

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505



Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Yates Petroleum Corporation	Contact Amber Griffin
Address 104 S. 4 th Street	Telephone No. 575-748-1471
Facility Name Hilliard B Federal #1	Facility Type Tank Battery

Surface Owner Federal	Mineral Owner Federal	API No. 30-005-20987
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LOCATION OF RELEASE

Unit Letter L	Section 26	Township 15S	Range 30E	Feet from the 1980	North/South Line South	Feet from the 460	East/West Line West	County Chaves
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Latitude 32.98501 Longitude 103.90212

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 6 B/O	Volume Recovered 0 B/O
Source of Release Heater Treater	Date and Hour of Occurrence 1/4/2015; AM	Date and Hour of Discovery 1/4/2015; AM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully. N/A

Describe Cause of Problem and Remedial Action Taken.*

The gas line and BP valves froze on the heater treater and busted, causing the release. Well was shut off and roustabout crews were called.

Describe Area Affected and Cleanup Action Taken.*

An approximate area of 40' X 40' was affected. The well was shut down, production equipment was power washed and contaminated soils were removed. Excavated soils will be hauled to a NMOCD approved facility. Vertical and horizontal delineation samples will be taken and analysis ran for TPH & BTEX. If initial analytical results for TPH & BTEX are under RRAL's (site ranking is 0) a Final Report, C-141 will be submitted to the OCD requesting closure. If the analytical results are above the RRAL's a work plan will be submitted to the OCD. **Depth to Ground Water: > 100' (approximately 185', Section 26, T15S-R30E, per Trend Map), Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 0.**

Yates Petroleum requests closure based off attached analytical results.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Amber Griffin	Approved by Environmental Specialist:	
Title: Environmental Representative	Approval Date: <u>06/10/2016</u>	Expiration Date: <u>///</u>
E-mail Address: agriffin@yatespetroleum.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: June 8, 2016 Phone: 575-748-4111	1RP-3504	

* Attach Additional Sheets If Necessary

MARTIN YATES, III
1912-1985

FRANK W. YATES
1936-1986

S.P. YATES
1914-2008



JOHN A. YATES SR.
CHAIRMAN EMERITUS

JOHN A. YATES JR.
CHAIRMAN OF THE BOARD

DOUGLAS E. BROOKS
PRESIDENT / CEO

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210-2118
TELEPHONE (575) 748-1471

June 8, 2016

Mr. Jamie Keyes
NMOCD District I
1625 N. French Dr.
Hobbs, NM 88240

RE: Hilliard B Federal #1
30-005-20987
Section 26, T15S-R30E
Chaves County, New Mexico

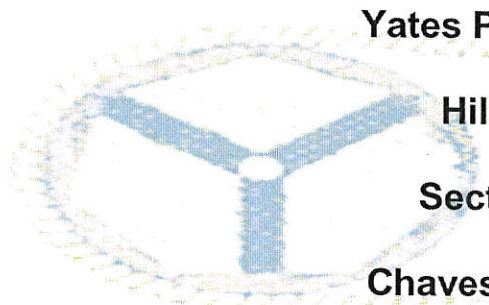
Mr. Keyes,

Yates Petroleum Corporation (Yates) would like to submit the attached Final C-141 and supporting documentation to you regarding the release that occurred at the above mentioned facility on January 4, 2015 (1RP-3504).

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

Thank You,

Amber Griffin
Environmental Representative
Yates Petroleum Corporation



Yates Petroleum Corporation

Hilliard B Federal #1

Section 26, T15S-R30E

Chaves County, New Mexico

June 8, 2016

I. Location

The well is located approximately 11 miles north of Loco Hills via Hagerman Cutoff Road and approximately 6 miles east of Hagerman Cutoff Road via lease roads.

II. Background

On January 4, 2015 Yates had a release of 6 barrels of crude oil, with 0 barrels of crude oil recovered. The area affected from this release was on the east side off of the production pad. An initial Form C-141 was submitted, via e-mail, to the NMOCD District I office on January 13, 2015 for this release.

On January 15, 2015 personnel returned to the release area and collected initial soil samples from the release area using a hand auger at depth of 6" and 1' below the surface level. Samples at each depth were a 5-point composite of the release area. The soil samples were sent to an approved NMOCD laboratory and tested for BTEX 8021B and TPH 8015M. Yates received the analytical results on January 20, 2015 (Report H500161 attached to this letter). The analytical results showed that BTEX and TPH were at levels above NMOCD RRAL's.

On January 20, 2015 personnel had a contractor spray the release area with a 3% Micro-Blaze and water mixture.

On February 16, 2016 personnel returned to the release area and collected further soil samples from the release area using a hand auger. Soil samples were collected from the surface, 1', 2' and 3' below the surface level. At this time the release area was split into three separate sections for sampling. The soil samples were sent to an approved NMOCD laboratory and tested for BTEX 8021B and TPH 8015M. Yates received the analytical results on February 25, 2015 (Report 1602849 attached to this letter). The analytical results showed that BTEX and TPH were at levels above NMOCD RRAL's only at 2' below the surface level in Section 2. All other sections and depths were below NMOCD RRAL's for this site.

On April 25, 2016 personnel had a contractor spray the release area with a 6% Micro-Blaze and water mixture.

On May 25, 2016 personnel returned to the release area and collected further soil samples from the release area using a hand auger. During this sampling event samples were collected from Section 1 at the depths of the surface and 1' below the surface level. Samples were also collected from Section 2 at the depths of the surface, 1', 2', and 3' below the surface level. The soil samples were sent to an approved NMOCD laboratory and tested for TPH 8015M. Yates received the analytical results on June 6, 2016 (Report 1605D62 attached to this letter). The analytical results showed that TPH are now at levels below NMOCD RRAL's for all samples collected.

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 185 feet making the site ranking for this site a

zero (0). Watercourses in the area are dry except for infrequent flows in response to major precipitation events.

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

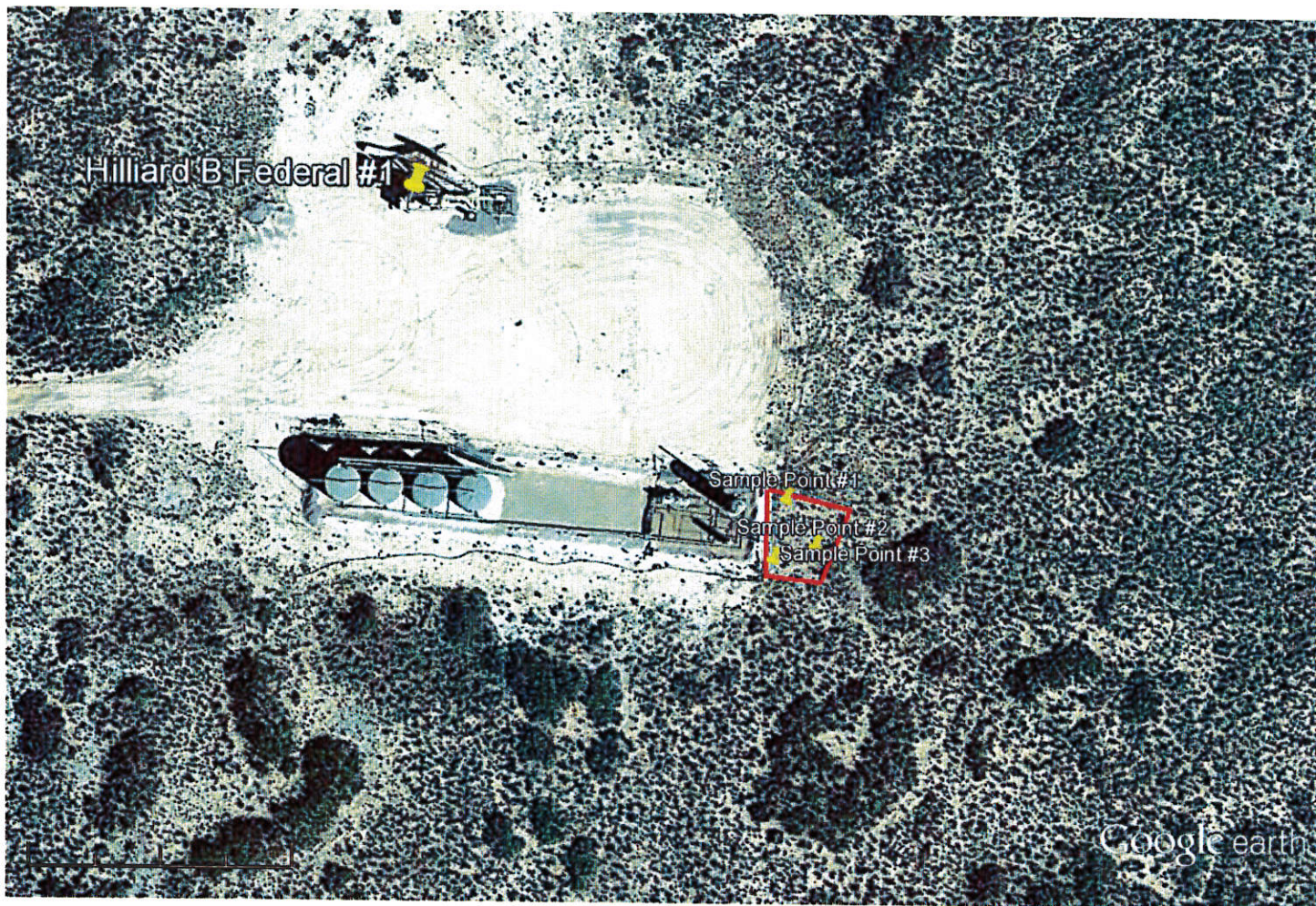
Depth to ground water >100'
Wellhead Protection Area > 1000'
Distance to surface water body > 1000'

IV. Soils

The area consists of soils that are sand.

V. Conclusion

Based off the analytical data which shows that Yates remediated the soils to TPH and BTEX levels below the NMOCD RRALs for a site ranking of zero (0), Yates requests closure. No further work will be conducted at this site.



Google earth



Hilliard B Federal #1

INITIAL SAMPLING	Sample Area	Sample Date	Analytical Report	Sample Type	Depth	B	T	E	X	BTEX	GRO	DRO	TOTAL
6"	Release Area	1/15/2015	H500161	Comp/Auger	6"	5.91	33.1	15.5	38.6	93.11	1,540	3,260	4,800
1'	Release Area	1/15/2015	H500161	Comp/Auger	1'	22.7	123	54.9	131	331.6	2,890	5,270	8,160

	Sample Area	Sample Date	Analytical Report	Sample Type	Depth	B	T	E	X	BTEX	GRO	DRO	TOTAL
1 - Surface	Release Area	2/16/2016	1602849	Grab/Auger	Surface	ND	ND	ND	ND	ND	ND	2,200	2,200
1 - 1'	Release Area	2/16/2016	1602849	Grab/Auger	1'	ND	0.09	ND	2	2.09	500	2,000	2,500
1 - 2'	Release Area	2/16/2016	1602849	Grab/Auger	2'	ND	ND	ND	ND	ND	ND	45	45
1 - 3'	Release Area	2/16/2016	1602849	Grab/Auger	3'	ND	ND	ND	ND	ND	ND	ND	ND

2 - Surface	Release Area	2/16/2016	1602849	Grab/Auger	Surface	ND	ND	ND	ND	ND	ND	2,200	2,200
2 - 1'	Release Area	2/16/2016	1602849	Grab/Auger	1'	ND	ND	ND	2.6	2.6	450	3,000	3,450
2 - 2'	Release Area	2/16/2016	1602849	Grab/Auger	2'	ND	ND	ND	3.5	3.5	680	4,700	5,380
2 - 3'	Release Area	2/16/2016	1602849	Grab/Auger	3'	ND	ND	ND	4.8	4.8	450	4,000	4,450

3 - Surface	Release Area	2/16/2016	1602849	Grab/Auger	Surface	ND	ND	ND	ND	ND	ND	240	240
3 - 1'	Release Area	2/16/2016	1602849	Grab/Auger	1'	ND	ND	ND	ND	ND	ND	ND	ND
3 - 2'	Release Area	2/16/2016	1602849	Grab/Auger	2'	ND	ND	ND	ND	ND	ND	ND	ND
3 - 3'	Release Area	2/16/2016	1602849	Grab/Auger	3'	ND	ND	ND	ND	ND	ND	ND	ND

	Sample Area	Sample Date	Analytical Report	Sample Type	Depth	B	T	E	X	BTEX	GRO	DRO	TOTAL
1 - Surface	Release Area	5/25/2016	1605D92	Grab/Auger	Surface	-	-	-	-	-	ND	600	600
1 - 1'	Release Area	5/25/2016	1605D92	Grab/Auger	1'	-	-	-	-	-	ND	210	210
2 - Surface	Release Area	5/25/2016	1605D92	Grab/Auger	Surface	-	-	-	-	-	ND	820	820
2 - 1'	Release Area	5/25/2016	1605D92	Grab/Auger	1'	-	-	-	-	-	14	1,500	1,514
2 - 2'	Release Area	5/25/2016	1605D92	Grab/Auger	2'	-	-	-	-	-	30	1,100	1,130
2 - 3'	Release Area	5/25/2016	1605D92	Grab/Auger	3'	-	-	-	-	-	ND	ND	ND

Site Ranking is zero (0). Depth to Ground Water >100' (approx. 185', per ChevronTexaco Trend Map).

Released: 6 B/O; Recovered: 0 B/O. Release Date: 1/4/2015. 1RP-3504



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

January 20, 2015

AMBER CANNON

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: HILLARD B FEDERAL #1

Enclosed are the results of analyses for samples received by the laboratory on 01/16/15 12:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

YATES PETROLEUM CORPORATION
AMBER CANNON
105 S 4th Street
Artesia NM, 88210
Fax To: (505) 748-4635

Received: 01/16/2015
Reported: 01/20/2015
Project Name: HILLARD B FEDERAL #1
Project Number: 1RP-3504 (1/14/15 RELEASE)
Project Location: CHAVES COUNTY

Sampling Date: 01/15/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: COMP 6" (H500161-01)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	5.91	1.00	01/20/2015	ND	1.69	84.6	2.00	4.80	
Toluene*	33.1	1.00	01/20/2015	ND	1.71	85.5	2.00	4.41	
Ethylbenzene*	15.5	1.00	01/20/2015	ND	1.68	83.8	2.00	4.10	
Total Xylenes*	38.6	3.00	01/20/2015	ND	5.00	83.3	6.00	5.01	
Total BTEX	93.2	6.00	01/20/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 61-154

TPH 8015M		mg/kg		Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	1540	50.0	01/17/2015	ND	195	97.5	200	0.878		
DRO >C10-C28	3260 4300	50.0	01/17/2015	ND	207	103	200	3.71		

Surrogate: 1-Chlorooctane 164 % 47.2-157

Surrogate: 1-Chlorooctadecane 153 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

YATES PETROLEUM CORPORATION
AMBER CANNON
105 S 4th Street
Artesia NM, 88210
Fax To: (505) 748-4635

Received:	01/16/2015	Sampling Date:	01/15/2015
Reported:	01/20/2015	Sampling Type:	Soil
Project Name:	HILLARD B FEDERAL #1	Sampling Condition:	Cool & Intact
Project Number:	1RP-3504 (1/14/15 RELEASE)	Sample Received By:	Jodi Henson
Project Location:	CHAVES COUNTY		

Sample ID: COMP 1' (H500161-02)

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	22.7	2.00	01/20/2015	ND	1.69	84.6	2.00	4.80	
Toluene*	123	2.00	01/20/2015	ND	1.71	85.5	2.00	4.41	
Ethylbenzene*	54.9	2.00	01/20/2015	ND	1.68	83.8	2.00	4.10	
Total Xylenes*	131	6.00	01/20/2015	ND	5.00	83.3	6.00	5.01	
Total BTEX	332	12.0	01/20/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 61-154

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	2890	50.0	01/17/2015	ND	195	97.5	200	0.878		
DRO >C10-C28	5270 <i>8160</i>	50.0	01/17/2015	ND	207	103	200	3.71		

Surrogate: 1-Chlorooctane 202 % 47.2-157

Surrogate: 1-Chlorooctadecane 168 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



#54



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

February 25, 2016

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

RE: Hilliard B Federal 1

OrderNo.: 1602849

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 12 sample(s) on 2/19/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1602849

Date Reported: 2/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 1-Surface

Project: Hilliard B Federal 1

Collection Date: 2/16/2016 10:49:00 AM

Lab ID: 1602849-001

Matrix: SOIL

Received Date: 2/19/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	2200	96		mg/Kg	10	2/23/2016 5:02:28 PM	23859
Surr: DNOP	0	70-130	S	%Rec	10	2/23/2016 5:02:28 PM	23859
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/23/2016 7:24:36 PM	23866
Surr: BFB	91.3	66.2-112		%Rec	1	2/23/2016 7:24:36 PM	23866
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	2/23/2016 7:24:36 PM	23866
Toluene	ND	0.048		mg/Kg	1	2/23/2016 7:24:36 PM	23866
Ethylbenzene	ND	0.048		mg/Kg	1	2/23/2016 7:24:36 PM	23866
Xylenes, Total	ND	0.095		mg/Kg	1	2/23/2016 7:24:36 PM	23866
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	2/23/2016 7:24:36 PM	23866

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 1602849

Date Reported: 2/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 1-1'

Project: Hilliard B Federal 1

Collection Date: 2/16/2016 10:58:00 AM

Lab ID: 1602849-002

Matrix: SOIL

Received Date: 2/19/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	2000	100		mg/Kg	10	2/24/2016 9:46:47 AM	23859
Surr: DNOP	0	70-130	S	%Rec	10	2/24/2016 9:46:47 AM	23859
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	500	49		mg/Kg	10	2/24/2016 2:29:45 PM	23866
Surr: BFB	434	66.2-112	S	%Rec	10	2/24/2016 2:29:45 PM	23866
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.049		mg/Kg	1	2/23/2016 7:48:02 PM	23866
Toluene	0.090	0.049		mg/Kg	1	2/23/2016 7:48:02 PM	23866
Ethylbenzene	ND	0.049		mg/Kg	1	2/23/2016 7:48:02 PM	23866
Xylenes, Total	2.0	0.098		mg/Kg	1	2/23/2016 7:48:02 PM	23866
Surr: 4-Bromofluorobenzene	547	80-120	S	%Rec	1	2/23/2016 7:48:02 PM	23866

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 1602849

Date Reported: 2/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 1-2'

Project: Hilliard B Federal 1

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

Lab ID: 1602849-003

Matrix: SOIL

Received Date: 2/19/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	45	10		mg/Kg	1	2/23/2016 6:27:06 PM	23859
Surr: DNOP	85.2	70-130		%Rec	1	2/23/2016 6:27:06 PM	23859
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/23/2016 8:11:28 PM	23866
Surr: BFB	112	66.2-112	S	%Rec	1	2/23/2016 8:11:28 PM	23866
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	2/23/2016 8:11:28 PM	23866
Toluene	ND	0.049		mg/Kg	1	2/23/2016 8:11:28 PM	23866
Ethylbenzene	ND	0.049		mg/Kg	1	2/23/2016 8:11:28 PM	23866
Xylenes, Total	ND	0.099		mg/Kg	1	2/23/2016 8:11:28 PM	23866
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	2/23/2016 8:11:28 PM	23866

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 1602849

Date Reported: 2/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 1-3'

Project: Hilliard B Federal 1

Collection Date: 2/16/2016 11:15:00 AM

Lab ID: 1602849-004

Matrix: SOIL

Received Date: 2/19/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/23/2016 6:48:13 PM	23859
Surr: DNOP	86.7	70-130		%Rec	1	2/23/2016 6:48:13 PM	23859
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/23/2016 8:34:54 PM	23866
Surr: BFB	98.1	66.2-112		%Rec	1	2/23/2016 8:34:54 PM	23866
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	2/23/2016 8:34:54 PM	23866
Toluene	ND	0.048		mg/Kg	1	2/23/2016 8:34:54 PM	23866
Ethylbenzene	ND	0.048		mg/Kg	1	2/23/2016 8:34:54 PM	23866
Xylenes, Total	ND	0.096		mg/Kg	1	2/23/2016 8:34:54 PM	23866
Surr: 4-Bromofluorobenzene	114	80-120		%Rec	1	2/23/2016 8:34:54 PM	23866

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 1602849

Date Reported: 2/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 2-Surface

Project: Hilliard B Federal 1

Collection Date: 2/16/2016 10:50:00 AM

Lab ID: 1602849-005

Matrix: SOIL

Received Date: 2/19/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	2200	97		mg/Kg	10	2/23/2016 7:09:08 PM	23859
Surr: DNOP	0	70-130	S	%Rec	10	2/23/2016 7:09:08 PM	23859
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/23/2016 8:58:28 PM	23866
Surr: BFB	98.5	66.2-112		%Rec	1	2/23/2016 8:58:28 PM	23866
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	2/23/2016 8:58:28 PM	23866
Toluene	ND	0.049		mg/Kg	1	2/23/2016 8:58:28 PM	23866
Ethylbenzene	ND	0.049		mg/Kg	1	2/23/2016 8:58:28 PM	23866
Xylenes, Total	ND	0.098		mg/Kg	1	2/23/2016 8:58:28 PM	23866
Surr: 4-Bromofluorobenzene	117	80-120		%Rec	1	2/23/2016 8:58:28 PM	23866

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 1602849

Date Reported: 2/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 2-1'

Project: Hilliard B Federal 1

Collection Date: 2/16/2016 11:27:00 AM

Lab ID: 1602849-006

Matrix: SOIL

Received Date: 2/19/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	3000	98		mg/Kg	10	2/23/2016 7:51:10 PM	23859
Surr: DNOP	0	70-130	S	%Rec	10	2/23/2016 7:51:10 PM	23859
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	450	48		mg/Kg	10	2/24/2016 2:53:20 PM	23866
Surr: BFB	379	66.2-112	S	%Rec	10	2/24/2016 2:53:20 PM	23866
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.048		mg/Kg	1	2/23/2016 9:22:00 PM	23866
Toluene	ND	0.048		mg/Kg	1	2/23/2016 9:22:00 PM	23866
Ethylbenzene	ND	0.048		mg/Kg	1	2/23/2016 9:22:00 PM	23866
Xylenes, Total	2.6	0.096		mg/Kg	1	2/23/2016 9:22:00 PM	23866
Surr: 4-Bromofluorobenzene	482	80-120	S	%Rec	1	2/23/2016 9:22:00 PM	23866

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 1602849

Date Reported: 2/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 2-2'

Project: Hilliard B Federal 1

Collection Date: 2/16/2016 11:32:00 AM

Lab ID: 1602849-007

Matrix: SOIL

Received Date: 2/19/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	4700	100		mg/Kg	10	2/23/2016 8:33:01 PM	23859
Surr: DNOP	0	70-130	S	%Rec	10	2/23/2016 8:33:01 PM	23859
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	680	99		mg/Kg	20	2/24/2016 3:16:57 PM	23866
Surr: BFB	330	66.2-112	S	%Rec	20	2/24/2016 3:16:57 PM	23866
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.049		mg/Kg	1	2/23/2016 9:45:28 PM	23866
Toluene	ND	0.049		mg/Kg	1	2/23/2016 9:45:28 PM	23866
Ethylbenzene	ND	0.049		mg/Kg	1	2/23/2016 9:45:28 PM	23866
Xylenes, Total	3.5	0.099		mg/Kg	1	2/23/2016 9:45:28 PM	23866
Surr: 4-Bromofluorobenzene	704	80-120	S	%Rec	1	2/23/2016 9:45:28 PM	23866

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 1602849

Date Reported: 2/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 2-3'

Project: Hilliard B Federal 1

Collection Date: 2/16/2016 11:37:00 AM

Lab ID: 1602849-008

Matrix: SOIL

Received Date: 2/19/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	4000	96		mg/Kg	10	2/23/2016 9:14:54 PM	23859
Surr: DNOP	0	70-130	S	%Rec	10	2/23/2016 9:14:54 PM	23859
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	450	48		mg/Kg	10	2/24/2016 3:40:33 PM	23866
Surr: BFB	371	66.2-112	S	%Rec	10	2/24/2016 3:40:33 PM	23866
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.048		mg/Kg	1	2/23/2016 10:09:01 PM	23866
Toluene	ND	0.048		mg/Kg	1	2/23/2016 10:09:01 PM	23866
Ethylbenzene	ND	0.048		mg/Kg	1	2/23/2016 10:09:01 PM	23866
Xylenes, Total	4.8	0.096		mg/Kg	1	2/23/2016 10:09:01 PM	23866
Surr: 4-Bromofluorobenzene	500	80-120	S	%Rec	1	2/23/2016 10:09:01 PM	23866

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 1602849

Date Reported: 2/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 3-Surface

Project: Hilliard B Federal 1

Collection Date: 2/16/2016 10:51:00 AM

Lab ID: 1602849-009

Matrix: SOIL

Received Date: 2/19/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	240	9.8		mg/Kg	1	2/23/2016 9:56:52 PM	23859
Surr: DNOP	85.6	70-130		%Rec	1	2/23/2016 9:56:52 PM	23859
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/23/2016 10:32:29 PM	23866
Surr: BFB	105	66.2-112		%Rec	1	2/23/2016 10:32:29 PM	23866
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.047		mg/Kg	1	2/23/2016 10:32:29 PM	23866
Toluene	ND	0.047		mg/Kg	1	2/23/2016 10:32:29 PM	23866
Ethylbenzene	ND	0.047		mg/Kg	1	2/23/2016 10:32:29 PM	23866
Xylenes, Total	ND	0.095		mg/Kg	1	2/23/2016 10:32:29 PM	23866
Surr: 4-Bromofluorobenzene	99.0	80-120		%Rec	1	2/23/2016 10:32:29 PM	23866

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 1602849

Date Reported: 2/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 3-1'

Project: Hilliard B Federal 1

Collection Date: 2/16/2016 12:00:00 PM

Lab ID: 1602849-010

Matrix: SOIL

Received Date: 2/19/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/23/2016 10:38:47 PM	23859
Surr: DNOP	85.0	70-130		%Rec	1	2/23/2016 10:38:47 PM	23859
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/23/2016 10:55:52 PM	23866
Surr: BFB	97.5	66.2-112		%Rec	1	2/23/2016 10:55:52 PM	23866
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	2/23/2016 10:55:52 PM	23866
Toluene	ND	0.047		mg/Kg	1	2/23/2016 10:55:52 PM	23866
Ethylbenzene	ND	0.047		mg/Kg	1	2/23/2016 10:55:52 PM	23866
Xylenes, Total	ND	0.095		mg/Kg	1	2/23/2016 10:55:52 PM	23866
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	1	2/23/2016 10:55:52 PM	23866

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 1602849

Date Reported: 2/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 3-2'

Project: Hilliard B Federal 1

Collection Date: 2/16/2016 12:10:00 PM

Lab ID: 1602849-011

Matrix: SOIL

Received Date: 2/19/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/23/2016 10:59:39 PM	23859
Surr: DNOP	94.1	70-130		%Rec	1	2/23/2016 10:59:39 PM	23859
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/24/2016 12:29:54 AM	23866
Surr: BFB	97.6	66.2-112		%Rec	1	2/24/2016 12:29:54 AM	23866
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	2/24/2016 12:29:54 AM	23866
Toluene	ND	0.050		mg/Kg	1	2/24/2016 12:29:54 AM	23866
Ethylbenzene	ND	0.050		mg/Kg	1	2/24/2016 12:29:54 AM	23866
Xylenes, Total	ND	0.099		mg/Kg	1	2/24/2016 12:29:54 AM	23866
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	1	2/24/2016 12:29:54 AM	23866

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 1602849

Date Reported: 2/25/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 3-3'

Project: Hilliard B Federal 1

Collection Date: 2/16/2016 12:20:00 PM

Lab ID: 1602849-012

Matrix: SOIL

Received Date: 2/19/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/23/2016 11:20:38 PM	23859
Surr: DNOP	96.8	70-130		%Rec	1	2/23/2016 11:20:38 PM	23859
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/24/2016 12:53:19 AM	23866
Surr: BFB	94.4	66.2-112		%Rec	1	2/24/2016 12:53:19 AM	23866
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.049		mg/Kg	1	2/24/2016 12:53:19 AM	23866
Toluene	ND	0.049		mg/Kg	1	2/24/2016 12:53:19 AM	23866
Ethylbenzene	ND	0.049		mg/Kg	1	2/24/2016 12:53:19 AM	23866
Xylenes, Total	ND	0.099		mg/Kg	1	2/24/2016 12:53:19 AM	23866
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	1	2/24/2016 12:53:19 AM	23866

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602849

25-Feb-16

Client: Yates Petroleum Corporation

Project: Hilliard B Federal 1

Sample ID	LCS-23882		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 23882		RunNo: 32326					
Prep Date:	2/23/2016		Analysis Date: 2/23/2016		SeqNo: 988158		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		106	70	130			

Sample ID	MB-23882		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 23882		RunNo: 32326					
Prep Date:	2/23/2016		Analysis Date: 2/23/2016		SeqNo: 988160		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.4		10.00		94.0	70	130			

Sample ID	LCS-23859		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	23859		RunNo:	32327				
Prep Date:	2/22/2016		Analysis Date:	2/23/2016		SeqNo:	988166		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	43	10	50.00	0	86.5	65.8	136				
Surr: DNOP	4.8		5.000		95.8	70	130				

Sample ID	MB-23859		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	23859		RunNo:	32327				
Prep Date:	2/22/2016		Analysis Date:	2/23/2016		SeqNo:	988168		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	8.7		10.00		87.0	70	130				

Sample ID	LCS-23901		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	23901		RunNo:	32363				
Prep Date:	2/23/2016		Analysis Date:	2/24/2016		SeqNo:	989602		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	5.0		5.000		99.6	70	130				

Sample ID	MB-23901		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 23901		RunNo: 32363					
Prep Date:	2/23/2016		Analysis Date: 2/24/2016		SeqNo: 989603		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.7		10.00		97.0	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#: 1602849

25-Feb-16

Client: Yates Petroleum Corporation

Project: Hilliard B Federal 1

Sample ID	MB-23867		SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range						
Client ID:	PBS		Batch ID: 23867	RunNo: 32332						
Prep Date:	2/22/2016		Analysis Date: 2/23/2016	SeqNo: 988918		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	920		1000		91.8	66.2	112			

Sample ID	LCS-23867		SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range						
Client ID:	LCSS		Batch ID: 23867	RunNo: 32332						
Prep Date:	2/22/2016		Analysis Date: 2/23/2016	SeqNo: 988919		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	990		1000		99.2	66.2	112			

Sample ID	MB-23866		SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range						
Client ID:	PBS		Batch ID: 23866	RunNo: 32332						
Prep Date:	2/22/2016		Analysis Date: 2/23/2016	SeqNo: 988952		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	950		1000		95.4	66.2	112			

Sample ID	LCS-23866		SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range						
Client ID:	LCSS		Batch ID: 23866	RunNo: 32332						
Prep Date:	2/22/2016		Analysis Date: 2/23/2016	SeqNo: 988963		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	114	79.6	122			
Surr: BFB	1100		1000		113	66.2	112			S

Sample ID	MB-23887		SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range						
Client ID:	PBS		Batch ID: 23887	RunNo: 32377						
Prep Date:	2/23/2016		Analysis Date: 2/24/2016	SeqNo: 989970		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	940		1000		94.1	66.2	112			

Sample ID	LCS-23887		SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range						
Client ID:	LCSS		Batch ID: 23887	RunNo: 32377						
Prep Date:	2/23/2016		Analysis Date: 2/24/2016	SeqNo: 989971		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		102	66.2	112			

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#: 1602849

25-Feb-16

Client: Yates Petroleum Corporation

Project: Hilliard B Federal 1

Sample ID	MB-23867	SampType	MBLK	TestCode	EPA Method 8021B: Volatiles					
Client ID	PBS	Batch ID	23867	RunNo	32332					
Prep Date	2/22/2016	Analysis Date	2/23/2016	SeqNo	989011	Units	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID	LCS-23867	SampType	LCS	TestCode	EPA Method 8021B: Volatiles					
Client ID	LCSS	Batch ID	23867	RunNo	32332					
Prep Date	2/22/2016	Analysis Date	2/23/2016	SeqNo	989012	Units	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		120	80	120			S

Sample ID	MB-23866	SampType	MBLK	TestCode	EPA Method 8021B: Volatiles					
Client ID	PBS	Batch ID	23866	RunNo	32332					
Prep Date	2/22/2016	Analysis Date	2/23/2016	SeqNo	989021	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

Sample ID	LCS-23866	SampType	LCS	TestCode	EPA Method 8021B: Volatiles					
Client ID	LCSS	Batch ID	23866	RunNo	32332					
Prep Date	2/22/2016	Analysis Date	2/23/2016	SeqNo	989022	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	105	80	120			
Toluene	1.0	0.050	1.000	0	105	80	120			
Ethylbenzene	1.1	0.050	1.000	0	106	80	120			
Xylenes, Total	3.2	0.10	3.000	0	108	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		115	80	120			

Sample ID	MB-23887	SampType	MBLK	TestCode	EPA Method 8021B: Volatiles					
Client ID	PBS	Batch ID	23887	RunNo	32377					
Prep Date	2/23/2016	Analysis Date	2/24/2016	SeqNo	990007	Units	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602849

25-Feb-16

Client: Yates Petroleum Corporation

Project: Hilliard B Federal 1

Sample ID	LCS-23887	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	23887	RunNo:	32377					
Prep Date:	2/23/2016	Analysis Date:	2/24/2016	SeqNo:	990008	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		124	80	120			S

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 Hawks 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: 1602849

RcptNo: 1

Received by/date: JA 02/19/16

Logged By: Ashley Gallegos

2/19/2016 9:00:00 AM

Completed By: Ashley Gallegos

2/19/2016 3:28:04 PM

Reviewed By: AS 02/22/16

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

of preserved
bottles checked
for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			



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

June 06, 2016

Amber Griffin

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

RE: Hilliard B Federal 1

OrderNo.: 1605D62

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 6 sample(s) on 5/27/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1605D62

Date Reported: 6/6/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 1-Surface

Project: Hilliard B Federal 1

Collection Date: 5/25/2016 7:20:00 AM

Lab ID: 1605D62-001

Matrix: SOIL

Received Date: 5/27/2016 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	600	97		mg/Kg	10	6/2/2016 7:26:09 PM	25601
Surr: DNOP	0	70-130	S	%Rec	10	6/2/2016 7:26:09 PM	25601
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/1/2016 12:45:38 PM	25568
Surr: BFB	116	80-120		%Rec	1	6/1/2016 12:45:38 PM	25568

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 1605D62

Date Reported: 6/6/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 1-1'

Project: Hilliard B Federal 1

Collection Date: 5/25/2016 7:39:00 AM

Lab ID: 1605D62-002

Matrix: SOIL

Received Date: 5/27/2016 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	210	100		mg/Kg	10	6/2/2016 8:10:03 PM	25601
Surr: DNOP	0	70-130	S	%Rec	10	6/2/2016 8:10:03 PM	25601
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/1/2016 4:16:56 PM	25568
Surr: BFB	119	80-120		%Rec	1	6/1/2016 4:16:56 PM	25568

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 1605D62

Date Reported: 6/6/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 2-Surface

Project: Hilliard B Federal 1

Collection Date: 5/25/2016 7:23:00 AM

Lab ID: 1605D62-003

Matrix: SOIL

Received Date: 5/27/2016 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	820	100		mg/Kg	10	6/2/2016 8:53:28 PM	25601
Surr: DNOP	0	70-130	S	%Rec	10	6/2/2016 8:53:28 PM	25601
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/1/2016 4:40:21 PM	25568
Surr: BFB	118	80-120		%Rec	1	6/1/2016 4:40:21 PM	25568

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 1605D62

Date Reported: 6/6/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 2-1'

Project: Hilliard B Federal 1

Collection Date: 5/25/2016 7:50:00 AM

Lab ID: 1605D62-004

Matrix: SOIL

Received Date: 5/27/2016 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	1500	96		mg/Kg	10	6/2/2016 9:36:48 PM	25601
Surr: DNOP	0	70-130	S	%Rec	10	6/2/2016 9:36:48 PM	25601
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	14	4.7		mg/Kg	1	6/1/2016 5:03:46 PM	25568
Surr: BFB	181	80-120	S	%Rec	1	6/1/2016 5:03:46 PM	25568

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 1605D62

Date Reported: 6/6/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 2-2'

Project: Hilliard B Federal 1

Collection Date: 5/25/2016 7:57:00 AM

Lab ID: 1605D62-005

Matrix: SOIL

Received Date: 5/27/2016 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	1100	98		mg/Kg	10	6/2/2016 10:19:59 PM	25601
Surr: DNOP	0	70-130	S	%Rec	10	6/2/2016 10:19:59 PM	25601
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	30	4.9		mg/Kg	1	6/1/2016 5:27:11 PM	25568
Surr: BFB	231	80-120	S	%Rec	1	6/1/2016 5:27:11 PM	25568

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 1605D62

Date Reported: 6/6/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 2-3'

Project: Hilliard B Federal 1

Collection Date: 5/25/2016 8:05:00 AM

Lab ID: 1605D62-006

Matrix: SOIL

Received Date: 5/27/2016 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/2/2016 11:03:05 PM	25601
Surr: DNOP	96.9	70-130		%Rec	1	6/2/2016 11:03:05 PM	25601
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	6/1/2016 5:50:41 PM	25568
Surr: BFB	121	80-120	S	%Rec	1	6/1/2016 5:50:41 PM	25568

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1605D62

06-Jun-16

Client: Yates Petroleum Corporation

Project: Hilliard B Federal 1

Sample ID	LCS-25600	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	25600	RunNo:	34632					
Prep Date:	6/1/2016	Analysis Date:	6/2/2016	SeqNo:	1068193	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.8		5.000		75.0	70	130			

Sample ID	LCS-25601	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	25601	RunNo:	34632					
Prep Date:	6/1/2016	Analysis Date:	6/2/2016	SeqNo:	1068194	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	10	50.00	0	78.3	62.6	124			
Surr: DNOP	4.1		5.000		82.4	70	130			

Sample ID	MB-25600	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	25600	RunNo:	34632					
Prep Date:	6/1/2016	Analysis Date:	6/2/2016	SeqNo:	1068196	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.7		10.00		87.5	70	130			

Sample ID	MB-25601	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	25601	RunNo:	34632					
Prep Date:	6/1/2016	Analysis Date:	6/2/2016	SeqNo:	1068197	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	8.2		10.00		81.7	70	130			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1605D62

06-Jun-16

Client: Yates Petroleum Corporation

Project: Hilliard B Federal 1

Sample ID	MB-25568	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	25568	RunNo:	34598					
Prep Date:	5/31/2016	Analysis Date:	6/1/2016	SeqNo:	1067457	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		112	80	120			

Sample ID	LCS-25568	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	25568	RunNo:	34598					
Prep Date:	5/31/2016	Analysis Date:	6/1/2016	SeqNo:	1067458	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.1	80	120			
Surr: BFB	1200		1000		125	80	120			S

Sample ID	MB-25547	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	25547	RunNo:	34598					
Prep Date:	5/27/2016	Analysis Date:	6/1/2016	SeqNo:	1067478	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1200		1000		118	80	120			

Sample ID	LCS-25547	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	25547	RunNo:	34598					
Prep Date:	5/27/2016	Analysis Date:	6/1/2016	SeqNo:	1067479	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1300		1000		127	80	120			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



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: 1605D62

RcptNo: 1

Received by/date: JH 05/27/16

Logged By: Anne Thorne

5/27/2016 9:50:00 AM

Anne Thorne

Completed By: Anne Thorne

5/31/2016

Anne Thorne

Reviewed By: *[Signature]*

05/31/16

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°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	1.7	Good	Yes			

