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 JOHN A. YATES

JOHN A. YATES JR. CHAIRMAN OF THE BOARD

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January 22, 2016

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

RE: Union Federal SWD #1 30-025-31412 Section 8, T21S-R32E Lea County, New Mexico 1/26/2016 Isubmitted via email to NMOCTIFBUM. -All analyticals attached to submission. AG

Mr. Keys or Ms. Jones,

Yates Petroleum Corporation (Yates) would like to submit the attached plan of work to you regarding the two releases that occurred at the above mentioned facility on March 9, 2015 (1RP-3568) and March 10, 2015 (1RP-3568).

With NMOCD and BLM 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 <u>agriffin@yatespetroleum.com</u>.

Thank You,

amber Griffin

Amber Griffin Environmental Regulatory Agent Yates Petroleum Corporation **RECEIVED** By JKeyes at 11:02 am, Feb 08, 2016

**APPROVED** By JKeyes at 11:03 am, Feb 08, 2016

# **Yates Petroleum Corporation**

Union Federal SWD #1 Work Plan

Section 8, T21S-R32E

Lea County, New Mexico

January 22, 2016

## I. Location

The well is located approximately 31.1 miles east of Carlsbad, NM on Highway 62/180, approximately 5.8 miles south of Highway 62/180 on Campbell Road (County Road 29) and approximately 1.8 miles east of Campbell Road (County Road 29) on a lease road.

## II. Background

On March 9, 2015, Yates had a release of 10 barrels produced water, with 10 barrels produced water recovered. On March 10, 2015, Yates had a release of 300 barrels produced water, with 300 barrels produced water recovered. The area affected from these releases was within the unlined, bermed battery. An initial Form C-141 was submitted, via e-mail, to the NMOCD District I office on March 18, 2015 for both releases.

On April 1, 2015 personnel returned to the release area and collected initial composite soil samples from the surface and from the depths of  $6^{\circ} - 2^{\circ}$  below surface level using a hand auger. The soil samples were sent to an approved NMOCD laboratory and tested for BTEX 8021B, TPH 8015M, and Chlorides SM4500Cl-B. Yates received the analytical results on April 9, 2015 (Report H500883 attached to this work plan). The analytical results showed that BTEX was at levels below NMOCD RRAL's. The analytical results also showed that TPH was at levels above NMOCD RRAL's and there were elevated chloride levels. Yates determined that further vertical delineation of TPH and chlorides was needed within the release area.

Due to the initial analytical results and two releases occurring within two days, Yates made the decision to relocate the tanks of this location from the south side to the east side of the production pad. It was decided that the tanks needed to be in a steel containment with a liner to prevent further environmental issues if more releases occurred at this facility. Production started the process to relocate the tanks into a lined, steel containment system. The tanks also needed to be re-located in order for environmental personnel to be able to safely and effectively complete vertical delineation within the release area. Further sampling and remediation of this site was put on hold until the tank re-location process was compelte.

On July 29, 2015 personnel returned to the release area and completed further vertical delineation within the battery using a backhoe. During this sampling event, the release area was split into three separate sections in order to have a better picture of the contamination issues at the site. For Section 1 of the release area, Yates sampled at depths of 1' - 5' below surface level. For Section 2 of the release area, Yates was able to successfully collect soil samples from the depths of 3' - 13' below surface level. For Section 3 of the release area, Yates was able to successfully collect soil samples from the depths of 3' - 13' below surface level. For Section 3 of the release area, Yates was able to successfully collect soil samples from the depths of 3' - 11' below surface level. The backhoe was not able to safely or effectively pull samples from deeper depths. The soil samples from this sampling event were sent to an approved NMOCD laboratory and tested for BTEX 8021B, TPH 8051M, and Chlorides 300.0. Yates received the analytical results August 7, 10 & 24, 2015 (Reports 1507D85, 1507D95 and 1508707 attached to this work plan). The analytical results showed that both BTEX and TPH had delineated to levels below NMOCD RRAL's. The analytical results showed that there were still elevated chloride levels, and Yates determined that further vertical delineation of chlorides was still needed within the release area.

The release area contains mostly sandy soils and these soils would collapse while digging with heavy equipment. The collapsing of soils created personnel safety issues and made it

impossible to obtain discrete samples from deeper depths. As a result, it was determined that a hollow stem auger core rig would be needed to complete further vertical delineation within the release area.

On November 9, 2015 Yates contacted a company with a hollow stem auger core rig to conduct further vertical delineation of the release area. The hollow stem auger was scheduled for December 15, 2015 and complete vertical delineation of chlorides was completed. Soil samples obtained with the hollow stem auger were sent to an approved NMOCD laboratory and tested for Chlorides 300.0. Yates received the analytical results on January 6, 2016 (Report 1512A71 attached to this work plan). The analytical results showed that Yates had successfully found the bottom of the chloride contamination.

# 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 100 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 to excavate four (4) feet from the release area. The excavation will be approximately 154' long, 29' wide. Once all soils have been excavated, a 20 mil synthetic liner will be placed in the bottom of the excavation. The backfill of the excavation will then be started with caliche (up to 2' below surface level) and finished with 2' of top soil or sand.

Contaminated soils that are excavated will be hauled to a NMOCD approved disposal facility, The Lea Land, Inc. Landfill.

The backfill material for the excavation will be purchased from the nearest BLM pit.

Once all excavation and backfill work is complete, Yates will submit a Final Form C-141 to NMOCD and BLM requesting closure of these three releases.





# Union Federal SWD #1

			Analytical							
	Sample Area	Sample Date	Report	Sample Type	Depth	BTEX	GRO	DRO	TOTAL	Chlorides
Surface	Release area	4/1/2015	H500883	Grab/Auger	Surface	5.21	295	10,500	10,795	11,600
9"	Release area	4/1/2015	H500883	Grab/Auger	6"	3.59	271	3710	3,981	9,600
	Release area	4/1/2015	H500883	Grab/Auger	.1	0.54	152	1820	1,972	7,600
2	Release area	4/1/2015	H500883	Grab/Auger	2'	8.93	426	3510	3,936	10,400
1 - 1	Release area	7/29/2015	1507D95	Grab/Backhoe		QN	DN	170	170	690
1 - 2'	Release area	7/29/2015	1507D95	Grab/Backhoe	2'	DN	DN	140	140	83
1-3'	Release area	7/29/2015	1507D95	Grab/Backhoe	3'	DN	DN	170	170	QN
1 - 4'	Release area	7/29/2015	1507D85	Grab/Backhoe	4'	'	t		,	340
1 - 5'	Release area	7/29/2015	1507D85	Grab/Backhoe	5	ı		x	1	130
2 - 3'	Release area	7/29/2015	1507D95	Grab/Backhoe	3'	QN	QN	QN	QN	1,600
2 - 4'	Release area	7/29/2015	1507D95	Grab/Backhoe	4'	DN	QN	DN	QN	5,700
2-5'	Release area	7/29/2015	1507D95	Grab/Backhoe	5'	QN	QN	QN	QN	2,500
2-6'	Release area	7/29/2015	1507D85	Grab/Backhoe	6'	a	,		,	11,000
2 - 7'	Release area	7/29/2015	1507D85	Grab/Backhoe	7'	г	•	,		8,700
2 - 8'	Release area	7/29/2015	1507D85	Grab/Backhoe	8'		,	,	•	15,000
2 - 9'	Release area	7/29/2015	1507D85	Grab/Backhoe	9'		- 1	1	a	5,600
2-10'	Release area	7/29/2015	1508707	Grab/Backhoe	10'	£	'	,		4,800
2-11'	Release area	7/29/2015	1508707	Grab/Backhoe	11'	1	'	1		6,600
2-12'	Release area	7/29/2015	1508707	Grab/Backhoe	12'	•	•			14,000
2-13'	Release area	7/29/2015	1508707	Grab/Backhoe	13'					15,000
2-15'	Release area	12/15/2015	1512A71	Hollow Stem Auger	15'	1	ı	1		5,500
2-20'	Release area	12/15/2015	1512A71	Hollow Stem Auger	20'	-	1	3		1,700
2-25'	Release area	12/15/2015	1512A71	Hollow Stem Auger	25'		r,		-	1,800
2-30'	Release area	12/15/2015	1512A71	Hollow Stem Auger	30'	1	1		-	1,600
2-35'	Release area	12/15/2015	1512A71	Hollow Stem Auger	35'	-			1	2,000
2-40'	Release area	12/15/2015	1512A71	Hollow Stem Auger	40'		¢.	•		1,800
2-45'	Release area	12/15/2015	1512A71	Hollow Stem Auger	45'			•	-	700
2-50'	Release area	12/15/2015	1512A71	Hollow Stem Auger	50'	1	•			230
3-3'	Release area	7/29/2015	1507D95	Grab/Backhoe	3	QN	QN	QN	QN	5,600
3 - 4'	Release area	7/29/2015	1507D95	Grab/Backhoe	4	QN	Q	Q	QN	430
3-5'	Release area	7/29/2015	1507D95	Grab/Backhoe	5	QN	QN	ND	ND	2,500
3 - 6'	Release area	7/29/2015	1507D85	Grab/Backhoe	6'	1	T	ī	,	2,200
3 - 7'	Release area	7/29/2015	1507D85	Grab/Backhoe	7.		1	,	,	440
3-8'	Release area	7/29/2015	1507D85	Grab/Backhoe	8'			,		1,500
3 - 9'	Release area	7/29/2015	1507D85	Grab/Backhoe	9,			1	ŗ	1,200
3-10'	Release area	7/29/2015	1508707	Grab/Backhoe	10'		1	1	0	480
3-11'	Release area	7/29/2015	1508707	Grab/Backhoe	11.		a		•	630

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

All results are ppm.Chlorides for documentation. Released: 10 B/PW; Recovered: 10 B/PW. Release Date: 3/9/2015, 1RP-3568

Released: 300 B/PW; Recovered: 300 B/PW. Release Date: 3/10/2015, 1RP-3568



April 09, 2015

AMBER CANNON YATES PETROLEUM CORPORATION 105 S 4th Street Artesia, NM 88210

RE: UNION FEDERAL SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 04/02/15 11:35.

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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited certif.html.

Cardinal Laboratories is accreditated 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. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	04/02/2015	Sampling Date:	04/01/2015
Reported:	04/09/2015	Sampling Type:	Soil
Project Name:	UNION FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	1RP-3568	Sample Received By:	Jodi Henson
Project Location:	8-21S-32E, LEA COUNTY		

#### Sample ID: SURFACE (H500883-01)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	04/08/2015	ND	1.82	91.2	2.00	2.09	
Toluene*	0.677	0.200	04/08/2015	ND	1.74	86.9	2.00	0.754	
Ethylbenzene*	0.804	0.200	04/08/2015	ND	1.68	84.2	2.00	0.196	
Total Xylenes*	3.73	0.600	04/08/2015	ND	5.29	88.1	6.00	0.465	
Total BTEX	5.21	1.20	04/08/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE 127 % 61-154

Desertion 1 in th							
Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
50.0	04/06/2015	ND	193	96.5	200	0.183	
<b>5</b> 0.0	04/06/2015	ND	203	101	200	0.985	
(							

Surrogate: 1-Chlorooctadecane 215 % 52.1-176

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## \*=Accredited Analyte

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Celey D. Keine



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

Received:	04/02/2015	Sampling Date:	04/01/2015
Reported:	04/09/2015	Sampling Type:	Soil
Project Name:	UNION FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	1RP-3568	Sample Received By:	Jodi Henson
Project Location:	8-21S-32E, LEA COUNTY		

#### Sample ID: 6" (H500883-02)

BTEX 8021B	mg/	'kg	Analyze	d By: ms		- Harley Anton - Bookly Longe Intelligible			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.200	0.200	04/08/2015	ND	1.82	91.2	2.00	2.09	
Toluene*	0.431	0.200	04/08/2015	ND	1.74	86.9	2.00	0.754	
Ethylbenzene*	0.453	0.200	04/08/2015	ND	1.68	84.2	2.00	0.196	
Total Xylenes*	2.70	0.600	04/08/2015	ND	5,29	88.1	6.00	0.465	
Total BTEX	3.59	1.20	04/08/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIL 130 % 61-154

TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	271	50.0	04/06/2015	ND	193	96.5	200	0.183	
DR0 >C10-C28	3710	50.0	04/06/2015	ND	203	101	200	0.985	
Surrogate: 1-Chlorooctane	113	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	125	% 52.1-17	6						

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Celey D. Keine-



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

Received:	04/02/2015	Sampling Date:	04/01/2015
Reported:	04/09/2015	Sampling Type:	Soil
Project Name:	UNION FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	1RP-3568	Sample Received By:	Jodi Henson
Project Location:	8-21S-32E, LEA COUNTY		

#### Sample ID: 1' (H500883-03)

BTEX 8021B	mg/	'kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/08/2015	ND	1.82	91.2	2.00	2.09	
Toluene*	0.058	0.050	04/08/2015	ND	1.74	86.9	2.00	0.754	
Ethylbenzene*	<0.050	0.050	04/08/2015	ND	1.68	84.2	2.00	0.196	
Total Xylenes*	0.478	0.150	04/08/2015	ND	5.29	88.1	6.00	0.465	
Total BTEX	0.536	0.300	04/08/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	135	% 61-154	1						
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	152	50.0	04/06/2015	ND	193	96.5	200	0.183	
DR0 >C10-C28	1820	50.0	04/06/2015	ND	203	101	200	0.985	
Surrogate: 1-Chlorooctane	103	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	114	% 52.1-17	6						

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Celey D. Keene



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

Received:	04/02/2015	Sampling Date:	04/01/2015
Reported:	04/09/2015	Sampling Type:	Soil
Project Name:	UNION FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	1RP-3568	Sample Received By:	Jodi Henson
Project Location:	8-21S-32E, LEA COUNTY		

#### Sample ID: 2' (H500883-04)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	04/08/2015	ND	1.82	91.2	2.00	2.09	
Toluene*	0.301	0.200	04/08/2015	ND	1.74	86.9	2.00	0.754	
Ethylbenzene*	0.262	0.200	04/08/2015	ND	1.68	84.2	2.00	0.196	
Total Xylenes*	8.37	0.600	04/08/2015	ND	5.29	88.1	6.00	0.465	
Total BTEX	8.93	1.20	04/08/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	115 9	% 61-154							
TPH 8015M	mg/	'kg	Analyze	d By: MS		*.			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	426	50.0	04/06/2015	ND	193	96.5	200	0.183	
DR0 >C10-C28	3510	50.0	04/06/2015	ND	203	101	200	0.985	

Surrogate: 1-Chlorooctane	121 %	47.2-157
Surrogate: 1-Chlorooctadecane	131 %	52.1-176

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Celeg Di Keene-



#### **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 SM4500CI-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

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Celleg D. Keene

Celey D. Keene, Lab Director/Quality Manager

Relinquished by:	Relinquished by:	Relinquished by:	Special In					4	-		-	LAB # (lab use only)	(lab use only) ORDER #:							
d by:	d by:	a by:	Special Instructions:					2'	4	6"	Surface	FIELD CODE	my # H500883	Sampler Signature:		City/State/Zip:	Company Address: 105 South 4th Street	Comp: (505) 393-232E Yates Petroleum Corporation	Project Manager:	
Date	4 2 20/S	separate report.	TPH: 8015B, BTEX: 8021B.									CODE	83	Limber (0	575-748-4111 or 575-513-8799	Artesia, NM 88210	05 South 4th Street	(ates Petroleum Corporat	Amber Cannon	TO LAST MAHAHA, HUUUS, MM 00240
Time	Time	Than	X: 80					Ņ	ŗ		Surf.	Beginning Depth		annov	-8799			ion		
			21B.					Ņ	1.	ດຸ	Surf.	Ending Depth	]	NO						
Received by ELOT:	Received by:		Please show					4/1/2015	4/1/2015	4/1/2015	4/1/2015	Date Sampled								(CUC) 282-232
IC AND	Sten		Please show BTEX results as mo/ko					11:45 AM	11:23 AM	11:06 AM	10:42 AM	Time Sampled		e-mail:	Fax No:					(303) 393-2326 FAX (505) 393-2476
	è		sas		┝─┝					1	1	Field Filtered			Im					3-247
	×							×	×	×	×	Ice		acannon@y	575-748-4131					0.
	F											HNO3	Preservation	Ino	18-41					
			Pleas						_	-		нсі	vatio	n@	31					
		00						-				H <sub>2</sub> SO <sub>4</sub> NaOH		vate						
												Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	of Cor	gsp						
	7											None	& # of Containers	atespetroleum.com						
Date	Date			-				_				Other ( Specify)	CA.	leu						
	S	0							s	S		DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid	Ma	m.o	R				·	
-		0										NP=Non-Potable Specify Other	Matrix	mo	epor		-		P	
Time	ime		_	-			1	< 1	×	×	×	TPH: 418.1 8015M 80	15	1	Report Format:		Project Loc:	Pr	Project Name:	
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April 09, 2015

AMBER CANNON YATES PETROLEUM CORPORATION 105 S 4th Street Artesia, NM 88210

RE: UNION FEDERAL SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 04/02/15 11:35.

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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes are denoted by <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes are denoted by <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes are denoted analytes are denoted by <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes are denoted analytes are denoted by <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes are denoted analytes are denoted by <a href="https://www.tceq.texas.go

Cardinal Laboratories is accreditated 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. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	04/02/2015	Sampling Date:	04/01/2015
Reported:	04/09/2015	Sampling Type:	Soil
Project Name:	UNION FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	1RP-3568	Sample Received By:	Jodi Henson
Project Location:	8-21S-32E, LEA COUNTY		

#### Sample ID: SURFACE (H500883-01)

Chloride, SM4500CI-B	mg,	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11600	16.0	04/06/2015	ND	400	100	400	0.00	

#### Sample ID: 6" (H500883-02)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9600	16.0	04/06/2015	ND	400	100	400	0.00	

#### Sample ID: 1' (H500883-03)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7600	16.0	04/06/2015	ND	400	100	400	0.00	

#### Sample ID: 2' (H500883-04)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10400	16.0	04/06/2015	ND	400	100	400	0.00	

#### **Cardinal Laboratories**

#### \*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by claims, including those for negligence and including, whether cause whatsoever shall be deemed waived unless made in writing and received by claims, including those for negligence and including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its sublicitaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such climins based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall note performances in full with written approval of Cardinal Laboratories.

Celez D. Keine



#### **Notes and Definitions**

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.
( <b>1</b>	Chloride by SM4500CI-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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This reproduced exception in full with mitten approval of Cardinal Laboratories.

Celez D. Keene\_

	Relinquished by:	Relinquished by:	Relinquished by:	Special Instructions:					4 2	1	1N 0"	S	LAB # (lab use only)	ORDER #:	(0		0			_	C
	by:	12 Jannon									-	Surface	FIELD CODE	» * H500883	Sampler Signature:	2	City/State/Zip: Artesia, NM 88210	Company Address: 105 South 4th Street		Project Manager: Amber Cannon	<ol> <li>101 East Marland, Hobbs, NM 88240</li> </ol>
. Cac	Date	4/2/2015	Separate report.	TPH: 8015B, BTEX: 8021B.											but	575-748-4111 or 575-513-8799	M 88210	4th Street	roleum Corporat	Innon	, NM 88240
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	1	Sten		Please show BTEX results					11:45 AM	11:23 AM	11:06 AM	10:42 AM	Time Sampled		- e-mail:	- Fax No:					(505) 393-2326 FAX (505) 393-2476
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		R		as mg/kg.		+	+		×	-	X	×	Total #. of Containers Ice	h	acannon@	575-748-4131					6
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Date	Date	4/2/15		ride	_	-							Other ( Specify)	2	oleu						
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Jre	and Inpler	eals eals	onta e of	2-05				-			-+		SAR / ESP / CEC Metals: As Ag Ba Cd Cr Pb Hg	F. D		Stan					
Ipon	/Clie	onc	iners						┝─┼	-	+		Volatiles	Ana	1	× Standard		00			
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

August 07, 2015

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

OrderNo.: 1507D85

RE: Union Federal SWD #1

Dear Amber Cannon:

Hall Environmental Analysis Laboratory received 10 sample(s) on 7/31/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environ	mental Analysi	s Laborato	ory, Inc.		Date Reported: 8/7/2	2015
	ates Petroleum Corpo Jnion Federal SWD #1	ration		L	ab Order: 15071	085
Lab ID: Client Sample ID:	1507D85-001 1-4'			Matrix:	7/29/2015 7:28:00 A SOIL	М
Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	340	30	mg/Kg	Ana 20 8/4/2015 11:51:20	alyst: <b>LGT</b> AM 20587
Lab ID: Client Sample ID:	1507D85-002 1-5'		3	Collection Date: Matrix:	7/29/2015 7:31:00 A SOIL	M
Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	130	30	mg/Kg	Ana 20 8/4/2015 12:28:33	alyst: <b>LGT</b> PM 20587
Lab ID:	1507D85-003			Collection Date:	7/29/2015 8:04:00 A	M
Client Sample ID:	2-6'			Matrix:	SOIL	
Analyses		Result	RL Qual	Units	DF Date Analyzed	<b>Batch ID</b>
EPA METHOD 300	0.0: ANIONS				Ana	alyst: LGT
Chloride		11000	750	mg/Kg	500 8/5/2015 1:00:08 P	M 20587
Lab ID: Client Sample ID:	1507D85-004 2-7'			Collection Date: Matrix:	7/29/2015 8:09:00 A SOIL	M
Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	).0: ANIONS	8700	300	mg/Kg	Ana 200 8/5/2015 1:12:33 P	alyst: <b>LGT</b> M 20587
Lab ID:	1507D85-005			Collection Date:	7/29/2015 8:13:00 A	M
Client Sample ID:	2-8'			Matrix:	SOIL	
Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	15000	750	mg/Kg	Ana 500 8/5/2015 1:24:58 P	alyst: <b>LGT</b> PM 20587

Hall Environmental Analysis \* **Analytical Report** Lab Order: 1507D85

- Qualifiers: \* Value exceeds Maximum Contaminant Level.
  - D Sample Diluted Due to Matrix
  - Н 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
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 3
- Р Sample pH Not In Range
- RL Reporting Detection Limit

Hall Environ	mental Analysis	s Laborato	ory, Inc.		Date Repor	ted: 8/7/20	)15
	ates Petroleum Corpor Jnion Federal SWD #1	ation		L	ab Order:	1507D	85
Lab ID: Client Sample ID:	1507D85-006 2-9'		(	Collection Date: Matrix:		:16:00 AM	1
Analyses		Result	RL Qual	Units	DF Date An	alyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	5600	300	mg/Kg	200 8/5/2015		yst: <b>LGT</b> / 20587
Lab ID: Client Sample ID:	1507D85-007 3-6'			Collection Date: Matrix:		:20:00 AN	1
Analyses		Result	RL Qual	Units	DF Date Ar	alyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	2200	75	mg/Kg	50 8/5/2015	Anal 1:49:48 PM	yst: <b>LGT</b> A 20587
Lab ID: Client Sample ID:	1507D85-008 3-7'			Collection Date: Matrix:		:25:00 AN	1
Analyses		Result	RL Qual	Units	DF Date Ar	alyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	440	30	mg/Kg	20 8/4/2015	Anal 5 2:07:49 PM	lyst: <b>LGT</b> M 20587
Lab ID: Client Sample ID:	1507D85-009 3-8'			Collection Date: Matrix:		:35:00 AN	И
Analyses		Result	RL Qual	Units	DF Date Ar	nalyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	1500	75	mg/Kg	50 8/5/2015	Anal 5 2:02:12 PM	lyst: <b>LGT</b> M 20587
Lab ID: Client Sample ID:	1507D85-010 3-9'			Collection Date Matrix		:42:00 AN	Л
Analyses		Result	RL Qual		DF Date A	nalyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	1200	75	mg/Kg	50 8/5/2018	Ana 5 2:14:37 PM	lyst: <b>LGT</b> M 20587

**Analytical Report** Lab Order: 1507D85

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

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 В Analyte detected in the associated Method Blank

- E Value above quantitation range
  - J Analyte detected below quantitation limits Page 2 of 3
  - Р Sample pH Not In Range
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental	Analysis	Laboratory,	Inc.
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Result

14

PQL

1.5

Client: Project:		Petroleum Corporation Federal SWD #1				
Sample ID N	MB-20587	SampType: MBLK	TestCode: EPA Method	1 300.0: Anions		
Client ID: F	PBS	Batch ID: 20587	RunNo: 27959			
Prep Date:	8/4/2015	Analysis Date: 8/4/2015	SeqNo: 841176	Units: mg/Kg		
Analyte			SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit	Qual
		ND 1.5				
Sample ID	LCS-20587	SampType: LCS	TestCode: EPA Method	1 300.0: Anions		
Client ID: L	LCSS	Batch ID: 20587	RunNo: 27959			
Prep Date:	8/4/2015	Analysis Date: 8/4/2015	SeqNo: 841177	Units: mg/Kg		

0

%REC

90.5

LowLimit

90

HighLimit

110

SPK value SPK Ref Val

15.00

**Qualifiers:** 

Analyte

Chloride

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

Page 3 of 3

1507D85 07-Aug-15

WO#:

%RPD

**RPDLimit** 

Qual

	HALL
	ENVIRONMENTAL
and and	ANALYSIS
	LABORATORY

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	1507D85		RcptNo:	1
Received by/dat	e: AT	073115				
Logged By:	Lindsay Mangin	7/31/2015 7:10:00 AM		Antythego		
Completed By:	Lindsay Mangin	7/31/2015 8:24:11 AM		Julythap		
Reviewed By:	CS	67/31/15		V		
Chain of Cus	tody	nanina an ann an State and Sta				
1. Custody sea	ils intact on sample bottles?		Yes 🗌	No 🗌	Not Present 🔽	
2. Is Chain of (	Sustody complete?		Yes 🔽	No 🗌	Not Present	
3. How was the	a sample delivered?		Courier			
Log In						
4. Was an atte	empt made to cool the sampl	es?	Yes 🗌	No 🔽	NA	
5 Mars -	males resolved at a tamaant	up of SO <sup>o</sup> C to 6 COC	Approved b	<mark>oy cilent.</mark> No ☑	NA	
o, were all sar	mples received at a temperat	uie ar 20°C to 6.0°C	Yes Approved b			
6. Sample(s)	n proper container(s)?		Yes 🗹	No		
7. Sufficient sa	ample volume for indicated te	s1(s)?	Yes 🗹	No 🗌		
8, Are sample:	s (except VCA and ONG) pro	perly preserved?	Yes 🔽	No 🗌	(increase)	
9. Was presen	vative added to bottles?		Yes	No 🔽	NA 🗌	
10.VOA vials h	ave zero headspace?		Yes 🗌	No	No VOA Vials 🔽	
11. Were any s	ample containers received b	rcken?	Yes	No 🔽	# of preserved	
					bottles checked	
	work match bottle labels? epancies on chain of custody	,	Yes 🗹	No	for pH: (<2 o	r >12 unless noted
	s correctly identified on Chai		Yes 🗹	No 🗌	Adjusted?	
14, Is it clear w	hat analyses were requested	?	Yes 🖌	No 🗌		
	Iding times able to be met?		Yes 🖌	No	Checked by:	
(ir no, notiry	v customer for authorization.)					
Special Hand	dling (if applicable)					
16. Was client	notified of all discrepancies v	vith this order?	Yes 🗌	No 🗔	NA 🔽	
Perso	on Notified:	Date	n na sina na sina na sina ng sina 2000 ki Ng sina ng sina ng sina ng sina 2000 ki	and a subsection of the subsec		
By W	/hom	, Via:	eMail 🗍	Phone 🗌 Fax	In Person	
Rega	irding:	gen maar het en en ste de ste kennen aan de ste de ste Een ste de st	nan san dan karang k	annan an a	ata per sun d'anti, mantinan annan di per la gi anti di dini di manya termet fat	
Clien	t Instructions:		ernen das sols tradis sente director from de lang			
17. Additional	remarks:			e Charlenne (a la seconda de la companya de la constante de la constante de la constante de la constante de la		Nama and a state of the second sec
18. Cooler Int	formation					
Cooler	No Temp C Condition	Seal Intact Seal No	Seal Date	Signed By		
1	21.0 Good	Yes				
Page 1	of 1					

Mailing Address: 105 South 4th S	Client: Yates Petro Mailing Address: 105 South 4th Street	etroleum et Artes	Yates Petroleum Corporation Iress: 4th Street Artesia, NM 88210	X Standard Project Name: U Project #:	☐ Rush e: Union Federal SWD #1	SWD #1		4901 Tel. 5	Hawk 505-3-	4901 Hawkins NE Tel. 505-345-3975	LY haller E - A 75	<b>SIS</b> wironr dbuqu Fax	www.hallenvironmental.com ins NE - Albuquerque, NM 45-3975 Fax 505-345-41	<b>SIS LABORA</b> Invironmental.com Albuquerque, NM 87109 Fax 505-345-4107	YSIS LABORATOR environmental.com Albuquerque, NM 87109 Fax 505-345-4107	ANALYSIS LABORATORY www.hallenvironmental.com kins NE - Albuquerque, NM 87109 345-3975 Fax 505-345-4107
Phone #: email or Fax#:		575-513- acannon	575-513-8799 or 575-748-4111 acarnon@yatespetroleum.com	Project Manager.	1RP-3568 ger: Amher Griffin	88	Contraction of the local division of the loc		00000		Au	205'*C		ā		
QA/QC Package: C Standard Accreditation:	kage: d on:		Level 4 (Full Validation)	Sampler:	N N	05-2020 Amber Griffin <i>HC</i>	and the set of the set of the other				(H)	<sup>3'</sup> //O <sup>5</sup> bC	/ 8082 P	(\		
C NELAP	(be)	a Other		On Ice: Sample Tem	<ul> <li>Tes</li> <li>emperature:</li> </ul>	ANO 211		OCH WILLIAM STREET						anaanaa ah		
Date	Цще Ц	Matrix	Sample Request ID	Container Type and #	Preservativ e Type	HEAL No.	BTEX + M	BTEX + Metho BTEX + M	TPH (Meth	EDB (Well	8310 (PNA 8 ARDR	(F) snoinA	itse9 r808	n92) 0728 vv) 80828	kali (Marina)	
7/29/2015	7:28 Soil	Soil	1 - 4'	1 - 4oz.	Not Required	100-						×				
7/29/2015	7:31 Soil	Soll	1 - 5'	1 - 4oz.	Not Required	-002-						×				
7/29/2015	8:04 Soil		2 - 6'	1 - 4oz.	Not Required	-033						×				encorrido en
7/29/2015	8:09 Soil		2 - 7'	1 - 4oz.	Not Required	1220-		a pointentente est	_			×				
7/29/2015	8:13 Soil		2 - 8'	1 - 402.	Not Required	-02		-			-	×				
7/29/2015	8:16 Soil	Soil	2 - 9'	1 - 4oz.	Not Required	-ar		_				×				
7/29/2015	9:20 Soil	Soil	3 - 6'	1 - 4oz.	Not Required	あ						×				
7/29/2015	9:25 Soil		3-7	1 - 4oz.	Not Required	-038			_		-	×				
7/29/2015	9:35 Soil		3 - 8'	1 - 402.	Not Required	-000-					_	×				
7/29/2015	9:42 Soil	Soil	3 - 9'	1 - 402.	Not Required	010-			atal and a second			×			1	
Cate:	Time:	Refinquished by:	edby:	Received by:	M	Date Jime	Remarks:	arks:	Ani	Anions: Chloride only.	Chlor	ide or	IIY.			
Dale.	Time:	Relinquished by:	ed by: UC	Received by:		Date Time	Research and P									



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquergue, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

August 10, 2015

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

RE: Union Federal SWD #1

OrderNo.: 1507D95

Dear Amber Cannon:

Hall Environmental Analysis Laboratory received 9 sample(s) on 7/31/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

 CLIENT:
 Yates Petroleum Corporation
 Client Sample ID: 1-1'

 Project:
 Union Federal SWD #1
 Collection Date: 7/29/2015 7:21:00 AM

 Lab ID:
 1507D95-001
 Matrix: SOIL
 Received Date: 7/31/2015 8:00:00 AM

 Analyses
 Result
 RL Qual Units
 DF Date Analyzed

KJH
20541
20541
NSB
20550
20550
NSB
20550
20550
20550
20550
20550

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 12
	ND	Not Detected at the Reporting Limit	Р	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		

Batch

# Hall Environmental Analysis Laboratory, Inc.

 CLIENT: Yates Petroleum Corporation
 Client Sample ID: 1-2'

 Project: Union Federal SWD #1
 Collection Date: 7/29/2015 7:23:00 AM

 Lab ID: 1507D95-002
 Matrix: SOIL
 Received Date: 7/31/2015 8:00:00 AM

 Analyses
 Result
 RL
 Qual
 Units
 DF

EPA METHOD 8015M/D: DIESEL RANGE	ORGANIC	S			Analyst	: KJH
Diesel Range Organics (DRO)	140	10	mg/Kg	1	8/5/2015 11:19:39 AM	20541
Surr: DNOP	94.4	57.9-140	%REC	1	8/5/2015 11:19:39 AM	20541
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/4/2015 1:29:49 AM	20550
Surr: BFB	88.4	75.4-113	%REC	1	8/4/2015 1:29:49 AM	20550
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.048	mg/Kg	1	8/4/2015 1:29:49 AM	20550
Toluene	ND	0.048	mg/Kg	1	8/4/2015 1:29:49 AM	20550
Ethylbenzene	ND	0.048	mg/Kg	1	8/4/2015 1:29:49 AM	20550
Xylenes, Total	ND	0.096	mg/Kg	1	8/4/2015 1:29:49 AM	20550
Surr: 4-Bromofluorobenzene	94.0	80-120	%REC	1	8/4/2015 1:29:49 AM	20550

<b>Oualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
Quanners.			Б	•
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 12
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation Project: Union Federal SWD #1

1507D95-003

Lab ID:

Client Sample ID: 1-3' Collection Date: 7/29/2015 7:25:00 AM Received Date: 7/31/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S				Analys	t: KJH
Diesel Range Organics (DRO)	170	100		mg/Kg	10	8/3/2015 5:32:17 PM	20541
Surr: DNOP	0	57.9-140	S	%REC	10	8/3/2015 5:32:17 PM	20541
EPA METHOD 8015D: GASOLINE RAM	IGE					Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/4/2015 1:54:34 AM	20550
Surr: BFB	89.8	75.4-113		%REC	1	8/4/2015 1:54:34 AM	20550
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.048		mg/Kg	1	8/4/2015 1:54:34 AM	20550
Toluene	ND	0.048		mg/Kg	1	8/4/2015 1:54:34 AM	20550
Ethylbenzene	ND	0.048		mg/Kg	1	8/4/2015 1:54:34 AM	20550
Xylenes, Total	ND	0.095		mg/Kg	1	8/4/2015 1:54:34 AM	20550
Surr: 4-Bromofluorobenzene	95.8	80-120		%REC	1	8/4/2015 1:54:34 AM	20550

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 12
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# Hall Environmental Analysis Laboratory, Inc.

 CLIENT: Yates Petroleum Corporation
 Client Sample ID: 2-3'

 Project: Union Federal SWD #1
 Collection Date: 7/29/2015 7:52:00 AM

 Lab ID: 1507D95-004
 Matrix: SOIL
 Received Date: 7/31/2015 8:00:00 AM

 Analyses
 Result
 RL Qual Units
 DF Date Analyzed

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE	ORGANIC	S			Analyst	: KJH
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/3/2015 5:59:05 PM	20541
Surr: DNOP	104	57.9-140	%REC	1	8/3/2015 5:59:05 PM	20541
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/4/2015 2:19:17 AM	20550
Surr: BFB	91.6	75.4-113	%REC	1	8/4/2015 2:19:17 AM	20550
EPA METHOD 8021B: VOLATILES					Analyst	t: NSB
Benzene	ND	0.049	mg/Kg	1	8/4/2015 2:19:17 AM	20550
Toluene	ND	0.049	mg/Kg	1	8/4/2015 2:19:17 AM	20550
Ethylbenzene	ND	0.049	mg/Kg	1	8/4/2015 2:19:17 AM	20550
Xylenes, Total	ND	0.098	mg/Kg	1	8/4/2015 2:19:17 AM	20550
Surr: 4-Bromofluorobenzene	98.2	80-120	%REC	1	8/4/2015 2:19:17 AM	20550

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 12
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# Hall Environmental Analysis Laboratory, Inc.

 CLIENT: Yates Petroleum Corporation
 Client Sample ID: 2-4'

 Project: Union Federal SWD #1
 Collection Date: 7/29/2015 7:55:00 AM

 Lab ID: 1507D95-005
 Matrix: SOIL

 Received Date: 7/31/2015 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANIC	S			Analys	t: KJH
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	8/3/2015 6:26:29 PM	20541
Surr: DNOP	102	57.9-140	%REC	1	8/3/2015 6:26:29 PM	20541
EPA METHOD 8015D: GASOLINE RAN	IGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/4/2015 2:44:04 AM	20550
Surr: BFB	89.9	75.4-113	%REC	1	8/4/2015 2:44:04 AM	20550
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.048	mg/Kg	1	8/4/2015 2:44:04 AM	20550
Toluene	ND	0.048	mg/Kg	1	8/4/2015 2:44:04 AM	20550
Ethylbenzene	ND	0.048	mg/Kg	1	8/4/2015 2:44:04 AM	20550
Xylenes, Total	ND	0.095	mg/Kg	1	8/4/2015 2:44:04 AM	20550
Surr: 4-Bromofluorobenzene	95.4	80-120	%REC	1	8/4/2015 2:44:04 AM	20550

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 5 of 12
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# Hall Environmental Analysis Laboratory, Inc.

4

 CLIENT: Yates Petroleum Corporation
 Client Sample ID: 2-5'

 Project: Union Federal SWD #1
 Collection Date: 7/29/2015 7:58:00 AM

 Lab ID: 1507D95-006
 Matrix: SOIL
 Received Date: 7/31/2015 8:00:00 AM

 Avalyses
 Paralyses
 DE Date Analysed

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	E ORGANIC	S			Analyst	: KJH
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/3/2015 6:53:27 PM	20541
Surr: DNOP	102	57.9-140	%REC	1	8/3/2015 6:53:27 PM	20541
EPA METHOD 8015D: GASOLINE RANG	GE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/4/2015 10:07:35 AM	20550
Surr: BFB	92.1	75.4-113	%REC	1	8/4/2015 10:07:35 AM	20550
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.048	mg/Kg	1	8/4/2015 10:07:35 AM	20550
Toluene	ND	0.048	mg/Kg	1	8/4/2015 10:07:35 AM	20550
Ethylbenzene	ND	0.048	mg/Kg	1	8/4/2015 10:07:35 AM	20550
Xylenes, Total	ND	0.096	mg/Kg	1	8/4/2015 10:07:35 AM	20550
Surr: 4-Bromofluorobenzene	99.9	80-120	%REC	1	8/4/2015 10:07:35 AM	20550

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	в	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 6 of 12
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# Hall Environmental Analysis Laboratory, Inc.

\_

 CLIENT: Yates Petroleum Corporation
 Client Sample ID: 3-3'

 Project:
 Union Federal SWD #1
 Collection Date: 7/29/2015 9:05:00 AM

 Lab ID:
 1507D95-007
 Matrix: SOIL
 Received Date: 7/31/2015 8:00:00 AM

 Analyses
 Result
 RL
 Qual
 Units
 DF Date Analyzed

Result	RL Qu	ial Units	DF	Date Analyzed	Batch
	S			Analyst	: KJH
ND	10	mg/Kg	1	8/3/2015 7:20:30 PM	20541
102	57.9-140	%REC	1	8/3/2015 7:20:30 PM	20541
ε				Analyst	: NSB
ND	4.7	mg/Kg	1	8/4/2015 10:32:21 AM	20550
89.6	75.4-113	%REC	1	8/4/2015 10:32:21 AM	20550
				Analyst	: NSB
ND	0.047	mg/Kg	1	8/4/2015 10:32:21 AM	20550
ND	0.047	mg/Kg	1	8/4/2015 10:32:21 AM	20550
ND	0.047	mg/Kg	1	8/4/2015 10:32:21 AM	20550
ND	0.094	mg/Kg	1	8/4/2015 10:32:21 AM	20550
97.3	80-120	%REC	1	8/4/2015 10:32:21 AM	20550
	E ORGANIC: ND 102 SE ND 89.6 ND ND ND ND ND ND	E ORGANICS ND 10 102 57.9-140 SE ND 4.7 89.6 75.4-113 ND 0.047 ND 0.047 ND 0.047 ND 0.047 ND 0.047 ND 0.047	E ORGANICS ND 10 mg/Kg 102 57.9-140 %REC SE ND 4.7 mg/Kg 89.6 75.4-113 %REC ND 0.047 mg/Kg ND 0.047 mg/Kg ND 0.047 mg/Kg ND 0.047 mg/Kg ND 0.047 mg/Kg	E ORGANICS ND 10 mg/Kg 1 102 57.9-140 %REC 1 SE ND 4.7 mg/Kg 1 89.6 75.4-113 %REC 1 ND 0.047 mg/Kg 1	E ORGANICS         Analyst           ND         10         mg/Kg         1         8/3/2015 7:20:30 PM           102         57.9-140         %REC         1         8/3/2015 7:20:30 PM           iE         Analyst           ND         4.7         mg/Kg         1         8/4/2015 10:32:21 AM           89.6         75.4-113         %REC         1         8/4/2015 10:32:21 AM           ND         0.047         mg/Kg         1         8/4/2015 10:32:21 AM           ND         0.094         mg/Kg         1         8/4/2015 10:32:21 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 7 of 12
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum CorporationClient Sample ID: 3-4'Project:Union Federal SWD #1Collection Date: 7/29/2015 9:07:00 AMLab ID:1507D95-008Matrix: SOILReceived Date: 7/31/2015 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	S			Analyst	: KJH
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/3/2015 7:47:32 PM	20541
Surr: DNOP	106	57.9-140	%REC	1	8/3/2015 7:47:32 PM	20541
EPA METHOD 8015D: GASOLINE RA	ANGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/4/2015 10:57:19 AM	20550
Surr: BFB	91.2	75.4-113	%REC	1	8/4/2015 10:57:19 AM	20550
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.047	mg/Kg	1	8/4/2015 10:57:19 AM	20550
Toluene	ND	0.047	mg/Kg	1	8/4/2015 10:57:19 AM	20550
Ethylbenzene	ND	0.047	mg/Kg	1	8/4/2015 10:57:19 AM	20550
Xylenes, Total	ND	0.095	mg/Kg	1	8/4/2015 10:57:19 AM	20550
Surr: 4-Bromofluorobenzene	98.7	80-120	%REC	1	8/4/2015 10:57:19 AM	20550

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

Analytical Report Lab Order 1507D95

#### Date Reported: 8/10/2015

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation Project: Union Federal SWD #1

1507D95-009

Lab ID:

Client Sample ID: 3-5' Collection Date: 7/29/2015 9:14:00 AM Received Date: 7/31/2015 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE		s			Analyst	: KJH
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/3/2015 8:14:21 PM	20541
Surr: DNOP	101	57.9-140	%REC	1	8/3/2015 8:14:21 PM	20541
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/4/2015 11:22:21 AM	20550
Surr: BFB	88.2	75.4-113	%REC	1	8/4/2015 11:22:21 AM	20550
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.048	mg/Kg	1	8/4/2015 11:22:21 AM	20550
Toluene	ND	0.048	mg/Kg	1	8/4/2015 11:22:21 AM	20550
Ethylbenzene	ND	0.048	mg/Kg	1	8/4/2015 11:22:21 AM	20550
Xylenes, Total	ND	0.096	mg/Kg	1	8/4/2015 11:22:21 AM	20550
Surr: 4-Bromofluorobenzene	94.2	80-120	%REC	1	8/4/2015 11:22:21 AM	20550

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	в	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 9 of 12
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# QC SUMMARY REPORT

# Hall Environmental Analysis Laboratory, Inc.

WO#: 1507D95

10-Aug-15

	etroleum Cor ederal SWD	See.	on									
Sample ID MB-20541	0541 SampType: MBLK				TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 20541			RunNo: 27904								
Prep Date: 7/31/2015	Analysis Date: 8/3/2015			SeqNo: 839331			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	10		10.00		101	57.9	140					
Sample ID LCS-20541	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 20541			RunNo: 27904								
Prep Date: 7/31/2015	Analysis Date: 8/3/2015			SeqNo: 839332			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	48	10	50.00	0	95.8	57.4	139					
Surr: DNOP	5.0		5.000		101	57.9	140					

Qualifiers:

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

Page 10 of 12

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

Client: Project:	Yates Petroleum Corporation Union Federal SWD #1											
Sample ID	MB-20550	SampT	ype: ME	BLK	TestCode: EPA Method 8015D: Gasoline Range							
Client ID:	PBS	Batch ID: 20550			RunNo: 27919							
Prep Date:	7/31/2015	Analysis Date: 8/3/2015			SeqNo: 839770			Units: mg/Kg				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Surr: BFB	e Organics (GRO)	ND 910	5.0	1000		91.4	75.4	113				
Sample ID	LCS-20550	SampType: LCS TestCode: EPA Method 8015D: Gasoline Range										
Client ID:	LCSS	Batch	ID: 20	550	RunNo: 27919							
Prep Date:	7/31/2015	Analysis Date: 8/3/2015			SeqNo: 839772			Units: mg/Kg				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
entre de la remain de la compañía 🖶	e Organics (GRO)	26	5.0	25.00	0	103	79.6	122				
Surr: BFB		1000		1000		101	75.4	113				
Sample ID	5ML RB	SampType: MBLK			Tes	tCode: El	e					
Client ID:	PBS	Batch ID: R27950			F	RunNo: 2	7950					
Prep Date:		Analysis Date: 8/4/2015			SeqNo: 840981			Units: %REC				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: BFB		910		1000		91.1	75.4	113				
Sample ID	2.5UG GRO LCS	SampType: LCS TestCode: EPA Method 8015D: Gasoline Range										
Client ID:	LCSS	Batch ID: R27950			RunNo: 27950							
Prep Date:		Analysis Date: 8/4/2015			SeqNo: 840982			Units: %REC				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: BFB		1000		1000		101	75.4	113				

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- 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

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- 10-Aug-15
- WO#: 1507D95
#### QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

Client: Project:	Yates Petr Union Feo			on							
Sample ID	MB-20550	SampT	ype: ME	BLK	Tes	Code: E	PA Method	8021B: Volat	iles		
Client ID:	PBS	Batch	D: 20	550	R	unNo: 2	7919				
Prep Date:		Analysis D				eqNo: 8		Units: mg/K	a		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.050	o		701120	LOWLINK	- ingrienne	70111 0	TH DENIN	Quui
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.10								
Surr: 4-Bron	nofluorobenzene	0.99		1.000		99.1	80	120			
Sample ID	LCS-20550	SampT	ype: LC	S	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID:	LCSS	Batch	ID: 20	550	F	RunNo: 2	27919				
Prep Date:	7/31/2015	Analysis D	ate: 8/	3/2015	S	SeqNo: 8	339801	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.0	0.050	1.000	0	103	76.6	128			
Toluene		1.0	0.050	1.000	0	104	75	124			
Ethylbenzene		1.1	0.050	1.000	0	105	79.5	126			
Xylenes, Total		3.4	0.10	3.000	0	113	78.8	124			
Surr: 4-Bron	nofluorobenzene	1.1		1.000		108	80	120			
Sample ID	5ML RB	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8021B: Volat	tiles		
Client ID:	PBS	Batch	n ID: R2	7950	F	RunNo: 2	27950				
Prep Date:		Analysis D	ate: 8/	4/2015	S	SeqNo: 8	841022	Units: %RE	с		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bror	nofluorobenzene	1.0		1.000		99.5	80	120			
Sample ID	100NG BTEX LCS	SampT	ype: LC	s	Tes	tCode: E	PA Method	8021B: Volat	tiles		
Client ID:	LCSS	Batch	n ID: R2	7950	F	RunNo: 2	27950				
Prep Date:		Analysis D	Date: 8	4/2015	S	SeqNo: 8	841023	Units: %RE	с		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bror	nofluorobenzene	1.1		1.000		108	80	120			

Qualifiers:

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

10-Aug-15

WO#:

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1507D95

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

Hall Environmental Analysis Laboratory 4901 Hawkins NL 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	15070	95		RepiNo	c <b>1</b>
Received by/date:	AC	073115					
Logged By: Linds	say Mangin	7/31/2015 8:00:00 AM			Hythes		
Completed By: Linds	ay Mangin	7/31/2015 9:27:19 AM			And Happ		
Reviewed By	(CS	67/31/15					
Chain of Custody	an and a second	o filofit s					
1, Custody seals intac	t on sample bottles?		Yes		No 📋	Not Present 🗹	
2. Is Chain of Custody	complete?		Yes	~	No 🗌	Not Present	
3. How was the sample	e delivered?		Cour	ier			
<u>Log In</u>							
4. Was an attempt ma	ide to cool the sample	s?	Yes		No 🗌	NA 🗌	
5. Were all samples re	eceived at a temperati	ure of >0° C to 6.0°C	Yes	V	No 🗍	NA	
6. Sample(s) in prope	r container(s)?		Yes	Y	No 🗌		
7, Sufficient sample w	olume for indicated te	st(s)?	Yes	V	No 🗌		
8. Are samples (excep	t VOA and ONG) pro	perly preserved?	Yes	✓	No 🗌		
9. Was preservative a	dded to bottles?		Yes		No 🔽	NA	
10.VOA vials have zer	o headspace?		Yes		No 🗌	No VOA Vials 🗹	3
11, Were any sample of	containers received br	cken?	Yes	$\Box$	No 🔽	# of preserved	
					training	bottles checked	
12. Does paperwork m	atch bottle labels? s on chain of custody)		Yes	V	No	for pH: (<	2 cr >12 unless noted)
13. Are matrices correc			Yes	V	No	Adjusted?	na se nancient e marine del secondo de la constance e la
14, Is it clear what ana			Yes	(remote)	No 🗌		
15. Were all holding tin (If no, notify custon	nes able to be met? ner for authorization.)		Yes	Y	No	Checked by	<ul> <li>Marcola (Contractor constraints) in the second secon</li></ul>
Special Handling	(if applicable)						
16. Was client notified	of all discrepancies w	ith this order?	Yes		No 🗌	NA 5	1
Person Notif	ed.	Date			tere and a Claric difference		
By Whom	n dagen an anne ad s dan e dde waarsen die de see Santon	Via	elv	lail (	Phone Fax	In Person	
Regarding	<b>P<sup>r</sup>io</b> Transmission and the second strategies of the second strategie	an a	ulanna fhur a fha far shan a bha	della ti di mi della mi tana			
Client Instruc	tions						
17. Additional remark	B':						
18. Cooler Informati	on						
And a state of the	emp °C Condition	Seal Intact Seal No	Seal (	Date	Signed By		
1 1.2	Gocd	Not Present					
Page 1 of 1							

TAL	ORY					21		١	14 ->>		/ U	थापप⊡व था थ											fease show BTEX Please put chlorid	
ENVIRONMENTAL	ANALYSIS LABORATORY	шo	Albuquerque, NM 87109	505-345-4107					(∀		in the second second	nə2) 0728											Remarks: TPH: 8015B, BTEX: 8021B. Please show BTEX results as mg/kg. Anions: Chloride only. Please put chloride on a senarate remort from TPH and BTEX	
Ro	P	ntal.c	tue, N	5-345	Analysis Request	0.0		200		and the state of the		8260B (VC											021B de on	
5	S	onme	Iduero	Fax 50	is Re	A CHARLEN COLONN						, a) snoinA 1269 1808	×	×	×	×	×	×	×	×	×		hloric 8	,
	XS	llenvir		ů.	nalys					-	-	м 8 АЯЭЯ											3, BT	
HALL	IAL	www.hallenvironmental.com	NE	3975	4						An I Carl State	8310 (PN	-								_		Anio	
Ì	A	M	4901 Hawkins NE -	Tel. 505-345-3975			a tala (de m	-	INCOMENTS OF			tPH (Meth							distances tax	_	+		TPH: 8015B, BTEX: 8021B. ng/kg. Anions: Chloride only	
			01 Ha	el. 505		osoi(	]/se	ອ)	891	08	pc	члэм нат	×	×	×	×	×	×	×	×	×	na na na seconda da se	as n	5
			49	Ĕ		Contract on the local division of the	and the second second					BTEX + M BTEX + M	×	×	×	×	×	×	×	×	×	_	Remarks: TPH: 8015B, BTEX: 8021B. P results as mg/kg. Anions: Chloride only.	come
	1					1101	18/ •	Τ			1	M + YETO	$\hat{}$	$\hat{}$	$\hat{}$						7			2
	Ę		il SWD #1		568		sriffin	1	Amber Griffin HO		1	HEAL No.	100-	-012	-172	-1254	-015	-1726.	ES-	-07%	50-		OTATINE OBOO	Date Time
ime:	🗆 Rush	23	Union Federal SWD #1		1RP-3568	ger	Amber Griffin	PO # 205-2020	200	A Yes	perature: /,	Preservativ e Type	lce	lce	lce	loe De	lce	lce	lce	lce	lce		det -	
I urn-Around	X Standard	Project Name:		Project #:		Project Manager			Sampler:	On Ice:	Sample Temperature:	Container Type and #	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 402.	1 - 402.	1 - 4oz.		Received by:	Received by:
Chain-of-Custody Record	Yates Petroleum Corporation			105 South 4th Street Artesia, NM 88210	575-513-8799 or 575-748-4111	acarnon@yatespetroleum.com		Level 4 (Full Validation)				Sample Request ID	1 - 1.	1 - 2'	1 - 3'	2 - 3'	2 - 4'	2 - 5'	3 - 3'	3 - 4'	3 - 5'		set by hiller	ed by: 00
of-Cus	etroleum			eet Artes	575-513-	acannon(	9.00.00.00.00.00			□ Other		Maurix	7-21 Soil	7-23 Soil							9:14 Soil		Relinquished by	Relinquished by.
ain-c	ates P		ress:	4th Stre		逬	age:		ä		(ed)	Time	10.2	2.03	7-25	7-53	7-55	7-58	9:05	9:07	9:14		Time:	Time:
<del>й</del>	Clent: Y		Mailing Address:	05 South	Phone #	email or Fax#:	QA/QC Package:	C Standard	Accreditation:	D NELAP	C EDD (Type)		7/20/2015	2100/00/15	7/20/2015	3100/00/2	7/20/2015	7/29/2015	7/29/2015	7/29/2015	7/29/2015		Date:	



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

August 10, 2015

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

RE: Union Federal SWD #1

OrderNo.: 1507D95

Dear Amber Cannon:

Hall Environmental Analysis Laboratory received 9 sample(s) on 7/31/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report
Lab Order 1507D95
Date Reported: 8/10/2014

#### Hall Environmental Analysis Laboratory, Inc. Date Reported: 8/10/2015 CLIENT: Yates Petroleum Corporation Client Sample ID: 1-1' Union Federal SWD #1 **Project:** Collection Date: 7/29/2015 7:21:00 AM Lab ID: 1507D95-001 Matrix: SOIL Received Date: 7/31/2015 8:00:00 AM Analyses Result **RL** Qual Units DF Date Analyzed Batch **EPA METHOD 300.0: ANIONS** Analyst: LGT Chloride 690 30 mg/Kg 20 8/4/2015 9:59:21 PM 20603

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order 1507D95
Date Reported: 8/10/2015

CLIENT:	Yates Petroleum Corporation			<b>Client Sampl</b>	e ID: 1-2	!	
Project:	Union Federal SWD #1			Collection 1	Date: 7/2	9/2015 7:23:00 AM	
Lab ID:	1507D95-002	Matrix: S	OIL	Received 1	Date: 7/3	1/2015 8:00:00 AM	
Analyses		Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METI	HOD 300.0: ANIONS					Analys	t: LGT
Chloride		83	30	mg/Kg	20	8/4/2015 10:11:45 PM	20603

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	в	Analyte detected in the associated Method Blank
Quanners.	D		D	
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order 1507D95
Date Reported: 8/10/2015

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CLIENT: Yates Petroleum Corporation			Client Sampl	e ID: 1-3'	
Project: Union Federal SWD #1			Collection	Date: 7/29/2015 7:25:00 AM	
Lab ID: 1507D95-003	Matrix: S	OIL	Received	Date: 7/31/2015 8:00:00 AM	
Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analyst	: LGT
Chloride	ND	30	mg/Kg	20 8/4/2015 10:24:09 PM	20603

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order 1507D95
Date Reported: 8/10/2016

#### Hall Environmental Analysis Laboratory, Inc. Date Reported: 8/10/2015 CLIENT: Yates Petroleum Corporation Client Sample ID: 2-3' **Project:** Union Federal SWD #1 Collection Date: 7/29/2015 7:52:00 AM 1507D95-004 Lab ID: Matrix: SOIL Received Date: 7/31/2015 8:00:00 AM Analyses Result RL Qual Units **DF** Date Analyzed Batch **EPA METHOD 300.0: ANIONS** Analyst: LGT Chloride 1600 75 mg/Kg 50 8/5/2015 6:22:49 PM 20603

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	в	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report Lab Order 1507D95

#### Hall Environmental Analysis Laboratory, Inc. Date Reported: 8/10/2015 CLIENT: Yates Petroleum Corporation Client Sample ID: 2-4' **Project:** Union Federal SWD #1 Collection Date: 7/29/2015 7:55:00 AM 1507D95-005 Lab ID: Matrix: SOIL Received Date: 7/31/2015 8:00:00 AM RL Qual Units Analyses Result **DF** Date Analyzed Batch **EPA METHOD 300.0: ANIONS** Analyst: LGT Chloride 5700 300 mg/Kg 200 8/5/2015 6:35:14 PM 20603

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 5 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order 1507D95
Date Reported: 8/10/2015

CLIENT:	Yates Petroleum Corporation	Client Sample ID: 2-5'						
<b>Project:</b>	Union Federal SWD #1	Collection Date: 7/29/2015 7:58:00 AM						
Lab ID:	1507D95-006	Matrix: S	SOIL	Received 1	Date: 7/31/2015 8:00:00 AM			
Analyses		Result	RL	Qual Units	DF Date Analyzed	Batch		
ЕРА МЕТ	HOD 300.0: ANIONS				Analys	st: LGT		
Chloride		2500	150	mg/Kg	100 8/5/2015 6:47:39 PM	20603		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 6 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order 1507D95
Date Reported: 8/10/2015

CLIENT: Yates Petroleum Corporation	Client Sample ID: 3-3'						
Project: Union Federal SWD #1			Collection 1	Date: 7/29/2015 9:05:00 AM			
Lab ID: 1507D95-007	Matrix: S	SOIL	Received 3	Date: 7/31/2015 8:00:00 AM			
Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS				Analys	st: LGT		
Chloride	5600	300	mg/Kg	200 8/5/2015 7:00:04 PM	20603		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	в	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 7 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order 1507D95
Date Reported: 8/10/2015

CLIENT:	Yates Petroleum Corporation			Client Sampl	le ID: 3-4	ľ	
Project:	Union Federal SWD #1			Collection	<b>Date:</b> 7/2	9/2015 9:07:00 AM	
Lab ID:	1507D95-008	Matrix: S	OIL	Received	Date: 7/3	1/2015 8:00:00 AM	
Analyses		Result	RL Qu	al Units	DF	Date Analyzed	Batch
ΕΡΑ ΜΕΤ	THOD 300.0: ANIONS					Analys	st: LGT
Chloride		430	30	mg/Kg	20	8/4/2015 11:51:01 PM	20603

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	в	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 8 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report Lab Order 1507D95 Date Reported: 8/10/2015

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT:	: Yates Petroleum Corporation			Client Sampl	le ID: 3-5'		
Project:	Union Federal SWD #1			Collection	Date: 7/29/2015 9:14:00 AM		
Lab ID:	1507D95-009	Matrix: SOIL Received Date: 7/31/2015 8:00:00 AM					
Analyses		Result	RL Qu	al Units	DF Date Analyzed	Batch	
EPA ME	THOD 300.0: ANIONS				Analys	st: LGT	

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 9 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

#### **QC SUMMARY REPORT**

Hall Environmental Analysis Laborat	ory,	Inc.
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WO#: 1507D95

10-Aug-15 **Client:** Yates Petroleum Corporation Union Federal SWD #1 **Project:** Sample ID MB-20603 SampType: MBLK TestCode: EPA Method 300.0: Anions Client ID: PBS Batch ID: 20603 RunNo: 27959 Prep Date: 8/4/2015 Analysis Date: 8/4/2015 SeqNo: 841213 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Chloride ND 1.5 Sample ID LCS-20603 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS	Batch ID: 20603	RunNo: 27959		
Prep Date: 8/4/2015	Analysis Date: 8/4/2015	SeqNo: 841214	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 96.4 90	110	

Qualifiers:

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

Page 10 of 10

	HALL
	ENVIRONMENTAL
-	ANALYSIS
	LABORATORY

Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 503-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

### Sample Log-In Check List

Client Name:	Yates Petroleum Corpora	Work Order Number	1507D	95		ReptN	o: 1
Received by/dat	e: 574	07/31/15					
Logged By:	Lindsay Mangin	7/31/2015 8:00:00 AM			Andyther		
Completed By:	Lindsay Mangin	7/31/2015 9:27:19 AM			Anderther		
Reviewed By:	(CS	07/31/15			$V \vee V$		
Chain of Cus							
1. Custody sea	als intact on sample bottles?		Yes		No	Not Present	2
2. Is Chain of (	Custody complete?		Yes	V	No 🗌	Not Present	5
3. How was the	e sample delivered?		Couri	ər			
Log In		×					
	empt made to cool the sample	es?	Yes	V	No 🗌	NA [	
5. Were all sa	mples received at a temperat	ure of >0° C to 6.0°C	Yes	V	No	NA	)
6. Sample(s)	in proper container(s)?		Yes	¥	No		
7. Sufficient sa	ample volume for indicated te	st(s)?	Yes	$\mathbf{V}$	No 🗍		
8. Are sample:	s (except VOA and ONG) pro	porly preserved?	Yes	V	No 🗌		
	vative added to bottles?	n en na na	Yes		No 🔽	NA	
10. VOA vials h	ave zero headspace?		Yes		No 🗔	No VOA Vials	
11, Were any s	sample containers received bi	roken?	Yes		No 🔽	4 - 4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	and the second se
					and the second	# of preserved bottles checked	
	work match bottle labels?		Yes	V	No	for pH:	<2 cr >12 unless noted
	epancies on chain of custody) is correctly identified on Chair		Yes	V	No 🗌	Adjusted?	
	hat analyses were requested		Yes		No 🗌		
15. Were all ho	Iding times able to be met? y customer for authorization.)				No 🗍	Checked b	
Special Han	dling (if applicable)						
16. Was client	notified of all discrepancies w	with this order?	Yes		No 🗌	NA	2.
Pers	on Notified.	Date	an a	nterio des mástique			
By W	/hom	Via:	eMa	ail []	Phone Eax	In Person	
Rega	arding:	an a Galance can be an	egaturidu hendiki kelele	nich former lander			
Clien	It Instructions						
17. Additional	remarks:		1999))))))))))))))))))))))))))))))))))				
	formation						
18. Cooler In		· · · · · · · · · · · · · · · · · · ·			Diseased Due	1	
18. <u>Cooler In</u> Cooler	No Temp °C Condition 1.2 Gocd	Seal Intact Seal No Not Present	Seal D	ate	Signed By		

Mailing Address:       Mailing Address:         105 South 4th Street Artesia, NM         Phone #:       575-513-8799 o         CAVQC Package:	r Record ration 88210 88210 r 575-748-4111 petroleum.com i 4 (Full Validation) i 4 (Full Validation) nple Request ID	X Standard Inton Project Name: Project Nanager: Project Manager: An Project Manager: An Project Manager: An An An An An An An An An An An An An	The server of th	sh ral SWD #1 Griffin Griffin 05-2020 Amber Griffin AC Amber Griffin AC Amber Griffin AC Amber Griffin AC Amber Criffin AC Amber Criffin AC AC Amber Criffin AC AC AC AC AC AC AC AC AC AC AC AC AC	d discool dia and the second second	TPH Method 8015B (Gas/Diese	Hold State       Hold State <th>All         (1.403 bortheM)           All         (1.404 bortheM)           All         (1.404 bortheM)           All         (1.404 bortheM)</th> <th>ENVIRONMENT OF CONTRACT OF CON</th> <th>Image: Section of the sectio</th> <th>RCRA 8 Metals         Blbuduerque, NM 8703           SISS LABORA         Siss Request           Row Normental Com         Albuduerque, NM 8703           Albuduerque, NM 8703         Africonmental Com           Siss Request         Siss Request           Siss Request         Siss Request           Siss Request         Siss Request           Siss Request         Siss Request           Siss Request         Siss Request</th> <th>HAL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com www.hallenvironmental.com www.hallenvironmental.com www.hallenvironmental.com %fins NE - Albuquerque, NM 87109 8310 (PVA or PAH) RCRA 8 Metals 835-3975 Fax 505-345-4107 882608 (VOA) 88270 (Semi-VOA) 88270 (</th>	All         (1.403 bortheM)           All         (1.404 bortheM)           All         (1.404 bortheM)           All         (1.404 bortheM)	ENVIRONMENT OF CONTRACT OF CON	Image: Section of the sectio	RCRA 8 Metals         Blbuduerque, NM 8703           SISS LABORA         Siss Request           Row Normental Com         Albuduerque, NM 8703           Albuduerque, NM 8703         Africonmental Com           Siss Request         Siss Request	HAL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com www.hallenvironmental.com www.hallenvironmental.com www.hallenvironmental.com %fins NE - Albuquerque, NM 87109 8310 (PVA or PAH) RCRA 8 Metals 835-3975 Fax 505-345-4107 882608 (VOA) 88270 (Semi-VOA) 88270 (
7.25 Soil       1 - 3'       1 - 402.       Ice $-\sqrt{12}$ X      <	Soil         1 - 3'         1 - 3'           Soil         2 - 4'         1 - 1           Soil         3 - 4'         1 - 1           Soil         3 - 5'         1 - 1           Soil         3 - 5'         1 - 1           Reinquished by:         Mubble         Reinquished by:	1 - 402.     1       1 - 403.     1		-123 -124 -125 -125 -125 -125 -125 -125 -125 -125	X     X     X       X     X       X <td></td> <td>X     X       X<td>e repoi</td><td>TEX: 8 Chloric</td><td>8021B. TPH a</td><td>X       X       X       X         X       &lt;</td><td>X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X</td></td>		X     X       X <td>e repoi</td> <td>TEX: 8 Chloric</td> <td>8021B. TPH a</td> <td>X       X       X       X         X       &lt;</td> <td>X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X</td>	e repoi	TEX: 8 Chloric	8021B. TPH a	X       X       X       X         X       <	X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X       X       X         X       X       X



January 06, 2016

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

RE: Union Federal SWD #1

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

OrderNo.: 1512A71

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 8 sample(s) on 12/23/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environ	nental Analysis	Laborato	ry, Inc.			ate Reported: 1		
	ates Petroleum Corporat nion Federal SWD #1	ion		La	ıb Oı	rder: 15	12A71	
Lab ID: Client Sample ID:	1512A71-001 2-15'		A A	Collection Date: Matrix:			00 AM	
Analyses		Result	RL Qual	Units	DF	Date Analyze	d Ba	tch ID
EPA METHOD 300 Chloride	.0: ANIONS	5500	300	mg/Kg	200	12/31/2015 9:0	Analyst: 9:41 PM	
Lab ID:	1512A71-002			<b>Collection Date:</b>	12/	15/2015 8:43:0	00 AM	
Client Sample ID:	2-20'			Matrix:	SO	L		
Analyses		Result	RL Qual	Units	DF	Date Analyze	d Ba	tch ID
EPA METHOD 300 Chloride	.0: ANIONS	1700	75	mg/Kg	50	12/31/2015 9:2	Analyst: 2:05 PM	
Lab ID:	1512A71-003			<b>Collection Date:</b>	12/	15/2015 8:54:0	00 AM	
Client Sample ID:	2-25'			Matrix:	SO	IL		
Analyses		Result	RL Qual	Units	DF	Date Analyze	d Ba	atch ID
EPA METHOD 300	.0: ANIONS						Analyst	LGT
Chloride		1800	75	mg/Kg	50	12/31/2015 9:3	4:30 PM	23002
Lab ID: Client Sample ID:	1512A71-004 2-30'			Collection Date: Matrix:			00 AM	
Analyses		Result	RL Qual	Units	DF	Date Analyze	d Ba	atch ID
EPA METHOD 300 Chloride	.0: ANIONS	1600	75	mg/Kg	50	12/31/2015 9:4	Analyst 6:55 PM	
Lab ID:	1512A71-005			<b>Collection Date:</b>	: 12/	15/2015 9:34:	00 AM	
Client Sample ID:	2-35'			Matrix:	s SO	IL		
Analyses		Result	RL Qual	Units	DF	Date Analyze	d B	atch ID
EPA METHOD 300 Chloride	0.0: ANIONS	2000	75	mg/Kg	50	12/31/2015 9:5	Analyst 59:19 PM	

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

Qualifiers: \* Value exceeds Maximum Contaminant Level.

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

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
  - J Analyte detected below quantitation limits Page 1 of 3

Analytical Report Lab Order: 1512A71

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

Hall Environ	mental Analysis	Date Reported: 1/6/2016			
	/ates Petroleum Corporat Jnion Federal SWD #1	tion			Lab Order: 1512A71
Lab ID:	1512A71-006			Collection I	Date: 12/15/2015 9:55:00 AM
<b>Client Sample ID:</b>	2-40'			Ma	trix: SOIL
Analyses	2	Result	RL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 300	0.0: ANIONS				Analyst: LGT
Chloride		1800	75	mg/Kg	50 12/31/2015 10:36:34 PM 23002
Lab ID:	1512A71-007			Collection 1	Date: 12/15/2015 10:25:00 AM
<b>Client Sample ID:</b>	2-45'			Ma	trix: SOIL
Analyses		Result	RL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 300	0.0: ANIONS				Analyst: LGT
Chloride		700	30	mg/Kg	20 12/30/2015 3:13:10 PM 23002
Lab ID:	1512A71-008			Collection ]	Date: 12/15/2015 10:56:00 AM
<b>Client Sample ID:</b>	2-50'			Ma	atrix: SOIL
Analyses		Result	RL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 300	0.0: ANIONS				Analyst: LGT
Chloride		230	30	mg/Kg	20 12/30/2015 1:06:47 AM 23001

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

Qualifiers: \*

- Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н 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
- В Analyte detected in the associated Method Blank

**Analytical Report** Lab Order: 1512A71

- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Page 2 of 3

#### QC SUMMARY REPORT

Hall Environmen	tal Analysis	s Laboratory,	Inc.
-----------------	--------------	---------------	------

Client: Project:		Petroleum Corporation Federal SWD #1							
Sample ID	MB-23001	SampType: MBLK	/pe: MBLK TestCode: EPA Method 300.0: Anions						
Client ID:	PBS	Batch ID: 23001	RunNo: 31145						
Prep Date:	12/29/2015	Analysis Date: 12/30/2015	SeqNo: 953296	Units: mg/Kg					
Analyte Chloride		Result PQL SPK value ND 1.5	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual				
Sample ID	LCS-23001 SampType: LCS TestCode: EPA Method 300.0: Anions								
Client ID:	LCSS	Batch ID: 23001	RunNo: 31145						
Prep Date:	12/29/2015	Analysis Date: 12/30/2015	SeqNo: 953297 Units: mg/Kg						
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual				
Chloride		14 1.5 15.00	0 93.4 90	110					
Sample ID	MB-23002	SampType: MBLK	TestCode: EPA Method	300.0: Anions					
Client ID:	PBS	Batch ID: 23002	RunNo: 31168						
Prep Date:	12/29/2015	Analysis Date: 12/30/2015	SeqNo: 954140	Units: mg/Kg					
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual				
Chloride		ND 1.5							
Sample ID	LCS-23002	SampType: LCS	TestCode: EPA Method	300.0: Anions					
Client ID:	LCSS	Batch ID: 23002	RunNo: 31168						
Prep Date:	12/29/2015	Analysis Date: 12/30/2015	SeqNo: 954141	Units: mg/Kg					
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual				
Chloride		14 1.5 15.00	0 92.4 90	110					

Qualifiers:

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

Page 3 of 3

1512A71 06-Jan-16

WO#:

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmenta Alt TEL: 505-345-397, Website: www.h	4901 buquerqu 5 FAX: 5	Hawkins N e. NM 8710 05-345-410	<sup>7</sup> <sup>99</sup> Sam	ple Log-In C	heck List
Client Name: Yates Petroleum Corporat	Work Order Number	r: 1512/	A71		RcptNo:	1
Received by/date:	12/23/15					
Logged By: Lindsay Mangin	12/23/2015 9:40:00 A	M		And Hago	<b>)</b>	
Completed By: Lindsay Mangin	12/23/2015 10:25:55	AM		Andy Hope		
Reviewed By: CS	12/23/15		L			
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?		Cour	ier			
Log In						
4. Was an attempt made to cool the samples	?	Yes		No []	NA []	
5. Were all samples received at a temperature	e of >0° 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) prope	rly preserved?	Yes		No []		
9. Was preservative added to bottles?		Yes	$\Box$	No 🛃	NA []	
10.VOA vials have zero headspace?		Yes	[]]	No 🗍	No VOA Vials 🕷	
11. Were any sample containers received brok	en?	Yes		No 🛃		
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes		No 🗀	# of preserved bottles checked for pH:	
13. Are matrices correctly identified on Chain of	f Custody?	Yes		No []	Adjusted?	or >12 unless noted)
14. Is it clear what analyses were requested?				No []		
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes		No []]	Checked by:	
Special Handling (if applicable)						
16. Was client notified of all discrepancies with	this order?	Yes	[_]	No []]	NA 🛃	
Person Notified:	Date:			ويستعد والمراقعة فيحدثه فالت		
By Whom:	Via:	eMa	ail [ˈ] Pho	one [_] Fax	In Person	
Regarding:			<u> </u>	***	an film an film film an ann an an an an an Anna	
Client Instructions:	and a second			Minetes or Coperations	2.9	
17. Additional remarks:						
18. <u>Cooler Information</u>						

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed	d By	1
1	9.8	Good	Yes					-
			••	· · ·				

Client: Yates Petroleum Corporation	Sieum	Corporation	V 2011				•	IVIN	VETO	A I I	ANALVETS   ARODATORY	VOCT
			> standard	L KUSN				INT	10	5	5.0	
			Project Name:					www.hallenvironmental.com	environ	mental.	шo	
Mailing Address:				Union Federal SWD #1	1# OMS	490	4901 Hawkins NE	- JN SL	Albuqu	erque,	Albuquerque, NM 87109	
105 South 4th Street Artesia, NM 88210	<b>Urtesia</b>		Project #:			Tel	Tel. 505-345-3975	5-3975	Fax	505-34	505-345-4107	
Phone #: 575	5-513-	575-513-8799 or 575-748-4111		1RP-3568	88	24.3		A	Analysis Request	Reque	st	
Fax#:	iffin@		Project Manager	ger:		1	)eei(		os'	s'8		
		Level 4 (Full Validation)		Amber Griffin PO # 205-2020	iffin 2020				03'b04	85 bC		
on:					Amber Griffin AC				0N'£(	08 /	(\	
NELAP D C	D Other		On Ice:	A Yes	O NO	-		-				
EDD (Type)			Sample Témper	perature: 9	×							
e E	Matrix	Sample Request ID	Container Type and #	Preservativ e Type	HEAL NO.	м + хэта втех + м	AI <del>D</del> M HQT UDM) HQT	8310 (PN/ 8310 (PN/	RCRA 8 M (F) anoina	8081 Pest V) 80828 (V	n92) 0728	
12/15/2015 8:32 Soil		2-15	1 - 402.		18-				×	-		
1.		2-20	1 - 402.		200-			3 1	×			
		2-25	1 - 402.		8				×			
		2-30	1 - 4oz.	1	-024				×			
		2-35'	1 - 402.		\$				×			
12		2-40'	1 - 402.		ror				×	-		
-		2-45	1 - 402.		48-				×			
12/15/2015 10:56 Soil		2-50'	1 - 402.	4	20				×			
				4								
Date: Time: Relit 221/IS 8:00.4 0 Date: Time: Relit	Relinquished by:	Shellin	Received by:	A A	Date time Date Time	Remarks:		Anions: Chloride only.	oride of	K		
		>	2		This second as	motice of this mostbility		ntracted dat	a will be cle	serfy notate	Anv extrementancied data will be clearly notated on the analytical report.	teport.



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

August 24, 2015

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

RE: Union Federal SWD #1

OrderNo.: 1508707

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/14/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

	'ates Petroleum Corpora Jnion Federal SWD #1	ition		L	ab Order: 1508	707
Lab ID:	1508707-001		(	Collection Date:	: 7/29/2015 8:20:00 A	M
Client Sample ID:	2-10'			Matrix	: SOIL	
Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300	.0: ANIONS				An	alyst: LGT
Chloride		4800	150	mg/Kg	100 8/20/2015 8:01:16	
Lab ID:	1508707-002			Collection Date:	: 7/29/2015 8:24:00 A	M
Client Sample ID:	2-11'			Matrix	: SOIL	
Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300	.0: ANIONS				An	alyst: LGT
Chloride		6600	300	mg/Kg	200 8/20/2015 8:13:41	PM 20871
Lab ID:	1508707-003		(	Collection Date:	: 7/29/2015 8:28:00 A	M
Client Sample ID:	2-12'			Matrix	SOIL	
Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300	.0: ANIONS				An	alyst: LGT
Chloride		14000	750	mg/Kg	500 8/20/2015 8:26:05	PM 20871
Lab ID:	1508707-004		(	Collection Date:	: 7/29/2015 8:32:00 A	M
Client Sample ID:	2-13'			Matrix	SOIL	
Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300	.0: ANIONS				An	alyst: LGT
Chloride		15000	750	mg/Kg	500 8/20/2015 8:38:30	0
Lab ID:	1508707-005			Collection Date	: 7/29/2015 9:47:00 A	M
Client Sample ID:	3-10'			Matrix	: SOIL	
Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	.0: ANIONS	480	30	mg/Kg	An 20 8/19/2015 1:50:55	alyst: <b>LGT</b> PM 20871

Analytical Report Lab Order: 1508707

Date Reported: 8/24/2015

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

Qualifiers: \*

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 2
- P Sample pH Not In Range
- RL Reporting Detection Limit

Hall Envi	ronmental Analysi	s Laborat	ory, Inc.		Lab Order: 1 Date Reporte	508707 d: 8/24/2015
CLIENT: Project:	Yates Petroleum Corpo Union Federal SWD #1				Lab Order:	1508707
Lab ID: Client Sample	1508707-006 e ID: 3-11'			(160)(0.0)	Date: 7/29/2015 9:5 trix: SOIL	53:00 AM
Analyses		Result	RL Qua	l Units	DF Date Ana	lyzed Batch ID
EPA METHO Chloride	D 300.0: ANIONS	630	30	mg/Kg	20 8/19/2015	Analyst: <b>LGT</b> 2:03:20 PM 20871

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

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 2

**Analytical Report** 

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

#### HALL ENVIRONMENTAL ANALYSIS LABORATORY

4

Hall Luviconnental Analy its Laboratory 4901 Hawkins NI. Albuquerque: XM 87109 TEL: 505 315-3975 FAV: 505-345-4403 Websita: www.hallenvironmental.com

Sample Log-In Check List

A REAL OF A					
Client Name: Yates Petroleum Corpora	Work Order Nymber	1508707		ReptNo	1
Received by/date: CFS	08/14/15				
Logged By: Ashley Gallegos	8/14/2015 9:18:00 AM		AFF		
Completed By: Ashley Gallegos	8/14/2015 1:48:59 PM		A		
Reviewed By:	08/14/15		v		
Chain of Custody					
1. Custody seals intact on sample bottles?		Yes	No	Not Present V	
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° 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	5)?	Yes 🗸	No		
8. Are samples (except VOA and ONG) proper	ly 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 broke	en?	Yes	No 🗸	# of preserved	
				bottles checked	
<ol> <li>Does paperwork match bottle labels? (Note discrepancies on chain of custody)</li> </ol>		Yes 🖌	No	for pH: (<2)	or >12 unless noted)
13. Are matrices correctly identified on Chain of	Custody2	Yes 🗸	No	Adjusted?	
14. Is it clear what analyses were requested?	ousiday.	Yes 🗸	No		
15. Were all holding times able to be met?		Yes 🗸	No	Checked by	
(If no, notify customer for authorization.)					
Special Handling (if applicable)					
16. Was client notified of all discrepancies with	this order?	Yes	No	NA 🗸	
Person Notified:	Date		aradear analar tati adilar di kata a		
By Whom.	Via	eMail	Phone Fax	In Person	
Regarding			and the second	alianna Ratanana kana kanang kang kang kang kang ka	
Client Instructions.		and the second second second frequencies of the second frequencies of		lanaan na 10 amin'ny faritr'o dia 40 mini 20 kini 2006 (1996) (1997) (1997)	
17. Additional remarks:					
18 Cooler Information					
	Seal Infact   Seal No	Seal Date	Signed By		
1 5.6 Good Ye	00000000000000000000000000000000000000		and the second second second second second	and the second se	
• • • • • • • • •				2 2	
Page 1 of 1					

	30-5	Clight - Or - Output of the ou					5	ALL				HALL ENVIRONMENIAL	
Client: Yates	Petroleur	Yates Petroleum Corporation	X Standard	,⊡ Rush			•	NAL	YSI.	SLA	BOR	ANALYSIS LABORATORY	
			Project Name:	1,1				www.hs	www.hallenvironmental.com	nmenta	.com		
Mailing Address:				Union Federal SWD #1	1# OWS	490	4901 Hawkins NE		- Albug	nerque,	Albuquerque, NM 87109	a	
105 South 4th Street Artesia, NM 88210	treet Arte	sia, NM 88210	Project #:			Tel	Tel. 505-345-3975	15-3975	Fax	( 505-3	505-345-4107		
Dhone #	575-513	575-513-8799 or 575-748-4111		1RP-3568	88				Analysis kequest	nbay s	ISI		-
email or Fax#:	agriffin(	agriffin@yatespetroleum.com	Project Manager	ger:			)ieso	-	05"				
QA/QC Package:				Amber Griffin DO # 205-2020	iffin 2020	6200-00-00-00-00	]/se£		0d. <sub>e</sub>				
C Standard			Sampler:	Am	Amber Griffin AG			ACCURATION OF THE			(	nes Cre <del>ssa</del>	(N
	D Other		On Ice:	1.00	D No				sje	i sol			10
C EDD (Type)			Sample Temperature:		5600		common		atəh	piol		teletore dia	, sc
	e Matrix	Sample Request ID	Container Type and #	Preservativ e Type	HEAL NO.	M + X3T8 M + X3T8	пэм нат нэм) нат	8310 (PN) 8310 (PN)	RCRA 8 N	1e91 1808	8260B (Ver		Air Bubble
7/29/2015 82	8.20 Soil	2 - 10'	1 - 4oz.	Not Required	100				×				-
	8:24 Soil	2 - 11'	1 - 4oz.	Not Required	602-				×				
	8:28 Soil	2 - 12'	1 - 402.	Not Required	- 003				×				
	8:32 Soil	2 - 13'	1 - <del>4</del> 0Z.	Not Required	700,				×				
	9:47 Soil	3 - 10'	1 - 4oz.	Not Required	-005				×				
	9:53 Soil	3-11	1 - 4oz.	Not Required	- 0010				×				_
							and the state						
													H
		-	Described hur		Date Time	Remarks:		ons: Cl	Anions: Chloride only.	only.			-
Oate: Time Qh7J <		linguisted by Inder Sriftin	aller in	Free	5								
Dete: Timor	Relinquished by:	ned by:	Received by		Date Time	-							