1RP-3421
CONFIRMATION SAMPLE REPORT
Falcon 25 Fed Well #1H
Produced Water Release
Lea County, New Mexico

LAI Project No. 16-0128-07

September 14, 2016

Prepared for:

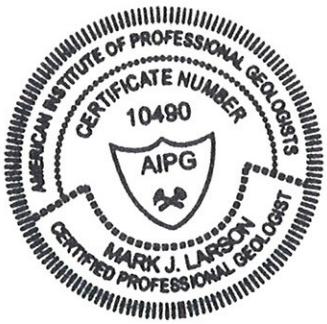
EOG Resources, Inc.
5509 Champions Drive
Midland, Texas 797067

Prepared by:

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

Mark J. Larson, P.G.

Certified Professional Geologist #10490



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Introduction

This report presents laboratory results of soil samples to confirm remediation of a produced water release from a poly line at the Falcon 25 Fed Well #1H (Site). The Site is located in Unit C (NW/4, NE/4), Section 25, Township 24 South and Range 33 East in Lea County, New Mexico. The geodetic position is North 32.1949° and West -103.5274°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

Background

On May 8, 2014, EOG Resources, Inc. (EOG) reported a release involving approximately 720 barrels (bbl) of produced water due to failure of a poly line. The release occurred inside the lined containment however some fluid flowed outside the containment and off the location. Approximately 620 bbls was recovered. The initial C-141 was submitted to the New Mexico Oil Conservation Division (OCD) District 1 on May 12, 2014 and assigned remediation permit number 1RP-3421. The C-141 states that EOG proposed to collect soil samples for chloride and total petroleum hydrocarbon analysis. The impacted area would be excavated, stockpiled on poly-plastic and transported to an approved disposal facility. Clean material will be backfilled within the excavated area to normal grade. The approved C-141 required remediation to be completed by January 12, 2015. No final report was submitted to OCD to confirm remediation was performed.

Setting

The setting is as follows:

- Elevation is approximately 3,570 feet above mean sea level (AMSL);
- Topography slopes toward the east and southeast;
- A topographically low area is located about 2,500 feet east of the Site;
- Groundwater is estimated at approximately 75 feet below ground surface (bgs);
- The nearest fresh water well is approximately 2,500 feet east of the Site in Unit A (NE/4, NE/4), Section 25, Township 24 South and Range 33 East;
- Depth to groundwater is reported at 17.56 feet bgs.

Remediation Action Levels

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	>50 Feet	10
Wellhead Protection Area	No	0
Distance to Surface Water	> 1,000 Horizontal Feet	0

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

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

Soil Samples and Laboratory Analysis

During an initial Site visit LAI personnel observed an area where a produced water spill had occurred near the southwest corner of the containment. The spill flowed off the location towards the southeast. LAA personnel observed a soil stockpile near the northwest corner of the location.

On August 30, 2016, LAI personnel used a direct push (Terraprobe®) rig to collect soil samples at eight (8) locations (DP-1 through DP-8) and background (DP-BG) west of the Site. Two (2) composite samples (Comp-1 and Comp-2) consisting of five (5) discrete samples were collected from a soil pile located near the northwest corner of the location. Trace Analysis, Inc., located in Midland and Lubbock, Texas, analyzed the samples for total petroleum hydrocarbons (TPH) including gasoline (GRO), diesel (DRO) and oil (ORO) range organics by EPA SW-846 Method 8015 and chloride by method 300. Table 1 presents the analytical data summary. Figure 3 presents a Site drawing and sample locations. Appendix A presents the laboratory report. Appendix B presents photographs.

Referring to Table 1, the maximum TPH concentration was 35.3 milligrams per kilogram (mg/Kg) in sample DP-3, 0 to 2 feet and less than the method reporting limit (RL) in the remaining samples. Chloride was less than 250 mg/Kg except in samples DP-8, 0 to 2 feet (567 mg/Kg) and background (940 mg/Kg). TPH and chloride were below the RL in the soil pile composite samples.

Conclusions

The laboratory results confirm TPH is below the recommended remediation action levels (RRAL) and chloride is less the OCD recommended delineation level of 250 mg/Kg except DP-8, 0 to 2 feet (567 mg/Kg). EOG requests no further action for this spill incident. Appendix C presents the initial and final C-141.

Tables

Table 1
Investigation Soil Sample Analytical Data Summary
EOG Resources, Inc., Falcon 25 Fed #1H
Unit C (NE/4, NW/4), Section 25, Township 24 South, Range 33 East
Lea County, New Mexico
1RP-3421

Sample	Depth (Feet)	Collection Date	Status	GRO C6-C12	DRO >C12 - C28	ORO >C28 - C36	TPH	Chloride
OCD RRAL:							**100**	***250**
DP-1	0 - 2	8/30/2016	In-Situ	<28.7	<28.7	<28.7	<28.7	14.1
DP-2	0 - 2	8/30/2016	In-Situ	<28.1	<28.1	<28.1	<28.1	6.64
DP-3	0 - 2	8/30/2016	In-Situ	<26.6	<26.6	35.2	**35.3**	53.5
DP-4	0 - 2	8/30/2016	In-Situ	<29.4	<29.4	<29.4	<29.4	17.4
	2 - 4	8/30/2016	In-Situ	--	--	--	--	48.0
DP-5	0 - 2	8/30/2016	In-Situ	<26.9	<26.9	<26.9	<26.9	3.90
DP-6	0 - 2	8/30/2016	In-Situ	<27.5	<27.5	<27.5	<27.5	21.1
DP-7	0 - 2	8/30/2016	In-Situ	<27.5	<27.5	<27.5	<27.5	<1.10
DP-8	0 - 2	8/30/2016	In-Situ	<28.1	<28.1	<28.1	<28.1	567
DP-BG	0 - 2	8/23/2016	In-Situ	--	--	--	--	940
Soil Pile Samples								
Comp-1	--	8/30/2016	Excavated	<27.8	<27.8	<27.8	<27.8	<1.11
Comp-2	--	8/30/2016	Excavated	<28.4	<28.4	<28.4	<28.4	<1.14

Notes: analysis performed by Permian Basin Environmental Lab, Midland, Texas, by EPA SW-846 method 8015M (TPH) and 300.0 (chloride)
Depth feet below ground surface (bgs)
mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)
*: OCD delineation limit

Figures

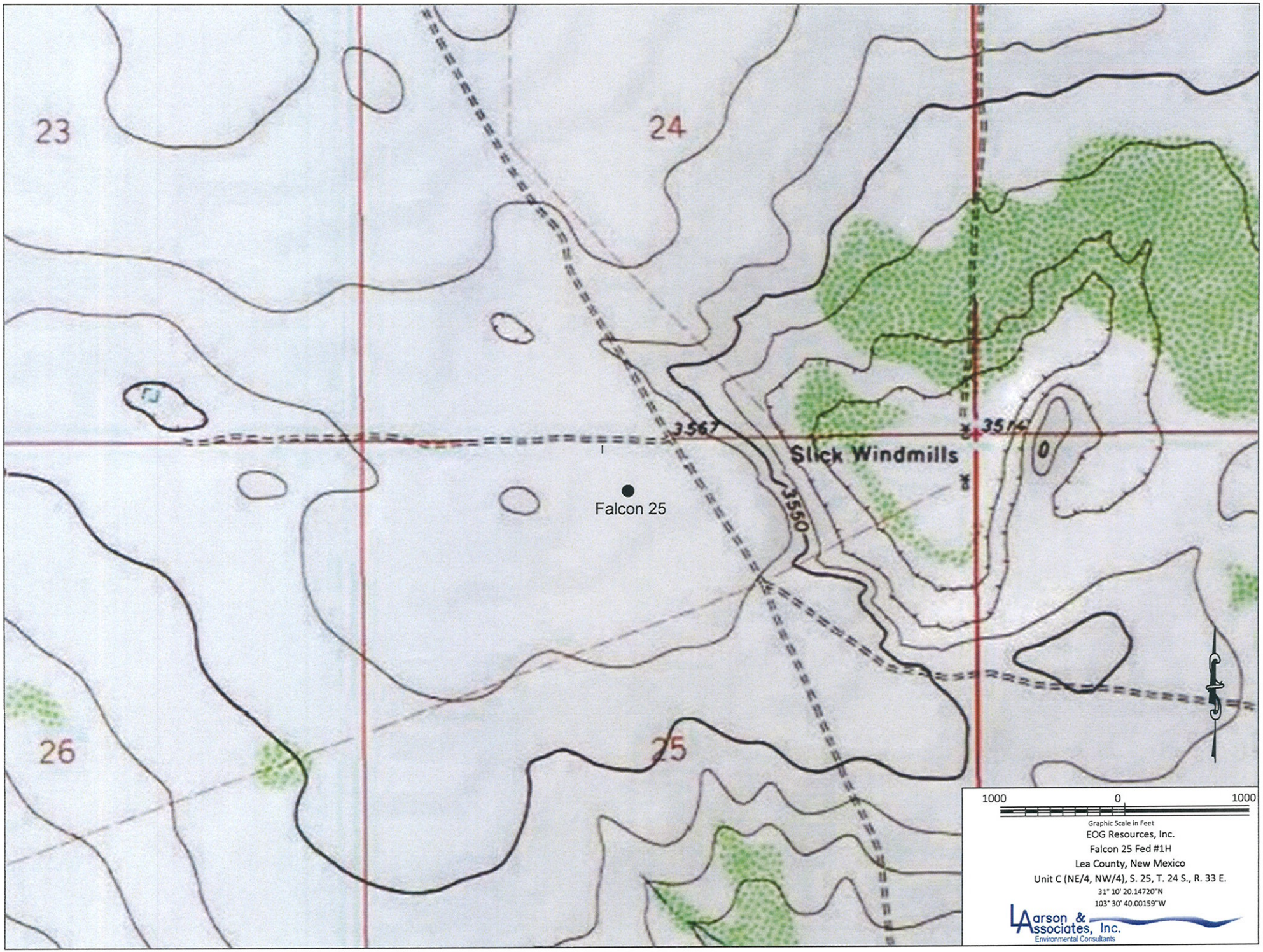

Figure 1 - Topographic Map

Figure 2 - Aerial Map

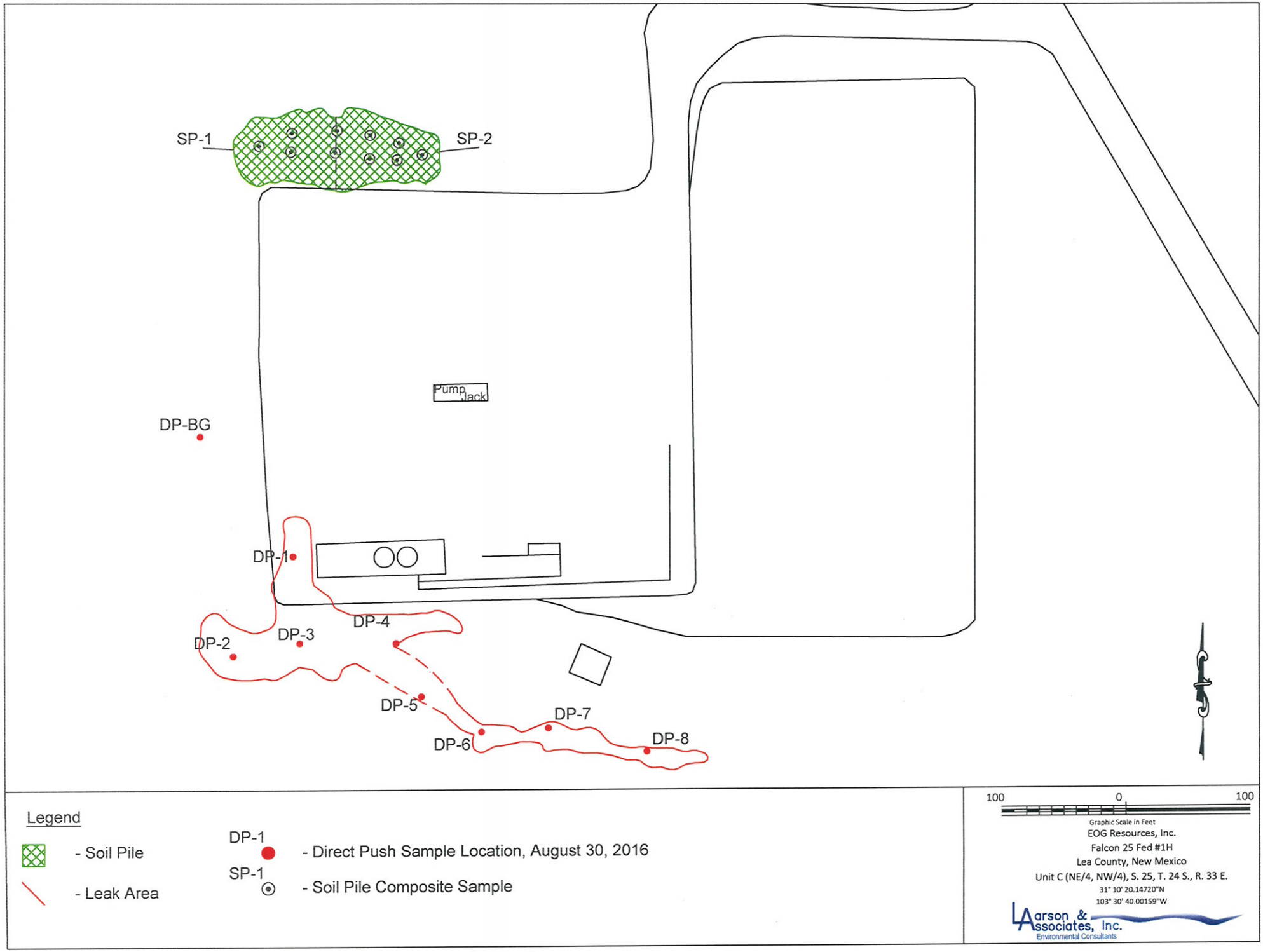

Figure 3 - Site Map showing Direct Push and Composite Sample Locations

Appendix A

Laboratory Report

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

PBELAB

Analytical Report

Prepared for:

Mark Larson

Larson & Associates, Inc.

P.O. Box 50685

Midland, TX 79710

Project: EOG Falcon 25

Project Number: 16-0128-07

Location: New Mexico

Lab Order Number: 6I01002

NELAP ACCREDITED TNI LABORATORY

NELAP/TCEQ # T104704156-13-3

Report Date: 09/08/16

Larson & Associates, Inc.	Project: EOG Falcon 25	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0128-07	
Midland TX, 79710	Project Manager: Mark Larson	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-1 (0-2)	6101002-01	Soil	08/30/16 11:25	08-31-2016 15:50
DP-3 (0-2)	6101002-02	Soil	08/30/16 11:40	08-31-2016 15:50
DP-2 (0-2)	6101002-03	Soil	08/30/16 11:55	08-31-2016 15:50
DP-4 (0-2)	6101002-04	Soil	08/30/16 12:10	08-31-2016 15:50
DP-4 (2-4)	6101002-05	Soil	08/30/16 12:10	08-31-2016 15:50
DP-5 (0-2)	6101002-06	Soil	08/30/16 12:25	08-31-2016 15:50
DP-6 (0-2)	6101002-07	Soil	08/30/16 12:30	08-31-2016 15:50
DP-7 (0-2)	6101002-08	Soil	08/30/16 12:35	08-31-2016 15:50
DP-8 (0-2)	6101002-09	Soil	08/30/16 12:40	08-31-2016 15:50
DP-BG (0-2)	6101002-10	Soil	08/30/16 13:30	08-31-2016 15:50
Comp-1	6101002-11	Soil	08/30/16 10:45	08-31-2016 15:50
Comp1-2	6101002-12	Soil	08/30/16 10:55	08-31-2016 15:50

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DP-1 (0-2)

6I01002-01 (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	**14.1**	1.15	mg/kg dry	1	P6I0602	09/05/16	09/05/16	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P6I0701	09/07/16	09/07/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*95.5 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*119 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	09/01/16	09/01/16	calc	

Larson & Associates, Inc.	Project: EOG Falcon 25	Fax: (432) 687-0456
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DP-3 (0-2)

6I01002-02 (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	**53.5**	1.06	mg/kg dry	1	P6I0602	09/05/16	09/05/16	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P6I0701	09/07/16	09/07/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C28-C35	**35.2**	26.6	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*78.1 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*96.6 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**35.2**	26.6	mg/kg dry	1	[CALC]	09/01/16	09/01/16	calc	

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DP-2 (0-2)

6I01002-03 (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	**6.64**	1.12	mg/kg dry	1	P6I0602	09/05/16	09/05/16	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P6I0701	09/07/16	09/07/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*82.2 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*112 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	09/01/16	09/01/16	calc	

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DP-4 (0-2)

6I01002-04 (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	**17.4**	1.18	mg/kg dry	1	P6I0602	09/05/16	09/05/16	EPA 300.0	
% Moisture	**15.0**	0.1	%	1	P6I0701	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	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C12-C28	ND	29.4	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C28-C35	ND	29.4	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*91.7 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*122 %*	*70-130*		*P6I0205*	*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	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-4 (2-4)

6I01002-05 (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	**48.0**	1.11	mg/kg dry	1	P6I0602	09/05/16	09/05/16	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P6I0701	09/07/16	09/07/16	% calculation	

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DP-5 (0-2)

6I01002-06 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**3.90**	1.08	mg/kg dry	1	P6I0602	09/05/16	09/05/16	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P6I0701	09/07/16	09/07/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*65.7 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	*S-GC*
Surrogate: o-Terphenyl		*87.4 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	09/01/16	09/01/16	calc	

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DP-6 (0-2)

6I01002-07 (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	**21.1**	1.10	mg/kg dry	1	P6I0602	09/05/16	09/05/16	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P6I0701	09/07/16	09/07/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*78.3 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*104 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	09/01/16	09/01/16	calc	

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DP-7 (0-2)

6I01002-08 (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	1.10	mg/kg dry	1	P6I0602	09/05/16	09/05/16	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P6I0701	09/07/16	09/07/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*72.7 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*95.4 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	09/01/16	09/01/16	calc	

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DP-8 (0-2)

6I01002-09 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**567**	1.12	mg/kg dry	1	P6I0602	09/05/16	09/05/16	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P6I0701	09/07/16	09/07/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*77.1 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	09/01/16	09/01/16	calc	

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DP-BG (0-2)

6I01002-10 (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	**940**	11.5	mg/kg dry	10	P6I0602	09/05/16	09/05/16	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P6I0701	09/07/16	09/07/16	% calculation	

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Comp-1

6101002-11 (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	1.11	mg/kg dry	1	P6I0602	09/05/16	09/05/16	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P6I0701	09/07/16	09/07/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*92.0 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*116 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	09/01/16	09/01/16	calc	

Larson & Associates, Inc.	Project: EOG Falcon 25	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0128-07	
Midland TX, 79710	Project Manager: Mark Larson	

Compl-2

6I01002-12 (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	1.14	mg/kg dry	1	P6I0602	09/05/16	09/05/16	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P6I0701	09/07/16	09/07/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.4	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P6I0205	09/01/16	09/01/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*128 %*	*70-130*		*P6I0205*	*09/01/16*	*09/01/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	09/01/16	09/01/16	calc	

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

Project: EOG Falcon 25
Project Number: 16-0128-07
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	

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

Project: EOG Falcon 25
Project Number: 16-0128-07
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 P6I0701 - * DEFAULT PREP *****										
Duplicate (P6I0701-DUP3)	**Source: 6I02002-15**			Prepared & Analyzed: 09/07/16						
% Moisture	9.0	0.1	%		10.0			10.5	20	
Duplicate (P6I0701-DUP4)	**Source: 6I06001-09**			Prepared & Analyzed: 09/07/16						
% Moisture	4.0	0.1	%		4.0			0.00	20	

Larson & Associates, Inc.	Project: EOG Falcon 25	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0128-07	
Midland TX, 79710	Project Manager: Mark Larson	

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 P6I0205 - TX 1005										
Blank (P6I0205-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 (P6I0205-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 (P6I0205-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 (P6I0205-MS1)	**Source: 6I01002-01**			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 (P6I0205-MSD1)	**Source: 6I01002-01**			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*			

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

CHAIN-OF-CUSTOD

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to: 6I01002

DATE: 8/31/16 PAGE 1 OF 1

PO #: _____ LAB WORK ORDER #: 6I01002

PROJECT LOCATION OR NAME: EOG Falcon 25

LAI PROJECT #: 16-0128-07 COLLECTOR: Travis Lunsford

TRRP report? ☐ Yes ☒ No

~~S=SOIL~~ P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE: Time zone/State: NM

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☐ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ D.W. 200.8 ☐ OTHER LIST ☐	LEAD - TOTAL ☐ TOX ☐ FLASHPOINT ☐ TCLP ☐	RCI ☐ TOX ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	TDS ☐ pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐	300.0	FIELD NOTES
DP-1 (0-2)	-01	8/30/16	11:25	S	1				X				X	X													X		
DP-3 (0-2)	-02		11:40										X	X															
DP-2 (0-2)	-03		11:55										X	X															
DP-4 (0-2)	-04		12:10										X	X															
DP-4 (2-4)	-05		12:10																										
DP-5 (0-2)	-06		12:25										X	X															
DP-6 (0-2)	-07		12:30										X	X															
DP-7 (0-2)	-08		12:35										X	X															
DP-8 (0-2)	-09		12:40										X	X															
DP-BG (0-2)	-10		1:20																										
Comp 1	-11		10:45										X	X															
Comp 2	-12		10:55										X	X															
TOTAL																													

RELINQUISHED BY:(Signature) [signature] DATE/TIME 3:50 8/31/16 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 4.2 THERM #: 41
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

Bill To EOG

Appendix B

Photographs

Well Sign

Spill Area and Location of Soil Samples Viewing East

Appendix C

Initial and Final C-141

HOBBS OCD

NOV 14 2014

RECEIVED

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

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company – EOG Resources, Inc.	Contact – Ryan Kainer
Address – 5509 Champions Drive, Midland, TX 79706	Telephone No. (432) 686-3662
Facility Name – Falcon 25 FED 1H	Facility Type – Oil Well

Surface Owner – BLM	Mineral Owner – New Mexico	API No. 30-025-39560

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	25	T24S	R33E	330	S	2210	West	Lea

Falcon 25 Fed 1

Latitude 32.1949 Longitude -103.5274

NATURE OF RELEASE

Type of Release – Produced Water	Volume of Release - 720 bbls	Volume Recovered – 670 bbls
Source of Release – Flare leaked oil on location	Date and Hour of Occurrence: 5/8/2014, 6:00 PM	Date and Hour of Discovery 5/8/2014
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Geoffery Leking (NMOCD)	
By Whom? Ryan Kainer	Date and Hour 5/10/2014	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

NA

Describe Cause of Problem and Remedial Action Taken.*
A poly line leak released approximately 720 bbls of produced water into containment and flowed off location. Approximately 670 bbls were recovered.

Poly line was repaired. A sampling plan and remediation of the spill will be underway pending approval.

Describe Area Affected and Cleanup Action Taken.*

The spill area will be sampled and analyzed for Chlorides and Total Petroleum Hydrocarbons. The impacted area will be excavated, stockpiled on poly-plastic, and transported to an approve disposal facility. Clean material will be backfilled within the excavated area to normal grade.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD 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, NMOCD 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: [signature]	OIL CONSERVATION DIVISION	
Printed Name: Ryan Kainer	Approved by Environmental Specialist: [signature]	
Title: Sr. Safety & Environmental Rep.	Approval Date: 11-12-14	Expiration Date: 1-12-15
E-mail Address: ryan_kainer@eogresources.com	Conditions of Approval: Site sample required. Delineate & remediate per NMOCD guides. Submit final C-141 by 1-12-15	Attached ☐ 1RP-3421
Date: 5/12/2014 Phone: 432-686-3662		

* Attach Additional Sheets If Necessary

ogrid 7377
nTO 1431647649

NOV 14 2014

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: Falcon 25 Fed #1H	Facility Type: Tank Battery
Surface Owner: Federal	Mineral Owner: Federal	API No.: 30-025-39560

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	25	24S	33E	330	South	2210	West	Lea

Latitude 32.1949° **Longitude** -103.5274°

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 720 bbl	Volume Recovered: 670 bbl
Source of Release: Poly Line	Date and Hour of Occurrence: 5-8-2014, 6:00PM	Date and Hour of Discovery: 5-8-2014
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Geoffery Leking (NMOCD)	
By Whom? Ryan Kainer	Date and Hour: 5/10/2014	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken. *Initial C-141 stated that poly line inside containment leaked and released approximately 720 bbls of produced water into containment and flowed off location. Approximately 670 bbls were recovered. Poly line was repaired. A sampling plan and remediation of the spill will be underway pending approval. The spill area will be sampled and analyzed for chloride and total petroleum hydrocarbons. The impacted area will be excavated, stockpiled on poly-plastic, and transported to an approved disposal facility. Clean material will be backfilled within the excavated area to normal grade

Describe Area Affected and Cleanup Action Taken. * On August 30, 2016, LAI personnel collected soil samples at 8 locations in spill area, soil pile and background. TPH was below RRAL (100 mg/Kg) and chloride less than 250 mg/Kg except sample DP-8 (567 mg/Kg). TPH and chloride in soil pile below the method reporting limits. EOG requests no further action for this spill incident.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD 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, NMOCD 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: Zane Kurtz	OIL CONSERVATION DIVISION
Printed Name: Zane Kurtz, EOG Resources, Inc.	Approved by Environmental Sp: Per Oberding Email Attached
Title: Sr. Environmental Representative	Approval Date: 11/24/2014 Expiration Date: N/A
E-mail Address: zane_kurtz@eogresources.com	Conditions of Approval: Sample borings to be backfilled Attached ☐ 1RP 3421
Date: 09-14-2016 Phone: 432-556-8074	

* Attach Additional Sheets If Necessary

1RP-3421

From:	Bockisch, Bernie
To:	Lynch, Kristen, EMNRD
Subject:	FW: Falcon 25 Fed 1H Assessment Report
Date:	Friday, September 30, 2016 8:11:22 AM

Kristen,

Here's the closure approval from Tomas for the 1H (RP3421).

Bernard Bockisch, PMP
Senior Project Manager

GHD

T: +1 505 884 0672 | M: +1 505 280 0572 | E: Bernard.Bockisch@ghd.com
6121 Indian School Rd. NE Albuquerque New Mexico 87110 | www.ghd.com
WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

From: Oberding, Tomas, EMNRD [mailto:Tomas.Oberding@state.nm.us]
Sent: Tuesday, November 25, 2014 2:32 PM
To: Bockisch, Bernie; Jim Amos
Cc: Zane Kurtz
Subject: RE: Falcon 25 Fed 1H Assessment Report

Aloha Bernie et al,

Thank you for sending this in.
Based on the work document here and sample results OCD conditionally approved no further remediation action.
Please obtain concurrence from the BLM.
Have a great afternoon all.
-Doc

Tomáš 'Doc' Oberding, PhD
Senior Environmental Specialist – New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Department
1625 N. French Dr.
Hobbs, NM 88240
(O): (575) 393-6161 ext 111
(C): 575-370-3180
(F): (575) 393-0720
E-Mail: tomas.oberding@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/

From: Bockisch, Bernie [mailto:bbockisch@craworld.com]
Sent: Tuesday, November 25, 2014 12:12 PM
To: Oberding, Tomas, EMNRD; Jim Amos

Cc: Zane Kurtz
Subject: Falcon 25 Fed 1H Assessment Report

Jim/Tomas,

On behalf of EOG Resources, Conestoga Rovers and Associates is submitting the attached report describing the sampling and remediation activities performed at the above mentioned site. Based on the laboratory analytical results, there were no observed petroleum hydrocarbon impacts and chloride concentrations do not extend below 2 feet below ground surface. Based on this, EOG is requesting that no further action be required for this site. Please feel free to contact me if you have any questions.

Bernard Bockisch, PMP
Conestoga-Rovers & Associates (CRA)
6121 Indian School Rd NE Ste. 200
Albuquerque, NM, USA 87110
Office: (505) 884-0672
Mobile: (505) 280-0572
Fax: (505) 884-4932
Email: bbockisch@craworld.com
www.CRAworld.com
