

MARTIN YATES, III  
1912-1985

FRANK W. YATES  
1936-1986

S.P. YATES  
1914-2008



105 SOUTH FOURTH STREET  
ARTESIA, NEW MEXICO 88210-2118

TELEPHONE (575) 748-1471

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

JOHN A. YATES  
CHAIRMAN EMERITUS

JOHN A. YATES JR.  
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CHIEF FINANCIAL OFFICER

JAMES S. BROWN  
CHIEF OPERATING OFFICER

April 8, 2016

Mr. Jamie Keys or Ms. Kellie Jones  
NMOCD District I  
1625 N. French Dr.  
Hobbs, NM 88240

**RECEIVED**

*By JKeyes at 8:33 am, Apr 11, 2016*

**APPROVED**

RE: Undaunted BSD State Com #1H  
30-025-40408  
Section 2, T25S-R32E  
Lea County, New Mexico

Mr. Keys or Ms. Jones,

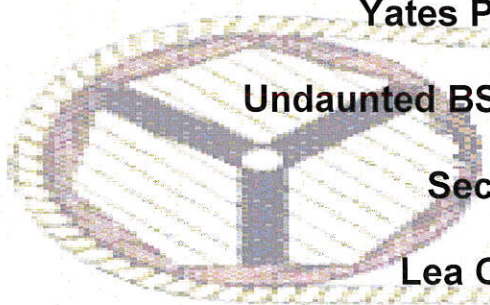
Yates Petroleum Corporation (Yates) would like to submit the attached plan of work to you regarding the release that occurred at the above mentioned facility on February 28, 2016 (1RP-4204).

With NMOCD approval of this work plan, Yates will hold a bid meeting allowing several contractors the opportunity to submit bids on this remediation project. Bids that are received will be forwarded to Yates Management for review. Once Yates Management reviews the bids and gives approval, the remediation project will be awarded to a contractor for work to commence.

If you have any questions or concerns, I can be reached at (575) 748-4111 or by email at [agriffin@yatespetroleum.com](mailto:agriffin@yatespetroleum.com).

Thank You,

Amber Griffin  
Environmental Regulatory Agent  
Yates Petroleum Corporation



**Yates Petroleum Corporation**

**Undaunted BSD State Com #1H Work Plan**

**Section 2, T25S-R32E**

**Lea County, New Mexico**

**April 8, 2016**

## **I. Location**

The well is located approximately 4 miles south of Highway 128 and 1.5 miles east of Orla Road, via a lease road.

## **II. Background**

On February 28, 2016, Yates had a release of 25 barrels produced water, with 18 barrels produced water recovered. The area affected from this release was on the east side of the production pad. Please note that all released fluids remained on the production pad. An initial Form C-141 was submitted, via e-mail, to the NMOCD District I office on March 9, 2016 for this release.

On March 10, 2016 personnel returned to the release area and collected soil samples from the release area using a backhoe. The release area was split into three separate sections for the sampling process. The soil samples were sent to an approved NMOCD laboratory and tested for BTEX 8021B, TPH 8015M, and Chlorides 300.0. Yates received the analytical results on March 25, 2016 and April 7, 2016 (Reports 1603846 and 1603E20 attached to this work plan). The analytical results showed that BTEX and TPH were at levels below NMOCD RRAL's for all three sections. Yates also fully delineated all three sections of the release to acceptable chloride levels.

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

Area surface geology is Cenozoic. The ChevronTexaco depth to ground water map shows the depth to groundwater to be approximately 215 feet making the site ranking for this site a zero (0). Watercourses in the area are dry except for infrequent flows in response to major precipitation events.

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

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

## **IV. Soils**

The area consists of soils that are sand and interspersed with caliche and clay seams.

## **V. Scope of Work**

Based off the analytical reports which show complete vertical delineation, Yates proposes the following work:

- Excavate 1.5' from Section 1 of the release area. This section will be backfilled with clean caliche.
- Excavate 4' from both Sections 2 and 3 of the release area. Once these two sections are excavated, a 20 mil liner will be placed in the bottom of the excavation. A 6" layer of topsoil will be placed on top of the liner and the remaining excavation will be backfilled with clean caliche.

- Contaminated soils that are excavated will be hauled to a NMOCD approved disposal facility.
- The backfill material for the excavation will be purchased from a nearby caliche pit.
- There will be no re-seeding of the release area because it was contained to the production pad.
- Once all excavation and backfill work is complete, Yates will submit a Final Form C-141 to NMOCD requesting closure of this release.



Google earth

feet  
meters 100 400



# Undaunted BSD State Com #11H

	Sample Area	Sample Date	Analytical Report	Sample Type	Depth	BTEX	GRO	DRO	TOTAL	Chlorides
1 - Surface	Release area	3/10/2016	1603846	Grab/Backhoe	Surface	ND	ND	ND	ND	9,700
1 - 1'	Release area	3/10/2016	1603846	Grab/Backhoe	1'	ND	ND	ND	ND	1,400
1 - 2'	Release area	3/10/2016	1603846	Grab/Backhoe	2'	ND	ND	ND	ND	160
1 - 3'	Release area	3/10/2016	1603846	Grab/Backhoe	3'	ND	ND	ND	ND	230
2 - Surface	Release area	3/10/2016	1603846	Grab/Backhoe	Surface	ND	ND	12	12	17,000
2 - 1'	Release area	3/10/2016	1603846	Grab/Backhoe	1'	ND	ND	ND	ND	3,500
2 - 2'	Release area	3/10/2016	1603846	Grab/Backhoe	2'	ND	ND	ND	ND	4,400
2 - 3'	Release area	3/10/2016	1603846	Grab/Backhoe	3'	ND	ND	ND	ND	6,900
2 - 4'	Release area	3/10/2016	1603E20	Grab/Backhoe	4'	-	-	-	-	7,000
2 - 5'	Release area	3/10/2016	1603E20	Grab/Backhoe	5'	-	-	-	-	5,400
2 - 6'	Release area	3/10/2016	1603E20	Grab/Backhoe	6'	-	-	-	-	6,400
2 - 7'	Release area	3/10/2016	1603E20	Grab/Backhoe	7'	-	-	-	-	8,600
2 - 8'	Release area	3/10/2016	1603E20	Grab/Backhoe	8'	-	-	-	-	4,600
2 - 9'	Release area	3/10/2016	1603E20	Grab/Backhoe	9'	-	-	-	-	38
2 - 10'	Release area	3/10/2016	1603E20	Grab/Backhoe	10'	-	-	-	-	46
3 - Surface	Release area	3/10/2016	1603846	Grab/Backhoe	Surface	30.6	400	5,100	5,500	11,000
3 - 1'	Release area	3/10/2016	1603846	Grab/Backhoe	1'	ND	ND	ND	ND	3,000
3 - 2'	Release area	3/10/2016	1603846	Grab/Backhoe	2'	ND	ND	ND	ND	3,600
3 - 3'	Release area	3/10/2016	1603846	Grab/Backhoe	3'	ND	ND	ND	ND	9,600
3 - 4'	Release area	3/10/2016	1603E20	Grab/Backhoe	4'	-	-	-	-	8,400
3 - 5'	Release area	3/10/2016	1603E20	Grab/Backhoe	5'	-	-	-	-	6,700
3 - 6'	Release area	3/10/2016	1603E20	Grab/Backhoe	6'	-	-	-	-	5,900
3 - 7'	Release area	3/10/2016	1603E20	Grab/Backhoe	7'	-	-	-	-	8,900
3 - 8'	Release area	3/10/2016	1603E20	Grab/Backhoe	8'	-	-	-	-	6,200
3 - 9'	Release area	3/10/2016	1603E20	Grab/Backhoe	9'	-	-	-	-	2,000
3 - 10'	Release area	3/10/2016	1603E20	Grab/Backhoe	10'	-	-	-	-	160

Site Ranking is ZERO (0). Depth to Ground Water >100' (approx. 215', per Chevron/Texaco trend map).

All results are ppm.Chlorides for documentation.

Released: 25 B/PW; Recovered: 18 B/PW. Release Date: 2/28/2016, 1RP-4204



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

March 25, 2016

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

RE: Undaunted BSD State Com #1H

OrderNo.: 1603846

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 12 sample(s) on 3/16/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order: 1603846

Date Reported: 3/25/2016

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation  
**Project:** Undaunted BSD State Com #1H

Lab Order: 1603846

Lab ID: 1603846-001

Collection Date: 3/10/2016 9:51:00 AM

Client Sample ID: 1- Surface

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	9700	750		mg/Kg	500	3/23/2016 9:20:10 PM	24388

Analyst: SRM

Lab ID: 1603846-002

Collection Date: 3/10/2016 9:53:00 AM

Client Sample ID: 1-1'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	1400	75		mg/Kg	50	3/23/2016 9:57:24 PM	24388

Analyst: SRM

Lab ID: 1603846-003

Collection Date: 3/10/2016 9:54:00 AM

Client Sample ID: 1-2'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	160	30		mg/Kg	20	3/22/2016 4:33:56 PM	24388

Analyst: LGT

Lab ID: 1603846-004

Collection Date: 3/10/2016 9:55:00 AM

Client Sample ID: 1-3'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	230	30		mg/Kg	20	3/22/2016 4:46:20 PM	24388

Analyst: LGT

Lab ID: 1603846-005

Collection Date: 3/10/2016 10:20:00 AM

Client Sample ID: 2- Surface

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	17000	750		mg/Kg	500	3/23/2016 9:32:34 PM	24388

Analyst: SRM

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

# Analytical Report

Lab Order: 1603846

Date Reported: 3/25/2016

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation  
**Project:** Undaunted BSD State Com #1H

**Lab Order:** 1603846

**Lab ID:** 1603846-006

**Collection Date:** 3/10/2016 10:21:00 AM

**Client Sample ID:** 2-1'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	3500	150		mg/Kg	100	3/25/2016 5:31:00 AM	24388

**Lab ID:** 1603846-007

**Collection Date:** 3/10/2016 10:22:00 AM

**Client Sample ID:** 2-2'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: SRM
Chloride	4400	150		mg/Kg	100	3/23/2016 10:47:02 PM	24388

**Lab ID:** 1603846-008

**Collection Date:** 3/10/2016 10:23:00 AM

**Client Sample ID:** 2-3'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: SRM
Chloride	6900	300		mg/Kg	200	3/23/2016 11:24:17 PM	24388

**Lab ID:** 1603846-009

**Collection Date:** 3/10/2016 10:50:00 AM

**Client Sample ID:** 3- Surface

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: SRM
Chloride	11000	750		mg/Kg	500	3/23/2016 9:44:59 PM	24388

**Lab ID:** 1603846-010

**Collection Date:** 3/10/2016 10:51:00 AM

**Client Sample ID:** 3-1'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: SRM
Chloride	3000	150		mg/Kg	100	3/23/2016 10:59:27 PM	24388

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 2 of 4
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

**Analytical Report**

Lab Order: 1603846

Date Reported: 3/25/2016

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Yates Petroleum Corporation  
**Project:** Undaunted BSD State Com #1H**Lab Order:** 1603846**Lab ID:** 1603846-011**Collection Date:** 3/10/2016 10:52:00 AM**Client Sample ID:** 3-2'**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SRM</b>
Chloride	3600	150		mg/Kg	100	3/23/2016 11:11:52 PM	24388

**Lab ID:** 1603846-012**Collection Date:** 3/10/2016 10:53:00 AM**Client Sample ID:** 3-3'**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SRM</b>
Chloride	9600	300		mg/Kg	200	3/23/2016 11:36:42 PM	24388

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1603846

25-Mar-16

**Client:** Yates Petroleum Corporation  
**Project:** Undaunted BSD State Com #1H

Sample ID	MB-24388	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	24388	RunNo:	33002					
Prep Date:	3/22/2016	Analysis Date:	3/22/2016	SeqNo:	1012346	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-24388	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	24388	RunNo:	33002					
Prep Date:	3/22/2016	Analysis Date:	3/22/2016	SeqNo:	1012347	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.2	90	110			

### Qualifiers:

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



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: 1603846

RcptNo: 1

Received by/date:

JA 03/16/16

Logged By: Lindsay Mangin

3/16/2016 9:55:00 AM

*Lindsay Mangin*

Completed By: Lindsay Mangin

3/16/2016 3:02:24 PM

*Lindsay Mangin*

Reviewed By:

JA 03/17/16

### Chain of Custody

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

### Log In

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

### Special Handling (if applicable)

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

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

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

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

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

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

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

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			





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

March 25, 2016

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

RE: Undaunted BSD State Com #1H

OrderNo.: 1603846

Dear Amber Griffin:

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

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

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

Sincerely,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1603846

Date Reported: 3/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 1- Surface

Project: Undaunted BSD State Com #1H

Collection Date: 3/10/2016 9:51:00 AM

Lab ID: 1603846-001

Matrix: SOIL

Received Date: 3/16/2016 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/18/2016 9:23:04 PM	24294
Surr: DNOP	88.5	70-130		%Rec	1	3/18/2016 9:23:04 PM	24294
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/18/2016 7:18:26 PM	24316
Surr: BFB	111	66.2-112		%Rec	1	3/18/2016 7:18:26 PM	24316
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/18/2016 7:18:26 PM	24316
Toluene	ND	0.048		mg/Kg	1	3/18/2016 7:18:26 PM	24316
Ethylbenzene	ND	0.048		mg/Kg	1	3/18/2016 7:18:26 PM	24316
Xylenes, Total	ND	0.096		mg/Kg	1	3/18/2016 7:18:26 PM	24316
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	3/18/2016 7:18:26 PM	24316

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1603846

Date Reported: 3/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 1-1'

Project: Undaunted BSD State Com #1H

Collection Date: 3/10/2016 9:53:00 AM

Lab ID: 1603846-002

Matrix: SOIL

Received Date: 3/16/2016 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/18/2016 9:44:31 PM	24294
Surr: DNOP	90.3	70-130		%Rec	1	3/18/2016 9:44:31 PM	24294
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/18/2016 7:41:45 PM	24316
Surr: BFB	106	66.2-112		%Rec	1	3/18/2016 7:41:45 PM	24316
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	3/18/2016 7:41:45 PM	24316
Toluene	ND	0.048		mg/Kg	1	3/18/2016 7:41:45 PM	24316
Ethylbenzene	ND	0.048		mg/Kg	1	3/18/2016 7:41:45 PM	24316
Xylenes, Total	ND	0.097		mg/Kg	1	3/18/2016 7:41:45 PM	24316
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	3/18/2016 7:41:45 PM	24316

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

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

**Analytical Report**

Lab Order 1603846

Date Reported: 3/25/2016

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Yates Petroleum Corporation**Client Sample ID:** 1-2'**Project:** Undaunted BSD State Com #1H**Collection Date:** 3/10/2016 9:54:00 AM**Lab ID:** 1603846-003**Matrix:** SOIL**Received Date:** 3/16/2016 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/18/2016 10:06:00 PM	24294
Surr: DNOP	93.6	70-130		%Rec	1	3/18/2016 10:06:00 PM	24294
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/18/2016 8:05:14 PM	24316
Surr: BFB	104	66.2-112		%Rec	1	3/18/2016 8:05:14 PM	24316
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	3/18/2016 8:05:14 PM	24316
Toluene	ND	0.048		mg/Kg	1	3/18/2016 8:05:14 PM	24316
Ethylbenzene	ND	0.048		mg/Kg	1	3/18/2016 8:05:14 PM	24316
Xylenes, Total	ND	0.097		mg/Kg	1	3/18/2016 8:05:14 PM	24316
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	3/18/2016 8:05:14 PM	24316

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

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

## Analytical Report

Lab Order 1603846

Date Reported: 3/25/2016

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: 1-3'

Project: Undaunted BSD State Com #1H

Collection Date: 3/10/2016 9:55:00 AM

Lab ID: 1603846-004

Matrix: SOIL

Received Date: 3/16/2016 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/18/2016 10:27:20 PM	24294
Surr: DNOP	99.4	70-130		%Rec	1	3/18/2016 10:27:20 PM	24294
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/18/2016 8:28:42 PM	24316
Surr: BFB	104	66.2-112		%Rec	1	3/18/2016 8:28:42 PM	24316
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/18/2016 8:28:42 PM	24316
Toluene	ND	0.050		mg/Kg	1	3/18/2016 8:28:42 PM	24316
Ethylbenzene	ND	0.050		mg/Kg	1	3/18/2016 8:28:42 PM	24316
Xylenes, Total	ND	0.10		mg/Kg	1	3/18/2016 8:28:42 PM	24316
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	3/18/2016 8:28:42 PM	24316

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

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

**Analytical Report**Lab Order **1603846**

Date Reported: 3/25/2016

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Yates Petroleum Corporation**Client Sample ID:** 2- Surface**Project:** Undaunted BSD State Com #1H**Collection Date:** 3/10/2016 10:20:00 AM**Lab ID:** 1603846-005**Matrix:** SOIL**Received Date:** 3/16/2016 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	12	10		mg/Kg	1	3/18/2016 10:48:50 PM	24294
Surr: DNOP	81.3	70-130		%Rec	1	3/18/2016 10:48:50 PM	24294
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/18/2016 11:13:00 PM	24316
Surr: BFB	111	66.2-112		%Rec	1	3/18/2016 11:13:00 PM	24316
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	3/18/2016 11:13:00 PM	24316
Toluene	ND	0.050		mg/Kg	1	3/18/2016 11:13:00 PM	24316
Ethylbenzene	ND	0.050		mg/Kg	1	3/18/2016 11:13:00 PM	24316
Xylenes, Total	ND	0.10		mg/Kg	1	3/18/2016 11:13:00 PM	24316
Surr: 4-Bromofluorobenzene	113	80-120		%Rec	1	3/18/2016 11:13:00 PM	24316

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

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

**Analytical Report**

Lab Order 1603846

Date Reported: 3/25/2016

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Yates Petroleum Corporation**Client Sample ID:** 2-1'**Project:** Undaunted BSD State Com #1H**Collection Date:** 3/10/2016 10:21:00 AM**Lab ID:** 1603846-006**Matrix:** SOIL**Received Date:** 3/16/2016 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/18/2016 11:10:08 PM	24294
Surr: DNOP	90.9	70-130		%Rec	1	3/18/2016 11:10:08 PM	24294
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/18/2016 11:36:24 PM	24316
Surr: BFB	103	66.2-112		%Rec	1	3/18/2016 11:36:24 PM	24316
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/18/2016 11:36:24 PM	24316
Toluene	ND	0.049		mg/Kg	1	3/18/2016 11:36:24 PM	24316
Ethylbenzene	ND	0.049		mg/Kg	1	3/18/2016 11:36:24 PM	24316
Xylenes, Total	ND	0.099		mg/Kg	1	3/18/2016 11:36:24 PM	24316
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	3/18/2016 11:36:24 PM	24316

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1603846

Date Reported: 3/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 2-2'

Project: Undaunted BSD State Com #1H

Collection Date: 3/10/2016 10:22:00 AM

Lab ID: 1603846-007

Matrix: SOIL

Received Date: 3/16/2016 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/18/2016 11:31:28 PM	24294
Surr: DNOP	90.5	70-130		%Rec	1	3/18/2016 11:31:28 PM	24294
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/18/2016 11:59:56 PM	24316
Surr: BFB	105	66.2-112		%Rec	1	3/18/2016 11:59:56 PM	24316
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/18/2016 11:59:56 PM	24316
Toluene	ND	0.048		mg/Kg	1	3/18/2016 11:59:56 PM	24316
Ethylbenzene	ND	0.048		mg/Kg	1	3/18/2016 11:59:56 PM	24316
Xylenes, Total	ND	0.096		mg/Kg	1	3/18/2016 11:59:56 PM	24316
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	3/18/2016 11:59:56 PM	24316

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

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

**Analytical Report**

Lab Order 1603846

Date Reported: 3/25/2016

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Yates Petroleum Corporation**Client Sample ID:** 2-3'**Project:** Undaunted BSD State Com #1H**Collection Date:** 3/10/2016 10:23:00 AM**Lab ID:** 1603846-008**Matrix:** SOIL**Received Date:** 3/16/2016 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/18/2016 11:52:35 PM	24294
Surr: DNOP	96.2	70-130		%Rec	1	3/18/2016 11:52:35 PM	24294
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/19/2016 12:23:25 AM	24316
Surr: BFB	104	66.2-112		%Rec	1	3/19/2016 12:23:25 AM	24316
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	3/19/2016 12:23:25 AM	24316
Toluene	ND	0.047		mg/Kg	1	3/19/2016 12:23:25 AM	24316
Ethylbenzene	ND	0.047		mg/Kg	1	3/19/2016 12:23:25 AM	24316
Xylenes, Total	ND	0.095		mg/Kg	1	3/19/2016 12:23:25 AM	24316
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	3/19/2016 12:23:25 AM	24316

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1603846

Date Reported: 3/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 3- Surface

Project: Undaunted BSD State Com #1H

Collection Date: 3/10/2016 10:50:00 AM

Lab ID: 1603846-009

Matrix: SOIL

Received Date: 3/16/2016 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: KJH
Diesel Range Organics (DRO)	5100	98		mg/Kg	10	3/19/2016 12:13:48 AM	24294
Surr: DNOP	0	70-130	S	%Rec	10	3/19/2016 12:13:48 AM	24294
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	400	47		mg/Kg	10	3/19/2016 12:46:55 AM	24316
Surr: BFB	294	66.2-112	S	%Rec	10	3/19/2016 12:46:55 AM	24316
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.23		mg/Kg	10	3/19/2016 12:46:55 AM	24316
Toluene	4.1	0.47		mg/Kg	10	3/19/2016 12:46:55 AM	24316
Ethylbenzene	3.5	0.47		mg/Kg	10	3/19/2016 12:46:55 AM	24316
Xylenes, Total	23	0.93		mg/Kg	10	3/19/2016 12:46:55 AM	24316
Surr: 4-Bromofluorobenzene	129	80-120	S	%Rec	10	3/19/2016 12:46:55 AM	24316

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

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

**Analytical Report**

Lab Order 1603846

Date Reported: 3/25/2016

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Yates Petroleum Corporation**Client Sample ID:** 3-1'**Project:** Undaunted BSD State Com #1H**Collection Date:** 3/10/2016 10:51:00 AM**Lab ID:** 1603846-010**Matrix:** SOIL**Received Date:** 3/16/2016 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/19/2016 12:56:03 AM	24294
Surr: DNOP	99.8	70-130		%Rec	1	3/19/2016 12:56:03 AM	24294
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/19/2016 1:10:17 AM	24316
Surr: BFB	110	66.2-112		%Rec	1	3/19/2016 1:10:17 AM	24316
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	3/19/2016 1:10:17 AM	24316
Toluene	ND	0.049		mg/Kg	1	3/19/2016 1:10:17 AM	24316
Ethylbenzene	ND	0.049		mg/Kg	1	3/19/2016 1:10:17 AM	24316
Xylenes, Total	ND	0.098		mg/Kg	1	3/19/2016 1:10:17 AM	24316
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	3/19/2016 1:10:17 AM	24316

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1603846

Date Reported: 3/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 3-2'

Project: Undaunted BSD State Com #1H

Collection Date: 3/10/2016 10:52:00 AM

Lab ID: 1603846-011

Matrix: SOIL

Received Date: 3/16/2016 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/19/2016 1:17:03 AM	24294
Surr: DNOP	93.8	70-130		%Rec	1	3/19/2016 1:17:03 AM	24294
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/19/2016 1:33:43 AM	24316
Surr: BFB	107	66.2-112		%Rec	1	3/19/2016 1:33:43 AM	24316
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	3/19/2016 1:33:43 AM	24316
Toluene	ND	0.049		mg/Kg	1	3/19/2016 1:33:43 AM	24316
Ethylbenzene	ND	0.049		mg/Kg	1	3/19/2016 1:33:43 AM	24316
Xylenes, Total	ND	0.098		mg/Kg	1	3/19/2016 1:33:43 AM	24316
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	3/19/2016 1:33:43 AM	24316

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

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

**Analytical Report**

Lab Order 1603846

Date Reported: 3/25/2016

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Yates Petroleum Corporation**Client Sample ID:** 3-3'**Project:** Undaunted BSD State Com #1H**Collection Date:** 3/10/2016 10:53:00 AM**Lab ID:** 1603846-012**Matrix:** SOIL**Received Date:** 3/16/2016 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/19/2016 1:38:29 AM	24294
Surr: DNOP	88.6	70-130		%Rec	1	3/19/2016 1:38:29 AM	24294
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/18/2016 9:03:05 PM	24316
Surr: BFB	91.3	66.2-112		%Rec	1	3/18/2016 9:03:05 PM	24316
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/18/2016 9:03:05 PM	24316
Toluene	ND	0.048		mg/Kg	1	3/18/2016 9:03:05 PM	24316
Ethylbenzene	ND	0.048		mg/Kg	1	3/18/2016 9:03:05 PM	24316
Xylenes, Total	ND	0.097		mg/Kg	1	3/18/2016 9:03:05 PM	24316
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	1	3/18/2016 9:03:05 PM	24316

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603846

25-Mar-16

Client: Yates Petroleum Corporation  
Project: Undaunted BSD State Com #1H

Sample ID	LCS-24294		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 24294		RunNo: 32883					
Prep Date:	3/17/2016		Analysis Date: 3/18/2016		SeqNo: 1008135		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.3	65.8	136			
Surr: DNOP	3.8		5.000		76.8	70	130			

Sample ID	MB-24294	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	24294		RunNo:	32883				
Prep Date:	3/17/2016	Analysis Date:	3/18/2016		SeqNo:	1008137	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	8.6		10.00		86.1	70	130			

## Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1603846

25-Mar-16

Client: Yates Petroleum Corporation  
Project: Undaunted BSD State Com #1H

Sample ID	MB-24321	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	24321	RunNo:	32893					
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008613	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		108	66.2	112			

Sample ID	LCS-24321	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	24321	RunNo:	32893					
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008614	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1200		1000		117	66.2	112			S

Sample ID	MB-24316	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	24316	RunNo:	32893					
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008621	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	1100		1000		106	66.2	112			

Sample ID	LCS-24316	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	24316	RunNo:	32893					
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008622	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	103	80	120			
Surr: BFB	1100		1000		114	66.2	112			S

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1603846

25-Mar-16

**Client:** Yates Petroleum Corporation  
**Project:** Undaunted BSD State Com #1H

Sample ID	MB-24321	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	24321	RunNo:	32893					
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008645	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

Sample ID	LCS-24321	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	24321	RunNo:	32893					
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008646	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		121	80	120			S

Sample ID	MB-24316	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	24316	RunNo:	32893					
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008653	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

Sample ID	LCS-24316	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	24316	RunNo:	32893					
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008654	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	0.98	0.050	1.000	0	97.7	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.9	80	120			
Xylenes, Total	2.9	0.10	3.000	0	98.1	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		116	80	120			

### Qualifiers:

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

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



Hall Environmental Analysis Laboratory  
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: 1603846

RcptNo: 1

Received by/date:

JA 03/16/16

Logged By: Lindsay Mangin

3/16/2016 9:55:00 AM

*J. Mangin*

Completed By: Lindsay Mangin

3/16/2016 3:02:24 PM

*J. Mangin*

Reviewed By:

JA 03/17/16

### Chain of Custody

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

### Log In

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

### Special Handling (if applicable)

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

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

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

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

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

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

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

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			





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

April 07, 2016

Amber Griffin

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

RE: Undaunted BSD State Com #1H

OrderNo.: 1603E20

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 14 sample(s) on 3/30/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1603E20

Date Reported: 4/7/2016

**CLIENT:** Yates Petroleum Corporation  
**Project:** Undaunted BSD State Com #1H

**Lab Order:** 1603E20

**Lab ID:** 1603E20-001

**Collection Date:** 3/10/2016 10:24:00 AM

**Client Sample ID:** 2-4'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	7000	300		mg/Kg	200	4/4/2016 4:15:41 PM	24575

**Lab ID:** 1603E20-002

**Collection Date:** 3/10/2016 10:25:00 AM

**Client Sample ID:** 2-5'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	5400	300		mg/Kg	200	4/4/2016 4:28:05 PM	24575

**Lab ID:** 1603E20-003

**Collection Date:** 3/10/2016 10:26:00 AM

**Client Sample ID:** 2-6'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	6400	300		mg/Kg	200	4/4/2016 4:40:30 PM	24575

**Lab ID:** 1603E20-004

**Collection Date:** 3/10/2016 10:29:00 AM

**Client Sample ID:** 2-7'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	8600	750		mg/Kg	500	4/4/2016 4:52:54 PM	24575

**Lab ID:** 1603E20-005

**Collection Date:** 3/10/2016 10:34:00 AM

**Client Sample ID:** 2-8'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	4600	150		mg/Kg	100	4/4/2016 5:05:18 PM	24575

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1603E20

Date Reported: 4/7/2016

**CLIENT:** Yates Petroleum Corporation  
**Project:** Undaunted BSD State Com #1H

**Lab Order:** 1603E20

**Lab ID:** 1603E20-006

**Collection Date:** 3/10/2016 10:38:00 AM

**Client Sample ID:** 2-9'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	38	30		mg/Kg	20	4/1/2016 4:40:36 PM	24575

Analyst: LGT

**Lab ID:** 1603E20-007

**Collection Date:** 3/10/2016 10:42:00 AM

**Client Sample ID:** 2-10'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	46	30		mg/Kg	20	4/1/2016 2:24:06 PM	24575

Analyst: LGT

**Lab ID:** 1603E20-008

**Collection Date:** 3/10/2016 10:54:00 AM

**Client Sample ID:** 3-4'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	8400	300		mg/Kg	200	4/4/2016 5:17:43 PM	24575

Analyst: LGT

**Lab ID:** 1603E20-009

**Collection Date:** 3/10/2016 10:56:00 AM

**Client Sample ID:** 3-5'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	6700	300		mg/Kg	200	4/4/2016 5:30:08 PM	24575

Analyst: LGT

**Lab ID:** 1603E20-010

**Collection Date:** 3/10/2016 10:58:00 AM

**Client Sample ID:** 3-6'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	5900	300		mg/Kg	200	4/4/2016 5:42:33 PM	24575

Analyst: LGT

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

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

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation  
**Project:** Undaunted BSD State Com #1H

**Lab Order:** 1603E20

**Lab ID:** 1603E20-011

**Collection Date:** 3/10/2016 11:01:00 AM

**Client Sample ID:** 3-7'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	8900	300		mg/Kg	200	4/4/2016 5:54:58 PM	24575

**Lab ID:** 1603E20-012

**Collection Date:** 3/10/2016 11:03:00 AM

**Client Sample ID:** 3-8'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	6200	300		mg/Kg	200	4/4/2016 6:07:23 PM	24575

**Lab ID:** 1603E20-013

**Collection Date:** 3/10/2016 11:08:00 AM

**Client Sample ID:** 3-9'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	2000	75		mg/Kg	50	4/4/2016 6:44:36 PM	24575

**Lab ID:** 1603E20-014

**Collection Date:** 3/10/2016 11:16:00 AM

**Client Sample ID:** 3-10'

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	160	30		mg/Kg	20	4/1/2016 4:15:47 PM	24575

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1603E20

07-Apr-16

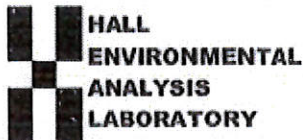
**Client:** Yates Petroleum Corporation  
**Project:** Undaunted BSD State Com #1H

Sample ID	MB-24575	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	24575	RunNo:	33247					
Prep Date:	4/1/2016	Analysis Date:	4/1/2016	SeqNo:	1021596	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-24575	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	24575	RunNo:	33247					
Prep Date:	4/1/2016	Analysis Date:	4/1/2016	SeqNo:	1021597	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.8	90	110			

### Qualifiers:

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



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

## Sample Log-In Check List

Client Name: Yates Petroleum Corpora

Work Order Number: 1603E20

ReptNo: 1

Received by/date:

Logged By: Lindsay Mangin

3/30/2016 9:45:00 AM

Completed By: Lindsay Mangin

3/30/2016 10:47:50 AM

Reviewed By:

### 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

### 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  $6.0^{\circ}\text{C}$ ?
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 ☐

Yes ☐

No ☒

NA ☐

Yes ☐

No ☐

No VOA Vials ☒

Yes ☐

No ☒

# of preserved  
bottles checked  
for pH

(<2 or >12 unless noted)

Yes ☒

No ☐

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

Yes ☒

No ☐

Yes ☒

No ☐

Yes ☒

No ☐

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

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?

Yes ☐

No ☐

NA ☒

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

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

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

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

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

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

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

# Chain-of-Custody Record

Client: Yates Petroleum Corporation

Mailing Address:

05 South 4th Street Artesia, NM 88210

Phone #: 575-513-8799 or 575-748-4111

Email or Fax #: agriffin@yatespetroleum.com

AVQC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Undaunted BSD State Com #1H

Project #:

1RP-4204

Project Manager:

Amber Griffin  
PO # 205-2020

Sampler:

Amber Griffin AG

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.7

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
3/10/2016	10:24	Soil	2 - 4'	1 - 4oz.	T	1603520
3/10/2016	10:25	Soil	2 - 5'	1 - 4oz.	T	-001
3/10/2016	10:26	Soil	2 - 6'	1 - 4oz.	T	-002
3/10/2016	10:29	Soil	2 - 7'	1 - 4oz.	T	-003
3/10/2016	10:34	Soil	2 - 8'	1 - 4oz.	T	-004
3/10/2016	10:38	Soil	2 - 9'	1 - 4oz.	T	-005
3/10/2016	10:42	Soil	2 - 10'	1 - 4oz.	T	-006
3/10/2016	10:54	Soil	3 - 4'	1 - 4oz.	T	-007
3/10/2016	10:56	Soil	3 - 5'	1 - 4oz.	T	-008
3/10/2016	10:58	Soil	3 - 6'	1 - 4oz.	T	-009
3/10/2016	11:01	Soil	3 - 7'	1 - 4oz.	T	-010
3/10/2016	11:03	Soil	3 - 8'	1 - 4oz.	T	-011
3/10/2016	11:08	Soil	3 - 9'	1 - 4oz.	T	-012
3/10/2016	11:16	Soil	3 - 10'	1 - 4oz.	T	-013
3/10/2016	11:16	Soil	3 - 10'	1 - 4oz.	T	-014

Date: 3/29/16 Time: 10:00A Relinquished by: Amber Griffin

Date: 03/30/16 Time: 0945 Received by: Joe. Alpt



www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F <sup>-</sup> , Cl <sup>-</sup> , NO <sub>3</sub> <sup>-</sup> , NO <sub>2</sub> <sup>-</sup> , PO <sub>4</sub> <sup>3-</sup> , SO <sub>4</sub> <sup>2-</sup> )	8081 Pesticides / 8082 PCBs	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
							X				
							X				
							X				
							X				
							X				
							X				
							X				
							X				
							X				
							X				
							X				
							X				
							X				
							X				
							X				
							X				
							X				
							X				
							X				

Remarks: Anions: Chloride Only. Thank you.