

STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY Department of Natural Resources

1313 Sherman St., Room 215
Denver, Colorado 80203
Phone: (303) 866-3567
FAX: (303) 832-8106



John W. Hickenlooper
Governor

Mike King
Executive Director

Loretta Piñeda
Director

March 21, 2013

Mr. Benton Jensen
Western Gravel, LLC
P.O. 808
Meeker, CO 81641

Re: WRC Gravel Pit, Permit No. M-2008-070, Amendment Approval, Revision No. AM-1

Dear Mr. Jensen:

On March 21, 2013 the Division of Reclamation, Mining and Safety approved the Amendment application submitted to the Division on September 26, 2012, addressing the following:

- *Revise the reclamation plan to incorporate an E&P solid waste disposal facility in Phase 1.*
- *Change the post mine land use of Phase 1 from rangeland to industrial commercial.*

The terms of the Amendment No. 1 approved by the Division are hereby incorporated into Permit No. M-2008-070. All other conditions and requirements of Permit No. M-2008-070 remain in full force and effect.

The estimated liability amount of \$106,547.59 exceeds the \$75,430.00 performance bond currently held. If you have not already done so, please submit additional bond in the amount of **\$31,117.59**. The revision will not be final until the bond is approved by the Division.

If you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Travis H. Marshall".

Travis H. Marshall
Environmental Protection Specialist

Enclosure – Revised Reclamation Cost Estimate

cc: Gary Webber
NWCC
2580 Copper Ridge Drive
Steamboat Springs, CO 80487

COST SUMMARY WORK

Task description: _____

Site: WRC Gravel Pit Permit Action: AM-1 Permit/Job#: M2008070

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 3/21/2013 County: Rio Blanco Filename: M070-001
User: THM

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Establish 3H:1V Slopes Phase 1	DOZER	1	53.59	\$10,617.42
02a	Rip Phase 1 Pit Floor prior to topsoil placement	RIPPER	1	18.94	\$5,035.00
03a	Spred topsoil over Phase 1	DOZER	1	16.41	\$4,093.34
04a	Revegetate 19.5 acres of Phase 1	REVEGE	1	16.00	\$21,862.60
05a	Rip office/scale area	RIPPER	1	6.08	\$1,619.00
06a	Revegetate 4.5 acres of fice/scale area	REVEGE	1	8.00	\$5,045.22
07a	Establish 3H:1V Slopes Phase 2a	DOZER	1	28.51	\$5,648.86
08a	Rip Phase 2a Pit Floor prior to topsoil placement	RIPPER	1	16.10	\$4,280.00
09a	Spred topsoil over Phase 2a	DOZER	1	12.37	\$3,085.75
10a	Revegetate 14.7 acres of Phase 2a	REVEGE	1	16.00	\$16,481.04
11a	Mobilization	MOBILIZE	1	3.33	\$3,842.89
<u>SUBTOTALS:</u>				195.33	\$81,611.12

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02%	Total =	\$1,648.54
Performance bond:	1.05%	Total =	\$856.92
Job superintendent:	97.67 hrs	Total =	\$6,388.27
Profit:	10.00%	Total =	\$8,161.11

TOTAL O & P = \$17,054.84

CONTRACT AMOUNT (direct + O & P) = \$98,665.96

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	<u>500.00</u>	Total =	<u>500.00</u>
Engineering work and/or contract/bid preparation:	<u>0.00%</u>	Total =	<u>\$0.00</u>
Reclamation management and/or administration:	<u>5.00%</u>		<u>\$4,933.30</u>

CONTINGENCY: 3.00 Total = \$2,448.33

TOTAL INDIRECT COST = \$24,936.47

TOTAL BOND AMOUNT (direct + indirect) = \$106,547.59

BULLDOZER WORKTask description: Establish 3H:1V Slopes Phase 1Site: WRC Gravel PitPermit Action: AM-1Permit/Job#: M2008070**PROJECT IDENTIFICATION**Task #: 01AState: ColoradoAbbreviation: NoneDate: 3/20/2013County: Rio BlancoFilename: M070-01aUser: THMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$56.69	NA
Operating Cost/Hour:	\$104.03	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$37.41	NA

Total unit Cost/Hour: \$198.13Total Fleet Cost/Hour: \$198.13**MATERIAL QUANTITIES**Initial Volume: 43,700Swell factor: 1.125Loose volume: 49,163 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 1,400.0 LCY/hrMaterials consistency description: Consolidated stockpile 1.0Average push gradient: -25 %Average site altitude: 5,875 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**Job Condition Correction Factor**

		<u>Source</u>
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:	1.516	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6553

Adjusted unit production: 917.42 LCY/hr

Adjusted fleet production: 917.42 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
 Unit cost: \$0.216/LCY

Total job time: 53.59 Hours
 Total job cost: \$10,617.42

BULLDOZER RIPPING WORK

Task description: Rip Phase 1 Pit Floor prior to topsoil placement

Site: WRC Gravel Pit Permit Action: AM-1 Permit/Job#: M2008070

PROJECT IDENTIFICATION

Task #: 02A State: Colorado Abbreviation: None
Date: 3/20/2013 County: Rio Blanco Filename: M070-02a
User: THM

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU Horsepower: 405
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$78.33</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$142.13</u>	<u>100</u>
Ripper Operating Cost/Hour:	<u>\$7.96</u>	<u>100</u>
Operator Cost/Hour:	<u>\$37.41</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$265.84</u>	
Total Fleet Cost/Hour:	<u>\$265.84</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 14.00 acres Rip Depth (ft): 2.00 Volume: 45,173 BCY or CCY

Source of estimated quantity: Previous Estimate

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.63 mph
Average Ripping Width: 7.67 degrees
Average Ripping Length: 500.00 feet
Average Dozer Speed: 88.00 feet
Average Maneuver Time: 0.25 feet
Production per unit area: 0.891 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.891 Acres/hr
Site Altitude: 5,875 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier
Adjusted Hourly Unit Production: 0.74 Acres/hr
Adjusted Hourly Fleet Production: 0.74 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 18.94 Hours
Unit cost: \$359.668 Per acre Total job cost: \$5,035.00

BULLDOZER WORKTask description: Spred topsoil over Phase 1Site: WRC Gravel PitPermit Action: AM-1Permit/Job#: M2008070PROJECT IDENTIFICATIONTask #: 03AState: ColoradoAbbreviation: NoneDate: 3/21/2013County: Rio BlancoFilename: M070-03aUser: THMAgency or organization name: DRMSHOURLY EQUIPMENT COSTBasic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$69.88	NA
Operating Cost/Hour:	\$142.13	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$37.41	NA

Total unit Cost/Hour: \$249.42Total Fleet Cost/Hour: \$249.42MATERIAL QUANTITIESInitial Volume: 15,730Swell factor: 1.000Loose volume: 15,730 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat HandbookHOURLY PRODUCTIONAverage push distance: 150 feetUnadjusted hourly production: 910.5 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: -10 %Average site altitude: 5,875 feetMaterial weight: 1,600 lbs/LCYWeight description: Top SoilJob Condition Correction Factor

		<u>Source</u>
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:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.0527

Adjusted unit production: 958.48 LCY/hr

Adjusted fleet production: 958.48 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.260/LCY

Total job time: 16.41 Hours

Total job cost: \$4,093.34

REVEGETATION WORKTask description: Revegetate 19.5 acres of Phase 1Site: WRC Gravel PitPermit Action: AM-1Permit/Job#: M2008070PROJECT IDENTIFICATIONTask #: 04AState: ColoradoAbbreviation: NoneDate: 3/21/2013County: Rio BlancoFilename: M070-04aUser: THMAgency or organization name: DRMSFERTILIZING**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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$98.01
Total Tilling Cost/Acre	\$98.01

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Nespar	0.90	2.91	\$6.37
Bluebunch Wheatgrass - Secar	1.50	4.82	\$10.26
Bottlebrush Squirreltail	0.50	2.20	\$12.43
Sandberg Bluegrass - VNS	0.80	16.99	\$6.94
Streambank Wheatgrass - Sodar	0.60	1.96	\$2.53
Rabbitbrush, Rubber	0.01	0.15	\$0.37
Western Wheatgrass - Rosanna	2.00	5.05	\$7.02
Sagebrush, Wyoming Big	0.01	0.59	\$0.35
Saltbush, Four Wing	0.20	0.28	\$2.15
		34.95	\$48.42

Totals Seed Mix	6.52		
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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
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$16.24	\$16.24
Straw, delivered {MEANS 31 25 14.16 1200}	1.50	TON	\$265.00	\$397.50
Total Mulch Materials Cost/Acre				\$413.74

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$65.89
Power mulcher (MEANS 32 91 13.16 0250)	\$86.68
Weed spray, truck, non-aquatic area, nox. [DMG]	\$61.49
Total Mulch Application Cost/Acre	\$214.06

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: 19.5 Cost /Acre: \$862.43
 Estimated Failure Rate: 30% Cost /Acre*: \$862.43
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: \$16,817.39
 Reseeding Job Cost: \$5,045.22
 Total Job Cost: \$21,862.60
 Job Hours: 16.00

BULLDOZER RIPPING WORK

Task description: Rip office/scale area

Site: WRC Gravel Pit

Permit Action: AM-1

Permit/Job#: M2008070

PROJECT IDENTIFICATION

Task #: 05A

State: Colorado

Abbreviation: None

Date: 3/21/2013

County: Rio Blanco

Filename: M070-05a

User: THM

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU

Horsepower: 405

Ripper Attachment: 3-Shank Ripper

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$78.33	NA
Operating Cost/Hour:	\$142.13	100
Ripper Operating Cost/Hour:	\$7.96	100
Operator Cost/Hour:	\$37.41	NA
Total Unit Cost/Hour:	\$265.84	
Total Fleet Cost/Hour:	\$265.84	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA

Bank Volume: NA

BCY NA

Area: 4.50 acres

Rip Depth (ft): 2.00

Volume: 14,520 BCY or CCY

Source of estimated quantity: Previous Estimate

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	<u>2.63</u>	mph
Average Ripping Width:	<u>7.67</u>	degrees
Average Ripping Length:	<u>500.00</u>	feet
Average Dozer Speed:	<u>88.00</u>	feet
Average Maneuver Time:	<u>0.25</u>	feet
Production per unit area:	<u>0.891</u>	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production:	<u>0.891</u>	Acres/hr
Site Altitude:	<u>5,875</u>	feet
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.83</u>	multiplier

Adjusted Hourly Unit Production: 0.74 Acres/hr

Adjusted Hourly Fleet Production: 0.74 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 6.09 Hours

Unit cost: \$359.668 Per acre Total job cost: \$1,619.00

REVEGETATION WORKTask description: Revegetate 4.5 acres of fice/scale areaSite: WRC Gravel PitPermit Action: AM-1Permit/Job#: M2008070PROJECT IDENTIFICATIONTask #: 06AState: ColoradoAbbreviation: NoneDate: 3/21/2013County: Rio BlancoFilename: M070-06aUser: THMAgency or organization name: DRMSFERTILIZING**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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$98.01
Total Tilling Cost/Acre	\$98.01

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Nespar	0.90	2.91	\$6.37
Bluebunch Wheatgrass - Secar	1.50	4.82	\$10.26
Bottlebrush Squirreltail	0.50	2.20	\$12.43
Sandberg Bluegrass - VNS	0.80	16.99	\$6.94
Streambank Wheatgrass - Sodar	0.60	1.96	\$2.53
Rabbitbrush, Rubber	0.01	0.15	\$0.37
Western Wheatgrass - Rosanna	2.00	5.05	\$7.02
Sagebrush, Wyoming Big	0.01	0.59	\$0.35
Saltbush, Four Wing	0.20	0.28	\$2.15
		34.95	\$48.42

Totals Seed Mix	6.52		
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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
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$16.24	\$16.24
Straw, delivered {MEANS 31 25 14.16 1200}	1.50	TON	\$265.00	\$397.50
Total Mulch Materials Cost/Acre				\$413.74

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$65.89
Power mulcher (MEANS 32 91 13.16 0250)	\$86.68
Weed spray, truck, non-aquatic area, nox. [DMG]	\$61.49
Total Mulch Application Cost/Acre	\$214.06

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: 4.5 Cost /Acre: \$862.43
 Estimated Failure Rate: 30% Cost /Acre*: \$862.43
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: \$3,880.94
 Reseeding Job Cost: \$1,164.28
 Total Job Cost: \$5,045.22
 Job Hours: 8.00

BULLDOZER WORKTask description: Establish 3H:1V Slopes Phase 2aSite: WRC Gravel PitPermit Action: AM-1Permit/Job#: M2008070**PROJECT IDENTIFICATION**Task #: 07AState: ColoradoAbbreviation: NoneDate: 3/21/2013County: Rio BlancoFilename: M070-07aUser: THMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$56.69	NA
Operating Cost/Hour:	\$104.03	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$37.41	NA

Total unit Cost/Hour: \$198.13Total Fleet Cost/Hour: \$198.13**MATERIAL QUANTITIES**Initial Volume: 23,250Swell factor: 1.125Loose volume: 26,156 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 1,400.0 LCY/hrMaterials consistency description: Consolidated stockpile 1.0Average push gradient: -25 %Average site altitude: 5,875 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**Job Condition Correction Factor**

		<u>Source</u>
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:	1.516	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6553

Adjusted unit production: 917.42 LCY/hr

Adjusted fleet production: 917.42 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.216/LCY

Total job time: 28.51 Hours

Total job cost: \$5,648.86

BULLDOZER RIPPING WORK

Task description: Rip Phase 2a Pit Floor prior to topsoil placement

Site: WRC Gravel Pit

Permit Action: AM-1

Permit/Job#: M2008070

PROJECT IDENTIFICATION

Task #: 08A

State: Colorado

Abbreviation: None

Date: 3/21/2013

County: Rio Blanco

Filename: M070-08a

User: THM

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU

Horsepower: 405

Ripper Attachment: 3-Shank Ripper

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$78.33	NA
Operating Cost/Hour:	\$142.13	100
Ripper Operating Cost/Hour:	\$7.96	100
Operator Cost/Hour:	\$37.41	NA
Total Unit Cost/Hour:	\$265.84	
Total Fleet Cost/Hour:	\$265.84	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA

Bank Volume: NA

BCY

NA

Area: 11.90 acres

Rip Depth (ft): 2.00

Volume: 38,397

BCY or CCY

Source of estimated quantity: Previous Estimate

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	<u>2.63</u>	mph
Average Ripping Width:	<u>7.67</u>	degrees
Average Ripping Length:	<u>500.00</u>	feet
Average Dozer Speed:	<u>88.00</u>	feet
Average Maneuver Time:	<u>0.25</u>	feet
Production per unit area:	<u>0.891</u>	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.891 Acres/hr

Site Altitude: 5,875 feet

Altitude Adj: 1.00 (CAT HB)

Job Efficiency: 0.83 (1 shift/day)

Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.74 Acres/hr

Adjusted Hourly Fleet Production: 0.74 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 16.10 Hours

Unit cost: \$359.668 Per acre Total job cost: \$4,280.00

BULLDOZER WORKTask description: Spred topsoil over Phase 2aSite: WRC Gravel PitPermit Action: AM-1Permit/Job#: M2008070**PROJECT IDENTIFICATION**Task #: 09AState: ColoradoAbbreviation: NoneDate: 3/21/2013County: Rio BlancoFilename: M070-09aUser: THMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$69.88	NA
Operating Cost/Hour:	\$142.13	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$37.41	NA

Total unit Cost/Hour: \$249.42Total Fleet Cost/Hour: \$249.42**MATERIAL QUANTITIES**Initial Volume: 11,858Swell factor: 1.000Loose volume: 11,858 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 150 feetUnadjusted hourly production: 910.5 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: -10 %Average site altitude: 5,875 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
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:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.0527

Adjusted unit production: 958.48 LCY/hr

Adjusted fleet production: 958.48 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.260/LCY

Total job time: 12.37 Hours

Total job cost: \$3,085.75

REVEGETATION WORKTask description: **Revegetate 14.7 acres of Phase 2a**Site: **WRC Gravel Pit**Permit Action: **AM-1**Permit/Job#: **M2008070****PROJECT IDENTIFICATION**Task #: **10A**State: **Colorado**Abbreviation: **None**Date: **3/21/2013**County: **Rio Blanco**Filename: **M070-10a**User: **THM**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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$98.01
Total Tilling Cost/Acre	\$98.01

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Nespar	0.90	2.91	\$6.37
Bluebunch Wheatgrass - Secar	1.50	4.82	\$10.26
Bottlebrush Squirreltail	0.50	2.20	\$12.43
Sandberg Bluegrass - VNS	0.80	16.99	\$6.94
Streambank Wheatgrass - Sodar	0.60	1.96	\$2.53
Rabbitbrush, Rubber	0.01	0.15	\$0.37
Western Wheatgrass - Rosanna	2.00	5.05	\$7.02
Sagebrush, Wyoming Big	0.01	0.59	\$0.35
Saltbush, Four Wing	0.20	0.28	\$2.15
		34.95	\$48.42

Totals Seed Mix	6.52		
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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
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$16.24	\$16.24
Straw, delivered {MEANS 31 25 14.16 1200}	1.50	TON	\$265.00	\$397.50
Total Mulch Materials Cost/Acre				\$413.74

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$65.89
Power mulcher (MEANS 32 91 13.16 0250)	\$86.68
Weed spray, truck, non-aquatic area, nox. [DMG]	\$61.49
Total Mulch Application Cost/Acre	\$214.06

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: 14.7 Cost /Acre: \$862.43
 Estimated Failure Rate: 30% Cost /Acre*: \$862.43
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: \$12,677.72
 Reseeding Job Cost: \$3,803.32
 Total Job Cost: \$16,481.04
 Job Hours: 16.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilization**Site: **WRC Gravel Pit**Permit Action: **AM-1**Permit/Job#: **M2008070****PROJECT IDENTIFICATION**Task #: **11A**State: **Colorado**Abbreviation: **None**Date: **3/21/2013**County: **Rio Blanco**Filename: **M070-11a**User: **THM**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 D9T - 9SU	66.13	\$78.33	\$125.45	1	\$203.78	\$125.45	\$250.00
Water Tanker, 7,000 Gal.	29.65	\$33.04	\$117.55	1	\$150.59	\$117.55	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$39.59	\$88.67	1	\$128.26	\$88.67	\$250.00
Power Mulcher (Reinco M90)	6.00	\$7.03	\$88.67	1	\$95.70	\$88.67	\$250.00

Subtotals: **\$578.33** **\$420.34** **\$1,000.00****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.	\$15.34	2	\$30.68	\$30.68

Subtotals: **\$30.68** **\$30.68**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>MEEKER</u>	
Total one-way travel distance:	<u>15.00</u>	miles
Average Travel Speed:	<u>45.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$3,822.44</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$20.45</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

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

JOB TIME AND COST

Total job time:	<u>3.33</u>	Hours
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Total job cost:	<u>\$3,842.89</u>
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