

COST SUMMARY WORK

Task description: Recontour waste dump

Site: JD-6 Mine

Permit Action: AM01 EPP

Permit/Job#: M1977310

PROJECT IDENTIFICATION

Task #: J01

State: Colorado

Abbreviation: None

Date: 12/4/2013

County: Montrose

Filename: M310-J01

User: SJM

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
002	removal of waste material 2:1 slope	EXCAVATE	1	57.79	\$5,427.00
003	pocking	EXCAVATE	1	8.25	\$775.00
005	mobilization of Dozer and Excavator	MOBILIZE	1	1.01	\$1,208.20
006	demo of building	DEMOLISH	1	0.00	\$2,837.21
008	PUF to 10' depth	MINESEAL	1	0.00	\$5,273.70
009	Backfill Mine Portal	MINESEAL	1	0.00	\$1,577.80
010	SEEDING	REVEGE	1	0.00	\$3,280.14
J01	recontour waste dump	DOZER	1	102.61	\$12,910.11
<u>SUBTOTALS:</u>				169.66	\$33,289.16

REVEGETATION WORKTask description: SeedSite: JD-6 MinePermit Action: RevegetationPermit/Job#: M1977310PROJECT IDENTIFICATIONTask #: 009State: ColoradoAbbreviation: NoneDate: 12/4/2013County: MontroseFilename: M310-009User: SJMAgency or organization name: DRMSFERTILIZINGMaterials

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

Application

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

TILLING

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

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	2.00	32.64	\$21.30
Indian Ricegrass - Paloma	4.00	12.95	\$34.84
Galleta	2.00	7.30	\$50.40
Slender Wheatgrass - Native	2.00	7.30	\$4.50
Western Wheatgrass - Arriba	8.00	20.20	\$29.44
Needle and Thread	1.00	2.64	\$46.99
Needlegrass, Green - Lodorm	2.00	8.31	\$10.78
Flax, Lewis Blue	1.00	6.63	\$16.52
Saltbush, Four Wing	3.00	4.13	\$32.19
Globemallow, Scarlet (or copper)	0.03	0.34	\$4.21

Winter Fat	1.00	2.55	\$32.69
Penstemon, Palmer	0.05	1.11	\$1.55
Totals Seed Mix	26.08	106.10	\$285.41

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$261.28
Total Seed Application Cost/Acre	\$261.28

MULCHING and MISCELLANEOUS**Materials**

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

Application

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

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres:	6	Cost /Acre:	\$546.69
Estimated Failure Rate:	20%	Cost /Acre*:	\$546.69
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$3,280.14		
Reseeding Job Cost:	\$656.03		
Total Job Cost:	\$3,936.17		
Job Hours:	0.00		

SAFEGUARDING UNDERGROUND OPENINGS

Task description: Backfill Mine Portal

Site: JD-6 Mine

Permit Action: AM01 EPP

Permit/Job#: M1977310

PROJECT IDENTIFICATION

Task #: 009

State: Colorado

Abbreviation: None

Date: 12/4/2013

County: Montrose

Filename: M310-009

User: SJM

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Backfill Mine Portal	7' x 7'	Adit closure - backfilling (per cu. yd.)	980.00	CY	\$1.61	\$1,577.80

Job Hours: 0.00

Total Cost: \$1,577.80

BULLDOZER WORKTask description: Recontour waste dumpSite: JD-6 MinePermit Action: DozingPermit/Job#: M1977310**PROJECT IDENTIFICATION**Task #: 001State: ColoradoAbbreviation: NoneDate: 12/4/2013County: San MiguelFilename: M310-001User: SJMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D6THorsepower: 185Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$30.43</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$57.97</u>	<u>100</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$37.41</u>	<u>NA</u>

Total unit Cost/Hour: \$125.81Total Fleet Cost/Hour: \$125.81**MATERIAL QUANTITIES**Initial Volume: 7,000Swell factor: 1.060Loose volume: 7,420 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 75 feetUnadjusted hourly production: 357.1 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 25 %Average site altitude: 6,200 feetMaterial weight: 2,900 lbs/LCYWeight description: Sand and gravel - DryJob Condition Correction Factor

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.200</u>	<u>(SLOT)</u>

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	0.422	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2025

Adjusted unit production: 72.31 LCY/hr

Adjusted fleet production: 72.31 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$1.740/LCY

Total job time: 102.61 Hours

Total job cost: \$12,910.11

HYDRAULIC EXCAVATOR WORK

Task description: Removal of waste material 2:1 slope

Site: JD-6 Mine

Permit Action: Excavator

Permit/Job#: M1977310

PROJECT IDENTIFICATION

Task #: 002

State: Colorado

Abbreviation: None

Date: 12/4/2013

County: San Miguel

Filename: M310-002

User: SJM

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:	\$23.85	NA
Operating Cost/Hour:	\$36.12	100
Operator Cost/Hour:	\$33.94	NA
Total Unit Cost/Hour:	\$93.91	
Total Fleet Cost/Hour:	\$93.91	

MATERIAL QUANTITIES

Initial volume: 7,000

CCY

Swell factor: 1.060

Loose volume: 7,420

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

Bucket Size Class: Medium

Rated Capacity: 0.80 LCY (heaped)

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

Adjusted Capacity: 0.66 LCY

Job Condition Correction Factors

Site Altitude: 6200 feet

Altitude Adj:	1.00	Source (CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.83	multiplier

Unadjusted Hourly Unit Production: 154.69 LCY/Hour

Adjusted Hourly Unit Production: 128.39 LCY/Hour

Adjusted Hourly Fleet Production: 128.39 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 57.79 Hours

Unit cost: \$0.731 /LCY Total job cost: \$5,427.00

HYDRAULIC EXCAVATOR WORK

Task description: Pocking

Site: JD-6 Mine

Permit Action: Excavator pocking
slope

Permit/Job#: M1977310

PROJECT IDENTIFICATION

Task #: 003

State: Colorado

Abbreviation: None

Date: 12/4/2013

County: San Miguel

Filename: M310-003

User: SJM

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:	\$23.85	NA
Operating Cost/Hour:	\$36.12	100
Operator Cost/Hour:	\$33.94	NA
Total Unit Cost/Hour:	\$93.91	
Total Fleet Cost/Hour:	\$93.91	

MATERIAL QUANTITIES

Initial volume: 1,000

CCY

Swell factor: 1.060

Loose volume: 1,060

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: 0.80 LCY (heaped)
Bucket Fill Factor: 0.825 Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity: 0.66 LCY

Bucket Size Class: Medium

Job Condition Correction Factors

Site Altitude: 6200 feet

Altitude Adj: 1.00 Source (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Unadjusted Hourly Unit Production: 154.69 LCY/Hour
Adjusted Hourly Unit Production: 128.39 LCY/Hour
Adjusted Hourly Fleet Production: 128.39 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 8.26 Hours

Unit cost: \$0.731 /LCY Total job cost: \$775.00

SAFEGUARDING UNDERGROUND OPENINGS

Task description: Backfill Mine Portal

Site: JD-6 Mine

Permit Action: AM01 EPP

Permit/Job#: M1977310

PROJECT IDENTIFICATION

Task #: 009

State: Colorado

Abbreviation: None

Date: 12/4/2013

County: Montrose

Filename: M310-009

User: SJM

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Backfill Mine Portal	7' x 7'	Adit closure - backfilling (per cu. yd.)	980.00	CY	\$1.61	\$1,577.80

Job Hours: 0.00

Total Cost: \$1,577.80

SAFEGUARDING UNDERGROUND OPENINGS

Task description: PUF to 10' depth

Site: JD-6 Mine

Permit Action: AM01 EPP

Permit/Job#: M1977310

PROJECT IDENTIFICATION

Task #: 008

State: Colorado

Abbreviation: None

Date: 12/4/2013

County: Montrose

Filename: M310-008

User: SJM

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
PUF mine vents to 10'	7' x 7'	Shaft closure - polyurethane foam plug (per cu. yd.)	30.00	CY	\$175.79	\$5,273.70

Job Hours: 0.00

Total Cost: \$5,273.70

DEMOLITION WORK

Task description: Demo of building

Site: JD-6 Mine

Permit Action: Demo

Permit/Job#: M1977310

PROJECT IDENTIFICATION

Task #: 006

State: Colorado

Abbreviation: None

Date: 12/4/2013

County: Montrose

Filename: M310-006

User: SJM

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 94.70 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
dry building removal	20x20	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 15 mile haul	2,800.00	CF	\$1.07	\$2,996.00

Job Hours: 0.00

Subtotal
(unadjusted): \$2,996.00

Total Cost
(adjusted for
location): \$2,837.21