



*EOG Resources, Inc.  
Artesia Division Office  
104 S. 4<sup>th</sup> Street  
Artesia, N. M. 88210*

October 23, 2017

Mr. Mike Bratcher/Ms. Crystal Weaver  
NMOCD District II  
811 S. First St.  
Artesia, NM 88210

Re: Compromise SWD Remediation Work Plan  
30-015-25665  
Section 30, T18S-R27E  
1980' FNL & 880' FEL  
Eddy County, New Mexico  
2RP-4208

Mr. Bratcher/Ms. Weaver,

EOG Y Resources, Inc. is submitting the enclosed remediation work plan for the above referenced site. The plan is being submitted subsequent to the C-141 report dated on May 15, 2017.

**If there are no objections with the scope of work described in the plan, EOG Y Resources, Inc. will have a contractor begin work on or after November 6, 2017.**

If you have any questions, feel free to call me at (575) 748-4171.

Respectfully,

Chase Settle  
Rep Safety & Environmental II  
EOG Y Resources, Inc.

**EOG Y Resources, Inc.**  
**Compromise SWD**  
**Remediation Work Plan**  
**Section 30, T18S-R27E**  
**Eddy County, New Mexico**  
**October 23, 2017**  
**2RP- 4208**

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## **I. Location**

From the intersection of US 285 and Dayton Road, follow Dayton Road east for 5.0 miles. Turn south for 1,250 feet, then west on the least road to the location.

## **II. Background**

On May 15, 2017, EOG Y Resources, Inc. submitted to the NMOCD District II office a Form C-141 for the release of 129.5 B/PW and 0.5 B/O with 129.5 B/PW and 0.5 B/O recovered. The affected area is approximately 62 feet by 28 feet within a lined and concrete bottomed containment, with an additional area of 70 feet by 60 feet effected by overflow on the southeast corner of the location pad. There was a failure of a rubber connection line that connects the pump system to the flow line that caused the release to occur. Initial delineation samples were taken on May 8, 2017 prior to submission of the C-141 and sent to a NMOCD approved laboratory (May 12, 2017 and May 23, 2017 results enclosed). Based on the initial sample results, background samples were collected on September 19, 2017 and sent to a NMOCD approved laboratory (September 26, 2017 results enclosed).

## **III. Surface and Ground Water**

Area surface geology is Paleozoic Permian. Based on information from the New Mexico Office of the State Engineer database regarding this location (Section 30, T18S-R27E) and monitor wells installed by Yates Petroleum Corporation at the injection well site, depth to groundwater is approximately 17 feet. This entire area is prone to flooding during rain events because it is located in the historical Kaiser Lake bed, and has been flooded numerous times when the Pecos River, which is approximately 1700 feet away, overflows the banks.

## **IV. NMOCD Ranking Criteria**

The ranking for this site is twenty (20) based on the following:

Depth to ground water	< 50'
Wellhead Protection Area	> 1000'
Distance to surface water body	> 1000'

Based on the ranking criteria, the NMOCD established RRALs for this site are:

Benzene	10 ppm
BTEX	50 ppm
TPH	100 ppm
Chlorides	No established RRAL

## **V. Soils**

The area consists of soils that are loam based with thin seams of sand layers in some places before transitioning into clay layers.



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**VI. Scope of Work**

Based on enclosed analytical results, background chloride levels, and a decrease in chlorides within the release area, EOG Y Resources, Inc. will excavate four (4) feet of impacted soil from the release area off of the concrete production foundation, hauling all excavated soil to a NMOCD approved facility for disposal. EOG Y Resources, Inc. will take sidewall samples at 1' bgs to confirm that all edges of the release area have been identified and excavated, then install a 20 ml synthetic liner and backfill the excavated area with four (4) feet of caliche. There will be no re-vegetative measures taken since the release occurred on the production pad of an active salt water disposal facility. The TPH & BTEX for the remaining soil are within the RRAL's for BTEX (50 ppm) and TPH (100 ppm) for the Total Ranking Score of twenty (20), no further analytical testing of TPH and/or BTEX will be conducted. When remediation work is completed a C-141 Final Report will be submitted to the NMOCD requesting closure of the site.

# Table 1

## Soil Analytical Data

### Soil Analytical Data

Sample ID	Depth (ft. bgs)	Date	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	TPH (GRO)	TPH (DRO)	Total TPH	Chlorides
S1-1'	1'	5/8/17	ND	ND	ND	ND	ND	ND	ND	ND	6900
S1-2'	2'	5/8/17	ND	ND	ND	ND	ND	ND	ND	ND	980
S1-3'	3'	5/8/17	ND	ND	ND	ND	ND	ND	ND	ND	1500
S1-4'	4'	5/8/17	ND	ND	ND	ND	ND	ND	ND	ND	1100
S1-6'	6'	5/8/17	ND	ND	ND	ND	ND	ND	ND	ND	1200
S1-8'	8'	5/8/17									1400
S1-10'	10'	5/8/17									1000
S1-12'	12'	5/8/17									1200
S1-14'	14'	5/8/17									1800
S2-1'	1'	5/8/17	ND	ND	ND	ND	ND	ND	ND	ND	3300
S2-2'	2'	5/8/17	ND	ND	ND	ND	ND	ND	ND	ND	50
S2-3'	3'	5/8/17	ND	ND	ND	ND	ND	ND	ND	ND	1100
S2-4'	4'	5/8/17	ND	ND	ND	ND	ND	ND	ND	ND	1100
S2-6'	6'	5/8/17	ND	ND	ND	ND	ND	ND	ND	ND	1000
S2-8'	8'	5/8/17									860
S2-10'	10'	5/8/17									1000
S2-12'	12'	5/8/17									1100
S2-14'	14'	5/8/17									1600
BKSE-1'	1'	9/19/17									80
BKSE-3'	3'	9/19/17									128
BKSE-5'	5'	9/19/17									384
BKSE-7'	7'	9/19/17									576
BKSE-9'	9'	9/19/17									720
BKSE-11'	11'	9/19/17									720
BKSE-13'	13'	9/19/17									1220
BKSE-14.5'	14.5'	9/19/17									1120

# Figure 1

## Site Map



Compromise SWD

2RP-4208

Legend

- Release Area- Inside of Containment
- Release Area- Outside of Containment



Google Earth

70 ft

# Figure 2

## Vertical Sample Points



Compromise SWD

2RP-4208

Legend

- P Sample Points
- Release Area- Inside of Containment
- Release Area- Outside of Containment



# **Figure 3**

## **Background Sample Point**

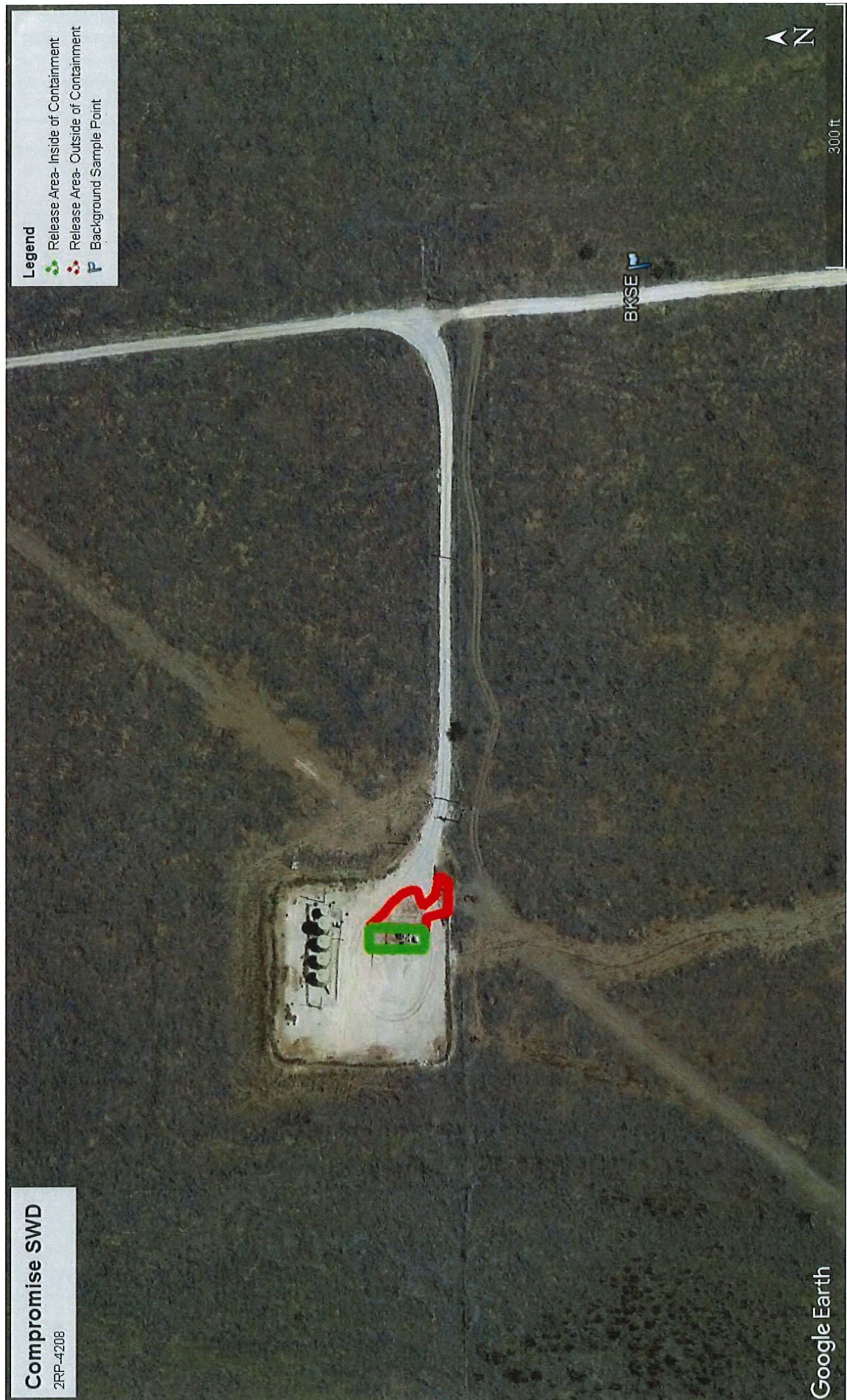


**Compromise SWD**

2RP-4208

**Legend**

- Release Area- Inside of Containment
- Release Area- Outside of Containment
- Background Sample Point



# Photos













# Appendix A

## NMOSE Well Log



POD Number	Code	Subunit	County	Source	q	q	q	Sig	Tow	Rag	X	Y	Distance	Start Date	Finish Date	Log File	Depth Water	Depth Dofine	Licensed Number
RA-12280-P001			ED	Shallow	4	14	2	30	18S	27E	564352	36203584	187	07/20/2015	07/22/2015	08/26/2015	25	17 HAMMER, RODNEY	1186
RA-12280-P003			ED	Shallow	4	4	2	30	18S	27E	564447	3620494	315	07/20/2015	07/22/2015	08/26/2015	29	17 HAMMER, RODNEY	1186
RA-12280-P002			ED	Shallow	3	4	2	30	18S	27E	564402	36209428	317	07/20/2015	07/22/2015	08/26/2015	25	18 HAMMER, RODNEY	1186

**UTMNA D83 Radius Search (in meters):**

Easting (X): 564453.16

Northing (Y): 3620742.63

Radius: 500

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

10/12/17 11:35 AM

# **Appendix B**

## **Soil Sample Laboratory Data**



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

May 12, 2017

Chase Settle  
EOG Resources  
105 South Fourth Street  
Artesia, NM 88210  
TEL: (575) 748-4111  
FAX

RE: Compromise SWD #1

OrderNo.: 1705527

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 10 sample(s) on 5/10/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



## Analytical Report

Lab Order 1705527

Date Reported: 5/12/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: S1-1'

Project: Compromise SWD #1

Collection Date: 5/8/2017 8:45:00 AM

Lab ID: 1705527-001

Matrix: SOIL

Received Date: 5/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	6900	300		mg/Kg	200	5/11/2017 12:15:53 PM	31677
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/10/2017 1:53:59 PM	31659
Surr: DNOP	112	70-130		%Rec	1	5/10/2017 1:53:59 PM	31659
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/11/2017 9:22:32 AM	31671
Surr: BFB	99.4	54-150		%Rec	1	5/11/2017 9:22:32 AM	31671
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	5/11/2017 9:22:32 AM	31671
Toluene	ND	0.049		mg/Kg	1	5/11/2017 9:22:32 AM	31671
Ethylbenzene	ND	0.049		mg/Kg	1	5/11/2017 9:22:32 AM	31671
Xylenes, Total	ND	0.099		mg/Kg	1	5/11/2017 9:22:32 AM	31671
Surr: 4-Bromofluorobenzene	116	66.6-132		%Rec	1	5/11/2017 9:22:32 AM	31671

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



## Analytical Report

Lab Order 1705527

Date Reported: 5/12/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: S1-2'

Project: Compromise SWD #1

Collection Date: 5/8/2017 8:49:00 AM

Lab ID: 1705527-002

Matrix: SOIL

Received Date: 5/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	980	30		mg/Kg	20	5/10/2017 5:13:25 PM	31677
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/10/2017 2:16:01 PM	31659
Surr: DNOP	108	70-130		%Rec	1	5/10/2017 2:16:01 PM	31659
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/11/2017 9:46:39 AM	31671
Surr: BFB	97.8	54-150		%Rec	1	5/11/2017 9:46:39 AM	31671
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	5/11/2017 9:46:39 AM	31671
Toluene	ND	0.048		mg/Kg	1	5/11/2017 9:46:39 AM	31671
Ethylbenzene	ND	0.048		mg/Kg	1	5/11/2017 9:46:39 AM	31671
Xylenes, Total	ND	0.096		mg/Kg	1	5/11/2017 9:46:39 AM	31671
Surr: 4-Bromofluorobenzene	113	66.6-132		%Rec	1	5/11/2017 9:46:39 AM	31671

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

## Analytical Report

Lab Order 1705527

Date Reported: 5/12/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: S1-3'

Project: Compromise SWD #1

Collection Date: 5/8/2017 8:55:00 AM

Lab ID: 1705527-003

Matrix: SOIL

Received Date: 5/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	1500	75		mg/Kg	50	5/11/2017 12:28:17 PM	31677
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/10/2017 2:38:08 PM	31659
Surr: DNOP	110	70-130		%Rec	1	5/10/2017 2:38:08 PM	31659
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/11/2017 10:10:36 AM	31671
Surr: BFB	98.6	54-150		%Rec	1	5/11/2017 10:10:36 AM	31671
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	5/11/2017 10:10:36 AM	31671
Toluene	ND	0.048		mg/Kg	1	5/11/2017 10:10:36 AM	31671
Ethylbenzene	ND	0.048		mg/Kg	1	5/11/2017 10:10:36 AM	31671
Xylenes, Total	ND	0.097		mg/Kg	1	5/11/2017 10:10:36 AM	31671
Surr: 4-Bromofluorobenzene	114	66.6-132		%Rec	1	5/11/2017 10:10:36 AM	31671

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

## Analytical Report

Lab Order 1705527

Date Reported: 5/12/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: S1-4'

Project: Compromise SWD #1

Collection Date: 5/8/2017 9:00:00 AM

Lab ID: 1705527-004

Matrix: SOIL

Received Date: 5/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	1100	75		mg/Kg	50	5/11/2017 12:40:42 PM	31677
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/10/2017 3:00:20 PM	31659
Surr: DNOP	107	70-130		%Rec	1	5/10/2017 3:00:20 PM	31659
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/11/2017 10:34:36 AM	31671
Surr: BFB	99.5	54-150		%Rec	1	5/11/2017 10:34:36 AM	31671
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	5/11/2017 10:34:36 AM	31671
Toluene	ND	0.047		mg/Kg	1	5/11/2017 10:34:36 AM	31671
Ethylbenzene	ND	0.047		mg/Kg	1	5/11/2017 10:34:36 AM	31671
Xylenes, Total	ND	0.094		mg/Kg	1	5/11/2017 10:34:36 AM	31671
Surr: 4-Bromofluorobenzene	115	66.6-132		%Rec	1	5/11/2017 10:34:36 AM	31671

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

## Analytical Report

Lab Order 1705527

Date Reported: 5/12/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: S1-6'

Project: Compromise SWD #1

Collection Date: 5/8/2017 9:05:00 AM

Lab ID: 1705527-005

Matrix: SOIL

Received Date: 5/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	1200	30		mg/Kg	20	5/10/2017 5:50:39 PM	31677
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/10/2017 3:22:20 PM	31659
Surr: DNOP	107	70-130		%Rec	1	5/10/2017 3:22:20 PM	31659
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/11/2017 10:58:28 AM	31671
Surr: BFB	100	54-150		%Rec	1	5/11/2017 10:58:28 AM	31671
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	5/11/2017 10:58:28 AM	31671
Toluene	ND	0.050		mg/Kg	1	5/11/2017 10:58:28 AM	31671
Ethylbenzene	ND	0.050		mg/Kg	1	5/11/2017 10:58:28 AM	31671
Xylenes, Total	ND	0.099		mg/Kg	1	5/11/2017 10:58:28 AM	31671
Surr: 4-Bromofluorobenzene	116	66.6-132		%Rec	1	5/11/2017 10:58:28 AM	31671

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

## Analytical Report

Lab Order 1705527

Date Reported: 5/12/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: S2-1'

Project: Compromise SWD #1

Collection Date: 5/8/2017 11:46:00 AM

Lab ID: 1705527-006

Matrix: SOIL

Received Date: 5/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	3300	150		mg/Kg	100	5/11/2017 12:53:07 PM	31677
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/10/2017 3:44:38 PM	31659
Surr: DNOP	107	70-130		%Rec	1	5/10/2017 3:44:38 PM	31659
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/11/2017 9:31:58 AM	31671
Surr: BFB	95.7	54-150		%Rec	1	5/11/2017 9:31:58 AM	31671
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/11/2017 9:31:58 AM	31671
Toluene	ND	0.047		mg/Kg	1	5/11/2017 9:31:58 AM	31671
Ethylbenzene	ND	0.047		mg/Kg	1	5/11/2017 9:31:58 AM	31671
Xylenes, Total	ND	0.095		mg/Kg	1	5/11/2017 9:31:58 AM	31671
Surr: 4-Bromofluorobenzene	102	66.6-132		%Rec	1	5/11/2017 9:31:58 AM	31671

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

## Analytical Report

Lab Order 1705527

Date Reported: 5/12/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: S2-2'

Project: Compromise SWD #1

Collection Date: 5/8/2017 11:50:00 AM

Lab ID: 1705527-007

Matrix: SOIL

Received Date: 5/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	50	30		mg/Kg	20	5/10/2017 6:40:17 PM	31677
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/10/2017 1:54:18 PM	31659
Surr: DNOP	89.8	70-130		%Rec	1	5/10/2017 1:54:18 PM	31659
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	5/11/2017 9:55:39 AM	31671
Surr: BFB	97.3	54-150		%Rec	1	5/11/2017 9:55:39 AM	31671
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	5/11/2017 9:55:39 AM	31671
Toluene	ND	0.046		mg/Kg	1	5/11/2017 9:55:39 AM	31671
Ethylbenzene	ND	0.046		mg/Kg	1	5/11/2017 9:55:39 AM	31671
Xylenes, Total	ND	0.092		mg/Kg	1	5/11/2017 9:55:39 AM	31671
Surr: 4-Bromofluorobenzene	102	66.6-132		%Rec	1	5/11/2017 9:55:39 AM	31671

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



## Analytical Report

Lab Order 1705527

Date Reported: 5/12/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: S2-3'

Project: Compromise SWD #1

Collection Date: 5/8/2017 11:55:00 AM

Lab ID: 1705527-008

Matrix: SOIL

Received Date: 5/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	1100	75		mg/Kg	50	5/11/2017 1:05:32 PM	31677
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/10/2017 2:21:59 PM	31659
Surr: DNOP	89.2	70-130		%Rec	1	5/10/2017 2:21:59 PM	31659
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/11/2017 10:19:13 AM	31671
Surr: BFB	98.0	54-150		%Rec	1	5/11/2017 10:19:13 AM	31671
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	5/11/2017 10:19:13 AM	31671
Toluene	ND	0.047		mg/Kg	1	5/11/2017 10:19:13 AM	31671
Ethylbenzene	ND	0.047		mg/Kg	1	5/11/2017 10:19:13 AM	31671
Xylenes, Total	ND	0.094		mg/Kg	1	5/11/2017 10:19:13 AM	31671
Surr: 4-Bromofluorobenzene	102	66.6-132		%Rec	1	5/11/2017 10:19:13 AM	31671

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

## Analytical Report

Lab Order 1705527

Date Reported: 5/12/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: S2-4'

Project: Compromise SWD #1

Collection Date: 5/8/2017 12:01:00 PM

Lab ID: 1705527-009

Matrix: SOIL

Received Date: 5/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	1100	75		mg/Kg	50	5/11/2017 1:17:56 PM	31677
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/10/2017 2:49:49 PM	31659
Surr: DNOP	85.0	70-130		%Rec	1	5/10/2017 2:49:49 PM	31659
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/11/2017 10:43:00 AM	31671
Surr: BFB	98.1	54-150		%Rec	1	5/11/2017 10:43:00 AM	31671
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	5/11/2017 10:43:00 AM	31671
Toluene	ND	0.050		mg/Kg	1	5/11/2017 10:43:00 AM	31671
Ethylbenzene	ND	0.050		mg/Kg	1	5/11/2017 10:43:00 AM	31671
Xylenes, Total	ND	0.099		mg/Kg	1	5/11/2017 10:43:00 AM	31671
Surr: 4-Bromofluorobenzene	102	66.6-132		%Rec	1	5/11/2017 10:43:00 AM	31671

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

## Analytical Report

Lab Order 1705527

Date Reported: 5/12/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: S2-6'

Project: Compromise SWD #1

Collection Date: 5/8/2017 12:08:00 PM

Lab ID: 1705527-010

Matrix: SOIL

Received Date: 5/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	1000	30		mg/Kg	20	5/10/2017 7:17:31 PM	31677
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/10/2017 3:17:39 PM	31659
Surr: DNOP	84.9	70-130		%Rec	1	5/10/2017 3:17:39 PM	31659
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/11/2017 11:06:40 AM	31671
Surr: BFB	98.2	54-150		%Rec	1	5/11/2017 11:06:40 AM	31671
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	5/11/2017 11:06:40 AM	31671
Toluene	ND	0.050		mg/Kg	1	5/11/2017 11:06:40 AM	31671
Ethylbenzene	ND	0.050		mg/Kg	1	5/11/2017 11:06:40 AM	31671
Xylenes, Total	ND	0.10		mg/Kg	1	5/11/2017 11:06:40 AM	31671
Surr: 4-Bromofluorobenzene	102	66.6-132		%Rec	1	5/11/2017 11:06:40 AM	31671

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705527

12-May-17

Client: EOG Resources  
Project: Compromise SWD #1

Sample ID	MB-31677	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31677	RunNo:	42705					
Prep Date:	5/10/2017	Analysis Date:	5/10/2017	SeqNo:	1343326	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31677	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31677	RunNo:	42705					
Prep Date:	5/10/2017	Analysis Date:	5/10/2017	SeqNo:	1343327	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.5	90	110			

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705527

12-May-17

Client: EOG Resources  
Project: Compromise SWD #1

Sample ID	LCS-31659		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 31659		RunNo: 42671					
Prep Date:	5/10/2017		Analysis Date: 5/10/2017		SeqNo: 1342637		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.4	63.8	116			
Surr: DNOP	4.8		5.000		95.3	70	130			

Sample ID	MB-31659		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	31659		RunNo:	42671				
Prep Date:	5/10/2017		Analysis Date:	5/10/2017		SeqNo:	1342638		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Surr: DNOP	11		10.00		107	70	130				

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705527

12-May-17

Client: EOG Resources  
Project: Compromise SWD #1

Sample ID	MB-31671	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	31671	RunNo:	42718					
Prep Date:	5/10/2017	Analysis Date:	5/11/2017	SeqNo:	1344416	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		100	54	150			

Sample ID	LCS-31671	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	31671	RunNo:	42718					
Prep Date:	5/10/2017	Analysis Date:	5/11/2017	SeqNo:	1344417	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.1	76.4	125			
Surr: BFB	1100		1000		106	54	150			

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1705527

12-May-17

Client: EOG Resources  
Project: Compromise SWD #1

Sample ID	MB-31671	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	31671	RunNo:	42718					
Prep Date:	5/10/2017	Analysis Date:	5/11/2017	SeqNo:	1344435	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		114	66.6	132			

Sample ID	LCS-31671	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	31671	RunNo:	42718					
Prep Date:	5/10/2017	Analysis Date:	5/11/2017	SeqNo:	1344436	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	99.8	80	120			
Toluene	1.0	0.050	1.000	0	99.6	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	66.6	132			

### Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: EOG/Yates

Work Order Number: 1705527

RcptNo: 1

Received By: Andy Jansson 5/10/2017 9:30:00 AM

Completed By: Andy Jansson 5/10/2017 10:08:15 AM

Reviewed By: *spe* 05/10/17

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒  
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐  
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐  
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐  
6. Sample(s) in proper container(s)? Yes ☒ No ☐  
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐  
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐  
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐  
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒  
11. Were any sample containers received broken? Yes ☐ No ☒  
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐  
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐  
14. Is it clear what analyses were requested? Yes ☒ No ☐  
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.0	Good	Yes			









Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

May 23, 2017

Chase Settle  
EOG Resources  
105 South Fourth Street  
Artesia, NM 88210  
TEL: (575) 748-4111  
FAX

RE: Compromise SWD 1

OrderNo.: 1705946

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/16/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order 1705946

Date Reported: 5/23/2017

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** EOG Resources**Client Sample ID:** S1-8'**Project:** Compromise SWD 1**Collection Date:** 5/8/2017 9:10:00 AM**Lab ID:** 1705946-001**Matrix:** SOIL**Received Date:** 5/16/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	1400	75		mg/Kg	50	5/23/2017 12:23:53 AM	31842

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705946

23-May-17

Client: EOG Resources  
Project: Compromise SWD 1

Sample ID	MB-31842	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351558	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31842	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351559	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: EOG/Yates

Work Order Number: 1705946

RcptNo: 1

Received By: Erin Melendrez 5/18/2017 9:35:00 AM

Completed By: Ashley Gallegos 5/18/2017 7:50:08 AM

Reviewed By: SRC 05/18/17

*Handwritten signatures and initials*

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒  
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐  
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐  
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐  
6. Sample(s) in proper container(s)? Yes ☒ No ☐  
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐  
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐  
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐  
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒  
11. Were any sample containers received broken? Yes ☐ No ☒  
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐  
# of preserved bottles checked for pH: \_\_\_\_\_  
( $<2$  or  $>12$  unless noted)  
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ Adjusted? \_\_\_\_\_  
14. Is it clear what analyses were requested? Yes ☒ No ☐  
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
By Whom: \_\_\_\_\_ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person  
Regarding: \_\_\_\_\_  
Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.9	Good	Yes			







Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

May 23, 2017

Chase Settle  
EOG Resources  
105 South Fourth Street  
Artesia, NM 88210  
TEL: (575) 748-4111  
FAX

RE: Compromise SWD 1

OrderNo.: 1705945

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/16/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order 1705945

Date Reported: 5/23/2017

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** EOG Resources**Client Sample ID:** S1-10'**Project:** Compromise SWD 1**Collection Date:** 5/8/2017 9:17:00 AM**Lab ID:** 1705945-001**Matrix:** SOIL**Received Date:** 5/16/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	1000	30		mg/Kg	20	5/19/2017 4:20:35 PM	31842

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705945

23-May-17

Client: EOG Resources  
Project: Compromise SWD 1

Sample ID	MB-31842	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351558	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31842	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351559	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: EOG/Yates

Work Order Number: 1705945

RcptNo: 1

Received By: Erin Melendrez 5/16/2017 9:35:00 AM

Completed By: Ashley Gallegos 5/18/2017 7:48:29 AM

Reviewed By: SRE 05/18/17

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒  
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐  
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐  
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐  
6. Sample(s) in proper container(s)? Yes ☒ No ☐  
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐  
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐  
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐  
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒  
11. Were any sample containers received broken? Yes ☐ No ☒  
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐ # of preserved bottles checked for pH: \_\_\_\_\_  
( $<2$  or  $>12$  unless noted)  
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ Adjusted? \_\_\_\_\_  
14. Is it clear what analyses were requested? Yes ☒ No ☐  
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒  
Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
By Whom: \_\_\_\_\_ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person  
Regarding: \_\_\_\_\_  
Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.9	Good	Yes			







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May 23, 2017

Chase Settle  
EOG Resources  
105 South Fourth Street  
Artesia, NM 88210  
TEL: (575) 748-4111  
FAX

RE: Compromise SWD 1

OrderNo.: 1705944

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/16/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

Analytical Report  
Lab Order 1705944  
Date Reported: 5/23/2017

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG Resources

**Client Sample ID:** S1-12'

**Project:** Compromise SWD 1

**Collection Date:** 5/8/2017 9:23:00 AM

**Lab ID:** 1705944-001

**Matrix:** SOIL

**Received Date:** 5/16/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	1200	75		mg/Kg	50	5/23/2017 12:11:29 AM	31842

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705944

23-May-17

Client: EOG Resources  
Project: Compromise SWD 1

Sample ID	MB-31842	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351558	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31842	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351559	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |





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4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: EOG/Yates

Work Order Number: 1705944

RcptNo: 1

Received By: Erin Melendrez 5/16/2017 9:35:00 AM

Completed By: Ashley Gallegos 5/18/2017 7:47:09 AM

Reviewed By: spe 05/18/17

UAG  
AG

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒  
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐  
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐  
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐  
6. Sample(s) in proper container(s)? Yes ☒ No ☐  
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐  
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐  
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐  
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒  
11. Were any sample containers received broken? Yes ☐ No ☒  
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐  
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐  
14. Is it clear what analyses were requested? Yes ☒ No ☐  
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐  
# of preserved bottles checked for pH: \_\_\_\_\_  
( $<2$  or  $>12$  unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
By Whom: \_\_\_\_\_ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person  
Regarding: \_\_\_\_\_  
Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.9	Good	Yes			

**THE UNIVERSITY OF CHICAGO**

## X Standard

**Project Name:**

### Compromise SVD #1

Project #:

## Battery

Project Manager:

QA/QC Package:

☐ Standard

☐ Level 4 (Full Validation)

PO #205.0750

**Sampler:** Chase Settle

On Ice: ☒ Yes ☐ No

Sample Temperature: 5.9°C

## Sample Request ID

S1-12

10

**Table 1**

1000

1990

1111

100

Received by:

1

**Disinquinished by:**

Received by:

Time

77

Time

Remarks: Results needed by May 23, 2017.

05/16/17 @ 0935

Date	Time
------	------

If necessary, samples submitted to Hail Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.





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4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

May 23, 2017

Chase Settle  
EOG Resources  
105 South Fourth Street  
Artesia, NM 88210  
TEL: (575) 748-4111  
FAX

RE: Compromise SWD 1

OrderNo.: 1705943

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/16/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order 1705943

Date Reported: 5/23/2017

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** EOG Resources**Client Sample ID:** S1-14'**Project:** Compromise SWD 1**Collection Date:** 5/8/2017 9:30:00 AM**Lab ID:** 1705943-001**Matrix:** SOIL**Received Date:** 5/16/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	1800		75	mg/Kg	50	5/22/2017 11:59:04 PM	31842

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705943

23-May-17

Client: EOG Resources  
Project: Compromise SWD 1

Sample ID	MB-31842	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351558	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31842	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351559	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified



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Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: EOG/Yates

Work Order Number: 1705943

RcptNo: 1

Received By: Erin Melendrez 5/16/2017 9:35:00 AM

Completed By: Ashley Gallegos 5/18/2017 7:45:51 AM

Reviewed By: SRE 05/18/17

uug  
Ag

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒  
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐  
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐  
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐  
6. Sample(s) in proper container(s)? Yes ☒ No ☐  
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐  
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐  
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐  
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒  
11. Were any sample containers received broken? Yes ☐ No ☒  
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐ # of preserved bottles checked for pH: \_\_\_\_\_  
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ Adjusted? \_\_\_\_\_  
14. Is it clear what analyses were requested? Yes ☒ No ☐  
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
By Whom: \_\_\_\_\_ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person  
Regarding: \_\_\_\_\_  
Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.9	Good	Yes			

**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

## Analysis Request

[illegible]

Remarks: Results needed by May 23, 2017.

Received by:	Date	Time

Date: 05/16/17 Time: 0935

Received by:	Date	Time
--------------	------	------

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.





Hall Environmental Analysis Laboratory  
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Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

May 23, 2017

Chase Settle  
EOG Resources  
105 South Fourth Street  
Artesia, NM 88210  
TEL: (575) 748-4111  
FAX

RE: Compromise SWD 1

OrderNo.: 1705942

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/16/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



**Analytical Report**

Lab Order 1705942

Date Reported: 5/23/2017

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** EOG Resources**Client Sample ID:** S2-8'**Project:** Compromise SWD 1**Collection Date:** 5/8/2017 12:14:00 PM**Lab ID:** 1705942-001**Matrix:** SOIL**Received Date:** 5/16/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	860	30		mg/Kg	20	5/19/2017 3:43:21 PM	31842

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705942

23-May-17

Client: EOG Resources  
Project: Compromise SWD 1

Sample ID	MB-31842	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351558	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31842	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351559	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: EOG/Yates

Work Order Number: 1705942

RcptNo: 1

Received By: Erin Melendrez 5/16/2017 9:35:00 AM

Completed By: Ashley Gallegos 5/18/2017 7:44:07 AM

Reviewed By: SRC 05/18/17

UAG  
AG

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒  
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐  
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐  
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐  
6. Sample(s) in proper container(s)? Yes ☒ No ☐  
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐  
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐  
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐  
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒  
11. Were any sample containers received broken? Yes ☐ No ☒  
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐ # of preserved bottles checked for pH: \_\_\_\_\_  
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ Adjusted? \_\_\_\_\_  
14. Is it clear what analyses were requested? Yes ☒ No ☐  
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.9	Good	Yes			

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

## Analysis Request

<b>Chain-of-Custody Record</b>				Turn-Around Time:			
Client: EOG Y Resources, Inc.				X Standard			
Mailing Address:				Project Name:			
105 South 4th Street Artesia, NM 88210				Compromise SWD #1			
Phone #: 575-703-6537				Project #:			
email or Fax#: Chase.Settle@eogresources.com				Battery			
QA/QC Package:				Project Manager:			
<input type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)				Chase Settle			
Accreditation:				PO # 205.0750			
<input type="checkbox"/> NELAP <input type="checkbox"/> Other				Sampler: Chase Settle			
<input type="checkbox"/> EDD (Type)				On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
				Sample Temperature: 5.9°C			
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	
5/3/2017	12:14P	Soil	S2-8'	1 - 4oz.	None	- 001	1705942
Date:	Time:	Relinquished by:	Received by:	Date	Time		
5-15-17	9:30	[Signature]	[Signature]	05/16/17	09:00		
Date:	Time:	Relinquished by:	Received by:	Date	Time		

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

May 23, 2017

Chase Settle  
EOG Resources  
105 South Fourth Street  
Artesia, NM 88210  
TEL: (575) 748-4111  
FAX

RE: Compromise SWD 1

OrderNo.: 1705940

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/16/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order 1705940

Date Reported: 5/23/2017

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** EOG Resources**Client Sample ID:** S2-10'**Project:** Compromise SWD 1**Collection Date:** 5/8/2017 12:19:00 PM**Lab ID:** 1705940-001**Matrix:** SOIL**Received Date:** 5/16/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	1000	30		mg/Kg	20	5/19/2017 2:53:43 PM	31842

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 2
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705940

23-May-17

Client: EOG Resources  
Project: Compromise SWD 1

Sample ID	MB-31842	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351558	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31842	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351559	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory  
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Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: EOG/Yates

Work Order Number: 1705940

RcptNo: 1

Received By: Erin Melendrez 5/16/2017 9:35:00 AM

Completed By: Ashley Gallegos 5/18/2017 7:40:02 AM

Reviewed By: *SPC* 05/18/17

*UAG*  
*AG*

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒  
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐  
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐  
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐  
6. Sample(s) in proper container(s)? Yes ☒ No ☐  
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐  
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐  
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐  
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒  
11. Were any sample containers received broken? Yes ☐ No ☒  
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐ # of preserved bottles checked for pH:   
( $<2$  or  $>12$  unless noted)  
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ Adjusted?  
14. Is it clear what analyses were requested? Yes ☒ No ☐  
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by:

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
By Whom: \_\_\_\_\_ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person  
Regarding: \_\_\_\_\_  
Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.9	Good	Yes			



# Chain-of-Custody Record

Client: EOG Y Resources, Inc.

Mailing Address:

105 South 4th Street Artesia, NM 88210

Phone #: 575-703-8537

email or Fax#: Chase Settle@eogresources.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Project Manager:

Chase Settle

PO # 205.0750

Sampler: Chase Settle

On Ice: ☒ Yes ☐ No

Sample Temperature: 5-10°C

Date Time Matrix Sample Request ID

5/8/2017 12:19P Soil S2-10'

Container Type and #

1 - 4oz.

Preservative Type

None

HEAL No.

1705940

- 601

Turn-Around Time:

X Standard

Project Name:

Compromise SWD #1

Project #:

Battery



**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMBs (6021)  
BTEX + MTBE + TPH (Gas only)  
TPH Method 8015B (Gas/Diesel)  
TPH (Method 418.1)  
EDD (Method 504.1)  
8310 (PNA or PAH)  
RCRA 8 Metals  
Anions (F, Cl, NO<sub>2</sub>, NO<sub>3</sub>, PO<sub>4</sub>, SO<sub>4</sub>)  
8081 Pesticides / 8082 PCBs  
8260B (VOA)  
8270 (Semi-VOA)

X

Remarks: Results needed by May 23, 2017.

Received by: *[Signature]* Date: 05/16/17 Time: 0935

Received by: *[Signature]* Date: Time:

Date: 5-15-17 Time: 4:30 Relinquished by: *[Signature]*

Date: Time: Relinquished by:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



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May 23, 2017

Chase Settle  
EOG Resources  
105 South Fourth Street  
Artesia, NM 88210  
TEL: (575) 748-4111  
FAX

RE: Compromise SWD 1

OrderNo.: 1705941

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/16/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



**Analytical Report**

Lab Order 1705941

Date Reported: 5/23/2017

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** EOG Resources**Client Sample ID:** S2-12'**Project:** Compromise SWD 1**Collection Date:** 5/8/2017 12:24:00 PM**Lab ID:** 1705941-001**Matrix:** SOIL**Received Date:** 5/16/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	1100	75		mg/Kg	50	5/22/2017 11:46:39 PM	31842

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705941

23-May-17

Client: EOG Resources

Project: Compromise SWD 1

Sample ID	MB-31842	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351558	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31842	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351559	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

## Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified





Hall Environmental Analysis Laboratory  
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Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: EOG/Yates

Work Order Number: 1705941

ReptNo: 1

Received By: Erin Melendrez 5/16/2017 9:35:00 AM

Completed By: Ashley Gallegos 5/18/2017 7:42:50 AM

Reviewed By: SRE 05/18/17

Handwritten initials and signature.

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH: \_\_\_\_\_  
( $<2$  or  $>12$  unless noted)
- Adjusted? \_\_\_\_\_
- Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_

By Whom: \_\_\_\_\_ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.9	Good	Yes			

Turn-Around Time:

X Standard

Project Name:

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Relinquished by: \_\_\_\_\_

U

[illegible]

100

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Turn-Around Time:

X Standard

Project Name:

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Relinquished by: \_\_\_\_\_

U

Figure 1. A schematic diagram of the experimental setup. The subject is seated in a chair, viewing a screen displaying a target. The target is a small circle. The subject's hand is positioned at the starting point, and the distance from the starting point to the target is indicated. The subject is instructed to move the hand to the target. The distance from the starting point to the target is 10 cm. The subject is instructed to move the hand to the target. The distance from the starting point to the target is 10 cm. The subject is instructed to move the hand to the target. The distance from the starting point to the target is 10 cm.

100

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.





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May 23, 2017

Chase Settle  
EOG Resources  
105 South Fourth Street  
Artesia, NM 88210  
TEL: (575) 748-4111  
FAX

RE: Compromise SWD 1

OrderNo.: 1705947

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/16/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order 1705947

Date Reported: 5/23/2017

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** EOG Resources**Client Sample ID:** S2-14'**Project:** Compromise SWD 1**Collection Date:** 5/8/2017 12:30:00 PM**Lab ID:** 1705947-001**Matrix:** SOIL**Received Date:** 5/16/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	1600	75		mg/Kg	50	5/23/2017 1:01:07 AM	31842

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 2
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
ND	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
R	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
S	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705947

23-May-17

Client: EOG Resources  
Project: Compromise SWD 1

Sample ID	MB-31842	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351558	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31842	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31842	RunNo:	42953					
Prep Date:	5/19/2017	Analysis Date:	5/19/2017	SeqNo:	1351559	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory  
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Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: EOG/Yates

Work Order Number: 1705947

RcptNo: 1

Received By: Erin Melendrez 5/16/2017 9:35:00 AM

Completed By: Ashley Gallegos 5/18/2017 7:51:28 AM

Reviewed By: SRC 05/18/17

UAG  
AG

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH: \_\_\_\_\_  
( $<2$  or  $>12$  unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	_____	Date	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.9	Good	Yes			

# Chain-of-Custody Record

Client: EOG Y Resources, Inc.

Turn-Around Time:

X Standard

Project Name:

Mailing Address:

105 South 4th Street Artesia, NM 88210

Phone #: 575-703-6537

email or Fax#: Chase Settle@eogresources.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Compromise SWD #1

Project #:

Battery

Project Manager:

Chase Settle

PO # 205. 0750

Sampler:

Chase Settle

On Ice: ☒ Yes ☐ No

Sample Temperature: 5.0°C

Date Time Matrix Sample Request ID

5/6/2017 12:30P Soil S2-14\*

Container Type and #

1 - 4oz.

Preservative Type

None

HEAL No.

1705947

-001

Date: Time: Relinquished by:

5-15-17 4:30

Date: Time: Relinquished by:

5-15-17 4:30

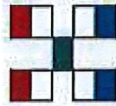
Received by:

Date Time

Received by:

Date Time

Remarks: Results needed by May 23, 2017.



**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMBs (8021)  
BTEX + MTBE + TPH (Gas only)  
TPH Method 8015B (Gas/Diesel)  
TPH (Method 418.1)  
EDB (Method 504.1)  
B310 (PNA or PAH)  
RCRA 8 Metals  
Anions (F, Cl, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>)  
B326B (VOA)  
B3270 (Semi-VOA)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 26, 2017

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: COMPROMISE

Enclosed are the results of analyses for samples received by the laboratory on 09/20/17 16:14.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in dark ink that reads "Caley D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Caley D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

 EOG Y RESOURCES, INC  
 CHASE SETTLE  
 105 SOUTH 4TH STREET  
 ARTESIA NM, 88210  
 Fax To: (575) 748-4131

 Received: 09/20/2017  
 Reported: 09/26/2017  
 Project Name: COMPROMISE  
 Project Number: SWD  
 Project Location: NOT GIVEN

 Sampling Date: 09/19/2017  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Tamara Oldaker

**Sample ID: BKSE- 1' (H702559-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	09/23/2017	ND	432	108	400	0.00	

**Sample ID: BKSE- 3' (H702559-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/23/2017	ND	432	108	400	0.00	

**Sample ID: BKSE- 5' (H702559-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	09/23/2017	ND	432	108	400	0.00	

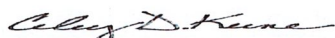
**Sample ID: BKSE- 7' (H702559-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	09/23/2017	ND	432	108	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

EOG Y RESOURCES, INC  
CHASE SETTLE  
105 SOUTH 4TH STREET  
ARTESIA NM, 88210  
Fax To: (575) 748-4131

Received: 09/20/2017  
Reported: 09/26/2017  
Project Name: COMPROMISE  
Project Number: SWD  
Project Location: NOT GIVEN

Sampling Date: 09/19/2017  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Tamara Oldaker

**Sample ID: BKSE- 9' (H702559-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	09/23/2017	ND	432	108	400	0.00	

**Sample ID: BKSE- 11' (H702559-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	09/25/2017	ND	416	104	400	3.77	QM-07

**Sample ID: BKSE- 13' (H702559-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1220	16.0	09/25/2017	ND	416	104	400	3.77	

**Sample ID: BKSE- 14.5' (H702559-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1120	16.0	09/25/2017	ND	416	104	400	3.77	

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**


QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager







# Appendix C

## Form C-141 Initial

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

MAY 15 2017

Form C-141  
Revised August 8, 2011

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

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

RECEIVED

**Release Notification and Corrective Action**

NAB1713733931

**OPERATOR**

☒ Initial Report ☐ Final Report

Name of Company EOG Y Resources, Inc.	Contact Chase Settle	New forms can be found in the New Mexico State Website in forms: <a href="http://www.emnrd.state.nm.us/OCD/forms.html">http://www.emnrd.state.nm.us/OCD/forms.html</a>
Address 104 S. 4 <sup>th</sup> Street	Telephone No. 575-748-1471	
Facility Name Compromise SWD #1	Facility Type SWD Battery	

Surface Owner Fee	Mineral Owner Federal	API No. 30-015-25665
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**LOCATION OF RELEASE**

Unit Letter H	Section 30	Township 18S	Range 27E	Feet from the 1980	North/South Line North	Feet from the 800	East/West Line East	County Eddy
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Latitude 32.72051 Longitude 104.31146

**NATURE OF RELEASE**

Type of Release Produced Water and Crude Oil	Volume of Release 129.5 B/PW & 0.5 B/O	Volume Recovered 129.5 B/PW & 0.5 B/O
Source of Release Pump motor failed, causing a line separation from pressure	Date and Hour of Occurrence 05/01/2017; 6:35 p.m.	Date and Hour of Discovery 05/01/2017; 6:35 p.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher, Crystal Weaver – NMOCD District II	
By Whom? Bob Asher	Date and Hour 05/02/2017; 9:18 a.m.	
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.\*

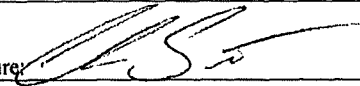

Describe Cause of Problem and Remedial Action Taken.\*

The motor on the injection pump failed, causing pressure to build up causing the rubber connection line to separate from the steel transfer line. Vacuum truck(s) was called to retrieve standing fluid and roustabout crew was called to repair damaged line.

Describe Area Affected and Cleanup Action Taken.\*

The area affected was 62' X 28' within a lined and concrete bottomed containment, with an additional area of 70' X 60' effected from overflow out of the lined southeast corner. Vertical and horizontal delineation samples HAVE ALREADY (5/8/2017) been taken and analysis ran for TPH & BTEX (chlorides for documentation). If initial analytical results for TPH & BTEX are under RRAL's (site ranking is 20) a Final Report, C-141 will be submitted to NMOCD requesting closure. If the analytical results are above the RRAL's a work plan will be submitted to NMOCD. Depth to Ground Water: < 50' (approximately 18', Section 30, T18S-R27E per NMOSE), Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 20.

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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Chase Settle	Approved by Environmental Specialist: 	
Title: Safety & Environmental Rep II	Approval Date: <u>5/16/17</u>	Expiration Date: <u>N/A</u>
E-mail Address: Chase_Settle@eogresources.com	Conditions of Approval: <u>See attached</u>	Attached <input checked="" type="checkbox"/>
Date: May 15, 2017	Phone: 575-748-4171	

\* Attach Additional Sheets If Necessary

2RP-4208