

**FINAL
REMEDICATION REPORT
Ross Gulch 8 Fed Com Well #2H
Eddy County, New Mexico
2RP-1486**

LAI Project No. 16-0128-01

October 26, 2016

Prepared for:

EOG Resources, Inc.
5509 Champions Drive
Midland, Texas 797067

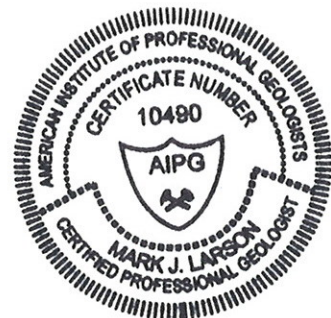
Prepared by:

Larson & Associates, Inc.
507 North Marienfeld Street, Suite 205
Midland, Texas 79701



Mark J. Larson, P.G.

Certified Professional Geologist #10490



This Page Intentionally Left Blank

Table of Contents

1.0	INTRODUCTION	1
1.1	<i>Setting</i>	1
1.2	<i>Remediation Action Levels</i>	1
1.3	<i>Soil Samples</i>	2
2.0	ADDITIONAL REMEDIATION	2
3.0	CONCLUSIONS	2

Figures

Figure 1	Topographic Map
Figure 2	Aerial Map
Figure 3	Site Map Showing Soil Sample Locations
Figure 4	Site Map Showing Final Remediation Area

Appendices

Appendix A	Laboratory Report
Appendix B	Photographs
Appendix C	Initial and Final C-141

1.0 INTRODUCTION

This report is prepared by Larson & Associates, Inc. (LAI) on behalf of EOG Resources, Inc. (EOG) for submittal to the New Mexico Oil Conservation Division (OCD) District 2 in Artesia, New Mexico. The report is submitted to confirm remediation of a crude oil spill at the Ross Gulch 8 Fed Com Well #2H (Site) located in Unit N (SE/4, SW/4), Section 8, Township 26 South, Range 31 East, in Eddy County, New Mexico. Texas. The geodetic position is North 32.0636885 and West -103.8035110. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

A crude oil spill occurred on December 6, 2012, after a separator dump valve malfunctioned and diverted liquids to the flare. EOG estimated the volume of the release at 10 barrels (bbl) of crude oil. Wind dispersed the release as a spray over the pasture covering an area about 100 yards (300 feet) by 150 yards (450 feet), according to the initial C-141. Free liquid was picked up with absorbent pads. The spill was treated with approximately 1,500 gallons of Microblaze® (4%). The initial C-141 was submitted to the OCD on December 12, 2012 and was approved on January 8, 2013. The OCD assigned the release remediation permit number 2RP-1486.

1.1 Setting

The setting is as follows:

- Elevation is approximately 3,280 feet above mean sea level (AMSL);
- Topography slopes toward the southwest;
- The nearest surface water feature is an unnamed drainage located about 350 feet west of the Site;
- The nearest fresh water well is located approximately 1,400 feet north in Unit K (NE/4, SW/4), Section 8, Township 26 South and Range 31 East;
- Depth to groundwater is reported at 275.96 feet below ground surface (bgs) according to records from the New Mexico Office of the State Engineer (NMOSE).

1.2 Remediation Action Levels (RRAL)

Remediation action levels (RRAL) were calculated for benzene, BTEX and TPH based on the following criteria established by the OCD (*Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993*):

Criteria	Result	Score
Depth-to-Groundwater	>100 Feet	0
Wellhead Protection Area	No	0
Distance to Surface Water	200 – 1,000 Horizontal Feet	10

The following RRAL apply to the release for ranking score: 10

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg
- TPH 1,000 mg/Kg

1.3 Soil Samples

On August 17 and 31, 2016, LAI personnel collected soil samples at six (6) locations (S-1 through S-6) and a background location (S-BG) southeast of the Site. The samples were collected with a stainless steel hand auger to about 6 inches bgs. On August 31, 2016, a sample was collected at S-2 from 12 to 18 inches to delineate total petroleum hydrocarbons (TPH) reported in the sample from 1 to 6 inches bgs. The samples were delivered under chain of custody and preservation to Permian Basin Environmental Laboratory (PBEL) and were analyzed for TPH including gasoline (GRO), diesel (DRO) and oil (ORO) range organics by EPA SW-846 Method 8015 and chloride by Method 300. The background sample (S-BG) was analyzed for chloride. Table 1 presents the analytical data summary. Figure 3 presents a Site drawing and sample location map. Appendix A presents the laboratory report.

Referring to Table 1, TPH was above the RRAL (1,000 mg/Kg) in samples S-1 (3,066.6 mg/kg), S-2 (11,248 mg/kg) and S-3 (3,090 mg/Kg). TPH was less than the method reporting limit (<29.4 mg/Kg) in sample S-2, 12 to 18 inches. The highest chloride concentration was reported in 0 to 6 inch sample S-1 (23.2 mg/Kg).

2.0 ADDITIONAL REMEDIATION

On October 4, 2016, personnel from SDR Enterprises (SDR) applied Oil Gator[®] oil absorbent with nutrients (nitrogen, sulphur and phosphorous) to enhance bioremediation by the indigenous soil bacteria. Oil Gator[®] was applied to an area measuring approximately 11, 487 square feet. SDR personnel tilled the area and applied water to promote bioremediation. Figure 4 presents the remediation area. Appendix B presents photographs.

3.0 CONCLUSIONS

Laboratory results demonstrate the impact is limited to the upper 6 to 12 inches of soil. Application of Oil Gator[®], tilling to 12 inches and watering will promote bioremediation of the residual hydrocarbons. The remediation area will be seeded with BLM seed blend no. 2. EOG requests no further action for this spill incident. Appendix A presents the initial and final C-141.

Tables

Table 1
Investigation Soil Sample Analytical Data Summary
EOG Resources, Inc., Ross Gulch 8 Fed Com Well #2H
Unit N (SE/4, SW/4), Section 8, Township 26 South, Range 31 East
Eddy County, New Mexico
2RP-1486

Sample	Depth (Inches)	Collection Date	Status	GRO C6-C12	DRO >C12 - C28	ORO >C28 - C36	TPH	Chloride
OCD RRAL: 1,000								
S-1	0 - 6	8/17/2016	In-Situ	70.6	2,510	486	3,066.6	23.2
S-2	0 - 6 12 - 18	8/17/2016	In-Situ	768	8,930	1,550	11,248	3.17
		8/31/2016	In-Situ	<29.4	<29.4	<29.4	<29.4	13.1
S-3	0 - 6	8/17/2016	In-Situ	146	2,430	514	3,090	<1.01
S-4	0 - 6	8/17/2016	In-Situ	<25.3	36.1	<25.3	36.1	<1.01
S-5	0 - 6	8/17/2016	In-Situ	<25.3	<25.3	<25.3	<25.3	<1.01
S-6	0 - 6	8/17/2016	In-Situ	<25.0	<25.0	<25.0	<25.0	<1.00
Background (S-BG)	6 - 12	8/17/2016	In-Situ	--	--	--	--	<1.01

Notes: analysis performed by Permian Basin Environmental Lab, Midland, Texas, by EPA SW-846 method 8015M (TPH) and 300.0 (chloride)

Depth in feet below ground surface (bgs)

mg/kg: milligrams per kilogram equivalent to parts per million (ppm)

*: OCD delineation limit

Bold and highlighted denotes analyte detected at concentration above the OCD Recommended Remediation Action Level (RRAL)

Figures

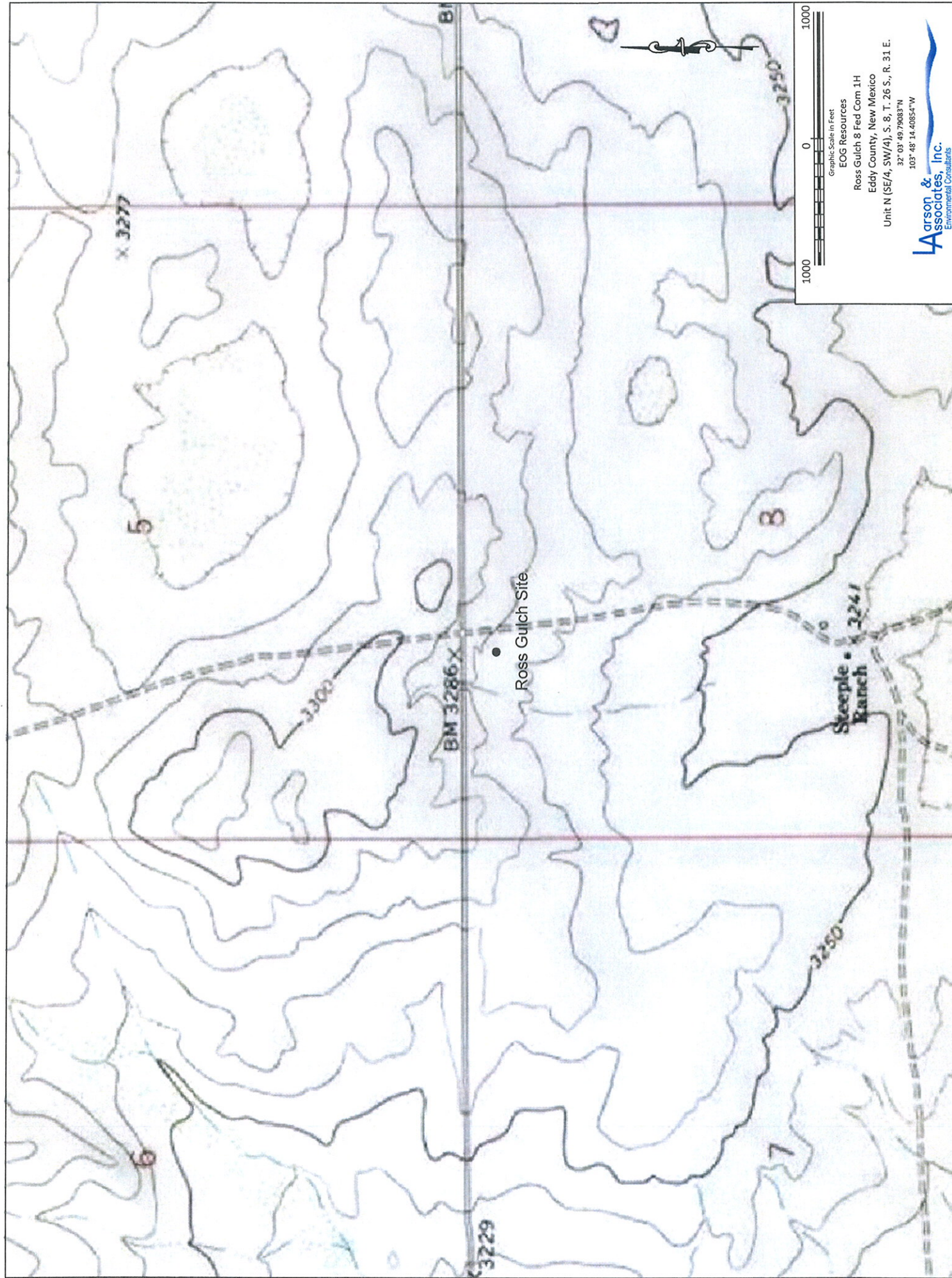


Figure 1 - Topographic Map

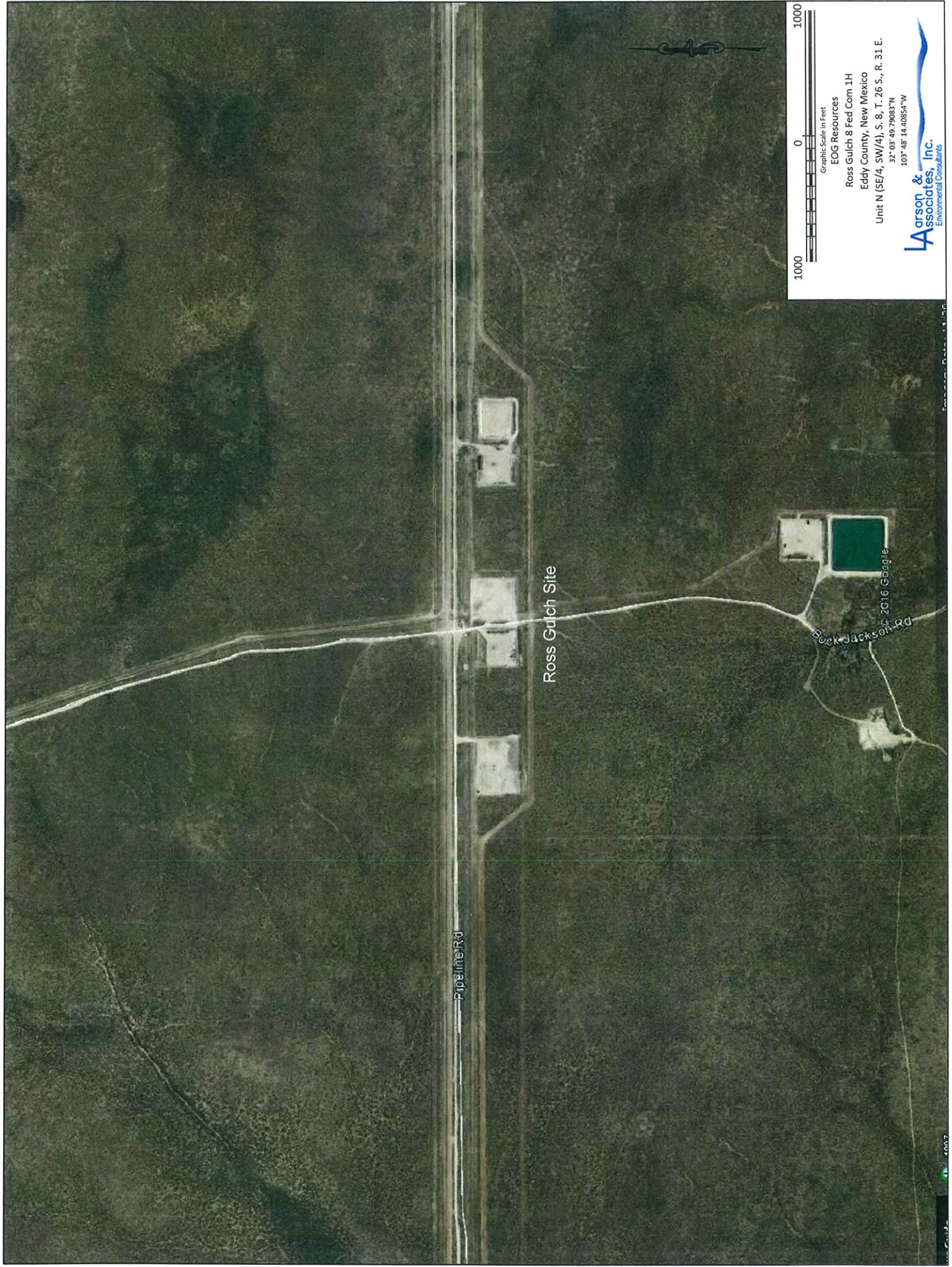
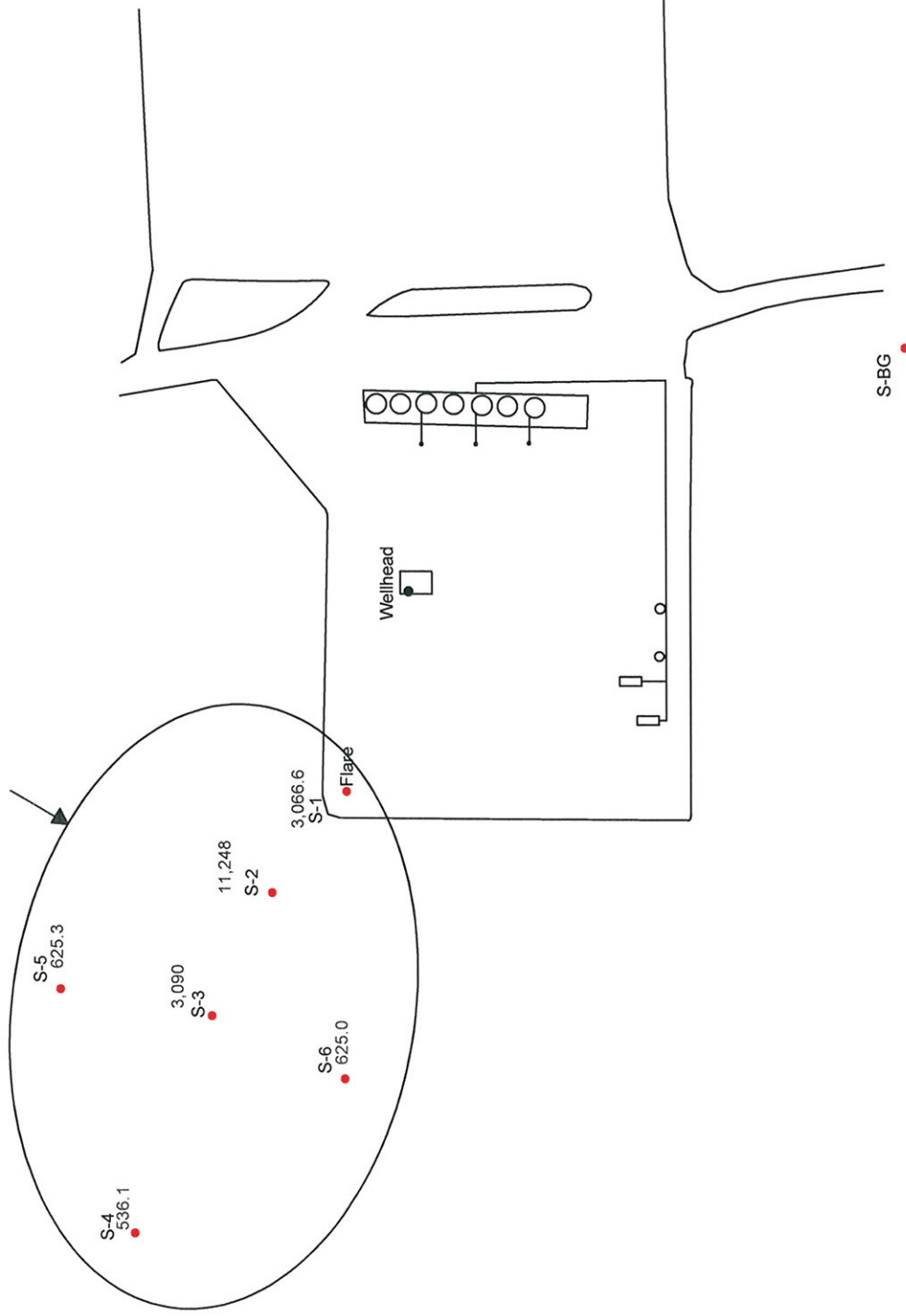


Figure 2 - Aerial Map

Approx. Spray Area



Legend

S-1

- Soil Sample Location, 0-6", and TPH Concentration, Mg/Kg, August 17, 2016

S-BG

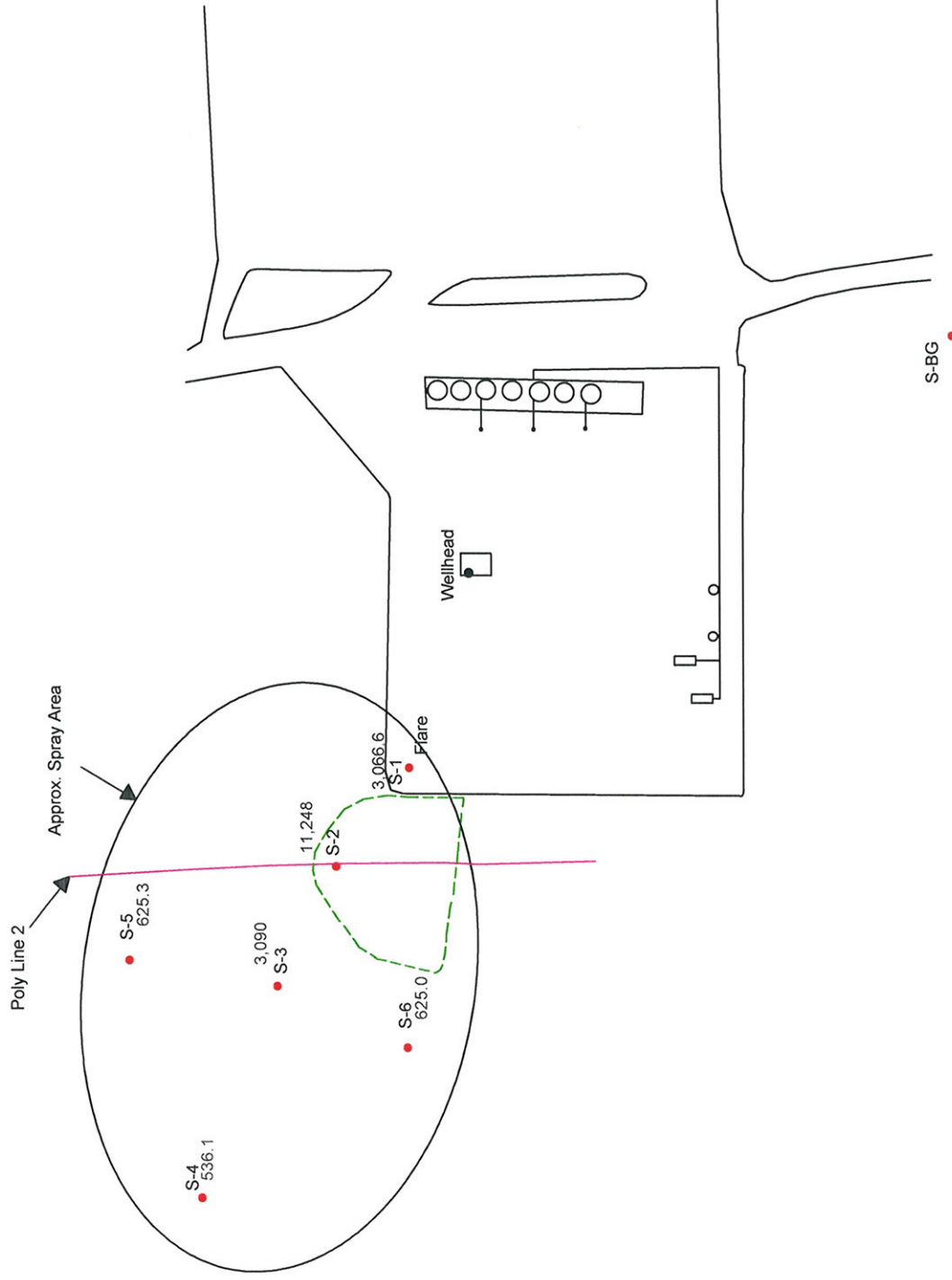
- Background Sample Location (Chloride)



EOG Resources
Ross Gulch 8 Fed Com 1H
Eddy County, New Mexico
Unit N (SE/4, SW/4), S. 8, T. 26 S., R. 31 E.
32° 03' 49.79683"N
103° 48' 14.40854"W

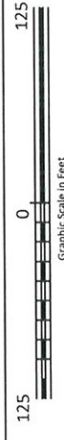
Arson & Associates, Inc.
Environmental Consultants

Figure 3 - Site Map Showing Sample Locations and TPH Concentration in Soil, August 17, 2016



Legend

- S-1 ● - Soil Sample Location, 0-6", and TPH Concentration, Mg/Kg, August 17, 2016
- - Oil Gator Application Area
- S-BG ● - Background Sample Location (Chloride)



EOG Resources
 Ross Gulch 8 Fed Com 1H
 Eddy County, New Mexico
 Unit N (SE/4, SW/4), S. 8, T. 26 S., R. 31 E.
 32° 03' 49.79083"N
 103° 48' 14.40854"W

Larson & Associates, Inc.
 Environmental Consultants

Figure 4 - Site Map Showing Oil Gator Application Area

Appendix A
Laboratory Reports

**PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701**



Analytical Report

Prepared for:

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, TX 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Location: EOG Ross Gulch
Lab Order Number: 6H18002



NELAP/TCEQ # T104704156-13-3

Report Date: 08/26/16

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-1 (0-6")	6H18002-01	Soil	08/17/16 11:45	08-17-2016 16:42
S-2 (0-6")	6H18002-02	Soil	08/17/16 11:48	08-17-2016 16:42
S-3 (0-6")	6H18002-03	Soil	08/17/16 11:50	08-17-2016 16:42
S-4 (0-6")	6H18002-04	Soil	08/17/16 11:55	08-17-2016 16:42
S-5 (0-6")	6H18002-05	Soil	08/17/16 12:00	08-17-2016 16:42
S-6 (0-6")	6H18002-06	Soil	08/17/16 12:02	08-17-2016 16:42
S-BG (6"-12")	6H18002-07	Soil	08/17/16 12:15	08-17-2016 16:42

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

S-1 (0-6")
6H18002-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	23.2	1.01	mg/kg dry	1	P6H12402	08/19/16	08/19/16	EPA 300.0	
% Moisture	1.0	0.1	%	1	P6H1803	08/18/16	08/18/16	% calculation	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	70.6	25.3	mg/kg dry	1	P6H12203	08/18/16	08/18/16	TPH 8015M	
>C12-C28	2510	25.3	mg/kg dry	1	P6H12203	08/18/16	08/18/16	TPH 8015M	
>C28-C35	486	25.3	mg/kg dry	1	P6H12203	08/18/16	08/18/16	TPH 8015M	
Surrogate: 1-Chlorooctane		81.1 %	70-130		P6H12203	08/18/16	08/18/16	TPH 8015M	
Surrogate: o-Terphenyl		94.8 %	70-130		P6H12203	08/18/16	08/18/16	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	3070	25.3	mg/kg dry	1	[CALC]	08/18/16	08/18/16	calc	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

S-2 (0-6")
6H18002-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	3.17	1.01	mg/kg dry	1	P6H2402	08/19/16	08/19/16	EPA 300.0	
% Moisture	1.0	0.1	%	1	P6H1803	08/18/16	08/18/16	% calculation	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	768	126	mg/kg dry	5	P6H2203	08/18/16	08/18/16	TPH 8015M	
>C12-C28	8930	126	mg/kg dry	5	P6H2203	08/18/16	08/18/16	TPH 8015M	
>C28-C35	1550	126	mg/kg dry	5	P6H2203	08/18/16	08/18/16	TPH 8015M	
Surrogate: 1-Chlorooctane		102 %	70-130		P6H2203	08/18/16	08/18/16	TPH 8015M	
Surrogate: o-Terphenyl		117 %	70-130		P6H2203	08/18/16	08/18/16	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	11300	126	mg/kg dry	5	[CALC]	08/18/16	08/18/16	calc	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

S-3 (0-6")
6H18002-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.01	mg/kg dry	1	P6H2402	08/19/16	08/19/16	EPA 300.0	
% Moisture	1.0	0.1	%	1	P6H1803	08/18/16	08/18/16	% calculation	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	146	126	mg/kg dry	5	P6H2203	08/18/16	08/18/16	TPH 8015M	
>C12-C28	2430	126	mg/kg dry	5	P6H2203	08/18/16	08/18/16	TPH 8015M	
>C28-C35	514	126	mg/kg dry	5	P6H2203	08/18/16	08/18/16	TPH 8015M	
Surrogate: 1-Chlorooctane		77.4 %	70-130		P6H2203	08/18/16	08/18/16	TPH 8015M	
Surrogate: o-Terphenyl		92.6 %	70-130		P6H2203	08/18/16	08/18/16	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	3090	126	mg/kg dry	5	[CALC]	08/18/16	08/18/16	calc	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

S-4 (0-6")
6H18002-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.01	mg/kg dry	1	P6H2402	08/19/16	08/19/16	EPA 300.0	
% Moisture	1.0	0.1	%	1	P6H1803	08/18/16	08/18/16	% calculation	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.3	mg/kg dry	1	P6H2203	08/18/16	08/18/16	TPH 8015M	
>C12-C28	36.1	25.3	mg/kg dry	1	P6H2203	08/18/16	08/18/16	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P6H2203	08/18/16	08/18/16	TPH 8015M	
Surrogate: 1-Chlorooctane		76.9 %	70-130		P6H2203	08/18/16	08/18/16	TPH 8015M	
Surrogate: o-Terphenyl		86.9 %	70-130		P6H2203	08/18/16	08/18/16	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	36.1	25.3	mg/kg dry	1	[CALC]	08/18/16	08/18/16	calc	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

S-5 (0-6")
6H18002-05 (Soil)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.01	mg/kg dry	1	P6H2402	08/19/16	08/19/16	EPA 300.0
% Moisture	1.0	0.1	%	1	P6H1803	08/18/16	08/18/16	% calculation

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.3	mg/kg dry	1	P6H2203	08/18/16	08/18/16	TPH 8015M
>C12-C28	ND	25.3	mg/kg dry	1	P6H2203	08/18/16	08/18/16	TPH 8015M
>C28-C35	ND	25.3	mg/kg dry	1	P6H2203	08/18/16	08/18/16	TPH 8015M
Surrogate: 1-Chlorooctane		82.7 %	70-130		P6H2203	08/18/16	08/18/16	TPH 8015M
Surrogate: o-Terphenyl		94.5 %	70-130		P6H2203	08/18/16	08/18/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	08/18/16	08/18/16	calc

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

S-6 (0-6")
6H18002-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.00	mg/kg dry	1	P6H2402	08/19/16	08/19/16	EPA 300.0	
% Moisture	ND	0.1	%	1	P6H1803	08/18/16	08/18/16	% calculation	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.0	mg/kg dry	1	P6H2203	08/18/16	08/18/16	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P6H2203	08/18/16	08/18/16	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P6H2203	08/18/16	08/18/16	TPH 8015M	
Surrogate: 1-Chlorooctane		75.3 %	70-130		P6H2203	08/18/16	08/18/16	TPH 8015M	
Surrogate: o-Terphenyl		84.1 %	70-130		P6H2203	08/18/16	08/18/16	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	08/18/16	08/18/16	calc	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

S-BG (6"-12")
6H18002-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.01	mg/kg dry	1	P6H2402	08/19/16	08/19/16	EPA 300.0	
% Moisture	1.0	0.1	%	1	P6H1803	08/18/16	08/18/16	% calculation	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.3	mg/kg dry	1	P6H2203	08/18/16	08/18/16	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P6H2203	08/18/16	08/18/16	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P6H2203	08/18/16	08/18/16	TPH 8015M	
Surrogate: 1-Chlorooctane		88.7 %	70-130		P6H2203	08/18/16	08/18/16	TPH 8015M	
Surrogate: o-Terphenyl		103 %	70-130		P6H2203	08/18/16	08/18/16	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	08/18/16	08/18/16	calc	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch P6H1803 - * DEFAULT PREP *****

Blank (P6H1803-BLK1)

Prepared & Analyzed: 08/18/16

% Moisture ND 0.1 %

Duplicate (P6H1803-DUP1)

Source: 6H17004-12

Prepared & Analyzed: 08/18/16

% Moisture 1.0 0.1 % ND 200 20

Batch P6H2402 - * DEFAULT PREP *****

Blank (P6H2402-BLK1)

Prepared & Analyzed: 08/19/16

Chloride ND 1.00 mg/kg wet

LCS (P6H2402-BS1)

Prepared & Analyzed: 08/19/16

Chloride 219 1.00 mg/kg wet 200 110 80-120

LCS Dup (P6H2402-BSD1)

Prepared & Analyzed: 08/19/16

Chloride 208 1.00 mg/kg wet 200 104 80-120 5.08 20

Duplicate (P6H2402-DUP1)

Source: 6H18002-01

Prepared & Analyzed: 08/19/16

Chloride 27.6 1.01 mg/kg dry 23.2 17.0 20

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch P6H2203 - TX 1005

Blank (P6H2203-BLK1)

Prepared & Analyzed: 08/18/16

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	73.4		"	100		73.4	70-130			
Surrogate: o-Terphenyl	41.2		"	50.0		82.3	70-130			

LCS (P6H2203-BS1)

Prepared & Analyzed: 08/18/16

C6-C12	916	25.0	mg/kg wet	1000		91.6	75-125			
>C12-C28	921	25.0	"	1000		92.1	75-125			
Surrogate: 1-Chlorooctane	111		"	100		111	70-130			
Surrogate: o-Terphenyl	56.3		"	50.0		113	70-130			

LCS Dup (P6H2203-BSD1)

Prepared & Analyzed: 08/18/16

C6-C12	789	25.0	mg/kg wet	1000		78.9	75-125	14.8	20	
>C12-C28	793	25.0	"	1000		79.3	75-125	14.9	20	
Surrogate: 1-Chlorooctane	105		"	100		105	70-130			
Surrogate: o-Terphenyl	46.8		"	50.0		93.6	70-130			

Matrix Spike (P6H2203-MS1)

Source: 6H18001-01

Prepared & Analyzed: 08/18/16

C6-C12	1050	26.0	mg/kg dry	1040	27.0	98.2	75-125			
>C12-C28	3340	26.0	"	1040	ND	321	75-125			QM-05
Surrogate: 1-Chlorooctane	128		"	104		122	70-130			
Surrogate: o-Terphenyl	52.9		"	52.1		102	70-130			

Matrix Spike Dup (P6H2203-MSD1)

Source: 6H18001-01

Prepared & Analyzed: 08/18/16

C6-C12	1050	26.0	mg/kg dry	1040	27.0	97.8	75-125	0.355	20	
>C12-C28	3480	26.0	"	1040	ND	334	75-125	3.96	20	QM-05
Surrogate: 1-Chlorooctane	125		"	104		120	70-130			
Surrogate: o-Terphenyl	52.9		"	52.1		102	70-130			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

Notes and Definitions

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:



Date:

8/26/2016

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

**PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701**



Analytical Report

Prepared for:

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, TX 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Location: New Mexico
Lab Order Number: 6I01001



NELAP/TCEQ # T104704156-13-3

Report Date: 09/08/16

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-2 (1-1.5)	6101001-01	Soil	08/31/16 11:15	09-01-2016 08:20

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

S-2 (1-1.5)
6101001-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	13.1	1.18	mg/kg dry	1	P610602	09/05/16	09/05/16	EPA 300.0	
% Moisture	15.0	0.1	%	1	P610701	09/07/16	09/07/16	% calculation	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	29.4	mg/kg dry	1	P610205	09/01/16	09/01/16	TPH 8015M	
>C12-C28	ND	29.4	mg/kg dry	1	P610205	09/01/16	09/01/16	TPH 8015M	
>C28-C35	ND	29.4	mg/kg dry	1	P610205	09/01/16	09/01/16	TPH 8015M	
Surrogate: 1-Chlorooctane		93.0 %	70-130		P610205	09/01/16	09/01/16	TPH 8015M	
Surrogate: o-Terphenyl		114 %	70-130		P610205	09/01/16	09/01/16	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	29.4	mg/kg dry	1	[CALC]	09/01/16	09/01/16	calc	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch P6I0602 - * DEFAULT PREP *****

Blank (P6I0602-BLK1)

Prepared & Analyzed: 09/05/16

Chloride ND 1.00 mg/kg wet

LCS (P6I0602-BS1)

Prepared & Analyzed: 09/05/16

Chloride 815 1.00 mg/kg wet 800 102 80-120

LCS Dup (P6I0602-BSD1)

Prepared & Analyzed: 09/05/16

Chloride 817 1.00 mg/kg wet 800 102 80-120 0.200 20

Duplicate (P6I0602-DUP1)

Source: 6I02003-01

Prepared: 09/05/16 Analyzed: 09/06/16

Chloride 1990 5.21 mg/kg dry 2000 0.271 20

Duplicate (P6I0602-DUP2)

Source: 6I01002-09

Prepared & Analyzed: 09/05/16

Chloride 563 1.12 mg/kg dry 567 0.742 20

Matrix Spike (P6I0602-MS1)

Source: 6I02003-01

Prepared & Analyzed: 09/05/16

Chloride 4300 5.21 mg/kg dry 2080 2000 110 80-120

Batch P6I0701 - * DEFAULT PREP *****

Blank (P6I0701-BLK1)

Prepared & Analyzed: 09/07/16

% Moisture ND 0.1 %

Duplicate (P6I0701-DUP1)

Source: 6I01003-14

Prepared & Analyzed: 09/07/16

% Moisture 10.0 0.1 % 10.0 0.00 20

Duplicate (P6I0701-DUP2)

Source: 6H31002-01

Prepared & Analyzed: 09/07/16

% Moisture 7.0 0.1 % 8.0 13.3 20

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch P610701 - * DEFAULT PREP *****

Duplicate (P610701-DUP3)

Source: 6102002-15

Prepared & Analyzed: 09/07/16

% Moisture	9.0	0.1	%		10.0			10.5	20	
------------	-----	-----	---	--	------	--	--	------	----	--

Duplicate (P610701-DUP4)

Source: 6106001-09

Prepared & Analyzed: 09/07/16

% Moisture	4.0	0.1	%		4.0			0.00	20	
------------	-----	-----	---	--	-----	--	--	------	----	--

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch P610205 - TX 1005

Blank (P610205-BLK1)

Prepared & Analyzed: 09/01/16

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	114		"	100		114	70-130			
Surrogate: o-Terphenyl	66.8		"	50.0		134	70-130			S-GC

LCS (P610205-BS1)

Prepared & Analyzed: 09/01/16

C6-C12	755	25.0	mg/kg wet	1000		75.5	75-125			
>C12-C28	784	25.0	"	1000		78.4	75-125			
Surrogate: 1-Chlorooctane	94.5		"	100		94.5	70-130			
Surrogate: o-Terphenyl	48.2		"	50.0		96.5	70-130			

LCS Dup (P610205-BSD1)

Prepared & Analyzed: 09/01/16

C6-C12	774	25.0	mg/kg wet	1000		77.4	75-125	2.49	20	
>C12-C28	817	25.0	"	1000		81.7	75-125	4.12	20	
Surrogate: 1-Chlorooctane	116		"	100		116	70-130			
Surrogate: o-Terphenyl	54.2		"	50.0		108	70-130			

Matrix Spike (P610205-MS1)

Source: 6101002-01

Prepared & Analyzed: 09/01/16

C6-C12	1020	28.7	mg/kg dry	1150	24.7	86.6	75-125			
>C12-C28	1370	28.7	"	1150	ND	119	75-125			
Surrogate: 1-Chlorooctane	161		"	138		117	70-130			
Surrogate: o-Terphenyl	83.8		"	69.0		121	70-130			

Matrix Spike Dup (P610205-MSD1)

Source: 6101002-01

Prepared & Analyzed: 09/01/16

C6-C12	1070	28.7	mg/kg dry	1150	24.7	91.1	75-125	5.10	20	
>C12-C28	1090	28.7	"	1150	ND	94.7	75-125	22.9	20	QM-05
Surrogate: 1-Chlorooctane	166		"	138		120	70-130			
Surrogate: o-Terphenyl	87.9		"	69.0		127	70-130			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: EOG Ross Gulch
Project Number: 16-0128-01
Project Manager: Mark Larson

Fax: (432) 687-0456

Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis


RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:



Date:

9/8/2016

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Varson & Associates, Inc.
Environmental Consultants

507 N. Marientfeld, Ste. 200
Midland, TX 79701
432-687-0901

Date Reported to:

DATE: 8/31/2016 PAGE: 1 OF 1
PO #: LAB WORK ORDER # 61061001
PROJECT LOCATION OR NAME: 16-0135-02 EOG Pass
LAI PROJECT #: 16-0135-02 COLLECTOR: Travis L...

CHAIN-OF-CUSTODY

Page 8 of 8

TRRP report?
☐ Yes ☒ No

W=Water
A=Air
P=Paint
SL=Sludge
OT=Other

TIME ZONE:
Time zone/State:

MM

Field
Sample I.D.

Lab #

Date

Time

Matrix

of Containers

HCl
HNO₃
H₂SO₄ ☐ NaOH ☐

ICE
UNPRESERVED

ANALYSES

BTEX ☐ MTBE ☐

TPH 418-1 ☐ TPH 1005 ☐ TPH 1006 ☐

GASOLINE MOD 8015 ☒ ACSC

DIESEL - MOD 8015 ☒

VOC 8280 ☐

SVOC 8270 ☐

8081 PESTICIDES ☐

8082 PESTICIDES ☐

8151 HERBICIDES ☐

PAH 8270 ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

TCAP VOC ☐

Appendix B

Photographs



Location Sign



Crude Oil Release Area Prior to Remediation, Viewing South, July 25, 2016



Crude Oil Release Area Post Remediation, Viewing South, October 5, 2016

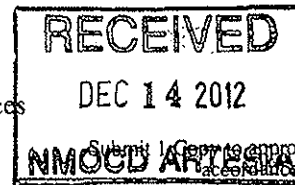
Appendix C

Initial and Final C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505



Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

njm 1300851642

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: EOG Resources, Inc. 7377	Contact: James Fischer
Address: 4000 N. Big Spring Ste 500 Midland, TX 79705	Telephone No. 432-686-3747
Facility Name: Ross Gulch 8 Fed Com 1H	Facility Type: Oil and Gas tank battery
Surface Owner: BLM	Mineral Owner: BLM
API No. 30-015-39171-00-X1	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	8	26 South	31 East	330'	South	1540'	West	Eddy

Latitude 32.0636885 Longitude 103.8035110

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 10 BBLS	Volume Recovered: 0 BBLS
Source of Release: Tank Battery	Date and Hour of Occurrence: 12/05/2012 - 0300	Date and Hour of Discovery: 12/06/2012 - 0620
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Geoffrey R. Leking	
By Whom? James Fischer	Date and Hour: 12/12/2012 - 10:30	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Lost pressure to separator dump and liquid went through the flare, spraying the pasture west of location. Dump valve will be adjusted.

Describe Area Affected and Cleanup Action Taken.*

Oil sprayed an area in pasture covering approx. 100 yards x 150 yards. Spot mopped the most impacted area with absorbent pads. Bio-remediated in place the entire affected area with approx. 1,500 gallons of 4% Microblaze/Water mixture. This method was approved by BLM and soil samples will be taken to insure proper levels of TPH are reached.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCN rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCN marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCN acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: James Fischer	Approved by Environmental Specialist:	Signed By <i>M/L B...</i>
Title: Environmental Manager	Approval Date: JAN 08 2013	Expiration Date:
E-mail Address: James.Fischer@eogresources.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 12/12/2012 Phone: 432-686-3747	Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:	

* Attach Additional Sheets If Necessary

February 8, 2013

2RP-1486

Bratcher, Mike, EMNRD

From: Leking, Geoffrey R, EMNRD
Sent: Friday, December 14, 2012 10:39 AM
To: Bratcher, Mike, EMNRD
Cc: James_Fischer@eogresources.com
Subject: FW: Ross Gulch 8 FC #1H oil spill
Attachments: Ross Gulch 8 FC #1H C-141.PDF

Mike

James sent this to me. Thanks.

Geoffrey Leking
Environmental Specialist
NMOCD-Hobbs
1625 N. French Drive
Hobbs, NM 88240
Office: (575) 393-6161 Ext. 113
Cell: (575) 399-2990
email: geoffreyr.leting@state.nm.us

From: James_Fischer@eogresources.com [mailto:James_Fischer@eogresources.com]
Sent: Wednesday, December 12, 2012 12:10 PM
To: Leking, Geoffrey R, EMNRD
Subject: Ross Gulch 8 FC #1H oil spill

Mr. Leking,
Here is the C-141 for a spill we had in Eddy county that I left you a message about this morning. The original is in the mail (certified). I apologize for the delay in reporting, the person that reported it to the BLM didn't know we needed to report to OCD as well.

Thanks,
James

James Fischer
Environmental Manager
EOG Resources, Inc. | Midland Division
Office: 432-686-3747 | Cell: 432-270-1170

Bratcher, Mike, EMNRD

From: Bratcher, Mike, EMNRD
Sent: Friday, December 14, 2012 12:47 PM
To: Leking, Geoffrey R, EMNRD
Cc: James_Fischer@eogresources.com
Subject: RE: Ross Gulch 8 FC #1H oil spill

Got it – Thanks

James,

Please copy me on anything sent to BLM.

Thank you,

Mike Bratcher
NMOCD District 2
811 S. First Street
Artesia, NM 88210
O: 575-748-1283 X108
C: 575-626-0857
F: 575-748-9720

From: Leking, Geoffrey R, EMNRD
Sent: Friday, December 14, 2012 10:39 AM
To: Bratcher, Mike, EMNRD
Cc: James_Fischer@eogresources.com
Subject: FW: Ross Gulch 8 FC #1H oil spill

Mike

James sent this to me. Thanks.

Geoffrey Leking
Environmental Specialist
NMOCD-Hobbs
1625 N. French Drive
Hobbs, NM 88240
Office: (575) 393-6161 Ext. 113
Cell: (575) 399-2990
email: geoffreyr.leking@state.nm.us

From: James_Fischer@eogresources.com [mailto:James_Fischer@eogresources.com]
Sent: Wednesday, December 12, 2012 12:10 PM
To: Leking, Geoffrey R, EMNRD
Subject: Ross Gulch 8 FC #1H oil spill

Mr. Leking,
Here is the C-141 for a spill we had in Eddy county that I left you a message about this morning. The original is in the

mail (certified). I apologize for the delay in reporting, the person that reported it to the BLM didn't know we needed to report to OCD as well.

Thanks,
James

James Fischer
Environmental Manager
EOG Resources, Inc. | Midland Division
Office: 432-686-3747 | Cell: 432-270-1170

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

2RP-2186
State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

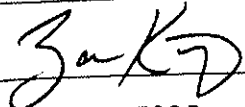
Name of Company: EOG Resources, Inc.	Contact: Zane Kurtz
Address: 5509 Champions Dr., Midland, TX 79705	Telephone No.: 432-425-2023
Facility Name: Ross Gulch 8 Fed Com #2H	Facility Type: Tank Battery
Surface Owner: BLM	Mineral Owner: BLM
API No.: 30-015-39171-00-X1	

LOCATION OF RELEASE

Unit Letter N	Section 8	Township 26S	Range 31E	Feet from the 330	North/South Line South	Feet from the 1540	East/West Line West	County Eddy
------------------	--------------	-----------------	--------------	----------------------	---------------------------	-----------------------	------------------------	----------------

Latitude 32.0636885° Longitude -103.8035110°

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 10 bbl	Volume Recovered: 0 bbl
Source of Release: Malfunction of dump valve at separator	Date and Hour of Occurrence: 12-05-2012, 3:00PM	Date and Hour of Discovery: 12-06-2012, 10:30AM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Geoffrey Leking (OCD District 1)	
By Whom?	Date and Hour:	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken. *Initial C-141 states - lost pressure to separator dump and liquid went through the flare, spraying the pasture west of location. Dump valve will be adjusted.		
Describe Area Affected and Cleanup Action Taken. * Initial C-141 states - oil sprayed an area in pasture approx. 100 yards x 150 yards. Spot mopped the most impacted area with absorbent pads. Bio-remediated in place the entire affected area with approx. 1,500 gallons of 4% Microblaze/Water mixture. This method was approved by BLM and soil samples will be taken to ensure proper levels of TPH are reached. On August 17, 2016, LAI personnel collected soil samples at 6 locations (S-1 - S-6) from 0 to 6 inches and 12 to 18 inches to confirm remediation. TPH exceeded RRAL (1,000 mg/Kg) in 3 samples (S-1 - S-3) with TPH between 3,066.6 and 11,248 mg/Kg in samples from 0 to 6 inches. Highest chloride was 23.2 mg/Kg in sample S-1, 0 to 6 inches. On October 4, 2016, SDR Enterprises treated area with Oil Gator®, tilled and watered. Area will be seed to BLM seed blend No. 2. No further action is requested for this spill event.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOC marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOC acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: 		OIL CONSERVATION DIVISION
Printed Name: Zane Kurtz, EOG Resources, Inc.		Approved by Environmental Specialist:
Title: Sr. Environmental Representative		Approval Date:
E-mail Address: zane_kurtz@eogresources.com		Expiration Date:
Date: 10-26-2016 Phone: 432-556-8074		Conditions of Approval:
		Attached <input type="checkbox"/>

* Attach Additional Sheets If Necessary

2RP-1486