COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY
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: Phillips Ranch Property Gravel Pit #2	**MINE/PROSPECTING ID#:** M-2000-046	**MINERAL:** Sand and gravel	**COUNTY:** Fremont
INSPECTION TYPE: Surety-Related Inspection	**INSPECTOR(S):** Timothy A. Cazier	**INSP. DATE:** June 9, 2015	**INSP. TIME:** 10:05
OPERATOR: Pioneer Sand Company, Inc.	**OPERATOR REPRESENTATIVES:** Mike Ausburn, Angela Bellantoni	**TYPE OF OPERATION:** 110c - Construction Limited Impact	

REASON FOR INSPECTION: Surety Related	**BOND CALCULATION TYPE:** Complete Bond	**BOND AMOUNT:** $26,443.00
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** None	**JOINT INSP. AGENCY:** None
WEATHER: Clear	**INSPECTOR'S SIGNATURE:**	**SIGNATURE DATE:** June 11, 2015

GENERAL INSPECTION TOPICS

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials with respect to those categories inspected. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

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

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

OBSERVATIONS

This inspection was prompted by an application received by the Division to convert the site to a 112c mine reclamation permit. The conversion application includes the adjacent Phillips Ranch Property Gravel Pit (M-1997-097). The Operator, Pioneer Sand Company, Inc was represented during the inspection by Mike Ausburn and Angela Bellantoni. The Phillips Ranch Property Gravel Pit #2 is located approximately 4 miles southeast of Florence, CO. The access road is about 1 mile north of Fremont CR 108 on Fremont CR 19 (or Siloam Road). The pit was active at the time of the inspection.

Inspection:
Permit Boundary: The public notice (**Photo 1**) and permit sign were properly posted at the time of the inspection. Mr. Ausburn pointed out the boundary markers: berms (**Photo 2**) and T-posts.

Pit & Permit Area: Mr. Ausburn pointed out the area planned for initial expansion (Phase 2) to the east of the M-2000-046 permit boundary (**Photos 3** and **4)**. He explained that the operation will leave 20 ft either side of the power line in Photo 4 untouched until the operation progresses to the point that access to the east side of the power line is required, at which time an access road will breach a portion of the power line setback.

Current Stipulations:
There are no current stipulations.

Records:
- The previous inspection was conducted 6/19/2012. A missing M-2000-046 permit sign was cited and resolved.
- The permit anniversary date is June 16. The operator is current with annual fees and reports through 2014.
- There is a $26,443 financial warranty (corporate surety) for the site.
- The post-mine land use is rangeland.

Bond:
The Division calculated a new bond for the proposed 112c operation. This bond includes reclamation of the current M-1997-097 and M-2000-046 operations (slightly less than 20 acres) plus the 20-acre disturbance proposed for Phase 2. The current operations do not have sufficient room for the proposed concurrent reclamation. As such, the Division will require a bond for the current disturbance as well as the proposed 20-acre Phase 2 disturbance.

The existing overburden stockpile is to be used as backfill in the existing pit(s) and the estimated cost to move this material is included in the new bond. Once the overburden stockpile is removed, the Operator should request a surety reduction for that portion of the bond. The Division's understanding of future overburden handing is that it will be moved to the mined out area immediately after being stripped from new areas to be mined as part of the concurrent reclamation approach. As such, no bond will be required for future overburden stockpile reclamation.

The Division is requiring a bond for 40 acres as the five-year commitment to complete reclamation in the mined out area is the same as the expected five-year mine life of Phase 2. A copy of the Division's bond calculation is attached.

Recommendations:
1. The Division recommends approval of the 112c conversion application. The Operator will be informed under separate cover.
2. The Division recommends the Operator request a surety reduction for the removal/backfill of the existing overburden stockpile once it is complete.

PHOTOGRAPHS

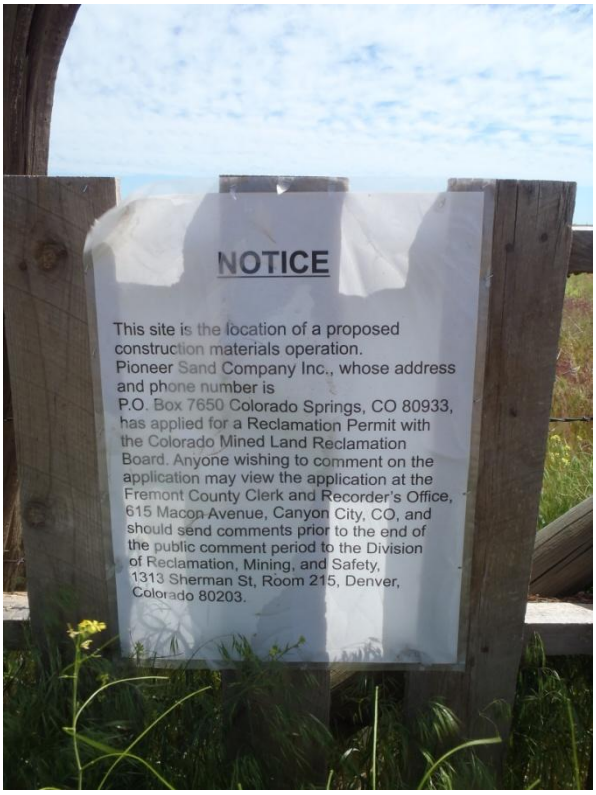

Photo 1. Required public notice (at pit entrance).

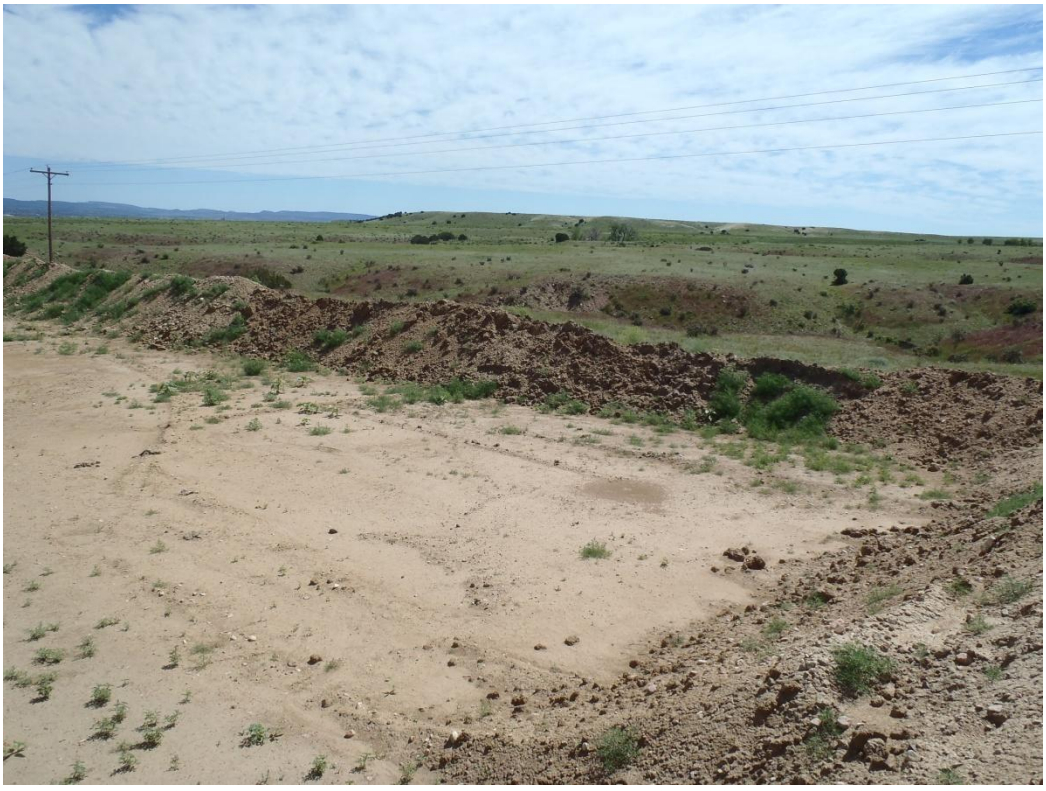
Photo 2. Berms marking existing boundary (looking NE).

PHOTOGRAPHS (cont.)

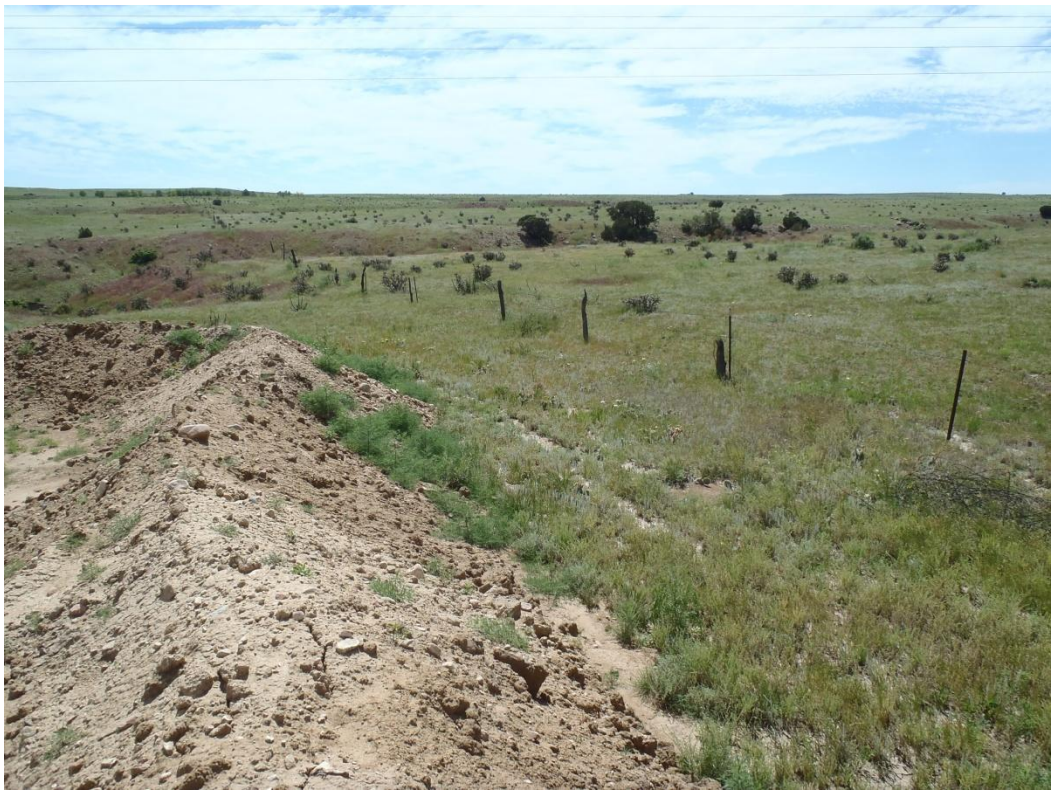

Photo 3. Area proposed for initial expansion (looking east).

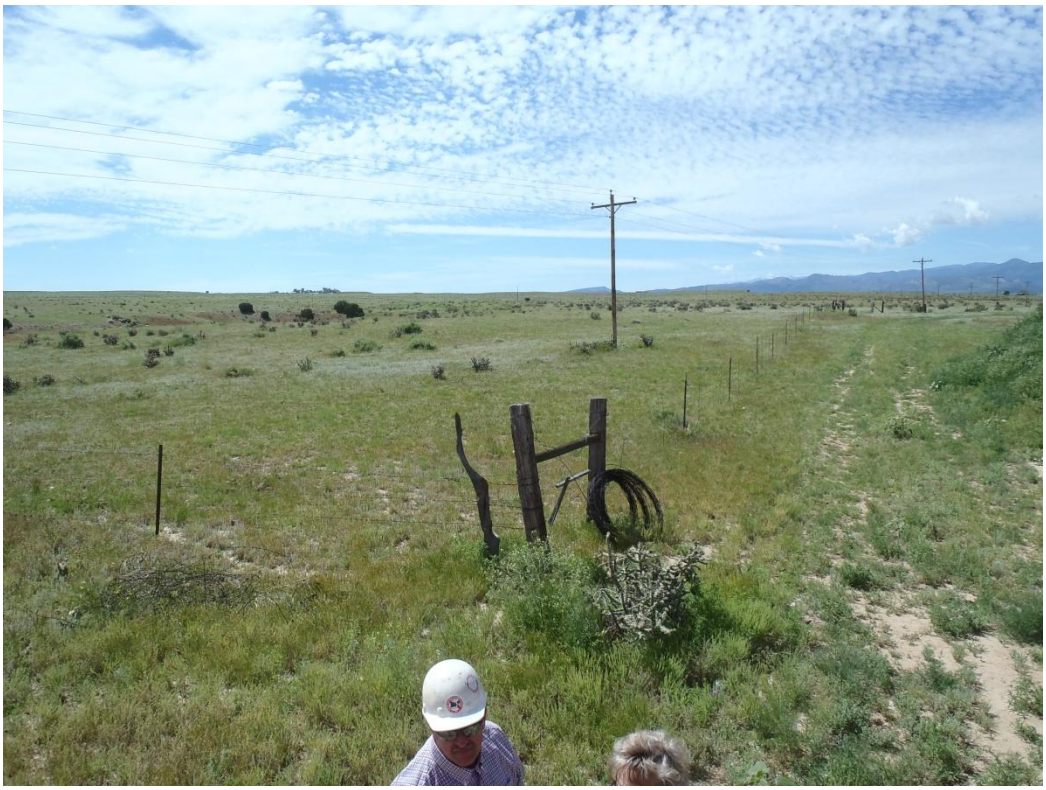

Photo 4. Area proposed for initial expansion (looking SE).

Inspection Contact Address

Mike Ausburn
Pioneer Sand Company, Inc.
5000 Northpark Drive
Colorado Springs, CO 80933

Enclosure

EC: Wally Erickson, DRMS
DRMS file
Angela Bellantoni, EAI

COST SUMMARY WORK

Task description: **CN-01 Cost Summary**

Site: **Phillips Ranch Property Gravel Pit #2** Permit Action: CN-01 Permit/Job#: M2000046

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 6/10/2015 County: Fremont Filename: M046-000
User: TC1

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
C01	Spread existing overburden pile	SCRAPER1	1	159.38	$20,579.00
C02	Replace 6 inches of topsoil (Completed Phase)	SCRAPER1	1	72.61	$9,375.00
C03	Reveg 20 acres (Completed Phase)	REVEGE	1	40.00	$21,892.00
C04	Mob/demob Equipment	MOBILIZE	1	3.50	$2,640.00
C12	Replace 6 inches of topsoil (Active Phase)	SCRAPER1	1	72.61	$9,375.00
C13	Reveg 20 acres (Active Phase)	REVEGE	1	40.00	$21,892.00
	SUBTOTALS:			**388.1**	**$85,753**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02%	Total =	$1,732.21
Performance bond:	1.05%	Total =	$900.41
Job superintendent:	194.05 hrs	Total =	$14,584.80
Profit:	10.00%	Total =	$8,575.30
		TOTAL O & P =	$25,792.72
		CONTRACT AMOUNT (direct + O & P) =	$111,545.72

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	0.00	Total =	0.00
Engineering work and/or contract/bid preparation:	0.00%	Total =	$0.00
Reclamation management and/or administration:	5.00%		$5,577.29
CONTINGENCY:	0.00	Total =	$0.00
		TOTAL INDIRECT COST =	$31,370.01
		TOTAL BOND AMOUNT (direct + indirect) =	**$117,123.01**

SCRAPER TEAM WORK

Task description: **Spread existing overburden pile**

Site: **Phillips Ranch Property** **Gravel Pit #2** Permit Action: CN-01 Permit/Job#: M2000046

PROJECT IDENTIFICATION

Task #: C01 State: Colorado Abbreviation: None
Date: 6/10/2015 County: Fremont Filename: M046-C01
User: TC1

Agency or organization name: DRMS

HOURLY EQUIPMENT

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 613C Series 2
-Dozer:	NA
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance –Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	NA	NA	NA	NA
Ownership cost/hour:	$25.15	NA	NA	NA	NA	NA
Operating cost/hour:	$70.41	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	$33.56	NA	NA	NA	NA	NA
Unit Subtotals:	$129.12	NA	NA	NA	NA	NA
Number of Units:	1	0	0	0	0	0
Group Subtotals:	Work:	$129.12	Support:	$0.00	Maint:	$0.00

Total work team cost/hour: **$129.12**

MATERIAL QUANTITIES

Initial volume: 26,000 CCY Swell factor: 1.250
Loose volume: **32,500** LCY

Source of estimated volume: Google Earth 2011 Image (*~15ft high, 1.56-ac footprint, .68-ac top*)
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

Material weight: 2,650 lbs/LCY
Material description: Decomposed rock - 25% Rock, 75% Earth
Rated Payload: 26,400 pounds
Payload Capacity: 9.96 LCY

Struck Volume: 8.90 LCY
Heaped Volume: 11.00 LCY
Average Volume: 9.95 LCY
Adjusted Capacity: **9.95** LCY

Cycle Time:

Scraper Loading Time: 0.90 Minutes
Maneuver and Spread Time: 0.70 Minutes

Job Condition Correction: Site Altitude: 5350 feet

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

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	-15.00	5.00	-10.00	1602	0.28

Haul Time: **0.28** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	15.00	5.00	20.00	555	0.55

Return Time: **0.55** minutes

Total Scraper team cycle time: **2.43** minutes
Adjusted for job conditions: 203.91 LCY/Hour
Selected Number of Scrapers: 1 Scraper(s)
Adjusted single scraper team (unit) hourly production: 203.91 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: **203.91** LCY/Hour

Unadjusted unit production/hour: 245.68 LCY/Hour
Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **159.38** Hours

Unit cost: $0.633 /LCY Total job cost: **$20,579**

SCRAPER TEAM WORK

Task description: **Replace 6 inches of topsoil (Completed Phase)**

Site: **Phillips Ranch Property** **Gravel Pit #2** Permit Action: CN-01 Permit/Job#: M2000046

PROJECT IDENTIFICATION

Task #: C02 State: Colorado Abbreviation: None
Date: 6/10/2015 County: Fremont Filename: M046-C02
User: TC1

Agency or organization name: DRMS

HOURLY EQUIPMENT

COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 613C Series 2
-Dozer:	NA
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance –Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	NA	NA	NA	NA
Ownership cost/hour:	$25.15	NA	NA	NA	NA	NA
Operating cost/hour:	$70.41	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	$33.56	NA	NA	NA	NA	NA
Unit Subtotals:	$129.12	NA	NA	NA	NA	NA
Number of Units:	1	0	0	0	0	0
Group Subtotals:	Work:	$129.12	Support:	$0.00	Maint:	$0.00

Total work team cost/hour: **$129.12**

MATERIAL QUANTITIES

Initial volume: 16,133 CCY Swell factor: 1.000
Loose volume: **16,133** LCY

Source of estimated volume: 20 acres, 6" deep
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

Material weight: 1,600 lbs/LCY
Material description: Top Soil
Rated Payload: 26,400 pounds
Payload Capacity: 16.50 LCY

Struck Volume: 8.90 LCY
Heaped Volume: 11.00 LCY
Average Volume: 9.95 LCY
Adjusted Capacity: **9.95** LCY

Cycle Time:

Scraper Loading Time: 0.90 Minutes
Maneuver and Spread Time: 0.70 Minutes

Job Condition Correction: Site Altitude: 5350 feet

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

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	350.00	-5.00	5.00	0.00	2259	0.27

Haul Time: **0.27** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	350.00	5.00	5.00	10.00	1058	0.36

Return Time: **0.36** minutes

Total Scraper team cycle time: **2.23** minutes
Adjusted for job conditions: 222.20 LCY/Hour
Selected Number of Scrapers: 1 Scraper(s)
Adjusted single scraper team (unit) hourly production: 222.20 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: **222.20** LCY/Hour

Unadjusted unit production/hour: 267.71 LCY/Hour
Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **72.61** Hours

Unit cost: $0.581 /LCY Total job cost: **$9,375**

REVEGETATION WORK

Task description: **Reveg 20 acres (Completed Phase)**

Site: **Phillips Ranch Property** **Gravel Pit #2** Permit Action: CN-01 Permit/Job#: M2000046

PROJECT IDENTIFICATION

Task #: C03 State: Colorado Abbreviation: None
Date: 6/10/2015 County: Fremont Filename: M046-C03
User: TC1

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	10.00	pound	$0.36	$3.59
Superphosphate, 0-20-0 with 12% S	20.00	pound	$0.23	$4.64
			Total Fertilizer Materials Cost/Acre	**$8.23**

Application

Description	Cost /Acre
Truck whirlwind spreader (MEANS 32 01 90.13 0140)	$22.22
Total Fertilizer Application Cost/Acre	**$22.22**

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	$88.58
Total Tilling Cost/Acre	**$88.58**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	0.75	12.24	$7.99
Indian Ricegrass - Native	1.25	4.05	$8.43
Little Bluestem - Pastura	0.70	4.18	$11.07
Sideoats Grama - El Reno	2.70	8.86	$30.35
Western Wheatgrass - Arriba	4.00	10.10	$14.72
Totals Seed Mix	9.40	39.43	**$72.55**

Application

Description	Cost /Acre
Drill seeding (DRMS Cost Data)	$88.20
Total Seed Application Cost/Acre	**$88.20**

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	$265.00	$530.00
Total Mulch Materials Cost/Acre				**$530.00**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$65.89
Total Mulch Application Cost/Acre	**$65.89**

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

No. of Acres: 20 Cost /Acre: $875.67
Estimated Failure Rate: 25% Cost /Acre*: $875.67
*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,MULCHING

Initial Job Cost: **$17,513.40**
Reseeding Job Cost: **$4,378.35**
Total Job Cost: **$21,892**
Job Hours: **40.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mob/demob Equipment**

Site: **Phillips Ranch Property** **Gravel Pit #2** Permit Action: CN-01 Permit/Job#: M2000046

PROJECT IDENTIFICATION

Task #: C04 State: Colorado Abbreviation: None
Date: 6/10/2015 County: Fremont Filename: M046-C04
User: TC1

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:	$16.63	$18.37	$22.33
Operating Cost/Hour:	$44.38	$46.13	$50.07
Operator Cost/Hour:	$27.66	$27.66	$27.66
Helper Cost/Hour:	$0.00	$25.39	$25.39
Total Unit Cost/Hour:	$88.67	$117.55	$125.45

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 613C Series 2	18.61	$29.29	$88.67	1	$117.96	$88.67	$250.00
Drill/Broadcast Seeder with Tractor	25.00	$39.59	$88.67	1	$128.26	$88.67	$250.00
Power Mulcher (Reinco M90)	6.00	$7.03	$88.67	1	$95.70	$88.67	$250.00
Subtotals:					**$341.92**	**$266.01**	**$750.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Subtotals:			**$0.00**	**$0.00**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	CANON CITY	
Total one-way travel distance:	15.00	miles
Average Travel Speed:	40.00	mph

Total Non-Roadable Mob/Demob Cost *	$2,639.79
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	$0.00
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.38	0.38
Return Time (Hours):	0.38	0.38
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.75	0.75

JOB TIME AND COST

Total job time: **3.50** Hours

Total job cost: **$2,640**

SCRAPER TEAM WORK

Task description: **Replace 6 inches of topsoil (Active Phase)**

Site: **Phillips Ranch Property** **Gravel Pit #2** Permit Action: CN-01 Permit/Job#: M2000046

PROJECT IDENTIFICATION

Task #: C12 State: Colorado Abbreviation: None
Date: 6/10/2015 County: Fremont Filename: M046-C12
User: TC1

Agency or organization name: DRMS

HOURLY EQUIPMENT

COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 613C Series 2
-Dozer:	NA
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance –Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	NA	NA	NA	NA
Ownership cost/hour:	$25.15	NA	NA	NA	NA	NA
Operating cost/hour:	$70.41	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	$33.56	NA	NA	NA	NA	NA
Unit Subtotals:	$129.12	NA	NA	NA	NA	NA
Number of Units:	1	0	0	0	0	0
Group Subtotals:	Work:	$129.12	Support:	$0.00	Maint:	$0.00

Total work team cost/hour: **$129.12**

MATERIAL QUANTITIES

Initial volume: 16,133 CCY Swell factor: 1.000
Loose volume: **16,133** LCY

Source of estimated volume: 20 acres, 6" deep
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

Material weight: 1,600 lbs/LCY
Material description: Top Soil
Rated Payload: 26,400 pounds
Payload Capacity: 16.50 LCY

Struck Volume: 8.90 LCY
Heaped Volume: 11.00 LCY
Average Volume: 9.95 LCY
Adjusted Capacity: **9.95** LCY

Cycle Time:

Scraper Loading Time: 0.90 Minutes
Maneuver and Spread Time: 0.70 Minutes

Job Condition Correction: Site Altitude: 5350 feet

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

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	350.00	-5.00	5.00	0.00	2259	0.27

Haul Time: **0.27** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	350.00	5.00	5.00	10.00	1058	0.36

Return Time: **0.36** minutes

Total Scraper team cycle time: **2.23** minutes
Adjusted for job conditions: 222.20 LCY/Hour
Selected Number of Scrapers: 1 Scraper(s)
Adjusted single scraper team (unit) hourly production: 222.20 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: **222.20** LCY/Hour

Unadjusted unit production/hour: 267.71 LCY/Hour
Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **72.61** Hours

Unit cost: $0.581 /LCY Total job cost: **$9,375**

REVEGETATION WORK

Task description: **Reveg 20 acres (Active Phase)**

Site: **Phillips Ranch Property** **Gravel Pit #2** Permit Action: CN-01 Permit/Job#: M2000046

PROJECT IDENTIFICATION

Task #: C13 State: Colorado Abbreviation: None
Date: 6/10/2015 County: Fremont Filename: M046-C13
User: TC1

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	10.00	pound	$0.36	$3.59
Superphosphate, 0-20-0 with 12% S	20.00	pound	$0.23	$4.64
			Total Fertilizer Materials Cost/Acre	**$8.23**

Application

Description	Cost /Acre
Truck whirlwind spreader (MEANS 32 01 90.13 0140)	$22.22
Total Fertilizer Application Cost/Acre	**$22.22**

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	$88.58
Total Tilling Cost/Acre	**$88.58**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	0.75	12.24	$7.99
Indian Ricegrass - Native	1.25	4.05	$8.43
Little Bluestem - Pastura	0.70	4.18	$11.07
Sideoats Grama - El Reno	2.70	8.86	$30.35
Western Wheatgrass - Arriba	4.00	10.10	$14.72
Totals Seed Mix	9.40	39.43	**$72.55**

Application

Description	Cost /Acre
Drill seeding (DRMS Cost Data)	$88.20
Total Seed Application Cost/Acre	**$88.20**

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	$265.00	$530.00
Total Mulch Materials Cost/Acre				**$530.00**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$65.89
Total Mulch Application Cost/Acre	**$65.89**

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

No. of Acres: 20 Cost /Acre: $875.67
Estimated Failure Rate: 25% Cost /Acre*: $875.67
*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,MULCHING

Initial Job Cost: **$17,513.40**
Reseeding Job Cost: **$4,378.35**
Total Job Cost: **$21,892**
Job Hours: **40.00**