

## COST SUMMARY WORK

Task description: Cost Summary

Site: Valco T Pit Permit Action: September 2021 Permit/Job#: M2004043

### PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None  
Date: 9/23/2021 County: Las Animas Filename: M043-000  
User: JLE

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Grade highwall from 0H:1V to 3H:1V	DOZER	2	0.75	\$316
002	Spread 6" topsoil across 7 acres	DOZER	2	17.72	\$7,507
003	Revegetate 7 acres to rangeland	REVEGE	1	7.00	\$3,350
004	Cover crop of oats on 7 acres	REVEGE	1	7.00	\$2,484
005	Mobilization/Demobilization	MOBILIZE	1	1.43	\$2,303
<b><u>SUBTOTALS:</u></b>				<b>33.9</b>	<b>\$15,960</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$322
Performance bond:	1.05	Total =	\$168
Job superintendent:	16.95	Total =	\$1,221
Profit:	10.00	Total =	\$1,596

TOTAL O & P = \$3,307

CONTRACT AMOUNT (direct + O & P) = \$19,267

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	<u>\$500</u>	Total =	<u>\$500</u>
Engineering work and/or contract/bid preparation:	<u>4.25</u>	Total =	<u>\$819</u>
Reclamation management and/or administration:	<u>5.00</u>		<u>\$963</u>

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$5,589

**TOTAL BOND AMOUNT (direct + indirect) = \$21,549**

## BULLDOZER WORK

Task description: Grade highwall from 0H:1V to 3H:1V

Site: Valco T Pit

Permit Action: September 2021

Permit/Job#: M2004043

### PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 9/23/2021

County: Las Animas

Filename: Na

User: JLE

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS XR Series II

Horsepower: 240

Blade Type: Semi-Universal

Attachment: 3-shank ripper

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$81.02	NA
Operating Cost/Hour:	\$79.33	100
Ripper own. Cost/Hour:	\$9.32	NA
Ripper op. Cost/Hour:	\$0.89	15
Operator Cost/Hour:	\$41.30	NA
Total unit Cost/Hour:	\$211.86	
Total Fleet Cost/Hour:	<b>\$423.72</b>	

### MATERIAL QUANTITIES

Initial Volume: 947

Swell factor: 1.250

Loose volume: **1,184 LCY**

Source of estimated volume: DRMS Inspection : 970 'L x 10'H

Source of estimated swell  
factor: Cat Handbook

### HOURLY PRODUCTION

Average push distance: 50 feet

Unadjusted hourly  
production: 1,022.9 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push  
gradient: -15 %

Average site altitude: 6,020 feet

Material weight: 2,650 lbs/LCY

Weight description: Decomposed rock - 25% Rock, 75% Earth

Job Condition Correction Factor

Source

Operator Skill:	0.750	(AVG.)
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:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.7755

Adjusted unit  
production: 793.26 LCY/hr  
Adjusted fleet  
production: **1586.52** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)  
Unit cost: \$0.267/LCY

Total job time: **0.75** Hours  
Total job cost: **\$316**

## BULLDOZER WORK

Task description: Spread 6" topsoil across 7 acres

Site: Valco T Pit

Permit Action: September 2021

Permit/Job#: M2004043

### PROJECT IDENTIFICATION

Task #: 002

State: Colorado

Abbreviation: None

Date: 9/23/2021

County: Las Animas

Filename: NA

User: JLE

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS XR Series II

Horsepower: 240

Blade Type: Semi-Universal

Attachment: 3-shank ripper

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$81.02	NA
Operating Cost/Hour:	\$79.33	100
Ripper own. Cost/Hour:	\$9.32	NA
Ripper op. Cost/Hour:	\$0.89	15
Operator Cost/Hour:	\$41.30	NA
Total unit Cost/Hour:	\$211.86	
Total Fleet Cost/Hour:	<b>\$423.72</b>	

### MATERIAL QUANTITIES

Initial Volume: 5,647

Swell factor: 1.215

Loose volume: **6,861** LCY

Source of estimated volume: DRMS inspection 9/9/15: 7ac x 6" deep

Source of estimated swell  
factor: Cat Handbook

### HOURLY PRODUCTION

Average push distance: 300 feet

Unadjusted hourly  
production: 311.1 LCY/hr

Materials consistency  
description: Consolidated stockpile 1.0

Average push  
gradient: 5 %

Average site altitude: 6,020 feet

Material weight: 1,600 lbs/LCY

Weight description: Top Soil

Job Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.100	(50% SL)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6224

Adjusted unit  
production: 193.63 LCY/hr

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Adjusted fleet  
production: **387.26** LCY/hr

**JOB TIME AND COST**

Fleet size: 2 Dozer(s)

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Unit cost: \$1.094/LCY

Total job time: **17.72** Hours

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Total job cost: **\$7,507**

## REVEGETATION WORK

Task description: Revegetate 7 acres to rangeland

Site: Valco T Pit

Permit Action: September 2021

Permit/Job#: M2004043

### PROJECT IDENTIFICATION

Task #: 003

State: Colorado

Abbreviation: None

Date: 9/23/2021

County: Las Animas

Filename: Na

User: JLE

Agency or organization name: DRMS

### FERTILIZING

#### **Materials**

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

#### **Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

### TILLING

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

### SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Lovington	0.45	7.35	\$7.19
Little Bluestem - Pastura	1.75	10.45	\$23.60
Sideoats Grama - Vaughn	2.70	8.86	\$22.61
Western Wheatgrass - Barton	4.80	12.12	\$33.60
<b>Totals Seed Mix</b>	<b>9.70</b>	<b>38.78</b>	<b>\$87.00</b>

#### **Application**

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

<b>Total Seed Application Cost/Acre</b>	<b>\$232.00</b>
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### **MULCHING and MISCELLANEOUS**

#### **Materials**

<b>Description</b>	<b>Units / Acre</b>	<b>Unit</b>	<b>Cost / Unit</b>	<b>Cost /Acre</b>
			\$	\$
<b>Total Mulch Materials Cost/Acre</b>				<b>\$0.00</b>

#### **Application**

<b>Description</b>	<b>Cost /Acre</b>
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</b>

### **NURSERY STOCK PLANTING**

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

### **JOB TIME AND COST**

No. of Acres:	7	Cost /Acre:	\$319.00
Estimated Failure Rate:	50%	Cost /Acre*:	\$319.00
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	<b>\$2,233.00</b>
Reseeding Job Cost:	<b>\$1,116.50</b>
Total Job Cost:	<b>\$3,350</b>
Job Hours:	<b>7.00</b>

## REVEGETATION WORK

Task description: Cover crop of oats on 7 acres

Site: Valco T Pit

Permit Action: September 2021

Permit/Job#: M2004043

### PROJECT IDENTIFICATION

Task #: 004

State: Colorado

Abbreviation: None

Date: 9/23/2021

County: Las Animas

Filename: NA

User: JLE

Agency or organization name: DRMS

### FERTILIZING

#### Materials

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

#### Application

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

### TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.56
<b>Total Tilling Cost/Acre</b>	<b>\$114.56</b>

### SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Oats - Hytest	25.00	7.46	\$8.25
<b>Totals Seed Mix</b>	<b>25.00</b>	<b>7.46</b>	<b>\$8.25</b>

#### Application

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



## **MULCHING and MISCELLANEOUS**

### **Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
Total Mulch Materials Cost/Acre				<b>\$0.00</b>

### **Application**

Description	Cost /Acre
	\$
Total Mulch Application Cost/Acre	<b>\$0.00</b>

## **NURSERY STOCK PLANTING**

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

## **JOB TIME AND COST**

No. of Acres:	7	Cost /Acre:	\$354.81
Estimated Failure Rate:	0%	Cost /Acre*:	\$0.00
*Selected Replanting Work Items:	NONE		

Initial Job Cost:	<b>\$2,483.67</b>
Reseeding Job Cost:	<b>\$0.00</b>
Total Job Cost:	<b>\$2,484</b>
Job Hours:	<b>7.00</b>

## EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: Mobilization/Demobilization

Site: Valco T Pit Permit Action: September 2021 Permit/Job#: M2004043

### PROJECT IDENTIFICATION

Task #: 005 State: Colorado Abbreviation: None  
Date: 9/23/2021 County: Las Animas Filename: Na  
User: JLE

Agency or organization name: DRMS

### EQUIPMENT TRANSPORT RIG COST

Shift basis: 1 per day  
Cost Data Source: CRG Data

Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,  
400 HP (2ND HALF, 2006)

Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT  
TRAILER (25T, 50T, AND 100T)

#### Cost Breakdown:

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$21.28	\$37.94	\$47.67
Operating Cost/Hour:	\$26.55	\$50.48	\$56.21
Operator Cost/Hour:	\$20.54	\$20.54	\$20.54
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$68.37	\$132.49	\$147.95

### NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D7R DS XR Series II	32.01	\$81.02	\$132.49	2	\$427.02	\$264.98	\$500.00
Drill/Broadcast Seeder with Tractor	25.00	\$7.98	\$68.37	2	\$152.70	\$136.74	\$250.00

Subtotals: 

<b>\$579.72</b>	<b>\$401.72</b>	<b>\$750.00</b>
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### 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.	\$40.61	1	\$40.61	\$40.61

Subtotals: 

<b>\$40.61</b>	<b>\$40.61</b>
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**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>TRINIDAD</u>	
Total one-way travel distance:	<u>6.00</u>	miles
Average Travel Speed:	<u>55.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$2,293.85</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$8.86</u>
** one round trip, no haul rig:	

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.11	0.11
Return Time (Hours):	0.11	0.11
Loading Time (Hours):	0.25	NA
Unloading Time (Hours):	0.25	NA
Subtotals:	0.72	0.22

**JOB TIME AND COST**

Total job time:	<u>1.44</u>	Hours
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Total job cost:	<u>\$2,303</u>
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