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

\* Attach Additional Sheets If Necessary

### State of New Mex Energy Minerals and Natura

RECEIVED

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

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

## Release Notification and Corrective Action

						OPERA'	ΓOR	[	Initia	l Report		Final Report
Name of Co		ev			- 3	Contact						
Yates Petrol	leum Corp	oration				Chase Settle						
Address 104 S. 4 <sup>th</sup> St						Telephone N						4
	17.10(14.1510)4					75-748-14	4 (85)					
Facility Nar Caper BFE		í				Facility Typ Battery	ie .					
Caper Br E	r cuci ai π2					Jattery						
Surface Ow	ner			Mineral O	wner				API No			
Federal				Federal					30-025-	37439		
				LOCA	TION	OF RE	LEASE					
Unit Letter	Section	Township	Range	Feet from the	North/S	South Line	Feet from the		est Line	County		
K	17	21S	32E	2310	5	South	2310	W	/est	Lea		
			L	Latitude_32.4		Longitude						
Type of Rele						Volume of			Volume F			
Crude Oil & Source of Re		vater				20 B/O &	80 B/PW Hour of Occurrence	26	20 B/O & Date and			,
Poly line	icase					8/19/2015			8/19/2015		iscovery	
Was Immedi	ate Notice (		VE 9900	- A/200 1990.X	40 55	If YES, To		**************************************				
		$\boxtimes$	Yes	No Not Re	quired	Kellie Jon	es/NMOCD I					
By Whom?						Date and I				3-11 - 0 0.309		
		oleum Corpoi	ation				; PM (Email)					
Was a Water	course Read	cned?	Yes ⊠	] No		If YES, Y	APPRO	<b>VED</b>				
If a Waterco	urse was Im	pacted, Descr	ibe Fully.	*			By JKeye	s at 1	1:00 p	m, No	v 13,	2015
		em and Reme					. 1/\					
		and Cleanup		nd the battery, cau	ising the	release. Vac	cuum truck(s) and	roustabo	out crews v	vere calle	<u>a.</u>	
				were shut in, vacu	ium truc	ks were calle	ed to recover the	spill, and	a roustabo	out crew w	vas callec	1 to repair the
				MOCD approved f								
				f initial analytical								
				the analytical resu								
				7, T21S-R32E, pour Corporation			ilnead Protection	n Area: 1	vo, Distan	ce to Sur	race wa	ter Body:
I hereby cert	ify that the	information g	iven abov	e is true and comp	lete to th	ne best of my	knowledge and	understar	nd that pur	suant to N	MOCD 1	rules and
				nd/or file certain r								
				ce of a C-141 repo								
				y investigate and r ptance of a C-141								
		ws and/or reg		plance of a C-141	report a	oes not rene	ve the operator of	responsi	Dility for C	ompnanc	c willi ali	ly oulei
rederai, state	-	-	aidirono.				OIL CON	ISERV	ATION	DIVIS	ION	
	///	5-	-				<u>oil con</u>	DLICT	711101	DIVIO	1011	
Signature									Nami	& lhye		
Printed Nam	e: Chase So	ettle				Approved by	y Environmental S	Specialist	t: /			
		al Regulatory	Agent			Approval Da	11/13/2015		Expiration	Date: ///		
		e@yatespetrol					of Approval:				<u> </u>	
L-man Addi	css. Cotill	cae y a cespe ir Or	cam.com				n ripprovar.				ned 🗌	
Date: Nover	nber 13, 20	15		Phone: 575-748-	4171	1RP- ///				1RP 38	45	

Form 3160-5 (March 2012)

#### **UNITED STATES** DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2014

5. Lease Serial No. NM-94095

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this	form for proposals to ( Use Form 3160-3 (API	drill or to re-enter ar		or Tribe Name
SUBM	IT IN TRIPLICATE – Other ins			eement, Name and/or No.
1. Type of Well		A	and the second	
Oil Well Gas	Well Other		8. Well Name and No Caper BFE Federa	o. Il #2
Name of Operator     Yates Petroleum Corporation			9. API Well No. 30-025-37439	
3a. Address 105 S. 4th St., Artesia, NM 88210		. Phone No. <i>(include area co</i> 75-748-4171		Exploratory Area re & Wildcat Bone Spring
4. Location of Well (Footage, Sec., T 2310' FSL & 2310' FWL, Section 17, T21S-R3	,R.,M., or Survey Description) 2E		11. County or Parish Lea County, New I	sequipped
12. CHE	CK THE APPROPRIATE BOX(	ES) TO INDICATE NATUR	E OF NOTICE, REPORT OR OTI	HER DATA
TYPE OF SUBMISSION		TY	PE OF ACTION	
Notice of Intent  ✓ Subsequent Report  Final Abandonment Notice	Acidize Alter Casing Casing Repair Change Plans Convert to Injection	Deepen Fracture Treat New Construction Plug and Abandon Plug Back	Production (Start/Resume) Reclamation Recomplete Temporarily Abandon Water Disposal	Water Shut-Off Well Integrity Other Clean up actions to be taken.
approximate area of 130' X 290'. T line. Excavated soils will be hauled (chlorides for documentation). If ir OCD requesting closure. If the an 100' (approximately 110', Section IS 0. Yates Petroleum Corporation	rated between the well and the rewells were shut in, vacuum I to a NMOCD approved facilitial analytical results for TPH alytical results are above the F17, T21S-R32E, per Trend Man requests closure.	n trucks were called to reco y. Vertical and horizontal d & BTEX are under RRAL's RRAL's a work plan will be ap), Wellhead Protection Ar	elineation samples will be taker (site ranking is 0) a Final Repo submitted to the OCD. Depth t	crew was called to repair the poly n and analysis ran for TPH & BTEX ort, C-141 will be submitted to the
14. I hereby certify that the foregoing is Chase Settle	true and correct. Name (Printed/1	T 20 44 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ironmental Regulatory Agent	
Signature // S.		Date 11/13/2	015	
	THIS SPACE F	OR FEDERAL OR ST	ATE OFFICE USE	
Approved by		Title		Data
Conditions of approval, if any, are attack that the applicant holds legal or equitable entitle the applicant to conduct operation	e title to those rights in the subject l			Date

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.

	X	Х	Х	Х	X	Х	Х	Х	Х	Х	Х	Х																		
( )	X	х	х	х	х	х	х	х	х	х	х	х														1				
-												х	х						1											
- **							- 7						х	х						,			-			Ν				
												<b>S1</b>	х	х	<b>S5</b>									- 1						
			-										х	х																
			1										х	х		1	22													
2.0						100	1.15			100		<b>S2</b>	х	х	<b>S6</b>		50	10.0								- 1	- 1			
52											1	1	х	х		6.7 5.8				rdi to t								1 n	10	
										S3			х	х						×		10				٠,	÷			
	•			-								<b>S4</b>	х	х	<b>S7</b>			II =		13	12.1		19	10		110				61 63
													Х	х								Е.	10						_	
-													9	- :				0.			Ca	per	BFE	Fee	dera	al #2	2- N	ot to	o Sc	ale
			<b>S</b> 1			S3			S5			<b>S</b> 7															1000			6

	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	NO	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	NO	ND
S3-2 <sup>1</sup>	1509234	9/1/2015	Hand Auger	2'	ND	ND	ND	ND
S4-1 <sup>1</sup>	1509234	9/1/2015	Hand Auger	1'	ND	ND	ND	ND
S4-2'	1509234	9/1/2015	Hand Auger	2'	ND	ND	ONO	ND
S5-1 <sup>'</sup>	1509234	9/1/2015	Hand Auger	1'	ND	ND	I ND	ND
S5-2'	1509234	9/1/2015	Hand Auger	2'	ND	ND	NO	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 <sup>1</sup>	1509234	9/1/2015	Hand Auger	1'	194.5	3200	9300	6700
<b>S7-2</b> '	1509234	9/1/2015	Hand Auger	2'	192.8	3400	7100	7200
S7-3 <sup>1</sup>	1510 E61	10/26/2015	Backhoe	3'	1.471	130	800	ND
S7-4 <sup>1</sup>	1510 E61	10/26/2015	Backhoe	4'	ND	ND	NO	ND
S7-5 <sup>'</sup>	1510 E61	10/26/2015	Backhoe	5'	ND	ND	NO	630
\$7-6°	1510 E61	10/26/2015	Backhoe	6'	ND	ND	ND	77
S7-7 <sup>1</sup>	1510 E61	10/26/2015	Backhoe	7'	ND	ND	ND	100
S7-8 <sup>1</sup>	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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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 qualifers 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,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

andyl

Albuquerque, NM 87109

#### Lab Order 1509234

Date Reported: 9/17/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation

Project: Caper BFE Federal #2

aper BFE Federal #2

Lab ID: 1509234-001

Client Sample ID: S1-1'

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

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

Analyses	Result	RL Qı	ual 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 RA	NGE ORGANIC	S			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 R	ANGE				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

Matrix: SOIL

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

- 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 Page 1 of 19
- P Sample pH Not In Range
- RL Reporting Detection Limit

#### Lab 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: 15092

1509234-002

Matrix: SOIL

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

Analyses	Result	RL Qı	ıal 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 RANG	GE ORGANIC	S			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 RAM	NGE				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.

- 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 Page 2 of 19
- P Sample pH Not In Range
- RL Reporting Detection Limit

### Lab Order 1509234

Date Reported: 9/17/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation

Project: Caper BFE Federal #2 1509234-003

Lab ID:

Matrix: SOIL

Client Sample ID: S2-1'

Collection Date: 9/1/2015 11:45:00 AM Received Date: 9/4/2015 10:20:00 AM

Analyses	Result	RL Q	ual 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 RA	NGE ORGANICS	3			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 R	ANGE				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.

- 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
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 19 J
- P Sample pH Not In Range
- Reporting Detection Limit

#### Lab Order 1509234

Date Reported: 9/17/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation

Caper BFE Federal #2

Client Sample ID: S2-2'

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 Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: LGT
Chloride	ND	30	mg/Kg	20	9/9/2015 7:09:06 PM	21206
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANIC	S			Analys	t: <b>KJH</b>
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	9/10/2015 11:19:07 AN	1 21185
Surr: DNOP	114	57.9-140	%REC	1	9/10/2015 11:19:07 AN	1 21185
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: 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					Analys	t: 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.

- 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
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 4 of 19 J
- P Sample pH Not In Range
- Reporting Detection Limit

### Lab Order 1509234

Date Reported: 9/17/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation

Project: Caper BFE Federal #2

Lab ID: 1509234-005

Client Sample ID: S3-1'

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

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

Analyses	Result	RL Q	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	: LGT
Chloride	ND	30	mg/Kg	20	9/9/2015 7:21:31 PM	21206
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analys	t: KJH
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	9/10/2015 11:40:39 AN	1 21185
Surr: DNOP	103	57.9-140	%REC	1	9/10/2015 11:40:39 AN	1 21185
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: 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					Analys	t: 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

Matrix: SOIL

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

- 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 Page 5 of 19
- P Sample pH Not In Range
- RL Reporting Detection Limit

#### Lab Order 1509234

9/9/2015 9:31:01 PM

21174

Date Reported: 9/17/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation

Project: Caper BFE Federal #2

Surr: 4-Bromofluorobenzene

Client Sample ID: S3-2'

Collection Date: 9/1/2015 11:57:00 AM Received Date: 9/4/2015 10:20:00 AM

**Lab ID:** 1509234-006 **Matrix:** SOIL

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

80-120

%REC

104

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

- 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 Page 6 of 19
- P Sample pH Not In Range
- RL Reporting Detection Limit

### Lab Order 1509234

Date Reported: 9/17/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation

Project: Caper BFE Federal #2

Lab ID: 1509234-007

Client Sample ID: S4-1'

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

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

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: LGT
Chloride	ND	30	mg/Kg	20	9/9/2015 7:46:20 PM	21206
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANIC	S			Analys	t: <b>KJH</b>
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	9/10/2015 12:23:40 PM	1 21185
Surr: DNOP	100	57.9-140	%REC	1	9/10/2015 12:23:40 PM	1 21185
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: 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					Analys	t: 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

Matrix: SOIL

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

- 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 Page 7 of 19
- P Sample pH Not In Range
- RL Reporting Detection Limit

### Lab Order 1509234

Date Reported: 9/17/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation

oject: Caper BFE Federal #2

Lab ID: 1509234-008

Matrix: SOIL

Collection Date: 9/1/2015 12:05:00 PM Received Date: 9/4/2015 10:20:00 AM

Client Sample ID: S4-2'

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

- 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 Page 8 of 19
- P Sample pH Not In Range
- RL Reporting Detection Limit

### Lab Order 1509234

Date Reported: 9/17/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation

Caper BFE Federal #2

1509234-009

Lab ID:

Matrix: SOIL

Client Sample ID: S5-1'

Collection Date: 9/1/2015 12:09:00 PM Received Date: 9/4/2015 10:20:00 AM

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

- 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
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 9 of 19 J
- P Sample pH Not In Range
- RL Reporting Detection Limit

### Lab Order 1509234

Date Reported: 9/17/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation

Caper BFE Federal #2

Client Sample ID: S5-2'

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

Lab ID: 1509234-010

Project:

Matrix: SOIL

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

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: LGT
Chloride	ND	30	mg/Kg	20	9/9/2015 8:23:34 PM	21206
EPA METHOD 8015M/D: DIESEL RAM	IGE ORGANIC	s			Analys	t: <b>KJH</b>
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 RA	NGE				Analys	t: 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					Analys	t: 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.

- 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 Page 10 of 19
- P Sample pH Not In Range
- RL Reporting Detection Limit

#### Lab Order 1509234

Date Reported: 9/17/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation

Project: Caper BFE Federal #2

Lab ID: 1509234-011

Client Sample ID: S6-1'

Collection Date: 9/1/2015 12:17:00 PM

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

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: LGT
Chloride	260	30	mg/Kg	20	9/9/2015 8:35:58 PM	21206
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS	3			Analys	t: <b>KJH</b>
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 RAM	IGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	9/10/2015 12:53:17 AM	M 21175
Surr: BFB	91.5	75.4-113	%REC	1	9/10/2015 12:53:17 AM	M 21175
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.047	mg/Kg	1	9/10/2015 12:53:17 AM	M 21175
Toluene	ND	0.047	mg/Kg	1	9/10/2015 12:53:17 AM	M 21175
Ethylbenzene	ND	0.047	mg/Kg	1	9/10/2015 12:53:17 AM	M 21175
Xylenes, Total	ND	0.094	mg/Kg	1	9/10/2015 12:53:17 Af	M 21175
Surr: 4-Bromofluorobenzene	106	80-120	%REC	1	9/10/2015 12:53:17 Af	M 21175

Matrix: SOIL

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

- 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 Page 11 of 19
- P Sample pH Not In Range
- RL Reporting Detection Limit

#### Lab Order 1509234

Date Reported: 9/17/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation

Project: Caper BFE Federal #2

**Lab ID:** 1509234-012

Client Sample ID: S6-2'

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

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

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: <b>LGT</b>
Chloride	32	30	mg/Kg	20	9/9/2015 9:13:11 PM	21206
EPA METHOD 8015M/D: DIESEL RAN	NGE ORGANICS	3			Analys	t: <b>KJH</b>
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 RA	NGE				Analys	t: 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					Analys	t: 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

Matrix: SOIL

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

- 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 page 12 of 19
- P Sample pH Not In Range
- RL Reporting Detection Limit

#### Lab Order 1509234

Date Reported: 9/17/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation

Project: Caper BFE Federal #2

Lab ID: 1509234-013

Client Sample ID: S7-1'

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

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 RAN	GE ORGANICS	3			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 RAN	IGE				Analys	t: 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					Analys	t: 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

Matrix: SOIL

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

- 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 Page 13 of 19
- P Sample pH Not In Range
- RL Reporting Detection Limit

## Lab Order **1509234**

Date Reported: 9/17/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation

Project: Caper BFE Federal #2

Lab ID:

1509234-014 **Matrix:** SOIL

Client Sample ID: S7-2'

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

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 RANG	GE ORGANICS	3			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 RAN	IGE				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.

- 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 Page 14 of 19
- P Sample pH Not In Range
- RL Reporting Detection Limit

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1509234

17-Sep-15

Client:

Yates Petroleum Corporation

Result

Project:

Caper BFE Federal #2

Sample ID MB-21206

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 21206

PQL

RunNo: 28738

Prep Date: 9/9/2015 Analysis Date: 9/9/2015

SeqNo: 871283

Units: mg/Kg

HighLimit %RPD

**RPDLimit** Qual

Analyte Chloride

ND 1.5

Sample ID LCS-21206

SampType: LCS

TestCode: EPA Method 300.0: Anions

Client ID:

LCSS

Batch ID: 21206

RunNo: 28738

Units: mg/Kg

Prep Date: 9/9/2015

Analysis Date: 9/9/2015

1.5

PQL

SeqNo: 871284

SPK value SPK Ref Val %REC LowLimit

0

HighLimit

**RPDLimit** %RPD

Qual

Analyte

15.00

%REC

LowLimit

110

Chloride

14

SPK value SPK Ref Val

94.1

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix S
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits J

Page 15 of 19

- P Sample pH Not In Range
- Reporting Detection Limit RL

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1509234

17-Sep-15

Client:

Yates Petroleum Corporation

Project:

Caper BFE Federal #2

Sample ID MB-21185	SampT	уре: <b>МЕ</b>	BLK	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch	Batch ID: 21185			tunNo: 2	8740				
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	SampT	ype: LC	S	TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch	ID: 21	185	RunNo: 28740							
Prep Date: 9/8/2015	Analysis D	Analysis Date: 9/10/2015			SeqNo: 8	71392	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

Page 16 of 19

- P Sample pH Not In Range
- RL Reporting Detection Limit

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1509234

17-Sep-15

Client: Project: Yates Petroleum Corporation

Caper BFE Federal #2

Sample ID MB-21174	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range
STATE CHARGE PROPERTY		

Client ID: PBS Batch ID: 21174 RunNo: 28722

SegNo: 870876 Units: mg/Kg Analysis Date: 9/9/2015 Prep Date: 9/8/2015

SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit Qual

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 890 1000 88.6 754 113

Sample ID LCS-21174	SampT	ype: LC	S	Test	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 21174			R	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				

TestCode: EPA Method 8015D: Gasoline Range Sample ID MB-21175 SampType: MBLK PBS Batch ID: 21175 RunNo: 28722 Client ID: SeqNo: 870894 Units: mg/Kg Analysis Date: 9/9/2015 Prep Date: 9/8/2015 %RPD **RPDLimit** Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit Qual Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 910 1000 91.5 75.4 113 TestCode: EPA Method 8015D: Gasoline Range Sample ID LCS-21175 SampType: LCS

Batch ID: 21175 RunNo: 28722 Client ID: LCSS

Analysis Date: 9/9/2015 SeqNo: 870895 Units: mg/Kg Prep Date: 9/8/2015

%RPD **RPDLimit** SPK value SPK Ref Val %REC LowLimit HighLimit Qual Analyte Result **PQL** 25.00 0 94.1 79.6 122 Gasoline Range Organics (GRO) 24 5.0 Surr: BFB 990 1000 98.6 75.4 113

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

1000 89.2 75.4 113 890 Surr: BFB

TestCode: EPA Method 8015D: Gasoline Range Sample ID LCS-21199 SampType: LCS Batch ID: 21199 RunNo: 28761 Client ID: LCSS Prep Date: 9/9/2015 SeqNo: 872161 Units: %REC Analysis Date: 9/10/2015

**RPDLimit** SPK value SPK Ref Val %REC %RPD Qual HighLimit Analyte Result **PQL** LowLimit

1000 1000 101 75.4 113 Surr: BFB

#### **Qualifiers:**

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded H

Not Detected at the Reporting Limit ND

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix B Analyte detected in the associated Method Blank

Value above quantitation range E

Analyte detected below quantitation limits

Page 17 of 19

P Sample pH Not In Range

RL Reporting Detection Limit

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1509234

17-Sep-15

Client:

Yates Petroleum Corporation

Project:

Caper BFE Federal #2

Sample ID MB-21174	SampT	SampType: MBLK			Code: EF					
Client ID: PBS	Batch ID: 21174			R	unNo: 2					
Prep Date: 9/8/2015	Analysis Date: 9/9/2015			S	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	SampT	ype: <b>LC</b>	S	Test	tCode: El					
Client ID: LCSS	Batch	n ID: 21	174	R	RunNo: 2					
Prep Date: 9/8/2015	Analysis D	oate: 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	SampT	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS	Batch ID: 21175			R	RunNo: 2					
Prep Date: 9/8/2015	Analysis Date: 9/9/2015			S	SeqNo: 8	70940	g			
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	SampT	ype: LC	s	TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch	ID: <b>21</b> 1	175	R	RunNo: 28722					
Prep Date: 9/8/2015	Analysis D	ate: 9/	9/2015	S	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

Page 18 of 19

P Sample pH Not In Range

RL Reporting Detection Limit

### 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

LowLimit

LowLimit

Client ID:

PBS

Batch ID: 21199

PQL

RunNo: 28761

Prep Date: 9/9/2015 Analysis Date: 9/10/2015

Units: %REC

SeqNo: 872195

Analyte

Client ID:

Result

SPK value SPK Ref Val %REC

HighLimit

**RPDLimit** 

Qual

Surr: 4-Bromofluorobenzene

1.1

1.000

106

120

%RPD

LCSS

SampType: LCS

TestCode: EPA Method 8021B: Volatiles

Sample ID LCS-21199

Prep Date: 9/9/2015

Batch ID: 21199 Analysis Date: 9/10/2015

PQL

RunNo: 28761 SeqNo: 872196

80

HighLimit

Units: %REC

%RPD

**RPDLimit** Qual

Analyte

Result

1.000

118

80

Surr: 4-Bromofluorobenzene

1.2

SPK value SPK Ref Val

%REC

120

Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Holding times for preparation or analysis exceeded H

Not Detected at the Reporting Limit ND

R RPD outside accepted recovery limits

% Recovery outside of range due to dilution or matrix S

В Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

Page 19 of 19

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

Work Order Number: 1509234 RcptNo: 1 Yates Petroleum Corpora Client Name: 09/04/15 NS Received by/date: aline Some 9/4/2015 10:20:00 AM Logged By: Celina Sessa alin Som Celina Sessa 9/4/2015 3:30:26 PM Completed By: 09/08/15 Reviewed By: Chain of Custody Not Present No 🗌 Yes V 1 Custody seals intact on sample bottles? No 🗍 Not Present Yes V 2. Is Chain of Custody complete? Courier 3. How was the sample delivered? Log In No 🗆 NA ... 4. Was an attempt made to cool the samples? No 🗌 NA 🗌 Yes V 5. Were all samples received at a temperature of >0° C to 6.0°C No | Yes V Sample(s) in proper container(s)? No [ 7. Sufficient sample volume for indicated test(s)? No | 8. Are samples (except VOA and ONG) properly preserved? NA 🗌 No V 9. Was preservative added to bottles? Yes .... No VOA Vials No 🗌 10. VOA vials have zero headspace? Yes 🗌 No V 11. Were any sample containers received broken? # of preserved bottles checked for pH: Yes V No 🗌 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 13. Are matrices correctly identified on Chain of Custody? Yes No 🗌 14. Is it clear what analyses were requested? Yes Checked by: No . Yes V 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes NA V No L 16. Was client notified of all discrepancies with this order? Person Notified: Date eMail Phone Fax In Person By Whom: Via: Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date Signed By 44 Good Yes

	1	1									-	-	0	4	COLTO COLT.
Client: Ya	tes Pet	Loleum	Client: Yates Petroleum Corporation	X Standard	□ Rush			Д	K	Z	YSI	V	AD	2	ANALYSIS LABORATORY
		1		Project Name:					ş	ww.ha	www.hallenvironmental.com	nment	al.con		
Mailing Address:	cress:			~	Caper BFE Federal #2	ederal #2	4	4901 Hawkins NE	awkin		- Albuq	nerqu	e. NN	Albuquerque, NM 87109	
105 South 4th Street Artesia, NM	4th Str	eet Arte	isia, NM 88210	Project #:				Tel. 505-345-3975	5-345	-3975	Fax 505-345-	505	505-345-4107	107	
Phone #:	U)	575-703-6537	6537		30-025-37439	7439					IIIII	Day of	Tean		
email or Fax#:		settle@	csettle@vatespetroleum.com	Project Manager:	ger:						.08				
OA/OC Package:	ài		n I aval 4 (Enll Validation)		Chase Settle PO # 205, 0750	750				7	o 'Od'				
o standard	2 6		(	Sampler:	Chase Settle										
Accreditation.		□ Other			₩ Yes		***********			-	s		··········	(AC	
□ EDD (Type)	1_			Sample Temp	perature:	20014					etal			)√-ir	
Date		Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	M + X3T8	M + X3T8	TPH (Meth	8310 (PM	RCRA 8 M	ised 1808	OV) 80058	8270 (Sen	
21100110	11:37 Soil	Soil	S1-1'	1 - 402.	ICE	1-001	×	×			×				
9/1/2015	11:41 Soil	100	S1-2,	1 - 4oz.	ICE	C00-	×	×		1 1	×	-		1	
977/2015	11:45 Soil	Soil	S2-1.	1 - 402.	ICE		×	×		$\dashv$	×				
9/1/27/15	11:49 Soil	jog	. S2-2.	1 - 4oz.	ICE	180	×	×		+	×	-		1	
a4/2015	11:53 Soil	Soil	S3-1'	1 - 4oz.	ICE	-005	×	×		$\dashv$	×	_		1	
9/1/2015	11:57 Soil	Soil	\$3-2'	1 - 40z.	ICE	-206	×	×	$\perp$		×	-			
9/1/2015	12:01 Soil	Soil	84-1'	1 - 402.	IČE	-00	×	×			×	-	1		
9/1/2015	12:05 Soil	Soil	84-2'	1 - 402	띬	800-	×	×	1		×	_		+	
911/2015	12:09 Soil	Soil	S5-1'	1 - 4oz.	핑	-004	×	×			×	-	丰	+	
370000	12-13 Soil	19	S5-2.	1 - 4oz.	ICE	010	×	×		-	×	-		1	
or operation	12-17 Soil	lick	S6-1*	1 - 40Z.	ICE	110-	×	×			×	_			
CI POUR	10:01	3	S6-2'	1 - 4oz.	SE	210-	×	×		$\dashv$	×				7
0.3.15	Time:	ne: Relinquished by:	, , , , , , , , , , , , , , , , , , ,	Received by	3	Date Time 0%/64/15 /090	Rema	ırks:							
	Time:	Relinquished by:	ed by:	Received by:		Date Time									
enter							-								

Chain-of-Custody Record Tum-Around Time:		8 S N N N N N N N N N N N N N N N N N N	8081 Pesticides / 8082 PCB's 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	F, OS, NOS, NOS, NOS, NOS, NOS, NOS, NOS,	RCRA 8 Metals	HAG to ANG) OTE8	EDB (Method 504.1)	(F.814 borliah) HTT	2 2 (leselOlase) 82 to8 botheM HqT × ×	호 는 (Vino sea) HPT + ATBE + TPH (Gas only) 등	(1508) s'8MT + 38TEX + MTBE + TMB's (8021)		deral #2   deral #2	Caper BFE Fe 30-025-37 30-025-37 ger: Chase Settle PO # 205. 07 Chase Settle ICE ICE ICE	X Standard Project Name Sampler: On Ice: Sample Tem Container Type and # 1 - 4oz. 1 - 4oz. 1 - 4oz.	Sie, NM 86210 Statespetroleum.com Catespetroleum.com Sample Request ID S7-1' S7-2' S7-2'	leum Other O		Client: Yates Petrole  Mailing Address:  105 South 4th Street Phone #: 575- email or Fax#: csctt QA/QC Package:  □ Standard Accreditation: □ NELAP □ Standard  □ EDD (Type) □ EDD (Type) □ EDD (Type) □ Date □ Time Ma  Date: Time: Relin
Notice   N												1030 Time	Osloul/15 Date	Such	Celui	7		1	i
Notice to Name:   Project Name:   Caper BFE Federal #2   A901 Haw												Time	Date		Received by:	ed by:	Relinquished by:	.6	Time
Caper New   Analysis   Contract   Caper   Ca												1000	cithalis	See S	Celun	3	1		
X Standard												1001	ratorthe	Ĺ	0.0			and the second s	
X Standard									S	Z Z	ř	E	Date		Received by:	A pk	Relinquishe	me:	1
X Standard	The state of the s				-			1	1	]		,							1
Notice   Name			_				_											-	
Notice   Name   Project Name   Pro	1	1	1	4	1	_	_												
Notice   Name   Notice   Name   Nam		-			_			_										-	
ANALYSIS LABORATORY   Notice to Name:   Project Name:   Caper BFE Federal #2   Analysis Request   Dones:   X-Yes   Dones:									-										
AMALYSIS LABORATORY			-	-	_	_	L	L											
ANALYSIS LABORATORY   Notice that   Project Name:   Project Name:   Caper BFE Federal #2   Analysis Request   Chase Settle   Polysidation   Project Manager:   Chase Settle   Container Chase Settle   Container Preservative   HEAL No.   Container Preservative   Container Preservative   HEAL No.   Container Preservative   Container   Container Preservative   Container   Containe								1							2000000				
X Standard   Rush   Rush   Rush   Roject Name:		L	L	L	L	L	L	L	L	L									
X Standard											100000		Monator of						
X Standard   Rush   R		L	L	L	L	L	L											1	
X Standard   Rush   R																			
Noticet Manager:   Chase Settle   Container   Preservative   Project I Manager:   Container   Preservative   HEAL No.   Type and # Type   Type and # Type and # Type   Type and # Type   Type and # Type   Type and # Type and # Type   Type and # Type   Type and # Type and # Type   Type and # Type   Type and # Type and # Type   Type and # Type and Type			L	Ļ	L	ļ	l	1											
ANALYSIS LABORATORY   ANALYSIS LABORATORY																			1
ANALYSIS LABORATORY   ANALYSIS LABORATORY				-	L	L		L										100	
Notice   Name:   Caper BFE Federal #2   Project Name:   Caper BFE Federal #2   Project Manager:   Chase Settle																			
Project Name:   Project Name:   Caper BFE Federal #2   210					L		-											-	
Notice   N																	de desta		
X Standard	***************************************																		1
X Standard   Rush   Newwhallenvironmental.com						į.					1								
X Standard   Rush   Newwhallenvironmental.com						-		agence.											
X Standard   Rush   R		1		×					×		×	+	9	ICE	1 - 402.	2-12	Soil	12:30	•
ANALYSIS LABORATORY   Name:   Project Name:   Caper BFE Federal #2   4901 Hawkins NE - Abuquerque, NM 87109												Į	1				100	4.4	
ANALYSIS LABORATORY   ANALYSIS LABORATORY				×					×		×	W)	101	30	1-402.	\$7-1.	į	30.0	7
NALYSIS LABORATORY   Name:		_	08	-	_	83	33	ᅫ	qT	T8	T8	34	26061		,				
Noticet Name:			eq 180			19) Ore	DB (We	əM) Hd	JaM Hc	1 + X31	LEX + N		HEAL		Container Type and #	Sample Request ID	Matrix	ile.	- Indian
ANALYSIS LABORATORY   ANALYSIS LABORATORY		-	olla			A	y	рц	OL	TN	T							200	
ANALYSIS LABORATORY			Þŀ	-		10	po	po	} p	18	18				Sample Tem			1000	E
ANALYSIS LABORATORY   ANALYSIS LABORATORY		-	60	-	-	d.	9	Þ	30		- ==			1	G. 100.		□ Officer		1
ANALYSIS LABORATORY   ANALYSIS LABORATORY			15	-	-	Vc	709	81	)\i	. +	. +		20	X Yes	On Ice:		1000	:	1
ANALYSIS LABORATORY   ANALYSIS LABORATORY			98	N,		(H	11	1.4	89	dΙ	MT			Chase Settle	Sampler:			o	tu
X Standard     Rush     Project Name:     Caper BFE Federal #2   4901 Haw	()		80	O			(	(	))	H	81								3
X Standard Caber BFE Federal #2 4901 Haw Caper BFE Federal #2 Tel. 505-210 30-025-37439 Tel. 505-37439 Chase Settle	220000000000000000000000000000000000000		17	d'8			120,000	TO A CONTRACT OF THE CONTRACT	ලඉ	o)	S		20	PC # 205. 07		☐ Level 4 (Full Validation)		-6	200
X Standard □ Rush Project Name:  Caper BFE Federal #2  4901 Haw  210  30-025-37439  Um.com Project Wanager:			ьс	Oc					]/5	393	)8)		1	Chase Sellie				age:	ack
X Standard C Rush Project Name:  Caper BFE Federal #2 4901 Haw  210 30-025-37439  Divisor Manager			s,g	8"					e)le	10	121			Oliver County	3000	diespendiespendiespendiespendiespendiespendiespendiespendiespendiespendiespendiespendiespendiespendiespendiesp		X.	T O
X Standard C Rush Project Name:  Caper BFE Federal #2 4901 Haw 210 Project #:  30-025-37439				°C				11	ə	Αį	(			707	Droignt Mana	man and and and and and	(		1
X Standard C Rush Project Name:  Caper BFE Federal #2 4901 Haw  Project #:				(					(1	(			456	30-029-31		3537	575-703-6		ا د و
X Standard C Rush Project Name:  Caper BFE Federal #2 4901 Haw Tel. 505-		nest	Red	VSIS	(leu	•							730	20 005 27					
X Standard C Rush Project Name: Caper BFE Federal #2 4901 Haw	4101	2	900	a X		0/6	Ų.	5	<u>بر</u>	<u>⊕</u>		F			Froject #.		treet Arte	tth S	ż
X Standard Caber BFE Federal #2 4901 Haw	4407	270	2	ı	•	į				I					l			-	1
X Standard	M 87109	Ξ	ergu	nbno	₹	<del>以</del>	ins	lawk	2	49			deral #2	Caper BFE Fe				dress	3Q
X Standard																			
X Standard   Rush	Ę	tai.co	neu	iron	llen	«ha	\$				1				Project Name			4	
X Standard																			
	SORATORY	AB	7	315	Σ.	A	Z	O,	Γ		L		1, 11		X Standard	Sorporation	etroleum C	tes P	500
	4							•	1		J					פוסמו ווספום	5		
Turn-Around Time:	MENIAL	Ō	H	2	Ш	님	4	1	T							さんごう 大手につての	うた。	בותי	



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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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 qualifers 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,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Collection Date: 10/26/2015 1:41:00 PM

Lab Order: 1510E61

Hall Environmental Analysis Laboratory, Inc. Date Reported: 11/6/2015

CLIENT: Yates Petroleum Corporation Lab Order: 1510E61 Project: Caper BFE Federal #2

Client Sample ID: S7-3' Matrix: SOIL

1510E61-001

Result **RL Qual Units DF** Date Analyzed Analyses **Batch ID EPA METHOD 300.0: ANIONS** Analyst: LGT Chloride ND 30 11/4/2015 2:58:58 PM mg/Kg 20 22180 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: KJH 800 Diesel Range Organics (DRO) 100 mg/Kg 10 11/3/2015 7:42:07 PM 22117 Surr: DNOP 0 70-130 S %REC 11/3/2015 7:42:07 PM 22117 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB 11/2/2015 3:47:37 PM Gasoline Range Organics (GRO) 130 4.9 mg/Kg 22110 Surr: BFB 580 %REC 75.4-113 S 11/2/2015 3:47:37 PM 22110 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.049 mg/Kg 11/2/2015 3:47:37 PM 22110 Toluene 0.071 0.049 mq/Kq 11/2/2015 3:47:37 PM Ethylbenzene 0.049 ND mg/Kg 11/2/2015 3:47:37 PM 22110 Xylenes, Total 1.4 0.098 mg/Kg 11/2/2015 3:47:37 PM 22110 Surr: 4-Bromofluorobenzene 166 80-120 S %REC 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 Qu	al Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS		*			Ana	lyst: <b>LGT</b>
Chloride	ND	30	mg/Kg	20	11/4/2015 3:11:23 F	PM 22180
EPA METHOD 8015M/D: DIESEL RANGE	ORGANIC	S			Ana	lyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	11/3/2015 8:09:22 F	PM 22117
Surr: DNOP	107	70-130	%REC	1	11/3/2015 8:09:22 F	PM 22117
EPA METHOD 8015D: GASOLINE RANGE	<b>≣</b>				Ana	lyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	11/2/2015 5:20:38 F	PM 22110
Surr: BFB	99.2	75.4-113	%REC	1	11/2/2015 5:20:38 F	PM 22110
EPA METHOD 8021B: VOLATILES					Ana	lyst: NSB
Benzene	ND	0.049	mg/Kg	1	11/2/2015 5:20:38 F	PM 22110
Toluene	ND	0.049	mg/Kg	1	11/2/2015 5:20:38 F	PM 22110
Ethylbenzene	ND	0.049	mg/Kg	1	11/2/2015 5:20:38 F	PM 22110
Xylenes, Total	ND	0.098	mg/Kg	1	11/2/2015 5:20:38 F	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:

Lab ID:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit

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:

Client Sample ID: S7-5'

1510E61-003

Collection Date: 10/26/2015 1:46:00 PM

Matrix: SOIL

Analyses	Result	RL Qu	al Units	DF	Date Analyzed E	atch ID
EPA METHOD 300.0: ANIONS					Analys	t: <b>LGT</b>
Chloride	630	30	mg/Kg	20	11/4/2015 3:48:37 PM	22180
EPA METHOD 8015M/D: DIESEL RANGE	ORGANIC	S			Analys	t: <b>KJH</b>
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					Analys	t: 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					Analys	t: 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:

Client Sample ID: S7-6'

1510E61-004

Collection Date: 10/26/2015 1:49:00 PM

Matrix: SOIL

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Ana	alyst: <b>LGT</b>
Chloride	77	30	mg/Kg	20	11/4/2015 4:01:01	PM 22180
EPA METHOD 8015M/D: DIESEL RANG	E ORGANIC	S			Ana	alyst: <b>KJH</b>
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 RAN	GE				Ana	alyst: <b>NSB</b>
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					An	alyst: <b>NSB</b>
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.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order: 1510E61

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/6/2015

**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

1.50						
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Ana	alyst: <b>LGT</b>
Chloride	100	30	mg/Kg	20	11/4/2015 4:13:25	PM 22180
EPA METHOD 8015M/D: DIESEL RANGE O	ORGANIC	S			Ana	alyst: <b>KJH</b>
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					Ana	alyst: <b>NSB</b>
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					Ana	alyst: <b>NSB</b>
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:

Analyses

1510E61-006

RL Qual Units

Collection Date: 10/26/2015 1:55:00 PM

Client Sample ID: S7-8'

Matrix: SOIL

**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 RANG	E ORGANICS	3			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 RAN	GE				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

Result

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - RPD outside accepted recovery limits
  - % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank В
- Value above quantitation range Е
- J Analyte detected below quantitation limits Page 3 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit

### 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

Units: mg/Kg

Result

SeqNo: 914569

HighLimit

**RPDLimit** 

Qual

Analyte Chloride

PQL ND 1.5

Sample ID LCS-22180

SampType: LCS

TestCode: EPA Method 300.0: Anions

Client ID: LCSS

Batch ID: 22180

RunNo: 30017

SPK value SPK Ref Val %REC

SeqNo: 914570

Units: mg/Kg

%RPD

Analyte

PQL

Analysis Date: 11/4/2015

15.00

Qual

Chloride

1.5

0

SPK value SPK Ref Val %REC LowLimit

%RPD

**RPDLimit** 

Result

Prep Date: 11/4/2015

14

92.2

LowLimit 90 HighLimit 110

Qualifiers:

D H

ND R

S

% Recovery outside of range due to dilution or matrix

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit RPD outside accepted recovery limits В

Analyte detected in the associated Method Blank E Value above quantitation range

Reporting Detection Limit

P Sample pH Not In Range

Analyte detected below quantitation limits Page 4 of 7

### Hall Environmental Analysis Laboratory, Inc.

59

6.4

10

50.00

5.000

WO#:

1510E61

06-Nov-15

Client:

Yates Petroleum Corporation

Project:

Diesel Range Organics (DRO)

Surr: DNOP

Caper BFE Federal #2

Sample ID MB-22117	SampType: MBLK		8015M/D: Diesel Range	e 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 valu	e SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Diesel Range Organics (DRO)	ND 10			
Surr: DNOP	12 10.0	0 125 70	130	
Sample ID LCS-22117	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Rang	e 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 valu	ie SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual

118

129

57.4

70

139

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

Page 5 of 7

- P Sample pH Not In Range
- RL Reporting Detection Limit

### 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 PBS Batch ID: 22110 RunNo: 29948 Client ID: 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 122 Gasoline Range Organics (GRO) 26 5.0 25.00 105 79.6 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

Page 6 of 7

- P Sample pH Not In Range
- RL Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1510E61

06-Nov-15

Client:

Yates Petroleum Corporation

Project:

Caper BFE Federal #2

Sample ID MB-22110	SampT	уре: МЕ	BLK	Test	Code: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch	n ID: 22	110	R	tunNo: 2	9948				
Prep Date: 10/30/2015	Analysis D	Date: 11	1/2/2015	S	SeqNo: 9	12211	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050	W			3.0				
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	SampT	ype: LC	S	Test	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batch	ID: 22	110	R	RunNo: 2	9948				
Prep Date: 10/30/2015	Analysis D	ate: 11	1/2/2015	S	SeqNo: 9	12212	Units: mg/K	(g		
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.
- 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

Page 7 of 7

- P Sample pH Not In Range
- RL Reporting Detection Limit



#### Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3973 FAX: 503-345-4107

Website: www.hallenvironmental.com

Sample Log-In Check List

RoptNo: 1 Work Order Number: 1510E61 Yates Petroleum Corpora Client Name: 15 10/30/15 Received by/date: alin Som 10/30/2015 9:45:00 AM Logged By: Celina Sessa Celin Som 10/30/2015 11:11:00 AM Celina Sessa Completed By: 10/30/15 Reviewed By: Chain of Custody No Not Present V 1. Custody seals intact on sample bottles? Yes V No Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In NA . Yes V No 4. Was an attempt made to cool the samples? No 🗌 NA Were all samples received at a temperature of >0° C to 6.0°C No Yes V Sample(s) in proper container(s)? No Yes V 7. Sufficient sample volume for indicated test(s)? Yes V No 8 Are samples (except VOA and ONG) properly preserved? No V NA Yes 9. Was preservative added to bottles? Yes No L No VOA Vials 🗸 10.VOA vials have zero headspace? Yes No Y 11, Were any sample containers received broken? # of preserved bottles checked No \_ for pH. Yes V 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? Yes V No 13. Are matrices correctly identified on Chain of Custody? No 🗌 Yes V 14, is it clear what analyses were requested? No 🗌 Checked by: Yes 🗸 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) NA V Yes No 🔲 16. Was client notified of all discrepancies with this order? Date Person Notified: eMail Phone Fax In Person Via: By Whom: Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date |

5	)	)	Clair of Colors						È	-	2		5	TALL ENVIRONMENTAL	4	_
Cirent: Yates Petroleum Corporation	Petroi	eum C		X Standard	□ Rush				A	AAL	YSI	SL	AB	ANALYSIS LABORATORY	OR	>
				Project Name	u.				ş	w.hal	www.hallenvironmental.com	ment	al.con	-		
Mailing Address:	SS:				Caper BFE Federal #2	deral #2		4901 Hawkins NE -	awkins	- H.		nerduk	N.	Albuquerque, NM 87109		
105 South 4th Street	Street		Artesia, NM 88210	Project #:				Tel. 505-345-3975	5-345	3975	Fay	Fax 505-345-4107	345-4	107		
Phone #:	575	575-703-6537	3537		30-025-37439	7439				A	Analysis Request	Requ	<b>Jest</b>		情報	
email or Fax#:		ttle@v	csettle@yatespetroleum.com	Project Manager:	ger:						(POS				_ buvotes estern	
QA/QC Package:	.e.		□ Level 4 (Full Validation)		Chase Settle PO # 205, 0750	20	-				S 'Od'					
				١,.	Chase Settle						ON					(N
O NELAP		□ Other			X Yes	ON D					-			(AC		10
☐ EDD (Type		7		Ten	nperature: 2.6	000					-			)Λ-Ι		Y) 8
Date Time		Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	TM + X3T8	BTEX + Metho	risM) HQT	AN9) 803 AN9) 0168	M 8 AROR Anions (F,	Bost Pesti	OV) 80628	mə2) 07.28		Air Bubble:
Oct28-15 1:	1:41 Soil		\$7-3'	1 - 40Z	ICE	100-	×	×			×					
1	1:43 Soil		S7-4.	1 - 40Z	ICE	£00-	×	×			×					1
	1:46 Soil		57-5	1 - 4oz.	ICE	-003	×	×			×					
	1:49 Soil		.9- <b>/</b> S	1 - 402.	ICE	400-	×	×			×		_		1	
	1:52 Soil		7-78	1 - 4oz.	ICE	7007	×	×			×	:				
	1:55 Soil		.8- <b>2</b> S	1 - 40Z.	ICE	000-	×	×		- "	×		1			
<u> </u>		- 1														
													-			
					71											
											1					-
Date: Time: /24/15		Relinquished by:	See	Received by:	Sur 1	- 10	Kemarks:	arks:								
Date: Time:	- Grein	4ReInquished by:	d by:	Received by:		Date. Time										
T nedes:	ary, samp	ndus sak	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analysical report.	contracted to other a	condited laborators	es. This serves as notice of t	lidissod sin	ty. Amy st	ap-contrac	sted data	will be cie	a:fy notat	ag on th	e analytical re	eport.	