

COST SUMMARY WORK

Task description: Reclaim Pads E8-1&2, E8-3 and roads

Site: West Elk Mine

Permit Action: TR145

Permit/Job#: C1980007

PROJECT IDENTIFICATION

Task #: 145

State: Colorado

Abbreviation: None

Date: 6/5/2018

County: Gunnison

Filename: C007-145

User: LDS

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
45a	MVBs E8-1, -2 and -3: plug and seal	BOREHOLE	1	24.00	\$14,775.57
45B	Pads E8-1&2, E8-3, and roads: regrade	DOZER	1	27.58	\$5,291.00
45C	Pads E8-1&2, E8-3, and roads: topsoil	DOZER	1	13.37	\$2,565.00
45D	Pads E8-1&2, E8-3, and roads: broadcast PRD mt shrub seed mix	REVEGE	1	2.70	\$4,644.00
<u>SUBTOTALS:</u>				67.65	\$27,276

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$550.98

Performance bond: 1.05

Total = \$286.40

Job superintendent: 40.24

Total = \$2,939.53

Profit: 10.00

Total = \$2,727.60

TOTAL O & P = \$6,504.51

CONTRACT AMOUNT (direct + O & P) = \$33,780.51

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 0.00

Total = 0.00

Engineering work and/or contract/bid preparation: 4.00

Total = \$1,351.22

Reclamation management and/or administration: 3.13

\$1,057.33

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$8,913.06

TOTAL BOND AMOUNT (direct + indirect) = \$36,189.06

BOREHOLE SEALING WORK

Task description: MVBs E8-1, -2 and -3: plug and seal

Site: West Elk Mine

Permit Action: TR145

Permit/Job#: C1980007

PROJECT IDENTIFICATION

Task 45A
#:

State: Colorado

Abbreviation: None

Date: 6/5/2018

County: Gunnison

Filename: C007-45a

User: LDS

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Bottom Plug	PVC plug - 10 in. diameter borehole	9"	NA	3.00	EA	\$101.60	\$304.80
Fill Hole with Cement	Portland cement grout (Bag, material cost only...94 lb. bag)	9"	3000	663.00	bag	\$10.55	\$6,994.65
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	9"	NA	7.00	LF	\$1.77	\$12.39
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	3.00	EA	\$3.67	\$11.01
Drill Rig Time	SCHRAMM T450WS	NA	NA	24.00	EA	\$266.52	\$6,396.48
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	24.00	EA	\$44.01	\$1,056.24

Job Hours: 24.00

Total Cost: \$14,776.00

BULLDOZER WORK

Task description: Pads E8-1&2, E8-3, and roads: regrade

Site: West Elk Mine

Permit Action: TR145

Permit/Job#: C1980007

PROJECT IDENTIFICATION

Task #: 45B

State: Colorado

Abbreviation: None

Date: 6/5/2018

County: Gunnison

Filename: C007-45B

User: LDS

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU

Horsepower: 310

Blade Type: Semi-Universal

Attachment: NA

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$83.81</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$66.17</u>	<u>100</u>
Ripper own.		
Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>100</u>
Operator Cost/Hour:	<u>\$41.85</u>	<u>NA</u>

Total unit Cost/Hour: \$191.83

Total Fleet Cost/Hour: **\$191.83**

MATERIAL QUANTITIES

Initial Volume: 6,534

Swell factor: 1.125

Loose volume: **7,351 LCY**

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

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 125 feet

Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %

Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

Job Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.900	(AB.AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit
production: 266.48 LCY/hr
Adjusted fleet
production: **266.48** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.720/LCY

Total job time: **27.58** Hours
Total job cost: **\$5,291**

BULLDOZER WORK

Task description: Pads E8-1&2, E8-3, and roads: topsoil

Site: West Elk Mine

Permit Action: TR145

Permit/Job#: C1980007

PROJECT IDENTIFICATION

Task #: 45C

State: Colorado

Abbreviation: None

Date: 6/6/2018

County: Gunnison

Filename: C007-45C

User: LDS

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU

Horsepower: 310

Blade Type: Semi-Universal

Attachment: NA

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$83.81	NA
Operating Cost/Hour:	\$66.17	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$41.85	NA

Total unit Cost/Hour: \$191.83

Total Fleet Cost/Hour: **\$191.83**

MATERIAL QUANTITIES

Initial Volume: 4,356

Swell factor: 1.000

Loose volume: **4,356 LCY**

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

Source of estimated swell
factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 125 feet

Unadjusted hourly
production: 726.3 LCY/hr

Materials consistency
description: Partly consolidated stockpile 1.1

Average push
gradient: 10 %

Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

Job Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.900	(AB.AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4485

Adjusted unit
production: 325.75 LCY/hr

Adjusted fleet
production: **325.75** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.589/LCY

Total job time: **13.37** Hours

Total job cost: **\$2,565**

REVEGETATION WORK

Task description: Pads E8-1&2, E8-3, and roads: broadcast PRD mt shrb seed mix

Site: West Elk Mine

Permit Action: TR145

Permit/Job#: C1980007

PROJECT IDENTIFICATION

Task #: 45D

State: Colorado

Abbreviation: None

Date: 6/6/2018

County: Gunnison

Filename: C007-45D

User: LDS

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium sulfate, 21-0-0 with 24% S	50.00	pound	\$0.34	\$17.00
			Total Fertilizer Materials Cost/Acre	\$17.00

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$144.62
Total Fertilizer Application Cost/Acre	\$144.62

TILLING

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

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$21.00
Mountain Brome - Bromar	4.00	6.43	\$17.40
Sandberg Bluegrass - VNS	3.00	63.71	\$24.18
Lupine, Silver	1.00	0.59	\$69.98
Western Wheatgrass - Arriba	4.00	10.10	\$32.32
Prairie Junegrass	3.00	159.46	\$90.99
Penstemon, Rocky Mountain	0.50	7.84	\$14.75
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$16.50
Golden Banner	1.00	2.00	\$83.00
Totals Seed Mix	22.50	269.47	\$370.12

Application

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$261.00	\$522.00
Total Mulch Materials Cost/Acre				\$522.00

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$66.02
Power mulcher (MEANS 32 91 13.16 0350)	\$99.32
Total Mulch Application Cost/Acre	\$165.34

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:	2.7	Cost /Acre:	\$1,592.59
Estimated Failure Rate:	20%	Cost /Acre*:	\$637.34
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$4,299.99
Reseeding Job Cost:	\$344.16
Total Job Cost:	\$4,644
Job Hours:	2.70