



*EOG Resources, Inc.
Artesia Division Office
105 S. 4th Street
Artesia, N. M. 88210*

December 7, 2016

Ms. Kristen Lynch
NMOCD District I
1625 N. French Drive
Hobbs, New Mexico 88240

APPROVED

By Olivia Yu at 12:59 pm, Apr 06, 2017

Re: Lusk-Belco Water Line
Section 36, T19S-R32E
Lea County, New Mexico
32.61124, -103.71108
1RP-4280

Ms. Lynch,

EOG Y Resources, Inc. is submitting the enclosed work plan for the above captioned well. The plan is being submitted in response to the C-141 report dated May 12, 2016.

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 December 21, 2016.

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

Thank you.

EOG Y Resources, Inc.

Chase Settle
Adv. Environmental Representative

EOG Y Resources, Inc.

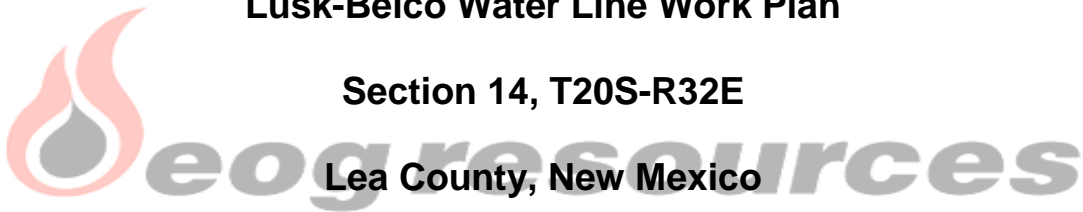
Lusk-Belco Water Line Work Plan

Section 14, T20S-R32E

Lea County, New Mexico

July 19, 2016

1RP- 4290



I. Location

From the intersection of 243 and 126A, take 126A north for approximately 6.07 miles, then turn east onto lease road and follow for 5.05 miles, then turn south on lease road for 2.16 miles, then turn southwest for 5,062 feet, then turn west for 3,194 feet, then turn south for 1.31 miles, take the temporary road east for 2,626 feet to the release site.

II. Background

On May 12, 2016, EOG Y Resources, Inc. submitted to the NMOCD District I office a Form C-141 for the release of an unknown amount of Crude Oil and Produced Water with none recovered. The affected area is approximately 30 feet by 10 feet area around a pipeline within the Right of Way. Failure of a poly transfer line caused the release. Initial delineation samples were taken (5/5/2016) and sent to a NMOCD approved laboratory (5/13/2016 & 5/25/2016, results enclosed). Further sampling was conducted (6/8/2016) with samples sent to a NMOCD approved laboratory (6/17/2016, results enclosed). In order to sample delineate chloride concentrations further, a core rig was used to obtain samples (11/16/2016) which were sent to a NMOCD approved laboratory (11/30/2016, results enclosed).

III. Surface and Ground Water

Area surface geology is Cenozoic Quaternary. The ChevronTexaco Trend Map displays at this location (Section 36, T19S-R32E) that depth to groundwater is approximately 185 feet making the site ranking for this site a zero (0). Watercourses in the area are dry except for infrequent flows in response to major precipitation events.

The ranking for this site is zero (0) based on the as following:

Depth to ground water	> 100'
Wellhead Protection Area	> 1000'
Distance to surface water body	> 1000'

IV. Soils

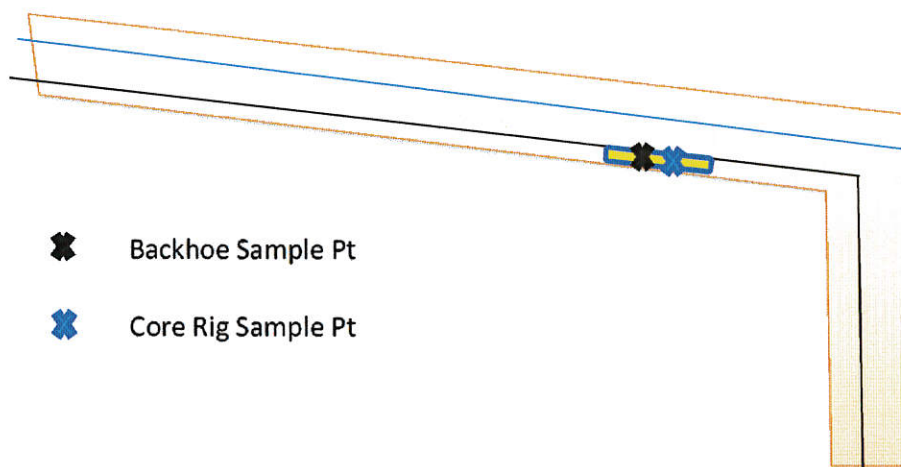
The area consists of soils that are sand based topsoil on top of a clay/sand/loam mix with a thick fine-clay layer prohibiting further migration of contaminants beginning at 35' BSL and continuing past 45' BSL.

V. Scope of Work

Based on enclosed analytical results, the depth to groundwater (185'), and a decrease in chlorides, EOG Y Resources, Inc. will excavate four (4) feet of impacted soil from the release area, hauling all excavated soil to a NMOCD approved facility for disposal. EOG Y Resources, Inc. will then install a 20 ml synthetic liner to prohibit percolation of moisture deeper into the subsurface, restricting further chloride migration deeper towards groundwater or rising back to the surface. EOG Y Resources, Inc. will then backfill the excavated area with two (2) feet of caliche, followed by two (2) feet of topsoil to allow for vegetative repopulation of the release site. The first July following soil remediation, the site will be reseeded with the following seed mix with a lb. PLS/acre basis: Sand dropseed 1.0 lb/acre, Plains bristlegrass 2.0 lb/acre, and Little bluestem 1.0 lb/acre (if broadcast these amounts will be doubled). During site remediation monitoring, evaluations for noxious weeds (NM Noxious Weed List updated Oct. 2016) will be undertaken. If noxious weeds are present, they will be addressed using the appropriate method (chemical, mechanical, or biological) until eradication is complete. The TPH & BTEX are within the RRAL's for BTEX (50 ppm) and TPH (5000 ppm) for the Total Ranking Score of zero (0) in the release area, no further analytical testing of TPH and/or BTEX will be conducted (all chloride analytical results are for documentation). When remediation work is completed a C-141 Final Report will be submitted to the NMOCD requesting closure of the site.



EOG/Lucid/DCP overlapping ROW



DCP- Blue Line



Backhoe Sample Pt

EOG/Lucid- Black Line



Core Rig Sample Pt

Release Area- Yellow Box

Lusk-Belco Water Line

Area	Analysis #	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
S1-1'	1605302	Release Area	5/5/2016	Backhoe	1'	N/D	N/D	N/D	7300
S1-2'	1605302	Release Area	5/5/2016	Backhoe	2'	N/D	N/D	N/D	13000
S1-3'	1605302	Release Area	5/5/2016	Backhoe	3'	N/D	N/D	N/D	14000
S1-4'	1605302	Release Area	5/5/2016	Backhoe	4'	N/D	N/D	N/D	19000
S1-5'	1605740	Release Area	5/5/2016	Backhoe	5'				25000
S1-6'	1605740	Release Area	5/5/2016	Backhoe	6'				25000
S1-8'	1605740	Release Area	5/5/2016	Backhoe	8'				26000
S1-10'	1605740	Release Area	5/5/2016	Backhoe	10'				24000
S1-12'	1605740	Release Area	5/5/2016	Backhoe	12'				22000
S1-14'	1605740	Release Area	5/5/2016	Backhoe	14'				20000
S1-17'	1606535	Release Area	6/8/2016	Backhoe	17'				16000
S1-18'	1606535	Release Area	6/8/2016	Backhoe	18'				13000
S1-20'	1606535	Release Area	6/8/2016	Backhoe	20'				17000
CR-20'	1611A10	Release Area	6/8/2016	Core Rig	20'				16000
CR-25'	1611A10	Release Area	6/8/2016	Core Rig	25'				8700
CR-30'	1611A10	Release Area	6/8/2016	Core Rig	30'				14000
CR-35'	1611A10	Release Area	6/8/2016	Core Rig	35'				740
CR-40'	1611A10	Release Area	6/8/2016	Core Rig	40'				490
CR-45'	1611A10	Release Area	6/8/2016	Core Rig	45'				500

Site Ranking is Zero (0). >100' (185', Section 36, T19S-R32E, Trend Map)

All results are ppm. Chlorides for documentation

Released: Unknown ; Recovered: 0 Release Date: 04/28/2016



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

May 13, 2016

Chase Settle

Yates Petroleum Corporation

105 South Fourth Street

Artesia, NM 88210

TEL: (575) 748-4195

FAX

RE: Lusk AHB Belco Water Line

OrderNo.: 1605302

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 4 sample(s) on 5/6/2016 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 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 1605302

Date Reported: 5/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S1-1'

Project: Lusk AHB Belco Water Line

Collection Date: 5/5/2016 12:14:00 PM

Lab ID: 1605302-001

Matrix: SOIL

Received Date: 5/6/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	7300	300		mg/Kg	200	5/13/2016 11:51:57 AM	25299
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/10/2016 8:15:26 PM	25219
Surr: DNOP	93.4	70-130		%Rec	1	5/10/2016 8:15:26 PM	25219
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/9/2016 8:40:26 PM	25187
Surr: BFB	99.1	80-120		%Rec	1	5/9/2016 8:40:26 PM	25187
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.095		mg/Kg	1	5/9/2016 8:40:26 PM	25187
Benzene	ND	0.024		mg/Kg	1	5/9/2016 8:40:26 PM	25187
Toluene	ND	0.047		mg/Kg	1	5/9/2016 8:40:26 PM	25187
Ethylbenzene	ND	0.047		mg/Kg	1	5/9/2016 8:40:26 PM	25187
Xylenes, Total	ND	0.095		mg/Kg	1	5/9/2016 8:40:26 PM	25187
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	5/9/2016 8:40:26 PM	25187

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 1605302

Date Reported: 5/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S1-2'

Project: Lusk AHB Belco Water Line

Collection Date: 5/5/2016 12:16:00 PM

Lab ID: 1605302-002

Matrix: SOIL

Received Date: 5/6/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	13000	750		mg/Kg	500	5/13/2016 12:04:22 PM	25299
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/10/2016 8:37:09 PM	25219
Surr: DNOP	92.9	70-130		%Rec	1	5/10/2016 8:37:09 PM	25219
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/9/2016 9:03:53 PM	25187
Surr: BFB	99.3	80-120		%Rec	1	5/9/2016 9:03:53 PM	25187
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	5/9/2016 9:03:53 PM	25187
Benzene	ND	0.024		mg/Kg	1	5/9/2016 9:03:53 PM	25187
Toluene	ND	0.048		mg/Kg	1	5/9/2016 9:03:53 PM	25187
Ethylbenzene	ND	0.048		mg/Kg	1	5/9/2016 9:03:53 PM	25187
Xylenes, Total	ND	0.096		mg/Kg	1	5/9/2016 9:03:53 PM	25187
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	5/9/2016 9:03:53 PM	25187

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 1605302

Date Reported: 5/13/2016

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Yates Petroleum Corporation**Client Sample ID:** S1-3'**Project:** Lusk AHB Belco Water Line**Collection Date:** 5/5/2016 12:19:00 PM**Lab ID:** 1605302-003**Matrix:** SOIL**Received Date:** 5/6/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	14000	750		mg/Kg	500	5/13/2016 12:16:46 PM	25299
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/10/2016 8:58:50 PM	25219
Surr: DNOP	93.2	70-130		%Rec	1	5/10/2016 8:58:50 PM	25219
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/9/2016 9:27:18 PM	25187
Surr: BFB	99.0	80-120		%Rec	1	5/9/2016 9:27:18 PM	25187
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.094		mg/Kg	1	5/9/2016 9:27:18 PM	25187
Benzene	ND	0.024		mg/Kg	1	5/9/2016 9:27:18 PM	25187
Toluene	ND	0.047		mg/Kg	1	5/9/2016 9:27:18 PM	25187
Ethylbenzene	ND	0.047		mg/Kg	1	5/9/2016 9:27:18 PM	25187
Xylenes, Total	ND	0.094		mg/Kg	1	5/9/2016 9:27:18 PM	25187
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	5/9/2016 9:27:18 PM	25187

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	Page 3 of 8
	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, Inc.

Analytical Report

Lab Order 1605302

Date Reported: 5/13/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: S1-4'

Project: Lusk AHB Belco Water Line

Collection Date: 5/5/2016 12:23:00 PM

Lab ID: 1605302-004

Matrix: SOIL

Received Date: 5/6/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	19000	750		mg/Kg	500	5/13/2016 12:29:10 PM	25299
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/10/2016 9:20:38 PM	25219
Surr: DNOP	93.4	70-130		%Rec	1	5/10/2016 9:20:38 PM	25219
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/9/2016 9:50:44 PM	25187
Surr: BFB	98.9	80-120		%Rec	1	5/9/2016 9:50:44 PM	25187
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	5/9/2016 9:50:44 PM	25187
Benzene	ND	0.024		mg/Kg	1	5/9/2016 9:50:44 PM	25187
Toluene	ND	0.048		mg/Kg	1	5/9/2016 9:50:44 PM	25187
Ethylbenzene	ND	0.048		mg/Kg	1	5/9/2016 9:50:44 PM	25187
Xylenes, Total	ND	0.097		mg/Kg	1	5/9/2016 9:50:44 PM	25187
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	5/9/2016 9:50:44 PM	25187

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1605302

13-May-16

Client: Yates Petroleum Corporation

Project: Lusk AHB Belco Water Line

Sample ID	MB-25299	SampType: mblk			TestCode: EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID: 25299			RunNo: 34199					
Prep Date:	5/12/2016	Analysis Date: 5/12/2016			SeqNo: 1054649		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-25299	SampType: lcs			TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID: 25299			RunNo: 34199					
Prep Date:	5/12/2016	Analysis Date: 5/12/2016			SeqNo: 1054650		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.2	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#: 1605302

13-May-16

Client: Yates Petroleum Corporation

Project: Lusk AHB Belco Water Line

Sample ID	LCS-25208		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 25208		RunNo: 34107					
Prep Date:	5/9/2016		Analysis Date: 5/10/2016		SeqNo: 1051391		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.3		5.000		126	70	130			

Sample ID	LCS-25219		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 25219		RunNo: 34107					
Prep Date:	5/9/2016		Analysis Date: 5/10/2016		SeqNo: 1051392		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	107	65.8	136			
Surr: DNOP	5.1		5.000		101	70	130			

Sample ID	MB-25208		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	25208		RunNo:	34107				
Prep Date:	5/9/2016		Analysis Date:	5/10/2016		SeqNo:	1051393		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	10		10.00		100	70	130				

Sample ID	MB-25219		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 25219		RunNo: 34107					
Prep Date:	5/9/2016		Analysis Date: 5/10/2016		SeqNo: 1051394		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		106	70	130			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1605302

13-May-16

Client: Yates Petroleum Corporation

Project: Lusk AHB Belco Water Line

Sample ID	MB-25187	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	25187	RunNo:	34080					
Prep Date:	5/6/2016	Analysis Date:	5/9/2016	SeqNo:	1050472	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	970		1000		96.5	80	120			

Sample ID	LCS-25187	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	25187	RunNo:	34080					
Prep Date:	5/6/2016	Analysis Date:	5/9/2016	SeqNo:	1050473	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.6	80	120			
Surr: BFB	1000		1000		105	80	120			

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#: 1605302

13-May-16

Client: Yates Petroleum Corporation

Project: Lusk AHB Belco Water Line

Sample ID	MB-25187		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	25187		RunNo:	34080			
Prep Date:	5/6/2016		Analysis Date:	5/9/2016		SeqNo:	1050509		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID	LCS-25187		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	25187		RunNo:	34080			
Prep Date:	5/6/2016		Analysis Date:	5/9/2016		SeqNo:	1050510		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.0	0.10	1.000	0	101	61	143			
Benzene	1.1	0.025	1.000	0	106	75.3	123			
Toluene	0.96	0.050	1.000	0	96.3	80	124			
Ethylbenzene	0.91	0.050	1.000	0	91.0	82.8	121			
Xylenes, Total	2.7	0.10	3.000	0	91.1	83.9	122			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

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
4905 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Yates Petroleum Corpora

Work Order Number: 1605302

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

5/6/2016 10:33:00 AM

Completed By: Lindsay Mangin

5/6/2016 12:58:06 PM

Reviewed By:

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 5.0°C ? Yes ☒ No ☐ NA ☐
6. Samplers 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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			



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

May 25, 2016

Chase Settle

Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4195
FAX

RE: Lusk AHB Belco Water Line

OrderNo.: 1605740

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 6 sample(s) on 5/17/2016 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 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: 1605740

Date Reported: 5/25/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation
Project: Lusk AHB Belco Water Line

Lab Order: 1605740

Lab ID: 1605740-001 **Collection Date:** 5/5/2016 12:28:00 PM
Client Sample ID: S1-5' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: LGT							
Chloride	25000	1500		mg/Kg	1E	5/23/2016 9:09:28 PM	25413

Lab ID: 1605740-002 **Collection Date:** 5/5/2016 12:31:00 PM
Client Sample ID: S1-6' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: LGT							
Chloride	25000	1500		mg/Kg	1E	5/23/2016 9:21:52 PM	25413

Lab ID: 1605740-003 **Collection Date:** 5/5/2016 12:37:00 PM
Client Sample ID: S1-8' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: LGT							
Chloride	26000	1500		mg/Kg	1E	5/23/2016 9:34:17 PM	25413

Lab ID: 1605740-004 **Collection Date:** 5/5/2016 12:44:00 PM
Client Sample ID: S1-10' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: LGT							
Chloride	24000	1500		mg/Kg	1E	5/23/2016 9:46:41 PM	25413

Lab ID: 1605740-005 **Collection Date:** 5/5/2016 12:50:00 PM
Client Sample ID: S1-12' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: LGT							
Chloride	22000	750		mg/Kg	500	5/23/2016 10:23:55 PM	25413

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	Page 1 of 3
	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, Inc.

Analytical Report

Lab Order: 1605740

Date Reported: 5/25/2016

CLIENT: Yates Petroleum Corporation

Lab Order: 1605740

Project: Lusk AHB Belco Water Line

Lab ID: 1605740-006

Collection Date: 5/5/2016 12:58:00 PM

Client Sample ID: S1-14'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	20000	750		mg/Kg	500	5/23/2016 10:36:19 PM	25413

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1605740

25-May-16

Client: Yates Petroleum Corporation

Project: Lusk AHB Belco Water Line

Sample ID	MB-25413	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	25413	RunNo:	34392					
Prep Date:	5/19/2016	Analysis Date:	5/19/2016	SeqNo:	1060476	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-25413	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	25413	RunNo:	34392					
Prep Date:	5/19/2016	Analysis Date:	5/19/2016	SeqNo:	1060477	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.0	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 Hawks NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hall-environmental.com

Sample Log-In Check List

Client Name: Yates Petroleum Corpora

Work Order Number: 1605740

RcptNo: 1

Received by/date:

EA

05/17/16

Logged By: Lindsay Mangin

5/17/2016 9:40:00 AM

Lindsay Mangin

Completed By: Lindsay Mangin

5/17/2016 9:51:52 AM

Lindsay Mangin

Reviewed By:

EA

05/17/16

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 5.0°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	5.4	Good	Yes			



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

June 17, 2016

Chase Settle

Yates Petroleum Corporation

105 South Fourth Street

Artesia, NM 88210

TEL: (575) 748-4195

FAX

RE: Lusk AHB Belco Water Line

OrderNo.: 1606535

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/10/2016 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 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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1606535

Date Reported: 6/17/2016

CLIENT: Yates Petroleum Corporation
Project: Lusk AHB Belco Water Line

Lab Order: 1606535

Lab ID: 1606535-001

Collection Date: 6/8/2016 10:37:00 AM

Client Sample ID: S1-17'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	16000	750		mg/Kg	500	6/15/2016 4:24:35 PM	25840

Lab ID: 1606535-002

Collection Date: 6/8/2016 11:14:00 AM

Client Sample ID: S1-18'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	13000	750		mg/Kg	500	6/15/2016 4:37:00 PM	25840

Lab ID: 1606535-003

Collection Date: 6/8/2016 11:30:00 AM

Client Sample ID: S1-20'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	17000	750		mg/Kg	500	6/15/2016 4:49:25 PM	25840

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606535

17-Jun-16

Client: Yates Petroleum Corporation

Project: Lusk AHB Belco Water Line

Sample ID	MB-25840	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	25840	RunNo:	34930					
Prep Date:	6/14/2016	Analysis Date:	6/14/2016	SeqNo:	1078875	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-25840	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	25840	RunNo:	34930					
Prep Date:	6/14/2016	Analysis Date:	6/14/2016	SeqNo:	1078876	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.7	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: Yates Petroleum Corporat

Work Order Number: 1606535

RcptNo: 1

Received by/date:

[Signature]

06/10/16

Logged By: Lindsay Mangin

6/10/2016 9:30:00 AM

[Signature]

Completed By: Lindsay Mangin

6/10/2016 10:32:09 AM

[Signature]

Reviewed By:

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°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	19.6	Good	Yes			



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

November 30, 2016

Chase Settle
Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4111
FAX

RE: Lusk AHB-Belco Water Line

OrderNo.: 1611A10

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 6 sample(s) on 11/18/2016 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 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 1611A10

Date Reported: 11/30/2016

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Yates Petroleum Corporation**Client Sample ID:** CR-20'**Project:** Lusk AHB-Belco Water Line**Collection Date:** 11/16/2016 1:55:00 PM**Lab ID:** 1611A10-001**Matrix:** SOIL**Received Date:** 11/18/2016 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	16000	750		mg/Kg	500	11/29/2016 12:07:21 AM	28796

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: CR-25'

Project: Lusk AHB-Belco Water Line

Collection Date: 11/16/2016 2:05:00 PM

Lab ID: 1611A10-002

Matrix: SOIL

Received Date: 11/18/2016 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	8700	750		mg/Kg	500	11/29/2016 12:19:46 AM	28796

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: CR-30'

Project: Lusk AHB-Belco Water Line

Collection Date: 11/16/2016 2:10:00 PM

Lab ID: 1611A10-003

Matrix: SOIL

Received Date: 11/18/2016 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	14000	750		mg/Kg	500	11/29/2016 12:32:11 AM	28796

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611A10

Date Reported: 11/30/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: CR-35'

Project: Lusk AHB-Belco Water Line

Collection Date: 11/16/2016 2:19:00 PM

Lab ID: 1611A10-004

Matrix: SOIL

Received Date: 11/18/2016 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	740	30		mg/Kg	20	11/22/2016 7:43:15 PM	28796

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611A10

Date Reported: 11/30/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: CR-40'

Project: Lusk AHB-Belco Water Line

Collection Date: 11/16/2016 2:28:00 PM

Lab ID: 1611A10-005

Matrix: SOIL

Received Date: 11/18/2016 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	490	30		mg/Kg	20	11/22/2016 7:55:40 PM	28796

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 1611A10

Date Reported: 11/30/2016

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Yates Petroleum Corporation**Client Sample ID:** CR-45'**Project:** Lusk AHB-Belco Water Line**Collection Date:** 11/16/2016 2:39:00 PM**Lab ID:** 1611A10-006**Matrix:** SOIL**Received Date:** 11/18/2016 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	500		30	mg/Kg	20	11/22/2016 8:08:04 PM	28796

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611A10

30-Nov-16

Client: Yates Petroleum Corporation

Project: Lusk AHB-Belco Water Line

Sample ID	MB-28796	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	28796	RunNo:	38922					
Prep Date:	11/21/2016	Analysis Date:	11/22/2016	SeqNo:	1216481	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-28796	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	28796	RunNo:	38922					
Prep Date:	11/21/2016	Analysis Date:	11/22/2016	SeqNo:	1216482	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.6	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
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: 1611A10

RcptNo: 1

Received by/date:

Logged By: Ashley Gallegos

11/18/2016 9:30:00 AM

Completed By: Ashley Gallegos

11/18/2016 12:12:59 PM

Reviewed By:

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°C ? Yes ☐ No ☒ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐ Not required
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	15.0	Good	Yes			

Chain-of-Custody Record

Client: Yates Petroleum Corporation

Mailing Address:

105 South 4th Street Artesia, NM 88210

Phone #: 575-703-6537

email or Fax#: csettle@yatespetroleum.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Lusk AHB-Belco Water Line

Project #:

Project Manager:

Chase Settle

PO # 205.0750

Sampler: Chase Settle

On Ice: ☐ Yes ☒ No

Sample Temperature: 5.0

Date Time Matrix Sample Request ID

11/16/16	1:55p	Soil	CR-20'
#####	2:05p	Soil	CR-25'
#####	2:10p	Soil	CR-30'
#####	2:19p	Soil	CR-35'
#####	2:28p	Soil	CR-40'
#####	2:39p	Soil	CR-45'

Container Type and #

1 - 4oz.	None	HEAL No. 10/14/10
1 - 4oz.	None	-001
1 - 4oz.	None	-002
1 - 4oz.	None	-003
1 - 4oz.	None	-004
1 - 4oz.	None	-005
1 - 4oz.	None	-006

Preservative Type

None
None
None
None
None
None
None

BTEX + MTBE + TMBs (8021)

BTEX + MTBE + TPH (Gas only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDE (Method 504.1)

8310 (PMA or PAH)

RCRA 8 Metals

Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

8081 Pesticides / 8082 PCB's

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)

Analysis Request

Date: 11/17/16 Time: 2:00

Date: Time

Relinquished by:

Relinquished by:

Received by: Lindsey Cancha 11/18/16 09:30

Date Time

Remarks:

Results needed by 11/29/2016.

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 noted on the analytical report.