

1313 Sherman St. Room 215 Denver, CO 80203

April 23, 2021

Mr. Kirk Daehling Natural Soda LLC 3200 CR 31 Rifle, CO 81650

Re: Nahcolite Project, Permit No. M-1983-194, Technical Revision Approval, Revision No. TR-46

Dear Mr. Daehling:

On April 23, 2021 the Division of Reclamation, Mining and Safety approved the Technical Revision application submitted to the Division on April 19, 2021, addressing the following:

Request to drill up-gradient monitoring wells PA-1, AG-2, and BG-10 on new pad (1.18 ac of disturbance)

The terms of the Technical Revision No. 46 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.

If the revised liability amount exceeds the performance bond currently held (see below), please submit additional bond. The revision will not be final until the bond is approved by the Division.

Bond Held:	\$3,671,965.00
Prior Liability:	\$3,671,965.00
Change in Liability:	\$0.00
Revised Liability:	\$3,671,965.00

If you have any questions, please contact me.

Sincerely,

Amy Geldell

Amy C. Yeldell Environmental Protection Specialist

CC: Jerry Daub Paul Daggett





COLORADO Division of Reclamation, Mining and Safety Department of Natural Resources

1313 Sherman Street, Room 215 Denver, CO 80203

April 22, 2021

Kirk Daehling Natural Soda LLC 3200 CR 31 Rifle, CO 81650

RE: Nahcolite Project, Permit No. M-1983-194, TR-46 Reclamation Cost Estimate-Changes to Bond

Dear Mr. Daehling:

This reclamation cost update was in response to the technical revision request (TR-46) which was submitted on April 19, 2021 as well as the updated figures provided in the attached Daub & Associates Inc. table. The Division is mandated to recalculate the reclamation cost estimate to ensure that the Financial Warranty adequately, reflects the actual current cost of fulfilling the requirements of the approved reclamation plan.

Below is a table summarizing input values that have been updated with technical revision (TR-46) as compared to previous technical revision (TR-45). This table does not account for price changes resulting from inflation or other RS Means cost changes.

Task	Form Used	Change	Justification
02a	Borehole	+	Added PA-1, AG-2, and BG-10 Remove BG-5 and BG-9 (removed under TR-45 13H-I, 14H-I, 10H-I, 10H-R, and 10H-1V)
05a	Dozer	-	Credit for partially reclaimed pads and addition of new pad as provided in D&A updated table New total of 142,393 CY to be graded over 44.13 ac
05b	Dozer	-	Credit for partially reclaimed pads and addition of new pad as provided in D&A updated table Per TR-46 477 CY of topsoil estimated to construct a 1.18 ac pad. 3" is less than Rec plan which requires 6" and is 952 CY.
			New total 44.13 ac of pads @ 6" depth is 35,598 CY



05c	Reveg	-	Add PA-1, AG-2, BG-10 Pad, remove reclaimed BG-5 and BG-9 pads and interim reclamation od DS-10 New total Reveg 44.13 ac
06a	Ripper,	-	Credit for partially reclaimed roads as provided in D&A updated table New total 3.76 ac
06b	Dozer	-	Credit for partially reclaimed roads as provided in D&A updated table New total 3.76 ac @ 6" is 3,033 CY
06c	Reveg	-	Credit for partially reclaimed roads as provided in D&A updated table New total Reveg 3.76 ac

Please feel free to contact me with any further questions.

Sincerely,

Amy Geldell

Amy Yeldell Environmental Protection Specialist

Natural Soda, LLC Road Pad Reclamation Tracking Spreadsheet

								WE	LL PADS								
DISTUR	DISTURBED INTERIM RECLAMATION (How does Normality in the image of the		does NS atus?)	UNDERGOING FINAL RECLAMATION RR should visit these areas and offer opinions for add'l reclamation efforts or determine if they should be moved to Monitored column.			FINAL RECLAMATION & VEGETATION STUDY (first grow & first monitor year) RR should visit these areas or review his notes and determine if they should be monitored again or are in need of add'I reclamation efforts.			MEETS RECLAMATION GOALS (yr met BLM goals)			RECOGNIZED AS RECLAIMED BY AGENCIES				
Description	Area, ft ²	Acres	Description	Area, ft ²	Acres	Description	Area, ft ²	Acres	Description	Area, ft ²	Acres	Description	Area, ft ²	Acres	Description	Area, ft ²	Acres
8H/3A-4H (2013) (P&A'd 2019)	88,287	2.03	3 2M-TDR, 3M-TDR	5,554	0.13	grass & not enuf forbs & perennials)	28,725	5 0.66	93-2M (2011 & <mark>2013-19)</mark>	12,505	0.29	4-2V & 93-3V (2013,14,15)	131,882	3.03	3 1A-5HR (13,14,15)	68,443	1.57
5H	98,187	2.2	5 89-1	14,961	0.34	G (05/16, 08/19: Russi. Thistle)	26,321	0.60	Q (2016 & <mark>2019</mark>)	24,786	0.57	91-1V (2013,14,15)	8,746	0.20) 1A-4HI (2013)	29,896	0.69
7H	76,787	1.70	5 90-1	38,490	0.88	U (05/16, 08/19:Russi Thist)	25,075	5 0.58	4-3H(V) (2013)	39,927	0.92	4A-5M, 4A-6V (2013,14,15 chk w/ BLM)	26,122	0.60) 3A-5V (13,14,15)	64,843	1.49
7H-1V (see 15H-1V)	0	0.00	90-2	18,509	0.42	BG-8 (DS-4) P&A 2017, 2018 1st grow yr	45,021	1.03			0.00	4A-1V (2018, 11yrs of rec)	57,885	1.33	35H-1V (2012 & 2014-19, 19)	35,862	0.82
10H-13H	290,596	6.6	7 90-5H	8,791	0.20	MW-1, PW-1, PW-2 (RR to ck 07 or 08 2016)	24,278	3 0.56			0.00						0.00
14H	98,457	2.20	6 BG-4	20,343	0.47	RI-3 (P&A 2015, RR to ck 07 or 08 2016)	6,872	0.16			0.00	E (2016 & 2019, 19)	25,379	0.58	3		0.00
88-1V	19,714	0.4	5 BG-6 (see RR 2015 rept)	25,439	0.58			0.00			0.00	H (2015 & 2019, 19)	28,880	0.66	5 1/24/20 D&A sent DRMS		0.00
15H-17H	207,133	4.76	6 DS-2	6,659	0.15	2013-19)	88,994	4 2.04			0.00	N (2015 & 2019, 19)	29,639	0.68	a list of successfully reclaimed acreage, have		0.00
12H-13H-IR (1-3A, 2B-3C)	74,053	1.70	DS-3	6,524	0.15	5 BG-5 (see RR 2015 rept)	38,668	3 0.89			0.00	P (2016 & 2019, 19)	24,581	0.56	6 drms/blm sign-off on		0.00
14H-1V	49,289	1.13	3 DS-6 (Aug 2015, Good Response)	25,160	0.58	BG-9 (DS-5) (see RR 2015 rept)	29,973	B 0.69			0.00	R (2016 & 2019, 19)	26,013	0.60) copy of list to D&A.		0.00
15H-1V	63,204	1.4	DS-7, 2A-2V (Aug 2015, Fair Response)	38,045	0.87	7		0.00			0.00	94-1M (2020)	56,433	1.30)		0.00
16H-17H-IR-E (as-blt)	114,095	2.62	l (DS-8) (Aug 2015, Good Response)	26,732	0.61	1		0.00			0.00	A (2016, 2020)	24,345	0.56	6		0.00
16-17H-1V (38,500 sq ft (0.88 acres)) of existing 1A- 4HI pad)	208,401	4.78	3 K (BG-7) (Aug 2015, Good Response)	27,870	0.64	1		0.00			0.00	D (2015, 2020)	27,853	0.64	1		0.00
		0.00	M (DS-9) (Aug 2015, Good Response)	29,224	0.67	7		0.00			0.00	IRI-2 (P&A 2017, 2020) is acerage in CIRCES?		0.00	D		0.00
		0.00	0 WSW-2	30,389	0.70)		0.00			0.00	T (05, 2016, 2020)	31,010	0.71	1		0.00
		0.00	Response)	32,647	0.75	5		0.00			0.00						0.00
		0.00	WSW-4 (Aug 2015, Good Response)	32,789	0.75	5		0.00			0.00			0.00	D		0.00
		0.00	WSW-5 (O-GMW-A) (Aug	28,854	0.66	δ		0.00			0.00			0.00)		0.00
		0.00	D 15H-SSMW	24,594	0.56	δ		0.00			0.00			0.00)		0.00
		0.00	0 17H-SSMW Pad	12,791	0.29	9		0.00			0.00			0.00			0.00
		0.00	PA-1 AG-2 BG-10 Upgradient Monitor Pad	51,401	1.18	3		0.00			0.00			0.00)		0.00
		0.00	(i toposed) D		0.00	D		0.00			0.00			0.00)		0.00
		0.00)		0.00			0.00			0.00			0.00			0.00
TOTAL	1,388,203	31.87	TOTAL	534,170	12.26	TOTAL	313,927	7.21	TOTAL	77,218	0.00 1.77	TOTAL	498,768	11.45	TOTAL	199,044	4.57
Pad/Road D	STURBED	34.36	Task 05A, 05B, & 05C	1													
Pad/Roa RECI	d INTERIM	13.52	needs: regrade, topsoil, & reveg, Roads will need decompation														
Pad/Road UNDERGO RECI	ING FINAL AMATION	8.12	2														
Pad/Road FINAL RECL/ VEGETAT	AMATION & ION STUDY	1.77	Acreage that does not need regrading, topsoil, or														
Pad/Road MEETS RECI	AMATION GOALS	14.72	reveg														
Pad/Road RECOO RECLAMED BY	NIZED AS	4.57															
Vertical Chec	k sum (ac)	77.07	Horizontal Check S	um (ac)	77.07												

Natural Soda, LLC Road Pad Reclamation Tracking Spreadsheet

ROADS and	PIPELIN	ES				ROA	DS and P	PIPELINE	S								
DISTURBED			INTERIM RECLAMATION			UNDERGOING FINAL RECLAMATION		FINAL RECLAMATION & VEGETATION STUDY (first grow & first monitor year) RR should visit these areas or review his notes and determine if they should be monitored again or are in need of add'l reclamation efforts.		, MEETS RECLAMATION GOALS (yr met BLM goals)			RECOGNIZED AS RECLAIMED BY AGENCIES				
Description	Area, ft ²	Acres	Description	Area, ft ²	Acres	Description	Area, ft ²	Acres	Description	Area, ft ²	Acres	Description	Area, ft ²	Acres	Description	Area, ft ²	Acres
RD A	23,690	0.54	RD D	1,044	0.02	RD A rdp	928	0.02			0.00	RD E ~960' rdp (2019)	10,649	0.24			0.00
RD B	38,042	0.87	RD G	8,168	0.19	RD G rdp	1,050	0.02			0.00	RD H ~ <mark>585</mark> ' rdp (2019)	11,542	0.26	i		0.00
RD C	18,711	0.43	RD H	6,168	0.14	RD H-C rdp (2019)	10,103	0.23			0.00	RD N-C ~960' rdp (2019)	10,196	0.23			0.00
RD E	778	0.02	RDI	1,528	0.04	RD U-T rdp	27,602	0.63			0.00	RD P ~3050' rdp (2019)	4,607	0.11			0.00
RD F	900	0.02	RD I rdp (DS-8)	1,476	0.03	3		0.00			0.00	RD Q rdp (2019)	30,284	0.70			0.00
RD K	1,808	0.04	RD J (old: 578)	924	0.02	2		0.00			0.00	RD R rdp? ~1550'					0.00
RD 14H	421	0.01	RD M rdp (DS-9)	8,247	0.19)		0.00			0.00	WSW-3 pipeline	21,521	0.49			0.00
RD 15-17	13,252	0.30	RD M-K rdp (DS- 9/BG-7)	8,719	0.20)		0.00			0.00	WSW-4 pipeline	53,675	1.23			0.00
RD 15H-SSMW	1,464	0.03	RD O rdp	11,436	0.26	5		0.00			0.00			0.00			0.00
16/17H-1V	7,404	0.17	RD DS-6 rdp	453	0.01			0.00			0.00			0.00			0.00
DS-10	1,300	0.03	RD WSW-3 rdp	2,297	0.05	5		0.00			0.00			0.00			0.00
Upgradient Monitor Pad Road (Proposed)	840	0.02	RD WSW-4 rdp	152	0.00)		0.00			0.00			0.00			0.00
		0.00	RD 17H-SSMW	4,415	0.10)		0.00			0.00			0.00			0.00
		0.00			0.00)		0.00			0.00			0.00			0.00
		0.00			0.00)		0.00			0.00)		0.00			0.00
		0.00			0.00)		0.00			0.00			0.00			0.00
		0.00			0.00)		0.00			0.00			0.00			0.00
		0.00			0.00)		0.00			0.00			0.00			0.00
		0.00			0.00)		0.00			0.00			0.00			0.00
		0.00			0.00)		0.00			0.00			0.00			0.00
		0.00			0.00			0.00			0.00			0.00			0.00
		0.00			0.00)		0.00			0.00			0.00			0.00
		0.00			0.00)		0.00			0.00			0.00			0.00
TOTAL	108,610	2.49	TOTAL	55,027	1.26	TOTAL	39,683	0.00	TOTAL	0	0.00	TOTAL	142,474	3.27	TOTAL	0	0.00

COST SUMMARY WORK

Task description:		Updated values	based on TR	R-46 and site progress			
Site:	Nahcolite	e Project	Pe	rmit Action:	TR-46	Permit/Job	o#: M1983194
<u>P</u>]	ROJECT Task #: Date: User:	IDENTIFI ACY 4/20/2021 ACY	CATION State: County:	Colorado Rio Blanco)	Abbreviation: Filename:	None M194-ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task		Form	Fleet	Task	
	Description	Used	Size	Hours	Cost
01a	Demo of Plant, pipelines, powerlines and parking lot	DEMOLISH	1	80.00	\$1,851,261
02a	Borehole P&A	BOREHOLE	1	610.00	\$637,066
03a	Regrade Process Ponds	DOZER	2	178.19	\$88,129
03b	Decompact Process Pond	RIPPER	2	6.85	\$3,678
03c	Topsoil Process Pond	DOZER	2	14.06	\$6,954
03d	Reveg Process Pond	REVEGE	1	28.50	\$36,722
04a	Regrade Plant Area	DOZER	2	23.69	\$11,717
04b	Decompact Plant Area	RIPPER	2	7.02	\$3,770
04c	Topsoil Plant Area	DOZER	2	7.58	\$3,751
04d	Reveg Plant Area	REVEGE	1	12.30	\$15,848
05a	Regrade Well Pads	DOZER	2	159.03	\$78,649
05b	Topsoil Well Pads	DOZER	2	32.66	\$16,151
05c	Reveg Well Pads	REVEGE	1	66.20	\$85,291
06a	Decompact Roads	RIPPER	2	3.02	\$1,625
06b	Topsoil roads	DOZER	2	2.32	\$1,147
06c	Reveg Roads	REVEGE	1	5.60	\$7,267
12a	Initial Mobilization	MOBILIZE	1	8.00	\$14,744
12b	Secondary Mobilization	MOBILIZE	1	8.00	\$2,374
		<u>SUBT(</u>)TALS:	1253.02	\$2,866,145

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$57,896					
Performance bond:	1.05	Total =	\$30,095					
Job superintendent:	626.51	Total =	\$43,574					
Profit:	10.00	Total =	\$286,614					
		TOTAL O & P =	\$418,179					
		CONTRACT AMOUNT (direct + O & P) = $($	\$3,284,324					
LEGAL - ENGINEERING - PROJECT MANAGEMENT:								

Financial warranty processing (legal/related costs): Engineering work and/or contract/bid preparation: Reclamation management and/or administration:	\$500 5.23 4.00	Total = Total =	\$500 \$171,770 \$131,373
CONTINGENCY:	3.00	Total =	\$85,984
	ΤΟΤΑ	L INDIRECT COST =	\$807,806
TOTAL BO	\$3,673,951		

DEMOLITION WORK

Site:	Nahcolite Project	Permit Action:	TR-46	Permit/.	lob#: <u>M1983194</u>
ROJEC	T IDENTIFICATI	<u>ION</u>			
Task #:	01A	State: Colorado		Abbreviation:	None
Date:	4/20/2021	County: Rio Blanco		Filename:	M194-01a
	ACIN				

Location adjustment: 95.50 %

UNIT COSTS

Structure or Item **Demolition Menu** Unit **Total Cost** Dimensions Quantity Unit Description Selection Cost 200'L x 227'W NSI Plant Plant (3S) demo./off-site 1,929,500.00 CF \$1,317,848.50 \$0.68 disposal in approved x 42.5'H landfill - Max. 30 mile haul Product Storage 95'L x 95'W x Plant (3S) demo./off-site 451,250.00 CF \$0.68 \$308,203.75 Dome 50'H disposal in approved landfill - Max. 30 mile haul Removal of NSI Plant 200'L x 227'W Demo. and on-site 45,400.00 SF \$1.19 \$54,116.80 x 8" disposal in excavated pit, Slab 8 in. thick - Max. 200 ft. push Demo. and on-site 9,025.00 SF Removal of Storage 95'L x 95'W x8" \$1.19 \$10,757.80 Dome Slab disposal in excavated pit, 8 in. thick - Max. 200 ft. push Plant (1S) demo./off-site CF Scale Building 108'W x 18'L x 19,440.00 \$0.68 \$13,199.76 10'H disposal in approved landfill - Max. 30 mile haul Demo. and on-site 1.944.00 Removal of Scale 108'W x 18'L x SF \$1.19 \$2.317.25 **Building Slab** 8" disposal in excavated pit, 8 in. thick - Max. 200 ft. push Tank Farm 30'W x 50'H Haul tank to certified 5.00 EA \$760.00 \$3,800.00 salvage dump - 3,000 to 5,000 gal. tank USER PROVIDED 70.00 Ft^2 Removal of 70 SqFt \$5.00 \$350.00 Flagpole/Monument ITEM Demolition of 6'W x 18'L x Plant (3S) demo./off-site 1.080.00 CF \$0.68 \$737.64 Screening and Magnet 10'H disposal in approved landfill - Max. 30 mile System haul Pipelines averaged to 34,948 LF Pipe, steel, welded 34,948.00 LF \$6.50 \$227,162.00 10" diam connections - 10 in. diameter pipe

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	80.00	(unadjusted):	\$1,938,493.50	location):	\$1,851,261.29

BOREHOLE SEALING WORK

,	Task description:	Borehole P	&A			
Site:	Nahcolite Project		Permit Action:	TR-46	Permit/J	lob#: M1983194
<u>PROJE</u>	CT IDENTIFICATIO	N				
Task #:	02A	State:	Colorado		Abbreviation:	None M104.02
User:	4/20/2021 ACY	County:	Rio Blanco		Filename:	M194-02a
	Agency or organiza	tion name:	DRMS			

UNIT COSTS

Borehole	Sealing/Item Method						
Description	C	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
3M-TDR	Portland cement grout - 4	4	1876	1,876.00	LF	\$5.55	\$10,411.80
	in. (labor, equip, materials)						
89-1	Portland cement grout - 4	4	1627	1,627.00	LF	\$5.55	\$9,029.85
	in. (labor, equip, materials)						
89-2	Portland cement grout - 4	4	1417	1,417.00	LF	\$5.55	\$7,864.35
	in. (labor, equip, materials)						
89-3	Portland cement grout - 4	4	347	347.00	LF	\$5.55	\$1,925.85
	in. (labor, equip, materials)						
90-1	Portland cement grout - 8	8.9	1417	1,417.00	LF	\$7.03	\$9,961.51
	in. (labor, equip, materials)						
90-3	Portland cement grout - 4	4	1627	1,627.00	LF	\$5.55	\$9,029.85
	in. (labor, equip, materials)						
90-4	Portland cement grout - 4	4	1417	1,417.00	LF	\$5.55	\$7,864.35
	in. (labor, equip, materials)						
BG-1	Portland cement grout - 4	4	1627	1,627.00	LF	\$5.55	\$9,029.85
	in. (labor, equip, materials)						
BG-4	Portland cement grout - 4	4	1627	1,627.00	LF	\$5.55	\$9,029.85
	in. (labor, equip, materials)						
DS-2	Portland cement grout - 4	4	1876	1,876.00	LF	\$5.55	\$10,411.80
	in. (labor, equip, materials)						
DS-3	Portland cement grout - 4	4	1876	1,876.00	LF	\$5.55	\$10,411.80
	in. (labor, equip, materials)						
EX-2	Portland cement grout - 4	4	1876	1,876.00	LF	\$5.55	\$10,411.80
	in. (labor, equip, materials)						
IRI-1	Portland cement grout - 4	4	347	347.00	LF	\$5.55	\$1,925.85
	in. (labor, equip, materials)						
IRI-4	Portland cement grout - 4	4	1417	1,417.00	LF	\$5.55	\$7,864.35
	in. (labor, equip, materials)						
IRI-5	Portland cement grout - 4	4.1	347	347.00	LF	\$5.55	\$1,925.85
	in. (labor, equip, materials)						
IRI-6	Portland cement grout - 4	4	1627	1,627.00	LF	\$5.55	\$9,029.85
	in. (labor, equip, materials)						
IRI-7	Portland cement grout - 4	4	1876	1,876.00	LF	\$5.55	\$10,411.80
	in. (labor, equip, materials)						
IRI-8	Portland cement grout - 4	4	347	347.00	LF	\$5.55	\$1,925.85
	in. (labor, equip, materials)						
12H-I	Portland cement grout - 8	7	2100	2,100.00	LF	\$7.03	\$14,763.00
	in. (labor, equip, materials)						
12H-I Bridge Plug	PVC plug - 8 in. diameter	7	1	1.00	EA	\$82.45	\$82.45
	borehole						
12H-R	Portland cement grout - 8	7	2100	2,100.00	LF	\$7.03	\$14,763.00
	in. (labor, equip, materials)						

12H-R Bridge	PVC plug - 8 in. diameter	7	1	1.00	EA	\$82.45	\$82.45
Plug	borehole						
BG-6	Portland cement grout - 4	4	1639	1,639.00	LF	\$5.55	\$9,096.45
	in. (labor, equip, materials)	_				*- - -	* 4 0 • 4 • 0 0
WSW-2	Portland cement grout - 8	7	1460	1,460.00	LF	\$7.03	\$10,263.80
	in. (labor, equip, materials)	<i></i>	1000	1.000.00		 	\$12 000 00
DVPW-I(A)	Portland cement grout - 6	6.4	1900	1,900.00	LF	\$6.32	\$12,008.00
	in. (labor, equip, materials)	<i>c</i> 1	1	1.00		\$ (0 1 0	¢ (0, 10
DVPW-I(A)	PVC plug - 6 in. diameter	6.4	1	1.00	EA	\$60.19	\$60.19
Bridge Plug	borehole	<i>C</i> 1	1000	1 000 00	ID	ф <i>с</i> 22	¢12,000,00
DVPW-I(B)	Portland cement grout - 6	6.4	1900	1,900.00	LF	\$6.32	\$12,008.00
	in. (labor, equip, materials)	<i>c</i> 1	1	1.00		\$60.10	¢ (0, 10
DVPW-I(B)	PVC plug - 6 in. diameter	6.4	1	1.00	EA	\$60.19	\$60.19
Bridge Plug	borehole	7	2100	2 100 00	ID	ф 7 .02	¢147(2.00
13H-KI-E (13H-K)	Portland cement grout - 8	/	2100	2,100.00	LF	\$7.03	\$14,763.00
	in. (labor, equip, materials)	7	1	1.00	E A	¢92.45	¢0 0 .45
13H-KI-E Bridge	PVC plug - 8 in. diameter	/	1	1.00	EA	\$82.45	\$82.45
Plug	borenole De the language de 9	7	2110	2 1 1 0 0 0	LE	¢7.02	¢14.022.20
14H-KI-E (14H-K)	Portland cement grout - 8	/	2110	2,110.00	LF	\$7.03	\$14,855.50
	in. (labor, equip, materials)	7	1	1.00	E A	¢92.45	¢0 0 .45
14H-KI-E Bridge	PVC plug - 8 in. diameter	/	1	1.00	EA	\$82.45	\$82.45
Plug WGW 2	Dorenole	7	1420	1 420 00	IE	\$7.02	¢0.09 2 .00
WSW-3	Portland cement grout - 8	/	1420	1,420.00	LF	\$7.03	\$9,982.60
WCW 4	In. (labor, equip, materials)	7	1421	1 421 00	IE	\$7.02	¢10.050.02
WSW-4	Portland cement grout - 8	/	1431	1,431.00	LF	\$7.05	\$10,059.95
DC Q (I Dhere 1)	In. (labor, equip, materials)	4	1000	1.992.00	IE	Ф <i>Е ЕЕ</i>	¢10 445 10
DS-8 (I, Phase I)	Portland cement grout - 4	4	1882	1,882.00	LF	\$5.55	\$10,445.10
AC = 1 (I Dhase 1)	In. (labor, equip, materials)	4	1407	1 497 00	LE	Ф <i>Е ЕЕ</i>	¢0.050.05
AG-1 (J, Phase 1)	in (labor equip materials)	4	1487	1,487.00	LF	\$5.55	\$8,252.85
$\mathbf{PG} 7 (\mathbf{K} \mathbf{Phase 1})$	Portland company grout 4	4	1503	1 503 00	IE	\$5.55	¢
DO-7 (K, Flase 1)	in (labor equip materials)	4	1393	1,393.00	LI	\$5.55	\$0,041.15
DS Q (M Phase 1)	Portland cament grout A	4	1017	1 017 00	IE	\$5.55	\$10,639,35
	in (labor equip materials)	-	1)17	1,717.00		ψ5.55	ψ10,057.55
DS-7	Portland cement grout - 4	4	1897	1 897 00	IF	\$5.55	\$10 528 35
007	in (labor equip materials)	-	1077	1,077.00		φ5.55	φ10,520.55
O-GWM-A (O	Portland cement grout - 8	7	1294	1 294 00	IF	\$7.03	\$9,096,82
Phase 2)	in (labor equip materials)	,	122	1,291.00	121	φ7.05	\$9,090.02
DS-6	Portland cement grout - 4	4	1882	1 882 00	LF	\$5.55	\$10 445 10
25 0	in. (labor, equip, materials)		1002	1,002.00	21	<i>\$0.00</i>	\$10,115.110
IRI-9	Portland cement grout - 4	4	1710	1.710.00	LF	\$5.55	\$9,490.50
/	in. (labor, equip, materials)	-		_,		+= == =	<i>+,,,,,,,,,</i> ,,,,,,,,,,,,,,,,,,,,,,,,,,,
IRI-11	Portland cement grout - 4	4	1550	1.550.00	LF	\$5.55	\$8,602.50
	in. (labor, equip, materials)	-		-,		+= == =	+ • , • • = • •
15H-I	Portland cement grout - 6	6.4	1960	1,960.00	LF	\$6.32	\$12,387.20
-	in. (labor, equip, materials)			,			, , · · · -
15H-1 Bridge Plug	PVC plug - 6 in. diameter	6.4	1	1.00	EA	\$60.19	\$60.19
0 0	borehole						
15H-RI (15H-R)	Portland cement grout - 6	6.4	1960	1,960.00	LF	\$6.32	\$12,387.20
, , , , , , , , , , , , , , , , , , , ,	in. (labor, equip, materials)						
15H-RI Bridge	PVC plug - 6 in. diameter	6.4	1	1.00	EA	\$60.19	\$60.19
Plug	borehole						
16H-I	Portland cement grout - 6	6.4	1960	1,960.00	LF	\$6.32	\$12,387.20
	in. (labor, equip, materials)						
16H-I Bridge Plug	PVC plug - 6 in. diameter	6.4	1	1.00	EA	\$60.19	\$60.19
	borehole						
16H-R	Portland cement grout - 8	8.9	1960	1,960.00	LF	\$7.03	\$13,778.80
	in. (labor, equip, materials)				1		

CIRCES Cost Estimating Software

16H-R Bridge	PVC plug - 8 in. diameter	8.9	1	1.00	EA	\$82.45	\$82.45
17H-I	Portland cement grout - 6	64	1960	1 960 00	LF	\$6.32	\$12,387,20
1/11 1	in. (labor, equip, materials)	0.1	1900	1,900.00	121	ψ0.52	¢12,507.20
17H-I Bridge Plug	PVC plug - 6 in. diameter	6.4	1	1.00	EA	\$60.19	\$60.19
	borehole						
17H-R	Portland cement grout - 10	9	2000	2,000.00	LF	\$9.57	\$19,140.00
	in. (labor, equip, materials)						
17H-R Bridge	PVC plug - 10 in. diameter	9	1	1.00	EA	\$112.95	\$112.95
Plug	borehole						
12H-IR	Portland cement grout - 10	9	2100	2,100.00	LF	\$9.57	\$20,097.00
	in. (labor, equip, materials)	-		1.00		<i>4112 07</i>	.
12H-IRBridge	PVC plug - 10 in. diameter	9	1	1.00	EA	\$112.95	\$112.95
Plug	Dorenole	0	2100	2 100 00	IE	¢0.57	\$20,007,00
15H-IK	in (labor equip materials)	9	2100	2,100.00	LF	\$9.37	\$20,097.00
13H-IR Bridge	PVC plug - 10 in diameter	9	1	1.00	FΔ	\$112.95	\$112.95
Plug	borehole	,	1	1.00		ψ112. <i>)</i> 5	ψ112.95
15H-SSMW	Portland cement grout - 4	4	1760	1.760.00	LF	\$5.55	\$9.768.00
	in. (labor, equip, materials)			_,,		++++++	+,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
17H-SSMW	Portland cement grout - 4	4	1720	1,720.00	LF	\$5.55	\$9,546.00
	in. (labor, equip, materials)						
DS-10	Portland cement grout - 4	4	1882	1,882.00	LF	\$5.55	\$10,445.10
	in. (labor, equip, materials)						
14H-1V	Portland cement grout - 8	8.9	2130	2,130.00	LF	\$7.03	\$14,973.90
	in. (labor, equip, materials)						
14H-1V Bridge	PVC plug - 8 in. diameter	8.9	1	1.00	EA	\$82.45	\$82.45
Plug	borehole Deutland	8.0	1000	1 909 00	ID	\$7.02	¢12 242 04
15H-1V	Portland cement grout - 8	8.9	1898	1,898.00	LF	\$7.03	\$13,342.94
16H 1V	Bortland compart grout 8	80	1076	1.076.00	IE	\$7.03	\$13 801 28
1011-1 V	in (labor equip materials)	0.7	1970	1,970.00	LI	\$7.03	\$13,071.20
17H-1V	Portland cement grout - 8	8.9	2100	2.100.00	LF	\$7.03	\$14,763.00
1,11 1,	in. (labor, equip, materials)	0.7	2100	2,100.00	21	<i></i>	¢11,705.00
15H-IR-E	Portland cement grout - 8	8.9	2135	2,135.00	LF	\$7.03	\$15,009.05
	in. (labor, equip, materials)			,			. ,
15H-IR-E Bridge	PVC plug - 8 in. diameter	8.9	1	1.00	EA	\$82.45	\$82.45
Plug	borehole						
16H-IR-E	Portland cement grout - 8	8.9	2131	2,131.00	LF	\$7.03	\$14,980.93
	in. (labor, equip, materials)						
16H-IR-E Bridge	PVC plug - 8 in. diameter	8.9	1	1.00	EA	\$82.45	\$82.45
Plug	borehole		2120	2 1 2 2 . 0 2		*7 • 2	<i>ф1 5 020 1 1</i>
I/H-IR-E	Portland cement grout - 8	8.9	2138	2,138.00	LF	\$7.03	\$15,030.14
17U ID E Bridge	BVC plug 8 in diameter	80	1	1.00	E۸	\$82.45	\$82.45
Plug	horehole	0.7	1	1.00	LA	\$62.45	φ02. 4 3
BG-11	Portland cement grout - 8	7 625	1677	1 677 00	LF	\$7.03	\$11 789 31
2011	in. (labor, equip. materials)	1.020	10,7	1,077.00		÷	<i>411,107.01</i>
PA-1	Portland cement grout - 8	6.75	490	490.00	LF	\$7.03	\$3,444.70
	in. (labor, equip, materials)						
AG-2	Portland cement grout - 8	6.75	1230	1,230.00	LF	\$7.03	\$8,646.90
	in. (labor, equip, materials)						
BG-10	Portland cement grout - 8	6.75	1420	1,420.00	LF	\$7.03	\$9,982.60
	in. (labor, equip, materials)						

Job Hours: 610.00

Total Cost:

\$637,067.00

Page 1 of 2

BULLDOZER WORK

Task description:	Regrade Process P	onds			
Nahcolite Project	Permi	t Action:	TR-46	Permit/Job#:	M1983194
PROJECT IDENTIFI	CATION				
Task #: 03A	State:	Colorado		Abbreviation:	None
Date: $\frac{0.011}{4/20/2021}$	County:	Rio Blanco)	Filename:	M194-03a
User: ACY					
Agency or organ	ization name: DRM	1S			
HOURLY EQUIPME	NT COST				
Basic Machine: Cat	D8T - 8SU				
Horsepower: 310					
Blade Type: Sem	ii-Universal				
Attachment: NA					
Shift Basis: 1 pe	r day				
Data Source: (CR	U)				
Cost Breakdown:					
a		* <i></i>	Utilization %		
Ownership Cost/Hour:		\$116.22	NA		
Operating Cost/Hour:		\$89.77	100		
Ripper own. Cost/Hour:		\$0.00 \$0.00	<u>NA</u>		
Operator Cost/Hours		\$0.00 \$41.20	U NT 4		
		\$ 4 1.50	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour:	\$247.28 \$494.57				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT	\$247.28 \$494.57 ITIES				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75	\$247.28 \$494.57 ITIES 47 54 LCY				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75	\$247.28 \$494.57 ITIES 47 54 LCY TP 42	- - -			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75 Source of estimated volum Source of estimated swell	\$247.28 \$494.57 ITIES 47 54 LCY he: <u>TR-42</u> factor: Cat Handbo	- - - -			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75 Source of estimated volum Source of estimated swell	\$247.28 \$494.57 ITIES 47 54 40 54 40 54 40 54 40 54 40 54 54 54 54 54 54 54 54 54 54	- - - - Dok			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75 Source of estimated volum Source of estimated swell HOURLY PRODUCT	\$247.28 \$494.57 ITIES 47 54 LCY he: <u>TR-42</u> factor: <u>Cat Handbo</u> TON	- - - Dok			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75 Source of estimated volum Source of estimated swell HOURLY PRODUCT	\$247.28 \$494.57 ITIES 47 54 LCY he: TR-42 factor: Cat Handbo ION	- - - Dok			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75 Source of estimated volun Source of estimated swell HOURLY PRODUCT Average push distance: Unodinated housing product	\$247.28 \$494.57 ITIES 17 54 LCY he: <u>TR-42</u> factor: <u>TR-42</u> Cat Handbo ION 175 feet 562 2 LCX/br	- - - Dok			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75 Source of estimated volun Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc	\$247.28 \$494.57 ITIES 47 54 LCY he: TR-42 factor: Cat Handbo ION 175 feet tion: 562.2 LCY/hr	- - - - - -			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc	\$247.28 \$494.57 ITIES 47 54 LCY he: <u>TR-42</u> factor: <u>Cat Handbo</u> ION tion: <u>562.2 LCY/hr</u> cription: <u>Compacto</u>	- - - - ed fill or er	 mbankment 0.9		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75 Source of estimated volun Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc Average push gradient: Average site altitude:	\$247.28 \$494.57 ITIES 17 54 LCY he: <u>TR-42</u> factor: <u>Cat Handbo</u> 10N 175 feet tion: <u>175 feet</u> 562.2 LCY/hr cription: <u>Compacte</u> <u>0 %</u> <u>6,600 feet</u>	- - - - - - - - - - - - - - - - - - -	 mbankment 0.9		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75 Source of estimated volun Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc Average site altitude: Material weight:	\$247.28 \$494.57 ITIES 494.57 ITIES 4 5 4 LCY he: TR-42 factor: Cat Handbo 175 feet tion: 562.2 LCY/hr cription: Compacte 0 % 6,600 feet 2,100 lbs/LCY	- 	 mbankment 0.9		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc Average site altitude: Material weight: Weight description:	\$247.28 \$494.57 ITIES ITIES ITIES ITIES ITIES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES ITES	- 	 mbankment 0.9		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc Average site altitude: Material weight: Weight description: Lob Condition Correction	\$247.28 \$494.57 ITIES 494.57 ITIES 4 5 4 L CY he: <u>TR-42</u> factor: <u>Cat Handbo</u> 10N 175 feet tion: <u>175 feet</u> 562.2 LCY/hr cription: <u>Compacte</u> 0 % 6,600 feet 2,100 lbs/LCY Earth - Loam Eactor	- ed fill or er 			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc Average site altitude: Material weight: Weight description: Job Condition Correction	\$247.28 \$494.57 ITIES 494.57 ITIES 4 5 4 LCY he: TR-42 factor: Cat Handbo 175 feet tion: 562.2 LCY/hr cription: Compacte 0 % 6,600 feet 2,100 lbs/LCY Earth - Loam <u>Factor</u> kill: 0.75	- 	mbankment 0.9		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75 Source of estimated volum Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator S Material consistence	\$247.28 \$494.57 ITIES 494.57 ITIES 41 53 54 LCY he: TR-42 factor: Cat Handbo ION 175 feet tion: 562.2 LCY/hr cription: Compacto 0 % 6,600 feet 2,100 lbs/LCY Earth - Loam Factor Skill: 0.75 ncy: 0.90				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 66,14 Swell factor: 1.115 Loose volume: 73,75 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator S Material consiste Dozing met	\$247.28 \$494.57 ITIES 494.57 ITIES 7 54 LCY he: TR-42 factor: Cat Handbox ION tion: 175 feet 562.2 LCY/hr cription: Compacts 0 % 6,600 feet 2,100 lbs/LCY Earth - Loam Factor 0.75 Skill: 0.75 ncy: 0.90 hod: 1.00				

Job efficiency:		0.830	(1 SHIFT/DAY)
Spoil pile:		0.600	(FND-SF)
Push gradient:		1.000	(CAT HB)
Altitud	Altitude:		(CAT HB)
Material Weight:		1.095	(CAT HB)
Blade type:		1.000	(PAT)
Net correction	on:	0.3681	
Adjusted unit production:	20	6.95 LCY/hr	
Adjusted fleet production:	41	3.9 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$1.195/LCY

Total job time:	178.19 Hours
Total job cost:	\$88,129

BULLDOZER RIPPING WORK

	Task description:	Deco	mpact Process Pond					
Site	: Nahcolite Pro	ject	Permit Action:	TR-46	P	ermit/Job#	: <u>M19831</u>	.94
	PROJECT ID	ENTIFICATI	<u>ON</u>					
	Task #: 031 Date: 4/2 User: AC	B 0/2021 CY	State: Colorado County: Rio Blanco)	Abt	reviation: Filename:	None M194-03	b
	Agency	or organization	name: DRMS					
	HOURLY EO	UIPMENT CO)ST					
	Basic	Machine: Cat	D8T - 8SU		Horsepower:		310	
	Ripper Att	achment: 3-S	hank Ripper		Shift Basis:	1	per day	
	C (D 11				Data Source:	(CRG)	
	Cost Breakdown	<u>.</u>			Utilization %			
		Ownership Co	st/Hour:	\$116.22	NA	_		
	D	Operating Co	st/Hour:	\$89.77	100	_		
	Ripp	er Ownership Co	ost/Hour:	\$12.00	<u> </u>	_		
	Кір	Operator Co	st/Hour:	\$41.30	 NA	-		
		Total Unit Co	ost/Hour:	\$268.46		_		
		Total Fleet Co	st/Hour: \$536	5.91				
	MATERIAL (DUANTITIES	Sele	cted estimating	method: Are	9		
	Alternate Method	ls:	Sele	eted estimating		u		
Seismic	NA	<u></u>	Bank Volume	NΛ	BCV		NΛ	
Area:	8.00	acres	Rip Depth (ft):	2.00	Volume:	25,813	INA	BCY or CCY
		Source of estin	nated quantity: TR-42					
	HOURLY PR	ODUCTION	1 V					
	Solomia							
	<u>Seisinic.</u>	S	Seismic Velocity:	NA	feet/sec	cond		
	A	~				0110		
	<u>Area:</u>	Averag	e Rinning Denth	2 56	feet/na			
		Average	e Ripping Width:	7.08	feet/pas	55 55		
		Average	Ripping Length:	100.00	feet/pas	55		
		Avera	ige Dozer Speed:	88.00	feet/mi	nute		
		Average	Maneuver Time:	0.25	minutes	s/pass		
		Product	ion per unit area:	0.703	acres/h	our		
	Job Condition Co	orrection Factors						
	Un	adjusted Hourly	Unit Production:	0.703	Acres/h	nr		
			Site Altitude:	6,600	feet			
			Altitude Adj:	1.00	(CAT I	HB)		
			Job Efficiency:	0.83	(1 shift	/day)		
				0.03				
		Adjusted	Hourly Unit Production:	0.58	Acres/hr			
			Tourry Freet Frouucuoll:	1.1/				
	JOB TIME AN	ND COST						
	Fleet size:	2	Grader(s)	Total job time	e:	6.85	Ho	urs
	Unit cost:	\$459.814	Per acre	Total job cos	.t:\$	63,678		

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BULLDOZER WORK

1	10pbon 110ccbb 1	onu			
Nahcolite Project	Perm	nit Action:	TR-46	Permit/Job#:	M1983194
PROJECT IDENTIF	ICATION				
Task #: 03C	State:	Colorado		Abbreviation:	None
Date: $\frac{4/20}{2021}$	County:	Rio Blanco)	Filename:	M194-03c
User: ACY					
Agency or orga	nization name: DR	MS			
HOURLY EQUIPME	ENT COST				
Basic Machine: Cat	t D8T - 8SU				
Horsepower: 310)				
Blade Type: Ser	ni-Universal				
Attachment: NA	\				
Shift Basis: 1 p	er day				
Data Source: (CI	RG)				
Cost Breakdown:					
			Utilization %		
Ownership Cost/Hour:		\$116.22	NA		
Operating Cost/Hour:		\$89.77	100		
Ripper own. Cost/Hour:		\$0.00	NA		
Ripper op. Cost/Hour:		\$0.00	0		
Operator Cost/Hour:		\$41.30	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour:	\$247.28 \$494.57				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT	\$247.28 \$494.57				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3	\$247.28 \$494.57 TTIES 27				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 100 Loose volume: 15,3	\$247.28 \$494.57 CITIES 27 0 27 L CX				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 1.00 Loose volume: 15,3	\$247.28 \$494.57 CITIES 27 0 27 LCY				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 1.00 Loose volume: 15,3 Source of estimated volume	\$247.28 \$494.57 TTIES 27 0 27 LCY me: <u>19 ac @ 6</u> 19 ac <u>@ 6</u>				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 1.00 Loose volume: 15,3 Source of estimated volu Source of estimated swel	\$247.28 \$494.57 CITIES 27 0 27 LCY me: 19 ac @ 6 1 factor: 19 ac @ 6	 ?' depth pook			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 1.00 Loose volume: 15,3 Source of estimated volu Source of estimated swel HOURLY PRODUCT	\$247.28 \$494.57 TTIES 27 0 27 LCY me: <u>19 ac @ 6</u> 1 factor: <u>19 ac @ 6</u> Cat Handl	 oook			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 1.00 Loose volume: 15,3 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance:	\$247.28 \$494.57 TTIES 27 0 27 LCY me: <u>19 ac @ 6</u> 1 factor: <u>19 ac @ 6</u> Cat Handl FION 150 feet	 oook			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 1.00 Loose volume: 15,3 Source of estimated volut Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly product 15,3	\$247.28 \$494.57 CITIES 27 0 27 LCY me: <u>19 ac @ 6</u> 1 factor: <u>19 ac @ 6</u> Cat Handle FION ction: <u>150 feet</u> <u>634.3 LCY/</u>				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 1.00 Loose volume: 15,3 Source of estimated volu 50 Source of estimated swel 4000000000000000000000000000000000000	\$247.28 \$494.57 CITIES 27 0 27 LCY me: 19 ac @ 6 1 factor: Cat Handle FION ction: 150 feet 634.3 LCY/r scription: Loose s				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 10,00 Loose volume: 15,3 Source of estimated volum Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average push gradient:	$ \begin{array}{r} & \$247.28 \\ \hline \$494.57 \\ \hline \\ $				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 1000 Loose volume: 15,3 Source of estimated volum Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCY Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average site altitude:	\$247.28 \$494.57 CITIES 27 0 27 LCY me: <u>19 ac @ 6</u> 1 factor: <u>Cat Handl</u> FION ction: <u>150 feet</u> 634.3 LCY/I scription: <u>Loose s</u> <u>0 %</u> <u>6,600 feet</u>				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 1000 Loose volume: 15,3 Source of estimated volue Source of estimated volue Source of estimated volue Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average site altitude: Material weight:	\$247.28 \$494.57 CITIES 27 0 27 LCY me: <u>19 ac @ 6</u> 1 factor: <u>Cat Handl</u> FION ction: <u>150 feet</u> <u>634.3 LCY/</u> scription: <u>Loose s</u> <u>0 %</u> <u>6,600 feet</u> <u>1,600 lbs/LCY</u>	hr tockpile 1.2			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 1.00 Loose volume: 15,3 Source of estimated volu 5,3 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average push gradient: Average site altitude: Material weight: Weight description:	\$247.28 \$494.57 TTIES 27 0 27 LCY me: <u>19 ac @ 6</u> 1 factor: <u>Cat Handle</u> TION ction: <u>150 feet</u> ction: <u>634.3 LCY/1</u> scription: <u>Loose s</u> <u>0 %</u> <u>6,600 feet</u> <u>1,600 lbs/LCY</u> <u>Top Soil</u>				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 1.00 Loose volume: 15,3 Source of estimated volu 5.3 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUC? Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Job Condition Correction	\$247.28 \$494.57 TTIES 27 0 27 LCY me: <u>19 ac @ 6</u> 1 factor: <u>Cat Handl</u> FION ction: <u>150 feet</u> ction: <u>150 feet</u> <u>634.3 LCY/</u> scription: <u>Loose s</u> <u>0 %</u> <u>6,600 feet</u> <u>1,600 lbs/LCY</u> <u>Top Soil</u> <u>Factor</u>	hr tockpile 1.2			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 1.00 Loose volume: 15,3 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	hr tockpile 1.2			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 1.00 Loose volume: 15,3 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		<u>Source</u> (AVG.) (CAT HB)		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 15,3 Swell factor: 1.00 Loose volume: 15,3 Source of estimated volue Source of estimated volue Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist	\$247.28 \$494.57 27 0 27 LCY me: 19 ac @ 6 1 factor: Cat Handle FION ction: 150 feet ction: 634.3 LCY/I scription: Loose s 0 % 6,600 feet 1,600 lbs/LCY Top Soil Factor Skill: 0.7 skill: 0.7 ency: 1.7 thod: 1.0		<u>Source</u> (AVG.) (CAT HB) (GEN.)		

Job efficient	cy: 0.830	(1 SHIFT/DAY)
Spoil pi	le: 0.800	(FND-RF)
Push gradie	nt: 1.000	(CAT HB)
Altitud	de: 1.000	(CAT HB)
Material Weig	ht: 1.438	(CAT HB)
Blade typ	pe: 1.000	(PAT)
Net correction	on: 0.8593	
Adjusted unit production:	545.05 LCY/hr	
Adjusted fleet production:	1090.1 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.454/LCY

Total job time:	14.06 Hours
Total job cost:	\$6,954

REVEGETATION WORK

Task descr	iption:	Reveg Process Pond	
ite: Nahcoli	te Project	Permit Action: TR-46	Permit/Job#: <u>M1983194</u>
PROJECT	<u>IDENTIFI(</u>	CATION	
Task #:	03D	State: Colorado	Abbreviation: None
Date	4/20/2021	County: Rio Blanco	Filename: M194-03d
Dute			

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Motorials	
			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)	\$107.16
Weed control spraying (MEANS 31 31 16.13 3100)	\$193.60
Total Tilling Cost/Acre	\$300.76

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.10	3.90	\$2.85
Crested Wheatgrass - Ephraim	4.00	18.37	\$17.30
Blue Wildrye - Arlington or Elkton	1.50	5.17	\$9.99
Russian Wildrye - Bozoisky	1.50	6.03	\$9.72
Hard Fescue - Discovery	1.00	12.97	\$2.93
Pubescent Wheatgrass - Luna	1.50	3.10	\$5.10
Yellow Sweet Clover - Madrid	0.50	2.98	\$1.41
Tall Wheatgrass - Jose	1.80	3.26	\$6.08
Thickspike Wheatgrass - Critana	4.30	15.20	\$29.56

Sweetvetch, Utah or Northern	0.10	0.05	\$7.50
Western Wheatgrass - Barton	1.50	3.79	\$10.50
Yarrow, Western	0.20	12.16	\$8.36
Totals Seed Mix	18.00	86.97	\$111.29

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS

Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	2.00	ACRE	\$2.92	\$5.84
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$607.84

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Power mulcher (MEANS 32 91 13.16 0350)		\$101.93
Weed spray, truck, non-aquatic area, nox. [DMG]		\$62.72
	Total Mulch Application Cost/Acre	\$234.82

NURSERY STOCK PLANTING

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

Estimate *Selected Replanti	No. of Acres: ed Failure Rate: ng Work Items:	19 30% TILLING,SEEDI	Cost /Acre: Cost /Acre*: NG,MULCHING	\$1,486.71 \$1,486.71
Initial Job Cost: Reseeding Job Cost: Total Job Cost: Job Hours:	\$28,247.49 \$8,474.25 \$36,722 28.50			

Page 1 of 2

BULLDOZER WORK

		Kegrade	: I lant A	rea				
Nahcolite Proj	ect		Peri	mit Action:	TR-46		Permit/Job#:	M1983194
PROJECT IDE	NTIFI	CATION						
Task #: 04A Date: 4/20 User: AC)/2021 Y		State: County:	Colorado Rio Blanco)		Abbreviation: Filename:	None M194-04a
Agency	or organ	ization nan	ne: DR	RMS				
HOURLY EQU	IPME	NT COST	<u>r</u>					
Basic Machine	Cat	D8T - 8SU	[
Horsepower Blade Type		ni_Universa	1					
Attachment	NA	11-0111 v 013a	1					
Shift Basis	1 pe	er dav						
Data Source	(CR	G)						
Cost Breakdown								
<u>Cost Dicardowii</u> .					Utiliz	ation %		
Ownership Cost	Hour:			\$116.22	N	IA		
Operating Cost	Hour:			\$89.77	1	00		
Ripper own. Cost	Hour:			\$0.00	Ν	JA		
Ripper op. Cost	Hour:			\$0.00		0		
Operator Cost	Hour:			\$41.30	Ν	IA		
Total Fleet Cost/F	our: lour:	\$247.28 \$494.57						
Total Fleet Cost/H MATERIAL Q Initial Volume:	our: lour: <u>UANT</u> 13,22	\$247.28 \$494.57 ITIES 29						
MATERIAL Q Initial Volume: Swell factor: Loose volume:	UANT <u>13,22</u> <u>1,115</u> <u>14,75</u>	\$247.28 \$494.57 ITIES 29 5 50 LCY						
Total Fleet Cost/H MATERIAL Q Initial Volume: Swell factor: Loose volume: Source of estimate	UANT <u>13,22</u> <u>1.115</u> 14,75 d volum	\$247.28 \$494.57 ITIES 29 5 50 LCY ne:	TR-42 8	 2 ac @ 12"				
Total Fleet Cost/H MATERIAL Q Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate	Jour: Iour: UANT 13,22 1.115 1.115 14,75 2d volum ad swell	\$247.28 \$494.57 ITIES 29 5 50 LCY ne: factor:	TR-42 8.2 Cat Hand	 2 ac @ 12" book				
Total Fleet Cost/H MATERIAL Q Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRC	Jour: Iour: UANT 13,22 1.115 1.115 14,75 ed volum ed swell DUCT	\$247.28 \$494.57 ITIES 29 50 LCY ne: factor: YION	TR-42 8.2 Cat Hand	 2 ac @ 12" book				
Total Fleet Cost/H MATERIAL Q Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRC Average push dist Unadjusted hourly	UANT 13,22 1.115 14,75 ed volumed swell DUCT ance: produce:	\$247.28 \$494.57 ITIES 29 50 LCY ne: factor: TION 15 ction:63	TR-42 8.2 Cat Hand 0 feet 4.3 LCY/	 2 ac @ 12" book				
Total Fleet Cost/H MATERIAL Q Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRC Average push dist Unadjusted hourly Materials consiste	Jour: Iour: Iour: 13,22 1.113 1.115 14,75 ed volum ed swell DUCT ance: product ncy desender	\$247.28 \$494.57 ITIES 29 50 LCY ne: factor: SO LCY ne: factor: factor: SO LCY ne: factor: SO LCY ne: factor: SO LCY ne: factor: SO LCY ne: factor: SO LCY ne: factor: SO LCY factor: SO LCY factor: SO LCY factor: SO LCY	TR-42 8.2 Cat Hand 0 feet 4.3 LCY/ Compa		 mbankment 0.	9		
Total Fleet Cost/H MATERIAL Q Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRC Average push dist Unadjusted hourly Materials consister	UANT 13,22 1.115 14,75 14,	\$247.28 \$494.57 ITIES 29 50 LCY ne: factor: TION 15 ction:63 cription: 0 %	TR-42 8.7 Cat Hand 0 feet 4.3 LCY/ Compa	 2 ac @ 12" book hr cted fill or en	 mbankment 0.	9		
Total Fleet Cost/H Total Fleet Cost/H MATERIAL Q Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate MOURLY PRC Average push dist Unadjusted hourly Materials consiste Average push grav Average site altitu	UANT 13,22 1.115 14,75 24 volum 24 volum 25 volum 26 volum 27 volum 27 volum 20 volum	\$247.28 \$494.57 ITIES 29 50 LCY ne: factor: TION 215 250 29 50 LCY 15 63 cription: 0 % 6,600 fee	TR-42 8.7 Cat Hand 0 feet 4.3 LCY/ Compa t	 2 ac @ 12" book hr 	 mbankment 0.	9		
Total Fleet Cost/H Total Fleet Cost/H MATERIAL Q Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate Mourly PRC Average push dist Unadjusted hourly Materials consiste Average site altitu Material weight:	In the second se	\$247.28 \$494.57 ITIES 29 5 50 LCY ne: factor: factor: CION CION cription: 0 % 6,600 fee 2,100 lbs	TR-42 8.2 Cat Hand 0 feet 4.3 LCY/ Compa t	 2 ac @ 12" book hr 	 	9		
Total Fleet Cost/H Total Fleet Cost/H MATERIAL Q Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate MOURLY PRC Average push dist Unadjusted hourly Materials consiste Average push grad Average site altitu Material weight: Weight descriptio	In the second se	\$247.28 \$494.57 ITIES 29 5 50 LCY ne: factor: CION 215 cription: 0 % 6,600 fee 2,100 lbs Earth - La	TR-42 8.2 Cat Hand 0 feet 4.3 LCY/ Compa t /LCY	 2 ac @ 12" book hr cted fill or en	 	9		
Total Fleet Cost/H Total Fleet Cost/H MATERIAL Q Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate Average push dist Unadjusted hourly Materials consiste Average push grad Average site altitu Material weight: Weight descriptio Job Condition Con	UANT 13,22 1.115 14,75 14,	\$247.28 \$494.57 ITIES 29 5 50 LCY ne: factor: CION <u>15</u> cription: <u>63</u> cription: <u>0 %</u> <u>6,600 fee</u> <u>2,100 lbs</u> Earth - Lu <u>Factor</u>	TR-42 8.2 Cat Hand 0 feet 4.3 LCY/ Compa t /LCY oam	 2 ac @ 12" book hr cted fill or en	 	9 <u>Source</u>		
Total Fleet Cost/H Total Fleet Cost/H MATERIAL Q Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate Average push dist Unadjusted hourly Materials consiste Average push grav Average site altitu Material weight: Weight descriptio Job Condition Cor OI	Jour: Iour: Iour: 13,22 1.115 14,75 od volum od swell DUCT ance: producct product lient: de: n: rection perator S	\$247.28 \$494.57 ITIES 29 50 LCY ne: factor: TON 15 cription: 0 % 6,600 fee 2,100 lbs Earth - Lo <u>Factor</u> Skill:	TR-42 8.2 Cat Hand 0 feet 4.3 LCY/ Compa t /LCY pam 0.	 2 ac @ 12" book hr cted fill or en	 	9 Source (AVG.)		
Total Fleet Cost/H Total Fleet Cost/H MATERIAL Q Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate Mourly PRC Average push dist Unadjusted hourly Materials consiste Average push grav Average site altitu Material weight: Weight descriptio Job Condition Con Of Material	Jour: Iour: Iour: 13,22 1.115 14,75 Idvolumed ance: product ance: consistent	\$247.28 \$494.57 ITIES 29 50 LCY ne: factor: CION 	TR-42 8.7 Cat Hand 0 feet 4.3 LCY/ Compa t /LCY oam 0. 0.	 2 ac @ 12" book hr cted fill or en 750 900	 	9 Source (AVG.) CAT HB))		
Total Fleet Cost/H Total Fleet Cost/H MATERIAL Q Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate Average push dist Unadjusted hourly Materials consiste Average push grad Average site altitu Material weight: Weight descriptio Job Condition Co Ol Material Doz	John: Iour: Iour: 13,22 1.115 14,75 ad volumed swell DUCT ance: produc ncy desc lient: de: n: rection perator \$ consiste ing met	\$247.28 \$494.57 ITIES 29 50 LCY ne: factor: CION 215 250 LCY ne: factor: CION 2,100 lbs Earth - Lu Factor Skill: ency: thod:	TR-42 8.2 Cat Hand 0 feet 4.3 LCY/ Compa t /LCY bam 0. 0.		 	9 Source (AVG.) CAT HB)) (GEN.)		

Job efficiency:		0.830	(1 SHIFT/DAY)
Spoil pile:		0.800	(FND-RF)
Push gradient:		1.000	(CAT HB)
Altitud	de:	1.000	(CAT HB)
Material Weight:		1.095	(CAT HB)
Blade type:		1.000	(PAT)
Net correction	on:	0.4908	
Adjusted unit production:	31	1.31 LCY/hr	
Adjusted fleet production: 62		2.62 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.794/LCY

Total job time:	23.69 Hours
Total job cost:	\$11,717

BULLDOZER RIPPING WORK

	Task description	: Deco	ompact Plant Area				
Site:	Nahcolite Pro	oject	Permit Action:	TR-46	Permit/Jo	b#: <u>M198319</u>	4
	PROJECT ID	ENTIFICATI	<u>ON</u>				
	Task #: 04	В	State: Colorado		Abbreviatio	n: None	
	Date: $\frac{4}{2}$ User: AC	20/2021 CY	County: <u>Rio Blanco</u>)	Filenam	e: <u>M194-04b</u>	
	Agency	or organization	name: DRMS				
	HOURLY EQ	UIPMENT C	<u>OST</u>				
	Basic Ripper Att	Machine: Car tachment: 3-S	t D8T - 8SU hank Ripper	_	Horsepower: Shift Basis: Data Source:	310 1 per day (CRG)	
	Cost Breakdown	<u>.</u>					
		Ohin C		¢116.00	Utilization %		
		Ownership C	ost/Hour:	\$116.22	<u> </u>		
	Rinn	er Ownershin C	ost/Hour.	\$12.00	 NA		
	Rip	per Operating C	ost/Hour:	\$9.18	100		
		Operator C	ost/Hour:	\$41.30	NA		
		Total Unit C	ost/Hour:	\$268.46			
		Total Fleet C	ost/Hour: \$536	5.91			
	MATERIAL (QUANTITIES	Sele	cted estimating	method: Area		
	Alternate Method	<u>ds:</u>					
smic:	NA		Bank Volume:	NA	BCY	NA	
Area:	8.20	acres	Rip Depth (ft):	2.00	Volume: 26,459]	BCY or CC
		Source of estin	mated quantity: TR-42				
	HOURLY PR	ODUCTION					
	Seismic:						
			Seismic Velocity:	NA	feet/second		
	Area.						
	<u>Alta.</u>	Avera	e Ripping Depth.	2.56	feet/nass		
		Averag	e Ripping Width:	7.08	feet/pass		
		Average	e Ripping Length:	100.00	feet/pass		
		Aver	age Dozer Speed:	88.00	feet/minute		
		Average	Maneuver Time:	0.25	minutes/pass		
		Produc	tion per unit area:	0.703	acres/hour		
	Job Condition Co	orrection Factors	<u>}</u>				
	Ur	nadjusted Hourly	Unit Production:	0.703	Acres/hr		
			Site Altitude:	6,600	feet		
			Altitude Adj:	1.00	(CAT HB)		
			Job Efficiency:	0.83	(1 shift/day)		
			Net Correction:	0.83	multiplier		
		Adjusted	Hourly Unit Production:	0.58	Acres/hr		
		Adjusted	Hourly Fleet Production:	1.17	Acres/hr		
	JOB TIME AN	ND COST					
	Fleet size:	2	Grader(s)	Total job time	e: 7.02	Hou	rs
	Unit cost:	\$459.814	Per acre	Total job cost	t: \$3,770		

Page 1 of 2

BULLDOZER WORK

Task description:	Topsoil Plant Are	ea			
Nahcolite Project	Pern	nit Action:	TR-46	Permit/Job#:	M1983194
PROJECT IDENTIFI	CATION				
Task #: 04C Date: 4/20/2021 User: ACY	County:	Colorado Rio Blanco	0	Abbreviation: Filename:	None M194-04c
Agency or organ	nization name: DR	MS			
HOURLY EQUIPME	NT COST				
Basic Machine: Cat	D8T - 8SU				
Horsepower: 310	· • • • • • • • • • • • • • • • • • • •				
Attachment: NA	ni-Universal				
Shift Basis: 1 pc	or dov				
Data Source: (CR	(G)				
	(0)				
Cost Breakdown:		1	TT.'11 .' 0/		
Orementalin Cost/Herry		¢11C 22	Utilization %		
Ownership Cost/Hour:		\$110.22	100		
Pipper own Cost/Hour:		\$0.00	100 NA		
Ripper on Cost/Hour		\$0.00	0		
Operator Cost/Hour:		\$41.30	NA NA		
operator costritour.		ψ-1.50	NA		
Total Fleet Cost/Hour: MATERIAL OUANT	\$494.57 ITIES				
Initial Volume: 6.614	5				
Swell factor: 1 000	<u>)</u>				
Loose volume: 6.61	5 5 LCY				
Source of estimated volur	$\begin{array}{c} \text{ne:} 8.2 \text{ ac } @ 6 \\ \hline \\$	6" depth			
Source of estimated swell	lactor: Cat Handt	DOOK			
HUUKLI PRODUCI	IION				
Average push distance:	150 feet				
Unadjusted hourly produc	ction: <u>634.3 LCY/l</u>	nr			
Materials consistency des	cription: Loose s	tockpile 1.2			
		1			
Average push gradient:	0 %	-			
Average push gradient: Average site altitude:	0 % 6,600 feet				
Average push gradient: Average site altitude: Material weight:	0 % 6,600 feet 1,600 lbs/LCY			_	
Average push gradient: Average site altitude: Material weight: Weight description:	0 % 6,600 feet 1,600 lbs/LCY Top Soil			_	
Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	0 % 6,600 feet 1,600 lbs/LCY Top Soil Factor		Source		
Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator S	0 % 6,600 feet 1,600 lbs/LCY Top Soil Factor Skill: _ 0.7	750_	Source (AVG.)		
Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator S Material consiste	0 % 6,600 feet 1,600 lbs/LCY Top Soil Factor Skill: 0.7 ency: 1.2	750	Source (AVG.) (CAT HB)		
Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator S Material consiste Dozing met	0 % 6,600 feet 1,600 lbs/LCY Top Soil Factor Skill: 0.7 ency: 1.2 thod: 1.0	750 200 000	Source (AVG.) (CAT HB) (GEN.)		

Job efficiency:		0.830	(1 SHIFT/DAY)
Spoil pile:		0.800	(FND-RF)
Push gradient:		1.000	(CAT HB)
Altitud	de:	1.000	(CAT HB)
Material Weight:		1.438	(CAT HB)
Blade type:		1.000	(PAT)
Net correction	on:	0.6875	
Adjusted unit production:	43	6.08 LCY/hr	
Adjusted fleet production: 872.16 LCY/hr			

Fleet size:	2 Dozer(s)
Unit cost:	\$0.567/LCY

Total job time:	7.58 Hours
Total job cost:	\$3,751

REVEGETATION WORK

Permit Action: TR-46	Permit/Job#: <u>M1983194</u>
FICATION	
State:Colorado21County:Rio Blanco	Abbreviation: None Filename: M194-04d
[Permit Action: TR-46 FICATION State: Colorado 21 County: Rio Blanco

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Motorials	
			Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Ac	re sa aa

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Weed control spraying (MEANS 31 31 16.13 3100)	\$193.60
Total Tilling Cost/Acre	\$300.76

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.10	3.90	\$2.85
Crested Wheatgrass - Ephraim	4.00	18.37	\$17.30
Blue Wildrye - Arlington or Elkton	1.50	5.17	\$9.99
Russian Wildrye - Bozoisky	1.50	6.03	\$9.72
Hard Fescue - Discovery	1.00	12.97	\$2.93
Pubescent Wheatgrass - Luna	1.50	3.10	\$5.10
Yellow Sweet Clover - Madrid	0.50	2.98	\$1.41
Tall Wheatgrass - Jose	1.80	3.26	\$6.08
Thickspike Wheatgrass - Critana	4.30	15.20	\$29.56

Sweetvetch, Utah or Northern	0.10	0.05	\$7.50
Western Wheatgrass - Barton	1.50	3.79	\$10.50
Yarrow, Western	0.20	12.16	\$8.36
Totals Seed Mix	18.00	86.97	\$111.29

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS

Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	2.00	ACRE	\$2.92	\$5.84
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$607.84

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Power mulcher (MEANS 32 91 13.16 0350)		\$101.93
Weed spray, truck, non-aquatic area, nox. [DMG]		\$62.72
	Total Mulch Application Cost/Acre	\$234.82

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

No. Estimated Fail *Selected Replanting Wo	of Acres: lure Rate: ork Items:	8.2 30% TILLING,SEEDIN	Cost /Acre: Cost /Acre*: NG,MULCHING	\$1,486.71 \$1,486.71	
Initial Job Cost: \$12, Reseeding Job Cost: \$3,6 Total Job Cost: \$15, Job Hours: 12.3	191.02 57.31 848 0				

Page 1 of 2

BULLDOZER WORK

rask description:		Regrade	Well Pa	ıds				
: Nahcolite Proje	ect		Per	mit Action:	TR-46		Permit/Job#:	M1983194
PROJECT IDE	NTIFI	CATION						
Task #· 05A			State	Colorado			Abbreviation:	None
Date: $\frac{4}{20}$	/2021		County:	Rio Blanco)		Filename:	M194-05a
User: <u>ACY</u>	7							
Agency of	or organi	ization nam	e: DF	RMS				
HOURLY EQU	IPME	NT COST	-					
Basic Machine:	Cat l	D8T - 8SU						
Horsepower:	310							
Blade Type:	Sem	1-Universal						
Attachment:		r dav						
Data Source:	$\frac{1}{CR}$	C)						
Data Source:		U)						
Cost Breakdown:				I	.	.•		
	П., .			¢116.00	<u>Utiliza</u>	ation %		
Ownersnip Cost/	Hour:			\$110.22 \$20.77	N	NA 00		
Ripper own Cost/	Hour:			ታሪንንነ// ይህ ሀህ	l	υυ ΙΔ		
Ripper on Cost/	Hour _			\$0.00	1	0		
Operator Cost/	Hour.			\$41.30				
I ofgl unit Cost/Ho								
Total unit COSt/HO	ur:	\$247.28						
Total Fleet Cost/H	ur: _ our: _	\$247.28 \$494.57						
Total Fleet Cost/H	ur: our: U ANTI	\$247.28 \$494.57						
Total Fleet Cost/H	ur: our: UANTI	\$247.28 \$494.57						
Initial Volume:	ur: our: <u>UANTI</u> 	\$247.28 \$494.57 [TIES 93						
MATERIAL QI Initial Volume: Swell factor: Loose volume:	ur: our: <u>UANTI</u> <u>142,3</u> <u>1.115</u> 158.7	\$247.28 \$494.57 [TIES 93 68 LCY						
Initial Volume: Swell factor: Loose volume:	ur: our: UANTI <u>142,3</u> <u>1.115</u> 158,7	\$247.28 \$494.57 TTIES 93 68 LCY						
MATERIAL QI Initial Volume: Swell factor: Loose volume:	ur: our: 142,3 1.115 158,7 d volum	\$247.28 \$494.57 TIES 93 68 LCY he: <u>4</u>	4.13 ac	of pads grade	24" depth			
MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate	ur: our: (ANTI) (142,3) (152,3	\$247.28 \$494.57 TTIES 93 68 LCY te: _4 factor: _C	4.13 ac (Cat Hand	of pads grade	24" depth			
MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate	ur: our: 142,3 1.115 158,7 d volum d swell :	\$247.28 \$494.57 TTIES 93 68 LCY te: _4 factor: _C	4.13 ac o Cat Hand	of pads grade	24" depth			
Initial Unit Cost/H0 MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO	ur: our: <u>142,3</u> <u>1.115</u> 158,7 d volum d swell	\$247.28 \$494.57 TTIES 93 68 LCY he: <u>4</u> factor: <u>C</u> ION	4.13 ac o Cat Hand	of pads grade	24" depth			
Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate Average push dista	ur: our: $_$ $_$ $_$ $_$ $_$ $_$ $_$ $_$ $_$ $_$	\$247.28 \$494.57 TTIES 93 68 LCY 10 10 75	4.13 ac o Cat Hand	of pads grade	24" depth			
MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly	ur: our: <u>142,3</u> <u>1.115</u> 158,7 d volum d swell : DUCT ance: product	\$247.28 \$494.57 TTES 93 68 LCY le: 4 factor: 0 ION 75 tion: 1,0	4.13 ac o Cat Hand feet 17.1 LC	of pads grade	24" depth			
Initial Volume: MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly Materials consister	ur: our: <u>142,3</u> <u>1.115</u> <u>158,7</u> d volum d swell: DUCT ance: product	\$247.28 \$494.57 THES 93 68 LCY ne: 4 factor: 0 ION fion: 1,0 cription: 1,0	4.13 ac o Cat Hand feet 17.1 LC Compa	 of pads grade book Y/hr y/hr	24" depth	9		
MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly Materials consister	ur: our: UANTI 142,3 1.115 158,7 d volum d swell : DUCT ance: product	\$247.28 \$494.57 THES 93 68 LCY ie: -4 factor: -0 ION tion: -75 tion: $-1,0$ cription: -0	4.13 ac o Cat Hand feet 17.1 LC Compa	 of pads grade lbook Y/hr cted fill or en	24" depth	9		
Notar unit Cost/H0 Total Fleet Cost/H MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly Materials consister Average push grad	ur: our: <u>142,3</u> <u>142,3</u> <u>142,3</u> <u>142,3</u> <u>158,7</u> d volum d volum d swell : DUCT nnce: product ncy desc	\$247.28 \$494.57 THES 93 68 LCY le: _4 factor: _6 ION tion: $\frac{75}{1,0}$ tription: _6	4.13 ac o Cat Hand feet 17.1 LC Compa	of pads grade book Y/hr cted fill or en	24" depth nbankment 0.	9		
Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly Materials consister Average site altitude	ur: our: 142,3 1.115 158,7 d volum d swell bucct nce: product ncy desc lient: de:	\$247.28 \$494.57 TTES 93 68 LCY ee: 4 factor: 0 finction: 1,0 cription: - 0 % 6,600 feet	4.13 ac o Cat Hand feet 17.1 LC Compa	 of pads grade book Y/hr cted fill or en	24" depth	9		
MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly Materials consister Average site altitud Material weight:	ur: our: 142,3 1.115 158,7 d volum d swell broduct nce: product ncy desc lient: de:	\$247.28 \$494.57 TTIES 93 68 LCY he: 4 factor: 0 fion: 1,0 cription: 0 0,600 feet 2,100 lbs/	4.13 ac o Cat Hand feet 17.1 LC Compa	 of pads grade book Y/hr cted fill or en	24" depth	9		
Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly Materials consister Average site altitud Material weight: Weight description	ur: our: 142,3 1.115 158,7 d volum d swell broduct nce: product ncy desc lient: de:	\$247.28 \$494.57 TIES 93 68 LCY he: <u>4</u> factor: <u>6</u> 10N 75 tion: <u>75</u> tion: <u>1,0</u> pription: <u>0 %</u> 6,600 feet 2,100 lbs/ Earth - Lo	4.13 ac o Cat Hand feet 17.1 LC Compa LCY	 of pads grade book Y/hr .cted fill or en	24" depth	9		
Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly Materials consister Average site altitud Material weight: Weight description Job Condition Corr	ur:	\$247.28 \$494.57 THES 93 $68 LCY$ $168 LCY$ $100 N$ $100 N$ $100 N$ $100 N$ 10% <	4.13 ac o Cat Hand feet 17.1 LC Compa LCY	 of pads grade lbook Y/hr icted fill or en	24" depth	9 Source		
Initial Fleet Cost/H MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate Source of estimate MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate Materials consister Average push grad Average site altitud Material weight: Weight description Job Condition Corr Op	ur: our: <u>142,3</u> <u>1.115</u> <u>158,7</u> d volum d swell : DUCT nce: product ncy desc lient: de: rection I erator S	\$247.28 \$494.57 THES 93 $68 LCY$ 100 100 $1,0$ $1,0$ $1,0$ $1,0$ $1,0$ $2,100 lbs/$ Earth - Lo Factor kill:	4.13 ac o Cat Hand feet 17.1 LC Compa LCY pam 0.		24" depth	9 <u>Source</u> (AVG.)		
MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate Source of estimate MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate Materials consistent Average push distate Average push grad Average site altitude Material weight: Weight description Job Condition Corr Op Material of	ur: our: UANTI 142,3 1.115 158,7 d volum d swell d swell DUCT ance: product ncy desc lient: de: 	\$247.28 \$494.57 TTES 93 68 LCY e: 4 factor: 0 finction: 75 finction: 75 finction: 75 finction: 75 finction: 6,600 cription: - 0 % 6,600 6,600 feet 2,100 lbs/ Earth - Loo - Factor - kill: - ncy: -	4.13 ac o Cat Hand feet 17.1 LC Compa LCY bam 0. 0.		24" depth	9 <u>Source</u> (AVG.) CAT HB))		
Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate Source of estimate MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate Materials consistent Average push dista Unadjusted hourly Materials consistent Average push grad Average site altitud Material weight: Weight description Job Condition Corr Op Material of Doz	ur: our: 142,3 1.115 158,7 d volum d swell: DUCT ance: product ncy desc lient: de: 	\$247.28 \$494.57 TTES 93 68 LCY e: 4 factor: C ION ficin: 75 ion: 1,0 cription: 0 6,600 feet 2,100 lbs/ Earth - Lo Factor kill:	4.13 ac o Cat Hand feet 17.1 LC Compa LCY pam 0. 0. 1.		24" depth	9 Source (AVG.) CAT HB)) (GEN.)		

Job efficience	cy: 0.830	(1 SHIFT/DAY)
Spoil pi	le: 0.800	(FND-RF)
Push gradie	nt: 1.000	(CAT HB)
Altitud	de: 1.000	(CAT HB)
Material Weig	ht: 1.095	(CAT HB)
Blade typ	pe: 1.000	(PAT)
Net correction	on: 0.4908	
Adjusted unit production:	499.19 LCY/hr	
Adjusted fleet production:	998.38 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.495/LCY

Total job time:	159.03 Hours
Total job cost:	\$78,649

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BULLDOZER WORK

Task description:	Topsoil Well Pad	s			
: Nahcolite Project	Peri	nit Action:	TR-46	Permit/Job#:	M1983194
PROJECT IDENTIF	ICATION				
Task #: 05B	State:	Colorado		Abbreviation:	None
Date: $\frac{4/20}{2021}$	County:	Rio Blanco)	Filename:	M194-05b
User: ACY					
Agency or orga	nization name: DR	MS			
HOURLY EQUIPME	ENT COST				
Basic Machine: Cat	t D8T - 8SU				
Horsepower: 310)				
Blade Type: Sei	mi-Universal				
Attachment: NA	1				
Shift Basis: <u>1 p</u>	er day				
Data Source: (CI	KG)				
Cost Breakdown:					
			Utilization %	<u>6</u>	
Ownership Cost/Hour:		\$116.22	NA		
Operating Cost/Hour:		\$89.77	100		
Ripper own. Cost/Hour:		\$0.00	<u>NA</u>		
Cost/Hour.		\$0.00	0		
MATERIAL QUANT	TTTES				
Initial Volume: $35,5$	98	_			
I cose volume: 35.5	0 308 I CV				
Loose volume. <u>55,5</u>	50 LC 1				
Source of estimated volu	me: 44.13 ac	@ 6" depth			
Source of estimated swel	I factor: Cat Hand	book			
HOURLY PRODUC	ΓΙΟΝ				
Average push distance:	150 feet				
Unadjusted hourly produ	ction: $634.3 \text{ LCY}/$	hr			
Materials consistency des	scription: Loose s	tockpile 1.2			
Average push gradient:	0%				
Average site attitude:	0,000 leet				
waterial weight:					
	1,600 lbs/LCY				
Weight description:	1,600 lbs/LCY Top Soil				
Weight description: Job Condition Correction	1,600 lbs/LCY Top Soil		Sourc	<u></u>	
Weight description: Job Condition Correction Operator	1,600 lbs/LCY Top Soil Factor Skill: 0.	750	Sourc (AVG	<u>e</u> .)	
Weight description: Job Condition Correction Operator Material consist	<u> </u>	750	Source (AVG (CAT H	<u>e</u> .) IB)	
Weight description: Job Condition Correction Operator Material consist Dozing me	1,600 lbs/LCY Top Soil 1 Factor Skill: 0. ency: 1. ethod: 1.	750 200 000	Sourc (AVG (CAT H (GEN	<u>e</u> .) IB) .)	

Job efficience	cy: 0.830	(1 SHIFT/DAY)
Spoil pi	le: 0.800	(FND-RF)
Push gradier	nt: 1.000	(CAT HB)
Altitud	le: 1.000	(CAT HB)
Material Weigl	ht: 1.438	(CAT HB)
Blade typ	be: 1.000	(PAT)
Net correction	on: 0.8593	
Adjusted unit production:	545.05 LCY/hr	
Adjusted fleet production:	1090.1 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.454/LCY

Total job time:	32.66 Hours
Total job cost:	\$16,151

REVEGETATION WORK

Nancome Project	Permit Action: TR-46	Permit/Job#: M1983194
PROJECT IDENTIFICA	TION	
Task #: 05C Date: 4/20/2021 User: ACY	State:ColoradoCounty:Rio Blanco	Abbreviation:NoneFilename:M194-05c

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Motorials	
			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)	\$107.16
Weed control spraying (MEANS 31 31 16.13 3100)	\$193.60
Total Tilling Cost/Acre	\$300.76

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.10	3.90	\$2.85
Crested Wheatgrass - Ephraim	4.00	18.37	\$17.30
Blue Wildrye - Arlington or Elkton	1.50	5.17	\$9.99
Russian Wildrye - Bozoisky	1.50	6.03	\$9.72
Hard Fescue - Discovery	1.00	12.97	\$2.93
Pubescent Wheatgrass - Luna	1.50	3.10	\$5.10
Yellow Sweet Clover - Madrid	0.50	2.98	\$1.41
Tall Wheatgrass - Jose	1.80	3.26	\$6.08
Thickspike Wheatgrass - Critana	4.30	15.20	\$29.56

Sweetvetch, Utah or Northern	0.10	0.05	\$7.50
Western Wheatgrass - Barton	1.50	3.79	\$10.50
Yarrow, Western	0.20	12.16	\$8.36
Totals Seed Mix	18.00	86.97	\$111.29

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	2.00	ACRE	\$2.92	\$5.84
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$607.84

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Power mulcher (MEANS 32 91 13.16 0350)		\$101.93
Weed spray, truck, non-aquatic area, nox. [DMG]		\$62.72
	Total Mulch Application Cost/Acre	\$234.82

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

l Estimated *Selected Replanting	No. of Acres: Failure Rate: Work Items:	44.13 30% TILLING,SEEDIN	Cost /Acre: Cost /Acre*: NG,MULCHING	\$1,486.71 \$1,486.71	
Initial Job Cost: \$ Reseeding Job Cost: \$ Total Job Cost: 5 Job Hours: 6	665,608.51 619,682.55 685,291 66.20				

BULLDOZER RIPPING WORK

	Task description	Dec	ompact Roads			
Site	: Nahcolite Pro	ject	Permit Action:	TR-46	Permit/Jo	ob#: <u>M1983194</u>
	PROJECT ID	ENTIFICAT	<u>ION</u>			
	Task #: 06 . Date: $4/2$ User: AC	A 20/2021 CY	State: Colorado County: Rio Blanco	,	Abbreviatio	n: None ne: M194-06a
	Agency	or organization	n name: DRMS			
	HOURI V FO	LIPMENT C	<u></u>			
	<u>Resia</u>	Maahina: Ca			Homopower	210
	Ripper Att	tachment: $3-3$	Shank Ripper		Shift Basis:	1 per day
					Data Source:	(CRG)
	Cost Breakdown	<u>:</u>		1 .		
		Ownershin ('ost/Hour:	\$116.22	Utilization %	
		Operating C	Cost/Hour:	\$89.77	100	
	Ripp	er Ownership C	Cost/Hour:	\$12.00	NA	
	Rip	per Operating C	Cost/Hour:	\$9.18 \$41.30	<u>100</u> NA	
		Total Unit C	Cost/Hour:	\$268.46		
		Total Fleet C	'ost/Hour: \$536	91		
	MATEDIAL (
		JUANTITIES	<u>Sele</u>	cted estimating r	method: Area	
	Alternate Method	ds:				
Seismic:	NA 2.76		Bank Volume:	NA 2.00	BCY 12 122	NA BCV or CC
Alea.	5.70			2.00		
		Source of esti	mated quantity: <u>IR-46</u>	D&A Provided I	able	
	HOURLY PR	<u>ODUCTION</u>				
	Seismic:		0			
			Seismic velocity:	NA	feet/second	
	Area:	A	as Dinning Donth	256	fact/maga	
		Avera	ge Ripping Depth.	7.08	feet/pass	
		Averag	e Ripping Length:	150.00	feet/pass	
		Ave	rage Dozer Speed:	88.00	feet/minute	
		Produc	ction per unit area:	0.23	ninutes/pass acres/hour	
	Job Condition Co	orrection Factor	· · · · · · · · · · · · · · · · · · ·			
	Job Condition Co	adjusted Hourly	u Unit Production	0748	A area/br	
	Un	aujusteu Houri		0.740		
			Site Altitude:	6,600	(CAT HB)	
			Job Efficiency:	0.83	(1 shift/day)	
			Net Correction:	0.83	multiplier	
		Adjustec Adjusted	Hourly Unit Production: Hourly Fleet Production:	0.62	Acres/hr Acres/hr	
	JOB TIME AN	ND COST				
	Fleet size:	2	_ Grader(s)	Total job time:	3.03	Hours
	Unit cost:	\$432.175	Per acre	Total job cost	\$1,625	

Page 1 of 2

BULLDOZER WORK

-	1 opson road	15			
Nahcolite Project		Permit Action:	TR-46	Permit/Job#:	M1983194
PROJECT IDENTI	FICATION				
Task #: 06B Date: 4/20/2021 User: ACY	St	ate: <u>Colorado</u> nty: <u>Rio Blanco</u>)	Abbreviation: Filename:	None M194-06b
Agency or orga	anization name:	DRMS			
HOURLY EQUIPM	ENT COST				
Basic Machine: Ca	at D8T - 8SU				
Horsepower: 31			_		
Attachmont: N	A A A A A A A A A A A A A A A A A A A		_		
Shift Basis: 1	A per dav		_		
Data Source: (C	CRG)				
Cost Breakdown:	,				
<u>Cost Broakdo win</u> .			Utilization %		
Ownership Cost/Hour:		\$116.22	NA		
Operating Cost/Hour:		\$89.77	100		
Ripper own. Cost/Hour:		\$0.00	NA		
Ripper op. Cost/Hour:		\$0.00	0		
Operator Cost/Hour:		\$41.30	NA		
MATEDIAL OUAN	TITIES				
Initial Volume: <u>3,0</u> Swell factor: <u>10</u>	<u>33</u> 00				
Initial Volume:3,0Swell factor:1.0Loose volume:3,0	33 00 33 LCY				
Initial Volume:3,0Swell factor:1.0Loose volume:3,0Source of estimated volume	33 00 33 LCY ume:	ac @ 6" depth			
Initial Volume: 3,0 Swell factor: 1.0 Loose volume: 3,0 Source of estimated volu 3,0 Source of estimated swell 3,0	33 00 33 LCY ume: 3.76 ell factor: Cat	ac @ 6" depth Handbook			
Initial Volume: 3,0 Swell factor: 1.0 Loose volume: 3,0 Source of estimated volu Source of estimated swe HOURLY PRODUCE	33 00 33 LCY ume: 3.76 ell factor: Cat 1 CTION	ac @ 6" depth Handbook			
Initial Volume: 3,0 Swell factor: 1.0 Loose volume: 3,0 Source of estimated volu Source of estimated volu Source of estimated sweet HOURLY PRODUCT Average push distance:	33 00 33 LCY ume: 3.76 ell factor: Cat CTION 150 fee	ac @ 6" depth Handbook			
Initial Volume: 3,0 Swell factor: 1.0 Loose volume: 3,0 Source of estimated volt 3,0 Source of estimated swe 3,0 HOURLY PRODUC Average push distance: Unadjusted hourly product	33 00 33 LCY ume: 3.76 cll factor: Cat CTION uction: 150 fea 634.3 1	ac @ 6" depth Handbook et LCY/hr			
Initial Volume: 3,0 Swell factor: 1.0 Loose volume: 3,0 Source of estimated volu 3,0 Source of estimated volu 3,0 Source of estimated volu 3,0 Average push distance: 10 Unadjusted hourly product 10 Materials consistency definition 10	33 00 33 LCY ume: 3.76 cll factor: Cat CTION uction: 150 fea 634.3 1 escription: Lat	ac @ 6" depth Handbook et LCY/hr pose stockpile 1.2			
Initial Volume: 3,0 Swell factor: 1.0 Loose volume: 3,0 Source of estimated volu 3,0 Source of estimated volu 3,0 Source of estimated volu 3,0 Materials consistency de 3,0 Average push distance: Unadjusted hourly produce Materials consistency de Average push gradient: Average site altitude: 10	33 00 33 LCY ume: 3.76 23 LCY ume: 3.76 control (Cat) 2TION uction: 150 fee escription: Lc 0 % 6,600 feet	ac @ 6" depth Handbook et LCY/hr bose stockpile 1.2			
Initial Volume: 3,0 Swell factor: 1.0 Loose volume: 3,0 Source of estimated volu 3,0 Materials consistency de 3,0 Average push distance: 0 Unadjusted hourly produce 0 Average push gradient: 0 Average site altitude: 0 Material weight: 0	$\frac{111125}{33}$ $\frac{33}{00}$ $33 LCY$ $\frac{33 LCY}{Cat}$ $\frac{150 \text{ fer}}{634.3 \text{ J}}$ $\frac{0 \%}{6,600 \text{ feet}}$ $\frac{1,600 \text{ lbs/LC}}{1,600 \text{ lbs/LC}}$	ac @ 6" depth Handbook et LCY/hr bose stockpile 1.2			
Initial Volume: 3,0 Swell factor: 1.0 Loose volume: 3,0 Source of estimated volu 3,0 Materials consistence: 100 Materials consistency defined 100 Average push gradient: 100 Average site altitude: 100 Material weight: 100 Weight description: 100	33 00 33 LCY ume: 3.76 33 LCY ume: 3.76 CTION uction: 150 fee escription: Lc 0 % 6,600 feet 1,600 lbs/LC Top Soil	ac @ 6" depth Handbook et LCY/hr bose stockpile 1.2			
Initial Volume: 3,0 Swell factor: 1.0 Loose volume: 3,0 Source of estimated volu 3,0 Material s consistency 0 Average push distance: 0 Materials consistency 0 Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction 0	33 33 00 33 LCY ume: 3.76 23 LCY ume: 3.76 Cat Cat 2 Cat 3 Cat 2 Cat 3 Cat 3 Cat 3 Cat 3 Cat 3 Cat 4 Cat 4 Cat 4 Cat 5 Cat 4 Cat 4 Cat 4 Cat 5 Cat 5 Cat <	ac @ 6" depth Handbook et LCY/hr pose stockpile 1.2			
Initial Volume: 3,0 Swell factor: 1.0 Loose volume: 3,0 Source of estimated volu 3,0 Material sconsistency 0 Average push distance: 0 Materials consistency de 0 Average push gradient: 0 Average site altitude: 0 Material weight: 0 Weight description: 0 Job Condition Correction 0 Operator 0	$\begin{array}{c} 1111ES\\ 33\\ 00\\ 33 LCY\\ ume: 3.76\\ cmmodel{a} 33 LCY\\ ume: 3.76\\ cmmodel{a} 31\\ cmmodel{a$	ac @ 6" depth Handbook et LCY/hr bose stockpile 1.2 Y Y			
Initial Volume: 3,0 Swell factor: 1.0 Loose volume: 3,0 Source of estimated volu 3,0 Source of estimated sweet HOURLY PRODUC Average push distance: Unadjusted hourly produce Materials consistency de Average push gradient: Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist Operator	33 00 33 LCY ume: 3.76 31 LCY ume: 3.76 CTION uction: 150 fee uction: 634.3 1 escription: Lc 0 % 6,600 feet 1,600 lbs/LC Top Soil m Factor r Skill: stency:	ac @ 6" depth Handbook et LCY/hr bose stockpile 1.2 Y 0.900 1.200	<u>Source</u> (AB.AVG.) (CAT HB)		
Initial Volume: 3,0 Swell factor: 1.0 Loose volume: 3,0 Source of estimated volu Source of estimated volu Source of estimated volu Source of estimated volu Source of estimated sweet HOURLY PRODUC Average push distance: Unadjusted hourly product Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist Dozing m	33 00 33 LCY ume: 3.76 33 LCY ume: 3.76 23 LCY ution: 2.76 20 feet 0 % $6,600$ feet $1,600$ lbs/LC Top Soil m Factor r Skill: stency: uethod:	ac @ 6" depth Handbook	<u>Source</u> (AB.AVG.) (CAT HB) (GEN.)		

Job efficienc	ey:	0.830	(1 SHIFT/DAY)
Spoil pi	le:		
Push gradier	nt:	1.000	(CAT HB)
Altitud	le:	1.000	(CAT HB)
Material Weigl	nt:	1.438	(CAT HB)
Blade typ	be:	1.000	(PAT)
Net correctio	on: NA		
Adjusted unit production:	LCY/hr		
Adjusted fleet production:	LCY/hr		

JOB TIME AND COST

Fleet size:	2 Dozer(s)	
Unit cost:	/LCY	
otal job time:	Hours	

Total job time:HoursTotal job cost:0

REVEGETATION WORK

Task descr	iption:	Reveg Roads			
ite: Nahcoli	te Project	Permit Action: _T	R-46	Permit/Job#:	M1983194
PROJECT	<u>IDENTIFIC</u>	CATION			
Task #: Date:	06C 4/20/2021	State: Colorado County: Rio Blanco		Abbreviation: <u>N</u> Filename: N	Vone //194-06c
Llaam	ACV	·			

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Motorials	
			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)	\$107.16
Weed control spraying (MEANS 31 31 16.13 3100)	\$193.60
Total Tilling Cost/Acre	\$300.76

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.10	3.90	\$2.85
Crested Wheatgrass - Ephraim	4.00	18.37	\$17.30
Blue Wildrye - Arlington or Elkton	1.50	5.17	\$9.99
Russian Wildrye - Bozoisky	1.50	6.03	\$9.72
Hard Fescue - Discovery	1.00	12.97	\$2.93
Pubescent Wheatgrass - Luna	1.50	3.10	\$5.10
Yellow Sweet Clover - Madrid	0.50	2.98	\$1.41
Tall Wheatgrass - Jose	1.80	3.26	\$6.08
Thickspike Wheatgrass - Critana	4.30	15.20	\$29.56

Sweetvetch, Utah or Northern	0.10	0.05	\$7.50
Western Wheatgrass - Barton	1.50	3.79	\$10.50
Yarrow, Western	0.20	12.16	\$8.36
Totals Seed Mix	18.00	86.97	\$111.29

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	2.00	ACRE	\$2.92	\$5.84
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$607.84

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Power mulcher (MEANS 32 91 13.16 0350)		\$101.93
Weed spray, truck, non-aquatic area, nox. [DMG]		\$62.72
	Total Mulch Application Cost/Acre	\$234.82

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

Estimate *Selected Replanti	No. of Acres: ed Failure Rate: ng Work Items:	3.76 30% TILLING,SEEDIN	Cost /Acre: Cost /Acr <u>e*:</u> G,MULCHING	\$1,486.71 \$1,486.71
Initial Job Cost:	\$5,590.03			
Total Job Cost:	\$1,677.01 \$7,267			
Job Hours:	5.60			

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Init	ial Mobilization					
e: Nahcolite Proj	ect	Permit	Action: <u>TR-4</u>	6		Permit/Job#: <u>M</u>	1983194
PROJECT IDEN	NTIFICATI	<u>ON</u>					
$\begin{array}{c} \text{Task #:} & \underline{12A} \\ \text{Date:} & \underline{4/20} \\ \text{User:} & AC \end{array}$)/2021 Y	State: Co County: Riv	olorado o Blanco		Abbre	eviation: None ilename: M194	l-12a
Agency o	r organization	n name: DRMS					
EQUIPMENT T	RANSPOR	<u>T RIG COST</u>					
					Shift ba Cost Data Sou	sis: 1 per da rce: CRG Da	ta
Truck	Tractor Desc	ription: GENE	RIC ON-HIGH	WAY TR 400 HI	UCK TRACTO P (2ND HALF,	OR, 6X4, DIESEL 2006)	L POWERED,
Truck	Trailer Desc	ription: G	ENERIC FOLD	OING GOO FRAILER	OSENECK, DF R (25T, 50T, A)	ROP DECK EQU ND 100T)	IPMENT
Cost Breakdown:							
Available Rig Ca	pacities	0-25 Tons	26-50 Tons	51	+ Tons		
Ownership	Cost/Hour:	\$17.20	\$29.63	\$	538.69		
Operating	Cost/Hour:	\$26.56	\$47.02	\$	55.69		
Operator	Cost/Hour:	\$23.63	\$23.63	\$	523.63		
Helper	Cost/Hour:	\$0.00	\$23.53	\$	523.53		
Total Unit	Cost/Hour:	\$67.39	\$123.81	\$	141.54		
NON ROADABI	LE EQUIPN	MENT:					
Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/uni t	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D8T - 8SU	53.08	\$128.22	\$141.54	2	\$539.52	\$283.08	\$500.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.72	\$67.39	1	\$74.11	\$67.39	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$11.19	\$67.39	1	\$78.58	\$67.39	\$250.00
Grove RT650E, 105', 45.4 MT	28.74	\$61.74	\$123.81	1	\$185.55	\$123.81	\$250.00
Broderson IC-200- 2F, 45', 13.6MT	8.68	\$18.78	\$67.39	1	\$86.17	\$67.39	\$250.00
Cat 345D L 12'- 10" Stick	54.31	\$77.54	\$141.54	1	\$219.08	\$141.54	\$250.00
CAT 973D	29.07	\$82.82	\$123.81	1	\$206.63	\$123.81	\$250.00

Subtotals: \$1,389.64 \$874.41 \$2,000.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$68.59	1	\$68.59	\$68.59
Generic 12-18 cy, 6x4	\$107.41	3	\$322.23	\$322.23

Subtotals: \$390.82

32\$390.82CIRCES Cost Estimating Software

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:	\$13,571.43	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$1,172.46	

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	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

Total job time:	8.00	Hours
Total job cost:	\$14,744	

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Sec	ondary Mobilizat	tion				
Nahcolite Pro	ject	Permit	Action: <u>TR-4</u>	.6]	Permit/Job#: <u>M</u>	1983194
PROJECT IDE	NTIFICATI	<u>ON</u>					
Task #: 12H	3	State: Co	olorado		Abbre	eviation: None	
Date: 4/2 User: AC	0/2021 2Y	County: Ri	o Blanco		Fi	ilename: M194	12b
Agency	or organizatior	n name: DRMS					
EQUIPMENT 1	TRANSPOR	<u>T RIG COST</u>					
				C	Shift ba Cost Data Sour	sis: 1 per da rce: CRG Da	y ta
Truck	c Tractor Desc	ription: GENE	RIC ON-HIGH	WAY TRU 400 HP	CK TRACTO (2ND HALF,	OR, 6X4, DIESEL 2006)	POWERED,
Truc	k Trailer Desc	ription: G	ENERIC FOLD	DING GOO TRAILER (SENECK, DF	ROP DECK EQU	IPMENT
No. (D. 1. 1. 1.					231, 301, 71	(2 1001)	
ost Breakdown:							
Available Rig C	apacities	0-25 Tons	26-50 Tons	51+	Tons		
Ownership	Cost/Hour:	\$17.20	\$29.63	\$3 \$5	8.69		
Operating	Cost/Hour:	\$20.30	\$47.02		3.09		
Uperator	Cost/Hour:	\$25.05	\$23.03	\$2	3.03		
Total Unit	t Cost/Hour:	\$67.39	\$123.81	\$14	<u>3.55</u> 41.54		
10000 0000	000001100011	çones	¢120101	ψı			
NON ROADAB	LE EQUIPN	<u>MENT:</u>					
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit (TONS)	Cost/hr/ unit	Cost/hr/uni t	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
Drill/Broadcast Seeder with Tractor	25.00	\$6.72	\$67.39	1	\$74.11	\$67.39	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$11.19	\$67.39	1	\$78.58	\$67.39	\$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.	\$68.59	1	\$68.59	\$68.59
		Subtotals:	\$68.59	\$68.59

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 Moh/Demoh Cost *		
* two round trips with haul rig:	\$2,167.79	
Total Roadable Mob/Demob Cost **	\$205 77	
** one round trip, no haul rig:	\$203.11	

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	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: \$2,374