# 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

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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,

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

Filename:

M070-001

Task description:

Date:

Site:	WRC Gr	avel Pit	117.1	Permit Action:	AM-1	Permit/Jo	b#: <u>M2008</u>	070
l	PROJECT	<b>IDENTIFICATION</b>						
	Task #:	001	State:	Colorado		Abbreviation:	None	

Rio Blanco

User: THM

Agency or organization name: DRMS

County:

#### TASK LIST (DIRECT COSTS)

3/21/2013

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>SUBT(</u>	DTALS:	195.33	\$81,611.12

#### **INDIRECT COSTS**

#### **OVERHEAD AND PROFIT:**

Liability insurance: Performance bond: Job superintendent: Profit:	1.05%	Total = Total =	
LEGAL - ENGINEERING - PF	OIFCT MANAG		<i> </i>
PROVE - PHOLIAPPINIAO - LL	COLOT MINIMO		

#### Financial warranty processing (legal/related costs): 500.00 Total = 500.00 Engineering work and/or contract/bid preparation: 0.00% Total = \$0.00 \$4,933.30 Reclamation management and/or administration: 5.00% CONTINGENCY: 3.00 Total = \$2,448.33 TOTAL INDIRECT COST = \$24,936.47

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<b>BULLDOZER</b>	WORK
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WRC Gravel Pit	Permit Action:	AM-1	Permit/Job#:	M2008070
PROJECT IDENTIFICAT	ION			
Task #: 01A	State: Colorado		Abbreviation:	None
Date: $3/20/2013$	County: Rio Blanco		Filename:	M070-01a
User: THM				
Agency or organization	on name: DRMS			
HOURLY EQUIPMENT	COST			
Basic Machine: Cat D8T	- 8SU			
Horsepower: 310				
Blade Type: Semi-Un	iversal	-		
Attachment: NA				
Shift Basis: 1 per day Data Source: (CRG)		_		
Cost Breakdown:				
		Utilization %		
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		
MATERIAL QUANTITIIInitial Volume:43,700Swell factor:1.125Loose volume:49,163 Loope				
Source of estimated volume: Source of estimated swell factor	Division of Reclamation: Cat Handbook	on, Mining & Safety		
HOURLY PRODUCTION	4			
Average push distance:	- 50 feet			
Unadjusted hourly production:				
Materials consistency descript	ion:Consolidated stock	pile 1.0		
Average push gradient: -2:	5 %			
	375 feet			
Material weight:2,6	550 lbs/LCY			
Weight description:De	composed rock - 25% Rock	, 75% Earth		
Job Condition Correction Fact	or	Source		
Job Condition Correction Fact Operator Skill	<u>or</u> 0.750	Source (AVG.)		
Job Condition Correction Fact	or0.7501.000	Source		

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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)

Adjusted unit production:	917.42 LCY/hr	
Adjusted fleet production:	917.42 LCY/hr	

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

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	Task description:	Rip Phas	e 1 Pit Floor prior	to topsoil placemen	it					
Site:	WRC Gravel P	Pit	Permit Action:	AM-1	Permit/Job#:	M2008070				
	PROJECT IDE	<b>NTIFICATION</b>								
	Task #: 02A		State: Colorado		Abbreviation:	None				
			County: Rio Blanc	0	Filename:	M070-02a				
	User: THM									
	Agency	or organization nam	e: DRMS							
	HOURLY EQU	JIPMENT COST	-							
		Aachine: <u>Cat D9</u>			lorsepower:	405				
	Ripper Atta	chment: <u>3-Shanl</u>	(Ripper			per day				
				L	Data Source: (	CRG)				
	Cost Breakdown:			I J1	tilization %					
		Ownership Cost/H	Iour: \$78	3.33	NA					
		Operating Cost/H	141	2.13	100					
	Ripp	er Operating Cost/H		.96	100					
		Operator Cost/H	lour: \$3'	7.41	NA					
		Total Unit Cost/H	lour: \$26	5.84						
		Total Fleet Cost/H	lour: \$26	5.84						
	MATERIAL Q	UANTITIES	Sel	ected estimating me	ethod: Area					
	Alternate Method			5						
Seismic:	NA		Bank Volume:	NA	BCY	NA				
Area:	14.00	acres	Rip Depth (ft):	2.00	Volume: 45,173	BCY or CC				
	-	Source of estimate	d quantity: Previo	us Estimate						
	HOURLY PRO	<u>JUCTION</u>								
	<u>Seismic:</u>	Seis	mic Velocity:	NA	feet/second					
		000								
	Area:	Average R	ipping Depth:	2.63	mph					
			ipping Width:	7.67	degrees					
			oping Length:	500.00	feet					
			Dozer Speed:	88.00	feet					
		0	neuver Time:	0.25	feet					
		Production	per unit area:	0.891	acres/hour					
	Job Condition Co	rrection Factors								
	Una	adjusted Hourly Un	it Production:	0.891	Acres/hr					
			Site Altitude:	5,875	feet					
			Altitude Adj:	1.00	(CAT HB)					
			ob Efficiency:	0.83	(1 shift/day)					
		N	et Correction:	0.83	multiplier					
		Adjusted Ho	urly Unit Production	0.74	Acres/hr					
			rly Fleet Production		Acres/hr					
	JOB TIME AN	ID COST								
	Fleet size:	<u>1</u> C	irader(s)	Total job time:	18.94	Hours				
	Unit cost:	\$359.668 P	er acre	Total job cost:	\$5,035.00					
	01111 0031.	4555,000 1		100 0000	20,000100					

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# BULLDOZER WORK

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Task description:	Spree	l topsoil over Phase 1			
WRC Gravel Pit		Permit Action:	AM-1	Permit/Job#:	M2008070
PROJECT IDEN	TIFICATIO	DN			
Task #: 03A		State: Colorado		Abbreviation:	None
Date: $3/21/2$	013	County: Rio Blanco		Filename:	M070-03a
User: THM	015	County. Rio Dianeo		T fieldifie.	101070-050
Agency or	organization	name: DRMS			
HOURLY EQUI	PMENT CC	<u>IST</u>			
Basic Machine:	Cat D9T - 9	SU			
Horsepower:	405				
Blade Type:	Semi-Unive	rsal			
Attachment:	NA				
Shift Basis:	1 per day				
Data Source:	(CRG)				
Cost Breakdown:					
COST DIEakuowii.		Ĩ	Utilization %		
Ownership Cost/H	0115.	\$69.88	NA		
Operating Cost/H		\$142.13	100		
Ripper op. Cost/H		\$0.00	0		
•• •			· · · · · · · · · · · · · · · · · · ·		
Operator Cost/H	our:	\$37.41	NA		
Total unit Cost/Hou	r: \$249.4	12			
Total Fleet Cost/Hor	-				
1010111001 0000110		•			
MATERIAL QU	ANTITES				
Initial Volume:	15,730				
Swell factor:	1.000				
Loose volume:	15,730 LCY				
	13,750 LC I	<u>`</u>			
Source of estimated	volume:	Division of Reclamation	on, Mining & Safety		
Source of estimated	swell factor:	Cat Handbook			
HOURLY PROD	UCTION				
Average push distar		150 feet			
Unadjusted hourly p	production:	910.5 LCY/hr			
Materials consistend	cy description	: Loose stockpile 1.2			
Average push gradi					
Average site altitude	e: 5,875	feet			
Material weight:	1,600	lbs/LCY			
Weight description:	Top S	oil			
Job Condition Corre	ection Factor		Source		
	rator Skill:	0.750	(AVG.)		
Material co		1.200	(CAT HB)		
	ng method:	1.000	(GEN.)		
DUZII	ig memou.	1.000	(OLN.)		

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)

Adjusted unit production:	958.48 LCY/hr	
Adjusted fleet production:	958.48 LCY/hr	

Fleet size:	1 Dozer(s)
Unit cost:	\$0.260/LCY

Total job time:	16.41 Hours
Total job cost:	\$4,093.34

# **REVEGETATION WORK**

te:	WRC Gra	avel Pit	Pen	mit Action:	AM-1	Permit/Job#:	M2008070
I	ROJECT	<u>IDENTIFI</u>	<u>CATION</u>				
	Task #:	04A	State:	Colorado		Abbreviation:	None
	Date:	3/21/2013	County:	Rio Blanco	)	Filename:	M070-04a
	User:	THM					

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

# Application

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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
					\$
		Tot	als Nursery Stoc	ek Cost / Acre	\$0.00

No. of Acres:	19.5	Cost /Acre:	\$862.43
Estimated Failure Rate:	30%	Cost /Acre*:	\$862.43
*Selected Replanting Work Items:	TILLING, SEEDIN	G,MULCHING	

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

v 6			BULLDOZER ]	RIPPING WOR	K			
	Task description:	Rip o	ffice/scale area					
Site	WRC Gravel	Pit	Permit Action:	AM-1	Permi	it/Job#:	M2008	8070
	PROJECT IDE	ENTIFICATIO	)N					
	Task #:05A	A	State: Colorado		Abbrevi		None	
	User: TH	1/2013 M	County: Rio Blan	CO	Filer	name:	M070-0	15a
	Agency	or organization	name: DRMS					
	HOURLY EQU	-						
							105	
	Ripper Atta		D9T - 9SU nank Ripper		Horsepower: Shift Basis:		405 ber day	
					Data Source:		CRG)	
	Cost Breakdown:							
		Ownership Co	st/Hour: \$7	/8.33	Itilization % NA			
		Operating Co		42.13	100			
	Ripp	per Operating Co	st/Hour: \$	7.96	100			
		Operator Co Total Unit Co		7.41	NA			
				65.84				
		Total Fleet Co	st/Hour: <b>\$2</b> 0	65.84				
	MATERIAL Q	UANTITIES	Se	lected estimating m	ethod: Area			
	Alternate Method	<u>ls:</u>						
Seismic:	NA		Bank Volume:	NA	BCY		NA	
Area:	4.50	acres	Rip Depth (ft):	2.00	Volume: 14,5	20		BCY or CCY
		Source of estim	ated quantity: Previ	ous Estimate				
	HOURLY PRO	<b>DDUCTION</b>						
	Seismic:							
		S	eismic Velocity:	NA	feet/second			
	Area:							
			Ripping Depth:	2.63	mph			
			Ripping Width: Ripping Length:	7.67 500.00	degrees feet			
			ge Dozer Speed:	88.00	feet			
			Maneuver Time:	0.25	feet			
		Product	ion per unit area:	0.891	acres/hour			
	Job Condition Co	rrection Factors						
	Una	adjusted Hourly	Unit Production:	0.891	Acres/hr			
			Site Altitude:	5,875	feet			
			Altitude Adj:	1.00	(CAT HB)			
			Job Efficiency: Net Correction:	0.83	(1 shift/day multiplier	)		
		A 1° / 1 1			·			
		-	Hourly Unit Production Iourly Fleet Production		Acres/hr Acres/hr			
	JOB TIME AN	-						
	Fleet size:	1	Grader(s)	Total job time:	6.09	)	ц	ours
		\$250 CCP		·			I ]	
	Unit cost:	\$359.668	Per acre	Total job cost:	\$1,619	.00		

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Materials Cost/Acre

\$0.00

# **REVEGETATION WORK**

	ption:	Revegetate 4.5 ac	cres of fice/scale	area		
WRC G	ravel Pit	Permit Action: AM-1		Permit/Job#	: M2008070	
PROJECT	<u>r identifi</u>	CATION				
Task #:	06A	State:	Colorado		Abbreviation:	None
Date:	3/21/2013	County:	Rio Blanco		Filename:	M070-06a
User:	THM					
Ag	gency or organ	ization name: DR	RMS			
Ag FERTILI Materials		lization name:DR				
FERTILI	ZING	lization name:DF	Units / Acre	Unit	Cost / Unit	Cost /Acre
FERTILI Materials	ZING	lization name:DF	Units /	Unit	Cost / Unit \$	Cost /Acre \$

# Application

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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

#### Application

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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
					\$
		Tot	als Nursery Stoc	ek Cost / Acre	\$0.00

No. of Acres:	4.5	Cost /Acre:	\$862.43	
Estimated Failure Rate:	30%	Cost /Acre*:	\$862.43	
*Selected Replanting Work Items:	TILLING, SEEDIN	G,MULCHING		

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

#### Page 1 of 2

# BULLDOZER WORK

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WRC Gravel Pit	Permit Action:	AM-1	Permit/Job#:	M2008070
;				1112000070
PROJECT IDENTIF	<b>ICATION</b>			
Task #: 07A	State: Colorado		Abbreviation:	None
Date: 3/21/2013	County: Rio Blance	0	Filename:	M070-07a
User: THM			-	
Agency or orga	nization name: DRMS			
Ageney of orga				
<b>IOURLY EQUIPMI</b>	ENT COST			
Basic Machine: Ca	t D8T - 8SU			
Horsepower: 310	0			
Blade Type: Ser	mi-Universal			
Attachment: NA	Λ			
Shift Basis: 1 p	er day			
Data Source: (Cl	RG)			
Cost Breakdown:				
our Diguido WII.		Utilization %		
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		
openner oberreari	φοτιτι	110		
otal unit Cost/Hour:	\$198.13			
otal unit Cost/Hour: otal Fleet Cost/Hour:	\$198.13 <b>\$198.13</b>			
otal Fleet Cost/Hour:	\$198.13			
	\$198.13			
otal Fleet Cost/Hour:	\$198.13 <u>CITIES</u>			
otal Fleet Cost/Hour:	\$198.13 <u>CITIES</u> 250			
Total Fleet Cost/Hour:         Initial Volume:         23,2         Swell factor:	\$198.13 <u>CITIES</u> 250			
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1	\$198.13 <u>FITIES</u> 250 25 56 LCY			
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu	\$198.13 <b>FITIES</b> 250           25           56 LCY           me:         Division of Reclamati			
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1	\$198.13 <u>FITIES</u> 250 25 56 LCY me: Division of Reclamati			
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu         ource of estimated swel	\$198.13         CITTIES         250         25         56 LCY         me:       Division of Reclamati         1 factor:       Cat Handbook			
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu       ource of estimated swel         HOURLY PRODUCT       1000000000000000000000000000000000000	\$198.13         CITIES         250         25         25         25         25         25         25         25         25         25         25         25         25         25         25         26         27         me:       Division of Reclamati         I factor:       Cat Handbook			
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu       ource of estimated swel         HOURLY PRODUCT       Average push distance:	\$198.13         CITIES         250         25         256 LCY         me:       Division of Reclamati         1 factor:       Cat Handbook         TION         50 feet			
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu       ource of estimated swel         HOURLY PRODUCT       1000000000000000000000000000000000000	\$198.13         CITIES         250         25         25         26 LCY         me:       Division of Reclamati         1 factor:       Cat Handbook         TION         50 feet			
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu       ource of estimated swel         HOURLY PRODUCT       Verage push distance:         Unadjusted hourly produ	\$198.13         CITIES         250         25         25         25         25         25         25         25         25         25         26 LCY         me:       Division of Reclamati         I factor:       Cat Handbook         TION         50 feet         ction:       1,400.0 LCY/hr	ion, Mining & Safety		
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu       ource of estimated swel         HOURLY PRODUCT       Average push distance:	\$198.13         CITIES         250         25         25         25         25         25         25         25         25         25         26         27         me:       Division of Reclamati         I factor:       Cat Handbook         TION         50 feet         ction:       1,400.0 LCY/hr	ion, Mining & Safety		
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu       ource of estimated swel         HOURLY PRODUCT       Verage push distance:         Unadjusted hourly produ	\$198.13         CITIES         250         25         25         25         25         25         25         25         25         25         26 LCY         me:       Division of Reclamati         I factor:       Cat Handbook         TION         50 feet         ction:       1,400.0 LCY/hr	ion, Mining & Safety		
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu       0         ource of estimated swel       3         HOURLY PRODUCT       1         Average push distance:       1         Inadjusted hourly produ       1	\$198.13         CITIES         250         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         26         27         28         29         29         20         20         20         20         20         20         20         20         20         20         20         20         20         20         20         20         20         20         20         20         20         20         20         20         20	ion, Mining & Safety		
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu       ource of estimated swel         HOURLY PRODUCT         Verage push distance:         Inadjusted hourly produ         Materials consistency destruction         Average push gradient:         Verage site altitude:	\$198.13         CITTIES         250         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         50 feet         ction:         1,400.0 LCY/hr         scription:         _Consolidated stockp         -25 %	ion, Mining & Safety		
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu       000000000000000000000000000000000000	\$198.13         CITTIES         250         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         50 feet         ction:         1,400.0 LCY/hr         scription:         _Consolidated stockp         -25 %	ion, Mining & Safety		
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu       ource of estimated swel         HOURLY PRODUCT         Verage push distance:         Inadjusted hourly produ         Materials consistency destruction         Average push gradient:         Verage site altitude:	\$198.13         FITIES         250         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         Cat Handbook         TION         50 feet         ction:         1,400.0 LCY/hr         scription:         Consolidated stocky         -25 %         5,875 feet	ion, Mining & Safety		
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu       000000000000000000000000000000000000	\$198.13         CITTIES         250         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         2,650 lbs/LCY         Decomposed rock - 25% Rock	ion, Mining & Safety pile 1.0		
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu       0         ource of estimated swel       0         HOURLY PRODUCT       1         Average push distance:       1         Unadjusted hourly produ       1         Aterials consistency des       1         Average push gradient:       1         Verage site altitude:       1         Aterial weight:       1         Veight description:       1         Ob Condition Correction       1	\$198.13         FITIES         250         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         2,650 lbs/LCY         Decomposed rock - 25% Rock	ion, Mining & Safety pile 1.0 , 75% Earth Source		
Total Fleet Cost/Hour:         Initial Volume:       23,2         Swell factor:       1.12         Loose volume:       26,1         ource of estimated volu       000000000000000000000000000000000000	\$198.13         CITIES         250         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         201         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25         25 <td>ion, Mining &amp; Safety pile 1.0</td> <td></td> <td></td>	ion, Mining & Safety pile 1.0		

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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:	l Dozer(s)	
Unit cost:	\$0.216/LCY	
Total job time:	28.51 Hours	

Total job cost: \$5,648.86

17 4	ka:	Ē	ULLDOZER RI	PPING WORK			
	Task description:	<b>Rip Phase 2a</b>	Pit Floor prior	to topsoil placen	nent		
Site:	WRC Gravel I	Pit	Permit Action:	AM-1	Perm	it/Job#: M	2008070
	PROJECT IDE	<b>NTIFICATION</b>					
	Task #: 08A		e: Colorado		Abbrevi	iation: No	ne
		/2013 Count	: Rio Blanco		File		070-08a
	User: TH						
	Agency	or organization name:	DRMS				
	HOURLY EQU	JIPMENT COST					
		Aachine: Cat D9T - 9S		_	Horsepower:	405	
	Ripper Atta	chment: <u>3-Shank Ripp</u>	er		Shift Basis: Data Source:	1 per da (CRG)	
	Cost Breakdown:					(CKU)	)
	COSt DIeakuowii.			τ	Jtilization %		
		Ownership Cost/Hour:	\$78.		NA		
	Rinn	Operating Cost/Hour: er Operating Cost/Hour:	\$142 \$7.9		100		
	Кірр	Operator Cost/Hour:	\$7.		NA		
		Total Unit Cost/Hour:	\$265	.84			
		Total Fleet Cost/Hour:	\$265	.84			
	MATERIAL Q	<b>UANTITIES</b>	Sele	cted estimating m	nethod: Area		
	Alternate Method	<u>S:</u>					
Seismic:	NA	Е	ank Volume:	NA	BCY	NA	
Area:	11.90	acres R	ip Depth (ft): _	2.00	Volume: 38,3		BCY or CCY
		Source of estimated qua	ntity: Previou	s Estimate			
	HOURLY PRO	DUCTION					
	Seismic:						
		Seismic V	elocity:	NA	feet/second	I	
	Area:						
		Average Ripping		2.63	mph		
		Average Ripping Average Ripping		7.67 500.00	degrees feet		
		Average Dozer		88.00	feet		
		Average Maneuve		0.25	feet		
		Production per un		0.891	acres/hour		
	Job Condition Con	rection Factors					
	Una	djusted Hourly Unit Prod	luction:	0.891	Acres/hr		
		Site A	ltitude:	5,875	feet		
			de Adj:	1.00	(CAT HB)		
		Job Eff		0.83	(1 shift/day	/)	
		Net Cor	rection:	0.83	multiplier		
		Adjusted Hourly U		0.74	Acres/hr		
		Adjusted Hourly Flo	eet Production:	0.74	Acres/hr		
	JOB TIME AN	<u>D COST</u>					
	Fleet size:	1 Grader(	s)	Total job time:	16.1	0	Hours
	Unit cost:	\$359.668 Per acre	2	Total job cost:	\$4,280	).00	_

# BULLDOZER WORK

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WRC Gravel Pit	Permit Action:	AM-1	Permit/Job#:	M2008070
PROJECT IDENTIFICATask #:09ADate:3/21/2013User:THM	TION State: Colorado County: Rio Blanco		Abbreviation: Filename:	None M070-09a
Agency or organizat	on name: DRMS			
HOURLY EQUIPMENT	COST			
Basic Machine:Cat D97Horsepower:405Blade Type:Semi-UiAttachment:NAShift Basis:1 per daData Source:(CRG)	niversal			
Cost Breakdown: Ownership Cost/Hour: Operating Cost/Hour: Ripper op. Cost/Hour:	\$69.88 \$142.13	Utilization % NA 100 0		
Operator Cost/Hour:	\$0.00 \$37.41	NA		
MATERIAL QUANTITI         Initial Volume:       11,858         Swell factor:       1.000         Loose volume:       11,858 L         Source of estimated volume:       Source of estimated swell factor	CY Division of Reclamation or: Cat Handbook	on, Mining & Safety	<u></u>	
HOURLY PRODUCTIO	<u>N</u> 150 feet			
Unadjusted hourly production				
Materials consistency descript	ion: Loose stockpile 1.2			
	0 % 375 feet			
Material weight: 1,	600 lbs/LCY			
Weight description:To	op Soil			
Job Condition Correction Fac Operator Skill	. 0.750	Source (AVG.)		
Material consistency Dozing method		(CAT HB) (GEN.)		

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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)

Adjusted unit production:	958.48 LCY/hr	
Adjusted fleet production:	958.48 LCY/hr	

	Fleet size:	1 Dozer(s)	
	Unit cost:	\$0.260/LCY	
Т	tal ich time.	13 27 House	

Total job time:	12.37 Hours
Total job cost:	\$3,085.75

# **REVEGETATION WORK**

Task des	cription:	Revegetate 14.7 acres of Phase 2a			
Site: WRC	e: WRC Gravel Pit Permit Action: AM-1		Permit/Job#:	M2008070	
<u>PROJE</u>	CT IDENTIF	<b>ICATION</b>			
Task	ŧ: 10A	State:	Colorado	Abbreviation:	None
Date	: 3/21/2013	County:	Rio Blanco	Filename:	M070-10a
	r: THM				

# FERTILIZING

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

#### Application

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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
					\$
		Tot	als Nursery Stoc	k Cost / Acre	\$0.00

No. of Acres:	14.7	Cost /Acre:	\$862.43	
Estimated Failure Rate:	30%	Cost /Acre*:	\$862.43	
*Selected Replanting Work Items:	TILLING, SEEDING	G,MULCHING		

\$12,677.72	
\$3,803.32	
\$16,481.04	
16.00	
	\$3,803.32 \$16,481.04

0 11 123

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

inte onure	l Pit	Permit A	Action: <u>AM-1</u>		Pe	ermit/Job#:	M200	8070
PROJECT II	<b>ENTIFICAT</b>	ION						
Task #: _11	IA	State: Co	olorado		Abbr	eviation:	None	
	21/2013 HM	County: Ri	o Blanco		F	ilename:	M070-	11a
Agenc	y or organization	n name:DRMS						
EQUIPMENT	T TRANSPOR	<u>AT RIG COST</u>						
					Shift ba	asis: 1	per day	,
					Cost Data Sou		G Data	
Tru	ick Tractor Desc	ription: GEN	ERIC ON-HIGH	WAY TR	UCK TRACTO	OR, 6X4, DI	ESEL I	POWERED,
Τ				400 HI	P (2ND HALF,	2006)		
1 m	uck Trailer Desc	ription: GENE	RIC FOLDING		ECK, DROP I , 50T, AND 10		IPMEN	T TRAILER
				(231	, 501, AND IC	J01)		
Cost Breakdown	<u>1:</u>							
Available Rig (		0-25 Tons	26-50 Tons	51	+ Tons			
	ip Cost/Hour:	\$16.63	\$18.37		22.33			
	ng Cost/Hour:	\$44.38	\$46.13		50.07			
	or Cost/Hour:	\$27.66	\$27.66		27.66			
	er Cost/Hour:	\$0.00	\$25.39		25.39			
Total Ui	nit Cost/Hour:	\$88.67	\$117.55	\$	125.45			
NON ROADA	BLE EQUIP	MENT:						
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Tr	i <b>p</b>	DOT Perm
Description	Unit	Cost/hr/ unit	Cost/hr/unit	Size	Cost/hr/	Cost/hr/ f		Cost/ fleet
	(TONS)				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	25.00 or	\$39.59	\$88.67	1	\$128.26	\$88.67		\$250.00
Seeder with Tract		\$7.03	\$88.67	1	\$95.70	\$88.67		\$250.00

# **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

#### Task # 11A

### **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	MEEKER 15.00 45.00	miles mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$3,822.44	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$20.45	

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: **3.33** Hours

Total job cost: \$3,842.89