

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

RECEIVED

By JKeyes at 1:00 pm, Nov 13, 2015

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Yates Petroleum Corporation	Contact Chase Settle	
Address 104 S. 4 th Street	Telephone No. 575-748-1471	
Facility Name Caper BFE Federal #2	Facility Type Battery	
Surface Owner Federal	Mineral Owner Federal	API No. 30-025-37439

LOCATION OF RELEASE

Unit Letter K	Section 17	Township 21S	Range 32E	Feet from the 2310	North/South Line South	Feet from the 2310	East/West Line West	County Lea
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Latitude 32.47774 Longitude 103.69746

NATURE OF RELEASE

Type of Release Crude Oil & Produced Water	Volume of Release 20 B/O & 80 B/PW	Volume Recovered 20 B/O & 80 B/PW
Source of Release Poly line	Date and Hour of Occurrence 8/19/2015; AM	Date and Hour of Discovery 8/19/2015; AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Kellie Jones/NMOCD I	
By Whom? Robert Asher/Yates Petroleum Corporation	Date and Hour 8/19/2015; PM (Email)	
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.*		

APPROVED

By JKeyes at 1:00 pm, Nov 13, 2015



Describe Cause of Problem and Remedial Action Taken.*

The poly flow line separated between the well and the battery, causing the release. Vacuum truck(s) and roustabout crews were called.

Describe Area Affected and Cleanup Action Taken.*

An approximate area of 130' X 290'. The wells were shut in, vacuum trucks were called to recover the spill, and a roustabout crew was called to repair the poly line. Excavated soils will be hauled to a NMOCD approved facility. Vertical and horizontal delineation samples will be taken and analysis ran for TPH & BTEX (chlorides for documentation). If initial analytical results for TPH & BTEX are under RRAL's (site ranking is 0) a Final Report, C-141 will be submitted to the OCD requesting closure. If the analytical results are above the RRAL's a work plan will be submitted to the OCD. **Depth to Ground Water: > 100' (approximately 110', Section 17, T21S-R32E, per Trend Map), Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 0. Yates Petroleum Corporation requests closure.**

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: 	OIL CONSERVATION DIVISION		
Printed Name: Chase Settle	Approved by Environmental Specialist: 		
Title: NM Environmental Regulatory Agent	Approval Date: 11/13/2015	Expiration Date: ///	
E-mail Address: CSettle@yatespetroleum.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: November 13, 2015	Phone: 575-748-4171	1RP- ///	IRP 3845

* Attach Additional Sheets If Necessary

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2014**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.5. Lease Serial No.
NM-940956. If Indian, Allottee or Tribe Name
N/A**SUBMIT IN TRIPLICATE – Other instructions on page 2.**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
Yates Petroleum Corporation3a. Address
105 S. 4th St., Artesia, NM 882103b. Phone No. (include area code)
575-748-41717. If Unit of CA/Agreement, Name and/or No.
N/A8. Well Name and No.
Caper BFE Federal #29. API Well No.
30-025-374394. Location of Well (Footage, Sec., T., R., M., or Survey Description)
2310' FSL & 2310' FWL, Section 17, T21S-R32E10. Field and Pool or Exploratory Area
Lost Tank' Delaware & Wildcat Bone Spring11. County or Parish, State
Lea County, New Mexico

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>Clean up actions to</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	<u>be taken.</u>
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

The poly flow line separated between the well and the battery, causing the release. Vacuum truck(s) and roustabout crews were called. An approximate area of 130' X 290'. The wells were shut in, vacuum trucks were called to recover the spill, and a roustabout crew was called to repair the poly line. Excavated soils will be hauled to a NMOCD approved facility. Vertical and horizontal delineation samples will be taken and analysis ran for TPH & BTEX (chlorides for documentation). If initial analytical results for TPH & BTEX are under RRAL's (site ranking is 0) a Final Report, C-141 will be submitted to the OCD requesting closure. If the analytical results are above the RRAL's a work plan will be submitted to the OCD. Depth to Ground Water: > 100' (approximately 110', Section 17, T21S-R32E, per Trend Map), Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 0. Yates Petroleum Corporation requests closure.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
Chase Settle

Title NM Environmental Regulatory Agent

Signature

Date 11/13/2015

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

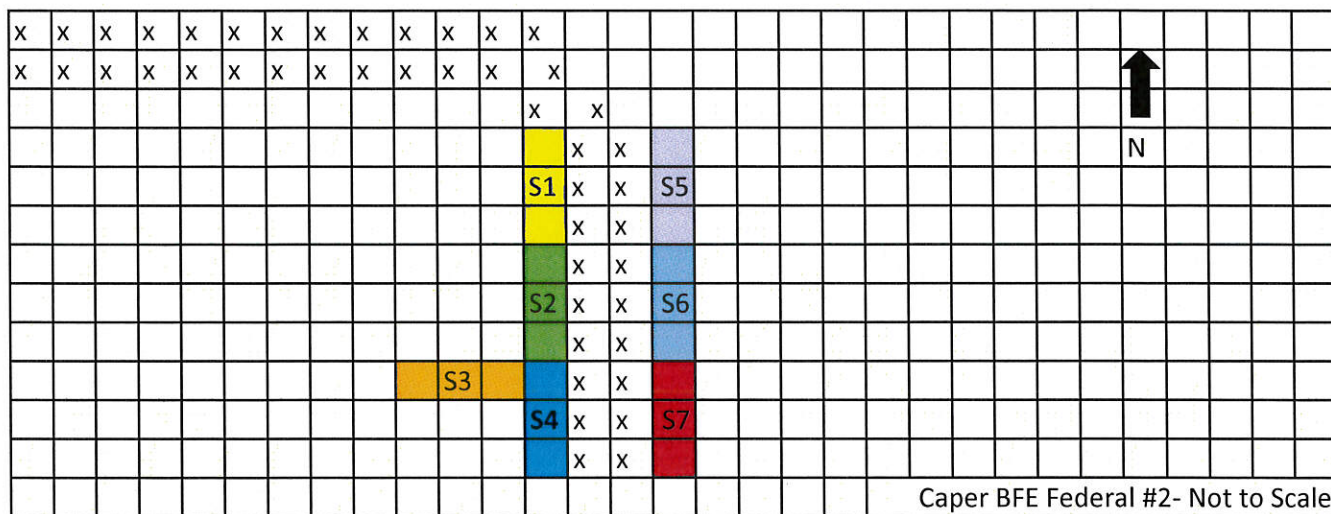
Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)



	Analytical	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
S1-1'	1509234	9/1/2015	Hand Auger	1'	ND	ND	ND	ND
S1-2'	1509234	9/1/2015	Hand Auger	2'	ND	ND	ND	ND
S2-1'	1509234	9/1/2015	Hand Auger	1'	ND	ND	ND	ND
S2-2'	1509234	9/1/2015	Hand Auger	2'	ND	ND	ND	ND
S3-1'	1509234	9/1/2015	Hand Auger	1'	ND	ND	ND	ND
S3-2'	1509234	9/1/2015	Hand Auger	2'	ND	ND	ND	ND
S4-1'	1509234	9/1/2015	Hand Auger	1'	ND	ND	ND	ND
S4-2'	1509234	9/1/2015	Hand Auger	2'	ND	ND	ND	ND
S5-1'	1509234	9/1/2015	Hand Auger	1'	ND	ND	ND	ND
S5-2'	1509234	9/1/2015	Hand Auger	2'	ND	ND	ND	ND
S6-1'	1509234	9/1/2015	Hand Auger	1'	ND	ND	ND	260
S6-2'	1509234	9/1/2015	Hand Auger	2'	ND	ND	ND	32
S7-1'	1509234	9/1/2015	Hand Auger	1'	194.5	3200	9300	6700
S7-2'	1509234	9/1/2015	Hand Auger	2'	192.8	3400	7100	7200
S7-3'	1510 E61	10/26/2015	Backhoe	3'	1.471	130	800	ND
S7-4'	1510 E61	10/26/2015	Backhoe	4'	ND	ND	ND	ND
S7-5'	1510 E61	10/26/2015	Backhoe	5'	ND	ND	ND	630
S7-6'	1510 E61	10/26/2015	Backhoe	6'	ND	ND	ND	77
S7-7'	1510 E61	10/26/2015	Backhoe	7'	ND	ND	ND	100
S7-8'	1510 E61	10/26/2015	Backhoe	8'	ND	ND	ND	590

Site Ranking is Zero (0). DTGW >100' (approx 110', Section 17, T21S-R32E, Trend Map)

All results are ppm.

Released: 20 B/O, 80 B/PW; Recovered: 20 B/O, 80 B/PW Release Date: 08/19/2015



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

September 17, 2015

Chase Settle

Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4217
FAX

RE: Caper BFE Federal #2

OrderNo.: 1509234

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 14 sample(s) on 9/4/2015 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 1509234

Date Reported: 9/17/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S1-1'

Project: Caper BFE Federal #2

Collection Date: 9/1/2015 11:37:00 AM

Lab ID: 1509234-001

Matrix: SOIL

Received Date: 9/4/2015 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/9/2015 12:19:32 PM	21206
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/10/2015 9:31:09 AM	21185
Surr: DNOP	117	57.9-140		%REC	1	9/10/2015 9:31:09 AM	21185
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/9/2015 7:24:34 PM	21174
Surr: BFB	90.0	75.4-113		%REC	1	9/9/2015 7:24:34 PM	21174
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	9/9/2015 7:24:34 PM	21174
Toluene	ND	0.047		mg/Kg	1	9/9/2015 7:24:34 PM	21174
Ethylbenzene	ND	0.047		mg/Kg	1	9/9/2015 7:24:34 PM	21174
Xylenes, Total	ND	0.094		mg/Kg	1	9/9/2015 7:24:34 PM	21174
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	9/9/2015 7:24:34 PM	21174

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		

Analytical ReportLab Order **1509234**

Date Reported: 9/17/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Yates Petroleum Corporation**Client Sample ID:** S1-2'**Project:** Caper BFE Federal #2**Collection Date:** 9/1/2015 11:41:00 AM**Lab ID:** 1509234-002**Matrix:** SOIL**Received Date:** 9/4/2015 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/9/2015 6:44:17 PM	21206
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/10/2015 10:36:11 AM	21185
Surr: DNOP	114	57.9-140		%REC	1	9/10/2015 10:36:11 AM	21185
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/9/2015 7:49:52 PM	21174
Surr: BFB	87.2	75.4-113		%REC	1	9/9/2015 7:49:52 PM	21174
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	9/9/2015 7:49:52 PM	21174
Toluene	ND	0.049		mg/Kg	1	9/9/2015 7:49:52 PM	21174
Ethylbenzene	ND	0.049		mg/Kg	1	9/9/2015 7:49:52 PM	21174
Xylenes, Total	ND	0.098		mg/Kg	1	9/9/2015 7:49:52 PM	21174
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	9/9/2015 7:49:52 PM	21174

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		

Analytical Report

Lab Order 1509234

Date Reported: 9/17/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S2-1'

Project: Caper BFE Federal #2

Collection Date: 9/1/2015 11:45:00 AM

Lab ID: 1509234-003

Matrix: SOIL

Received Date: 9/4/2015 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/9/2015 6:56:42 PM	21206
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/10/2015 10:57:41 AM	21185
Surr: DNOP	125	57.9-140		%REC	1	9/10/2015 10:57:41 AM	21185
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/9/2015 8:15:11 PM	21174
Surr: BFB	90.7	75.4-113		%REC	1	9/9/2015 8:15:11 PM	21174
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.046		mg/Kg	1	9/9/2015 8:15:11 PM	21174
Toluene	ND	0.046		mg/Kg	1	9/9/2015 8:15:11 PM	21174
Ethylbenzene	ND	0.046		mg/Kg	1	9/9/2015 8:15:11 PM	21174
Xylenes, Total	ND	0.093		mg/Kg	1	9/9/2015 8:15:11 PM	21174
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	9/9/2015 8:15:11 PM	21174

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		

Analytical Report

Lab Order 1509234

Date Reported: 9/17/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Yates Petroleum Corporation**Client Sample ID:** S2-2'**Project:** Caper BFE Federal #2**Collection Date:** 9/1/2015 11:49:00 AM**Lab ID:** 1509234-004**Matrix:** SOIL**Received Date:** 9/4/2015 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/9/2015 7:09:06 PM	21206
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/10/2015 11:19:07 AM	21185
Surr: DNOP	114	57.9-140		%REC	1	9/10/2015 11:19:07 AM	21185
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/9/2015 8:40:29 PM	21174
Surr: BFB	87.2	75.4-113		%REC	1	9/9/2015 8:40:29 PM	21174
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	9/9/2015 8:40:29 PM	21174
Toluene	ND	0.050		mg/Kg	1	9/9/2015 8:40:29 PM	21174
Ethylbenzene	ND	0.050		mg/Kg	1	9/9/2015 8:40:29 PM	21174
Xylenes, Total	ND	0.10		mg/Kg	1	9/9/2015 8:40:29 PM	21174
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	9/9/2015 8:40:29 PM	21174

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		

Analytical Report

Lab Order 1509234

Date Reported: 9/17/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S3-1'

Project: Caper BFE Federal #2

Collection Date: 9/1/2015 11:53:00 AM

Lab ID: 1509234-005

Matrix: SOIL

Received Date: 9/4/2015 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/9/2015 7:21:31 PM	21206
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/10/2015 11:40:39 AM	21185
Surr: DNOP	103	57.9-140		%REC	1	9/10/2015 11:40:39 AM	21185
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/9/2015 9:05:43 PM	21174
Surr: BFB	92.7	75.4-113		%REC	1	9/9/2015 9:05:43 PM	21174
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	9/9/2015 9:05:43 PM	21174
Toluene	ND	0.048		mg/Kg	1	9/9/2015 9:05:43 PM	21174
Ethylbenzene	ND	0.048		mg/Kg	1	9/9/2015 9:05:43 PM	21174
Xylenes, Total	ND	0.096		mg/Kg	1	9/9/2015 9:05:43 PM	21174
Surr: 4-Bromofluorobenzene	108	80-120		%REC	1	9/9/2015 9:05:43 PM	21174

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		

Analytical Report

Lab Order 1509234

Date Reported: 9/17/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S3-2'

Project: Caper BFE Federal #2

Collection Date: 9/1/2015 11:57:00 AM

Lab ID: 1509234-006

Matrix: SOIL

Received Date: 9/4/2015 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/9/2015 7:33:55 PM	21206
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/10/2015 12:02:05 PM	21185
Surr: DNOP	116	57.9-140		%REC	1	9/10/2015 12:02:05 PM	21185
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/9/2015 9:31:01 PM	21174
Surr: BFB	91.0	75.4-113		%REC	1	9/9/2015 9:31:01 PM	21174
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	9/9/2015 9:31:01 PM	21174
Toluene	ND	0.049		mg/Kg	1	9/9/2015 9:31:01 PM	21174
Ethylbenzene	ND	0.049		mg/Kg	1	9/9/2015 9:31:01 PM	21174
Xylenes, Total	ND	0.099		mg/Kg	1	9/9/2015 9:31:01 PM	21174
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	9/9/2015 9:31:01 PM	21174

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		

Analytical Report

Lab Order **1509234**

Date Reported: **9/17/2015**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S4-1'

Project: Caper BFE Federal #2

Collection Date: 9/1/2015 12:01:00 PM

Lab ID: 1509234-007

Matrix: SOIL

Received Date: 9/4/2015 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/9/2015 7:46:20 PM	21206
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/10/2015 12:23:40 PM	21185
Surr: DNOP	100	57.9-140		%REC	1	9/10/2015 12:23:40 PM	21185
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/9/2015 9:56:21 PM	21174
Surr: BFB	89.5	75.4-113		%REC	1	9/9/2015 9:56:21 PM	21174
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	9/9/2015 9:56:21 PM	21174
Toluene	ND	0.048		mg/Kg	1	9/9/2015 9:56:21 PM	21174
Ethylbenzene	ND	0.048		mg/Kg	1	9/9/2015 9:56:21 PM	21174
Xylenes, Total	ND	0.096		mg/Kg	1	9/9/2015 9:56:21 PM	21174
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	9/9/2015 9:56:21 PM	21174

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		

Analytical Report

Lab Order 1509234

Date Reported: 9/17/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S4-2'

Project: Caper BFE Federal #2

Collection Date: 9/1/2015 12:05:00 PM

Lab ID: 1509234-008

Matrix: SOIL

Received Date: 9/4/2015 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/9/2015 7:58:45 PM	21206
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/10/2015 1:36:47 PM	21185
Surr: DNOP	94.8	57.9-140		%REC	1	9/10/2015 1:36:47 PM	21185
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/9/2015 10:21:41 PM	21175
Surr: BFB	86.4	75.4-113		%REC	1	9/9/2015 10:21:41 PM	21175
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	9/9/2015 10:21:41 PM	21175
Toluene	ND	0.048		mg/Kg	1	9/9/2015 10:21:41 PM	21175
Ethylbenzene	ND	0.048		mg/Kg	1	9/9/2015 10:21:41 PM	21175
Xylenes, Total	ND	0.097		mg/Kg	1	9/9/2015 10:21:41 PM	21175
Surr: 4-Bromofluorobenzene	99.6	80-120		%REC	1	9/9/2015 10:21:41 PM	21175

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		

Analytical Report

Lab Order 1509234

Date Reported: 9/17/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S5-1'

Project: Caper BFE Federal #2

Collection Date: 9/1/2015 12:09:00 PM

Lab ID: 1509234-009

Matrix: SOIL

Received Date: 9/4/2015 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/9/2015 8:11:09 PM	21206
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/10/2015 1:58:16 PM	21185
Surr: DNOP	95.5	57.9-140		%REC	1	9/10/2015 1:58:16 PM	21185
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/9/2015 10:47:00 PM	21175
Surr: BFB	91.3	75.4-113		%REC	1	9/9/2015 10:47:00 PM	21175
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	9/9/2015 10:47:00 PM	21175
Toluene	ND	0.048		mg/Kg	1	9/9/2015 10:47:00 PM	21175
Ethylbenzene	ND	0.048		mg/Kg	1	9/9/2015 10:47:00 PM	21175
Xylenes, Total	ND	0.097		mg/Kg	1	9/9/2015 10:47:00 PM	21175
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	9/9/2015 10:47:00 PM	21175

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		

Analytical Report

Lab Order 1509234

Date Reported: 9/17/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S5-2'

Project: Caper BFE Federal #2

Collection Date: 9/1/2015 12:13:00 PM

Lab ID: 1509234-010

Matrix: SOIL

Received Date: 9/4/2015 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/9/2015 8:23:34 PM	21206
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/10/2015 2:19:53 PM	21185
Surr: DNOP	104	57.9-140		%REC	1	9/10/2015 2:19:53 PM	21185
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/9/2015 11:12:19 PM	21175
Surr: BFB	91.7	75.4-113		%REC	1	9/9/2015 11:12:19 PM	21175
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	9/9/2015 11:12:19 PM	21175
Toluene	ND	0.048		mg/Kg	1	9/9/2015 11:12:19 PM	21175
Ethylbenzene	ND	0.048		mg/Kg	1	9/9/2015 11:12:19 PM	21175
Xylenes, Total	ND	0.096		mg/Kg	1	9/9/2015 11:12:19 PM	21175
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	9/9/2015 11:12:19 PM	21175

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		

Analytical Report

Lab Order 1509234

Date Reported: 9/17/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Yates Petroleum Corporation**Client Sample ID:** S6-1'**Project:** Caper BFE Federal #2**Collection Date:** 9/1/2015 12:17:00 PM**Lab ID:** 1509234-011**Matrix:** SOIL**Received Date:** 9/4/2015 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	260	30		mg/Kg	20	9/9/2015 8:35:58 PM	21206
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/10/2015 2:41:25 PM	21185
Surr: DNOP	95.5	57.9-140		%REC	1	9/10/2015 2:41:25 PM	21185
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/10/2015 12:53:17 AM	21175
Surr: BFB	91.5	75.4-113		%REC	1	9/10/2015 12:53:17 AM	21175
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	9/10/2015 12:53:17 AM	21175
Toluene	ND	0.047		mg/Kg	1	9/10/2015 12:53:17 AM	21175
Ethylbenzene	ND	0.047		mg/Kg	1	9/10/2015 12:53:17 AM	21175
Xylenes, Total	ND	0.094		mg/Kg	1	9/10/2015 12:53:17 AM	21175
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	9/10/2015 12:53:17 AM	21175

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		

Analytical Report

Lab Order 1509234

Date Reported: 9/17/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S6-2'

Project: Caper BFE Federal #2

Collection Date: 9/1/2015 12:21:00 PM

Lab ID: 1509234-012

Matrix: SOIL

Received Date: 9/4/2015 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	32	30		mg/Kg	20	9/9/2015 9:13:11 PM	21206
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/10/2015 3:03:02 PM	21185
Surr: DNOP	114	57.9-140		%REC	1	9/10/2015 3:03:02 PM	21185
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/10/2015 1:18:34 AM	21175
Surr: BFB	89.7	75.4-113		%REC	1	9/10/2015 1:18:34 AM	21175
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.046		mg/Kg	1	9/10/2015 1:18:34 AM	21175
Toluene	ND	0.046		mg/Kg	1	9/10/2015 1:18:34 AM	21175
Ethylbenzene	ND	0.046		mg/Kg	1	9/10/2015 1:18:34 AM	21175
Xylenes, Total	ND	0.093		mg/Kg	1	9/10/2015 1:18:34 AM	21175
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	9/10/2015 1:18:34 AM	21175

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		

Analytical Report

Lab Order 1509234

Date Reported: 9/17/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S7-1'

Project: Caper BFE Federal #2

Collection Date: 9/1/2015 12:25:00 PM

Lab ID: 1509234-013

Matrix: SOIL

Received Date: 9/4/2015 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: SRM
Chloride	6700	300		mg/Kg	200	9/11/2015 12:18:09 AM	21206
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	9300	990		mg/Kg	100	9/10/2015 5:12:44 PM	21185
Surr: DNOP	0	57.9-140	S	%REC	100	9/10/2015 5:12:44 PM	21185
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	3200	460		mg/Kg	100	9/10/2015 1:43:54 AM	21175
Surr: BFB	178	75.4-113	S	%REC	100	9/10/2015 1:43:54 AM	21175
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	6.5	4.6		mg/Kg	100	9/10/2015 1:43:54 AM	21175
Toluene	61	4.6		mg/Kg	100	9/10/2015 1:43:54 AM	21175
Ethylbenzene	27	4.6		mg/Kg	100	9/10/2015 1:43:54 AM	21175
Xylenes, Total	100	9.2		mg/Kg	100	9/10/2015 1:43:54 AM	21175
Surr: 4-Bromofluorobenzene	120	80-120	S	%REC	100	9/10/2015 1:43:54 AM	21175

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		

Analytical Report

Lab Order 1509234

Date Reported: 9/17/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S7-2'

Project: Caper BFE Federal #2

Collection Date: 9/1/2015 12:30:00 PM

Lab ID: 1509234-014

Matrix: SOIL

Received Date: 9/4/2015 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: SRM
Chloride	7200	300		mg/Kg	200	9/11/2015 12:30:34 AM	21206
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	7100	990		mg/Kg	100	9/10/2015 5:55:53 PM	21185
Surr: DNOP	0	57.9-140	S	%REC	100	9/10/2015 5:55:53 PM	21185
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	3400	480		mg/Kg	100	9/10/2015 2:09:16 AM	21175
Surr: BFB	176	75.4-113	S	%REC	100	9/10/2015 2:09:16 AM	21175
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	6.8	4.8		mg/Kg	100	9/10/2015 2:09:16 AM	21175
Toluene	62	4.8		mg/Kg	100	9/10/2015 2:09:16 AM	21175
Ethylbenzene	27	4.8		mg/Kg	100	9/10/2015 2:09:16 AM	21175
Xylenes, Total	97	9.6		mg/Kg	100	9/10/2015 2:09:16 AM	21175
Surr: 4-Bromofluorobenzene	116	80-120		%REC	100	9/10/2015 2:09:16 AM	21175

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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1509234

17-Sep-15

Client: Yates Petroleum Corporation

Project: Caper BFE Federal #2

Sample ID	MB-21206	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	21206	RunNo:	28738					
Prep Date:	9/9/2015	Analysis Date:	9/9/2015	SeqNo:	871283	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-21206	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	21206	RunNo:	28738					
Prep Date:	9/9/2015	Analysis Date:	9/9/2015	SeqNo:	871284	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1509234

17-Sep-15

Client: Yates Petroleum Corporation

Project: Caper BFE Federal #2

Sample ID	MB-21185	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	21185	RunNo:	28740					
Prep Date:	9/8/2015	Analysis Date:	9/10/2015	SeqNo:	871391	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		110	57.9	140			

Sample ID	LCS-21185	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	21185	RunNo:	28740					
Prep Date:	9/8/2015	Analysis Date:	9/10/2015	SeqNo:	871392	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	10	50.00	0	110	57.4	139			
Surr: DNOP	5.7		5.000		113	57.9	140			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1509234

17-Sep-15

Client: Yates Petroleum Corporation

Project: Caper BFE Federal #2

Sample ID	MB-21174		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 21174		RunNo: 28722					
Prep Date:	9/8/2015		Analysis Date: 9/9/2015		SeqNo: 870876		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	890		1000		88.6	75.4	113			

Sample ID	LCS-21174		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 21174		RunNo: 28722					
Prep Date:	9/8/2015		Analysis Date: 9/9/2015		SeqNo: 870877		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	104	79.6	122			
Surr: BFB	1000		1000		102	75.4	113			

Sample ID	MB-21175		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 21175		RunNo: 28722					
Prep Date:	9/8/2015		Analysis Date: 9/9/2015		SeqNo: 870894		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	910		1000		91.5	75.4	113			

Sample ID	LCS-21175		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 21175		RunNo: 28722					
Prep Date:	9/8/2015		Analysis Date: 9/9/2015		SeqNo: 870895		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	94.1	79.6	122			
Surr: BFB	990		1000		98.6	75.4	113			

Sample ID	MB-21199		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 21199		RunNo: 28761					
Prep Date:	9/9/2015		Analysis Date: 9/10/2015		SeqNo: 872160		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	890		1000		89.2	75.4	113			

Sample ID	LCS-21199		SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS		Batch ID:	21199		RunNo:	28761				
Prep Date:	9/9/2015		Analysis Date:	9/10/2015		SeqNo:	872161		Units: %REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: BFB	1000		1000		101	75.4	113				

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 | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1509234

17-Sep-15

Client: Yates Petroleum Corporation

Project: Caper BFE Federal #2

Sample ID	MB-21174		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	21174		RunNo:	28722			
Prep Date:	9/8/2015		Analysis Date:	9/9/2015		SeqNo:	870922		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID	LCS-21174		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	21174		RunNo:	28722			
Prep Date:	9/8/2015		Analysis Date:	9/9/2015		SeqNo:	870923		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	1.000	0	97.1	80	120			
Toluene	0.99	0.050	1.000	0	98.6	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.5	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.4	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		115	80	120			

Sample ID	MB-21175		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	21175		RunNo:	28722			
Prep Date:	9/8/2015		Analysis Date:	9/9/2015		SeqNo:	870940		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID	LCS-21175		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	21175		RunNo:	28722			
Prep Date:	9/8/2015		Analysis Date:	9/9/2015		SeqNo:	870941		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	101	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.1	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		115	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1509234

17-Sep-15

Client: Yates Petroleum Corporation

Project: Caper BFE Federal #2

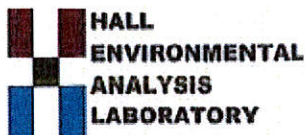
Sample ID	MB-21199		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 21199		RunNo: 28761					
Prep Date:	9/9/2015		Analysis Date: 9/10/2015		SeqNo: 872195		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	LCS-21199		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 21199		RunNo: 28761					
Prep Date:	9/9/2015		Analysis Date: 9/10/2015		SeqNo: 872196		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		118	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



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 Corpora

Work Order Number: 1509234

RcptNo: 1

Received by/date:

CS

09/04/15

Logged By: Celina Sessa

9/4/2015 10:20:00 AM

Celina Sessa

Completed By: Celina Sessa

9/4/2015 3:30:26 PM

Celina Sessa

Reviewed By:

CS

09/08/15

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 ☒

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

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?

Yes ☒

No ☐

(If no, notify customer for authorization.)

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	44	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:

Caper BFE Federal #2

Project #:

30-025-37439

Project Manager:

Chase Settle

PO # 205. 0750

Sampler: Chase Settle

On Ice: ☒ Yes ☐ No

Sample Temperature: 44°C

Date Time Matrix Sample Request ID

Container Type and #

Preservative Type

HEAL No. 1509234

9/1/2015

11:37

Soil

S1-1'

1 - 4oz.

ICE

-001

9/1/2015

11:41

Soil

S1-2'

1 - 4oz.

ICE

-002

9/1/2015

11:45

Soil

S2-1'

1 - 4oz.

ICE

-003

9/1/2015

11:49

Soil

S2-2'

1 - 4oz.

ICE

-004

9/1/2015

11:53

Soil

S3-1'

1 - 4oz.

ICE

-005

9/1/2015

11:57

Soil

S3-2'

1 - 4oz.

ICE

-006

9/1/2015

12:01

Soil

S4-1'

1 - 4oz.

ICE

-007

9/1/2015

12:05

Soil

S4-2'

1 - 4oz.

ICE

-008

9/1/2015

12:09

Soil

S5-1'

1 - 4oz.

ICE

-009

9/1/2015

12:13

Soil

S5-2'

1 - 4oz.

ICE

-010

9/1/2015

12:17

Soil

S6-1'

1 - 4oz.

ICE

-011

9/1/2015

12:21

Soil

S6-2'

1 - 4oz.

ICE

-012

Date: 9-3-15

Time:

Relinquished by: [Signature]

Time:

Received by: [Signature]

Time:

Date: 09/04/15

Time:

Remarks:

BTX + MTBE + TMB's (8021)

BTX + MTBE + TMB's (8021)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

8310 (PNA or PAH)

RCRA 8 Metals

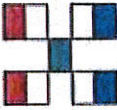
Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

8081 Pesticides / 8082 PCB's

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

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:

Caper BFE Federal #2

Project #:

30-025-37439

Project Manager:

Chase Settle

PO # 205. 0750

Sampler: Chase Settle

On Ice: ☒ Yes ☐ No

Sample Temperature: 4.4°C

Date Time Matrix Sample Request ID

Container Type and #

Preservative Type

HEAL No.

9/1/2015

12:25 Soil

S7-1'

1 - 4oz.

ICE

1509234

9/1/2015

12:30 Soil

S7-2'

1 - 4oz.

ICE

-013

-014

Analysis Request

BTX + MTBE + TMB's (8021)

BTX + MTBE + TPH (Gas only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

8310 (PNA 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)

Remarks:

Received by:

Date Time

09/04/15 1020

Received by:

Date Time



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

November 06, 2015

Chase Settle

Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4217
FAX

RE: Caper BFE Federal #2

OrderNo.: 1510E61

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 6 sample(s) on 10/30/2015 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: 1510E61

Date Reported: 11/6/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation
Project: Caper BFE Federal #2

Lab Order: 1510E61**Lab ID:** 1510E61-001**Collection Date:** 10/26/2015 1:41:00 PM**Client Sample ID:** S7-3'**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	11/4/2015 2:58:58 PM	22180
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	800	100		mg/Kg	10	11/3/2015 7:42:07 PM	22117
Surr: DNOP	0	70-130	S	%REC	10	11/3/2015 7:42:07 PM	22117
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	130	4.9		mg/Kg	1	11/2/2015 3:47:37 PM	22110
Surr: BFB	580	75.4-113	S	%REC	1	11/2/2015 3:47:37 PM	22110
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	11/2/2015 3:47:37 PM	22110
Toluene	0.071	0.049		mg/Kg	1	11/2/2015 3:47:37 PM	22110
Ethylbenzene	ND	0.049		mg/Kg	1	11/2/2015 3:47:37 PM	22110
Xylenes, Total	1.4	0.098		mg/Kg	1	11/2/2015 3:47:37 PM	22110
Surr: 4-Bromofluorobenzene	166	80-120	S	%REC	1	11/2/2015 3:47:37 PM	22110

Lab ID: 1510E61-002**Collection Date:** 10/26/2015 1:43:00 PM**Client Sample ID:** S7-4'**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	11/4/2015 3:11:23 PM	22180
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	11/3/2015 8:09:22 PM	22117
Surr: DNOP	107	70-130		%REC	1	11/3/2015 8:09:22 PM	22117
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/2/2015 5:20:38 PM	22110
Surr: BFB	99.2	75.4-113		%REC	1	11/2/2015 5:20:38 PM	22110
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	11/2/2015 5:20:38 PM	22110
Toluene	ND	0.049		mg/Kg	1	11/2/2015 5:20:38 PM	22110
Ethylbenzene	ND	0.049		mg/Kg	1	11/2/2015 5:20:38 PM	22110
Xylenes, Total	ND	0.098		mg/Kg	1	11/2/2015 5:20:38 PM	22110
Surr: 4-Bromofluorobenzene	112	80-120		%REC	1	11/2/2015 5:20:38 PM	22110

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		

Analytical Report

Lab Order: 1510E61

Date Reported: 11/6/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation
Project: Caper BFE Federal #2

Lab Order: 1510E61**Lab ID:** 1510E61-003**Collection Date:** 10/26/2015 1:46:00 PM**Client Sample ID:** S7-5'**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	630	30		mg/Kg	20	11/4/2015 3:48:37 PM	22180
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	11/3/2015 8:36:32 PM	22117
Surr: DNOP	101	70-130		%REC	1	11/3/2015 8:36:32 PM	22117
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/2/2015 8:49:56 PM	22110
Surr: BFB	89.8	75.4-113		%REC	1	11/2/2015 8:49:56 PM	22110
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	11/2/2015 8:49:56 PM	22110
Toluene	ND	0.049		mg/Kg	1	11/2/2015 8:49:56 PM	22110
Ethylbenzene	ND	0.049		mg/Kg	1	11/2/2015 8:49:56 PM	22110
Xylenes, Total	ND	0.099		mg/Kg	1	11/2/2015 8:49:56 PM	22110
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	11/2/2015 8:49:56 PM	22110

Lab ID: 1510E61-004**Collection Date:** 10/26/2015 1:49:00 PM**Client Sample ID:** S7-6'**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	77	30		mg/Kg	20	11/4/2015 4:01:01 PM	22180
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/3/2015 9:03:31 PM	22117
Surr: DNOP	102	70-130		%REC	1	11/3/2015 9:03:31 PM	22117
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/2/2015 9:13:07 PM	22110
Surr: BFB	88.9	75.4-113		%REC	1	11/2/2015 9:13:07 PM	22110
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	11/2/2015 9:13:07 PM	22110
Toluene	ND	0.049		mg/Kg	1	11/2/2015 9:13:07 PM	22110
Ethylbenzene	ND	0.049		mg/Kg	1	11/2/2015 9:13:07 PM	22110
Xylenes, Total	ND	0.098		mg/Kg	1	11/2/2015 9:13:07 PM	22110
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	11/2/2015 9:13:07 PM	22110

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		

Analytical Report

Lab Order: 1510E61

Date Reported: 11/6/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Yates Petroleum Corporation
Project: Caper BFE Federal #2**Lab Order:** 1510E61**Lab ID:** 1510E61-005**Collection Date:** 10/26/2015 1:52:00 PM**Client Sample ID:** S7-7'**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	100	30		mg/Kg	20	11/4/2015 4:13:25 PM	22180
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/3/2015 9:30:24 PM	22117
Surr: DNOP	103	70-130		%REC	1	11/3/2015 9:30:24 PM	22117
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/2/2015 9:36:23 PM	22110
Surr: BFB	89.2	75.4-113		%REC	1	11/2/2015 9:36:23 PM	22110
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	11/2/2015 9:36:23 PM	22110
Toluene	ND	0.049		mg/Kg	1	11/2/2015 9:36:23 PM	22110
Ethylbenzene	ND	0.049		mg/Kg	1	11/2/2015 9:36:23 PM	22110
Xylenes, Total	ND	0.098		mg/Kg	1	11/2/2015 9:36:23 PM	22110
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	11/2/2015 9:36:23 PM	22110

Lab ID: 1510E61-006**Collection Date:** 10/26/2015 1:55:00 PM**Client Sample ID:** S7-8'**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	590	30		mg/Kg	20	11/4/2015 4:25:50 PM	22180
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	11/3/2015 9:57:47 PM	22117
Surr: DNOP	101	70-130		%REC	1	11/3/2015 9:57:47 PM	22117
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/2/2015 9:59:30 PM	22110
Surr: BFB	89.4	75.4-113		%REC	1	11/2/2015 9:59:30 PM	22110
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	11/2/2015 9:59:30 PM	22110
Toluene	ND	0.050		mg/Kg	1	11/2/2015 9:59:30 PM	22110
Ethylbenzene	ND	0.050		mg/Kg	1	11/2/2015 9:59:30 PM	22110
Xylenes, Total	ND	0.10		mg/Kg	1	11/2/2015 9:59:30 PM	22110
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	11/2/2015 9:59:30 PM	22110

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	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510E61

06-Nov-15

Client: Yates Petroleum Corporation

Project: Caper BFE Federal #2

Sample ID	MB-22180	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	22180	RunNo:	30017					
Prep Date:	11/4/2015	Analysis Date:	11/4/2015	SeqNo:	914569	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-22180	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	22180	RunNo:	30017					
Prep Date:	11/4/2015	Analysis Date:	11/4/2015	SeqNo:	914570	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.2	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510E61

06-Nov-15

Client: Yates Petroleum Corporation

Project: Caper BFE Federal #2

Sample ID	MB-22117	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	22117	RunNo:	29954					
Prep Date:	11/2/2015	Analysis Date:	11/3/2015	SeqNo:	912719	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	12		10.00		125	70	130			

Sample ID	LCS-22117	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	22117	RunNo:	29954					
Prep Date:	11/2/2015	Analysis Date:	11/3/2015	SeqNo:	912857	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	10	50.00	0	118	57.4	139			
Surr: DNOP	6.4		5.000		129	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510E61

06-Nov-15

Client: Yates Petroleum Corporation

Project: Caper BFE Federal #2

Sample ID	MB-22110	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	22110	RunNo:	29948					
Prep Date:	10/30/2015	Analysis Date:	11/2/2015	SeqNo:	912103	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	890		1000		89.1	75.4	113			

Sample ID	LCS-22110	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	22110	RunNo:	29948					
Prep Date:	10/30/2015	Analysis Date:	11/2/2015	SeqNo:	912104	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	79.6	122			
Surr: BFB	980		1000		98.1	75.4	113			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510E61

06-Nov-15

Client: Yates Petroleum Corporation

Project: Caper BFE Federal #2

Sample ID	MB-22110	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	22110	RunNo:	29948					
Prep Date:	10/30/2015	Analysis Date:	11/2/2015	SeqNo:	912211	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID	LCS-22110	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	22110	RunNo:	29948					
Prep Date:	10/30/2015	Analysis Date:	11/2/2015	SeqNo:	912212	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	104	80	120			
Toluene	0.90	0.050	1.000	0	90.1	80	120			
Ethylbenzene	0.89	0.050	1.000	0	88.7	80	120			
Xylenes, Total	2.6	0.10	3.000	0	87.6	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	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 | |



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 Corpora

Work Order Number: 1510E61

Rep(No): 1

Received by/date: CS 10/30/15
Logged By: Celina Sessa 10/30/2015 9:45:00 AM
Completed By: Celina Sessa 10/30/2015 11:11:00 AM
Reviewed By: [Signature] 10/30/15

Celina Sessa
Celina Sessa

Chain of Custody

1. Custody seals intact on sample bottles?
2. Is Chain of Custody complete?
3. How was the sample delivered?

Yes ☒ No ☐ Not Present ☒
Yes ☒ No ☐ Not Present ☐
Courier

On 10/30/15

Log In

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

Yes ☒ No ☐ NA ☐
Yes ☒ No ☐ NA ☐
Yes ☒ No ☐
Yes ☒ No ☐
Yes ☐ No ☒ NA ☐
Yes ☐ No ☐ No VOA Vials ☒
Yes ☐ No ☒
Yes ☒ No ☐
Yes ☒ No ☐
Yes ☒ No ☐
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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.6	Good	Yes			

