

✓ TO: VARRA COMPANIES, INC
✓ 4/18/14

COST SUMMARY WORK

Task description: Bond Estimate Summary **REVISED** 4/10/14

Site: Varra-Coulson Resource Project

Permit Action: Varra Coulson
Bond Estimate

Permit/Job#: M2013064

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 2/7/2014 County: Weld Filename: M064-000
User: PSH
Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Grade Pit Walls - South / Middle Fields - 1600 LF Max	DOZER	1	517.03	\$112,275.55
002	Dewater Middle/South Fields - 59.3 A - Varra Est.	SITEMAINT ENANCE	1	0.00	\$6,213.03
003	Replace Topsoil - 12.21 Acres X 6" Depth	SCRAPER1	1	7.33	\$6,656.24
004	Revegetate 12.21 Acres - no mulch, cover crop	REVEGE	1	40.00	\$6,340.86
005	Mob / Demob	MOBILIZE	1	3.33	\$4,322.93
006	Operator to commit water rights for augmentation requirement	NA	0	0.00	\$0.00
<u>SUBTOTALS:</u>				567.69	\$135,808.61

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02%	Total =	\$2,743.33
Performance bond:	1.05%	Total =	\$1,425.99
Job superintendent:	532.30 hrs	Total =	\$34,817.74
Profit:	10.00%	Total =	\$13,580.86
		TOTAL O & P =	\$52,567.92
		CONTRACT AMOUNT (direct + O & P) =	\$188,376.53

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	0.00	Total =	0.00
Engineering work and/or contract/bid preparation:	4.25%	Total =	\$8,006.00
Reclamation management and/or administration:	5.00%		\$9,418.83

CONTINGENCY: 0.00 Total = \$0.00

TOTAL INDIRECT COST = \$69,992.75

TOTAL BOND AMOUNT (direct + indirect) = **\$205,801.00**

BULLDOZER WORKTask description: Grade Pit Walls - South / Middle Fields - 1600 LF MaxSite: Varra-Coulson Resource
ProjectPermit Action: Varra Coulson Bond
EstimatePermit/Job#: M2013064**PROJECT IDENTIFICATION**Task #: 001
Date: 2/7/2014
User: PSHState: Colorado
County: WeldAbbreviation: None
Filename: M064-001Agency 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:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$63.00	NA
Operating Cost/Hour:	\$107.90	100
Ripper op. Cost/Hour:	\$7.40	100
Operator Cost/Hour:	\$38.85	NA

Total unit Cost/Hour: \$217.15
Total Fleet Cost/Hour: \$217.15**MATERIAL QUANTITIES**Initial Volume: 88,888
Swell factor: 1.000
Loose volume: 88,888 LCYSource 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/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 15 %
Average site altitude: 4,630 feetMaterial weight: 2,900 lbs/LCYWeight description: Sand and gravel - Dry

<u>Job Condition Correction Factor</u>		<u>Source</u>
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:	0.666	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2367

Adjusted unit production: 171.92 LCY/hr

Adjusted fleet production: **171.92 LCY/hr**

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$1.263/LCY

Total job time: **517.03 Hours**

Total job cost: **\$112,275.55**

SITE MAINTENANCE

Task description: Dewater Middle/South Fields - 59.3 A - Varra Est.

Varra-Coulson Resource
Site: Project

Permit Action: Varra Coulson Bond
Estimate

Permit/Job#: M2013064

PROJECT IDENTIFICATION

Task #: 002
Date: 4/10/2014
User: PSH

State: Colorado
County: Weld

Abbreviation: None
Filename: M064-002

Agency or organization name: DRMS

UNIT COSTS

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Dewater Middle/South Fields-59.3 A-Varra Est.	638.64	USER PROVIDED ITEM	1.00	1	\$6,213.03	\$6,213.03

Job Hours: 0.00

Total Cost: \$6,213.03

SCRAPER TEAM WORKTask description: **Replace Topsoil - 12.21 Acres X 6" Depth**Site: **Varra-Coulson Resource**
ProjectPermit Action: **Varra Coulson Bond**
EstimatePermit/Job#: **M2013064****PROJECT IDENTIFICATION**Task #: **003**State: **Colorado**Abbreviation: **None**Date: **2/7/2014**County: **Weld**Filename: **M064-003**User: **PSH**Agency or organization name: **DRMS****HOURLY EQUIPMENT**COSTShift basis: **1 per day**

Equipment Description	
-Scraper:	Cat 637G
-Dozer:	NA
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 120M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown:**Scraper Work Team****Support Equipment****Maintenance Equipment**

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	NA	NA	100	75
Ownership cost/hour:	\$97.63	NA	NA	NA	\$22.17	\$7.51
Operating cost/hour:	\$239.94	NA	NA	NA	\$42.63	\$17.15
Ripper op. cost/hour:	NA	NA	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$38.82	NA	NA	NA	\$37.83	\$27.82
Unit Subtotals:	\$376.39	NA	NA	NA	\$102.64	\$52.48
Number of Units:	2	0	0	0	1	1
Group Subtotals:	Work: \$752.78		Support:	\$0.00	Maint:	\$155.12

Total work team cost/hour: **\$907.90****MATERIAL QUANTITIES**Initial volume: **9,849**

CCY

Swell factor: **1.000**Loose volume: **9,849**

LCY

Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	1,600 lbs/LCY	Struck Volume:	24.00	LCY
Material description:	Top Soil	Heaped Volume:	34.00	LCY
Rated Payload:	81,600 pounds	Average Volume:	29.00	LCY
Payload Capacity:	51.00 LCY	Adjusted Capacity:	29.00	LCY

Cycle Time:Scraper Loading Time: 0.80 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 4630 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

Travel Time:Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	-2.00	3.00	1.00	2952	0.37

Haul Time: 0.37 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	2.00	3.00	5.00	2795	0.38

Return Time: 0.38 minutesTotal Scraper team cycle time: 2.15 minutesAdjusted for job conditions: 671.72 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,343.44 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,343.44 LCY/HourUnadjusted unit production/hour: 809.30 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 7.33 HoursUnit cost: \$0.676 /LCYTotal job cost: \$6,656.24

REVEGETATION WORKTask description: Revegetate 12.21 Acres - no mulch, cover cropSite: Varra-Coulson Resource
ProjectPermit Action: Varra Coulson Bond
EstimatePermit/Job#: M2013064PROJECT IDENTIFICATIONTask #: 004
Date: 2/7/2014
User: PSHState: Colorado
County: WeldAbbreviation: None
Filename: M064-004Agency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
0-20-20, 4-8-12, 10-10-10	12.00	pound	\$0.21	\$2.53
			Total Fertilizer Materials Cost/Acre	\$2.53

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$52.71
Total Fertilizer Application Cost/Acre	\$52.71

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$98.01
Weed control spraying (MEANS 31 31 16.13 3100)	\$145.20
Total Tilling Cost/Acre	\$243.21

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alfalfa – Common for cover crop	5.00	24.10	\$12.75
Alkali Sacaton	0.01	0.39	\$0.23
Switchgrass - Blackwell	0.90	8.04	\$4.78
Blue Grama - Lovington	0.20	3.26	\$2.17
Indian Ricegrass - Native	1.90	6.15	\$12.81
Sand Dropseed	0.01	1.19	\$0.07
Kentucky Bluegrass - Ginger	0.05	2.47	\$0.16
Little Bluestem - Pastura	0.70	4.18	\$11.07
Sideoats Grama - Vaughn	1.80	5.91	\$20.23
Strawberry Clover (coated)	0.10	0.68	\$0.67

Smooth Brome - Manchar	0.10	0.33	\$0.20
Sheep Fescue - Covar	0.40	6.24	\$1.34
Tall Wheatgrass - Jose	1.10	1.99	\$2.48
Totals Seed Mix	12.27	64.94	\$68.95

Application

Description	Cost /Acre
Drill seeding (DRMS Cost Data)	\$88.20
Total Seed Application Cost/Acre	\$88.20

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: 12.21 Cost /Acre: \$455.60
 Estimated Failure Rate: 30% Cost /Acre*: \$212.39
 *Selected Replanting Work Items: FERTILIZING,SEEDING

Initial Job Cost: \$5,562.88
 Reseeding Job Cost: \$777.98
 Total Job Cost: \$6,340.86
 Job Hours: 40.00

EQUIPMENT MOBILIZATION/DEMobilIZATIONTask description: **Mob / Demob**Site: **Varra-Coulson Resource
Project**Permit Action: **Varra Coulson Bond
Estimate**Permit/Job#: **M2013064****PROJECT IDENTIFICATION**Task #: **005**
Date: **2/7/2014**
User: **PSH**State: **Colorado**
County: **Weld**Abbreviation: **None**
Filename: **M064-005**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	\$63.00	\$125.45	1	\$188.45	\$125.45	\$250.00
CAT 120M	15.53	\$23.96	\$88.67	1	\$112.63	\$88.67	\$250.00
Cat 637G	57.28	\$97.63	\$125.45	2	\$446.17	\$250.90	\$500.00

Subtotals: **\$747.25** **\$465.02** **\$1,000.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 2,500 Gal.	\$30.38	1	\$30.38	\$30.38

Subtotals: **\$30.38** **\$30.38**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>GREELEY</u>	
Total one-way travel distance:	<u>10.00</u>	miles
Average Travel Speed:	<u>30.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$4,302.68</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$20.25</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.33	0.33
Return Time (Hours):	0.33	0.33
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.67	0.67

JOB TIME AND COST

Total job time:	<u>3.33</u>	Hours
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Total job cost:	<u>\$4,322.93</u>
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