MARTIN YATES, III 1912-1985

FRANK W. YATES 1936-1986

> S.P YATES 1914-2008



JOHN A. YATES SR.

JOHN A. YATES JR.

DOUGLAS E. BROOKS

105 SOUTH FOURTH STREET ARTESIA, NEW MEXICO 88210-2118

TELEPHONE (575) 748-1471

September 14, 2016

Mr. Mike Bratcher/ Ms. Heather Patterson NMOCD District II 811 S. First St. Artesia, NM 88210

Re: F

Federal AB #9

Unit N, Section 32, T18S-R25E Eddy County, New Mexico

Dear Mr. Bratcher / Ms. Patterson,

Yates Petroleum Corporation is submitting the enclosed work plan for the above captioned well. The plan is being submitted in response to the C-141 report dated September 11, 2015.

If there are no objections with the scope of work described in the plan, Yates will have a contractor begin work on or after September 28, 2016.

If you have any questions, feel free to call me at (575) 748-4171

Thank you.

YATES PETROLEUM CORPORATION

Chase Settle Environmental Representative

Enclosure(s)

Yates Petroleum Corporation

Federal AB #9 Work Plan

Section 32, T18S-R25E

Eddy County, New Mexico

September 14, 2016

2RP-3254

١. Location

Take HWY 285 south of Artesia for 9.1 miles, then turn west on West Kincaid Ranch Road and go 6 miles before taking a right at the Y intersection onto the lease road for 1.83 miles, then north for ½ a mile, then turn east for ¼ mile to the site.

II. Background

On September 11, 2015, Yates submitted to the NMOCD District II office a Form C-141 for a release of 10 B/O and 10 B/PW with none recovered. The affected area is approximately 30 feet by 100 feet adjacent to the flow line north of the pumping unit. Initial remediation activities consisted of excavating 3 to 6 inches in the S1 area to the rock plate and approximately 1 to 2 feet in the S2 area, hauling all impacted soils to an NMOCD approved facility for disposal. Initial delineation samples were taken (02/17/2016) and sent to a NMOCD approved laboratory (03/01/2016 and 03/01/2016, results enclosed). Further sampling was conducted (05/03/2016) and sent to a NMOCD approved laboratory (05/12/2016, results enclosed).

III. Surface and Ground Water

Area surface geology is Paleozoic Permian. The ChevronTexaco Trend Map displays at this location (Section 32, T18S-R25E) that depth to groundwater is approximately 235' 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 as following:

Depth to ground water

> 100'

Wellhead Protection Area

> 1000'

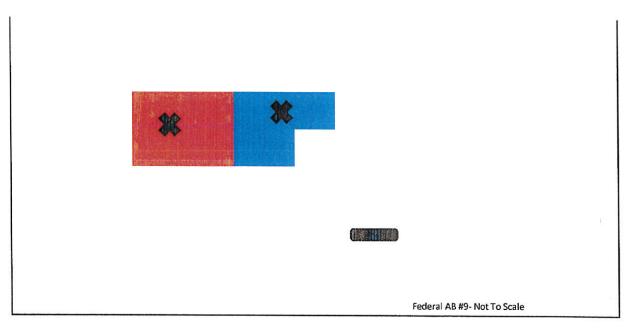
Distance to surface water body > 1000'

IV. Soils

The release area consists of layered rock plate on the western half, and loamy topsoil interspersed with clay seams on the eastern half.

٧. Scope of Work

Based on enclosed analytical results, the depth to ground water (235'), and a decrease in TPH, BTEX, & chloride concentration, Yates Petroleum Corporation proposes to excavate two (2) feet of impacted soil in the S1 release area and eleven (11) feet within the S2 release area, hauling excavated soils to an NMOCD approved facility for disposal. Yates will then backfill the S1 excavated area with two (2) feet of topsoil and the S2 excavation area with nine (9) feet of caliche and two (2) feet of topsoil. The remediated release area will then be seeded during Yates seeding schedule with a native grass seed mix developed using surface owner input. With such an extreme depth to groundwater (235') and TPH & BTEX below RRAL, no further analytical testing of TPH and/or BTEX will be conducted (all chloride analytical results are for documentation). When remediation work is completed a C-141 Final Report will be submitted to the NMOCD requesting closure of the site.



S1 Release Area S2 Release Area

Area	Analysis Report	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
S1-1'	1602859	2/17/2016	Backhoe	1'	562	3400	18000	960
S1-2'	1602859	2/17/2016	Backhoe	2'	912	5800	27000	68
- S1-3'	1602859	2/17/2016	Backhoe	3'	5.62	60	270	38
S1-4 ¹	1602859	2/17/2016	Backhoe	4'	ND	ND	ND	42
S2-1'	1602859	2/17/2016	Backhoe	1'	149.2	1200	12000	9600
S2-2'	1602859	2/17/2016	Backhoe	2'	284.7	2000	12000	8400
S2-31	1602859	2/17/2016	Backhoe	3'	311	2500	15000	9900
S2-4'	1602859	2/17/2016	Backhoe	4'	269	1900	12000	9100
S2-5'	H600447	2/17/2016	Backhoe	5'	117	1150	4360	9400
S2-7'	H600447	2/17/2016	Backhoe	7'	111	1030	3500	12000
S2-9 ¹	H600447	2/17/2016	Backhoe	9'	136	1040	3390	4080
S2-11'	H600447	2/17/2016	Backhoe	11'	0.809	15	109	2560
S2-13'	1605292	5/3/2016	Backhoe	13'	N/A	N/A	N/A	410
S2-15'	1605292	5/3/2016	Backhoe	15'	N/A	N/A	N/A	180
S2-17'	1605292	5/3/2016	Backhoe	17'	N/A	N/A	N/A	810
S2-19'	1605292	5/3/2016	Backhoe	19'	N/A	N/A	N/A	210
S2-20'	1605292	5/3/2016	Backhoe	20'	N/A	N/A	N/A	84

Site Ranking is Zero (0). >100' (235', Section 32, T18S-R25E, Trend Map All results are ppm. Chlorides for documentation

Released: 10 B/O & 10 B/PW; Recovered: 0 B/O & 0 B/PW Release Date: 09/01/2015



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

March 01, 2016

Chase Settle

Yates Petroleum Corporation 105 South Fourth Street Artesia, NM 88210

TEL: (575) 748-4111

FAX

RE: Federal AB #9

OrderNo.: 1602859

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 8 sample(s) on 2/19/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 3/1/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S1-1'

Project: Federal AB #9

Collection Date: 2/17/2016 8:12:00 AM

Lab ID:

1602859-001

Matrix: SOIL

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

Analyses	Result	PQL	Qual	Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					An	alyst: LGT
Chloride	960	30		mg/Kg	20 2/24/2016 10:27:3	6 PM 23934
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			An	alyst: KJH
Diesel Range Organics (DRO)	18000	1000		mg/Kg	100 2/24/2016 1:01:45	PM 23859
Surr: DNOP	0	70-130	S	%Rec	100 2/24/2016 1:01:45	PM 23859
EPA METHOD 8015D: GASOLINE RAN	NGE				An	alyst: NSB
Gasoline Range Organics (GRO)	3400	96		mg/Kg	20 2/23/2016 10:22:4	9 AM 23866
Surr: BFB	447	66.2-112	S	%Rec	20 2/23/2016 10:22:4	19 AM 23866
EPA METHOD 8021B: VOLATILES					Ar	alyst: NSB
Benzene	32	0.96		mg/Kg	20 2/23/2016 10:22:4	19 AM 23866
Toluene	210	2.4		mg/Kg	50 2/24/2016 1:16:47	AM 23866
Ethylbenzene	130	2.4		mg/Kg	50 2/24/2016 1:16:47	AM 23866
Xylenes, Total	190	1.9		mg/Kg	20 2/23/2016 10:22:4	19 AM 23866
Surr: 4-Bromofluorobenzene	187	80-120	S	%Rec	20 2/23/2016 10:22:4	19 AM 23866

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 12 J
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Date Reported: 3/1/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Federal AB #9

1602859-002

Project:

Lab ID:

Client Sample ID: S1-2'

Collection Date: 2/17/2016 8:16:00 AM

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

Analyses	Result	PQL (Qual	Units	DF Date Analyzed Bate
EPA METHOD 300.0: ANIONS					Analyst: LG1
Chloride	68	30		mg/Kg	20 2/24/2016 10:40:00 PM 2393
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst: KJF
Diesel Range Organics (DRO)	27000	1000		mg/Kg	100 2/24/2016 1:23:36 PM 238
Surr: DNOP	0	70-130	S	%Rec	100 2/24/2016 1:23:36 PM 2385
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst: NSE
Gasoline Range Organics (GRO)	5800	240		mg/Kg	50 2/23/2016 10:46:16 AM 2386
Surr: BFB	366	66.2-112	s	%Rec	50 2/23/2016 10:46:16 AM 2386
EPA METHOD 8021B: VOLATILES					Analyst: NSE
Benzene	52	2.4		mg/Kg	50 2/23/2016 10:46:16 AM 2386
Toluene	280	9.4		mg/Kg	200 2/24/2016 1:40:20 AM 2386
Ethylbenzene	200	2.4		mg/Kg	50 2/23/2016 10:46:16 AM 2380
Xylenes, Total	380	4.7		mg/Kg	50 2/23/2016 10:46:16 AM 238
Surr: 4-Bromofluorobenzene	179	80-120	S	%Rec	50 2/23/2016 10:46:16 AM 238

Matrix: SOIL

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 12
- Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified

Date Reported: 3/1/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Federal AB #9 Project:

Lab ID:

1602859-003

Matrix: SOIL

Client Sample ID: S1-3'

Collection Date: 2/17/2016 8:19:00 AM

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: LGT
Chloride	38	30		mg/Kg	20	2/24/2016 11:17:14 PM	
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS	S				Analys	t: KJH
Diesel Range Organics (DRO)	270	9.2		mg/Kg	1	2/24/2016 11:56:45 AM	
Surr: DNOP	121	70-130		%Rec	1	2/24/2016 11:56:45 AM	A 23860
EPA METHOD 8015D: GASOLINE RA	NGE					Analys	t: NSB
Gasoline Range Organics (GRO)	60	4.8		mg/Kg	1	2/24/2016 2:03:44 AM	
Surr: BFB	461	66.2-112	S	%Rec	1	2/24/2016 2:03:44 AM	23866
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.048		mg/Kg	1	2/24/2016 2:03:44 AM	
Toluene	0.62	0.048		mg/Kg	1	2/24/2016 2:03:44 AM	23866
Ethylbenzene	1.5	0.048		mg/Kg	1	2/24/2016 2:03:44 AM	23866
Xylenes, Total	3.5	0.096		mg/Kg	1	2/24/2016 2:03:44 AM	23866
Surr: 4-Bromofluorobenzene	157	80-120	S	%Rec	1	2/24/2016 2:03:44 AM	23866

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range E
- Analyte detected below quantitation limits Page 3 of 12 J
- P Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Date Reported: 3/1/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S1-4'

Project: Federal AB #9

Lab ID: 1602859-004

Collection Date: 2/17/2016 8:22:00 AM Received Date: 2/19/2016 9:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: LGT
Chloride	42	30	mg/Kg	20	2/24/2016 11:29:39 PM	A 23934
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analys	t: KJH
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	2/24/2016 12:00:56 At	A 23860
Surr: DNOP	105	70-130	%Rec	1	2/24/2016 12:00:56 AI	M 23860
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	2/24/2016 2:27:11 AM	23866
Surr: BFB	100	66.2-112	%Rec	1	2/24/2016 2:27:11 AM	23866
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.049	mg/Kg	1	2/24/2016 2:27:11 AM	23866
Toluene	ND	0.049	mg/Kg	1	2/24/2016 2:27:11 AM	23866
Ethylbenzene	ND	0.049	mg/Kg	1	2/24/2016 2:27:11 AM	23866
Xylenes, Total	ND	0.098	mg/Kg	1	2/24/2016 2:27:11 AM	23866
Surr: 4-Bromofluorobenzene	112	80-120	%Rec	1	2/24/2016 2:27:11 AM	23866

Matrix: SOIL

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- 11 Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 4 of 12 J
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Date Reported: 3/1/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S2-1'

Project: Federal AB #9 Collection Date: 2/17/2016 9:00:00 AM

Lab ID: 1602859-005

Matrix: SOIL

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

Analyses	Result	PQL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				- Committee of the Comm		Analys	t: LGT
Chloride	9600	750		mg/Kg	500	2/26/2016 1:14:13 AM	23934
EPA METHOD 8015M/D: DIESEL RAM	GE ORGANIC	S				Analys	t: KJH
Diesel Range Organics (DRO)	12000	930		mg/Kg	100	2/24/2016 1:45:24 PM	23860
Surr: DNOP	0	70-130	S	%Rec	100	2/24/2016 1:45:24 PM	23860
EPA METHOD 8015D: GASOLINE RA	NGE					Analys	t: NSB
Gasoline Range Organics (GRO)	1200	48		mg/Kg	10	2/23/2016 11:33:18 AM	A 23866
Surr: BFB	530	66.2-112	s	%Rec	10	2/23/2016 11:33:18 AM	A 23866
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	4.2	0.48		mg/Kg	10	2/23/2016 11:33:18 AM	A 23866
Toluene	39	0.48		mg/Kg	10	2/23/2016 11:33:18 AM	A 23866
Ethylbenzene	39	0.48		mg/Kg	10	2/23/2016 11:33:18 AM	A 23866
Xylenes, Total	67	0.97		mg/Kg	10	2/23/2016 11:33:18 AM	A 23866
Surr: 4-Bromofluorobenzene	187	80-120	S	%Rec	10	2/23/2016 11:33:18 AM	M 23866

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range E
- Analyte detected below quantitation limits Page 5 of 12 J
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Date Reported: 3/1/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S2-2'

Project:

Federal AB #9

Collection Date: 2/17/2016 9:01:00 AM

Lab ID:

1602859-006

Matrix: SOIL

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

Analyses	Result	PQL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	: LGT
Chloride	8400	750		mg/Kg	500	2/26/2016 1:26:37 AM	23934
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	3				Analys	: KJH
Diesel Range Organics (DRO)	12000	1000		mg/Kg	100	2/24/2016 2:07:12 PM	23860
Surr: DNOP	0	70-130	S	%Rec	100	2/24/2016 2:07:12 PM	23860
EPA METHOD 8015D: GASOLINE RA	ANGE					Analys	: NSB
Gasoline Range Organics (GRO)	2000	250		mg/Kg	50	2/23/2016 11:56:50 AM	23866
Surr: BFB	232	66.2-112	S	%Rec	50	2/23/2016 11:56:50 AM	23866
EPA METHOD 8021B: VOLATILES						Analys	: NSB
Benzene	5.7	2.5		mg/Kg	50	2/23/2016 11:56:50 AN	1 23866
Toluene	79	2.5		mg/Kg	50	2/23/2016 11:56:50 AM	1 23866
Ethylbenzene	70	2.5		mg/Kg	50	2/23/2016 11:56:50 AM	1 23866
Xylenes, Total	130	4.9		mg/Kg	50	2/23/2016 11:56:50 AM	1 23866
Surr: 4-Bromofluorobenzene	141	80-120	S	%Rec	50	2/23/2016 11:56:50 AN	1 23866

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 6 of 12 1
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Date Reported: 3/1/2016

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: S2-3'

CLIENT: Yates Petroleum Corporation Federal AB #9 Project: Collection Date: 2/17/2016 9:04:00 AM

Lab ID: 1602859-007 Matrix: SOIL Received Date: 2/19/2016 9:00:00 AM

Analyses	Result	PQL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	LGT
Chloride	9900	750		mg/Kg	500	2/26/2016 1:39:01 AM	23934
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	s				Analyst:	KJH
Diesel Range Organics (DRO)	15000	960		mg/Kg	100	2/24/2016 2:28:53 PM	23860
Surr: DNOP	0	70-130	S	%Rec	100	2/24/2016 2:28:53 PM	23860
EPA METHOD 8015D: GASOLINE RAI	NGE					Analyst	NSB
Gasoline Range Organics (GRO)	2500	93		mg/Kg	20	2/23/2016 12:20:37 PM	23866
Surr: BFB	633	66.2-112	S	%Rec	20	2/23/2016 12:20:37 PM	23866
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	10	0.93		mg/Kg	20	2/23/2016 12:20:37 PM	23866
Toluene	87	0.93		mg/Kg	20	2/23/2016 12:20:37 PM	23866
Ethylbenzene	74	0.93		mg/Kg	20	2/23/2016 12:20:37 PM	23866
Xylenes, Total	140	1.9		mg/Kg	20	2/23/2016 12:20:37 PM	23866
Surr: 4-Bromofluorobenzene	181	80-120	S	%Rec	20	2/23/2016 12:20:37 PM	23866

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 7 of 12
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Analytical Report Lab Order 1602859 Date Reported: 3/1/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: S2-4'

Project: Federal AB #9

Collection Date: 2/17/2016 9:07:00 AM

1602859-008 Lab ID:

Matrix: SOIL

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

Analyses	Result	PQL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	LGT
Chloride	9100	750		mg/Kg	500	2/26/2016 1:51:26 AM	23934
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS	S				Analyst	: KJH
Diesel Range Organics (DRO)	12000	1000		mg/Kg	100	2/24/2016 2:50:44 PM	23860
Surr: DNOP	0	70-130	S	%Rec	100	2/24/2016 2:50:44 PM	23860
EPA METHOD 8015D: GASOLINE RA	NGE					Analyst	: NSB
Gasoline Range Organics (GRO)	1900	48		mg/Kg	10	2/23/2016 12:44:11 PM	23866
Surr: BFB	652	66.2-112	S	%Rec	10	2/23/2016 12:44:11 PM	23866
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	11	0.48		mg/Kg	10	2/23/2016 12:44:11 PM	23866
Toluene	85	2.4		mg/Kg	50	2/24/2016 2:50:30 AM	23866
Ethylbenzene	63	2.4		mg/Kg	50	2/24/2016 2:50:30 AM	23866
Xylenes, Total	110	0.96		mg/Kg	10	2/23/2016 12:44:11 PM	23866
Surr: 4-Bromofluorobenzene	215	80-120	S	%Rec	10	2/23/2016 12:44:11 PM	23866

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 8 of 12 J
- P Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602859

01-Mar-16

Client:

Yates Petroleum Corporation

Project:

Federal AB #9

Sample ID MB-23934 SampType: MBLK TestCode: EPA Method 300.0: Anions Client ID: PBS Batch ID: 23934 RunNo: 32385 Prep Date: 2/24/2016 Analysis Date: 2/24/2016 SeqNo: 990234 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Chloride ND 1.5

Sample ID LCS-23934 SampType: LCS TestCode: EPA Method 300.0: Anions Client ID: LCSS Batch ID: 23934 RunNo: 32385 Prep Date: 2/24/2016 Analysis Date: 2/24/2016 SeqNo: 990235 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC %RPD LowLimit **HighLimit RPDLimit** Qual Chloride 14 1.5 15.00 0 95.9 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

Page 9 of 12

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1602859

01-Mar-16

Client:

Yates Petroleum Corporation

	l AB #9					
Todott.						
Sample ID LCS-23859	SampType: LCS	TestC	ode: EPA Method	8015M/D: Diesel Range	Organics	
Client ID: LCSS	Batch ID: 23859	Ru	nNo: 32327			
Prep Date: 2/22/2016	Analysis Date: 2/23/2016	Se	qNo: 988166	Units: mg/Kg		
Analyte	Result PQL SPK value	e SPK Ref Val	%REC LowLimit	HighLimit %RPD	RPDLimit C	lual
Diesel Range Organics (DRO)	43 10 50.0	0 0	86.5 65.8	136		
Surr: DNOP	4.8 5.00	00	95.8 70	130		
Sample ID LCS-23860	SampType: LCS	TestC	Code: EPA Method	8015M/D: Diesel Range	e Organics	***************************************
Client ID: LCSS	Batch ID: 23860	Ru	nNo: 32327			
Prep Date: 2/22/2016	Analysis Date: 2/23/2016	Se	eqNo: 988167	Units: mg/Kg		
Analyte	Result PQL SPK value	ie SPK Ref Val	%REC LowLimit	HighLimit %RPD	RPDLimit C	Qual
Diesel Range Organics (DRO)	45 10 50.	0 0	90.5 65.8	136		
Surr: DNOP	5.0 5.0	00	99.1 70	130		
Sample ID MB-23859	SampType: MBLK	TestC	Code: EPA Method	8015M/D: Diesel Rang	e Organics	
Client ID: PBS	Batch ID: 23859	Ru	ınNo: 32327			
Prep Date: 2/22/2016	Analysis Date: 2/23/2016	Se	eqNo: 988168	Units: mg/Kg		
Analyte	Result PQL SPK val	ue SPK Ref Val	%REC LowLimit	HighLimit %RPD	RPDLimit (Qual
Diesel Range Organics (DRO)	ND 10					
Surr: DNOP	8.7 10.	00	87.0 70	130		
Sample ID MB-23860	SampType: MBLK	Test	Code: EPA Method	8015M/D: Diesel Rang	e Organics	
Client ID: PBS	Batch ID: 23860	Ru	unNo: 32327			
Prep Date: 2/22/2016	Analysis Date: 2/23/2016	Se	eqNo: 988169	Units: mg/Kg		
Analyte		ue SPK Ref Val	%REC LowLimit	HighLimit %RPD	RPDLimit (Qual
Diesel Range Organics (DRO)	ND 10					
Surr: DNOP	9.1 10.	00	90.6 70	130		

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Page 10 of 12

- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1602859

01-Mar-16

S

Client:

Yates Petroleum Corporation

1100

1000

Sun: BFB

Project: Federal	AB #9								
Sample ID MB-23866	SampType: MI	BLK	TestCode: EPA Method 8015D; Gasoline Range						
Client ID: PBS	Batch ID: 23	866	F	RunNo: 32332					
Prep Date: 2/22/2016	Analysis Date: 2	/23/2016	SeqNo: 988952			Units: mg/Kg			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sasoline Range Organics (GRO)	ND 5.0								
Surr: BFB	950	1000		95.4	66.2	112			
Sample ID LCS-23866	SampType: LC	s	Tes	tCode: El	A Method	8015D: Gaso	line Rang	е	
Client ID: LCSS	Batch ID: 23	866	F	RunNo: 3	2332				
Prep Date: 2/22/2016	Analysis Date: 2	/23/2016	8	SeqNo: 9	88963	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29 5.0	25.00	0	114	79.6	122			

113

66.2

112

Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

Page 11 of 12

Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

3.2

1.1

0.10

3.000

1.000

WO#:

1602859

01-Mar-16

Client:

Yates Petroleum Corporation

Project:

Xylenes, Total

Surr: 4-Bromofluorobenzene

Federal AB #9

Froject: Federal	AB #9									
Sample ID MB-23866	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batch	ID: 23	866	F	RunNo: 32332					
Prep Date: 2/22/2016	Analysis D	ate: 2/	23/2016	5	SeqNo: 9	89021	Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			
Sample ID LCS-23866	SampT	ype: LC	s	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batch	ID: 23	866		RunNo: 3					
Prep Date: 2/22/2016	Analysis D	ate: 2/	23/2016	8	SeqNo: 9	89022	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	105	80	120			5001
Toluene	1.0	0.050	1.000	0	105	80	120			
Ethylbenzene	1.1	0.050	1.000	0	106	80	120			
V. I	12112	120020								

0

108

115

80

80

120

120

Qualifiers:

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

Page 12 of 12

- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins NE

Sample Log-In Check List Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Client Name: Yates Petroleum Corpora Work Order Number:	1602859		RcptNo: 1	
Received by/date: A 02 9 0				
Logged By: Ashley Gallegos 2/19/2016 9:00:00 AM		A		
Completed By: Ashley Gailegos 2/19/2016 3:34:28 PM		A		
Reviewed By: # 02/22/16		u		
Chain of Custody				A
1. Custody seals intact on sample bottles?	Yes 🗌	No 🗆	Not Present 🗹	
2. Is Chain of Custody complete?	Yes 🗹	No 🗆	Not Present	
3. How was the sample delivered?	Courier			
<u>Log In</u>				
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)?	Yes 🗹	No 🗆		
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗆		
9. Was preservative added to bottles?	Yes 🗌	No 🗹	NA 🗆	
10.VOA viats have zero headspace?	Yes 🗌	No 🗆	No VOA Vials	
11. Were any sample containers received broken?	Yes	No 🗹 [# of preserved	
***	C	🖂	bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	No 🗆	for pH:(<2 o	>12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No □	Adjusted?	· ·
14. Is it clear what analyses were requested?	Yes 🗹	No 🗆		
15. Were all holding times able to be met?	Yes 🗹	No 🗆	Checked by:	
(If no, notify customer for authorization.)		1		
Special Handling (if applicable)				
16. Was client notified of all discrepancies with this order?	Yes 🗌	No 🗆	NA ☑	
Person Notified: Date		AND RECEIVED AND REAL PROPERTY.		7
By Whom: Via:	eMail	Phone Tax	☐ In Person	
Regarding:				
Client Instructions:		ANALY TO PROPERTY AND PROPERTY OF	***************************************	
17. Additional remarks:	-			_
18. Cooler Information				
Cooler No Temp °C Condition Seal Intact Seal No	Seal Date	Signed By	1	
1 4.1 Good Yes		<u> </u>	.	

ord I um-Around I mile.	X Standarc	Project Name: www.hallenvironmental.com	Federal AB #9 4901 Hawkins NE - Albuquerque, NM 87109	## TOO BY	Tel. 505-345-3975	30-015-23643		Project Manager:	Chase Settle	PO#205.0750	Sampler: Chase Settle	1 + T + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 +	0	1	日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日	1-40z, ICE - CO X X	11-40z. ICE -000 x x x	1-40z. ICE -003 x x x	1-40z ICE	1.40z. ICE -005 x x x	1-40z. ICE	1-40z. ICE - O X X X	1-40z. ICE -\D3 x x x		Received by: Date Time Remarks:	214 02/19/16 0900	Received by: Date Time
7-Around mile.		ect Name:	Federal AB	#	ect #:	30-015-23(Mana	Chase Settle	PO # 205, 075	unler: Chase Settle	Sey X	nole Temperature : 4./	ontainer Preservative											lived by:	Met.	ived by:
Chain-of-Custody Record		Pro			88210			csettle@yatespetroleum.com Proj		☐ Level 4 (Full Validation)			San	Sample Request ID Tyr			S1-2' 1-4	S1-3' 1-4	S1-4' 1-4	S2-1' 1-2	S2-2' 1 - 4	S2-3' 1-4	S2-4' 1			11	
hain-of-Cus	ient: Yates Petroleum Corporation		ailing Address:		35 South 4th Street Artesia, NM	10 CUL 272		nail or Fax#: csettle@ya	AQC Package:			ration: AP \to Other	(eu	Time Matrix		8:12A Soil	8:16A Soil			1					Time. Belingshoutshod by	age of the second	10
C	ient:		ailing)5 Sou		# euou	nail or	AQC F	Standard	Old	coreditation:		Date	:	17/2016 8:12A	1772010 8:16A	M772016 8:19A	A222A	A00:6 9:00A	1172016 9:01A	M7/2016 9:04A	7772018 9:07A			4-16	1



March 01, 2016

CHASE SETTLE
YATES PETROLEUM CORPORATION
105 S 4th Street
Artesia, NM 88210

RE: FEDERAL AB #9

Enclosed are the results of analyses for samples received by the laboratory on 02/29/16 14:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab 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.

Celey D. Keene

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210 (505) 748-4635

Fax To:

Received:

02/29/2016

Reported:

03/01/2016

Project Name:

FEDERAL AB #9

Project Number: Project Location:

NONE GIVEN NOT GIVEN

Sampling Date:

02/17/2016

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: S2-5' (H600447-01)

BTEX 80218	mg/	kg	Analyzed	l By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	3.04	1.00	02/29/2016	ND	1.87	93.6	2.00	0.351	
Toluene*	31.5	1.00	02/29/2016	ND	1.81	90.3	2.00	0.547	
Ethylbenzene*	27.0	1.00	02/29/2016	ND	1.63	81.4	2.00	1.12	
Total Xylenes*	55.5	3.00	02/29/2016	ND	5.01	83.6	6.00	1.30	
Total BTEX	117	6.00	02/29/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIE	102	% 73.6-14	0			Tres established a back and allower and	***************************************		
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9400	16.0	03/01/2016	ND	448	112	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	1150	10.0	02/29/2016	ND	197	98.4	200	2.97	
DRO >C10-C28	4360	10.0	02/29/2016	ND	223	112	200	10.2	
Surrogate: 1-Chlorooctane	170 % 3.		7			AVIII - AVIII - AVIII - AVIII - AVIII			
Surrogate: 1-Chlorooctadecane	137 % 28-171		ı						

Cardinal Laboratories

*=Accredited Analyte

PLESE NOTE: Liablay and Danuges. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tost, shall be limited to the amount paid by claim for analyses. All claims, including those for negligance and any other cause whiteoever shall be deemed waived unless made in writing and received by Cardinal within thing (20) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential canarges, including, without limitation, business interruptions, loss of use, or loss of profits incurred by clent, at subsidicales, affiliates or successors arising out of or related to the performance of the services horeunder by Cardinal, regurdees of whether such claims is based upon any of the above stated resonance or otherwise. Results relate only to the samples statified above. This regurdees that in our being required.

Calley Thema-

Celey D. Keene, Lab Director/Quality Manager



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210 (505) 748-4635

Fax To:

Received:

02/29/2016

Reported:

03/01/2016

Project Name: Project Number: FEDERAL AB #9 NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

02/17/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S2-7' (H600447-02)

BTEX 8021B	mg/	kg	Analyze	d Bγ: MS		-			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	3.58	1.00	02/29/2016	ND	1.87	93.6	2.00	0.351	
Toluene*	33.0	1.00	02/29/2016	ND	1.81	90.3	2.00	0.547	
Ethylbenzene*	25.0	1.00	02/29/2016	ND	1.63	81.4	2.00	1.12	
Total Xylenes*	49.2	3.00	02/29/2016	ND	5.01	83.6	6.00	1.30	
Total BTEX	111	6.00	02/29/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIE	103	% 73.6-14	0		*************				
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12000	16.0	03/01/2016	ND	400	100	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					5-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	1030	10.0	02/29/2016	ND	197	98.4	200	2.97	
DRO >C10-C28	3500 10.0		02/29/2016	ND	223	112	200	10.2	
Surrogate: 1-Chlorooctane	151% 35-147		7						WHAT I WAS TO SHARE THE SH
Surrogate: 1-Chlorooctadecane	120	% 28-17.	ı						

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Utbility 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 cliains, inclining those for negligence and any other cause whotsoere shall be deemed waked unless made in writing and received by Cardinal within thirty (39) days after completion of the applicable service. In no event shall Cardinal be lable for incidental or consequential camages, including, without himstories, butternies interruptions, loss of use, or loss of profits incident by Client, its absolutions, affiliates or successors arising out of or related to the performance of the services hireunder by Cardinal pages, claims is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal basearances.

Celen Thema

Celey D. Keene, Lab Director/Quality Manager



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

02/29/2016 Reported: 03/01/2016 Project Name: FEDERAL AB #9

Project Number: NONE GIVEN

NOT GIVEN Project Location:

Sampling Date:

02/17/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S2-9' (H600447-03)

Received:

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	3,97	1.00	03/01/2016	ND	1.87	93.6	2.00	0.351	
Toluene*	39.7	1.00	03/01/2016	ND	1.81	90.3	2.00	0.547	
Ethylbenzene*	30.8	1.00	03/01/2016	ND	1.63	81.4	2.00	1.12	
Total Xylenes*	61.8	3.00	03/01/2016	ND	5.01	83.6	6.00	1.30	
Total BTEX	136	6.00	03/01/2016	ND					_
Surrogate: 4-Bromofluorobenzene (PIE	105	% 73.6-14	0		700 1075			***************************************	
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4080	16.0	03/01/2016	ND	400	100	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	1040	10.0	02/29/2016	ND	197	98.4	200	2.97	
DRO >C10-C28	3390	10.0	02/29/2016	ND	223	112	200	10.2	
Surrogate: 1-Chlorooctane	155	% 35-14	7						
Surrogate: I-Chlorooctadecane	124	% 28-17	I						

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Lability and Damages. Cardnel's lability and client's exclusive remety for any claim arising, whether based in contract or ton, shall be limited to the amount paid by chert for analyses. All claims, including those for negligence and any other clusts whatsoever shall be deemed waved unless made in writing and received by Cardnel within thisty (39) days after completion of the applicable service. In no event shall Cardnel Cardnel to consequential clanages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by cleans, it is subsidiaries, affiliates or successors arising out of or related to the performance of the services hereundae 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 report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Clay I trans-



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received: Reported: 02/29/2016

03/01/2016

Project Name:

FEDERAL AB #9

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

02/17/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By: Jodi Henson

Sample ID: S2-11' (H600447-04)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.052	0.050	03/01/2016	ND	1.87	93.6	2.00	0.351	
Toluene*	0.229	0.050	03/01/2016	ND	1.81	90.3	2.00	0.547	
Ethylbenzene*	0.140	0.050	03/01/2016	ND	1.63	81.4	2.00	1.12	
Total Xylenes*	0.387	0.150	03/01/2016	ND	5.01	83.6	6.00	1.30	
Total BTEX	0.809	0.300	03/01/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	100 9	6 73.6-14	0				······································		
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	porting Limit Analyzed		BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2560	16.0	03/01/2016	ND	400	100	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	15.0	10.0	02/29/2016	ND	197	98.4	200	2.97	
DRO >C10-C28	109 10.0		02/29/2016	ND	223	112	200	10.2	
Surrogate: 1-Chlorooctane	96.6% 35		7		******				
Surrogate: 1-Chlorooctadecane	97.5 % 28-171		ĺ						

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Usbilly and Damages. Cardinal's liability and clienc'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, inclusing those for negligence and any other clause whatloover shall be deemed waired unless made in verting and received by Cardinal Wichin thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, netluding, without intraction, business interruptions, loss of use, or loss of profits incurred by Clerical, segardless of whether such claims is based upon any of three above states dreamers or otherwise. Results relate only to the samples informed above. This report shall not be reproduced except in full with written approval of Cardinal balanceauses.

Celley & treeman



Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Usblirty and Damages. Cardnal's lability and client's exclusive remedy for any claim assing, whether based in contract or tons, shall be limited to the amount paid by client for analyses. All claims, inclusing those for negligence and only other cause whatorever shall be deemed warred unless made in witing and received by Cardinal within thirty (20) days, after completion of the applicable service. In no event shall Cardinal be labble for incidental or consequential damages, including, without familiation, Business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, alliables or successors arising out of or related to the performance of the services herefunder 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 report shall not be reproduced except in full with written approval of Cardinal Laboratories.

alex I treeman

Relinguished by:	Relinguished by	Special					F	N	n	F	L	AB i	# (lab use only)	* 83000 **	(lab use only)								66	PA
shed by:	Shed by:	Special Instructions:					S2-11'	S2-9'	\$2-7'	S2-5'		FIELD CODE		THE SOLE #	only)	Sampler Signature:	elephone No.			Company Address: 105 South 4th Street	Compi (505) 393-232f Yates Petroleum Corporation	Project Manager: Chase Settle	A A	,
Date	2-29-16 Date																1	Artesia, NW 00210 575-748-4171	28210	th 4th Street	troleum Corporation	ettie	RIES s, NM 88240	
Time	Time		_			_	\perp	+	+	+	-		jinning Depth				1							
e Received by ELOT:	Time Received by						271112010	2/17/2016	2/17/2016	2/17/2016	2/17/2016		ate Sampled										(505) 393-2326	
LOT:	Men						0.00	0.30 AM	0.53 AM	0:15 AM	9:11 AM		ime Sampled			q	P mail.	Fax No.					(505) 393-2326 FAX (505) 393-2476	
	\$		_ _	-	-		_	_	_	_		-	d Filtered al #. of Containers	+		18	3	57					476	
	8		_	+	+	\vdash		-	-	×	×	lo	6				Ď	575-748-4131						
			\top									Н	NO ₃	Preservation & # of Containe			9	12						
	,											_	CI	vation			Sa Sa				1			0
					_			_			_	-	,SO,	42			Se							HA
					-	-			_		_	-	aOH la _z S _z O ₃	of Cor			etr							N
				-	+-	+-	\vdash	-			-	-	lone	Haine			0)F (
	-6			+	+	+-	\vdash	-			+	-	Other (Specify)	- 3										ò
Car	29/16 2 Date							s	s	s	S	G	W=Drinking Water SL=Sludge W = Groundwater S=SortSolid P=Non-Potable Specify Other	Matrix			csettle@vatespetroleum.com	Report Format:			•		Proj	CHAIN OF COSTOD TRECORD AND CHAIR OF
=			口					×	×	×	×			158	4			Form		Project Loc:		Project #:	Project Name:	Ç
						_	1			_	1	-	PH TX 1005 TX 1006		-			at:	PO #	6		# 10g	ame	Ę
Ten	Cus	Sam			_	_	4-	_	_	1-	+	-	Cations (Ca, Mg, Na, K)		4.1			[J]	# 20	1 1		.77		1
Temperature Upon Receipt	Custody seals on container(s) Custody seals on cooler(s) Sample Hand Delivered by Sampler/Client Rep.? by Counier? UPS D	Sample Containers Intact? VOCs Free of Headspace?	\vdash	_	_	+	+-	-	_	-	+	_	Anions (CI, SO4, Alkalinity) SAR / ESP / CEC		- TOTAL:	100		x Standard	205, 0750					2
ature	seal seal Hanvampl	Cont	-	_	+	+	+	-	-	+	+		Metals: As Ag Ba Cd Cr Pb Hg	Se	++	7		anda	750					Ş
QU S	E C C	aine M He	1	-	+	+	+	+	-	+	+	-	Volatiles		++	Anaiyze		ard						
9 20	Lien Con	ers in		+	+	+	+	+-	-	+	+	-	Semivolatiles	-	TT	156				-	n		77	č
ece	Her(s) tact	•	_	+	+	+-	×	×	×	1		BTEX 80210/5030 or BTEX 8	260	11	- 3			1	6	ederal AR		ederal AB	į
pt		2 .0	\vdash	-	\dashv	+	+	+	+	Ť	Ť		RCI			1		Ŭ TRRP		Ġ	<u>0</u>		18	
	DHC (s)			\vdash	\dashv	\dashv	+	+	1	+	+		NORM					장					o o	
	TI 0	general saffice.		\forall	_	十	1	×	×	×	()	×	Chlorides					-			t O		#	
9.0	\$(3 3) × B	343				1		丁		T			SAR	-	-					-				
9	Ę				1			I	I	I			Control of	-		\perp	1	NPOES						
Ö	one Star	ZZZ						×	×	>	<	×	RUSH TAT (Pre-Schedule)	24, 4	8, 72 hr	1	_	S			_	L		Mark grown
	ğ. o								L				Standard TAT								L	Pa	ge 7 of 7	7



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

OrderNo.: 1605292

May 12, 2016

Chase Settle

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

FAX

RE: Federal AB 9

Dear Chase Settle:

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

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order: 1605292

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 5/12/2016

	ates Petroleum Corpo ederal AB 9	oration	STANFO AND SOURCE AND SOURCE OF SOURCE	L	ab Order: 160	5292
Lab ID:	1605292-001		4 Uni (Are in Santa Mercara) (1 (4 (4 (4 (4 (4 (4 (4 (4 (4 (4 (4 (4 (4	Collection Date:	: 5/3/2016 12:03:00	PM
Client Sample ID:	S2-13'			Matrix:	: SOIL	
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300	.0: ANIONS	ACCOUNT OF THE COURT OF THE COU			Α	nalyst: LGT
Chloride		410	30	mg/Kg	20 5/11/2016 6:52:2	4 PM 25270
Lab ID:	1605292-002			Collection Date:	: 5/3/2016 12:15:00	PM
Client Sample ID:	S2-15'			Matrix	: SOIL	
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300	0.0: ANIONS				Α	nalyst: LGT
Chloride		180	30	mg/Kg	20 5/11/2016 7:04:4	8 PM 25270
Lab ID:	1605292-003			Collection Date	: 5/3/2016 12:31:00	PM
Client Sample ID:	S2-17'			Matrix	: SOIL	
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300	0.0: ANIONS				A	ınalyst: LGT
Chloride		810	30	mg/Kg	20 5/11/2016 7:17:	13 PM 25270
Lab ID:	1605292-004			Collection Date	e: 5/3/2016 12:41:00	PM
Client Sample ID:	S2-19'			Matrix	: SOIL	
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 30	0.0: ANIONS				,	Analyst: LGT
Chloride		210	30	mg/Kg	20 5/11/2016 7:29:	38 PM 25270
Lab ID:	1605292-005			Collection Date	e: 5/3/2016 12:56:00	PM
Client Sample ID:	S2-20'			Matrix	x: SOIL	
Analyses		Result	PQL Qua	l Units	DF Date Analyze	Batch ID
EPA METHOD 30	0.0: ANIONS		The second secon		,	Analyst: LGT
Chloride		84	30	mg/Kg	20 5/11/2016 7:42:	D

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 2
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

RPDLimit

1605292 12-May-16

Client:

Yates Petroleum Corporation

Project:

Federal AB 9

Sample ID MB-25270

Prep Date: 5/11/2016

SampType: mblk

TestCode: EPA Method 300.0: Anions

Client ID: PBS

Batch ID: 25270

RunNo: 34141

Analysis Date: 5/11/2016

SeqNo: 1052628

Units: mg/Kg

%RPD

%RPD

HighLimit

Analyte Chloride

Result PQL. ND 1.5

TestCode: EPA Method 300.0: Anions

SPK value SPK Ref Val %REC LowLimit

Sample ID LCS-25270 Client ID: LCSS Prep Date: 5/11/2016

Batch ID: 25270

SampType: Ics

RunNo: 34141

Analyte

Analysis Date: 5/11/2016

SeqNo: 1052629

Units: mg/Kg

Result SPK value SPK Ref Val PQL 0

%REC LowLimit 95.1

HighLimit 110 **RPDLimit** Qual

Qual

Chloride

14 1.5 15.00

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

Analyte detected below quantitation limits J

Page 2 of 2

P Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NAI 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:	1605	292		Rcp	INo: 1
Received by/dat	le: () ()	05/06/16	7		1		
Logged By:	Ashley Gallegos	5/6/2016 10:35:00 AM			A		
Completed By:	Ashley Gallegos	5/6/2016 11:17:48 AM			A		
Reviewed By:	Q_{i}	05/06/16			V		
Chain of Cus	stody	0//04/10					
1. Custody sea	als intact on sample bottles?		Yes	[]	No [.]	Not Present	[æ]
2. Is Chain of	Custody complete?		Yes		No [:]	Not Present	f.i
3. How was th	e sample delivered?		Cou	rier			
Log In							
4. Was an atte	empt made to cool the sample	s?	Yes		No []	NA	[]
5. Were all sa	mples received at a temperatu	re of >0° C to 6.0°C	Yes		No []	NA	П
6. Sample(s)	in proper container(s)?		Yes		No []		
7. Sufficient sa	ample volume for indicated tes	n(s)?	Yes		No 1.]		
8. Are sample	s (except VOA and ONG) prop	perly preserved?	Yes	F	No []		
9. Was presen	rvative added to bottles?		Yes		No 🙀	NA	
10 VOA viata h	nave zero headspace?				1"1		اما
	sample containers received bro	alvan O	Yes	[]	No ☐	No VOA Vials	
[], were any s	sample containers received bit	oken?	Yes	li	No 💆	# of preserved	
12. Does pape	rwork match bottle labels?		Yes		No []	bottles checke for pH:	d
(Note discre	epancies on chain of custody)					Advanta - Antender	(<2 or >12 unless noted)
13, Are matrice	es correctly identified on Chain	of Custody?	Yes		No []	Adjusted	1?
	hat analyses were requested?		Yes		No []		
	olding times able to be met? y customer for authorization.)		Yes		No []	Checked	by:
Special Han	dling (if applicable)						
16. Was client	notified of all discrepancies wi	th this order?	Yes		No 🗔	NA	eris de la companya d
Perso	on Notified:	Date		ماسانا إسلنا ١٧٤١	erreich der Schrift der Schriften bereicht.		
By W	/hom:	Via: [i eM	ail [Phone Fax	[] In Person	
Rega	arding:	والمراو المتوند سنفسط فالمورود والمناسبة المتناس المساهد والمومية		*******	in the second services		C.ME
Clien	t Instructions:	بتدييه والمهادية فالمتاركة والمراوية والمراوية والمراوية والمتاركة	rus-an-stork	- 4 11 th John Hole Add Co. 1	والمنا المنا أدره المراشدة والمراجوج والمراجو والمحاسم معمد	والمراوعة والمراود ورود ويوادي والمراود	ercta
17. Additional	remarks:						
18. Cooler In	formation						
Cooler			Seal D	ate	Signed By	I	
1	1.0 Good	Yes)	VI	1	

HALL ENVIRONMENTAL	ANALYSIS LABORATORY	٥	4901 Hawkins NE - Albuquerque, NM 87109	70		and the latest to the			()			eelddu8 JlA	PPY Annual Control of the Control of				Treat angular				21/2		nalytica report.
S	AB	www.hallenvironmental.com	Z	505-345-4107	est	**********		* HHTW.	Elica-Artin	4 V		70A) 50958		and the season of the			\dashv		Amen alterification 1/2				on the a
	980	nent	erque	505-3	Redu		e ab	d i	301	713		-ભાવસ્તુ 1 ((ઉ)				**********	+			en winner (CO) (points) and recognitive to be a			otated
ingo Gan	SIS	viron	pndn	Fax	Analysis Request	(°O	S ⁻¹ 0	d'3	OV	, O	N,I	O∃) anoinA	×	×	×	×	×	average and discountry to a control to a		ng Agisalom Hi Mesab Assaure pagasaga			clearly
	>	alen	₹ -	ιo	Anal	nada Silvati ninta fati s	Constituent of the		-mestos	BORN HOUSE	mindament,	aw e Katasi	on here was		usometoxina	ternatura a		he samueli ritsi — mapatsi eensan sa asaa saasi saati saati saati saati sa	A THE COURT OF THE PARTY OF THE				AC IIV
4	4	ww.	S	-397		мир ю ентр	enad) endowylism	Charles The Land		ecazione Princi	a) Charleston	odraM) 803 Ans; ores	The Course		BARNETSHARE	**************************************	matte n area at d	ell a reclinated a respectation of the received and the second of the se		<u> </u>			ed Cata
100	4	۶	awkin	505-345-3975			e entitude market	TO HALL	-	- ILMAN	ounsenue	chold) Herr	on the same	- was to the		autroparemente	'vita (filovarba) ilef	on provide state and the second state of the second			8)		BEAUG
			ï.	1.50		Hoa	9 (<u>)</u> /8	(f.(i)	thus.			r) diplandi		- Herotope (Mar-	- TOTAL MINNS	* *************************************		and the second section of the section of the second section of the second					Y did
			49	Tel.			r) sp	- WATER	on the court of	Towns III Name of	and the same of th	_M + XTIA	15000000	- I Sugariory							Remarks:		IN. Ar
188						(1	200 1	1 5,5	JF1.	l. 1	(11)	BLEX + MJ.		(Albinistano) (Visio)		- Contract	roleusp-asm	The second of th		THE SECTION SECTION ASSESSMENT	Rem		elecod.
			\B #3		3643		0	750	6	X No	ž	HEAL NO	100-	-03	-003	ナ8 -	900-				Date Time 0 5/0/16/0 5 5	Date "Time	other appredited isboratories. This serves as notice of this possibility. Any sub-contracted case will be clearly notated on the analytical record
ound Time:	rc 🗆 Rush	19.	Federal AB #3		30-015-23643	Marager:	Chase Settle	PO # 205 0750	Chase Settle	□ Yes	Temperature: 18.	Preservative Type	None	None	None	None	None	menor metropos monotoregant mandebasedas.	A mictor/Atomorius di viera koconi		11 Miles		coredited isboratories
onu	andai	Nan		#		Mar	Tomas transport		 			ner # pr		-	and the state of t						الريق	Š	other ac
Tum-A	X Standard	Project Name:	4	Project		Project			Sample	On Ice:	Sample	Conta Type a	1 - 40Z.	1 - 40z.	1-402	1 - 40Z.	1 - 40z.				Received	Section of the contract of the	tracted to
Record	Vates Petroleum Corporation			Artesia. NM 88210	6537	csettle@yatespetroleum.com		☐ Level 4 (Full Validation)		desperimental in the second of		Sample Request ID	S2-13	S2-15'	S2-17	\$2-19'	.82-20.						If necessary, samples submitted to Hall Environmental may be subsoftfasted to
-of-Ct	Petroleum		in	Street Arte	575-703-6537	csettle@	.,			□ Other		Metrix	Scil	So	- Hardenburg	Soll					Retinquished by:	Rel nquisned by:	mans salames
nain	~ates		Mailing Address	ith 4th	11	r Fax#:	QA/QC Package:	dard	tation:	O. *1	(Type)	ب ت ع	Sazore 12:03P Scil	50/2016 12:15P	5/3/2016 12:31P	sis/2016 12:41P	(2:56P				Time: S.C.C.	E	Geoffstan,
U	Ollent		Mailing	105 South 4th	Phone #	email or Fax#:	OMOC	☐ Standard	Accreditation:	ONELAP	☐ EDD (Type)	Oate	5/3/2016	5/0/2010	5/3/2016	5/3/2016	sistare 12:56P	11.00		and the second s		Jate:	2