

1313 Sherman Street, Room 215 Denver, Colorado 80203

May 05, 2016

Alan Frantz Rough Cut, L.L.C. 15645 Rd. GG Rocky Ford, CO 81067

Re: Rough Cut Pit, Permit No. M-2001-033, Technical Revision No. 03, Adequacy Review

Mr. Frantz:

The Division of Reclamation, Mining and Safety (Division) received your Technical Revision application (Revision No. TR-03) for the Rough Cut Pit, Permit No. M-2001-033, which is located in Otero County. The revision requested addresses the following item(s):

Increase maximum allowed disturbed acreage from 45 acres to 55 acres

The Division reassessed the required financial warranty for current disturbance at this site, and found the currently held financial warranty to be inadequate to complete reclamation in accordance with the approved reclamation plan. The Division has calculated a required financial warranty in the amount of \$236,953.00, which is \$43,953.00 more than the currently held financial warranty of \$193,000.00. Please review the enclosed Cost Summary Work and submit any comments by the decision date.

You might consider taking this opportunity to make any additional revisions to the approved mining plan or reclamation plan through Technical Revision No. 03 which will reduce liability at the site (e.g., maintain mining walls at 3H:1V slopes rather than the current 0H:1V slopes). You may also reduce liability at the site now (e.g., grade highwalls to 3H:1V slopes, replace topsoil on and/or revegetate disturbed land that will not be redisturbed by the operation) and submit evidence of completion by the decision date.

Please submit the requested information by the decision date of May 25, 2016. If the Division does not receive a response from you by that time, a Surety Increase letter for the amount listed above will be mailed to you. At that time, you will have 60 days to post the additional required Financial Warranty, per Rule 4.2.1(2).

If you have any questions, please contact me by telephone at 303-866-3567, extension 8129, or by email at <a href="mailto:amy.eschberger@state.co.us">amy.eschberger@state.co.us</a>.

Sincerely,

Amy Eschberger

any Euchberger

**Environmental Protection Specialist** 



Enclosure(s): Cost Summary Work

Cc: Wally Erickson, DRMS

# **COST SUMMARY WORK**

: Rough C	ut Pit	I	Permit Action:	Inspection 1/13/16	Permit/Job	#: <u>M2001033</u>
PROJECT	<u>IDENTIFI</u>	CATION				
Task #: Date:	000 3/7/2016 AME	State County			Abbreviation: Filename:	None M033-000

# TASK LIST (DIRECT COSTS)

Task	5	Form	Fleet	Task	Cost
	Description	Used	Size	Hours	Cost
001	W. Area - Grade highwall from 0H:1V to 3H:1V	DOZER	2	4.23	\$1,848.00
002	W. Area - Rip 30 ac stockpiling/processing/storage	RIPPER	2	21.72	\$9,652.00
	area				
003	W. Area - Replace Topsoil on 33.2 acres	SCRAPER1	1	22.81	\$16,772.00
004	W. Area - Revegetate 33.2 acres to rangeland	REVEGE	1	120.00	\$64,911.00
005	W. Area - Revegetate 15 acres to rangeland	REVEGE	1	60.00	\$29,327.00
006	Center Area - Grade highwall from 0H:1V to	DOZER	2	2.54	\$1,109.00
	3H:1V				
007	Center Area - Rip 17 ac stockpiling area	RIPPER	2	12.30	\$5,469.00
008	Center Area - Replace Topsoil on 17.75 acres	SCRAPER1	1	10.56	\$7,764.00
009	Center Area - Revegetate 17.75 acres to rangeland	REVEGE	1	71.00	\$34,704.00
010	Center Area - Revegetate 8.25 acres to rangeland	REVEGE	1	32.00	\$16,130.00
011	East Area - Grade highwall from 0H:1V to 3H:1V	DOZER	1	0.15	\$33.00
012	East Area - Rip 0.5 ac stockpiling area	RIPPER	1	0.85	\$190.00
013	East Area - Replace Topsoil on 1.5 acres	SCRAPER1	1	1.63	\$460.00
014	East Area - Revegetate 1.5 acres to rangeland	REVEGE	1	4.00	\$2,933.00
015	Mobilization/Demobilization	MOBILIZE	1	4.74	\$7,861.00
	SUBTOTALS:				\$199,163

### **INDIRECT COSTS**

### OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$4,023.09
Performance bond:	1.05	Total =	\$2,091.21
Job superintendent:	0.00	Total =	\$0.00
Profit:	10.00	Total =	\$19,916.30

TOTAL O & P = \$26,030.60 CONTRACT AMOUNT (direct + O & P) = \$225,193.60

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	500.00	Total =	500.00
Engineering work and/or contract/bid preparation:	0.00	Total =	\$0.00
Reclamation management and/or administration:	5.00	-	\$11,259.68

CONTINGENCY: 0.00 Total = \$0.00

TOTAL INDIRECT COST = \$37,790.28

TOTAL BOND AMOUNT (direct + indirect) = \$236,953.28

# **BULLDOZER WORK**

Rough Cut Pit		Peri	mit Action:	Inspection 1/13/16	Permit/Job#:	M2001033
PROJECT IDE	NTIFICATIO	<u>ON</u>				
Task #:001		State:	Colorado		Abbreviation:	None
Date: 3/7/2		County:	Otero		Filename:	M033-001
User: AME	<u> </u>					
Agency o	r organization	name: DF	RMS			
HOURLY EQU	IPMENT CO	<u>DST</u>				
Basic Machine:	Cat D8T - 8	SSU				
Horsepower:	310			<u> </u>		
Blade Type:	Semi-Unive	ersal		<u> </u>		
Attachment:	3-shank rip	per		<del></del>		
Shift Basis:	1 per day			<u></u>		
Data Source:	(CRG)			<u> </u>		
Cost Breakdown:						
				<u>Utilization %</u>		
Ownership Cost/I		\$73.32		NA		
Operating Cost/I		\$102.51	·	100		
Ripper op. Cost/I		\$3.73		50		
Operator Cost/I	Hour:	\$38.89		NA		
MATERIAL QU Initial Volume: Swell factor: Loose volume:	7,320 1.250 <b>9,150</b> LCY					
Source of estimated Source of estimated HOURLY PRO	d swell factor:	1,647 ft L Cat Hand		eut and fill method)		
Average push dista	naa:	60 feet				
Average push dista Unadjusted hourly		1,246.9 LC	Y/hr			
	production:			mbankment 0.9		
Unadjusted hourly	production:	: Compa		mbankment 0.9		
Unadjusted hourly  Materials consister  Average push grad	production:	: Compa		mbankment 0.9		
Unadjusted hourly Materials consister Average push grad Average site altitud	production:	c Compa				
Unadjusted hourly Materials consister Average push grad Average site altitud Material weight:	production:	c Compa	cted fill or e			
Unadjusted hourly Materials consister Average push grad Average site altitud Material weight: Weight description Job Condition Corn	production:	: Compa  feet  lbs/LCY  mposed rock	cted fill or e	, 75% Earth		
Unadjusted hourly Materials consister Average push grad Average site altitud Material weight: Weight description Job Condition Corr	production:	: Compa feet lbs/LCY mposed rock 1.	cted fill or e	, 75% Earth Source		
Unadjusted hourly Materials consister Average push grad Average site altitud Material weight: Weight description  Job Condition Corn  Op  Material of	production:  ncy description:  ient:5 % de:4,500 2,650  :Decor rection Factor rection Skill: consistency: ing method:	feet  lbs/LCY  mposed rock  1. 0.	- 25% Rock	, 75% Earth  Source (EXCL.) (CAT HB)) (SLOT)		
Unadjusted hourly Materials consister Average push grad Average site altitud Material weight: Weight description  Job Condition Corn  Op  Material of	production:  acy description: ient:5 % de:4,500 2,650  :Decorrection Factor erator Skill: consistency:	feet  lbs/LCY  mposed rock  1. 0.	- 25% Rock	, 75% Earth  Source (EXCL.) (CAT HB))		

1.000

(DOZ-OC)

Spoil pile:

Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8676

Adjusted unit production: 1,081.81 LCY/hr
Adjusted fleet production: 2163.62 LCY/hr

## **JOB TIME AND COST**

Fleet size: 2 Dozer(s)
Unit cost: \$0.202/LCY

Total job time: 4.23 Hours
Total job cost: \$1,848

# **BULLDOZER RIPPING WORK**

,	Task description:	<b>W.</b> 2	Area - Rip 30 ac stock	piling/processing/s	storage area	
Site:	Rough Cut Pit	t	Permit Actio	n: Inspection 1/13	Permit/Job#	#: <u>M2001033</u>
1	PROJECT IDE	ENTIFICATI	ON			
	Task #: 002		State: Colora	do	Abbreviation:	None
	Date: 3/7/	/2016	County: Otero		Filename:	M033-002
	User: AM	IE				
	Agency	or organizatior	name: DRMS			
]	HOURLY EQU	JIPMENT C	<u>OST</u>			
			t D8T - 8SU		Horsepower:	310
	Ripper Atta	achment: 3-5	Shank Ripper			per day
					Data Source:	(CRG)
9	Cost Breakdown:			I	Utilization %	
		Ownership C	ost/Hour:	\$73.32	NA	
		Operating C		6102.51	100	
	Ripp	er Operating C	ost/Hour:	\$7.46	100	
		Operator C		\$38.89	NA	
		Total Unit C	ost/Hour:	5222.18		
		Total Fleet C	ost/Hour:	6444.37		
1	MATERIAL Q	UANTITIES	<u>S</u>	Selected estimating	method: Area	
	Alternate Method	<u>s:</u>				
mic:	NA		Bank Volume	e: NA	BCY	NA
rea:	30.00	acres	Rip Depth (ft)		Volume: 48,400	BCY or
		Source of esti	mated quantity: 30	ac x 1 ft denth – 48	400 CY	
			matea quantity	<u>ac x 1 1t depth = 10,</u>	100 C I	
_	HOURLY PRO	DUCTION				
,	Seismic:		Seismic Velocity:	NA	feet/second	
			beishile velocity.	INA		
ž	Area:	<b>A</b>	D'' D	2.56	1.	
			ge Ripping Depth:  ge Ripping Width:	2.56 7.08	mph	
			e Ripping Width:	7.08	degrees feet	
			rage Dozer Speed:	88.00	feet	
			e Maneuver Time:	0.25	feet	
		_	ction per unit area:	0.832	acres/hour	
;	Job Condition Co	rrection Factor	<u>s</u>			
	Una	adjusted Hourly	y Unit Production:	0.832	Acres/hr	
			Site Altitude:	4,500	feet	
			Altitude Adj:	1.00	(CAT HB)	
			Job Efficiency:	0.83	(1 shift/day)	
			Net Correction:	0.83	multiplier	
		Adjusted	Hourly Unit Production	on: 0.69	Acres/hr	
		•	Hourly Fleet Production		Acres/hr	
:	JOB TIME AN	D COST				
	Fleet size:	2	Grader(s)	Total job time	e: <b>21.72</b>	Hours
	Unit cost:	\$321.726	Per acre	Total job cost	t: \$9.652	

# SCRAPER TEAM WORK

Task description:	W. Area -	Replace Topsoil	on 33.2 acres				
Site: Rough Cut Pit		Permit Action:	Inspection 1/13	/16 Per	mit/Job#:	M2001033	3
PROJECT IDENT	<u> </u>						
Task #: 003 Date: 3/7/201 User: AME		State: Colorado unty: Otero			viation: _ lename: _	None M033-003	
Agency or o	organization name	DRMS					
HOURLY EQUIP	MENT		COSTS	hift basis: 1 per c	la <u>y</u>		
		Equipm	ent Description				
		Scraper: Cat 63	1G				<del></del>
Suppo	rt Equipment -Loa	-Dozer: NA d Area: NA					_
Suppo		p Area: NA					_
Road Ma	intenance –Motor	Grader: CAT 1					_
-	-Water	Truck: Water	Tanker, 2,500 Gal	l <b>.</b>			
Cost Breakdown:	Scraper Wo	rk Team	Support Equi	nment	Main	itenance Equ	inment
Cost Di cardown.	Scraper	Dozer	Load Area	Dump Area	Motor		Vater Truck
%Utilization-machine:	100	NA	NA	NA	10	00	50
Ownership cost/hour:	\$91.86	NA	NA	NA	\$46		\$7.54
Operating cost/hour:	\$157.03	NA	NA	NA	\$68	.95	\$9.78
Ripper op. cost/hour:	NA	NA	NA	NA	\$0.	00	\$0.00
Operator cost/hour:	\$34.24	NA	NA	NA	\$35	.83	\$0.00
Unit Subtotals:	\$283.13	NA	NA	NA	\$151	1.74	\$17.32
Number of Units:	2	0	0	0	1		1
Group Subtotals:	Work:	\$566.26	Support:	\$0.00		Maint:	\$169.06
Total work team cost	/hour: <b>\$735.32</b>						
MATERIAL QUA	ANTITIES						
Initial volume:	23,805	CCY	Swell fac	tor: 1.125			
Loose volume:	26,781	LCY			<del></del>		
	rce of estimated vo		$\frac{1}{2}$ x 6 in depth = 26,	781 CY			<u></u>
Source of	of estimated swell	factor: Cat Han	dbook				<u>—</u>
HOURLY PRODU	<u>UCTION</u>						
			Scraper B	owl (volume) Bas	sis:		
Material weight:	2,650 lbs/LCY		Struck	Volume: 24.00		LCY	
Material description:	Decomposed roc 75% Earth	k - 25% Rock,		Volume: 34.00		LCY	
Rated Payload:	81,600 pounds			Volume: 29.00		LCY	
Payload Capacity:	30.79 LCY		Adjusted (	Capacity: <b>29.00</b>		LCY	

$\sim$	1	<b>m</b> :	
Cyc	IΑ	11	me:
$\sim$ y $\sim$	ı	11	m.

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{0.80} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.70} \text{ Minutes} \end{array}$ 

Job Condition Correction: Site Altitude: 4500 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 3.0

#### Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	650.00	1.00	3.00	4.00	1667	0.55

Haul Time: **0.55** minutes

#### Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	650.00	-1.00	3.00	2.00	2914	0.41

Return Time: 0.41 minutes Total Scraper team cycle time: 2.46 minutes Adjusted for job conditions: 587.07 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: LCY/Hour 1,174.15 Adjusted multiple scraper team (fleet) hourly production: 1,174.15 LCY/Hour

Unadjusted unit production/hour:	707.32	LCY/Hou
Optimal Number of Scrapers per push dozer:		_

#### **JOB TIME AND COST**

Fleet size:	1	Team(s)	Total job time:	22.81	Hours
Unit cost:	\$0.626	/LCY	Total job cost:	\$16,772	

# **REVEGETATION WORK**

Task description:	W. Area - Revegetate 33.2 acres to rangeland				
Site: Rough Cut Pit	Permit Action: _	Inspection 1/13/16	Permit/Job#: _	M2001033	
PROJECT IDENTIFIC	ATION				
Tools #4 004	States Colorado		Abbassistian No.	••	

Task #:004State:ColoradoAbbreviation:NoneDate:3/7/2016County:OteroFilename:M033-004

User: AME

Agency or organization name: DRMS

# **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	121.00	pound	\$0.37	\$44.77
Triple superphosphate, 0-46-0	87.00	pound	\$0.51	\$44.37
			Total Fertilizer Materials Cost/Acre	\$89.14

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$21.34
	<b>Total Fertilizer Application Cost/Acre</b>	\$21.34

# **TILLING**

Description		Cost /Acre
Chisel plowing {DMG}		\$88.76
Weed control spraying (MEANS 31 31 16.13 3100)		\$242.00
	<b>Total Tilling Cost/Acre</b>	\$330.76

### **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Switchgrass - Blackwell	0.25	2.23	\$1.36
Blue Grama - Lovington	0.75	12.24	\$8.16
Sand Dropseed	0.03	3.58	\$0.21
Sideoats Grama - Vaughn	4.50	14.77	\$50.67
Galleta	0.20	0.73	\$5.05
Western Wheatgrass - Arriba	1.60	4.04	\$5.90
Totals Seed Mix	7.33	37.60	\$71.35

**Application** 

Description		Cost /Acre
Drill seeding (MEANS 32 92 19.13 0020)		\$434.00
	<b>Total Seed Application Cost/Acre</b>	\$434.00

### **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200)	77.00	BALE	\$10.60	\$816.20
Total Mulch Materials Cost/Acre				\$816.20

**Application** 

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$66.02
	<b>Total Mulch Application Cost/Acre</b>	\$66.02

### **NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals	Nursery Stoc	k Cost / Acre	\$0.00

## **JOB TIME AND COST**

No. of Acres: 33.2 Cost / Acre: \$1,828.81 I Failure Rate: 25% Cost / Acre\*: \$505.35

Estimated Failure Rate: 25% Cost /Acre\*: \$505.35

\*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$60,716.49

Reseeding Job Cost: \$4,194.41

Total Job Cost: \$64,911

120.00

M033-005

Filename:

# **REVEGETATION WORK**

Task description:	W. Area - Revegetar	te 15 acres to rangeland		
Site: Rough Cut Pit	Permit	Action: <u>Inspection 1/13/1</u>	Permit/Job#:	M2001033
PROJECT IDENTII	FICATION			
Task #: 005	State: Co	olorado	Abbreviation: N	Ione

Date: 3/7/2016 User: AME

Agency or organization name: DRMS

County:

Otero

# **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	121.00	pound	\$0.37	\$44.77
Triple superphosphate, 0-46-0	87.00	pound	\$0.51	\$44.37
			Total Fertilizer Materials Cost/Acre	\$89.14

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$21.34
	<b>Total Fertilizer Application Cost/Acre</b>	\$21.34

## **TILLING**

Description		Cost /Acre
Chisel plowing {DMG}		\$88.76
Weed control spraying (MEANS 31 31 16.13 3100)		\$242.00
	<b>Total Tilling Cost/Acre</b>	\$330.76

### **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Switchgrass - Blackwell	0.25	2.23	\$1.36
Blue Grama - Lovington	0.75	12.24	\$8.16
Sand Dropseed	0.03	3.58	\$0.21
Sideoats Grama - Vaughn	4.50	14.77	\$50.67
Galleta	0.20	0.73	\$5.05
Western Wheatgrass - Arriba	1.60	4.04	\$5.90
Totals Seed Mix	7.33	37.60	\$71.35

**Application** 

Description		Cost /Acre
Drill seeding (MEANS 32 92 19.13 0020)		\$434.00
	<b>Total Seed Application Cost/Acre</b>	\$434.00

### **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200)	77.00	BALE	\$10.60	\$816.20
Total Mulch Materials Cost/Acre				\$816.20

**Application** 

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$66.02
	<b>Total Mulch Application Cost/Acre</b>	\$66.02

### **NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals 2	Nursery Stoc	ek Cost / Acre	\$0.00

## **JOB TIME AND COST**

No. of Acres: 15 Cost / Acre: \$1,828.81

Estimated Failure Rate: 25% Cost /Acre\*: \$505.35

\*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$27,432.15

Reseeding Job Cost: \$1,895.06

Total Job Cost: \$29,327

Job Hours: 60.00

# **BULLDOZER WORK**

Task descr	ription:	Ce	nter Area - G	rade highwa	all from 0H:1V to 3H:1	IV	
: Rough	Cut Pit		Per	mit Action:	Inspection 1/13/16	Permit/Job#:	M2001033
PROJEC	T IDEN	TIFICAT	<u>'ION</u>				
Task #:	006		State:	Colorado		Abbreviation:	None
Date:	3/7/20	16	County:	Otero		Filename:	M033-006
User:	AME		-				
A	agency or	organizatio	n name: DF	RMS			
HOURLY	Y EQUI	PMENT (	COST				
Basic M	Iachine:	Cat D8T	- 8SU		<u></u>		
	epower:	310					
Blad	le Type:	Semi-Uni	versal				
Atta	chment:	3-shank r	ipper				
	ft Basis:	1 per day					
Data	Source:	(CRG)					
Cost Break	kdown:						
	<del></del>				<u>Utilization %</u>		
Ownersh	ip Cost/H	our:	\$73.32		NA		
	ng Cost/H		\$102.51		100		
	p. Cost/H		\$3.73		50		
Operato	r Cost/H	our:	\$38.89		NA		
	factor:	4,935 1.250	7	<u>—</u>			
Loose vo	oiume: _	6,169 LCY					
Source of e	estimated	volume:			6169 CY (cut and fill n	nethod)	
Source of 6	estimated	swell facto	r: Cat Hand	book			
HOURLY	Y PROD	UCTION					
Average pi	ush distan	ice:	50 feet				
Unadjusted			1,400.0 LC	Y/hr			
·		ey description	on: Compa	cted fill or e	mbankment 0.9		
A **** * * *	nob == 1'		,				
Average pi Average si	_		00 feet				
Material w	eight:	2,65	50 lbs/LCY				
Weight des	scription:	Dec	omposed rock	- 25% Rock	, 75% Earth		
Job Condit		ection Facto			Source		
		rator Skill:		000	(EXCL.)		
N.		onsistency:		900	(CAT HB)	)	
	Dozir	g method:		200	(SLOT)		
		Visibility:	1.	000	(AVG.)		
	Ioh	efficiency:	0	830	(1 SHIFT/DA	<b>Y</b> )	

Spoil pile:

1.000

(DOZ-OC)

Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8676

Adjusted unit production: 1,214.64 LCY/hr
Adjusted fleet production: 2429.28 LCY/hr

## **JOB TIME AND COST**

Fleet size: 2 Dozer(s)
Unit cost: \$0.180/LCY

Total job time: 2.54 Hours
Total job cost: \$1,109

# **BULLDOZER RIPPING WORK**

	Task description	: Cen	ter Area - Rip 17 ac st	tockpiling area				
Site:	Rough Cut Pi	it	Permit Action	n: Inspection 1/13	Permit/Job#	: <u>M2001033</u>		
	PROJECT IDENTIFICATION							
	Task #: 00	7	State: Colorad	lo	Abbreviation:	None		
		7/2016 ME	County: Otero		Filename:	M033-007		
	Agency	or organization	n name: DRMS					
	<b>HOURLY EQ</b>	UIPMENT C	<u>OST</u>					
	Basic Ripper At		nt D8T - 8SU Shank Ripper		Horsepower: Shift Basis: 1	310 per day		
					Data Source: (	CRG)		
	Cost Breakdown	<u>:</u>		ı	TT('1' .' 0/			
		Ownership C	'ost/Hour'	\$73.32	Utilization % NA			
		Operating C		102.51	100			
	Rip	per Operating C		\$7.46	100			
	•	Operator C		\$38.89	NA			
		Total Unit C	Cost/Hour: \$	222.18				
		Total Fleet C	Cost/Hour: \$	444.37				
	MATERIAL (	QUANTITIES	<u>S</u> S	Selected estimating	method: Area			
	Alternate Method	ds:						
eismic:	NA		Bank Volume	: NA	BCY	NA		
Area:	17.00	acres	Rip Depth (ft)	: 1.00	Volume: 27,427	BCY or Co		
		Source of esti	mated quantity: 17 a	$ac \times 1 \text{ ft depth} = 27,$	427 CY			
	HOURLY PR	<b>ODUCTION</b>						
	Seismic:							
			Seismic Velocity:	NA	feet/second			
	Area:							
			ge Ripping Depth:	2.56	mph			
			ge Ripping Width:	7.08	degrees			
			e Ripping Length: rage Dozer Speed:	700.00 88.00	feet feet			
			e Maneuver Time:	0.25	feet			
			ction per unit area:	0.832	acres/hour			
	Job Condition Co	orrection Factor	'S					
	Ur	nadjusted Hourly	y Unit Production:	0.832	Acres/hr			
			Site Altitude:	4,500	feet			
			Altitude Adj:	1.00	(CAT HB)			
			Job Efficiency:	0.83	(1 shift/day)			
			Net Correction:	0.83	multiplier			
		Adjusted	l Hourly Unit Productio	on: 0.69	Acres/hr			
		Adjusted	Hourly Fleet Production	on: 1.38	Acres/hr			
	JOB TIME A	ND COST						
	Fleet size:	2	_ Grader(s)	Total job time	e: <b>12.31</b>	Hours		
	Unit cost:	\$321.726	Per acre	Total job cos	st: <b>\$5,469</b>			

# SCRAPER TEAM WORK

Task description: Center Area - Replace Topsoil on 17.75 acres						
Site: Rough Cut Pit		Permit Action:	Inspection 1/13	/16 Per	mit/Job#: M20	01033
PROJECT IDENT	<u> </u>					
Task #: 008 Date: 3/7/201 User: AME		State: Colorado unty: Otero			viation: None M033	
Agency or o	organization name	DRMS				
<b>HOURLY EQUIP</b>	MENT		COSTS	hift basis: 1 per d	lay	
		Eauipme	ent Description			
	-,5	Scraper: Cat 63				
		-Dozer: NA				
Suppo	rt Equipment -Loa	d Area: NA p Area: NA				
Road Ma	intenance –Motor		4M			
-	-Water	Truck: Water	Tanker, 2,500 Gal			
					3.6	-
<u>Cost Breakdown:</u>	Scraper Wo	Dozer	Support Equi Load Area	pment Dump Area	Maintenanc  Motor Grader	e Equipment Water Truck
	-			•		
%Utilization-machine:	100	NA	NA	NA	100	50
Ownership cost/hour:	\$91.86	NA	NA	NA	\$46.96	\$7.54
Operating cost/hour:	\$157.03	NA	NA	NA	\$68.95	\$9.78
Ripper op. cost/hour:	NA	NA	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$34.24	NA	NA	NA	\$35.83	\$0.00
Unit Subtotals:	\$283.13	NA	NA	NA	\$151.74	\$17.32
Number of Units:	2	0	0	0	1	1
Group Subtotals:	Work:	\$566.26	Support:	\$0.00	Maint:	\$169.06
Total work team cost	/hour: <b>\$735.32</b>					
MATERIAL QUA	ANTITIES					
Initial volume:	12,727	CCY	Swell fac	tor: 1.125		
Loose volume:	14,318	LCY			<del></del>	
	rce of estimated vo		x = 6 in depth = 14 dbook	-,318 CY		
HUIDI A DDADI	UCTION					
HOURLY PRODU	UCTION		Scraper B	owl (volume) Bas	is:	
Material weight:	2,650 lbs/LCY		<del>-</del>	Volume: 24.00		LCY
Material description:	Decomposed roc 75% Earth	ek - 25% Rock,		Volume: 24.00 Volume: 34.00		LCY
Rated Payload:	81,600 pounds		Average	Volume: 29.00	<del></del> .	LCY
Payload Capacity:	30.79 LCY		Adjusted (			LCY

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 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{0.80} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.70} \text{ Minutes} \end{array}$ 

Job Condition Correction: Site Altitude: 4500 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 3.0

#### Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	1.00	3.00	4.00	1667	0.34

Haul Time: **0.34** minutes

#### Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	-1.00	3.00	2.00	2914	0.29

Return Time: 0.29 minutes

Total Scraper team cycle time:
Adjusted for job conditions:
Selected Number of Scrapers:
Adjusted single scraper team (unit) hourly production:
Adjusted multiple scraper team (fleet) hourly production:

Total Scraper team cycle time:
2.13 minutes
LCY/Hour
2.5craper(s)
1,356.06 LCY/Hour
1,356.06 LCY/Hour

Unadjusted unit production/hour: 816.90 LCY/Hour Optimal Number of Scrapers per push dozer:

#### JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 10.56
 Hours

 Unit cost:
 \$0.542
 /LCY
 Total job cost:
 \$7,764

# **REVEGETATION WORK**

Task de	scription:	Center Area - R	evegetate 17.	.75 acres to rangeland		
Site: Roug	h Cut Pit	Pe	rmit Action:	Inspection 1/13/16	Permit/Jol	o#: <u>M2001033</u>
<b>PROJE</b>	CT IDENTIFIC	<u>CATION</u>				
Task	#: 009	State:	Colorado		Abbreviation:	None
Da	te: 3/7/2016	County:	Otero		Filename:	M033-009

User: AME

Agency or organization name: DRMS

# **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	121.00	pound	\$0.37	\$44.77
Triple superphosphate, 0-46-0	87.00	pound	\$0.51	\$44.37
			Total Fertilizer Materials Cost/Acre	\$89.14

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$21.34
	Total Fertilizer Application Cost/Acre	\$21.34

# **TILLING**

Description		Cost /Acre
Chisel plowing {DMG}		\$88.76
Weed control spraying (MEANS 31 31 16.13 3100)		\$242.00
	<b>Total Tilling Cost/Acre</b>	\$330.76

### **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Switchgrass - Blackwell	0.25	2.23	\$1.36
Blue Grama - Lovington	0.75	12.24	\$8.16
Sand Dropseed	0.03	3.58	\$0.21
Sideoats Grama - Vaughn	4.50	14.77	\$50.67
Galleta	0.20	0.73	\$5.05
Western Wheatgrass - Arriba	1.60	4.04	\$5.90
Totals Seed Mix	7.33	37.60	\$71.35

**Application** 

Description		Cost /Acre
Drill seeding (MEANS 32 92 19.13 0020)		\$434.00
	<b>Total Seed Application Cost/Acre</b>	\$434.00

### **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200)	77.00	BALE	\$10.60	\$816.20
Total Mulch Materials Cost/Acre				\$816.20

**Application** 

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$66.02
	<b>Total Mulch Application Cost/Acre</b>	\$66.02

### **NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre \$0.00					\$0.00

## **JOB TIME AND COST**

 No. of Acres:
 17.75
 Cost /Acre:
 \$1,828.81

 Estimated Failure Rate:
 25%
 Cost /Acre\*:
 \$505.35

\*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$32,461.38

Reseeding Job Cost: \$2,242.49

Total Job Hours: \$34,704

71.00

# **REVEGETATION WORK**

Task description:	Center Area - Revegetate 8.2	25 acres to rangeland	land		
Site: Rough Cut Pit	Permit Action:	Inspection 1/13/16	Permit/Job#:	M2001033	
PROJECT IDENTIFICA	TION				

Task #:010State:ColoradoAbbreviation:NoneDate:3/7/2016County:OteroFilename:M033-010

User: AME

Agency or organization name: DRMS

### **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	121.00	pound	\$0.37	\$44.77
Triple superphosphate, 0-46-0	87.00	pound	\$0.51	\$44.37
			Total Fertilizer Materials Cost/Acre	\$89.14

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$21.34
	Total Fertilizer Application Cost/Acre	\$21.34

# **TILLING**

Description		Cost /Acre
Chisel plowing {DMG}		\$88.76
Weed control spraying (MEANS 31 31 16.13 3100)		\$242.00
	<b>Total Tilling Cost/Acre</b>	\$330.76

### **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Switchgrass - Blackwell	0.25	2.23	\$1.36
Blue Grama - Lovington	0.75	12.24	\$8.16
Sand Dropseed	0.03	3.58	\$0.21
Sideoats Grama - Vaughn	4.50	14.77	\$50.67
Galleta	0.20	0.73	\$5.05
Western Wheatgrass - Arriba	1.60	4.04	\$5.90
Totals Seed Mix	7.33	37.60	\$71.35

**Application** 

Description		Cost /Acre
Drill seeding (MEANS 32 92 19.13 0020)		\$434.00
	<b>Total Seed Application Cost/Acre</b>	\$434.00

### **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200)	77.00	BALE	\$10.60	\$816.20
Total Mulch Materials Cost/Acre				\$816.20

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$66.02
	<b>Total Mulch Application Cost/Acre</b>	\$66.02

### **NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals 2	Nursery Stoc	k Cost / Acre	\$0.00

### **JOB TIME AND COST**

 No. of Acres:
 8.25
 Cost /Acre:
 \$1,828.81

 1 Failure Rate:
 25%
 Cost /Acre\*:
 \$505.35

Estimated Failure Rate: 25% Cost /Acre\*: \$505.3
\*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$15,087.68

Reseeding Job Cost: \$1,042.28

Total Job Cost: \$16,130

Job Hours: 32.00

# **BULLDOZER WORK**

Task description	on:	Eas	st Area - Grac	de highwall	from 0H:1V to 3H:1V		
: Rough Cut	Pit		Per	mit Action:	Inspection 1/13/16	Permit/Job#:	M2001033
PROJECT I	IDENT	IFICAT	<u>ION</u>				
Task #:	011		State:	Colorado		Abbreviation:	None
	3/7/2016	5	County:	Otero		Filename:	M033-011
User:	AME						
Ager	ncy or or	ganizatio	n name: DF	RMS			
HOURLY E	QUIP	MENT C	COST				
Basic Mach	nine:	Cat D8T -	· 8SU		<u></u>		
Horsepo		310					
Blade T		Semi-Uni					
Attachm		3-shank ri	pper				
Shift B		1 per day			<u> </u>		
Data Sou	ırce:	(CRG)			<u>—</u>		
Cost Breakdov	wn:				ı		
_	_				<u>Utilization %</u>		
Ownership C			\$73.32		NA		
Operating C			\$102.51		100		
Ripper op. C			\$3.73		50		
Operator C	Cost/Hou	ır:	\$38.89		NA		
Initial Volur Swell fact	tor: 1	45 .250 <b>81</b> LCY		<u> </u>			
Loose volur	ne: <u>1</u>	<b>61</b> LC 1		_			
Source of estin	mated vo	olume:			1 CY (cut and fill method	)	
Source of estin	mated sv	vell factor	:: Cat Hand	lbook			
HOURLY P	RODU	CTION					
Average push	distance	·•	50 feet				
Unadjusted ho			1,400.0 LC	Y/hr			
Chagastea no	arry pro		1,100.0 LC				
Materials cons	sistency	description	on: Compa	cted fill or e	mbankment 0.9		
Average push							
Average site a	ltitude:	4,50	0 feet				
Material weigh	ht:	2,65	0 lbs/LCY			_	
Weight descrip	ption:	Dec	omposed rock	- 25% Rock	, 75% Earth		
Job Condition					Source		
		or Skill:		.000	(EXCL.)		
		sistency:		.900	(CAT HB))		
		method:		.200	(SLOT)		
		isibility:		.000	(AVG.)		
	Ioh eff	iciency:	0	830	(1 SHIFT/DAY	)	

Spoil pile:

1.000

(DOZ-OC)

Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8676

Adjusted unit production: 1,214.64 LCY/hr
Adjusted fleet production: 1214.64 LCY/hr

## **JOB TIME AND COST**

Fleet size: 1 Dozer(s)
Unit cost: \$0.180/LCY

Total job time: 0.15 Hours
Total job cost: \$33

# **BULLDOZER RIPPING WORK**

	Task description	: Eas	t Area - Rip 0.5 ac stoc	kpiling area						
Site:	Rough Cut Pi	it	Permit Action	: Inspection 1/13	Permit/Job#	: <u>M2001033</u>				
	PROJECT ID	ENTIFICAT	ION							
	Task #: 01	2	State: Colorad	О	Abbreviation:	None				
		7/2016 ME	County: Otero		Filename:	M033-012				
	Agency	or organization	n name: DRMS							
	HOURLY EQUIPMENT COST									
			t D8T - 8SU		Horsepower:	310				
	Ripper At	tachment: 3-5	Shank Ripper			per day CRG)				
	Cost Breakdown	<u>:</u>								
		Ovvm anahim C	Soat/House	773.32	Utilization %					
		Ownership C Operating C		102.51	NA 100					
	Rip	per Operating C	-	\$7.46	100					
	Γ.	Operator C		38.89	NA					
		Total Unit C	Cost/Hour: \$2	222.18						
		Total Fleet C	Cost/Hour: \$2	222.18						
	MATERIAL (	QUANTITIES	<u>S</u>	elected estimating	method: Area					
	Alternate Method	ds:								
Seismic:	NA		Bank Volume:		BCY	NA				
Area:	0.50	acres	Rip Depth (ft):		Volume: 807	BCY or CC				
		Source of esti	mated quantity: 0.5 a	$ac \times 1 \text{ ft depth} = 80$	07 CY					
	HOURLY PRODUCTION									
	Seismic:		Seismic Velocity:	NA	feet/second					
	Area:		, <u> </u>							
	Aica.	Avera	ge Ripping Depth:	2.56	mph					
			ge Ripping Width:	7.08	degrees					
			e Ripping Length:	100.00	feet					
			rage Dozer Speed:	88.00	feet					
			e Maneuver Time:	0.25	feet					
			ction per unit area:	0.703	acres/hour					
	Job Condition Co									
	Ur	nadjusted Hourly	y Unit Production:	0.703	Acres/hr					
			Site Altitude:	4,500	feet					
			Altitude Adj:	1.00	(CAT HB)					
			Job Efficiency: Net Correction:	0.83	(1 shift/day)					
					multiplier					
		•	Hourly Unit Production		Acres/hr					
		•	Hourly Fleet Production	n: <b>0.58</b>	Acres/hr					
	JOB TIME A	ND COST		m . 1: 1 .:	0.07	**				
	Fleet size:	1	_ Grader(s)	Total job time	e: <b>0.86</b>	Hours				
	Unit cost:	\$380.546	Per acre	Total job cos	st: <b>\$190</b>					

# SCRAPER TEAM WORK

Task description:	East Area	- Replace	e Topsoi	l on 1.5 acres			
Site: Rough Cut Pit		Permit	Action:	Inspection 1/13	/16 Per	mit/Job#: <u>M200</u>	01033
PROJECT IDEN	<u> </u>						
Task #: 013	:	State: (	Colorado		Abbre	eviation: None	
Date: 3/7/201	16 Co	unty:	Otero		Fi	lename: M033-	013
User: AME							
Agency or o	organization name	DRM	S				
HOURLY EQUIP	PMENT_			COSTS	hift basis: 1 per o	<u>day</u>	
				ent Description			
		Scraper: -Dozer:	Cat 63	1 <b>G</b>			
Suppo	rt Equipment -Loa		NA				
	-Dum	p Area:	NA				<del></del>
Road Ma	intenance – Motor		NA				
	-water	Truck:	NA				
Cost Breakdown:	Scraper Wo	rk Team		Support Equi	pment	Maintenance	Equipment
	Scraper	Doz	zer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	N.	A	NA	NA	NA	NA
Ownership cost/hour:	\$91.86	N.	A	NA	NA	NA	NA
Operating cost/hour:	\$157.03	N.	A	NA	NA	NA	NA
Ripper op. cost/hour:	NA	N.	A	NA	NA	NA	NA
Operator cost/hour:	\$34.24	N.	A	NA	NA	NA	NA
Unit Subtotals:	\$283.13	N.	A	NA	NA	NA	NA
Number of Units:	1	0		0	0	0	0
Group Subtotals:	Work:	\$283	3.13	Support:	\$0.00	Maint:	\$0.00
Total work team cost  MATERIAL QUA							
Initial volume:	1,076		CCY	Swell fact	tor: 1.125		
Loose volume:	1,211		LCY	Swell lac	1.123		
Sou	rce of estimated vo	alumai	1 <b>5</b> 00 v	6 in donth 1 210	CV needed		
	of estimated swell	_	Cat Han	6 in depth= 1,210 dbook	CT needed		
HOURLY PROD	<u>UCTION</u>						
				Scraper B	owl (volume) Bas	sis:	
Material weight:	2,650 lbs/LCY			Struck	Volume: 24.00		CY
Material description:	Decomposed roo 75% Earth	k - 25% I	Rock,	Heaped	Volume: 34.00	L	CY
Rated Payload:	81,600 pounds			Average			CY
Payload Canacity:	30 79 LCY			Adjusted (	Sapacity: 29 00	I	CY

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 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{0.80} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.70} \text{ Minutes} \end{array}$ 

Job Condition Correction: Site Altitude: 4500 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: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

#### Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	100.00	1.00	4.00	5.00	1343	0.18

Haul Time: 0.18 minutes

744.43

LCY/Hour

#### Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	100.00	-1.00	4.00	3.00	2890	0.26

Return Time: 0.26 minutes

Total Scraper team cycle time: 1.94 minutes

Adjusted for job conditions: 744.43 LCY/Hour Selected Number of Scrapers: 1 Scraper(s)

Adjusted single scraper team (unit) hourly production: 744.43 LCY/Hour

Unadjusted unit production/hour: 896.91 LCY/Hour Optimal Number of Scrapers per push dozer:

## **JOB TIME AND COST**

Fleet size:	1	Team(s)	Total job time:	1.63	Hours
Unit cost:	\$0.380	/LCY	Total job cost:	\$460	

Adjusted multiple scraper team (fleet) hourly production:

# **REVEGETATION WORK**

Task description:	East Area - Revegetate 1.5 acres to ra	ngeland
Site: Rough Cut Pit	Permit Action:Inspecti	ion 1/13/16 Permit/Job#: M2001033
PROJECT IDENTIFIC	<u>CATION</u>	
Task #: 014	State: Colorado	Abbreviation: None

Task #:014State:ColoradoAbbreviation:NoneDate:3/7/2016County:OteroFilename:M033-014

User: AME

Agency or organization name: DRMS

# **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	121.00	pound	\$0.37	\$44.77
Triple superphosphate, 0-46-0	87.00	pound	\$0.51	\$44.37
			Total Fertilizer Materials Cost/Acre	\$89.14

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$21.34
	<b>Total Fertilizer Application Cost/Acre</b>	\$21.34

### **TILLING**

Description		Cost /Acre
Chisel plowing {DMG}		\$88.76
Weed control spraying (MEANS 31 31 16.13 3100)		\$242.00
	<b>Total Tilling Cost/Acre</b>	\$330.76

### **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Switchgrass - Blackwell	0.25	2.23	\$1.36
Blue Grama - Lovington	0.75	12.24	\$8.16
Sand Dropseed	0.03	3.58	\$0.21
Sideoats Grama - Vaughn	4.50	14.77	\$50.67
Galleta	0.20	0.73	\$5.05
Western Wheatgrass - Arriba	1.60	4.04	\$5.90
Totals Seed Mix	7.33	37.60	\$71.35

**Application** 

Description		Cost /Acre
Drill seeding (MEANS 32 92 19.13 0020)		\$434.00
	<b>Total Seed Application Cost/Acre</b>	\$434.00

### **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200)	77.00	BALE	\$10.60	\$816.20
Total Mulch Materials Cost/Acre				\$816.20

**Application** 

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$66.02
	<b>Total Mulch Application Cost/Acre</b>	\$66.02

### **NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals	Nursery Stoc	k Cost / Acre	\$0.00

## **JOB TIME AND COST**

No. of Acres: 1.5 Cost / Acre: \$1,828.81

Estimated Failure Rate: 25% Cost /Acre\*: \$505.35

\*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$2,743.22

Reseeding Job Cost: \$189.51

Total Job Cost: \$2,933

Job Hours: 4.00

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Mobilizatio	n/Demobilizatio	n			
te: Rough Cut Pit		Permit Action	: Inspection	on 1/13/16	Permit/Job	o#: <u>M2001033</u>
PROJECT IDENTIFIC	<b>ATION</b>					
Task #: 015	St	ate: Colorado			Abbreviation:	None
Date: 3/7/2016	Cou	nty: Otero			Filename:	M033-015
User: AME						
Agency or organiz	ation name:	DRMS				
8,8						
<b>EQUIPMENT TRANSP</b>	ORT RIG	COST				
				c	Shife hasia	1 4
				~		l per day CRG Data
				Cost Da	ta Source: C	KG Data
Truck Tractor l	Description:	GENERIC O				DIESEL POWERED,
				100 HP (2ND 1		
Truck Trailer l	Description:	GENERI				K EQUIPMENT
			TRA	AILER (25T, 5	OT, AND 100T)	
Cost Breakdown:						
Available Rig Capacities	0-25	Tons 26.5	50 Tons	51+ Tons		
Ownership Cost/Hor			18.37	\$22.33		
Operating Cost/Hot			46.13	\$50.07		
Operator Cost/Hor			27.66	\$27.66		

#### **NON ROADABLE EQUIPMENT:**

Total Unit Cost/Hour:

Helper Cost/Hour:

\$0.00

\$88.67

Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
	(TONS)		t		fleet		
Cat D8T - 8SU	53.08	\$73.32	\$125.45	2	\$397.53	\$250.90	\$500.00
CAT 14M	23.57	\$46.96	\$88.67	1	\$135.63	\$88.67	\$250.00
Cat 631G	52.50	\$91.86	\$125.45	2	\$434.62	\$250.90	\$500.00
Drill/Broadcast	25.00	\$39.59	\$88.67	1	\$128.26	\$88.67	\$250.00
Seeder with							
Tractor							

\$25.39

\$117.55

\$25.39

\$125.45

Subtotals: \$1,096.04 \$679.14 \$1,500.00

# **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.	\$27.11	1	\$27.11	\$27.11

Subtotals: \$27.11 \$27.11

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

Nearest Major City or Town within project area region:

Total one-way travel distance:

Average Travel Speed:

LA JUNTA

miles

55.00

mph

#### **Transportation Cycle Time:**

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.44	0.44
Return Time (Hours):	0.44	0.44
Loading Time (Hours):	0.75	NA
Unloading Time (Hours):	0.75	NA
Subtotals:	2.37	0.87

## **JOB TIME AND COST**

Total job cost: 4.75 Hours

Total job cost: \$7,861