | |
| | | | | \$ | |
| | | | | | |
| | Total Fertiliz | zer Applicat | ion Cost/Acre | \$0.00 | |
| <u> </u> | | | | | |
| Description | | | | Cost /Acre | |
| | | | | \$ | |
| | | | | Ψ | |
| | | Total Till | ing Cost/Acre | \$0.00 | |
| REEDING | | | | | |
| SEEDING | | | | | |
| Seed Mix | | Rate – PLS | Seeds | Cost /Acre | |
| | | LBS / | per SQ. FT | | |
| | | Acre | F I | | |
| | | | | \$ | |
| | m | 0.00 | 0.00 | | |
| | Totals Seed Mi | IX 0.00 | 0.00 | \$0.00 | |
| Application | Totals Seed Mi | ix 0.00 | 0.00 | \$0.00 | |
| <u> </u> | | | | Cost /Acre | |

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

MULCHING and MISCELLANEOUS

Materials

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

Application

| Description | Cost /Acre |
|-----------------------------------|------------|
| | \$ |
| Total Mulch Application Cost/Agra | 40.00 |
| Total Mulch Application Cost/Acre | \$0.00 |

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|-----------------|--------------|--|------------------|---------------------------|------------|
| Fir, Douglas | 22 | Bare root seedling, 11-16 inch ht. (MEANS) | \$2.31 | \$0.00 | \$50.82 |
| Pine, Lodgepole | 21 | Bare root seedling, 11-16 inch ht. (MEANS) | \$2.31 | \$0.00 | \$48.51 |
| | | Totals | Nursery Stoo | ek Cost / Acre | \$99.33 |

JOB TIME AND COST

 No. of Acres:
 32.18
 Cost /Acre:
 \$99.33

 Estimated Failure Rate:
 45%
 Cost /Acre*:
 \$99.33

*Selected Replanting Work Items: NURSERY

Initial Job Cost: \$3,196.44

Reseeding Job Cost: \$1,438.40

Total Job Cost: Job Hours: 20.00

REVEGETATION WORK

| Task description: | k description: Private area to be planted w/ trees & watered sep. | | | | |
|----------------------|---|--------------------------------|------------------------|--------------------|--|
| Pikeview Quarry | Permit Action: AM-04 | | Permit/Job# | #: <u>M1977211</u> | |
| PROJECT IDENTIFI | CATION | | | | |
| Task #: 4TP0 | State: Colorado | A | Abbreviation: | None | |
| Date: 2/28/2020 | County: El Paso | | Filename: | M211-4TP0 | |
| User: TC1 | | | | | |
| Agency or organ | nization name: DRMS | | | | |
| FERTILIZING | | | | | |
| Materials | | | | | |
| Description | Units / Acre U | nit C | ost / Unit | Cost /Acre | |
| | | \$ | | \$ | |
| | | | otal Fertilizer | Ψ | |
| | | 1 | Materials | | |
| | | | Cost/Acre | \$0.00 | |
| TILLING Description | Total Fer | tilizer Applicat | ion Cost/Acre | \$0.00 Cost /Acre | |
| | | Total Till | ing Cost/Acre | \$0.00 | |
| | | | | ψυ•υυ | |
| SEEDING | | | | | |
| Seed Mix | | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre | |
| | | | | \$ | |
| | Totals Seed | Mix 0.00 | 0.00 | \$0.00 | |
| Application | | | | | |
| Description | | | | Cost /Acre | |
| | | | | \$ | |

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

MULCHING and MISCELLANEOUS

Materials

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

Application

| Description | Cost /Acre |
|-----------------------------------|------------|
| | \$ |
| Total Mulch Application Cost/Acre | 40.00 |
| Total Mulch Application Cost/Acre | \$0.00 |

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|----------------|-----------------|--|------------------|---------------------------|------------|
| Juniper, Rocky | 30 | Bare root seedling, 11-16 inch ht. | \$2.31 | \$0.00 | \$69.30 |
| Mountain | | (MEANS) | | | |
| Pine, Pinyon | 30 | Bare root seedling, 11-16 inch ht. (MEANS) | \$2.31 | \$0.00 | \$69.30 |
| | \$138.60 | | | | |

JOB TIME AND COST

 No. of Acres:
 37.52
 Cost /Acre:
 \$138.60

 Estimated Failure Rate:
 45%
 Cost /Acre*:
 \$138.60

*Selected Replanting Work Items: NURSERY

Initial Job Cost: \$5,200.27

Reseeding Job Cost: \$2,340.12

Total Job Cost: Job Hours: 25.00

TRUCK/LOADER TEAM WORK

| Site: Pikeview Quarr | ·y | Perm | it Acti | ion: AM-04 | | Permit/Job#: | M1977211 | |
|------------------------|-------------------------|-------------|---------|--------------------|-------------------|--------------------|----------------|--|
| PROJECT IDEN | <u>TIFICATION</u> | | | | | | | |
| Task #: 4TS1 | | State: | Colora | ıdo | Abl | Abbreviation: None | | |
| Date: 2/28/ | | | El Pas | 0 | | | 211-4TS1 | |
| User: TC1 | | | | | | | | |
| Agency or | organization nan | ne: DRM | 1S | | | | | |
| HOURLY EQUI | PMENT COST | • - | | | Shift ba | sis: 1 per day | | |
| | | | E | Equipment Descri | ption | | | |
| T | ruck Loader Tea | m -Truck: | Cat | | • | | | |
| | | -Loader: | | Г 980Н | | | | |
| Suppo | ort Equipment -L | | NA | D9T - 9SU | | | | |
| Road Ma | aintenance –Moto | mp Area: | | D91 - 930 Γ 12M | | | | |
| TOUG IVI | | ter Truck: | _ | er Tanker, 5,000 | Gal. | | | |
| | | | | | | | | |
| Cost Breakdown: | Truck/Loa | | | | Equipment | | ance Equipment | |
| | Truck | Loader | | Load Area | Dump Area | Motor Grader | Water Truck | |
| Utilization-machine: | 100 | | 100 | NA | 100 | 25 | 25 | |
| wnership cost/hour: | \$68.27 | \$52 | 2.71 | NA | \$121.49 | \$33.62 | \$27.40 | |
| Operating cost/hour: | \$59.78 | \$6 | 1.51 | NA | \$105.84 | \$8.55 | \$10.00 | |
| %Utilization-riper: | NA | | 0 | NA | NA | NA | NA | |
| pper own. cost/hour: | NA | | 0.00 | NA | \$0.00 | \$0.00 | \$0.00 | |
| Ripper op. cost/hour: | NA | | 0.00 | NA | \$0.00 | \$0.00 | \$0.00 | |
| Operator cost/hour: | \$24.79 | | 5.93 | NA | \$39.98 | \$45.39 | \$0.00 | |
| Unit Subtotals: | \$152.84 | \$150 | 0.14 | NA | \$267.31 | \$87.56 | \$37.39 | |
| Number of Units: | 2 | | 1 | 0 | 1 | 1 | 1 | |
| Group Subtotals: | Work: | \$455.82 | | Support: | \$267.31 | Maint: | \$124.95 | |
| Total work team cos | t/hour: \$848.08 | | | | | | | |
| MATERIAL QUA | <u>ANTITIES</u> | | | | | | | |
| Initial volume | : 15,577 | | CCY | Swell | factor: 1.000 | | | |
| Loose volume | : 15,57 | 7 | LCY | | | | | |
| Sou | urce of estimated | volume: | 6 in c | over 19.31 Ac; Ha | aul distance from | Google Earth | | |
| Source | of estimated swe | ll factor: | | Iandbook | | <u> </u> | | |
| | Material Purcha | _ | \$0.00 | | | | | |
| | To | tal Cost: _ | \$0.00 |) | | | | |
| HOURLY PRO | DUCTION | | | | | | | |
| Truck Capacity: | | | | | | | | |
| Truck Payload (weig | | | | | | | | |
| Material v | | | | Pounds/LCY | • | | | |
| Descr | ription: Top So |)1l | | | | | | |

Pounds

LCY

Rated Payload:

Payload Capacity:

87,000

54.38

| | | | | - | |
|-------|-----|-------|---------------------|-------|----|
| Truck | Rad | (3701 | 111110) | Rocio | ٠. |
| LIUCK | DCU | vv | $u_{111} \subset I$ | Dasis | ٦. |

Struck Volume: 24.20 **LCY** Heaped Volume: 31.40 **LCY** 27.80 Average Volume: LCY Adjusted Volume: 31.40 LCY

> Final Truck Volume Based on Number of Loader Passes: LCY 24.75

Loading Tool Capacity

Bucket Size Class: NA

| Rated Capacity: | 7.500 | LCY (heaped) |
|---------------------|-------|---|
| Bucket Fill Factor: | 1.100 | Other - rock/dirt mixtures (100-120%) 1.100 |
| Adjusted Capacity: | 8.250 | LCY |

Job Condition Corrections:

Site Altitude (ft.): 7200 feet

| | Truck | Loader | Source |
|-----------------|-------|--------|----------|
| Altitude Adj: | 0.960 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.797 | 0.830 | |

| Loading Tool Cycle Time: | Number of Loading Tool Passes Required to Fill | 2 | passes |
|---------------------------------|--|---|--------|
| Excavators and Front Shovels: | Truck: | | |
| Excavators and Front Shovers. | | | |

Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating:

Track Loaders - Material Description:

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.550 maneuver):

| Cycle Time Factors | | Factor (min.) | Source |
|--------------------|---|---------------|----------|
| Material: | Bank or broken material 0.04 | 0.040 | (Cat HB) |
| Stockpile: | No adjustment - factor not applicable 0.00 | 0.000 | (Cat HB) |
| Truck Ownership: | Common ownership of trucks and loaders - 0.04 | -0.040 | (Cat HB) |
| Operation: | Constant operation -0.04 | -0.040 | (Cat HB) |
| Dump Target: | Nominal target 0.00 | 0.000 | (Cat HB) |

Net Cycle Time Adjustment: -0.040minutes Adjusted Loader Cycle Time: 0.510 minutes Net Load Time per Truck: 1.120 minutes

Truck Cycle Time:

Truck Exchange Time: 0.60 Minutes Adjusted for site altitude: 0.625 Minutes 1.120 Truck Load Time: Minutes Adjusted for site altitude: 1.120 Minutes 1.00 1.042 Truck Maneuver and Dump Minutes Adjusted for site altitude: Minutes Time:

Truck Travel (Haul & Return) Time:

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

maintained 3.0

| T | โลบ | 1 D | _ | | ١., |
|---|-----|-----|---|---|-----|
| | เลแ | 1 1 | | ш | Ю. |

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|-----------------------|-----------|------------------|---------------|-------------------|-------------------------|
| 1 | 1200.00 | 5.00 | 3.00 | 8.00 | 1123 | 1.190 |

Haul Time: **1.190** minutes Return Route: Haul Distance Grade (%) Roll. Res Total Res Velocity Travel Seg# Time (fpm) (Ft) (%) (%) (min) 1200.00 3.00 -2.00 3706 -5.00 0.377

Return Time: 0.377 minutes
Total Truck Cycle Time: 4.354 minutes

Loading Tool unit

Production 851.00 LCY/Hour Adjusted for job efficiency: 706.33 LCY/Hour Truck Unit Production

____341.09 LCY/Hour Adjusted for job efficiency: ____283.11 LCY/Hour

Optimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 566.21 LCY/Hour Adjusted single truck/loader team production: 566.21 LCY/Hour Adjusted multiple truck/loader team production: 566.21 LCY/Hour

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 27.51
 Hours

 Unit cost:
 \$1.498
 /LCY
 Total job cost:
 \$23,331

TRUCK/LOADER TEAM WORK

| Task description: | | psoil in priva | | | ıs stockpiles | Downit/I-1-# | M1077211 |
|---|-------------------------|----------------|---------------|------------------|---------------------|----------------|----------------------|
| Site: Pikeview Quarry | 7 | Permit . | Action: | AM-04 | | Permit/Job#: _ | M19//211 |
| PROJECT IDENT | <u> TIFICATION</u> | | | | | | |
| Task #: 4TS2 | | | lorado | | Abl | oreviation: No | |
| Date: 2/28/2 User: TC1 | 2020 | County: El | Paso | | | Filename: M2 | 211-4TS2 |
| Agency or o | organization nan | ne: DRMS | | | | | |
| HOURLY EQUIP | MENT COST | 1 | | | Shift ba | sis: 1 per day | |
| | | - | Equip | ment Descri | ption | | |
| Tr | uck Loader Tea | | Cat 740 | | 1 | | |
| | - T | | CAT 980 |)H | | | |
| Suppo | rt Equipment -L | | NA Cat D9T | - 0211 | | | |
| Road Ma | intenance –Moto | 1 | CAT 121 | | | | |
| | -Wa | ter Truck: | Water Ta | nker, 5,000 | Gal. | | |
| Coat Door ledour | Tr 1 /I | 1 T | | G | F ' | Mainten | |
| Cost Breakdown: | Truck/Loa Truck | Loader | Loa | Support and Area | Equipment Dump Area | Motor | water Truck |
| | | | | | | Grader | |
| Utilization-machine: | 100 | 10 | | NA | 100 | 25 | 25 |
| Ownership cost/hour: | \$68.27 | \$52.7 | | NA | \$121.49 | \$33.62 | \$27.40 |
| Operating cost/hour: | \$59.78 | \$61.5 | | NA | \$105.84 | \$8.55 | \$10.00 |
| %Utilization-riper: | NA NA | \$0.0 | 0 | NA NA | NA \$0.00 | NA \$0.00 | NA \$0.00 |
| ipper own. cost/hour: Ripper op. cost/hour: | NA NA | \$0.0 | | NA NA | \$0.00 | \$0.00 | \$0.00 |
| Operator cost/hour: | \$24.79 | \$35.9 | | NA NA | \$39.98 | \$45.39 | \$0.00 |
| Unit Subtotals: | \$152.84 | \$150.1 | | NA NA | \$267.31 | \$87.56 | \$37.39 |
| Number of Units: | 4 | Ψ130.1 | 1 | 0 | 1 | 1 | 1 |
| Group Subtotals: | Work: | \$761.50 | 1 | Support: | \$267.31 | Maint: | \$124.95 |
| <u> </u> | | · | | Support. | Ψ207.31 | ivianit. | ψ12 4 .73 |
| Total work team cost | /hour: \$1,153.7 | 6 | | | | | |
| MATERIAL QUA | NTITIES | | | | | | |
| Initial volume: | 95,187 | C | CY | Swell | factor: 1.000 | | |
| Loose volume: | 95,18 | | CY | | | | |
| Sou | rce of estimated | volume: 6 | in over | 118 Ac; Hau | l distance from G | Google Earth | |
| Source of | of estimated swe | ll factor: C | at Handl | | | | |
| | Material Purcha | | 0.00 | | | | |
| | To | tal Cost: \$6 | 0.00 | | | | |
| HOURLY PROL | OUCTION | | | | | | |
| | <u> </u> | | | | | | |
| Truck Capacity: Truck Payload (weigh | nt) Basis: | | | | | | |
| Material w | | | l | Pounds/LCY | • | | |
| Descri | ption: Top So | | | | | | |
| Rated Pay | yload: 87,000 |) | I | Pounds | | | |

LCY

Payload Capacity: 54.38

Struck Volume: 24.20 **LCY** Heaped Volume: 31.40 **LCY** Average Volume: 27.80 LCY Adjusted Volume: 31.40 LCY

> Final Truck Volume Based on Number of Loader Passes: 24.75 LCY

Loading Tool Capacity

Bucket Size Class: NA

Truck:

| Rated Capacity: | 7.500 | LCY (heaped) |
|---------------------|-------|---|
| Bucket Fill Factor: | 1.100 | Other - rock/dirt mixtures (100-120%) 1.100 |
| Adjusted Capacity: | 8.250 | LCY |

Job Condition Corrections:

Site Altitude (ft.): 7200 feet

| | Truck | Loader | Source |
|-----------------|-------|--------|----------|
| Altitude Adj: | 0.960 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |
| Net Correction: | 0.797 | 0.830 | |

| Loading | Tool Cycle Time: | Num | ber of Load |
|---------|------------------|-----|-------------|
| | | | |

ding Tool Passes Required to Fill

passes

Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating:

Track Loaders – Material Description:

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.550

maneuver):

Cycle Time Factors Factor (min.) Source Material: Bank or broken material 0.04 0.040 (Cat HB) Stockpile: No adjustment - factor not applicable 0.00 0.000(Cat HB) Truck Ownership: Common ownership of trucks and loaders --0.040(Cat HB) 0.04 Operation: Constant operation -0.04 -0.040(Cat HB)

> Nominal target 0.00 0.000 (Cat HB) Net Cycle Time Adjustment: -0.040minutes Adjusted Loader Cycle Time: 0.510 minutes Net Load Time per Truck: 1.120 minutes

Truck Cycle Time:

Truck Exchange Time: 0.60 Minutes Adjusted for site altitude: 0.625 Minutes Truck Load Time: 1.120 Minutes Adjusted for site altitude: 1.120 Minutes 1.00 1.042 Truck Maneuver and Dump Minutes Adjusted for site altitude: Minutes Time:

Truck Travel (Haul & Return) Time:

Dump Target:

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

maintained 3.0

2000.00

Haul Route:

| Seg# | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|------|-----------------------|-----------|------------------|---------------|-------------------|-------------------------|
| 1 | 2000.00 | 10.00 | 3.00 | 13.00 | 708 | 2.888 |

Haul Time: **2.888** minutes Return Route: Haul Distance Grade (%) Roll. Res Total Res Velocity Travel Seg# Time (Ft) (%) (%) (fpm) (min)

3.00

-10.00

Return Time: 0.580 minutes
Total Truck Cycle Time: 6.255 minutes

3706

0.580

Loading Tool unit

Production 851.00 LCY/Hour Adjusted for job efficiency: 706.33 LCY/Hour Truck Unit Production

_____237.42 LCY/Hour Adjusted for job efficiency: ____197.06 LCY/Hour

Optimal No. of Trucks: 4 Truck(s) Selected Number of Trucks: 4 Truck(s)

Adjusted hourly truck team production: 788.24 LCY/Hour Adjusted single truck/loader team production: 706.33 LCY/Hour Adjusted multiple truck/loader team production: 706.33 LCY/Hour

-7.00

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 134.76 Hours

Unit cost: \$1.633 /LCY Total job cost: \$155,483

SITE MAINTENANCE

| Ta | ask description: | Water trees on USFS land | | | |
|----------|-------------------|--------------------------|-------|---------------|------------------------|
| Site: _I | Pikeview Quarry | Permit Action: | AM-04 | Permit | /Job#: <u>M1977211</u> |
| PROJEC | T IDENTIFICATIO | <u>ON</u> | | | |
| Task #: | 4TW1 | State: Colorado | | Abbreviation: | None |
| Date: | 3/5/2020 1:54:30 | County: El Paso | | Filename: | M211-4TW1 |
| | PM | | | | |
| User: | TC1 | | | | |
| | Agency or organiz | zation name: DRMS | | | |

UNIT COSTS

| Maintenance Item | Hours per Year | Menu Selection | Quantity | Unit | Unit Cost | Total Cost |
|------------------------|-------------------|-------------------------|----------|------|--------------|------------|
| Transport water to | 20.00 | Water Tanker, 5,000 | 10.00 | EA | \$95.59 | \$955.90 |
| site | | Gal. | | | | |
| Small rig to transport | 80.00 | Light Duty Pickup, 4x4, | 20.00 | EA | \$41.16 | \$823.20 |
| water to seedlings | | 3/4 T. | | | | |

| Job Hours: | 100.00 | Total Cost: | \$1,779.10 |
|------------|--------|-------------|------------|

SITE MAINTENANCE

| - | Γask description: | Water trees on private land | d | | | |
|--------|---------------------|-----------------------------|-------|---------------|----------|----------|
| Site: | Pikeview Quarry | Permit Action: | AM-04 | Permit | /Job#: _ | M1977211 |
| PROJE | CT IDENTIFICATIO | <u>N</u> | | | | |
| Task # | #: 4TW2 | State: Colorado | | Abbreviation: | None | |
| Date | e: 3/5/2020 1:56:14 | County: El Paso | | Filename: | M211 | -4TW2 |
| | PM | | | | | |
| Use | r: TC1 | | | _ | | |
| | Agency or organiz | cation name: DRMS | | | | |

UNIT COSTS

| Maintenance Item | Hours per Year | Menu Selection | Quantity | Unit | Unit Cost | Total Cost |
|------------------------|-------------------|-------------------------|----------|------|--------------|------------|
| Transport water to | 20.00 | Water Tanker, 5,000 | 12.00 | EA | \$95.59 | \$1,147.08 |
| site | | Gal. | | | | |
| Small rig to transport | 80.00 | Light Duty Pickup, 4x4, | 25.00 | EA | \$41.16 | \$1,029.00 |
| water to seedlings | | 3/4 T. | | | | |

| Job Hours: | 100.00 | Total Cost: | \$2,176.08 |
|------------|--------|-------------|------------|