

MINERALS PROGRAM INSPECTION REPORT PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME:	MINE/PROSPECTING ID#:	MINERAL:	COUNTY:	
Dewitt Excavating	M-1983-132	Sand	Prowers	
INSPECTION TYPE:	INSPECTOR(S):	INSP. DATE:	INSP. TIME:	
Monitoring	Amy Eschberger	September 12, 2019	10:00	
OPERATOR:	OPERATOR REPRESENTATIVE:	TYPE OF OPERAT	ION:	
DeWitt Excavating, Inc.	None	110c - Construction Limited Impact		

REASON FOR INSPECTION:	BOND CALCULATION TYPE:	BOND AMOUNT:
Normal I&E Program	Complete Bond	\$5,000.00
DATE OF COMPLAINT:	POST INSP. CONTACTS:	JOINT INSP. AGENCY:
NA	None	None
WEATHER:	INSPECTOR'S SIGNATURE:	SIGNATURE DATE:
Clear	any Exchanger	October 10, 2019

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

INSPECTION TOPIC: Financial Warranty

PROBLEM: The currently held financial warranty is not adequate to reclaim the site in accordance with the approved reclamation plan. This is a failure to maintain the proper financial warranty amount to complete reclamation of the affected lands pursuant to C.R.S. 34-32.5-117(4)(b) and Rule 4.2.1(1).

CORRECTIVE ACTIONS: The Division has re-evaluated the required financial warranty for reclaiming the site in accordance with the approved reclamation plan (see enclosed cost estimate). On the corrective action date, the Division will send the operator a notice of surety increase for the amount provided in the cost estimate. The operator will have 60 days from the date on the surety increase notice to post the additional financial warranty. If the operator wishes to reduce the required amount, the operator will need to complete reclamation on site and provide evidence to the Division this was done by the corrective action date. Such evidence should include photo documentation and a detailed description of the work that was completed.

CORRECTIVE ACTION DUE DATE: November 9, 2019

OBSERVATIONS

This was a normal monitoring inspection of the DeWitt Excavating site (Permit No. M-1983-132) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division). The operator was notified of the inspection but was unable to attend. The Division discussed its observations with the operator via telephone after the inspection. The site is located approximately ½ mile south of Lamar, CO in Prowers County. Access to the site is from the south off Co Rd Ff. The affected lands are owned by Ivory Terry DeWitt and Janet A. DeWitt. The site is situated in an area of sagebrush-covered sand hills. **Photos 1-14** taken during the inspection are included with this report.

This is a 110c operation permitted for 9.9 acres to mine blow sand for construction use. The approved mining plan includes beginning mining the western side of the sand dune which is elongated north-south, and generally proceeding in an easterly direction. The sand dune will be mined down approximately 15 feet to the level of surrounding lands. No topsoil is available on the sand dune to salvage for reclamation. The post-mining land use for the site is rangeland. The approved reclamation plan includes grading all disturbed land to 3H:1V or flatter, ripping the pit floor to reduce compaction, and seeding the site with a grass and clover mixture recommended by the local Soil Conservation Service (SCS). The SCS recommended the site be mulched with either grass hay or cereal straw at 4,000 lbs/acre, manufactured mulch netting, asphalt spray, jute netting, excelsior mat, or feedlot manure that has 60% or more by weight of heavy chunks 5 inches or more in diameter at 20 tons/acre. The SCS also recommended revegetating the southern portion of the site first if possible, as the most damaging winds come from the south.

At the time of the inspection, the weather was clear, warm, and dry. A permit sign was posted at the main site entrance off Co Rd Ff. The corners of the permit boundary were marked with PVC pipes. The site was not active during the inspection. However, according to the operator, the site is active every year in accordance with its intermittent status. In fact, mined material was just hauled off site three weeks prior to the inspection. The sand pit is oriented in a north-south direction. The pit wall daylights primarily to the west, and is approximately 15 feet in height with slope gradients ranging from near vertical to 2H:1V. The Division estimates the pit wall to be approximately 1,000 feet in total length. A few material stockpiles were stored on the pit floor, and adjacent to the access road where it enters the pit.

The previously mined western portion of the permit area was fairly flat and well-vegetated with grasses, some shrubs, and mature trees (primarily cottonwoods). Vegetative cover of the pit area consisted primarily of annual weeds (e.g., kochia, wild sunflowers) and a few volunteer cottonwood trees. Several dirt bike trails were present throughout the permit area, including over portions of the pit wall and over the larger material stockpile on the pit floor. These trails were also observed in the area located north of the site (outside of the permit area). According to the Division's inspection report from April 18, 2012, the county owns a motorcycle track on the adjacent property, from which, the bikers will frequently ride across the operator's property, including the pit area. <u>Once reclamation of the pit has been initated, the operator will need to somehow restrict access to the pit to protect it from being re-disturbed by these activities.</u>

The Division estimates current disturbance requiring reclamation to be approximately 6.85 acres (see enclosed Google Earth image of site). It appears the pit has almost been mined out given its proximity to the northern and eastern permit boundaries. The Division recommends the operator be very careful during mining and reclamation activities to not disturb land outside these boundaries. Previously (on June 9, 2003), the operator requested a partial release of the permit area (Revision No. AR-1) and to expand the permit area to the north and east. The Division notified the operator (on June 10, 2003) of deficiencies in the partial release request that needed to be addressed before it could be considered filed for review. The Division also informed the operator the permit area could be expanded in one of two ways: 1) Obtain approval of a partial release, then submit an

Amendment application to increase the permit area to no more than 9.9 acres, or 2) Submit a Conversion application to convert the permit to a 112c and increase the permit area to more than 9.9 acres. The partial release request (AR-1) was eventually denied because the operator never submitted the required information for it to be considered filed for review. If the operator still wishes to expand the permit area, one of the two options listed above would need to be pursued prior to land being disturbed outside the permit area. The release request form, Amendment application, and Conversion application are all available for download from the Division's website at: https://mining.state.co.us, by clicking the "Forms" header and selecting "Mineral Mines" from the pull-down list. The release request form (Performance and Financial Warranty Release Request Form) is available under "Revisions". The Amendment application Package] is available under "Applications". The Conversion Application Permit Application Package] is available under "Application Permit Applications".

During the inspection, the Division observed an area located directly southeast of the permit area in which the operator is storing concrete rubble, asphalt rubble, slash piles, dirt piles, and old (empty) storage tanks. The Division estimates this storage area to cover approximately 5.75 acres. The Division found documentation in the permit file (November 30, 1993 inspection report) indicating these materials had been initially stored within the permit area, and the Division required the operator to either remove them from the permit area, or to revise the approved mining and reclamation plans to account for the temporary or permanent storage of these materials within the permit area. The Division also informed the operator if the materials were not removed from the permit area in a timely fashion, the operator would need to post additional bond to cover costs of removing and/or disposing of the materials. The Division never issued a bond increase for the materials as they were removed from the permit area onto a nearby portion of the operator's property. According to the operator, these materials were brought to his property from various construction jobs that were completed off site and they are not associated with the mine site in any way. Because this area is located directly adjacent to the permit area, it could potentially be interpreted as affected lands as described by Rule 1.1(3). Therefore, the operator should be careful not to utilize this offsite storage area in any way for the mining operation, including storing material mined from the pit, storing material to be used for reclamation of the pit, using the area for mine operation parking, equipment storage, or any other use associated with the mining operation.

The Division currently holds a financial warranty for the site in the amount of \$5,000.00. This amount was calculated by the Division for the initial permit issuance in 1983. After conducting this inspection, the Division re-evaluated the required financial warranty for completing reclamation at the site in accordance with the approved plan in the case where the Division must take over reclamation liability of the site (see enclosed bond estimate). The Division found the required financial warranty to be in the amount of \$14,268.00, which is \$9,268.00 more than the currently held financial warranty. Therefore, the Division is citing a problem in this report for failure to maintain the proper financial warranty amount to complete reclamation of the affected lands pursuant to C.R.S. 34-32.5-117(4)(b) and Rule 4.2.1(1). The Division will send the operator a notice of surety increase separately from this report on the corrective action date (in 30 days). The operator will have 60 days from the date of the surety increase notice to submit the additional required financial warranty. To reduce the required amount, the operator would need to complete reclamation on site and provide evidence to the Division this was done by the corrective action date. Such evidence should include photo documentation and a detailed description of the work that was completed.

This concludes the report.

Any questions or comments regarding this inspection report should be forwarded to Amy Eschberger at the Colorado Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, via telephone at 303-866-3567, ext. 8129, or via email at <u>amy.eschberger@state.co.us</u>.

PHOTOGRAPHS



Photo 1. View looking north across pit area from its southern edge. Note large material stockpile stored on pit floor (with dirt bike trail across its middle).



Photo 2. View looking south across pit area, showing large material stockpile stored on pit floor.



Photo 3. View looking east across pit area, showing small material stockpile stored on pit floor and eastern pit wall (in background) with dirt bike trails across its slope.



Photo 4. View looking north at southern pit wall.



Photo 5. View looking east at eastern pit wall with dirt bike trails across its slope.



Photo 6. View looking north at northeastern pit wall, which has more vegetative cover consisting primarily of annual weeds (e.g., kochia, wild sunflower).



Photo 7. View looking north at northern pit wall. Note vegetative cover across pit area consists primarily of annual weeds (e.g., kochia, wild sunflowers) and some volunteer cottonwood trees.



Photo 8. View looking south across permit area from its northern boundary. Pit area is located below (in background).



Photo 9. View looking north at off-site storage area located directly southeast of permit area, showing concrete rubble and dirt stockpiles stored in this area.



Photo 10. View looking south across off-site storage area located directly southeast of permit area, showing asphalt rubble stored in this area.



Photo 11. View looking south across off-site storage area located directly southeast of permit area, showing old storage tanks and dirt stockpiles stored in this area.



Photo 12. View looking north across off-site storage area located directly southeast of permit area, showing slash piles stored in this area.



Photo 13. View looking southeast across off-site storage area located directly southeast of permit area, showing concrete rubble and large dirt stockpile stored in this area.



Photo 14. View looking northeast across off-site storage area located directly southeast of permit area, showing old (empty) storage tanks stored in this area.

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

(AR) RECORDS <u>Y</u>	(FN) FINANCIAL WARRANTY PB	(RD) ROADS <u>Y</u>
(HB) HYDROLOGIC BALANCE <u>Y</u>	(BG) BACKFILL & GRADING <u>N</u>	(EX) EXPLOSIVES <u>NA</u>
(PW) PROCESSING WASTE/TAILING <u>N</u>	(SF) PROCESSING FACILITIES <u>N</u>	(TS) TOPSOIL <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE <u>N</u>	(RV) REVEGETATION N
(SM) SIGNS AND MARKERS <u>Y</u>	(SP) STORM WATER MGT PLAN Y	(RS) RECL PLAN/COMP Y
(ES) OVERBURDEN/DEV. WASTE <u>N</u>	(SC) EROSION/SEDIMENTATION Y	(ST) STIPULATIONS <u>N</u>
(AT) ACID OR TOXIC MATERIALS <u>NA</u>	(OD) OFF-SITE DAMAGE <u>N</u>	

Y = Inspected and found in compliance / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

Inspection Contact Address

Dustin DeWitt DeWitt Excavating, Inc. 7395 U.S. Hwy 50 W Lamar, CO 81052

Encls: Google Earth image of site Division's Bond Estimate

CC: Michael Cunningham, DRMS

M-1983-132 / Dewitt Excavating / Dewitt Excavating, Inc.

Red Outline = 9.9 acres = Approved Permit Area (location approximated based on permit maps) Blue Outline = 6.85 acres = Disturbed Area (as of 9/12/2019 inspection) Yellow Line = 1,000 feet = Approximate Length of Highwall Green Outline = 5.75 acres = Operator's Adjacent Storage Area (Image data from 6/12/2017)

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COST SUMMARY WORK

Т	ask description:	Cost Summary				
Site:	Dewitt Excavating	Permit Action:	9-12-2019 Insp	ection	Permit/Jol	b#: <u>M1983132</u>
<u>PI</u>	ROJECT IDENTIFIC	CATION				
	Task #: 000 Date: 10/9/2019 User: AME	State:ColoradoCounty:Prowers			Abbreviation: Filename:	None M132-000
	Agency or organi	zation name: Deen End Solu	tions			
	Agency of organi					
<u>T</u>	ASK LIST (DIRECT	<u>COSTS)</u>				
Task	Description		Form Used	Fleet Size	Task Hours	Cost
001	Grade pit wall to 3H:	1V	DOZER	1	3.58	\$635
002	Rip pit floor (2.5 acro	es)	RIPPER	1	4.00	\$798
003	Revegetate 6.85 acre	5	REVEGE	1	6.85	\$7,927
004	Mobilization/Demob	ilization	MOBILIZE	1	2.16	\$1,623
			<u>SUBTC</u>	DTALS:	16.59	\$10,983
<u>IN</u> <u>01</u>	I <mark>DIRECT COSTS</mark> VERHEAD AND PROF	I <u>T:</u>				
	Liability insura	nce: 2.02			Total =	222
	Performance bo	ond: 1.05			Total =	115
	Job superintend	ent: 10.00			$Total = \frac{5}{2}$	1 008
	110	5ht. 10.00		τοται	$10 \text{tar} = \frac{3}{5}$	2 129
		CONT	RACT AMOUNT	(direct +	O & P =	13,112
LE	GAL - ENGINEERING	- PROJECT MANAGEMENT	:			
	Financial warranty pr	ocessing (legal/related costs):	\$500		Total = \$	500
	Engineering work an	id/or contract/bid preparation:	0.00	_	Total = \$	0
	Reclamation manag	gement and/or administration:	5.00	_	\$	656
		CONTINGENCY:	0.00		Total =\$	0
			TOTAL IN	DIRECT	$\Gamma \text{ COST} = $	3,285
		ndirect) =	14,268			

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BULLDOZER WORK

mit Exeavating Permit Action: <u>9-12-2019 Inspection</u> Permit/Job#: <u>M1983132</u> PROJECT IDENTIFICATION Task #: 001 State: Colorado Date: <u>109/2019</u> County: <u>Prowers</u> Date: <u>109/2019</u> County: <u>Prowers</u> Agency or organization name: <u>Deep End Solutions</u> HOURLY EQUIPMENT COST Basic Machine: Cat D7R DS XR Series II Horsepover: 240 Basic Machine: Cat D7R DS XR Series II Horsepover: 240 Basic Machine: NA Shift Basis: <u>Iper day</u> Data Source: (CRG) Cost Breakdown: Ownership Cost/Hour: <u>\$71.52</u> NAR Ripper own. <u>\$0.00</u> Ripper own. <u>\$0.00</u> Ripper own. <u>\$0.00</u> Rober own! Cost/Hour: <u>\$177.10</u> Total Wit Cost/Hour: <u>\$177.10</u> Total Fleet Cost/Hour: <u>\$177.10</u> Source of estimated svell Cat Handbook factor: Initial Volume: <u>3.1125</u> Source of estimated svell Loady Ly DEVICTON Average push distance: <u>\$0 feet</u> Unadjusted hourly I.002.9 LCV/hr production: Materials consistency description: <u>Compacted fill or embankment 0.9</u> Average push distance 4.5 % gradient: Average ise altitude: <u>3.700 feet</u> Material weight: 2.400 Ibs/LCY Weight description: <u>Sand -Dy, losse</u> Lob Condition Correction Factor	Task description:	Grade pit wa	all to 3H:1V			
PROJECT IDENTIFICATION Task #: 001 State: Colorado Abbreviation: None Date: 109/2019 County: Prowers Abbreviation: None Mate: Adt: County: Prowers Filename: M132-001 Agency or organization name: Deep End Solutions Horsepowe: 240 Bade Type: Semi-Universal Attachment: NA Pata Source: (CRG) Cost Breakdown: Stift Basis: Iper day Ownership Cost/Hour: \$71.52 NA Operating Cost/Hour: \$17.10 Stift Provide Cost/Hour: Cost/Hour: \$177.10 Stift Provide Cost/Hour: Cost/Hour: \$177.10 Stift Provide Cost/Hour: Total Fleet Cost/Hour: \$177.10 Stift Provide Cost/Hour: Swell factor: 1.124 NA Loose volume: \$3.511 LCY Source of estimated volume: Source of estimated volume: 2.0 feet Unalysted hourly Unadjusted hourly 1.022.9 LCY/hr Material sconsistency description: Ordered estinuit	: Dewitt Excavating		Permit Action:	9-12-2019 Inspection	Permit/Jo	b#: <u>M1983132</u>
Task #: 001 State: Colorado Abbreviation: None Dat: 109/2019 Couny: Prowers Filename: M132-001 Value: AML Couny: Prowers Filename: M132-001 Agency or organization name: Deep End Solutions Modeline: M132-001 HOURLY EQUIPMENT COST Basic Machine: Cat 17R DS XR Series II Horsepower: 240 Basic Machine: Cat 77R DS XR Series II Horsepower: 240 Basic Machine: Na Shifl Basis: 1 per day Data Source: (CRG) Cost Breakdown: Villization % Ownership Cost/Hour: \$71.52 NA Operator Cost/Hour: \$100.00 NA Ripper own. \$0.00 NA Operator Cost/Hour: \$177.10 Total wit Cost/Hour: \$177.10 Source of estimated volume: \$1124 NA Source of estimated volume: Highwall 1.000 ft L x 15 ft H Source of estimated swell Cat Handbook Source of estimated volume: 1022.9 LCY/hr Indue: 3,700 feet Induested hourly Unadjusted hourly 1.022.9 LCY/hr	PROJECT IDENTIFIC	CATION				
Date: 109/2019 County: Prowers Filename: M132-001 Were: Agency or organization name: Deep End Solutions	Task #: 001	Sta	te: Colorado		Abbreviation:	None
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Cost Breakdown: Ownership Cost/Hour: $\$71.52$ NA Operating Cost/Hour: $\$64.34$ 100 Ripper own. $\$0.00$ NA Cost/Hour: $\$0.00$ NA Ripper op. Cost/Hour: $\$0.00$ 0 Operator Cost/Hour: $\$100$ NA Total unit Cost/Hour: $\$177.10$ $\$177.10$ Total Unit Cost/Hour: $\$177.10$ $\$177.10$ MATERIAL QUANTITIES $\$177.10$ $$125$ Swell factor: $$1.124$ NA Loose volume: $3,125$ $$3511 LCY$ Source of estimated volume: Highwall 1,000 ft L x 15 ft H Source of estimated swell Cat Handbook factor: Cat Handbook factor: $Cat Handbook$ Materials consistency description: Compacted fill or embankment 0.9 Average push distance: $$0$ feet Unadjusted hourly $$1,022.9 LCY/hr$ production: $$3,700$ feet Materials consistency description: Compacted fill or embankment 0.9 Average site altitude: $$3,700$ feet	Data Source: (CR	RG)		_		
Ownership Cost/Hour: $$71.52$ NA Operating Cost/Hour: $$64.34$ 100 Ripper own. $$80.00$ NA Cost/Hour: $$80.00$ NA Ripper op. Cost/Hour: $$80.00$ 0 Operator Cost/Hour: $$80.00$ 0 Operator Cost/Hour: $$$17.10$ Total unit Cost/Hour: $$$177.10$ MATERIAL QUANTITIES Initial Volume: $$$125$ Swell factor: $$$1.124$ Loose volume: $$$3,511 LCY$ Source of estimated volume: Highwall 1,000 ft L x 15 ft H Source of estimated swell Cat Handbook factor: $Cat Handbook$ HOURLY PRODUCTION Average push distance: Average push distance: $$0 feet$ Unadjusted hourly $$1,022.9 LCY/hr$ production: $$$0 reget fill or embankment 0.9$ Average site altitude: $$3,700 feet$ Materials consistency description: Compacted fill or embankment 0.9 Average site altitude: $$3,700 feet$ Material weight: $$2,400 lbs/LCY$ Weight description: <td>Cost Breakdown:</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Cost Breakdown:					
Ownership Cost/Hour: $$71.52$ NA Operating Cost/Hour: $$64.34$ 100 Ripper own. $$0.00$ NA Ripper op. Cost/Hour: $$0.00$ 0 Operator Cost/Hour: $$0.00$ 0 Operator Cost/Hour: $$177.10$ Total unit Cost/Hour: $$177.10$ Total Fleet Cost/Hour: $$177.10$ MATERIAL OUANTITIES Swell factor: $$1.25$ Swell factor: $$1.24$ Loose volume: $$3,25$ Source of estimated volume: Highwall 1,000 ft L x 15 ft H Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION I.022.9 LCY/hr Materials consistency description: Compacted fill or embankment 0.9 Average push distance: $$0$ feet Unadjusted hourly $$0$ feet Materials consistency description: Compacted fill or embankment 0.9 Average site altitude: $$3,700$ feet Material weight: $$2,400$ lbs/LCY Weight description: Sand - Dry, loose Lob Condition Correction Factor. Souree				Utilization %		
Operating Cost/Hour: $$64.34$ 100 Ripper own. $$0.00$ NA Ripper op. Cost/Hour: $$0.00$ 0 Operator Cost/Hour: $$$177.10$ Total unit Cost/Hour: $$$177.10$ Total Pleet Cost/Hour: $$$177.10$ MATERIAL OUANTITIES Initial Volume: $$$125$ Swell factor: $$$11.24$ Loose volume: $$$3,511 LCY$ Source of estimated volume: Highwall 1,000 ft L x 15 ft H Source of estimated swell Cat Handbook factor:	Ownership Cost/Hour:		\$71.52	NA		
Ripper own. Cost/Hour: \$0.00 NA Ripper op. Cost/Hour: $$0.00$ 0 Operator Cost/Hour: $$$177.10$ Total unit Cost/Hour: $$$177.10$ Total Fleet Cost/Hour: $$$177.10$ Total Fleet Cost/Hour: $$$177.10$ MATERIAL QUANTITIES Initial Volume: $$$1125$ Swell factor: 1.124 Loose volume: $$$11 LCY$ Source of estimated volume: Highwall 1,000 ft L x 15 ft H Source of estimated swell Cat Handbook factor: Cat Handbook Materials consistency description: Compacted fill or embankment 0.9 Average push distance: $$0 feet$ unadjusted hourly 1,022.9 LCY/hr production:	Operating Cost/Hour:		\$64.34	100		
Cost/Hour: 0000 0 Ripper op. Cost/Hour: \$0.00 0 Operator Cost/Hour: \$177.10 NA Total unit Cost/Hour: \$177.10 NA MATERIAL QUANTITIES Initial Volume: 3,125 Swell factor: 1.124 Loose volume: 3,511 LCY Source of estimated volume: Highwall 1,000 ft L x 15 ft H	Ripper own.		\$0.00	NA		
Ripper op. Cost/Hour: S0.00 0 Operator Cost/Hour: \$41.24 NA Total unit Cost/Hour: \$177.10 Total Fleet Cost/Hour: \$177.10 MATERIAL QUANTITIES Initial Volume: 3,125 Swell factor: 1.124 Loose volume: 3,511 LCY Source of estimated volume: Highwall 1,000 ft L x 15 ft H Source of estimated swell Cat Handbook factor: Cat Handbook HOURLY PRODUCTION 1,022.9 LCY/hr Materials consistency description: Compacted fill or embankment 0.9 Average push -5 % gradient: Average site altitude: Average site altitude: 3,700 feet Material weight: 2,400 lbs/LCY Weight description: Sand - Dry, loose lob Condition Correction Factor. Source	Cost/Hour:		\$0.00			
Operator Cost/Hour: \$41.24 NA Total unit Cost/Hour: \$177.10 Total Fleet Cost/Hour: \$177.10 MATERIAL QUANTITIES Initial Volume: 3,125 Swell factor: 1.124 Loose volume: 3,511 LCY Source of estimated volume: Highwall 1,000 ft L x 15 ft H Source of estimated swell Cat Handbook factor: Cat Handbook Materials consistency description: 50 feet Unadjusted hourly 1,022.9 LCY/hr production: -5 % gradient: 3,700 feet Material weight: 2,400 lbs/LCY Weight description: Sand - Dry, loose lob Condition Correction Factor. Source	Ripper op. Cost/Hour:		\$0.00	0		
Total unit Cost/Hour: \$177.10 Total Fleet Cost/Hour: \$177.10 MATERIAL QUANTITIES Initial Volume: 3,125 Swell factor: 1.124 Loose volume: 3,511 LCY Source of estimated volume: Highwall 1,000 ft L x 15 ft H Source of estimated swell Cat Handbook factor: Cat Handbook Materials consistency description: 50 feet 1,022.9 LCY/hr 1,022.9 LCY/hr production:	Operator Cost/Hour:		\$41.24	NA		
Source of estimated volume: Highwall 1,000 ft L x 15 ft H Source of estimated swell Cat Handbook factor: Cat Handbook HOURLY PRODUCTION Average push distance: 50 feet Unadjusted hourly 1,022.9 LCY/hr production:	MATERIAL QUANTI Initial Volume: 3,12: Swell factor: 1.124 Loose volume: 3,51	<u>TIES</u> 5 4 1 LCY				
HOURLY PRODUCTION Average push distance: 50 feet Unadjusted hourly 1,022.9 LCY/hr production: Compacted fill or embankment 0.9 Materials consistency description: Compacted fill or embankment 0.9 Average push -5 % gradient: 3,700 feet Material weight: 2,400 lbs/LCY Weight description: Sand - Dry, loose Job Condition Correction Factor Source	Source of estimated volu Source of estimated swel factor:	me: <u>High</u> l Cat H	wall 1,000 ft L x Iandbook	15 ft H		
Average push distance: 50 feet Unadjusted hourly 1,022.9 LCY/hr production:	HOURLY PRODUCT	ION				
Unadjusted hourly 1,022.9 LCY/hr production: 1,022.9 LCY/hr Materials consistency description: Compacted fill or embankment 0.9 Average push -5 % gradient: -5 % Average site altitude: 3,700 feet Material weight: 2,400 lbs/LCY Weight description: Sand - Dry, loose Job Condition Correction Factor Source	Average push distance:	50 feet				
Materials consistency description: Compacted fill or embankment 0.9 Average push gradient: -5 % Average site altitude: 3,700 feet Material weight: 2,400 lbs/LCY Weight description: Sand - Dry, loose Job Condition Correction Factor Source	Unadjusted hourly production:	1,022.9	LCY/hr			
Average push gradient: -5 % Average site altitude: 3,700 feet Material weight: 2,400 lbs/LCY Weight description: Sand - Dry, loose Job Condition Correction Factor Source	Materials consistency de	scription: <u>Co</u>	mpacted fill or er	nbankment 0.9		
gradient: Average site altitude: 3,700 feet Material weight: 2,400 lbs/LCY Weight description: Sand - Dry, loose Job Condition Correction Factor Source	Average nush	-5 %				
Average site altitude: 3,700 feet Material weight: 2,400 lbs/LCY Weight description: Sand - Dry, loose Job Condition Correction Factor Source	gradient:	570				
Material weight: 2,400 lbs/LCY Weight description: Sand - Dry, loose Job Condition Correction Factor Source	Average site altitude:	3,700 feet				
Weight description: Sand - Dry, loose Job Condition Correction Factor Source	Material weight:	2,400 lbs/LCY	[_	
Job Condition Correction Factor Source	Weight description:	Sand - Dry, lo	ose			
	Job Condition Correction H	Factor		Source		

Task # 001

Operator Skill:	1.000	(EXCL.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9575

Adjusted unit production:	979.43 LCY/hr
Adjusted fleet production:	979.43 LCY/hr

JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$0.181/LCY

Total job time:	3.58 Hours	
Total job cost:	\$635	

BULLDOZER RIPPING WORK

,	Task description:	Ri	p pit floor (2.5 a	acres)					
Site:	Dewitt Excava	iting	Pern	nit Action:	9-12-20191	Inspection	Permit/Jo	b#: <u>M19831</u>	32
<u>P</u>	ROJECT IDE	NTIFICAT	ION						
	Task #• 002		State:	Colorado		Ah	breviation.	None	
	Date: $10/$	9/2019	County:	Prowers			Filename:	M132-002	
	User: AN	IE							
	Agency of	or organizatio	n name: Dee	p End Solut	tions				-
H	IOURLY EQU	IPMENT C	OST						
	Basic N	Aachine: C	at D7R DS Seri	es II LGP		Horsepower		240	
	Ripper Atta	chment: 3	-Shank Ripper		_	Shift Basis	: 11	per day	-
	11				_	Data Source:	. (CRG)	-
C	ost Breakdown						. <u></u> ,		-
	ost Dicardowii.					Utilization %			
		Ownership (Cost/Hour:		\$75.47	NA			
		Operating (Cost/Hour:		\$70.80	100			
	Ripper	· Ownership (Cost/Hour:		\$6.80	NA			
	Rippe	er Operating (Cost/Hour:		\$4.69	100			
		Operator (Cost/Hour:		\$41.24	NA			
		Total Unit (Cost/Hour:		\$198.99				
		Total Fleet (∼ost/Hour:	¢109	00	-			
				\$170	.))				
N	ATTRIAL OI	TANTITIE	2	C - 1	4 - 14:4:	41			
<u>11</u>			<u>-</u>	Selec	ted estimating	g method: <u>Al</u>	ea		
<u>A</u>	Aternate Methods	<u>.</u>							
Seismic:	NA		Banl	k Volume:	NA	BCY		NA	
Area:	2.50	acres	Rip I	Depth (ft):	1.00	Volume	: 4,033		BCY or CCY
		Source of est	imated quantity	DRMS					
T									-
H	IOURLY PRO	DUCTION							
S	eismic:								
			Seismic Veloci	ty:	NA	feet/s	econd		
А	rea:								
		Avera	ge Ripping Dep	th:	2.45	feet/p	ass		
		Avera	ge Ripping Wid	th:	6.50	feet/p	ass		
		Averag	ge Ripping Leng	th:	450.00	feet/p	ass		
		Ave	rage Dozer Spe	ed:	88.00	feet/n	ninute		
		Averag	e Maneuver Tin	ne:	0.25	minut	tes/pass		
		Produ	ction per unit ar	ea:	0.751	acres/	hour		
Jo	ob Condition Corr	rection Factor	<u>'S</u>						
	Una	djusted Hourl	y Unit Production	on:	0.751	Acres	s/hr		
			Site Altitu	de:	3,700	feet			
			Altitude A	dj:	1.00	(CAT	HB)		
			Job Efficien	cy:	0.83	(1 shi	ft/day)		
			Net Correction	on:	0.83	multi	plier		
		Adjusted	d Hourly Unit P	roduction:	0.62	Acres/hr			
		Aujusted	riourly rieet Pi	ouucuon:	0.02	Acres/nr			
J	OB TIME ANI	<u>) COST</u>							
	Fleet size:	1	Grader(s)		Total job tin	ne:	4.01	Hours	
	Unit cost:	\$319.171	Per acre		Total job co	ost:	\$798		

REVEGETATION WORK

Task descrip	otion:	Revegetate 6.85	acres			
Site: Dewitt Excavating		Per	mit Action:	9-12-2019 Inspection	Permit/Job#	#: <u>M1983132</u>
PROJECT	IDENTIFIC	ATION				
Task #: Date: User:	003 10/9/2019 AME	State: County:	Colorado Prowers		Abbreviation: _ Filename: _	None M132-003
Age	ency or organiz	zation name: De	ep End Solut	ions		

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	121.00	pound	\$0.34	\$40.54
Triple superphosphate, 0-46-0	115.00	pound	\$0.43	\$48.88
			Total Fertilizer Materials Cost/Acre	\$89.41

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$36.15
,	Total Fertilizer Application Cost/Acre	\$36.15

TILLING

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

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Sand Dropseed	0.20	23.88	\$1.95
Sideoats Grama - El Reno	3.30	10.83	\$27.64
White Sweet Clover	1.50	8.95	\$6.19
Totals Seed Mix	5.00	43.66	\$35.78

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
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, truck, non-aquatic areas, ann. [DMG]		\$23.35
Т	Sotal Mulch Application Cost/Acre	\$93.52

NURSERY STOCK PLANTING

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

JOB TIME AND COST

Estimate *Selected Replanti	No. of Acres: ed Failure Rate: ng Work Items:	6.85 30% SEEDING	Cost /Acre: Cost /Acre*:	\$1,076.86 \$267.78
Initial Job Cost: Reseeding Job Cost: Total Job Cost: Job Hours:	\$7,376.49 \$550.29 \$7,927 6.85			

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description	on: <u>Mo</u>	bilization/Demob	ilization				
e: Dewitt Exc	avating	Permit	Action: <u>9-12-</u>	2019 Inspe	ection Pe	rmit/Job#:	M1983132
PROJECT II	DENTIFICATI	<u>ON</u>					
Task #: 0	004	State: Co	olorado		Abbrevi	ation: 1	None
Date:	10/9/2019	County: Pr	owers		File	name: 1	M132-004
User:	AME						
Agend	cy or organization	n name: Deep E	nd Solutions				
FOLIDMENT		T DIC COST					
EQUIPMEN	I IKANSPUK	I KIG COST					
					Shift basis	s: <u>1 p</u>	er day
				(Cost Data Source	e: CR	G Data
Tr	uck Tractor Desc	ription: GENE	RIC ON-HIGH	WAY TRU 400 HP	JCK TRACTOR (2ND HALF, 20	2, 6X4, DI 206)	ESEL POWERED,
Tı	uck Trailer Desc	ription: G	ENERIC FOLD	ING GOO	SENECK, DRC	P DECK	EOUIPMENT
		-ipuoni o		FRAILER	(25T, 50T, ANE) 100T)	
						/	
Cost Breakdown	<u>n:</u>						
Available Rig	g Capacities	0-25 Tons	26-50 Tons	51+	Tons		
Owners	hip Cost/Hour:	\$17.20	\$29.63	\$3	8.69		
Operat	ing Cost/Hour:	\$26.56	\$47.02	\$5	5.69		
Opera	ator Cost/Hour:	\$23.63	\$23.63	\$2	3.63		
Hel	per Cost/Hour:	\$0.00	\$23.53	\$2	3.53		
Total U	Init Cost/Hour:	\$67.39	\$123.81	\$14	41.54		
	L.			·			
NON ROADA	ABLE EQUIPN	AENT:					
Maahina	Waight/	Owner shire	Haul Dig	Floot	Houl Trip	Return Tr	in DOT Permit
Description	Weight/	Cost/hr/wit		Size		Cost/hr/ fl	eet Cost/ fleet
Description	(TONS)	Cost/nr/ unit	t	Size	fleet	2056 11/ 11	
Cat D7R DS	38.49	\$82.27	\$123.81	1	\$206.08	\$123.81	\$250.00
Series II LGP							
Drill/Broadcast	25.00	\$18.15	\$67.39	1	\$85.54	\$67.39	\$250.00

Subtotals: \$291.62 \$191.20 \$500.00

ROADABLE EQUIPMENT:

Seeder with Tractor

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x2, 1/2 T.	\$12.01	1	\$12.01	\$12.01
		Subtotals:	\$12.01	\$12.01

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	LAMAR	
Total one-way travel distance:	2.00	miles
Average Travel Speed:	50.00	mph
Total Non-Roadable Mob/Demob Cost *	\$1,621.87	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$0.96	

Transportation Cycle Time:

	Non- Roadable	Roadable
Haul Time (Hours).	0 04	0.04
Return Time (Hours):	0.04	0.04
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.08	0.08

JOB TIME AND COST

Total job time: 2.16 Hours

Total job cost: \$1,623