

COST SUMMARY WORK

Task description: 2019 Cost Update

Site: Blue Star #1

Permit Action: 2019 Bond Calculation

Permit/Job#: M2014030

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 3/1/2019

County: Chaffee

Filename: M030-000

User: DMC

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Backfill dig areas	EXCAVATE	1	19.53	\$1,859
01b	Regrade parking area/ permit area roads	EXCAVATE	1	2.83	\$269
02a	Equipment Mobilization/Demobilization	MOBILIZE	1	4.28	\$985
02b	Drive excavator up FR 277	MOBILIZE	1	18.00	\$2,386
03a	Refuel Excavator	MISCTRUK	1	4.00	\$134
<u>SUBTOTALS:</u>				48.64	\$5,633

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$114

Performance bond: 1.05

Total = \$59

Job superintendent: 0.00

Total = \$0

Profit: 10.00

Total = \$563

TOTAL O & P = \$736

CONTRACT AMOUNT (direct + O & P) = \$6,369

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$0

Engineering work and/or contract/bid preparation: 0.00

Total = \$0

Reclamation management and/or administration: 5.00

\$318

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$1,055

TOTAL BOND AMOUNT (direct + indirect) = \$6,688

HYDRAULIC EXCAVATOR WORK

Task description: Backfill dig areas

Site: Blue Star #1

Permit Action: 2019 Bond Calculation

Permit/Job#: M2014030

PROJECT IDENTIFICATION

Task #: 01A State: Colorado Abbreviation: None
Date: 3/1/2019 County: Chaffee Filename: M030-01a
User: DMC

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat 315D L 8'-6" Stick Horsepower: 115
Attachment 1: ROPS Cab Weight (MT): 17.32
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$28.99</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$28.39</u>	<u>100</u>
Operator Cost/Hour:	<u>\$37.79</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$95.16</u>	
Total Fleet Cost/Hour:	<u>\$95.16</u>	

MATERIAL QUANTITIES

Initial volume: 711 CCY Swell factor: 1.000
Loose volume: 711 LCY

Source of estimated volume: Division of Reclamation, Mining & Safety
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: AVERAGE
Secondary Job Condition within Basic Description: AVERAGE
Cycle Time Value: 0.256 minutes

Load Bucket Capacity

Rated Capacity: 0.45 LCY (heaped) Bucket Size Class: Small
Bucket Fill Factor: 0.675 Blasted rock - poorly blasted (60 - 75%) 0.675
Adjusted Capacity: 0.30 LCY

Job Condition Correction Factors

Site Altitude: 13800 feet

		Source
Altitude Adj:	<u>0.83</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.69</u>	<u>multiplier</u>

Unadjusted Hourly Unit Production: 71.19 LCY/Hour
Adjusted Hourly Unit Production: 49.04 LCY/Hour
Adjusted Hourly Fleet Production: 49.04 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 14.50 Hours
Unit cost: \$1.940 /LCY Total job cost: \$1,380

HYDRAULIC EXCAVATOR WORK

Task description: Regrade parking area/ permit area roads

Site: Blue Star #1

Permit Action: 2019 Bond Calculation

Permit/Job#: M2014030

PROJECT IDENTIFICATION

Task #: 01B

State: Colorado

Abbreviation: None

Date: 3/1/2019

County: Chaffee

Filename: M030-01b

User: DMC

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat 315D L 8'-6" Stick

Attachment 1: ROPS Cab

Horsepower: 115

Weight (MT): 17.32

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$28.99	NA
Operating Cost/Hour:	\$28.39	100
Operator Cost/Hour:	\$37.79	NA
Total Unit Cost/Hour:	\$95.16	
Total Fleet Cost/Hour:	\$95.16	

MATERIAL QUANTITIES

Initial volume: 103

CCY

Swell factor: 1.000

Loose volume: 103

LCY

Source of estimated volume: Division of Reclamation, Mining & Safety

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: SEVERE

Secondary Job Condition within Basic Description: SEVERE

Cycle Time Value: 0.345 minutes

Load Bucket Capacity

Bucket Size Class: Small

Rated Capacity: 0.45 LCY (heaped)

Bucket Fill Factor: 0.675 Blasted rock - poorly blasted (60 - 75%) 0.675

Adjusted Capacity: 0.30 LCY

Job Condition Correction Factors

Site Altitude: 13800 feet

Altitude Adj:	0.83	Source (CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.69	multiplier

Unadjusted Hourly Unit Production: 52.83 LCY/Hour

Adjusted Hourly Unit Production: 36.39 LCY/Hour

Adjusted Hourly Fleet Production: 36.39 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 2.83 Hours

Unit cost: \$2.615 /LCY Total job cost: \$269

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Equipment Mobilization/Demobilization**Site: **Blue Star #1**Permit Action: 2019 Bond CalculationPermit/Job#: M2014030**PROJECT IDENTIFICATION**

Task #: 02A State: Colorado Abbreviation: None
 Date: 3/1/2019 County: Chaffee Filename: M030-02a
 User: DMC

Agency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**

Shift basis: 1 per day
 Cost Data Source: CRG Data

Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,
400 HP (2ND HALF, 2006)Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT
TRAILER (25T, 50T, AND 100T)**Cost Breakdown:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat 315D L 8'-6" Stick	19.05	\$28.99	\$88.67	1	\$117.66	\$88.67	\$250.00

Subtotals: **\$117.66** **\$88.67** **\$250.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$12.23	1	\$12.23	\$12.23

Subtotals: **\$12.23** **\$12.23**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	BUENA VISTA	
Total one-way travel distance:	20.00	miles
Average Travel Speed:	35.00	mph

Total Non-Roadable Mob/Demob Cost *	\$971.13
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$13.98
'** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.57	0.57
Return Time (Hours):	0.57	0.57
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	2.14	1.14

JOB TIME AND COST

Total job time:	4.29	Hours
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Total job cost:	\$985
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EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Drive excavator up FR 277**Site: **Blue Star #1**Permit Action: 2019 Bond CalculationPermit/Job#: M2014030**PROJECT IDENTIFICATION**Task #: 02BState: ColoradoAbbreviation: NoneDate: 3/1/2019County: ChaffeeFilename: M030-02bUser: DMCAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,
400 HP (2ND HALF, 2006)Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT
TRAILER (25T, 50T, AND 100T)**Cost Breakdown:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat 315D L 8'-6" Stick	19.05	\$28.99	\$88.67	1	\$117.66	\$88.67	\$250.00

Subtotals: **\$117.66** **\$88.67** **\$250.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
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Subtotals: **\$0.00** **\$0.00**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	FROM HAUL ROAD	
Total one-way travel distance:	6.00	miles
Average Travel Speed:	1.50	mph

Total Non-Roadable Mob/Demob Cost *	\$2,385.96
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$0.00
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	4.00	4.00
Return Time (Hours):	4.00	4.00
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	9.00	8.00

JOB TIME AND COST

Total job time: 18.00 Hours

Total job cost: \$2,386

MISCELLANEOUS TRUCK WORK

Task description: Refuel Excavator

Site: Blue Star #1 Permit Action: 2019 Bond Calculation Permit/Job#: M2014030

PROJECT IDENTIFICATION

Task #: 03A State: Colorado Abbreviation: None
Date: 3/1/2019 County: Chaffee Filename: M030-03a
User: DMC

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Make and Model: Light Duty Pickup, 4x4, 3/4 T. Horsepower: 160
Attachment 1: _____ Shift Basis: 1 per day
Attachment 2: _____ Weight: 2.25
Labor Unit 1: Fuel/Lube Truck Driver (US Tons)
Labor Unit 2: _____

Cost Breakdown:

	Utilization %
Ownership Cost/Hour: <u>\$4.72</u>	<u>NA</u>
Operating Cost/Hour: <u>\$7.51</u>	<u>100</u>
Operator Cost/Hour: <u>\$21.23</u>	<u>NA</u>
Total Unit Cost/Hour: <u>\$33.46</u>	
Total Fleet Cost/Hour: <u>\$33.46</u>	

JOB TIME AND COST

Fleet size: 1 Truck(s) Total job time: 4.00 Hours
Unit cost: \$33.46 /Hour Total job cost: \$134