COST SUMMARY WORK

Task description: **Cost Summary of Reclamation Tasks**

Site: **Project P.J.** Permit Action: 2019 New App Permit/Job#: M2018007

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 3/25/2019 County: Teller Filename: M007-000
User: ERR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill Open Excavation (10,000 CY)	DOZER	1	33.79	$7,412
002	Replace Topsoil (1 acre)	DOZER	1	4.56	$1,000
003	Reclaim Access Roads	DOZER	1	0.51	$114
004	Revegetate the Site	REVEGE	1	10.00	$6,463
005	Mob/Demob	MOBILIZE	1	5.34	$2,704
	SUBTOTALS:			**54.2**	**$17,693**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	$357
Performance bond:	1.05	Total =	$186
Job superintendent:	0.00	Total =	$0
Profit:	10.00	Total =	$1,769
		TOTAL O & P =	$2,312
		CONTRACT AMOUNT (direct + O & P) =	$20,005

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		$1,000
CONTINGENCY:	0.00	Total =	$0
		TOTAL INDIRECT COST =	$3,313
		TOTAL AMOUNT (direct + indirect) =	$21,006
		TOTAL BOND AMOUNT (Rounded) =	**$21,000**

BULLDOZER WORK

Task description: **Backfill Open Excavation (10,000 CY)**

Site: **Project P.J.** Permit Action: 2019 New App Permit/Job#: M2018007

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 3/25/2019 County: Teller Filename: M007-001
User: ERR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU
Horsepower: 310
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$93.62	NA
Operating Cost/Hour:	$73.35	100
Ripper own. Cost/Hour:	$8.93	NA
Ripper op. Cost/Hour:	$1.95	25
Operator Cost/Hour:	$41.52	NA

Total unit Cost/Hour: $219.36
Total Fleet Cost/Hour: **$219.36**

MATERIAL QUANTITIES

Initial Volume: 10,000
Swell factor: 1.000
Loose volume: **10,000** LCY

Source of estimated volume: Application.
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 100 feet
Unadjusted hourly production: 852.6 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: 0 %
Average site altitude: 9,100 feet

Material weight: 3,300 lbs/LCY

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

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3471

Adjusted unit production: 295.94 LCY/hr
Adjusted fleet production: **295.94** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.741/LCY

Total job time: **33.79** Hours
Total job cost: **$7,412**

BULLDOZER WORK

Task description: **Replace Topsoil (1 acre)**

Site: **Project P.J.** Permit Action: 2019 New App Permit/Job#: M2018007

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 3/25/2019 County: Teller Filename: M007-002
User: ERR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU
Horsepower: 310
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$93.62	NA
Operating Cost/Hour:	$73.35	100
Ripper own. Cost/Hour:	$8.93	NA
Ripper op. Cost/Hour:	$1.95	25
Operator Cost/Hour:	$41.52	NA

Total unit Cost/Hour: $219.36
Total Fleet Cost/Hour: **$219.36**

MATERIAL QUANTITIES

Initial Volume: 1,613
Swell factor: 1.250
Loose volume: **2,016** LCY

Source of estimated volume: Application: 12" on 1 acre
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 100 feet
Unadjusted hourly production: 852.6 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %
Average site altitude: 9,100 feet

Material weight: 2,650 lbs/LCY

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

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5187

Adjusted unit production: 442.24 LCY/hr
Adjusted fleet production: **442.24** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.496/LCY

Total job time: **4.56** Hours
Total job cost: **$1,000**

BULLDOZER WORK

Task description: **Reclaim Access Roads**

Site: **Project P.J.** Permit Action: 2019 New App Permit/Job#: M2018007

PROJECT IDENTIFICATION

Task #:	003	State:	Colorado	Abbreviation:	None
Date:	3/25/2019	County:	Teller	Filename:	M007-003
User:	ERR				

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine:	Cat D8T - 8SU
Horsepower:	310
Blade Type:	Semi-Universal
Attachment:	3-shank ripper
Shift Basis:	1 per day
Data Source:	(CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$93.62	NA
Operating Cost/Hour:	$73.35	100
Ripper own. Cost/Hour:	$8.93	NA
Ripper op. Cost/Hour:	$7.78	100
Operator Cost/Hour:	$41.52	NA

Total unit Cost/Hour: $225.20
Total Fleet Cost/Hour: **$225.20**

MATERIAL QUANTITIES

Initial Volume:	155
Swell factor:	1.430
Loose volume:	**222** LCY

Source of estimated volume: Application: 525' long x 8' wide
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 50 feet
Unadjusted hourly production: 1,400.0 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %
Average site altitude: 9,100 feet

Material weight: 3,300 lbs/LCY

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

Job Condition Correction Factor		Source
Operator Skill:	0.750	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3124

Adjusted unit production: 437.36 LCY/hr
Adjusted fleet production: **437.36** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.515/LCY

Total job time: **0.51** Hours
Total job cost: **$114**

REVEGETATION WORK

Task description: **Revegetate the Site**

Site: **Project P.J.** Permit Action: 2019 New App Permit/Job#: M2018007

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 3/25/2019 County: Teller Filename: M007-004
User: ERR

Agency or organization name: DRMS

FERTILIZING

Materials

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
Mountain Brome - Bromar	1.93	3.10	$8.59
Sandberg Bluegrass - VNS	0.37	7.86	$3.05
Idaho Fescue	0.79	9.97	$7.30
Prairie Junegrass	0.15	7.97	$4.66
Yarrow, Western	0.25	15.20	$10.70
Bluebunch Wheatgrass - Goldar	3.71	11.92	$20.89
Totals Seed Mix	7.20	56.03	**$55.19**

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	$232.00
Total Seed Application Cost/Acre	**$232.00**

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	$288.00	$576.00
Total Mulch Materials Cost/Acre				**$576.00**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$68.78
Total Mulch Application Cost/Acre	**$68.78**

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Fir, Douglas	129	Tubling, 3 cu. in. container (MEANS)	$1.17	$0.00	$150.93
Pine, Lodgepole	129	Tubling, 3 cu. in. container (MEANS)	$1.17	$0.00	$150.93
Totals Nursery Stock Cost / Acre					**$301.86**

JOB TIME AND COST

No. of Acres: 4.95
Estimated Failure Rate: 25%
*Selected Replanting Work Items: SEEDING

Cost /Acre: $1,233.83
Cost /Acre*: $287.19

Initial Job Cost: **$6,107.46**
Reseeding Job Cost: **$355.40**
Total Job Cost: **$6,463**
Job Hours: **10.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mob/Demob**

Site: **Project P.J.** Permit Action: 2019 New App Permit/Job#: M2018007

PROJECT IDENTIFICATION

Task #: 005 State: Colorado Abbreviation: None
Date: 3/25/2019 County: Teller Filename: M007-005
User: ERR

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 D8T - 8SU	53.08	$102.55	$125.45	1	$228.00	$125.45	$250.00
Drill/Broadcast Seeder with Tractor	25.00	$15.54	$88.67	1	$104.21	$88.67	$250.00
Subtotals:					**$332.21**	**$214.12**	**$500.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	$74.99	1	$74.99	$74.99
Subtotals:			**$74.99**	**$74.99**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	COLORADO SPRINGS	
Total one-way travel distance:	46.00	miles
Average Travel Speed:	55.00	mph

Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$2,578.28
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$125.44

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.84	0.84
Return Time (Hours):	0.84	0.84
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	2.67	1.67

JOB TIME AND COST

Total job time:	**5.35**	Hours
Total job cost:	**$2,704**	