

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

1313 Sherman St. Room 215 Denver, CO 80203

October 25, 2019

Steve and Joyce Wright Arboles Sand & Stone, LLC 12577 Highway 151 Pagosa Springs, CO 81147

Re: Lob Lolly Pit, Permit No. M-2013-066, Financial Warranty Increase, Revision No. SI-2

Dear Wright:

In an effort to ensure the Financial Warranty for the above referenced site adequately reflects the actual current costs of fulfilling the requirements of the approved reclamation plan, the Colorado Division of Reclamation, Mining and Safety (Division) has updated the reclamation cost estimate (copy enclosed). This estimate was updated in response to the Request to Reconsider Surety Increase SI-01. The details of the reconsideration are listed in the table below.

Task	Requested Change	Form Used	Change	Discussion
001	Use Dozer rather than Excavator	Excavator	N/A	The Hydraulic Excavator was more efficient for this task
002	Use Dozer rather than Excavator	Excavator	N/A	The Hydraulic Excavator was more efficient for this task
003	Adjust average ripping depth	Ripper	N/A	Correcting this task resulted in no change
004A	Correct Topsoil Depth to 6"	Scraper	_	Volume corrected based on 6" Topsoil replacement Depth
005	Correct Topsoil Depth to 6"	Scraper	_	Volume corrected based on 6" Topsoil replacement Depth



007a	Bond only for secondary Seeding	Reveg	-	Evidence of seeding received, bonding only for secondary seeding
007b	Bond only for secondary Seeding	Reveg	-	Evidence of seeding received, bonding only for secondary seeding

Division calculations estimate the cost to reclaim the above referenced site to be <u>\$98,585.00</u>. This is an increase of <u>\$51,756.68</u> over the <u>\$46,828.68</u> currently held by the Division. This estimate is based on the details of the Approved Reclamation Plan, Technical Revision TR-01 and site conditions during the May 14, 2019 inspection. The additional amount needs to be accepted prior to **Tuesday, December 24, 2019**. Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted.

Please make arrangements with Gabriel Benvenuti at the Division of Reclamation, Mining and Safety Denver Office, phone no. 303.866.3567, ext. 8148 for submittal of the financial warranty. Any questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Gabriel Benvenuti.

If you require additional information, or have questions or concerns, please feel free to contact me. Lucas West at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 970-243-6368 or by email at lucas.west@state.co.us.

If you have any questions, please contact me.

Sincerely,

Lucas J. West Environmental Protection Specialist

- cc: Gabriel R. Benvenuti, DRMS
- Ec: Nathan Barton, Wasteline Inc.

## COST SUMMARY WORK

: Lob Lo	lly Pit	Pe	rmit Action:	2019 Update	Permit/Jol	o#: M2013066	
PROJEC'	<u>r identific</u>	CATION					
Task #	000	State:	Colorado		Abbreviation:	None	
Date	8/28/2019	County:	Archuleta		Filename:	M066-000	
User	LJW						

#### TASK LIST (DIRECT COSTS)

Task		Form	Fleet	Task	<ul> <li>Constantial of Pressent Action of Constantial Constantian Constan</li></ul>
	Description	Used	Size	Hours	Cost
001	Reduce Highwalls of Pond F2	EXCAVATE	1	11.36	\$1,789
001a	Verify Depth of Ponds	SITEMAINT	1	16.00	\$3,500
		ENANCE			
002	Relax Highwalls of Pond F3	EXCAVATE	] 1	7.95	\$1,252
003	Rip compacted areas of the North Parcel	RIPPER	] 1	21.75	\$5,355
004a	Distrubute topsoil on North Area	SCRAPER1	] 1	7.91	\$9,049
005	Spread topsoil across affected lands	DOZER	1	13.40	\$3,185
006a	Revegetate North Area, semi-irrigated mix	REVEGE	1	16.00	\$8,141
006b	Revegetate North Area, Grazing Mix	REVEGE	1	16.00	\$14,816
007a	Secondary seeding of South Area, Grazing Mix	REVEGE	1	8.00	\$15,959
007b	Secondary Seeding of South Area, Semi irrigated	REVEGE	1	4.00	\$1,636
	mix				
008	Haul reclamation equipment to and from jobsite	MOBILIZE	1	6.32	\$12,655
	AND THE REPORT OF	<u>SUBTO</u>	TALS:	128.69	\$77,337

#### **INDIRECT COSTS**

### **OVERHEAD AND PROFIT:**

Liability insurance:	2.02		Total =	\$1,562
Performance bond:	1.05		Total =	\$812
Job superintendent:	92.89		Total =	\$6,446
Profit:	10.00		Total =	\$7,734
			TOTAL O & $P =$	\$16,554
	CONT	RACT AMOUNT	(direct + O & P) =	\$93,891
LEGAL - ENGINEERING - PRO	DJECT MANAGEMENT	:		
Financial warranty processi		\$0	Total =	\$0
Engineering work and/or c		0.00	Total =	\$0
Reclamation management	t and/or administration:	5.00		\$4,695
	CONTINGENCY:	0.00	Total =	\$0
		TOTAL IN	DIRECT COST =	\$21,248
	TOTAL BO	ND AMOUNT (d	irect + indirect) =	\$98,585

## HYDRAULIC EXCAVATOR WORK

Task description:	<b>Reduce Highwall</b>	s of Pond F2				
ite: Lob Lolly Pit	Pen	nit Action: _2	019 Update	Perm	uit/Job#: M201306	6
PROJECT IDENTIF	<b>ICATION</b>					
Task #:         001           Date:         10/25/201           User:         LJW	9 County:	Colorado Archuleta		Abbreviati Filenar		
Agency or orga	nization name: DR	MS				
HOURLY EQUIPME	NT COST					
Basic Machine: Attachment 1:	Cat 336D L 10'-6" ROPS Cab	Stick	Wei S	orsepower: ight (MT): hift Basis: ita Source:	268 29.30 1 per day (CRG)	
Cost Breakdown:						
Ownership Cost/ Operating Cost/ Operator Cost/ Total Unit Cost/	Hour: \$64.62 Hour: \$37.27	) 2 7	tilization % NA 100 NA			
Total Fleet Cost						
Loose volume: 6	5,858 5,461 of estimated volume: timated swell factor:	CCY LCY Height=25' I Cat Handboo	Swell factor: Length 583' Relative	1.330 ax to 3:1		
Excavator Cycle Time (lo		ed, dump buck	et, swing empty	):		
Load Bucket Capacity		asic Job Condit lition within Ba	tion Description	: AVERAGE : AVERAGE	minutes	-
Rated Capacity Bucket Fill Facto Adjusted Capacity	r: 1.100	LCY (heaped Other - rock/	l)	ucket Size Class: (100-120%) 1.100	Large	_
Job Condition Correction	Factors		Site A	ltitude: <u>6200</u> feet		
Altitude Adj: Job Efficiency: Net Correction:	1.00 0.83 0.83	Source (CAT HB) (1 shift/day) multiplier				
A	djusted Hourly Unit Pa djusted Hourly Unit Pa ljusted Hourly Fleet Pa T	roduction:	684.67 568.28 568.28	LCY/Hour LCY/Hour LCY/Hour		
	_	Tete1	ich time:	11 05	TT	
Unit cost: \$0.	Excavator		ob time:	<u>11.37</u>	Hours	
	$\leq 1 \leq 1 \leq 1 \leq 1$	10	tal job cost:	\$1,789		

## SITE MAINTENANCE

Т	ask description:	Verify Depth of Ponds			
Site: _]	Lob Lolly Pit	Permit Action:	2019 Update	Permit	/Job#: M2013066
PROJEC	T IDENTIFICATI	<u>ON</u>			
Task #:	001A	State: Colorado		Abbreviation:	None
Date:	8/28/2019	County: Archuleta		Filename:	M066-001a
User:	LJW				
	Agency or organ	ization name: DRMS			
<u>UNIT CO</u>	<u>STS</u>				

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Verify Depth of Pond F3	8.00	USER PROVIDED ITEM	1.00	EA	\$1,750.00	\$1,750.00
Verify Depth of Pond F2	8.00	USER PROVIDED ITEM	1.00	EA	\$1,750.00	\$1,750.00

Job Hours: 16.00

Total Cost: \$3,500.00

### HYDRAULIC EXCAVATOR WORK

Task description:	<b>Relax Highwal</b>	ls of Pond F3			
ite: Lob Lolly Pit	P	ermit Action:	2019 Update	Per	mit/Job#: M2013066
PROJECT IDENTIF	<b>TICATION</b>				
Task #:         002           Date:         10/25/20           User:         LJW	State: 19 County:	Colorado Archuleta		Abbrevia Filer	ation: <u>None</u> name: <u>M066-002</u>
Agency or orga	anization name:D	RMS			
HOURLY EQUIPMI	ENT COST				
Basic Machine: Attachment 1:	Cat 336D L 10'-6 ROPS Cab	" Stick	V	Horsepower: Veight (MT): Shift Basis:	268 29.30 1 per day
Cost Due 1-1-			1	Data Source:	(CRG)
<u>Cost Breakdown:</u> Ownership Cost Operating Cost Operator Cost Total Unit Cost	/Hour: \$64 /Hour: \$37	.62 .27	Utilization % NA 100 NA		
Total Fleet Cos					
Loose volume: Source		Cat Hand		F Relax to 3:1	
	_	-	ndition Description		
Load Bucket Capacity	Secondary Job Co			on: AVERAGE	
<u>_</u>				Bucket Size Class	: Large
Rated Capaci Bucket Fill Facto Adjusted Capaci	or: 1.100	LCY (hea Other - ro LCY	ped) pck/dirt mixtures	(100-120%) 1.10	00
Job Condition Correction			Site	Altitude: 6200 fee	et
Altitude Adj:	1.00	Source (CAT HB	)		
Job Efficiency: Net Correction:	0.83	(1 shift/day multiplier	y)		
A	adjusted Hourly Unit Adjusted Hourly Unit djusted Hourly Fleet	Production:	684.67 568.28 <b>568.28</b>	LCY/Hour LCY/Hour LCY/Hour	
JOB TIME AND CO	<u>ST</u>				
Fleet size:	1 Excava	tor To	tal job time:	7.96	Hours
Unit cost:\$0	.277 /LCY		Total job cost:	\$1,252	

### BULLDOZER RIPPING WORK

PROJECT IDENTIFICATION       Task #: 003		it	Реп	mit Action:	2019 Update	·	Permit/Jo	b#: M20130
Task #:       003       State:       Colorado       Abbreviation:       None         Date:       § 228 2019       County:       Archuleta       Filename:       M066-003         Agercy or organization name:       DRMS         HOURLY EOUIPMENT COST       Basic Machine:       Cat D87 - 8SU       Horsepower:       310         Ripper Attachment:       3-Shank Ripper       Data Source:       (CRG)         Cost Breakdown:       Utilization %       NA       (CRG)         Ownership Cost/Hour:       \$103.86       NA       (CRG)         Operating Cost/Hour:       \$10.43       NA       (CRG)         Operator Cost/Hour:       \$246.17       Total Unit Cost/Hour:       \$246.17         MATERIAL OUANTITIES       Selected estimating method:       Area         Alternate Methods:       :       NA       Bark Volume:       NA         :       1.00       Volume:       20,489       NA         Source of estimated quantity:	PROJECT ID	ENTIFICATI	ION					
Date:       #28/2019       County:       Archuleta       Filename:       M066-003         Agency or organization name:       DRMS <t< th=""><th></th><th></th><th></th><th>Calanda</th><th></th><th>. 1 1</th><th>• ,•</th><th>N</th></t<>				Calanda		. 1 1	• ,•	N
User: LIW Agency or organization name: DRMS HOURLY EQUIPMENT COST Basic Machine: Cat D8T - 8SU Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day Data Source: (CRG) Cost Breakdown: Utilization % Operating Cost/Hour: \$103.86 Utilization % NA Ripper Ownership Cost/Hour: \$10.45 NA Ripper Ownership Cost/Hour: \$10.45 NA Ripper Ownership Cost/Hour: \$10.45 NA Ripper Ownership Cost/Hour: \$246.17 Total Unit Cost/Hour: \$246.17 Total Unit Cost/Hour: \$246.17 MATTERIAL QUANTITIES Selected estimating method: Area Alternate Methods: NA Matter Metho								
HOURLY EQUIPMENT COST         Basic Machine:       Cat DST - 8SU       Horsepower:       310         Ripper Attachment:       3-Shank Ripper       Shift Basis:       1 per day         Ownership Cost/Hour:       \$103.86       NA       Operating Cost/Hour:       \$10.38         Operating Cost/Hour:       \$10.38       NA       Operating Cost/Hour:       \$10.43       NA         Ripper Operating Cost/Hour:       \$82.26       100       NA       Operator Cost/Hour:       \$83.81       100         Operator Cost/Hour:       \$\$246.17       Total Unit Cost/Hour:       \$\$246.17       NA       NA         MATERIAL QUANTITIES       Selected estimating method:       Area         Alternate Methods:       "       NA       BCY       NA         t:       12.70       acres       Rip Depth (ft):       1.00       Volume:       20,489         Source of estimated quantity:       HOURLY PRODUCTION       Seismic:       NA       feet/second         Area:       Average Ripping Depth:       1.00       feet/pass       Average Naneuver Time:       0.25       minutes/pass         Average Maneuver Time:       0.25       minutes/pass       Production result       0.00       feet/pass         Average Maneuve			County.	Alchuleta			r nename.	10100-003
HOURLY EQUIPMENT COST         Basic Machine:       Cat DST - 8SU       Horsepower:       310         Ripper Attachment:       3-Shank Ripper       Shift Basis:       1 per day         Ownership Cost/Hour:       \$103.86       NA       Operating Cost/Hour:       \$10.38         Operating Cost/Hour:       \$10.38       NA       Operating Cost/Hour:       \$10.43       NA         Ripper Operating Cost/Hour:       \$82.26       100       NA       Operator Cost/Hour:       \$83.81       100         Operator Cost/Hour:       \$\$246.17       Total Unit Cost/Hour:       \$\$246.17       NA       NA         MATERIAL QUANTITIES       Selected estimating method:       Area         Alternate Methods:       "       NA       BCY       NA         t:       12.70       acres       Rip Depth (ft):       1.00       Volume:       20,489         Source of estimated quantity:       HOURLY PRODUCTION       Seismic:       NA       feet/second         Area:       Average Ripping Depth:       1.00       feet/pass       Average Naneuver Time:       0.25       minutes/pass         Average Maneuver Time:       0.25       minutes/pass       Production result       0.00       feet/pass         Average Maneuve	Agency	v or organizatio	n name' DRI	MS				
Basic Machine:       Cat DST - 8SU       Horsepower:       310         Ripper Attachment:       3-Shank Ripper       Shift Basis:       1 per day         Cost Breakdown:       Utilization %       NA         Ownership Cost/Hour:       \$103.86       NA         Operating Cost/Hour:       \$103.86       NA         Operating Cost/Hour:       \$10.43       NA         Ripper Ownership Cost/Hour:       \$10.43       NA         Ripper Ownership Cost/Hour:       \$246.17         Total Unit Cost/Hour:       \$246.17         Total Fleet Cost/Hour:       \$246.17         MATERIAL QUANTITIES       Selected estimating method:       Area         Alternate Methods:       :       NA       Bank Volume:       NA         :       1.2.70       acres       Rip Depth (ft):       1.00       Volume:       20,489         Source of estimated quantity:        HOURLY PRODUCTION       Seismic:       Average Ripping Depth:       7.08       feet/pass         Average Ripping Width:       7.08       feet/pass       Average Ripping Nigth:       7.08       feet/pass         Average Ripping Depth:       1.00       feet/pass       Average Ripping Depth:       1.00       feet/pass         Average R								
Ripper Attachment:       3-Shank Ripper       Shift Basis:       1 per day Data Source:         Cost Breakdown:       Utilization %         Ownership Cost/Hour:       \$103.86       NA         Operating Cost/Hour:       \$10.386       NA         Operating Cost/Hour:       \$10.43       NA         Ripper Ownership Cost/Hour:       \$10.43       NA         Ripper Operating Cost/Hour:       \$246.17         Total Unit Cost/Hour:       \$246.17         Total Fleet Cost/Hour:       \$246.17         MATERIAL QUANTITIES       Selected estimating method:       Area         Alternate Methods:       ::       NA       Bank Volume:       NA         Source of estimated quantity:								
Cost Breakdown:       Data Source:       (CRG)         Cost Breakdown:       Utilization %       Vitilization %         Operating Cost/Hour:       \$103.86       NA         Ripper Ownership Cost/Hour:       \$82.26       100         Ripper Ownership Cost/Hour:       \$82.26       100         Perator Cost/Hour:       \$82.38       100         Operator Cost/Hour:       \$246.17         Total Unit Cost/Hour:       \$246.17         Total Fleet Cost/Hour:       \$246.17         MATERIAL QUANTITIES       Selected estimating method:       Area         Alternate Methods:       **       **         **       NA       Bank Volume:       NA         Source of estimated quantity:       **       HOURLY PRODUCTION         Seismic:       Seismic Velocity:       NA       feet/second         Area:       Average Ripping Depth:       1.00       feet/pass         Average Ripping Length:       100.00       feet/pass       Average Naverage Ripping Vidth:         Average Ripping Length:       100.00       feet/pass       Average Maneuver Time:       0.25       minutes/pass         Average Maneuver Time:       0.25       minutes/pass       Average/hour       Areas/hour         Job Eff								
Cost Breakdown:       Utilization %         Ownership Cost/Hour:       \$103.86       NA         Operating Cost/Hour:       \$82.26       100         Ripper Operating Cost/Hour:       \$10.43       NA         Ripper Operating Cost/Hour:       \$81.34       NA         Operator Cost/Hour:       \$84.1.24       NA         Total Unit Cost/Hour:       \$246.17         MATERIAL QUANTITIES       Selected estimating method:       Area         Alternate Methods:       :	Ripper A	ttachment: 3-	Shank Ripper					
Ownership Cost/Hour:       \$103.86       NA         Operating Cost/Hour:       \$104.31       NA         Ripper Ownership Cost/Hour:       \$104.31       NA         Ripper Operating Cost/Hour:       \$104.31       NA         Operating Cost/Hour:       \$104.31       NA         Ripper Operating Cost/Hour:       \$246.17         Total Unit Cost/Hour:       \$246.17         MATERIAL QUANTITIES       Selected estimating method:       Area         Alternate Methods:       ::       NA       BCY       NA         ::       NA       Bank Volume:       NA       BCY       NA         ::       12.70       acres       Rip Depth (ft):       1.00       Volume:       20,489         Source of estimated quantity:       HOURLY PRODUCTION       Seismic:       Poerdy acres Ripping Depth:       1.00       feet/pass         Average Ripping Depth:       1.00       feet/pass       Average Naverage Ripping Length:       100.00       feet/pass         Average Ripping Length:       100.00       feet/pass       acres/hour       Average Naverage Naver						Data Source:	(	CKG)
Ownership Cost/Hour:       \$103.86       NA         Operating Cost/Hour:       \$82.26       100         Ripper Ownership Cost/Hour:       \$10.43       NA         Ripper Operating Cost/Hour:       \$83.38       100         Operator Cost/Hour:       \$246.17         Total Unit Cost/Hour:       \$246.17         MATERIAL OUANTITIES       Selected estimating method:       Area         Alternate Methods:       **       **         **       NA       BCY       NA         start 12.70       acres       Rip Depth (ft):       1.00       Volume:       20,489         Source of estimated quantity:       **       **       **       **       100       Volume:       20,489         Seismic:       Seismic Velocity:       NA       feet/second       Area         Area       Average Ripping Depth:       1.00       feet/pass         Average Ripping Length:       100.00       feet/pass         Average Rippi	Cost Breakdown	<u>.:</u>			1	T T4:1:4: 0/		
Operating Cost/Hour:       \$82.26       100         Ripper Operating Cost/Hour:       \$10.43       NA         Ripper Operating Cost/Hour:       \$83.8       100         Operator Cost/Hour:       \$246.17         Total Unit Cost/Hour:       \$246.17         Total Fleet Cost/Hour:       \$246.17         MATERIAL OUANTITIES       Selected estimating method:       Area         Alternate Methods:       **       **       NA         Bank Volume:       NA       BCY       NA         t:       12.70       acres       Rip Depth (ft):       1.00       Volume:       20,489         Source of estimated quantity:		Ownership (	Cost/Hour		\$103.86			
Ripper Ovnership Cost/Hour:       \$10.43       NA         Ripper Operating Cost/Hour:       \$8.38       100         Operator Cost/Hour:       \$246.17         Total Unit Cost/Hour:       \$246.17         MATERIAL QUANTITIES       Selected estimating method:       Area         Alternate Methods:       **       NA       BCY       NA         **       NA       BCY       NA       NA         Source of estimated quantity:							_	
Ripper Operating Cost/Hour:       \$8.38       100         Operator Cost/Hour:       \$246.17         Total Unit Cost/Hour:       \$246.17         Total Fleet Cost/Hour:       \$246.17         MATERIAL QUANTITIES       Selected estimating method:       Area         Alternate Methods:	Ripp						_	
Operator Cost/Hour:       \$41.24       NA         Total Unit Cost/Hour:       \$246.17         Total Fleet Cost/Hour:       \$246.17         MATERIAL QUANTITIES       Selected estimating method:       Area         Alternate Methods:								
Total Fleet Cost/Hour:       \$246.17         MATERIAL QUANTITIES       Selected estimating method:       Area         Alternate Methods:	-						_	
MATERIAL QUANTITIES       Selected estimating method:       Area         Alternate Methods:       Bank Volume:       NA       BCY       NA         ::       NA       Bank Volume:       NA       BCY       NA         ::       12.70       acres       Rip Depth (ft):       1.00       Volume:       20,489         ::       12.70       acres       Rip Depth (ft):       1.00       Volume:       20,489         ::       :       12.70       acres       Rip Depth (ft):       1.00       Volume:       20,489         ::       :       :       :       :       :       20,489       :       :         ::       :<		Total Unit C	Cost/Hour:		\$246.17		_	
MATERIAL QUANTITIES       Selected estimating method:       Area         Alternate Methods:       Bank Volume:       NA       BCY       NA         ::       NA       Bank Volume:       NA       BCY       NA         ::       12.70       acres       Rip Depth (ft):       1.00       Volume:       20,489         ::       12.70       acres       Rip Depth (ft):       1.00       Volume:       20,489         ::       :       12.70       acres       Rip Depth (ft):       1.00       Volume:       20,489         ::       :       :       :       :       :       20,489       :       :         ::       :<		Total Fleet C	Cost/Hour	\$246	17			
Alternate Methods:         ::       NA       Bark Volume:       NA       BCY       NA         ::       12.70       acres       Rip Depth (ft):       1.00       Volume:       20,489         Source of estimated quantity:         HOURLY PRODUCTION         Seismic:       NA       feet/second         Area:       Average Ripping Depth:       1.00       feet/pass         Average Ripping Length:       100.00       feet/pass         Average Ripping Length:       100.00       feet/pass         Average Ripping Length:       100.00       feet/pass         Average Ripping Length:       0.25       minutes/pass         Average Maneuver Time:       0.25       minutes/pass         Production per unit area:       0.703       acres/hour         Job Condition Correction Factors       Unadjusted Hourly Unit Production:       0.703       Acres/hr         Site Altitude:       6,200       feet         Altitude Adj:       1.00       (CAT HB)         Job Efficiency:       0.83       multiplier         Adjusted Hourly Unit Production:       0.58       Acres/hr         Adjusted Hourly Unit Production:       0.58       Acres/hr								
HOURLY PRODUCTION         Seismic:       NA       feet/second         Area:       Average Ripping Depth:       1.00       feet/pass         Average Ripping Uength:       100.00       feet/pass         Average Ripping Length:       100.00       feet/pass         Average Ripping Length:       100.00       feet/pass         Average Dozer Speed:       88.00       feet/minute         Average Maneuver Time:       0.25       minutes/pass         Production per unit area:       0.703       acres/hour         Job Condition Correction Factors       Unadjusted Hourly Unit Production:       0.703       Acres/hr         Site Altitude:       6,200       feet         Altitude Adj:       1.00       (CAT HB)         Job Efficiency:       0.83       (1 shif/day)         Net Correction:       0.83       multiplier         Adjusted Hourly Unit Production:       0.58       Acres/hr         JOB TIME AND COST       JOB TIME AND COST       Image: State Stat								NA
Seismic:       NA       feet/second         Area:       1.00       feet/pass         Average Ripping Depth:       7.08       feet/pass         Average Ripping Length:       100.00       feet/pass         Average Ripping Length:       100.00       feet/pass         Average Ripping Length:       100.00       feet/pass         Average Maneuver Time:       0.25       minutes/pass         Production per unit area:       0.703       acres/hour         Job Condition Correction Factors       0.703       Acres/hr         Site Altitude:       6,200       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         JOB Efficiency:       0.58       Acres/hr         Adjusted Hourly Unit Production:       0.58       Acres/hr         JOB TIME AND COST       0.58       Acres/hr	a: <u>12.70</u>	acres					20,489	NA
Seismic Velocity:       NA       feet/second         Area:       1.00       feet/pass         Average Ripping Depth:       1.00       feet/pass         Average Ripping Uength:       100.00       feet/pass         Average Ripping Length:       100.00       feet/pass         Average Dozer Speed:       88.00       feet/minute         Average Maneuver Time:       0.25       minutes/pass         Production per unit area:       0.703       acres/hour         Job Condition Correction Factors       0.703       Acres/hr         Site Altitude:       6,200       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         JOB TIME AND COST       0.58       Acres/hr	a: <u>12.70</u>		Rip I	Depth (ft):			20,489	NA
Area:       Average Ripping Depth: Average Ripping Width:       1.00       feet/pass         Average Ripping Length:       100.00       feet/pass         Average Dozer Speed:       88.00       feet/minute         Average Maneuver Time:       0.25       minutes/pass         Production per unit area:       0.703       acres/hour         Job Condition Correction Factors       0.703       Acres/hr         Site Altitude:       6,200       feet         Altitude Adj:       1.00       (CAT HB)         Job Efficiency:       0.83       (1 shift/day)         Net Correction:       0.58       Acres/hr         Adjusted Hourly Unit Production:       0.58       Acres/hr         Job Efficiency:       0.83       multiplier         Adjusted Hourly Unit Production:       0.58       Acres/hr         JOB TIME AND COST       0.58       Acres/hr		Source of esti	Rip I	Depth (ft):			20,489	NA
Average Ripping Depth:1.00feet/passAverage Ripping Uength:7.08feet/passAverage Ripping Length:100.00feet/passAverage Dozer Speed:88.00feet/minuteAverage Maneuver Time:0.25minutes/passProduction per unit area:0.703acres/hourJob Condition Correction Factors0.703Acres/hrSite Altitude:6,200feetAltitude Adj:1.00(CAT HB)Job Efficiency:0.83(1 shift/day)Net Correction:0.83multiplierAdjusted Hourly Unit Production:0.58Acres/hrJOB TIME AND COSTJob Efficiency:0.58Acres/hr	HOURLY PR	Source of esti	Rip I	Depth (ft):			20,489	<u>NA</u>
Average Ripping Depth:1.00feet/passAverage Ripping Uength:7.08feet/passAverage Ripping Length:100.00feet/passAverage Dozer Speed:88.00feet/minuteAverage Maneuver Time:0.25minutes/passProduction per unit area:0.703acres/hourJob Condition Correction Factors0.703Acres/hrSite Altitude:6,200feetAltitude Adj:1.00(CAT HB)Job Efficiency:0.83(1 shift/day)Net Correction:0.83multiplierAdjusted Hourly Unit Production:0.58Acres/hrJOB TIME AND COSTJob Efficiency:0.58Acres/hr	HOURLY PR	Source of esti	Rip I mated quantity	Depth (ft):	1.00	Volume:		
Average Ripping Length:       100.00       feet/pass         Average Dozer Speed:       88.00       feet/minute         Average Maneuver Time:       0.25       minutes/pass         Production per unit area:       0.703       acres/hour         Job Condition Correction Factors       0.703       Acres/hr         Site Altitude:       6,200       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         JOB TIME AND COST       JOB TIME AND COST       0.58	HOURLY PR	Source of esti	Rip I mated quantity	Depth (ft):	1.00	Volume:		<u>NA</u>
Average Dozer Speed:       88.00       feet/minute         Average Maneuver Time:       0.25       minutes/pass         Production per unit area:       0.703       acres/hour         Job Condition Correction Factors       0.703       Acres/hr         Site Altitude:       6,200       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	HOURLY PR	Source of esti ODUCTION Averag	Rip I mated quantity Seismic Veloci ge Ripping Dep	Depth (ft):	1.00 NA	Volume:	cond	NA
Average Maneuver Time:       0.25       minutes/pass         Production per unit area:       0.703       acres/hour         Job Condition Correction Factors       0.703       Acres/hr         Site Altitude:       6,200       feet         Altitude Adj:       1.00       (CAT HB)         Job Efficiency:       0.83       (1 shift/day)         Net Correction:       0.58       Acres/hr         Adjusted Hourly Unit Production:       0.58       Acres/hr	HOURLY PR	Source of esti ODUCTION Averag Averag	Rip I mated quantity Seismic Veloci ge Ripping Dep ge Ripping Wid	Depth (ft): : ity: pth: lth:	1.00 NA 1.00 7.08	Volume: feet/se feet/pa feet/pa	cond ss ss	
Production per unit area:       0.703       acres/hour         Job Condition Correction Factors       0.703       Acres/hr         Unadjusted Hourly Unit Production:       0.703       Acres/hr         Site Altitude:       6,200       feet         Altitude Adj:       1.00       (CAT HB)         Job Efficiency:       0.83       (1 shift/day)         Net Correction:       0.58       Acres/hr         Adjusted Hourly Unit Production:       0.58       Acres/hr         JOB TIME AND COST       Job TIME AND COST       Job Context (Context (C	HOURLY PR	Source of esti ODUCTION Averag Averag Averag	Rip I mated quantity Seismic Veloci ge Ripping Dep ge Ripping Wid e Ripping Leng	Depth (ft): : ity: oth: th: th:	1.00 NA 1.00 7.08 100.00	Volume: feet/se feet/pa feet/pa feet/pa	cond ss ss ss	<u>NA</u>
Job Condition Correction Factors         Unadjusted Hourly Unit Production:       0.703       Acres/hr         Site Altitude:       6,200       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:       0.58       Acres/hr         JOB TIME AND COST       Image: Cost of the set o	HOURLY PR	Source of esti ODUCTION Averag Averag Averag Averag	Rip I mated quantity Seismic Veloci ge Ripping Dep ge Ripping Wid e Ripping Leng rage Dozer Spec	Depth (ft): ; ity: th: th: ed:	1.00 NA 1.00 7.08 100.00 88.00	Volume: feet/se feet/pa feet/pa feet/pa feet/m	cond ss ss ss inute	<u>NA</u>
Unadjusted Hourly Unit Production:0.703Acres/hrSite Altitude:6,200feetAltitude Adj:1.00(CAT HB)Job Efficiency:0.83(1 shift/day)Net Correction:0.83multiplierAdjusted Hourly Unit Production:0.58Acres/hrAdjusted Hourly Fleet Production:0.58Acres/hrJOB TIME AND COSTImage: Construction of the second sec	HOURLY PR	Source of esti ODUCTION Averag Averag Averag Average Average	Rip I mated quantity Seismic Veloci ge Ripping Dep ge Ripping Wid e Ripping Leng rage Dozer Spe e Maneuver Tim	Depth (ft): :	1.00 NA 1.00 7.08 100.00 88.00 0.25	volume: feet/se feet/pa feet/pa feet/pa feet/m feet/m	cond ss ss ss inute s/pass	
Site Altitude:6,200feetAltitude Adj:1.00(CAT HB)Job Efficiency:0.83(1 shift/day)Net Correction:0.83multiplierAdjusted Hourly Unit Production:0.58Acres/hrAdjusted Hourly Fleet Production:0.58Acres/hrJOB TIME AND COSTImage: Content of the set of	HOURLY PRO	Source of esti ODUCTION Averag Averag Average Average Produc	Rip I mated quantity Seismic Veloci ge Ripping Dep ge Ripping Wid e Ripping Leng rage Dozer Spec e Maneuver Tin stion per unit ar	Depth (ft): :	1.00 NA 1.00 7.08 100.00 88.00 0.25	volume: feet/se feet/pa feet/pa feet/pa feet/m feet/m	cond ss ss ss inute s/pass	<u>NA</u>
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:       0.58       Acres/hr         JOB TIME AND COST       JOB TIME AND COST       JOB TIME AND COST	HOURLY PRO Seismic: Area: Job Condition Co	Source of esti ODUCTION Averag Averag Average Average Productor	Rip I mated quantity Seismic Veloci ge Ripping Dep ge Ripping Wid e Ripping Leng rage Dozer Spe e Maneuver Tim ction per unit ar	Depth (ft):	1.00 NA 1.00 7.08 100.00 88.00 0.25 0.703	volume: feet/se feet/pa feet/pa feet/pa feet/m feet/m	cond ss ss ss inute s/pass	<u>NA</u>
Job Efficiency:       0.83       (1 shift/day)         Net Correction:       0.83       multiplier         Adjusted Hourly Unit Production:       0.58       Acres/hr         Adjusted Hourly Fleet Production:       0.58       Acres/hr         JOB TIME AND COST       JOB TIME AND COST       JOB TIME AND COST	HOURLY PRO Seismic: Area: Job Condition Co	Source of esti ODUCTION Averag Averag Average Average Productor	Rip I mated quantity Seismic Veloci ge Ripping Dep ge Ripping Wid e Ripping Leng rage Dozer Spe e Maneuver Tim ction per unit ar	Depth (ft):	1.00 NA 1.00 7.08 100.00 88.00 0.25 0.703	Volume: feet/se feet/pa feet/pa feet/pa feet/m feet/m acres/h	cond ss ss ss inute s/pass iour	<u>NA</u>
Net Correction:       0.83       multiplier         Adjusted Hourly Unit Production:       0.58       Acres/hr         Adjusted Hourly Fleet Production:       0.58       Acres/hr         JOB TIME AND COST       JOB TIME AND COST       JOB TIME AND COST	HOURLY PR Seismic: Area: Job Condition Co	Source of esti ODUCTION Averag Averag Average Average Productor	Rip I mated quantity Seismic Veloci ge Ripping Dep ge Ripping Wid e Ripping Leng rage Dozer Spec e Maneuver Tim ction per unit arr 2 y Unit Production	Depth (ft):	1.00 NA 1.00 7.08 100.00 88.00 0.25 0.703 0.703	Volume: feet/se feet/pa feet/pa feet/m minute acres/h Acres/	cond ss ss ss inute s/pass iour	<u>NA</u>
Adjusted Hourly Unit Production:       0.58       Acres/hr         Adjusted Hourly Fleet Production:       0.58       Acres/hr         JOB TIME AND COST       Acres/hr	HOURLY PRO Seismic: Area: Job Condition Co	Source of esti ODUCTION Averag Averag Average Average Productor	Rip I mated quantity Seismic Veloci ge Ripping Dep ge Ripping Wid e Ripping Leng rage Dozer Spe e Maneuver Tim tion per unit art v Unit Production Site Altitude A	Depth (ft): :	1.00 NA 1.00 7.08 100.00 88.00 0.25 0.703 0.703 6,200 1.00	Volume: feet/se feet/pa feet/pa feet/pa feet/m minute acres/h Acres/ feet (CAT	cond ss ss ss inute s/pass iour hr HB)	<u>NA</u>
Adjusted Hourly Fleet Production:       0.58       Acres/hr         JOB TIME AND COST	HOURLY PRO Seismic: Area: Job Condition Co	Source of esti ODUCTION Averag Averag Average Average Productor	Rip I mated quantity Seismic Veloci ge Ripping Dep ge Ripping Wid e Ripping Leng rage Dozer Spec e Maneuver Tin tion per unit ar Site Altitude Altitude A Job Efficience	Depth (ft): :	1.00 NA 1.00 7.08 100.00 88.00 0.25 0.703 0.703 6,200 1.00 0.83	Volume: feet/se feet/pa feet/pa feet/pa feet/pa feet/m minute acres/h Acres/ feet (CAT (1 shif	cond ss ss ss inute s/pass iour hr HB) t/day)	<u>NA</u>
JOB TIME AND COST	HOURLY PRO Seismic: Area: Job Condition Co	Source of esti ODUCTION Averag Averag Average Average Productor	Rip I mated quantity Seismic Veloci ge Ripping Dep ge Ripping Wid e Ripping Leng rage Dozer Spec e Maneuver Tin tion per unit ar Site Altitude Altitude A Job Efficience	Depth (ft): :	1.00 NA 1.00 7.08 100.00 88.00 0.25 0.703 0.703 6,200 1.00 0.83	Volume: feet/se feet/pa feet/pa feet/pa feet/pa feet/m minute acres/h Acres/ feet (CAT (1 shif	cond ss ss ss inute s/pass iour hr HB) t/day)	<u>NA</u>
	HOURLY PR Seismic: Area: Job Condition Co	Source of esti ODUCTION Average Average Average Productors badjusted Hourly Adjusted	Rip I mated quantity Seismic Veloci ge Ripping Dep ge Ripping Wid e Ripping Leng rage Dozer Spece Maneuver Tin tion per unit ar Site Altitude Altitude A Job Efficient Net Correction Hourly Unit Pr	Depth (ft): :	1.00 NA 1.00 7.08 100.00 88.00 0.25 0.703 0.703 6,200 1.00 0.83 0.83 0.58	Volume: feet/se feet/pa feet/pa feet/pa feet/m minute acres/h Acres/ feet (CAT (1 shif multip	cond ss ss ss inute s/pass iour hr HB) t/day)	
Fleet size: 1 Grader(s) Total job time: 21.75 Hour	HOURLY PR Seismic: Area: Job Condition Co	Source of esti ODUCTION Average Average Average Productors badjusted Hourly Adjusted	Rip I mated quantity Seismic Veloci ge Ripping Dep ge Ripping Wid e Ripping Leng rage Dozer Spece Maneuver Tin tion per unit ar Site Altitude Altitude A Job Efficient Net Correction Hourly Unit Pr	Depth (ft): :	1.00 NA 1.00 7.08 100.00 88.00 0.25 0.703 0.703 6,200 1.00 0.83 0.83 0.58	Volume: feet/se feet/pa feet/pa feet/pa feet/pa feet/m minute acres/h Acres/h feet (CAT (1 shif multip Acres/hr	cond ss ss ss inute s/pass iour hr HB) t/day)	
	HOURLY PRO Seismic: Area: Job Condition Co Un	Source of esti ODUCTION Average Average Average Productors badjusted Hourly Adjusted Adjusted	Rip I mated quantity Seismic Veloci ge Ripping Dep ge Ripping Wid e Ripping Leng rage Dozer Spece Maneuver Tin tion per unit ar Site Altitude Altitude A Job Efficient Net Correction Hourly Unit Pr	Depth (ft): :	1.00 NA 1.00 7.08 100.00 88.00 0.25 0.703 0.703 6,200 1.00 0.83 0.83 0.58	Volume: feet/se feet/pa feet/pa feet/pa feet/pa feet/m minute acres/h Acres/ feet (CAT (1 shif multip Acres/hr	cond ss ss ss inute s/pass iour hr HB) t/day)	

CIRCES Cost Estimating Software

Scraper Worksheet Cont'd

Task # 004A

Page 1 of 2

### SCRAPER TEAM WORK

Site: Lob Lolly Pit		Perm	it Action	n: 2019 Update	H	Permit/Job#: <u>M2</u>	2013066
PROJECT IDENT	<b>IFICATION</b>						
Task #: 004A	S	State:	Colorado	)	Abbre	viation: None	
Date: 8/28/20	019 Co	unty:	Archulet	a	Fi	lename: M066-	004a
User: LJW							
Agency or o	rganization name:	DRM	ſS				
HOURLY EQUIP	MENT			COSTS	Shift basis: <u>1 per</u>	day	
			Equipm	ent Description	<u>_</u>		
	-S	craper:	Cat 63	7G w/push-pull			
		-Dozer:		8T - 8SU			
Suppor	t Equipment -Loa	d Area: p Area:	NA NA				
Road Main	ntenance – Motor (		NA				
	-Water	Truck:	Water	Tanker, 7,000 Ga	ıl.		
Cost Ducal dame.	0	1					_
Cost Breakdown:	Scraper Wor Scraper	k Ieam Doz	zer	Support Equ Load Area	Ipment Dump Area	Maintenanc Motor Grader	e Equipment Water Truc
%Utilization-machine:	100		100		_		
Ownership cost/hour:	\$174.06	¢	103.86	NA NA	NA NA	NA NA	10
Operating cost/hour:	\$190.35		\$82.26	NA	NA	NA NA	\$44.0 \$71.8
%Utilization-ripper:	NA		0	NA	NA	NA	\$71.0 N
Ripper own. cost/hour:	NA	9	\$10.43	NA	NA	NA	\$0.0
Ripper op. cost/hour:	NA		\$0.00	NA	NA	NA	\$0.0
Operator cost/hour:	\$30.86	5	641.24	NA	NA	NA	\$0.0
Unit Subtotals:	\$395.26	\$2	237.79	NA	NA	NA	\$115.8
Number of Units:	2		1	0	0	0	
Group Subtotals:	Work:	\$1,02	8.31	Support:	\$0.00	Maint:	\$115.88
Total work team cost/h	NTITIES						
Initial volume: Loose volume:	<u>10,244</u> <b>10,244</b>		CCY LCY	Swell fact	tor: 1.000		
		11		10 0 0			
	e of estimated vo estimated swell f		Cat Han	across 12.7 AC	93 1		
			Cut IIun				
HOURLY PRODU	<u>CTION</u>						
				<u>Scr</u> aper B	owl (volume) Ba	sis:	
Material weight:	1,600 lbs/LCY			_	Volume: 24.00		CY
Material description:	Top Soil			Heaped			CY
Rated Payload:	81,600 pounds			Average	Volume: 29.00	L	CY
Payload Capacity:	51.00 LCY			Adjusted C	Capacity: 29.00	L	CY

1.00 Minutes

0.60 Minutes

#### Cycle Time:

Scraper Loading Time:

Maneuver and Spread Time:

#### Job Condition Correction:

Site Altitude: 6200 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

#### Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

#### Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	400.00	0.00	3.00	3.00	2800	0.35

Haul Time: 0.35 minutes

#### Return Route:

		 0120	initiateo
	Total Scraper team cycle time:	 2.23	minutes
	Adjusted for job conditions:	1,295.25	LCY/Hour
	Selected Number of Scrapers:	 2	Scraper(s)
	Adjusted single scraper team (unit) hourly production:	 1,295.25	LCY/Hour
	Adjusted multiple scraper team (fleet) hourly production:	1,295.25	LCY/Hour
Optimal N	Unadjusted unit production/hour: <u>1,560.54</u> LCY/Hour umber of Scrapers per push dozer:		

Fleet size:	1	Team(s)	Total job time:	7.91	Hours
Unit cost:	\$0.883	/LCY	Total job cost:	\$9,049	

#### BULLDOZER WORK

e: Lob Lolly Pit		ed lands		
	Permit Action:	2019 Update	Permit/Jo	b#: <u>M201306</u> 6
PROJECT IDENTIFI	CATION			
Task #:       005         Date:       8/28/2019         User:       LJW	State: Colorado County: Archuleta		Abbreviation: Filename:	None M066-005
Agency or organ	nization name: DRMS			
HOURLY EQUIPME	NT COST			
Horsepower: 310				
<b>,</b>	ni-Universal hank ripper			
Shift Basis: 1 p	er day RG)			
Cost Breakdown:		Utilization %		
Ownership Cost/Hour: Operating Cost/Hour:	\$103.86 \$82.26	NA 100		
Ripper own.				
Cost/Hour:	\$10.43	NA		
Ripper op. Cost/Hour:	\$0.00	0		
Operator Cost/Hour:	\$41.24	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour:	\$237.79 <b>\$237.79</b>			
MATERIAL QUANTI	TIES			
Initial Volume: 10.2	 4.4			
Swell factor: 1.00				
Loose	44 LCY			
Loose volume: <u>10,2</u>	44 LU I			
Source of estimated volu Source of estimated swel factor:	me: 6" deep across 12.7 ac	res		
Source of estimated volu Source of estimated swel	me: 6" deep across 12.7 ac ll Cat Handbook	res		
Source of estimated volu Source of estimated swel factor: HOURLY PRODUCT	In 6" deep across 12.7 ac Cat Handbook	res		
Source of estimated volu Source of estimated swel factor:	me: 6" deep across 12.7 ac ll Cat Handbook			
Source of estimated volu Source of estimated swel factor: HOURLY PRODUCT Average push distance: Unadjusted hourly	me:       6" deep across 12.7 ac         Cat Handbook         ION         75 feet         1,017.1 LCY/hr			
Source of estimated volu Source of estimated swel factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency de Average push gradient:	Ime:       6" deep across 12.7 ac         Cat Handbook         ION         75 feet         1,017.1 LCY/hr         scription:       Loose stockpile 1.2         0 %			
Source of estimated volu Source of estimated swel factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency des Average push	ame:       6" deep across 12.7 ac         Cat Handbook         ION         75 feet         1,017.1 LCY/hr         scription:       Loose stockpile 1.2			
Source of estimated volu Source of estimated swel factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency de Average push gradient:	Ime:       6" deep across 12.7 ac         Cat Handbook         ION         75 feet         1,017.1 LCY/hr         scription:       Loose stockpile 1.2         0 %			
Source of estimated volu Source of estimated swel factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency de Average push gradient: Average site altitude:	ame:       6" deep across 12.7 ac         Cat Handbook         ION         75 feet         1,017.1 LCY/hr         scription:       Loose stockpile 1.2         0 %         6,200 feet			

	(AVG.)
1.200	(CAT HB)
1.000	(GEN.)
1.000	(AVG.)
0.830	(1 SHIFT/DAY)
0.700	(FND-MF)
1.000	(CAT HB)
1.000	(CAT HB)
1.438	(CAT HB)
1.000	(PAT)
	1.000         1.000         0.830         0.700         1.000         1.000         1.438

Net correction: 0.7519

5.7519

Adjusted unit production:	764.76 LCY/hr
Adjusted fleet production:	764.76 LCY/hr

## JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$0.311/LCY

 Total job time:
 13.40 Hours

 Total job cost:
 \$3,185

## **REVEGETATION WORK**

te: Lob Lolly Pit		Permit Action:	2019 Update	Permit/Job	o#:M2013066
PROJECT	IDENTIFIC	CATION			
Task #: Date: User:	006A 8/28/2019 LJW	State: Colorado County: Archuleta		Abbreviation: Filename:	None M066-006a

## **FERTILIZING**

# Materials

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

### Application

Description		Cost /Acre
		\$
fine Something in a	Total Fertilizer Application Cost/Acre	\$0.00

### **TILLING**

Description		Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)		\$101.93
	Total Tilling Cost/Acre	\$101.93

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Rye, Annual Tetraploid - Barmultra	10.00	43.62	\$16.50
Meadow Brome - Paddock	5.00	4.59	\$19.88
Orchardgrass - Paiute	10.00	123.97	\$40.75
Smooth Brome - Manchar	5.00	16.64	\$16.63
Intermediate Wheatgrass - Rush	7.50	16.01	\$21.00
Burnett, Small (or Little) - Delar	5.00	6.31	\$12.50
Sainfoin - Remont	7.50	3.27	\$23.70
Totals Seed Mix	50.00	214.42	\$150.95

### Application

Description		Cost /Acre
Broadcast seeding [DMG]		\$267.22
	<b>Total Seed Application Cost/Acre</b>	\$267.22

### **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$590.00

#### Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Weed spray, hand, non-aquatic area, nox. [DMG]		\$180.00
	Total Mulch Application Cost/Acre	\$250.17

# NURSERY STOCK PLANTING

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

No. of Acres:	4.5	Cost /Acre:	\$1,360.27	
Estimated Failure Rate:	33%	Cost /Acre*:	\$1,360.27	
*Selected Replanting Work Items:	TILLING,SEEDIN	IG,MULCHING		
Initial Job Cost: \$6.121.22				

\$6,121.22	
\$2,020.00	
\$8,141	
16.00	
	\$2,020.00 \$8,141

## **REVEGETATION WORK**

e: Lob Lolly Pit	Permit Action: 2019 Update	Permit/Job#: M201306
PROJECT IDENTIF	ICATION	
Task #: 006B Date: 8/28/2011 User: LJW	State:     Colorado       O     County:     Archuleta	Abbreviation: None Filename: M066-006b

### **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials	
the second			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)		\$101.93
	Total Tilling Cost/Acre	\$101.93

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Rye, Annual Tetraploid - Barmultra	2.00	8.72	\$3.30
Orchardgrass - Paiute	8.00	99.17	\$32.60
Crested Wheatgrass - Standard	6.00	27.55	\$24.90
Russian Wildrye - VNS	4.00	16.07	\$23.68
Smooth Brome - Manchar	10.00	33.29	\$33.25
Pubescent Wheatgrass - VNS	10.00	20.66	\$31.50
Totals Seed Mix	40.00	205.46	\$149.23

Application

Description		Cost /Acre
Broadcast seeding [DMG]		\$267.22
	Total Seed Application Cost/Acre	\$267.22

### **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$590.00

### Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Weed spray, hand, non-aquatic area, nox. [DMG]		\$180.00
	Total Mulch Application Cost/Acre	\$250.17

#### NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Namers Sciel		To	als Nursery Stoc	ek Cost / Acre	\$0.00

No. of Acres:	8.2	Cost /Acre:	\$1,358.55
Estimated Failure Rate:	33%	Cost /Acre*:	\$1,358.55
*Selected Replanting Work Items:	TILLING, SEEDIN	G,MULCHING	

Initial Job Cost:	\$11,140.11	
Reseeding Job Cost:	\$3,676.24	
Total Job Cost:	\$14,816	
Job Hours:	16.00	

## **REVEGETATION WORK**

e: Lob Lolly Pit			nit Action:	Area, Grazing Mix 2019 Update	Permit/Jo	b#: M2013066
PROJECT	IDENTIFIC	CATION				
Task #: Date: User:	007A 8/28/2019 LJW		Colorado Archuleta		Abbreviation: Filename:	None M066-007a

### **FERTILIZING**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer	
			Materials	
1 49. 7 10 A		2	Cost/Acre	\$0.00

## Application

Description		Cost /Acre
	l.	\$
	Total Fertilizer Application Cost/Acre	\$0.00

## **TILLING**

Description		Cost /Acre
· · · · · · · · · · · · · · · · · · ·		\$
	Total Tilling Cost/Acre	\$0.00

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Rye, Annual Tetraploid - Barmultra	2.00	8.72	\$3.30
Orchardgrass - Paiute	8.00	99.17	\$32.60
Crested Wheatgrass - Standard	6.00	27.55	\$24.90
Russian Wildrye - VNS	4.00	16.07	\$23.68
Smooth Brome - Manchar	10.00	33.29	\$33.25
Pubescent Wheatgrass - VNS	10.00	20.66	\$31.50
Totals Seed Mix	40.00	205.46	\$149.23

### Application

Description	Cost /Acre
Broadcast seeding [DMG]	 \$267.22

Total Seed Application Cost/Acre \$267.22

#### 267.22

## **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$590.00

### Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Weed spray, hand, non-aquatic area, nox. [DMG]		\$180.00
and reaction that the graps	Total Mulch Application Cost/Acre	\$250.17

#### NURSERY STOCK PLANTING

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

No. of Acres:	12.7	Cost /Acre:	\$1,256.62
Estimated Failure Rate:	33%	Cost /Acre*:	\$0.00
*Selected Replanting Work Items:	NONE		

Initial Job Cost:	\$15,959.07	
Reseeding Job Cost:	\$0.00	
Total Job Cost:	\$15,959	
Job Hours:	8.00	

## **REVEGETATION WORK**

e: Lob Loll	y Pit	Permit Action:	2019 Update	Permit/Job	#: <u>M2013066</u>
	<b>IDENTIFIC</b>				<b>N</b> T
Task #:	007B	State: Colorado		Abbreviation:	None
Date:	8/28/2019	County: Archuleta		Filename:	M066-007b
User:	LJW				

### **FERTILIZING**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
		-	\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

## Application

Description		Cost /Acre
		\$
1999 - Alto I I I I I I I I I	Total Fertilizer Application Cost/Acre	\$0.00

## **TILLING**

Description		Cost /Acre
		\$
	Total Tilling Cost/Acre	\$0.00

### **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Rye, Annual Tetraploid - Barmultra	10.00	43.62	\$16.50
Meadow Brome - Paddock	5.00	4.59	\$19.88
Orchardgrass - Paiute	10.00	123.97	\$40.75
Smooth Brome - Manchar	5.00	16.64	\$16.63
Intermediate Wheatgrass - Rush	7.50	16.01	\$21.00
Burnett, Small (or Little) - Delar	5.00	6.31	\$12.50
Sainfoin - Remont	7.50	3.27	\$23.70
Totals Seed Mix	50.00	214.42	\$150.95

### Application

Description Broadcast seeding [DMG]		Cost /Acre \$267.22
	Total Seed Application Cost/Acre	\$267.22

### **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$590.00

### Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Weed spray, hand, non-aquatic area, nox. [DMG]		\$180.00
	Total Mulch Application Cost/Acre	\$250.17

## **NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
and the second second second second	11 11 11 11	Tot	als Nursery Stoc	ek Cost / Acre	\$0.00

No. of Acres:	1.3	Cost /Acre:	\$1,258.34
Estimated Failure Rate:	33%	Cost /Acre*:	\$0.00
*Selected Replanting Work Items:	NONE		
Initial Job Cost: \$1 625 94			

Initial Job Cost:	\$1,035.84	
Reseeding Job Cost:	\$0.00	
Total Job Cost:	\$1,636	
Job Hours:	4.00	

### EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Haul reclamation e	quipment to and	l from jobsite		
e: Lob Lolly Pit	Permi	t Action: 2019	Update	Permit/Job	#: M2013066
PROJECT IDENTIFICA	TION				
Task #:         008           Date:         8/28/2019           User:         LJW		olorado rchuleta		Abbreviation: Filename:	None M066-008
Agency or organiza	tion name: DRM	5			
EQUIPMENT TRANSPO	<u>DRT RIG COST</u>		Sł Cost Data		per day RG Data
Truck Tractor D	escription: GEN	ERIC ON-HIGHV	WAY TRUCK TR 400 HP (2ND H		DIESEL POWERED,
Truck Trailer D	escription: C		ING GOOSENEC TRAILER (25T, 50		K EQUIPMENT
Cost Breakdown:					
Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons		
Ownership Cost/Hour	: \$17.20	\$29.63	\$38.69		
Operating Cost/Hour	:: \$26.56	\$47.02	\$55.69		
Operator Cost/Hour	: \$23.63	\$23.63	\$23.63		

\$23.53

\$123.81

\$23.53

\$141.54

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

Total Unit Cost/Hour:

Helper Cost/Hour:

\$0.00

\$67.39

Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
	(TONS)		t		fleet		
Cat D8T - 8SU	53.08	\$114.29	\$141.54	1	\$255.83	\$141.54	\$250.00
Cat 637G w/push- pull	59.59	\$174.06	\$141.54	2	\$631.20	\$283.08	\$500.00
Water Tanker, 7,000 Gal.	29.65	\$44.05	\$123.81	1	\$167.86	\$123.81	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$18.15	\$67.39	2	\$171.08	\$134.78	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$9.74	\$67.39	2	\$154.26	\$134.78	\$250.00
Cat 336D L 10'-6" Stick	32.23	\$55.49	\$123.81	1	\$179.30	\$123.81	\$250.00
				Subtotals:	\$1,559.53	\$941.80	\$1,750.00

#### **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.	\$12.96	1	\$12.96	\$12.96
		Subtotals:	\$12.96	\$12.96

# **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	PAGOSA SPRINGS	
Total one-way travel distance:	29.00	miles
Average Travel Speed:	50.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$12,639.66	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$15.03	

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.58	0.58
Return Time (Hours):	0.58	0.58
Loading Time (Hours):	1.00	NA
Unloading Time (Hours):	1.00	NA
Subtotals:	3.16	1.16

Total job time:	6.32	Hours
Total job cost:	\$12,655	