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



March 13, 2013

Mr. Robert Warneke Natural Soda, Inc. 3200 RBC 31 Rifle, CO 81650 John W. Hickenlooper Governor

Mike King Executive Director

Loretta Piñeda Director

Re: Nahcolite Project, Permit No. M-1983-194, Technical Revision Approval, Revision No. TR-33

Dear Mr. Warneke:

On March 13, 2013 the Division of Reclamation, Mining and Safety approved the Technical Revision application submitted to the Division on March 11, 2013, addressing the following:

- Addition of wells 10H-V, 13H-I and 13H-R.
- Addition of stone monument and three flagpoles at entrance of site.

The terms of the Technical Revision No. 33 approved by the Division are hereby incorporated into Permit No. M-1983-194. All other conditions and requirements of Permit No. M-1983-194 remain in full force and effect.

The estimated liability amount of \$2,022,014.28 exceeds the \$1,935,536.19 performance bond currently held. If you have not already done so, please submit additional bond in the amount of (\$15,236.44). The revision will not be final until the bond is approved by the Division.

If you have any questions, please contact me at (970) 241-2042.

Sincerely,

Travis Marshall Environmental Protection Specialist

Enclosure – Reclamation Cost Estimate

cc: Gerald Daub Daub & Associates, Inc. 1985 ½ South Broadway Grand Junction, CO 81507

> Paul Daggett BLM – WRFO 220 East Market Street Meeker, CO 81641

COST SUMMARY WORK

Task description:

Site: Nahcolite Project

Permit Action: TR-33

Permit/Job#: M1983194

PROJECT IDENTIFICATION

Task #:	001	State:	Colorado	Abbreviation:	None	
Date:	3/13/2013	County:	Rio Blanco	Filename:	M194-001	
User:	THM					

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Demo. of NSI Plant, Pipelines and Powerlines	DEMOLISH	1	80.00	\$521,677.97
02a	Borehole P&A	BOREHOLE	1	460.00	\$861,355.97
03a	Re-grade Process Ponds	DOZER	2	141.43	\$56,045.00
04a	Re-grade Plant Area	DOZER	2	41.97	\$16,632.39
05a	Re-grade Well Pads	DOZER	2	31.60	\$12,520.87
06a	Distribute 6" of topsoil over 8 acre process pond area	DOZER	2	5.92	\$2,345.73
07a	Distribute 6" topsoil over 6.2 acre process area	DOZER	2	4.59	\$1,817.55
08a	Distribute 6" topsoil over12 acres of re-graded well pads	DOZER	2	6.59	\$2,612.40
09a	Rip 18.7 acres of road and compacted areas	RIPPER	2	14.08	\$5,945.00
10a	Distribute 6" topsoil over18.7 acres of decompacted area	DOZER	2	10.27	\$4,070.86
11a	Revegetate 44.9 acres	REVEGE	1	24.00	\$82,851.55
12a	Mobilization	MOBILIZE	1	8.00	\$6,399.36
		<u>SUBTO</u>	TALS:	828.45	\$1,574,274.65

INDIRECT COSTS

OVERHEAD AND PROFIT:

2.02%	Total =	\$31,800.35
1.05%	Total =	\$16,529.88
414.23 hrs	Total =	\$27,094.46
10.00%	Total =	\$157,427.47
	TOTAL O & P =	\$232,852.16
	CONTRACT AMOUNT (direct + O & P) = $($	\$1,807,126.81
	1.05% 414.23 hrs	1.05% Total = 414.23 hrs Total =

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	500.00	Total =	500.00
Engineering work and/or contract/bid preparation:	4.25%	Total =	\$76,802.89
Reclamation management and/or administration:	5.00%		\$90,356.34
CONTINGENCY:	3.00	Total =	\$47,228.24
	TOTAL I	NDIRECT COST =	\$447,739.63
TOTAL B	OND AMOUNT (d	lirect + indirect) =	\$2,022,014.28

DEMOLITION WORK

k description:	Demo. of NSI Plant, Pipelin	ies and Poweriin	ies	
hcolite Project	Permit Action:	TR-33	Permit/.	ob#:M1983194
IDENTIFICATIO	<u>DN</u>			
01A	State: Colorado		Abbreviation:	None
11/21/2011	County: Rio Blanco		Filename:	M194-01a
THM				
(IDENTIFICATIO 01A 11/21/2011	IDENTIFICATION 01A State: Colorado 11/21/2011 County: Rio Blanco	IDENTIFICATION 01A State: Colorado 11/21/2011 County: Rio Blanco	IDENTIFICATION01AState:ColoradoAbbreviation:11/21/2011County:Rio BlancoFilename:

UNIT COSTS

Location adjustment: 91.30 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
NSI Plant	200'L x 175'W x 50'H	Plant (3S) demo./on-site disposal in excavated pit - Max. 200 ft. push	1,750,000.00	CF	\$0.19	\$330,750.00
Product Storage Dome	100'L x 100'W x 50'H	Plant (3S) demo./on-site disposal in excavated pit - Max. 200 ft. push	500,000.00	CF	\$0.19	\$94,500.00
Removal of NSI Plant Slab	200'L x 175'W	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	35,000.00	SF	\$2.26	\$79,240.00
Removal of Storage Dome slab	100'L x 100'W	Demo. and on-site disposal in existing pit, 8 in. thick - Max. 200 ft. push	10,000.00	SF	\$2.22	\$22,200.00
Scale Building	20'W x 100'L x 15'H	Plant (1S) demo./on-site disposal in excavated pit - Max. 200 ft. push	30,000.00	CF	\$0.16	\$4,680.00
Removal of Scale Building Slab	20'W x 100'L	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	2,000.00	SF	\$1.70	\$3,396.00
Removal of Conveyor System	200'L	Conveyor, elevated, including supports - 5 ft. W x 6 ft. H housing	200.00	LF	\$43.17	\$8,634.00
Removal of Overhead Powerline	2100'L	Powerline or utility line, overhead, wood - Double or "H" pole	2,100.00	LF	\$5.23	\$10,978.80
Tank Farm	30'W x 50'H	Tank Removal and disposal in pit	5.00	Tank	\$2,000.00	\$10,000.00
Removal of Pipeline	3600'	Pipe, steel, welded connections - 10 in. diameter pipe	3,600.00	LF	\$1.85	\$6,660.00
Removal of Flagpoles/Monument	70 sq feet	USER PROVIDED ITEM	70.00	FT^2	\$5.00	\$350.00

				Total Cost	
		Subtotal		(adjusted for	
Job Hours: _	80.00	(unadjusted):	\$571,388.80	location):	\$521,677.97

BOREHOLE SEALING WORK

-	Task description:	Borehole P	&A			
Site:	Nahcolite Project		Permit Action:	TR-33	Permit/	Job#:
<u>PROJE</u>	CT IDENTIFICATIO	N				
Task #: Date: User:	3/12/2013	State: County:	Colorado Rio Blanco		Abbreviation: Filename:	None M194-02a
	Agency or organiza	tion name:	DRMS			

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
3M-TDR	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1876	1,876.00	LF	\$7.82	\$14,665.44
4A-1V	Portland cement grout - 10 in. (labor, equip, materials)	9.625"	1876	1,876.00	LF	\$17.84	\$33,475.34
4A-5M	Portland cement grout - 4 in. (labor, equip, materials)	2.375"	1876	1,876.00	LF	\$7.82	\$14,665.44
88-1	Portland cement grout - 10 in. (labor, equip, materials)	9.625"	2200	2,200.00	LF	\$17.84	\$39,256.80
89-1	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1627	1,627.00	LF	\$7.82	\$12,718.91
89-2	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1417	1,417.00	LF	\$7.82	\$11,077.26
89-3	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	347	347.00	LF	\$7.82	\$2,712.64
90-1	Portland cement grout - 10 in. (labor, equip, materials)	9.625"	1417	1,417.00	LF	\$17.84	\$25,284.95
90-2	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1876	1,876.00	LF	\$7.82	\$14,665.44
90-3	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1627	1,627.00	LF	\$7.82	\$12,718.91
90-4	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1417	1,417.00	LF	\$7.82	\$11,077.26
94-1M	Portland cement grout - 6 in. (labor, equip, materials)	5"	2200	2,200.00	LF	\$10.92	\$24,025.54
BG-1	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1627	1,627.00	LF	\$7.82	\$12,718.91
BG-4	Portland cement grout - 4 in. (labor, equip, materials)	4.5	1627	1,627.00	LF	\$7.82	\$12,718.91

DS-2	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1876	1,876.00	LF	\$7.82	\$14,665.44
DS-3	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1876	1,876.00	LF	\$7.82	\$14,665.44
EX-2	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1876	1,876.00	LF	\$7.82	\$14,665.44
IRI-1	Portland cement grout - 4 in. (labor, equip, materials)	4"	347	347.00	LF	\$7.82	\$2,712.64
IRI-4	Portland cement grout - 4 in. (labor, equip, materials)	4"	1417	1,417.00	LF	\$7.82	\$11,077.26
IRI-5	Portland cement grout - 4 in. (labor, equip, materials)	4.625"	347	347.00	LF	\$7.82	\$2,712.64
IRI-6	Portland cement grout - 4 in. (labor, equip, materials)	4"	1627	1,627.00	LF	\$7.82	\$12,718.91
IRI-7	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1876	1,876.00	LF	\$7.82	\$14,665.44
IRI-8	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	347	347.00	LF	\$7.82	\$2,712.64
MU-2	Portland cement grout - 6 in. (labor, equip, materials)	5"	1876	1,876.00	LF	\$10.92	\$20,487.23
MWA-2	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	347	347.00	LF	\$11.88	\$4,121.39
MWB-2	Portland cement grout - 6 in. (labor, equip, materials)	5"	1627	1,627.00	LF	\$10.92	\$17,767.98
MWD-1	Portland cement grout - 6 in. (labor, equip, materials)	5"	1876	1,876.00	LF	\$10.92	\$20,487.23
MWD-2	Portland cement grout - 6 in. (labor, equip, materials)	5"	1876	1,876.00	LF	\$10.92	\$20,487.23
1-3A	Portland cement grout - 10 in. (labor, equip, materials)	9.625"	1876	1,876.00	LF	\$17.84	\$33,475.34
7H-1R	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1876	1,876.00	LF	\$11.88	\$22,281.63
7H-1V	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1876	1,876.00	LF	\$11.88	\$22,281.63
7H-2I	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1876	1,876.00	LF	\$11.88	\$22,281.63
12H-I	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1935	1,935.00	LF	\$11.88	\$22,982.38
12H-R	Portland cement grout - 8	7.625"	1935	1,935.00	LF	\$11.88	\$22,982.38

CIRCES Cost Estimating Software

	in. (labor, equip, materials)						
10H-I	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1935	1,935.00	LF	\$11.88	\$22,982.38
11H-I	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1935	1,935.00	LF	\$11.88	\$22,982.38
10H-R	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1935	1,935.00	LF	\$11.88	\$22,982.38
11H-R	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1935	1,935.00	LF	\$11.88	\$22,982.38
DS-4	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1876	1,876.00	LF	\$7.82	\$14,665.44
BG-5	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1645	1,645.00	LF	\$7.82	\$12,859.62
DS-5	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1902	1,902.00	LF	\$7.82	\$14,868.69
BG-6	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1639	1,639.00	LF	\$7.82	\$12,812.72
WSW-2	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1460	1,460.00	LF	\$11.88	\$17,340.71
DVPW-1(A)	Portland cement grout - 8 in. (labor, equip, materials)	7"	2350	2,350.00	LF	\$11.88	\$27,911.42
DVPW-(B)	Portland cement grout - 8 in. (labor, equip, materials)	7"	2350	2,350.00	LF	\$11.88	\$27,911.42
10H-1V	Portland cement grout - 8 in. (labor, equip, materials)	7"	2010	2,010.00	LF	\$11.88	\$23,873.17
13H-I	Portland cement grout - 8 in. (labor, equip, materials)	8"	2335	2,335.00	LF	\$11.88	\$27,733.26
13H-R	Portland cement grout - 8 in. (labor, equip, materials)	8"	2310	2,310.00	LF	\$11.88	\$27,436.33

Job Hours: 460.00

Total Cost: \$861,355.95

BULLDOZER WORK

Task description:	Re-grade Process Ponds	S		
Nahcolite Project	Permit Act	ion: <u>TR-33</u>	_ Permit/Job#:	M1983194
PROJECT IDENTI	FICATION			
Task #: 03A	State: Color	rado	Abbreviation:	None
Date: 03/13/201		Blanco	Filename:	M194-03a
User: THM			T fieldifie.	11174-054
	anization name: DRMS			
HOURLY EQUIPM				
	at D8T - 8SU			
and the second sec	10			
	emi-Universal			
	Α			
	per day			
Data Source: (C	CRG)			
Cost Breakdown:				
		Utilization %		
Ownership Cost/Hour:	: \$56.69	NA		
Operating Cost/Hour		100		
Ripper op. Cost/Hour		0		
Operator Cost/Hour		NA	<u></u>	
a.		INA		
Total unit Cost/Hour:	\$198.13			
Total Fleet Cost/Hour:	\$396.26			
MATERIAL QUAN	TITIES			
Initial Volume: 52.	,723			
	10			
	,523 LCY			
Source of estimated vol	manufact in the second s	amation, Mining & Safety		
Source of estimated swe	ell factor: Cat Handbook			
HOURLY PRODUC	CTION			
Average push distance:	175 feet			
Unadjusted hourly prod				
Materials consistency d		l or embankment 0.9		
•		. o. emoundment 0.7		
Average push gradient:	0%			
Average site altitude:	6,600 feet			
Material weight:	2,800 lbs/LCY			
Weight description:	Clay - Natural bed			
Job Condition Correction	n Factor	Source		
Operato		(AVG.)		
Material consis		(CAT HB))		
Dozing m		(GEN.)		
Dozing n	1.000 I.000	(GEN.)		

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.821	(CAT HB)
Blade type:	1.000	(PAT)

Adjusted unit production:	206.89 LCY/hr	
Adjusted fleet production:	413.78 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.958/LCY

Total job time:	141.43 Hours
Total job cost:	\$56,045.00

BULLDOZER WORK

Task description:	Re-grade Plant Area			
Nahcolite Project	Permit Action:	TR-33	Permit/Job#:	M1983194
PROJECT IDENTIF	ICATION			
Task #: 04A	State: Colorado		Abbreviation:	None
Date: 03/13/2013			Filename:	M194-04a
User: THM			T Hondine.	MIT) + V+u
Agency or orga	nization name: DRMS			
HOURLY EQUIPMI	ENT COST			
Basic Machine: Ca	t D8T - 8SU			
Horsepower: 31	0			
	mi-Universal			
Attachment: NA	A			
Shift Basis: 1 r	ber day			
	RG)			
Cost Breakdown:	,	_		
		Utilization %		
Ownership Cost/Hour:	\$56.69	NA		
Operating Cost/Hour:	\$104.03	100		
Ripper op. Cost/Hour:	\$0.00	0		
	\$25 H			
Operator Cost/Hour:	\$37.41	NA		
·	-	NA		
- Total unit Cost/Hour:	\$198.13	NA		
·	-	NA		
- Total unit Cost/Hour:	\$198.13 \$396.26	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN	\$198.13 \$396.26 FITIES	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume:19,0	\$198.13 \$396.26 <u>FITIES</u> 582	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 19,0 Swell factor: 1.1	\$198.13 \$396.26 FITIES 582 10	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 19,0 Swell factor: 1.1	\$198.13 \$396.26 FITIES 582 10 847 LCY			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 19,0 Swell factor: 1.1 Loose volume: 21,0 Source of estimated volu	\$198.13 \$396.26 FITIES 582 10 847 LCY Ime: Division of Reclamation			
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Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 19,0 Swell factor: 1.1 Loose volume: 21,3 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: 1	\$198.13 \$396.26 FITIES 582 10 847 LCY time: Division of Reclamatic 10 847 LCY time: Division of Reclamatic Cat Handbook TION 150 feet 150 feet	on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 19,0 Swell factor: 1.1 Loose volume: 21,0 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ	\$198.13 \$396.26 FITIES 582 10 847 LCY Inter: Division of Reclamation Cat Handbook TION 150 feet 150 feet	on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 19,0 Swell factor: 1.1 Loose volume: 21,3 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient:	\$198.13 \$396.26 FITIES 582 10 847 LCY time: Division of Reclamatic 10 847 LCY time: Division of Reclamatic Cat Handbook TION 150 feet 150 feet	on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 19,0 Swell factor: 1.1 Loose volume: 21,4 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude:	\$198.13 \$396.26 FITIES 582 10 847 LCY ame: Division of Reclamatic 10 847 LCY ame: Cat Handbook TION action: 150 feet 634.3 LCY/hr escription: Compacted fill or en -5 % 6,600 feet	on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL OUAN Initial Volume: 19,0 Swell factor: 1.1 Loose volume: 21,4 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average site altitude: Material weight:	\$198.13 \$396.26 FITIES 582 10 847 LCY Ime: Division of Reclamatic 10 847 LCY Ime: Division of Reclamatic Cat Handbook TION action: 634.3 LCY/hr escription: Compacted fill or en -5 % 6,600 feet 2,800 lbs/LCY Clay - Natural bed	on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 19,0 Swell factor: 1.1 Loose volume: 21,3 Source of estimated volu Source of estimated swell HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average site altitude: Material weight: Weight description:	\$198.13 \$396.26 TITIES 582 10 847 LCY Ime: Division of Reclamatic Cat Handbook TION action: 150 feet 634.3 LCY/hr escription: Compacted fill or en -5 % 6,600 feet 2,800 lbs/LCY Clay - Natural bed n Factor	on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 19,0 Swell factor: 1.1 Loose volume: 21,3 Source of estimated volu Source of estimated swell HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	\$198.13 \$396.26 FITIES 582 10 847 LCY ame: Division of Reclamatic 11 factor: Cat Handbook TION action: 150 feet action: 634.3 LCY/hr escription: Compacted fill or en -5 % 6,600 feet 2,800 lbs/LCY Clay - Natural bed n Factor 0.750	on, Mining & Safety nbankment 0.9 Source		

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.821	(CAT HB)
Blade type:	1.000	(PAT)

Adjusted unit production:	260.25 LCY/hr	
Adjusted fleet production:	520.5 LCY/hr	

JOB TIME AND COST

-

Fleet size:	2 Dozer(s)
Unit cost:	\$0.761/LCY

Fotal job time:	41.97 Hours
Total job cost:	\$16,632.39

BULLDOZER WORK

	Re-grade Well Pads			
Nahcolite Project	Permit Action:	ГК-33	Permit/Job#:	M1983194
PROJECT IDENTIF	ICATION			
Task #: 05A	State: Colorado		Abbreviation:	None
Date: 03/13/2013	County: Rio Blanco		Filename:	M194-05a
User: THM			•	
Agency or organ	nization name: DRMS			
HOURLY EQUIPME	ENT COST			
Basic Machine: Cat	t D8T - 8SU			
Horsepower: 310		-		
	ni-Universal	-		
Attachment: NA		-		
	er day	-		
	RG)	-		
Cost Breakdown:		-		
	ſ	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		
Total unit Cost/Hour:	\$198.13			
Total Fleet Cost/Hour:	\$396.26			
MARDDAL OTISS				
MATERIAL QUANT	TTIES			
Initial Volume:29,0	40			
Initial Volume: 29,0 Swell factor: 1.11	40			
Initial Volume: 29,0 Swell factor: 1.11	40			
Initial Volume: 29,0 Swell factor: 1.11 Loose volume: 32,2 Source of estimated volu	40 0 34 LCY me: Division of Reclamation	n, Mining & Safety		
Initial Volume:29,0Swell factor:1.11Loose volume:32,2	40 0 34 LCY me:Division of Reclamation	n, Mining & Safety		
Initial Volume: 29,0 Swell factor: 1.11 Loose volume: 32,2 Source of estimated volu	40 0 34 LCY me: Division of Reclamation l factor: Cat Handbook	n, Mining & Safety		
Initial Volume: 29,0 Swell factor: 1.11 Loose volume: 32,2 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance:	40 0 34 LCY me: Division of Reclamation l factor: Cat Handbook <u>FION</u> 75 feet	n, Mining & Safety		
Initial Volume: 29,0 Swell factor: 1.11 Loose volume: 32,2 Source of estimated volu Source of estimated swel HOURLY PRODUCT	40 0 34 LCY me: Division of Reclamation l factor: Cat Handbook FION 75 feet	n, Mining & Safety 		
Initial Volume: 29,0 Swell factor: 1.11 Loose volume: 32,2 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance:	40 0 34 LCY me: Division of Reclamation 1 factor: Cat Handbook FION 75 feet ction: 1,017.1 LCY/hr			
Initial Volume: 29,0 Swell factor: 1.11 Loose volume: 32,2 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly produ Materials consistency des Average push gradient:	40 0 34 LCY me: Division of Reclamation 1 factor: Cat Handbook TION 75 feet ction: 1,017.1 LCY/hr scription: Partly consolidated st -5 %			
Initial Volume: 29,0 Swell factor: 1.11 Loose volume: 32,2 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly produ Materials consistency dest	40 0 34 LCY me: Division of Reclamation 1 factor: Cat Handbook TION 75 feet ction: 1,017.1 LCY/hr scription: Partly consolidated st			
Initial Volume: 29,0 Swell factor: 1.11 Loose volume: 32,2 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly produ Materials consistency des Average push gradient:	40 0 34 LCY me: Division of Reclamation 1 factor: Cat Handbook TION 75 feet ction: 1,017.1 LCY/hr scription: Partly consolidated st -5 %			
Initial Volume: 29,0 Swell factor: 1.11 Loose volume: 32,2 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly produ Materials consistency des Average push gradient: Average site altitude:	40 0 34 LCY me: Division of Reclamation 1 factor: Cat Handbook FION 75 feet ction: 1,017.1 LCY/hr scription: Partly consolidated st -5 % 6,600 feet			
Initial Volume: 29,0 Swell factor: 1.11 Loose volume: 32,2 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly produ Materials consistency des Average push gradient: Average site altitude: Material weight:	40 0 34 LCY me: Division of Reclamation 1 factor: Cat Handbook FION 75 feet ction: 1,017.1 LCY/hr scription: Partly consolidated st -5 % 6,600 feet 2,800 lbs/LCY Clay - Natural bed			
Initial Volume: 29,0 Swell factor: 1.11 Loose volume: 32,2 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly produ Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description:	40 0 34 LCY me: Division of Reclamation 1 factor: Cat Handbook FION 75 feet ction: 1,017.1 LCY/hr scription: Partly consolidated st -5 % 6,600 feet 2,800 lbs/LCY Clay - Natural bed h Factor	cockpile 1.1		
Initial Volume: 29,0 Swell factor: 1.11 Loose volume: 32,2 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly produ Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	40 0 34 LCY me: Division of Reclamation 1 factor: Cat Handbook TION 75 feet ction: 1,017.1 LCY/hr scription: Partly consolidated st -5 % 6,600 feet 2,800 lbs/LCY Clay - Natural bed 1 Factor Skill: 0.750	cockpile 1.1		

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.821	(CAT HB)
Blade type:	1.000	(PAT)

Adjusted unit production:	510.08 LCY/hr	
Adjusted fleet production:	1020.16 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.388/LCY
Total job time:	31.60 Hours

J	
Total job cost:	\$12,520.87

BULLDOZER	WORK

Task description:	Distribute 6" of topsoil ove	r 8 acre process pond are	a	
Nahcolite Project	Permit Action:	TR-33	Permit/Job#:	M1983194
PROJECT IDENTIE	TCATION			
Task #: 06A	State: Colorado		Abbreviation:	Mana
				None N104 0C
	3 County: Rio Blan	co	Filename:	M194-06a
User: THM				
Agency or orga	nization name: DRMS			
HOURLY EQUIPM	ENT COST			
Basic Machine: Ca	t D8T - 8SU			
Horsepower: 31				
	mi-Universal			
Attachment: NA				
Shift Basis: 1	ber day			
	RG)			
Cost Breakdown:		Littlingtion 0/		
Ownership Cost/Hour:	\$56.69	Utilization % NA		
Operating Cost/Hour:	\$104.03	100		
Ripper op. Cost/Hour:	\$104.05	0		
		-		
Operator Cost/Hour:	\$37.41	NA		
Total unit Cost/Hour:	\$198.13			
Total Fleet Cost/Hour:	\$396.26			
MATERIAL QUAN	TITIFS			
MATERIAL VOAN				
Initial Volume: 6,4				
Swell factor: 1.0	00			
Loose volume: 6,4	53 LCY			
Source of estimated volu	me: Division of Reclama	tion, Mining & Safety		
Source of estimated voit		ttion, whiling & Salety		
Source of estimated swe				
	TION			
HOURLY PRODUC	TION			
Average push distance:	150 feet			
Unadjusted hourly produ				
Materials consistency de	escription: Loose stockpile 1.	2		
Average push gradient:	0 %			
Average site altitude:	6,600 feet			
Material weight:	1,600 lbs/LCY			
Weight description:	Top Soil			
	n Frankrig	Source		
Job Condition Correction	n Factor			
Job Condition Correctio Operator				
Job Condition Correctio Operator Material consis	· Skill: 0.750	(AVG.) (CAT HB)		

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Adjusted unit production:	545.05 LCY/hr	
Adjusted fleet production:	1090.1 LCY/hr	

Fleet size:	2 Dozer(s)	
Unit cost:	\$0.364/LCY	
Total job time:	5 92 Hours	

I otal job time:	5.92 Hours	
Total job cost:	\$2,345.73	

BULLDOZER WORK

Task description:	D	istribute 6" topsoil over 6.	2 acre process area		
Nahcolite Projec	t	Permit Action:	TR-33	Permit/Job#:	M1983194
PROJECT IDEN	TIFICA	TION			
Task #: 07A Date: 03/13/ User: THM	/2013	State: Colorado County: Rio Blanc	20	Abbreviation: Filename:	None M194-07a
Agency or	organizat	ion name: DRMS			
HOURLY EQUI	PMENT	COST			
Basic Machine:	Cat D87	r - 8SU			
Horsepower:	310				
Blade Type:	Semi-U	niversal			
Attachment:	NA				
Shift Basis:	1 per da	У			
Data Source:	(CRG)				
Cost Breakdown:			Utilization %		
Ownership Cost/H	our.	\$56.69	NA		
Operating Cost/H		\$104.03	100		
Ripper op. Cost/H		\$0.00	0		
Operator Cost/H		\$37.41	NA		
Total unit Cost/Hou Total Fleet Cost/Ho		98.13 96.26			
	ur: \$3	96.26			
Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor:	ur: \$3 ANTITI 5,000 1.000	96.26 ES			
Total Fleet Cost/Ho <u>MATERIAL QU</u> Initial Volume:	ur: \$3 <u>ANTITI</u> 5,000	96.26 ES			
Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor:	ur: \$3 ANTITI 5,000 1.000 5,000 LC volume:	96.26 ES Y Division of Reclamat	ion, Mining & Safety		
Total Fleet Cost/Ho MATERIAL OU Initial Volume: Swell factor: Loose volume: Source of estimated	ur: \$3 ANTITI 5,000 1.000 5,000 LC volume: swell fact	96.26 ES CY Division of Reclamat cor: Cat Handbook	tion, Mining & Safety		
Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated	ur: \$3 ANTITI 5,000 1.000 5,000 LC volume: swell fact DUCTIO	96.26 ES CY Division of Reclamat cor: Cat Handbook N 150 feet	ion, Mining & Safety		
Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROD Average push distant	ur: \$3 ANTITI 5,000 1.000 5,000 LC volume: swell fact DUCTIO nce: production	96.26 ES CY Division of Reclamat Cat Handbook N 150 feet : 634.3 LCY/hr			
Total Fleet Cost/Ho MATERIAL OU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROD Average push distar Unadjusted hourly p	ur: \$3 ANTITI 5,000 5,000 1.000 5,000 LC volume: swell fact DUCTIO ace: broduction cy description cy description content:	96.26 ES Division of Reclamat cor: Division of Reclamat Cat Handbook N 150 feet : 634.3 LCY/hr tion: Loose stockpile 1.2			
Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROE Average push distant Unadjusted hourly p Materials consistence Average push gradie	ur: \$3 ANTITI 5,000 1.000 5,000 LC volume: swell fact DUCTIO or broduction ce: or or cet: or cet: or cet: or cet: or cet: or	96.26 ES Division of Reclamat cor: Division of Reclamat Cat Handbook N 150 feet : 634.3 LCY/hr tion: Loose stockpile 1.2 %			
Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROE Average push distar Unadjusted hourly p Materials consistence Average push gradie Average site altitude	ur: \$3 ANTITI 5,000 5,000 1.000 5,000 LC volume: swell fact DUCTIO Duction broduction Constraint cy descripter Constraint ent: 0 6, 1, 1,	96.26 ES Division of Reclamat cor: Cat Handbook N 150 feet : 634.3 LCY/hr tion: Loose stockpile 1.2 % 600 feet			
Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROD Average push distar Unadjusted hourly p Materials consistence Average push gradie Average site altitude Material weight:	ur: \$3 ANTITI 5,000 1.000 5,000 LC volume: swell fact DUCTIO toce: production cy descript ent: 0 e: 6, 1, To	96.26 ES Division of Reclamat or: Cat Handbook N 150 feet : 634.3 LCY/hr tion: Loose stockpile 1.2 600 lbs/LCY op Soil			
Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROE Average push distar Unadjusted hourly p Materials consistence Average push gradie Average site altitude Material weight: Weight description: Job Condition Correct	ur: \$3 ANTITI 5,000 1.000 5,000 LC volume: swell fact DUCTIO toce: production cy descript ent: 0 e: 6, 1, To	96.26 ES Division of Reclamat Cat Handbook N 150 feet : 634.3 LCY/hr tion: Loose stockpile 1.2 600 feet 600 lbs/LCY pp Soil tor	2		
Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PRODE Average push distar Unadjusted hourly p Materials consistence Average push gradie Average site altitude Material weight: Weight description: Job Condition Correc Ope Material co	ur: \$3 ANTITI 5,000 5,000 1.000 5,000 LC volume: swell fact DUCTIO Duction cy descripter 0 ent: 0	96.26 ES CY Division of Reclamat cor: Division of Reclamat Cat Handbook N 150 feet 634.3 LCY/hr tion: Loose stockpile 1.2 % 600 lbs/LCY op Soil tor 0.750 : 1.200	2 Source		

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Adjusted unit production:	545.05 LCY/hr	
Adjusted fleet production:	1090.1 LCY/hr	

Fleet size:	2 Dozer(s)	
Unit cost:	\$0.364/LCY	
Total job time:	4 50 Hours	

Total job time:	4.59 Hours
Total job cost:	\$1,817.55

BULLDOZER	WORK

	Distribute 6" topsoil over12 a	0		
Nahcolite Project	Permit Action:	TR-33	_ Permit/Job#:	M1983194
PROJECT IDENTIF	ICATION			
Task #: 08A	State: Colorado		Abbreviation:	None
Date: 03/13/2013	County: Rio Blanco		Filename:	M194-08a
User: THM				
Agency or orga	nization name: DRMS			
HOURLY EQUIPMI	ENT COST			
	t D8T - 8SU			
Horsepower: 310				
	mi-Universal			
the second se				
		-12 		
	er day			
Data Source: (Cl	RG)	<u> </u>		
Cost Breakdown:	2			
		<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		
Fotal unit Cost/Hour:	\$198.13			
Fotal Fleet Cost/Hour:				
lotal Fleet Cost/Hour:	\$396.26			
ATERNAL OTANT	PTPTEO			
MATERIAL QUANT	IIIES			
Initial Volume: 9,66	i0			
Swell factor: 1.00				
Loose volume: 9,66	0 LCY			
Source of estimated volu		n, Mining & Safety		
Source of estimated volu Source of estimated swel		on, Mining & Safety		
Source of estimated swel	l factor: Cat Handbook	on, Mining & Safety		
	l factor: Cat Handbook	on, Mining & Safety		
Source of estimated swel	l factor: Cat Handbook	on, Mining & Safety		
Source of estimated swel HOURLY PRODUC	l factor: Cat Handbook TION 100 feet	on, Mining & Safety		
Source of estimated swel	l factor: Cat Handbook TION 100 feet	on, Mining & Safety		
Source of estimated swel HOURLY PRODUC	I factor: Cat Handbook TION 100 feet action: 852.6 LCY/hr	on, Mining & Safety		
Source of estimated swel HOURLY PRODUC Average push distance: Jnadjusted hourly produ Materials consistency de	I factor: Cat Handbook TION 100 feet action: 852.6 LCY/hr scription: Loose stockpile 1.2	on, Mining & Safety		
Source of estimated swel HOURLY PRODUC Average push distance: Jnadjusted hourly produ Materials consistency de Average push gradient:	l factor: Cat Handbook TION 100 feet totion: 852.6 LCY/hr scription: Loose stockpile 1.2 0 %	on, Mining & Safety 		
Source of estimated swel HOURLY PRODUC Average push distance: Jnadjusted hourly produ Materials consistency de	I factor: Cat Handbook TION 100 feet action: 852.6 LCY/hr scription: Loose stockpile 1.2	on, Mining & Safety 		
Source of estimated swel HOURLY PRODUC Average push distance: Jnadjusted hourly produ Materials consistency de Average push gradient:	l factor: Cat Handbook TION 100 feet totion: 852.6 LCY/hr scription: Loose stockpile 1.2 0 %	on, Mining & Safety		
Source of estimated swel HOURLY PRODUC Average push distance: Jnadjusted hourly produ Materials consistency de: Average push gradient: Average site altitude:	I factor: Cat Handbook TION 100 feet action: 852.6 LCY/hr scription: Loose stockpile 1.2 0 % 6,600 feet	on, Mining & Safety		
Source of estimated swel HOURLY PRODUC Average push distance: Jnadjusted hourly produ Materials consistency de: Average push gradient: Average site altitude: Material weight: Weight description:	I factor: Cat Handbook TION 100 feet action: 852.6 LCY/hr scription: Loose stockpile 1.2 0 % 6,600 feet 1,600 lbs/LCY Top Soil			
Source of estimated swel HOURLY PRODUC Average push distance: Jnadjusted hourly produ Materials consistency de: Average push gradient: Average site altitude: Material weight: Weight description: Iob Condition Correction	I factor: Cat Handbook TION 100 feet action: 852.6 LCY/hr scription: Loose stockpile 1.2 0 % 6,600 feet 1,600 lbs/LCY Top Soil n Factor 1			
Source of estimated swel HOURLY PRODUC Average push distance: Jnadjusted hourly produ Materials consistency de: Average push gradient: Average site altitude: Material weight: Weight description:	I factor: Cat Handbook TION 100 feet action: 852.6 LCY/hr scription: Loose stockpile 1.2 0 % 6,600 feet 1,600 lbs/LCY Top Soil D Factor 0.750			

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Adjusted unit production:	732.64 LCY/hr	
Adjusted fleet production:	1465.28 LCY/hr	

JOB TIME AND COST

Fleet size:	2 Dozer(s)
Unit cost:	\$0.270/LCY
Total job time:	6.59 Hours

Total job cost: **\$2,612.40**

BULLDOZER RIPPING WORK

	Task description:	Rip 18.7 acres	of road and co	mpacted areas		
Site:	Nahcolite Project	P	ermit Action:	TR-33	Permit/Job#:	M1983194
	PROJECT IDENTIF	ICATION				
	Task #: 09A Date: 03/13/2013	State County			Abbreviation: Filename:	None M194-09a
	User: THM					
	Agency or organ	nization name:	DRMS			
	HOURLY EQUIPME	NT COST				
	Basic Machine					310
<u>85</u>	Ripper Attachment	:: <u>3-Shank Ripp</u>	ber	_		cRG)
	Cost Breakdown:					
	Owne	rship Cost/Hour:	\$63.		tilization % NA	
	Oper	ating Cost/Hour:	\$104		100	
		ating Cost/Hour:	\$6.5		100	
	•	rator Cost/Hour: Unit Cost/Hour:	\$37.	and and a state of the state of	NA	
		Fleet Cost/Hour:	\$421			
	MATERIAL QUANT			cted estimating me	thod: Area	
	Alternate Methods:					
Seismic:	NA	В	ank Volume:	NA	BCY	NA
Area:	18.70 ac	res R	ip Depth (ft):	2.00	Volume: 60,339	BCY or CCY
	Source	e of estimated quar	ntity: Staff Es	stimate		
	HOURLY PRODUCT	<u>FION</u>				
	Seismic:	0 ' ' '	1 4	214		
		Seismic V	elocity:	NA	feet/second	
	<u>Area:</u>	Average Ripping	Depth:	2.56	mph	
		Average Ripping	Width:	7.08	degrees	
		Average Ripping		300.00	feet	
		Average Dozer		88.00	feet	
		Average Maneuve Production per ur		0.25	feet acres/hour	
	Job Condition Correction	•				
	Unadjusted	l Hourly Unit Proc	luction:	0.800	Acres/hr	
		Site A	ltitude:	6,600	feet	
			de Adj:	1.00	(CAT HB)	
		Job Eff	· · · · · · · · · · · · · · · · · · ·	0.83	(1 shift/day)	
		Net Cor	rection:	0.83	multiplier	
		djusted Hourly U djusted Hourly Flo		0.66	Acres/hr Acres/hr	
	JOB TIME AND CO		eet i rouuetioii.	1.55		
	Fleet size: 2		(s)	Total job time:	14.09	Hours
	Unit cost: \$317			Total job cost:	\$5,945.00	

BULLDOZER	WORK

Task description:	Distribute 6" tops	oil over18.	7 acres of decompac	ted area	
Nahcolite Project	Perm	it Action:	TR-33	Permit/Job#:	M1983194
PROJECT IDENTIF	ICATION				
Task #: 10A	State:	Colorado		Abbreviation:	None
Date: 03/13/2013		Rio Blance		Filename:	M194-10a
User: THM	0000000	THE DIANE		i nenume.	11174-104
Agency or orga	nization name: DRM	٧Ŋ			
HOURLY EQUIPMI					
	t D8T - 8SU				
Horsepower: 31					
L	mi-Universal				
Attachment: NA					
	ber day				
	RG)				
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		
Total unit Cost/Hour:	\$198.13				
Total Fleet Cost/Hour:	\$396.26				
			1000		
MATERIAL QUAN	TITIES				
Initial Volume: 15,0					
Swell factor: 1.00					
Loose volume: 15,0)53 LCY	_			
Source of estimated volu	me: Division o	f Reclamati	on, Mining & Safety		
Source of estimated swel					
				~	
HOURLY PRODUC	TION				
Average push distance:	100 feet				
Unadjusted hourly produ		r			
Materials consistency de	scription: Loose st	ockpile 1.2			
Average push gradient:	0 %				
Average site altitude:	6,600 feet				
	1 (00 11 11 011	-			
	1,600 lbs/LCY				
Material weight:					
Material weight: Weight description:	Top Soil				
Weight description: Job Condition Correction	Top Soil		Source		
Weight description: Job Condition Correction Operator	Top Soil <u>n Factor</u> Skill: 0.7		Source (AVG.)		
Weight description: Job Condition Correction	Top Soil <u>n Factor</u> Skill: 0.7 tency: 1.2	00)	

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Adjusted unit production:	732.64 LCY/hr	
Adjusted fleet production:	1465.28 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.270/LCY
Total job time:	10.27 Hours
Total job cost:	\$4,070.86

REVEGETATION WORK

Nahcolite Project	Permit Action: Permit/J		Permit/Job#:	M1983194	
PROJECT IDENTIFICATI	ON				
Task #: 11A		olorado		Abbreviation:	None
Date: 03/13/2013		io Blanco		Filename:	M194-11a
User: THM					
Agency or organization	name: DRMS				
FERTILIZING					
Materials		Units /			
Description		Acre	Unit	Cost / Unit	Cost /Acre
				\$	\$
				Total Fertilizer	
				Materials	
				Cost/Acre	\$0.00
Application				1	
Description					Cost /Acre
					\$
		Tota	Fertilizer A	pplication Cost/Acre	\$0.00
TILLING					
Description					Cost /Acre
Disc harrowing, 6" deep (MEA	NS 32 91 13.23 (6100)			\$98.01
Weed control spraying (MEAN					\$145.20

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.10	3.90	\$2.28
Crested Wheatgrass - Ephraim	4.00	18.37	\$8.92
Blue Wildrye - Arlington or Elkton	1.50	5.17	\$17.88
Russian Wildrye - Bozoisky	1.50	6.03	\$9.36
Hard Fescue - Discovery	1.00	12.97	\$2.09
Pubescent Wheatgrass - Luna	1.50	3.10	\$3.36
Yellow Sweet Clover - Madrid	0.50	2.98	\$1.28
Tall Wheatgrass - Jose	1.80	3.26	\$4.05
Thickspike Wheatgrass - Critana	4.30	15.20	\$22.23
Sweetvetch, Utah or Northern	0.10	0.05	\$4.09

Western Wheatgrass - Barton		1.50	3.79	\$5.52
Yarrow, Western		0.20	12.16	\$6.13
	Totals Seed Mix	18.00	86.97	\$87.18

Application

Description		Cost /Acre
Drill seeding (MEANS 32 92 19.13 0020)		\$404.00
	Total Seed Application Cost/Acre	\$404.00

MULCHING and MISCELLANEOUS

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	2.00	ACRE	\$1.23	\$2.46
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$265.00	\$530.00
Total Mulch Materials Cost/Acre				\$532.46

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$65.89
Power mulcher (MEANS 32 91 13.16 0250)		\$86.68
	Total Mulch Application Cost/Acre	\$152.57

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: ed Failure Rate: ng Work Items:	 Cost /Acre*	e: \$1,419.42 *: \$1,419.42	
Initial Job Cost:	\$63,731.96			
Reseeding Job Cost:	\$19,119.59			
Total Job Cost:	\$82,851.55			
Job Hours:	24.00			

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Nahcolite Proje	ct	Permit A	Action: TR-33		Pe	rmit/Job#:M19	983194
PROJECT IDEN	NTIFICAT	ION					
Task #: 12A		State: Co	lorado		Abbr	eviation: None	2
	3/2013						4-12a
Agency of	r organization	n name: DRMS					
EQUIPMENT T	RANSPOR	T RIG COST					
					Shift ba	- F - F	
				1	Cost Data Sou	rce: CRG D	ata
Truck	Tractor Desc	ription: GENI	ERIC ON-HIGH	WAY TRU	JCK TRACTO	DR, 6X4, DIESEI	POWERED.
		1			(2ND HALF,		,
Truck	Trailer Desc	ription: GENE	RIC FOLDING			DECK EQUIPME	ENT TRAILER
				(251,	50T, AND 10	101)	
Cost Breakdown:							
Available Rig Cap	acities	0-25 Tons	26-50 Tons	51+	- Tons		
Ownership	Cost/Hour:	\$16.63	\$18.37	\$2	22.33		
Operating	Cost/Hour:	\$44.38	\$46.13	\$5	50.07		
	Cost/Hour:	\$27.66	\$27.66	\$2	27.66		
	Cost/Hour:	\$0.00	\$25.39	\$2	25.39		
Total Unit	Cost/Hour:	\$88.67	\$117.55	\$1	25.45		
NON ROADAB	LE EQUIP	MENT:					
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permi
	Unit (TONS)	Cost/hr/ unit	Cost/hr/unit	Size	Cost/hr/ fleet	Cost/hr/ fleet	Cost/ fleet
Description		\$65.28	\$125.45	2	\$381.46	\$250.90	\$500.00
Description Cat D8T - 8SU	53.08		000 (7	1	\$128.26	\$88.67	\$250.00
•	53.08 25.00	\$39.59	\$88.67				
Cat D8T - 8SU Drill/Broadcast		\$39.59 \$7.03	\$88.67	1	\$95.70	\$88.67	\$250.00
Cat D8T - 8SU Drill/Broadcast Seeder with Tractor Power Mulcher	25.00		\$88.67	1 Subtotals:	\$95.70 \$605.42	\$88.67 \$428.24	\$250.00 \$1,000.00

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.	\$14.59	2	\$29.18	\$29.18
		Subtotals:	\$29.18	\$29.18

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	RIFLE	
Total one-way travel distance:	60.00	miles
Average Travel Speed:	40.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$6,311.82	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$87.54	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	1.50	1.50
Return Time (Hours):	1.50	1.50
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	4.00	3.00

JOB TIME AND COST

Total job time: **8.00** Hours

Total job cost: \$6,399.36