MARTIN YATES, III 1912-1985 FRANK W. YATES

1936-1986 S.P YATES



105 SOUTH FOURTH STREET

ARTESIA, NEW MEXICO 88210-2118

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www.yatespetroleum.com

JOHN A. YATES CHAIRMAN EMERITUS

JOHN A. YATES JR.

DOUGLAS E. BROOKS
PRESIDENT
CHIEF EXECUTIVE OFFICER

JOHN D. PERINI

June 20, 2016

Mr. Mike Bratcher or Ms. Heather Patterson NMOCD District II 811 South First Artesia, NM 88210

RE:

Loving AIB State #2

30-015-26497

Section 16, T23S-R28E Eddy County, New Mexico

Mr. Bratcher or Ms. Patterson,

Yates Petroleum Corporation would like to submit the following plan of work to you regarding the release that occurred at the above mentioned facility on October 24, 2014 (2RP-2570). The release was 8 barrels of produced water and 7 barrels of crude oil with 7 barrels of produced water and 6 barrels of crude oil recovered.

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

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

Thank You,

Amber Griffin

Environmental Representative Yates Petroleum Corporation

Yates Petroleum Corporation

Loving AIB State #2

Section 16, T23S-R28E

Eddy County, New Mexico

June 20, 2016

I. Location

The release area is located 13.1 miles south of Carlsbad on Highway 285 to Highway 31. Turn east on Highway 31 for approximately 2.0 miles to Nymyer Road. Turn south on Nymyer Road and travel 0.5 miles. Turn west onto lease road and travel 0.4 miles and turn south to location.

II. Background

On October 24, 2014, Yates had a release of 8 barrels produced water and 7 barrels of crude oil with 7 barrels produced water and 6 barrels of crude oil recovered. The area affected from this release was around the wellhead/pumpjack and is approximately 65' x 36' and 30' x 42' on the production pad. An initial Form C-141 was submitted, via e-mail, to the NMOCD District II on October 30, 2014.

On July 15, 2015 Yates visited the site and collected initial soil samples from the surface, 1' and 2' below the surface level using a shovel or hand auger. The release area was split into Section 1 and Section 2. The soil samples were sent to an approved NMOCD laboratory and tested for BTEX 8021B, TPH 8015M, and Chlorides 300.0. Yates received the analytical results on July 24, 2015 and August 7, 2015 (Reports 1507793 and 1507D94 attached to this work plan). The analytical results showed that both BTEX and TPH were at levels below NMOCD RRAL's. The analytical results also showed elevated chloride levels, and Yates determined that further vertical delineation of chlorides was needed.

On December 7, 2015 Yates returned to the site and collected further soil samples. Section 1 was sampled from the depths of 3'-8' below the surface level and Section 2 was sampled from the depths of 3'-10' below the surface level using a backhoe. The soil samples were sent to an approved NMOCD laboratory and tested for Chlorides 300.0. Yates received the analytical results on December 28, 2015 and January 5, 2016 (Reports 1512600, H600009 and H600008 attached to this work plan). The analytical results showed that Chloride levels in Section 1 were fully delineated at 8' below the surface level with a result of 288 ppm. Chloride levels in Section 2 were still above 1,000 ppm at 10' below the surface level, and need further delineation.

On February 24, 2016 Yates returned to the site and collected further soil samples from Section 2 from the depths of 12' – 18' below the surface level (samples collected every 2') with a trackhoe. The soil samples were sent to an approved NMOCD laboratory and tested for Chlorides 300.0. Yates received the analytical results on March 4, 2016 (Report 1602B45 attached to this work plan). Analytical results show that Chloride levels were fully delineated.

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 35' feet making the site ranking for this site a twenty (20). Watercourses in the area are dry except for infrequent flows in response to major precipitation events.

The ranking for this site is twenty (20) based on the following:

Depth to ground water 50-99' Wellhead Protection Area > 1000' Distance to surface water body > 1000'

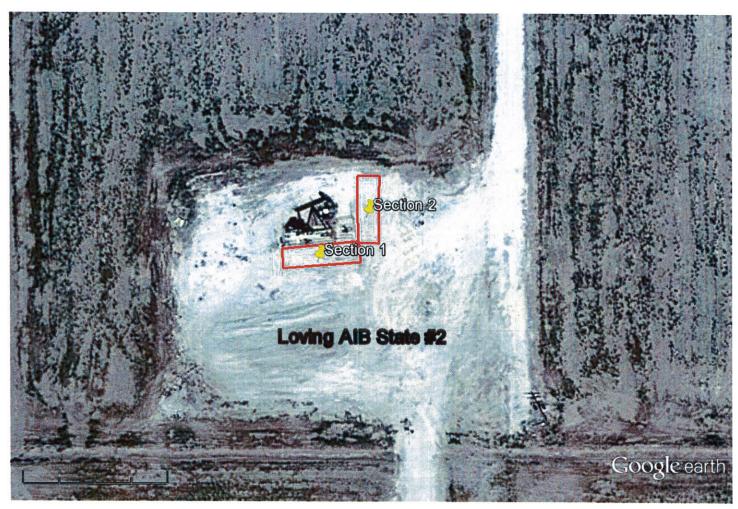
IV. Soils

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

V. Scope of Work

Based off the analytical reports which show complete vertical delineation, Yates proposes the following excavation work for the release area.

- Excavate 4' from Section 1 of the release area (approximately 30' x 42'). Backfill the excavation with caliche.
- Excavate 4' from Section 2 of the release area (approximately 65' x 36'). Lay a 20 mil synthetic liner in the bottom of the excavation (cushion the liner with 6' of sand), and backfill with caliche.
- Contaminated soils that are excavated will be hauled to a NMOCD approved disposal.
- Once all excavation and backfill work is complete, Yates will submit a Final Form C-141 to NMOCD requesting closure of this release.



Google earth

feet 200 meters 60



Loving AIB State #2

			Analytical		3-341					
	Sample Area	Sample Date	Report	Sample Type	Depth	BTEX	GRO	PRO	TOTAL	Chlorides
1 - Surface	Release area	7/15/2015	1507793	Grab/Auger	Surface	ND	ND	Q	ND	10,000
1-1	Release area	7/15/2015	1507793	Grab/Auger	1,	Q	Q	Ð	ND	006'6
1-2'	Release area	7/15/2015	1507D94	Grab/Auger	2'		1	1		6,100
1-3'	Release area	12/7/2015	1512600	Grab/Backhoe	3,		1			1,100
1-4'	Release area	12/7/2015	1512600	Grab/Backhoe	4,	•	ñ	,	ı	840
1-5'	Release area	12/7/2015	600009H	Grab/Backhoe	5,		1			512
1 - 6'	Release area	12/7/2015	600009H	Grab/Backhoe	.9					432
1-7	Release area	12/7/2015	H600009	Grab/Backhoe	7.		1			432
1 - 8'	Release area	12/7/2015	600009H	Grab/Backhoe	8	-	1	-	-	288
2 - Surface	Release area	7/15/2015	1507793	Grab/Auger	Surface	QN	Q	Q.	QN	7,600
2 - 1'	Release area	7/15/2015	1507793	Grab/Auger	1.	Q.	Q	Ð	ND	7,800
2-2,	Release area	7/15/2015	1507D94	Grab/Auger	2'			1		8,200
2 - 3'	Release area	12/7/2015	1512600	Grab/Backhoe	3,	ı	ı	ı	1	2,400
2 - 4'	Release area	12/7/2015	1512600	Grab/Backhoe	4,		1	r	E	4,100
2 - 5'	Release area	12/7/2015	H600008	Grab/Backhoe	5'	ı	1			6,000
2-6'	Release area	12/7/2015	H600008	Grab/Backhoe	6,		1		1	3,280
2 - 7'	Release area	12/7/2015	H600008	Grab/Backhoe	7.		1	1	3	1,280
2 - 8'	Release area	12/7/2015	H600008	Grab/Backhoe	%	1	,	1		1,960
2 - 9'	Release area	12/7/2015	H600008	Grab/Backhoe	ō,		,			2,560
2 - 10'	Release area	12/7/2015	H600008	Grab/Backhoe	10,	1			•	2,400
2 - 12'	Release area	2/24/2016	1602B45	Grab/Backhoe	12'		ı			2,100
2 - 14'	Release area	2/24/2016	1602B45	Grab/Backhoe	14'					1,900
2 - 16'	Release area	2/24/2016	1602B45	Grab/Backhoe	16'	1	1			1,200
2 - 18'	Release area	2/24/2016	1602B45	Grab/Backhoe	18'	-	ŗ			340
THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	The same of the sa									

Site Ranking is TWENTY (20). Depth to Ground Water <50' (approx. 35', per ChevronTexaco trend map).

All results are ppm.Chlorides for documentation. Released: 7 B/O, 8 B/PW; Recovered: 6 B/O, 7 B/PW. Release Date: 10/24/2014, 2RP-2570



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

July 24, 2015

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

FAX

RE: Loving AIB State #2

OrderNo.: 1507793

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 4 sample(s) on 7/17/2015 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 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

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1507793

Date Reported: 7/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum

Client Sample ID: Loving 1 - Surface

Project: Loving AIB State #2

Collection Date: 7/15/2015 11:30:00 AM

Lab ID:

1507793-001

Matrix: SOIL

Received Date: 7/17/2015 10:00:00 AM

Analyses	Result	RL Q	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANIC	S			Analys	t: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/22/2015 11:45:40 AM	1 20309
Surr: DNOP	106	57.9-140	%REC	1	7/22/2015 11:45:40 AM	1 20309
EPA METHOD 8015D: GASOLINE RAN	IGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/20/2015 4:07:20 PM	20306
Surr: BFB	92.2	75.4-113	%REC	1	7/20/2015 4:07:20 PM	20306
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.049	mg/Kg	1	7/20/2015 4:07:20 PM	20306
Toluene	ND	0.049	mg/Kg	1	7/20/2015 4:07:20 PM	20306
Ethylbenzene	ND	0.049	mg/Kg	1	7/20/2015 4:07:20 PM	20306
Xylenes, Total	ND	0.097	mg/Kg	1	7/20/2015 4:07:20 PM	20306
Surr: 4-Bromofluorobenzene	99.3	80-120	%REC	1	7/20/2015 4:07:20 PM	20306

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range Ε
- Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 1 of 7

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

Lab Order 1507793

Date Reported: 7/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum

Client Sample ID: Loving 1 - 1'

Project: Loving AIB State #2

Collection Date: 7/15/2015 11:40:00 AM

Lab ID:

1507793-002

Matrix: SOIL

Received Date: 7/17/2015 10:00:00 AM

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANIC	S			Analyst	: JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	7/22/2015 12:12:29 PM	20309
Surr: DNOP	105	57.9-140	%REC	1	7/22/2015 12:12:29 PM	20309
EPA METHOD 8015D: GASOLINE RAN	IGE				Analys	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/20/2015 4:36:07 PM	20306
Surr: BFB	92.3	75.4-113	%REC	1	7/20/2015 4:36:07 PM	20306
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.050	mg/Kg	1	7/20/2015 4:36:07 PM	20306
Toluene	ND	0.050	mg/Kg	1	7/20/2015 4:36:07 PM	20306
Ethylbenzene	ND	0.050	mg/Kg	1	7/20/2015 4:36:07 PM	20306
Xylenes, Total	ND	0.10	mg/Kg	1	7/20/2015 4:36:07 PM	20306
Surr: 4-Bromofluorobenzene	99.1	80-120	%REC	1	7/20/2015 4:36:07 PM	20306

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 2 of 7

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

Lab Order 1507793

Date Reported: 7/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum

Client Sample ID: Loving 2 - Surface

Project: Loving AIB State #2

Collection Date: 7/15/2015 11:50:00 AM

Lab ID: 1507793-003

Matrix: SOIL

Received Date: 7/17/2015 10:00:00 AM

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS	S			Analyst	: KJH
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	7/23/2015 10:23:50 AM	20309
Surr: DNOP	88.0	57.9-140	%REC	1	7/23/2015 10:23:50 AM	20309
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/20/2015 5:04:54 PM	20306
Surr: BFB	93.6	75.4-113	%REC	1	7/20/2015 5:04:54 PM	20306
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.050	mg/Kg	1	7/20/2015 5:04:54 PM	20306
Toluene	ND	0.050	mg/Kg	1	7/20/2015 5:04:54 PM	20306
Ethylbenzene	ND	0.050	mg/Kg	1	7/20/2015 5:04:54 PM	20306
Xylenes, Total	ND	0.099	mg/Kg	1	7/20/2015 5:04:54 PM	20306
Surr: 4-Bromofluorobenzene	100	80-120	%REC	1	7/20/2015 5:04:54 PM	20306

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 3 of 7

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

Lab Order 1507793

Date Reported: 7/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum

Client Sample ID: Loving 2 - 1'

Project:

Loving AIB State #2

Collection Date: 7/15/2015 12:00:00 PM

Lab ID:

1507793-004

Matrix: SOIL

Received Date: 7/17/2015 10:00:00 AM

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	S			Analys	t: JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	7/22/2015 1:06:34 PM	20309
Surr: DNOP	101	57.9-140	%REC	1	7/22/2015 1:06:34 PM	20309
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/20/2015 10:20:42 PM	1 20306
Surr: BFB	89.8	75.4-113	%REC	1	7/20/2015 10:20:42 PM	A 20306
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.049	mg/Kg	1	7/20/2015 10:20:42 PM	A 20306
Toluene	ND	0.049	mg/Kg	1	7/20/2015 10:20:42 PM	1 20306
Ethylbenzene	ND	0.049	mg/Kg	1	7/20/2015 10:20:42 PM	1 20306
Xylenes, Total	ND	0.099	mg/Kg	1	7/20/2015 10:20:42 PM	A 20306
Surr: 4-Bromofluorobenzene	94.7	80-120	%REC	1	7/20/2015 10:20:42 PM	A 20306

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 4 of 7

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

Hall Environmental Analysis Laboratory, Inc.

WO#:

1507793

24-Jul-15

Client:

Yates Petroleum

Project:

Loving AIB State #2

Comple ID MD 20200	CompTime: MDLK	Today Bridge	
Sample ID MB-20309	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics	
Client ID: PBS	Batch ID: 20309	RunNo: 27634	
Prep Date: 7/17/2015	Analysis Date: 7/21/2015	SeqNo: 830062 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	103 57.9 140	
Sample ID LCS-20309	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics	
Client ID: LCSS	Batch ID: 20309	RunNo: 27634	
Prep Date: 7/17/2015	Analysis Date: 7/21/2015	SeqNo: 830063 Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit	Qual
Diesel Range Organics (DRO)	51 10 50.00	0 102 57.4 139	
Surr: DNOP	5.0 5.000	100 57.9 140	
Sample ID MB-20378	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics	
Client ID: PBS	Batch ID: 20378	RunNo: 27701	
Prep Date: 7/22/2015	Analysis Date: 7/23/2015	SeqNo: 833319 Units: %REC	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit	Qual
Surr: DNOP	11 10.00	109 57.9 140	

Sample ID LCS-20378	SampT	ype: LC	s	Tes	Code: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS	Batch	ID: 20	378	F	lunNo: 2	7701				
Prep Date: 7/22/2015	Analysis D	ate: 7/	23/2015	S	SeqNo: 8	33320	Units: %RE	С		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.3		5.000		147	57.9	140			S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

Page 5 of 7

Hall Environmental Analysis Laboratory, Inc.

WO#:

1507793

24-Jul-15

Client:

Yates Petroleum

Project:

Loving AIB State #2

Sample ID MB-20306

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: 20306

RunNo: 27604

LowLimit

75.4

Prep Date: 7/17/2015

SeqNo: 829377

Analyte

Analysis Date: 7/20/2015 **PQL**

5.0

Units: mg/Kg HighLimit

RPDLimit Qual

Gasoline Range Organics (GRO) Surr: BFB

Result ND

910

1000

90.7

113

%RPD

Prep Date: 7/17/2015

Sample ID LCS-20306

SampType: LCS

Analysis Date: 7/20/2015

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

LCSS

Batch ID: 20306

24

RunNo: 27604

SPK value SPK Ref Val %REC

122

113

%RPD **RPDLimit** Qual

Analyte

Result Gasoline Range Organics (GRO)

PQL SPK value SPK Ref Val

25.00

1000

1000

SPK value SPK Ref Val

SeqNo: 829378

Units: mg/Kg HighLimit

Surr: BFB

980

SampType: MBLK

Batch ID: 20308

TestCode: EPA Method 8015D: Gasoline Range

%REC

97.1

98.1

RunNo: 27604

LowLimit

75.4

LowLimit

79.6

75.4

Client ID:

PBS Prep Date: 7/17/2015

Sample ID MB-20308

Analysis Date: 7/20/2015 PQL

5.0

SeqNo: 829387

Units: %REC

HighLimit

113

%RPD **RPDLimit** Qual

Analyte Surr: BFB

Sample ID LCS-20308

SampType: LCS

900

Result

Batch ID: 20308

TestCode: EPA Method 8015D: Gasoline Range

%REC

90.4

RunNo: 27604

Prep Date: 7/17/2015

LCSS

Analysis Date: 7/20/2015

SeqNo: 829388

Units: %REC

Analyte

Client ID:

Result

SPK value SPK Ref Val %REC

LowLimit

HighLimit

%RPD **RPDLimit**

Qual

Surr: BFB

990

1000

98.5

75.4

113

Qualifiers:

S

Value exceeds Maximum Contaminant Level.

Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

Page 6 of 7

Hall Environmental Analysis Laboratory, Inc.

WO#:

1507793

24-Jul-15

Client:

Yates Petroleum

Project:

Loving AIB State #2

Sample ID MB-20306	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch	1D: 20	306	E	RunNo: 2	7604				
Prep Date: 7/17/2015	Analysis D	ate: 7/	20/2015	5	SeqNo: 8	29405	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97 1.000				96.9	80	120			

Sample ID LCS-20306	SampT	ype: LC	S	TestCode: EPA Method 8021B: Volatiles									
Client ID: LCSS	Batch	n ID: 20	306	F	RunNo: 2	7604							
Prep Date: 7/17/2015	Analysis D	ate: 7/	20/2015	S	SeqNo: 8	29406	Units: mg/K	(g					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene	0.99	0.050	1.000	0	99.0	76.6	128						
Toluene	0.97	0.050	1.000	0	96.9	75	124						
Ethylbenzene	0.99	0.050	1.000	0	98.7	79.5	126						
Xylenes, Total	2.9	0.10	3.000	0	98.1	78.8							
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120						

Sample ID MB-20308	SampT	ype: Mi	BLK	Tes	tCode: El	iles					
Client ID: PBS	Batch	ID: 20	308	F	RunNo: 2	7604					
Prep Date: 7/17/2015	Analysis D	ate: 7	/20/2015		SeqNo: 8	29414	Units: %RE	С			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	0.97		1.000		96.8	80	120				

Sample ID LCS-20308	SampT	ype: LC	s	Tes						
Client ID: LCSS	Batch	1D: 20	308	F	RunNo: 2	7604				
Prep Date: 7/17/2015	Analysis D	ate: 7	/20/2015	8	SeqNo: 8	29419	Units: %RE	С		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

O RSD is greater than RSDlimit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

P Sample pH Not In Range

Page 7 of 7

RL Reporting Detection Limit



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Work Order Number: 1507793 RcptNo: 1 Client Name Yates Petroleum Corpora 07/17/15 Received by/date: alin Som 7/17/2015 10:00:00 AM Logged By: Celina Sessa Celin Som 7/17/2015 11:30:00 AM Celina Sessa Completed By: 07/17/15 Reviewed By IO Chain of Custody Not Present Yes No 🗌 1. Custody seals intact on sample bottles? Yes V No 🗌 Not Present 2. Is Chain of Custody complete? Courier 3. How was the sample delivered? Log In No 🗌 NA 🗌 Yes 🗸 4. Was an attempt made to cool the samples? NA No | Were all samples received at a temperature of >0° C to 6.0°C Yes V Yes V No 🗌 Sample(s) in proper container(s)? Yes 7. Sufficient sample volume for indicated test(s)? 8. Are samples (except VOA and ONG) properly preserved? Yes NA 🗌 No V Yes 9. Was preservative added to bottles? No _ No VOA Vials Yes 10. VOA vials have zero headspace? Yes 🗔 No V 11. Were any sample containers received broken? # of preserved bottles checked Yes V No for pH: 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No | 13. Are matrices correctly identified on Chain of Custody? No 🗌 14. Is it clear what analyses were requested? Checked by Yes 🗸 No 🗌 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes No NA V 16. Was client notified of all discrepancies with this order? Person Notified Date In Person Via: eMail Phone Fax By Whom: Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Seal Intact | Seal No Seal Date Cooler No Temp °C Condition Signed By 1.0 Good

HALL ENVIRONMENTAL	ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis Request	-	BALL TO THE REAL PROPERTY.	NAME OF TAXABLE PARTY.	105'	r.40 (HA N.80	Piese MC Piese Pie	oor deta (IO)	TPH (Mett 8310 (PM 8310 (PM ROB1 Pest 8081 Pest 8260B (Vo 8260B (Vo	×	×	×	×							Remarks: TPH: 8015B, BTEX: 8021B. Please show BTE results as mg/kg. Please put chloride results on a separal		
		*	1901 F	Tel. 5(H111050021171	-				M + X3T8 rieM H9T	×	×	×	×			-		<u> </u>		 rks:	ئہ	ity. Any
		192	4								Menne	and the last of th	BTEX + M	×	×	×	×	and distillent open	easter control				-	 Remarks: results as	report	dissod s
	sh		Loving AIB State #2		2RP-2570			emin s	PO # 205-2020	Amber Griffin		5007	IN HEAL NO.	100-	-200Z	-203	700-							Date Time	1	atories. This serves as notice of this
me:	□ Rush		wing Al		2RP	١.		Amber	PO # 2		Sel	rature:	Preservativ e Type	eol	83	92	φş							3		edited labor
Turn-Around Time	X Standard	Project Name:	2	Project #:		Pagent Manager	Project manager			f.	On Ice:	Sample Temperature:	Container P	1 - 40z. Ic		1/- 40z. Ice	7 - 40z. Ice							Received by:	Received by:	contracted to other acon
Chain-of-Custody Record	Yates Petroleum Corporation			105 South 4th Street Artesia, NM 88210		13-01 39 OI 37 3-10-11	acannon(g/vatesperroleum.com		☐ Level 4 (Full Validation)		her		rix Sample Request ID	Loving 1 - Surface	Loving 1 - 1'	Loving 2 - Surface	Loving 2 - 21 Per UN.	TO KA				Resignation (Control of Control o	And the state of t	Relinquished by:	Reilnquished by:	s submitted to Hall Environmental may be subt
O-Jo	Petrole			reet A	1	2/ 2-2	acan				□ Other		Matrix	11.30 Soil	11:40 Soil	11:50 Soil	12:00 Soil	-Annes and Cons	un de samera e per	 -	-			Reling	3 1 2 2	y, samples
lain-	Yates		dress:	A+A		:	ax#.	kage:	p	ion:		ype)	Time		and a street company									Time:	Jä H	[necessar
ਹ	Olient:		Mailing Address:	405 2014	20000	Phone #:	email or Fax#.	QA/QC Package:	□ Standard	Accreditation:	□ NELAP	□ EDD (Type)	Date	7/15/2015	7/15/2015	7/15/2015	7/15/2015							Date:	Date:	



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

OrderNo.: 1507793

July 24, 2015

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

FAX

RE: Loving AIB State #2

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 4 sample(s) on 7/17/2015 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 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

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1507793

Date Reported: 7/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum

Client Sample ID: Loving 1 - Surface

Project: Loving AIB State #2

Collection Date: 7/15/2015 11:30:00 AM

1507793-001 Lab ID:

Matrix: SOIL Received Date: 7/17/2015 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Anal	yst: LGT
Chloride	10000	750	mg/Kg	500	7/23/2015 4:10:27 P	M 20356

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 1 of 4

P Sample pH Not In Range

Reporting Detection Limit

Lab Order 1507793

Date Reported: 7/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum

Client Sample ID: Loving 1 - 1'

Project: Loving AIB State #2

Collection Date: 7/15/2015 11:40:00 AM

Lab ID: 1507793-002

Matrix: SOIL Received

Received Date: 7/17/2015 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analy	/st: LGT
Chloride	9900	300	mg/Kg	200 7/23/2015 4:22:51 PI	M 20356

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 2 of 4

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

Lab Order 1507793

Date Reported: 7/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum

Client Sample ID: Loving 2 - Surface

Project: Loving AIB State #2 Collection Date: 7/15/2015 11:50:00 AM

Lab ID: 1507793-003

Matrix: SOIL

Received Date: 7/17/2015 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	st: LGT
Chloride	7600	300	mg/Kg	200	7/23/2015 4:35:16 PM	1 20356

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range E
- Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 3 of 4

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

Lab Order 1507793

Date Reported: 7/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum

Client Sample ID: Loving 2 - 1'

Project: Loving AIB State #2

Collection Date: 7/15/2015 12:00:00 PM

Lab ID: 1507793-004

Matrix: SOIL

Received Date: 7/17/2015 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analy	st: LGT
Chloride	7800	300	mg/Kg	200 7/23/2015 4:47:40 PM	1 20356

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 4 of 4

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



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albaquerque, 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	1507793		RoptNo: 1	
Received by/date	cs CS	07/17/15				
Logged By:	Celina Sessa	7/17/2015 10:00:00 AM		alin Si Alin Si	274-	
Completed By:	Celina Sessa	7/17/2015 11:30:00 AM		Celin S	m	
Reviewed By	IO	07/11/15				
Chain of Cust	tody	and the second s		10 may 1 may		
1. Custody seal	ls intact on sample bottles?		Yes 🗌	No 🗆	Not Present 🗸	
2, Is Chain of C	sustody complete?		Yes 🗸	No 🗌	Not Present	
3. How was the	sample delivered?		Courier			
<u>Log In</u>						
4. Was an atte	mpt made to cool the sample	15?	Yes 🗸	No 🗀	NA 🗆	
5. Were all san	nples received at a temperati	ure of >0° C to 6.0°C	Yes 🗸	No 🗌	NA 🗆	
6. Sample(s) in	n proper container(s)?		Yes 🗹	No 🖾		
7. Sufficient sa	mple volume for indicated te	5i(s)?	Yes 🔽	No 🗆		
8. Are samples	(except VOA and ONG) pro	perly preserved?	Yes 🗸	No []		
9. Was preserv	vative added to bettles?		Yes	No 🗸	NA 🗌	
10. VOA vials h	ave zero headspace?		Yes	No 🗆	No VOA Vials 🗹	
11. Were any s	ample containers received br	oken?	Yes	No 🗸	# of preserved bottles checked	
	work match bottle labels?		Yes 🗸	No 🗆	for pH: (<2 or >12 un	less noted
	pancies on chain of custody) s correctly identified on Chair		Yes 🗸	No 🗆	Adjusted?	erson et transmission i sette et a
	nat analyses were requested		Yes 🗸	No 🗌		
15. Were all hol	Iding times able to be met? customer for authorization.)		Yes 🗸	No 🗀	Checked by:	entre de la constante de la co
Special Hand	dling (if applicable)					
16, Was client	notified of all discrepancies w	ith this order?	Yes 🗌	No 🗀	NA 🔽	
Perso	on Notified:	Date [general a martin archive article infli	Specific and the production of the second		
By W	hom:	Via;	eMail _	Phone Fax	☐ In Person	
Rega	rding.	and district the search of the season of the	hand the second second track and beautiful to	Commission of managers of the second		
Client	t Instructions.	(4) Styley (My 44 - 44 - 4) (4) ST TITLES (MY 10 - 12) ST TITLES (MY 10 - 14) ST TITLES (MY	arakum gittamiirkka kunnatu värakumi (Andriikkka)		Systems in remove by discourse principle are 12, principle in 12, principl	
17. Additional	remarks:					
18. Cooler Inf	formation	y see a	u.			
Cooler	and the second s	A THE RESERVE AND ADDRESS OF THE PARTY OF TH	Seal Date	Signed By		
1	1.0 Good	Yes				

HALL ENVIRONMENTAL	ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analys	os'	ssə) O\ss	10 ⁵ 1) 1) 3 (G	+ TI - 18: -	d 80 od 4 or P stals stals stals	TEX + MT hetho PH (Metho BH) (PM BH) (PMA 310 (PMA BM3 (PMA MG) (PMO MG) (Sem	Н Х Х Д Х Д Х Д Х Д Х Д Х Д Х Д Х Д Х Д		×	×	×					Remarks: TPH: 8015B, BTEX: 8021B. Please show B1EX results as mg/kg. Please put chloride results on a separate	report.	If necessary, samples submitted to Hall Environmental may be subcentracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Turn-Around Time:	X Standard Rush	Project Name:	Loving AlB State #2	Project #:	2RP-2570	in the second second	ner volter	PO # 205-2020	Sampler: Amber Grinin F	Temperature: 1.0°C	atik e atik	561/851		1-40z lce	7-40Z Ice X	7-40z. Ice -004 ×			and the second s		Date Time	Time	ontracted to other accredited laboratories. This serves as notice of this po-
Chain-of-Custody Record	Client: Yates Petroleum Corporation		Mailing Address:	105 South 4th Street Artesia, NM 88210	Dhone # 575-513-8799 or 575-748-4111	Fax#: acannon@yatespetroleum.com		□ Standard □ Level 4 (Full Validation)	on:	Other Other	me Matrix Sample Request ID	acino la control de la control	200	7/15/2015 11:40 Soil Loving 1 - 1'	11:50 Soil Loving 2 - S		2				Time: Relinquished by:	Compenion	If necessary, samples submitted to Hall Environmental may be subor



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

OrderNo.: 1507D94

August 07, 2015

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

FAX

RE: Loving AIB State #2

Dear Amber Cannon:

Hall Environmental Analysis Laboratory received 2 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 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

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1507D94

Date Reported: 8/7/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Project: Loving AIB State #2

Lab ID: 1507D94-001 Client Sample ID: Loving 1-2'

Collection Date: 7/15/2015 11:45:00 AM Received Date: 7/31/2015 8:00:00 AM

Analyses Result RL Qual Units DF Date Analyzed

Matrix: SOIL

Batch **EPA METHOD 300.0: ANIONS** Analyst: LGT Chloride 6100 300 mg/Kg 200 8/5/2015 5:57:59 PM 20603

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
- 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 1 of 3 J
- P Sample pH Not In Range
- Reporting Detection Limit

Lab Order 1507D94

Date Reported: 8/7/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Project: Loving AIB State #2

1507D94-002

Lab ID:

Matrix: SOIL

Client Sample ID: Loving 2-2'

Collection Date: 7/15/2015 12:05:00 PM

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

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Anal	yst: LGT
Chloride	8200	300	mg/Kg	200 8/5/2015 6:10:24 PM	20603

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
- Holding times for preparation or analysis exceeded H
- 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
- Analyte detected below quantitation limits Page 2 of 3 J
- P Sample pH Not In Range
- Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1507D94

07-Aug-15

Client:

Yates Petroleum Corporation

Project:

Loving AIB State #2

Sample ID MB-20603

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 20603

PQL

1.5

RunNo: 27959

Prep Date: 8/4/2015

Result

Units: mg/Kg

HighLimit

Analyte

Analysis Date: 8/4/2015

SeqNo: 841213

%RPD **RPDLimit**

Qual

Chloride

ND

Sample ID LCS-20603

SampType: LCS

TestCode: EPA Method 300.0: Anions

RunNo: 27959

Prep Date: 8/4/2015

Batch ID: 20603

SeqNo: 841214

Units: mg/Kg

Analyte

Client ID:

Analysis Date: 8/4/2015

SPK value SPK Ref Val %REC

HighLimit

Qual

Result

Chloride

110

1.5

LCSS

14

15.00

90

%RPD

0

SPK value SPK Ref Val %REC LowLimit

96.4

PQL

LowLimit

RPDLimit



- - Qualifiers:
 - Sample Diluted Due to Matrix D
 - ND Not Detected at the Reporting Limit
 - Value exceeds Maximum Contaminant Level.
 - Holding times for preparation or analysis exceeded H
 - 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

Reporting Detection Limit

- Analyte detected below quantitation limits J
- P Sample pH Not In Range

RL

Page 3 of 3



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: 1507D94 RcptNo: 1 Received by/date: 7/31/2015 8:00:00 AM Lindsay Mangin Logged By: 7/31/2015 9:23:05 AM Completed By: Lindsay Mangin MS 07/31/15 Reviewed By: Chain of Custody 1. Custody seals intact on sample bottles? Yes 🔲 No 🗌 Not Present Y Yes 🗸 No Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In NA 🗌 No 🗌 Yes V 4. Was an attempt made to cool the samples? NO MATPENES BICLIENT. 5. Were all samples received at a temperature of >0° C to 6.0°C Yes V Yes V Sample(s) in proper container(s)? 7. Sufficient sample volume for indicated test(s)? Yes No 8. Are samples (except VOA and ONG) properly preserved? Yes NA [No V 9. Was preservative added to bottles? Yes No 🗌 No VOA Vials Yes 10. VOA viais have zero headspace? Yes 🗔 11. Were any sample containers received broken? No V # of preserved bottles checked No 🗌 for pH: Yes V 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No Yes V 13. Are matrices correctly identified on Chain of Custody? No 🗌 14, is it clear what analyses were requested? No 🗌 Checked by: Yes 🗸 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes No 🗌 NA V 16. Was client notified of all discrepancies with this order? Person Notified: Date eMail Phone Fax In Person By Whom: Via: Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C Condition Seal Intact | Seal No Seal Date Signed By Not Present 4.9 Good 20.1 Page 1 of 1

HALL ENVIRONMENTAL	ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	. Analysis Request				() 282	(H/ (H/ N,E	NO/ Sel Sel Sel Sel Sel Sel Sel Sel Sel Sel	hod A or Mets (<mark>OI)</mark> , Ucid (AO)	TPH (Met 8310 (PN) RCRA 8 N Anions (F 8081 Pes 8250 (V) 8270 (Ser	×	×											Anions: Chlorides only.			b-contracted data will be clearly notated on the analytical report.
	П		01 Ha	el. 505					၅)	89	108	ро	HPH Meth											onen v					r, Anyst
		74. 44.	49	F	No.	_		-		and the latest designation of the latest des			M + X3T8 M + X3T8				_		+	-	***************************************	port.				Remarks:			oossibility
Turn-Around Time:	X Standard	Project Name:	Loving AIB State #2	Project #:	2PD,2570	Monographic Proposed			(: Amber Griffin 1/2	On Ice: TYes K No	Sample Temperature: 207	Container Preservativ HEAL No.	1 - 407 Not required - 107		1 - 40z, Not required										by: Date Time	Comment of the	Received by: Date Ime	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Chain-of-Custody Record	Client: Yates Petroleum Corporation		Mailing Address:	0100 MN cisoth 400000 110 July 20010	n 4th offe		email or Fax#: acannon@yatespetroleum.com	QA/QC Package:	☐ Standard ☐ Level 4 (Full Validation)	Accreditation:	□ NELAP □ Other	□ EDD (Type)	Date Time Matrix Sample Request ID		1000 (47)	7/15/2015 12:05 Soil Loving 2 - 2										H H	115915 10Cmbw.6121.0	Date: Time: Relinquished by: 0U	If necessary, samples submitted to Hall Environmental may be sub



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

December 28, 2015

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

ГАЛ

RE: Loving AIB State #2

OrderNo.: 1512600

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/11/2015 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 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

andy

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order: 1512600

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/28/2015

CLIENT:

Yates Petroleum Corporation

Project:

Loving AIB State #2

Lab Order:

1512600

Lab ID:

1512600-001

Collection Date: 12/7/2015 11:59:00 AM

Matrix: SOIL

Analyses

Client Sample ID: 1-3'

RL Qual Units

75

DF Date Analyzed

Batch ID

Analyst: LGT

EPA METHOD 300.0: ANIONS

Chloride

1100

Result

mg/Kg

12/17/2015 11:54:55 AM 22833

Lab ID:

1512600-002

mg/Kg

Collection Date: 12/7/2015 12:02:00 PM

Matrix: SOIL

Analyses

Client Sample ID: 1-4'

RL Qual Units

30

DF Date Analyzed

Batch ID

EPA METHOD 300.0: ANIONS

Chloride

840

Result

12/16/2015 1:13:10 PM 22833

Collection Date: 12/7/2015 12:32:00 PM

Analyst: JRR

Lab ID:

1512600-003

Collection Date: 12/7/2015 12:29:00 PM

Matrix: SOIL

Analyses

Client Sample ID: 2-3'

Result **RL Qual Units** **DF** Date Analyzed

Batch ID

Analyst: LGT

EPA METHOD 300.0: ANIONS

Chloride

75

mg/Kg

50 12/17/2015 12:07:19 PM 22833

Lab ID:

1512600-004 Client Sample ID: 2-4'

RL Qual Units

Matrix: SOIL

DF Date Analyzed

Batch ID

Analyst: LGT

EPA METHOD 300.0: ANIONS

Chloride

Analyses

4100

Result

2400

150

mg/Kg

100 12/17/2015 12:19:44 PM 22833

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

Not Detected at the Reporting Limit

RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank В

Ε Value above quantitation range

J Analyte detected below quantitation limits

Page 1 of 2

P Sample pH Not In Range

Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1512600

28-Dec-15

Client:

Yates Petroleum Corporation

Result

Project:

Loving AIB State #2

Sample ID MB-22833

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

Batch ID: 22833

PQL

RunNo: 30906

PBS

SPK value SPK Ref Val %REC LowLimit

Prep Date: 12/16/2015 Analysis Date: 12/16/2015

SeqNo: 944921

Units: mg/Kg

HighLimit

%RPD **RPDLimit**

Qual

Analyte Chloride

ND 1.5

Sample ID LCS-22833 LCSS

SampType: LCS

Batch ID: 22833

RunNo: 30906

Units: mg/Kg

Prep Date: 12/16/2015

Analysis Date: 12/16/2015

SeqNo: 944922

Analyte

Client ID:

PQL SPK value SPK Ref Val %REC

TestCode: EPA Method 300.0: Anions

HighLimit %RPD **RPDLimit** Qual

Result

15.00

14 1.5 92.8

110

Chloride

Qualifiers:

S

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Holding times for preparation or analysis exceeded Η

% Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits В Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

Page 2 of 2



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 Corporat Work Order Number:	1512600		RcptNo: 1	
Received by/date: SA IZ 11 15		8 *		
Logged By: Lindsay Mangin 12/11/2015 9:40:00 AM		Street by Hours		
Completed By: Lindsay Mangin 12/14/2015 8:35:17 AM		Simulay Hongs		=
Reviewed By: 0 12/14/15				
Chain of Custody	* *			
Custody seals intact on sample bottles?	Yes 🗹	No 🗆	Not Present	
2. Is Chain of Custody complete?	Yes 🗹	No 🗆	Not Present	
3. How was the sample delivered?	Courier			
Log In				
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗆	NA □	
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗹	No 🗆	NA 🗆	
6. Sample(s) in proper container(s)?	Yes 🐼	No 🗆	§5.	
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗆		
8. Are samples (except VOA and ONG) properly preserved?	Yes 🕏	No 🗆		
9. Was preservative added to bottles?	Yes 🗌	No 🗹	NA 🗀	
10,VOA vials have zero headspace?	Yes 🗌	No 🗆	No VOA Vials	
11. Were any sample containers received broken?	Yes	No 🗹	# of preserved	
12.Does paperwork match bottle labels?	Yes 🗹	No 🗆	bottles checked for pH:	>12 unless noted)
(Note discrepancies on chain of custody) 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? (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:				
By Whom: Via:	ı ☐ eMail [Phone Fax	☐ In Person	
Regarding:				[[
Client Instructions:				
17. Additional remarks:				907
18. Cooler Information				
Cooler No Temp °C Condition Seal Intact Seal No	Seal Date	Signed By	1	
1 2.3 Good Yes]	
		a san sa Marana		

HALL ENVIRONMENTAL	ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Ana				(H) (H) (H) (H)	PAG 8 801 801 1 86	oor sta n,t: co sbic (A	EDB (Meth 8310 (PNA RCRA 8 Md Anions (F,C 8081 Pestic 8270 (Sem 8270 (Sem	×	×	×	X									Chlorides only.		ler accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
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a rime:	d □Rush	.е.	Loving AIB State #2		2RP-2570		Amber Griffin	PO # 205-2020	Am	¥,¥es	emperature.	Preservative Type					• 5								ant.		accredited laboratorie
I um-Around I me	X Standard	Project Name:		Project #:		Project Manager:			Sampler:	On les	Sample Ten	Container Type and #	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 4oz.				P				7.5	Received by:	Received by:	
Chain-of-Custody Record	Yates Petroleum Corporation			Artesia NM 88210	575-513-8799 or 575-748-4111	acannon@vatespetroleum.com		☐ Level 4 (Full Validation)				Sample Request ID	1-3'	1-4	2-3'	2-4'									moushed by:	d by:	 If necessary, samples submitted to Hall Environmental may be subcontracted to off
f-Cus	etroleum				575-513.5	acannon				□ Other_	:	Matrix				,	:						i		Relinquished by	Relinquished by:	samples subm
ain-c	rates P		ress:	4th Stre	200		age:		 	• :	be)	Time	11:59 Soil	12:02 Soil	12:29 Soil	12:32 Soil	2 ·					٠.			Time:	1	necessary,
5	Client:		Mailing Address:	405 South 4th Street	Dhono #-	email or Fax#:	OA/OC Package:	□ Standard	Accreditation:	O NELAP	□ EDD (Type)	Date	12/7/2015	12/7/2015	12/7/2015	12/7/2015									Date: T	4	



January 05, 2016

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

RE: LOVING AIB STATE #2

Enclosed are the results of analyses for samples received by the laboratory on 01/04/16 11:30.

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

Celeg 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



Analytical Results For:

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

Fax To:

(505) 748-4635

Received:

01/04/2016

Sampling Date:

12/07/2015

Reported:

01/05/2016

Sampling Type:

Soil

Project Name:

LOVING AIB STATE #2

Sampling Condition:

** (See Notes)

Project Number:

2RP-2570

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: 1 - 5' (H600009-01)

Chlavida	SM4500CI-B
Chioride,	SM4SUUCI-D

mg/kg

Analyzed By: AP

Analyte

Result 512

Reporting Limit 16.0

Reporting Limit

Analyzed

Analyzed

Method Blank

BS

% Recovery 100

True Value QC 400

Qualifier

01/04/2016 ND 400

Sample ID: 1 - 6' (H600009-02)

Analyte

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

RPD

3.92

RPD

3.92

Chloride

Chloride

Result

432

16.0 01/04/2016 Method Blank

BS

% Recovery

True Value QC

Qualifier

ND

400

100

400

Sample ID: 1 - 7' (H600009-03)

Analyte

Analyte

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

BS

% Recovery

RPD

Qualifier

432

Result

Result

288

16.0

Reporting Limit

Reporting Limit

16.0

Analyzed 01/04/2016

Analyzed

01/04/2016

Method Blank ND

400

BS

400

100

% Recovery

100

True Value QC 400

3.92

Sample ID: 1 - 8' (H600009-04)

Chloride

Chloride

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Method Blank

ND

True Value QC

400

RPD

3.92

Qualifier

Cardinal Laboratories

*=Accredited Analyte

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Celley Dities

Celey D. Keene, Lab Director/Quality Manager



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.

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

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Celey D. Keens

ARDINAL LABORATORIES
101 East Mariand, Hobbs, NM 88240

RUSH!

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name:

Loving AIB Sta

(505) 393-2326 FAX (505) 393-2476

Company Name Project Manager: Amber Griffin Yates Petroleum Corporation

City/State/Zip: Company Address: 105 South 4th Street Artesia, NM 88210

Telephone No: 575-748-4111

Sampler Signature: (I mby 6 M)

Fax No:

575-748-4131

PO #:

Project Loc:

Eddy Count

Project #:

Report Format: X Standard

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2RP-2570

consideration by.	Relinquished by:	Relinquished by:	Relinquished by:		Special Instructions:								2	W	1		LAB # (lab use only)		ORDER #
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liner,	and	cor	6 0	3		-	+	+	+	+	+	+		_	1	-	SAR / ESP / CEC	- IOTAL:	TCLP:
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January 05, 2016

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

RE: LOVING AIB STATE #2

Enclosed are the results of analyses for samples received by the laboratory on 01/04/16 11:30.

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

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



Analytical Results For:

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

Fax To:

(505) 748-4635

Received:

01/04/2016

Sampling Date:

12/07/2015

Reported:

01/05/2016

Sampling Type:

Soil

Project Name:

LOVING AIB STATE #2

Sampling Condition:

** (See Notes)

Project Number:

2RP-2570

Sample Received By:

Jodi Henson

Project Location:

Analyte

Analyte

EDDY COUNTY, NM

Sample ID: 2 - 5' (H600008-01)

Chloride,	SM4500CI-B
-----------	------------

mg/kg

Analyzed By: AP

% Recovery

True Value QC

Chloride

Result 6000

Reporting Limit

16.0

01/04/2016

Analyzed

Analyzed

400

100

400

Qualifier

Sample ID: 2 - 6' (H600008-02)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Method Blank

Method Blank

ND

% Recovery

RPD

3.92

RPD

3.92

Chloride

Chloride

Chloride

Result 3280

16.0 01/04/2016

Reporting Limit

ND

BS 400

100

True Value QC 400

Qualifier

Chloride, SM4500CI-B

Sample ID: 2 - 7' (H600008-03)

Analyzed By: AP

Analyte

Result 1280 Reporting Limit 16.0

Reporting Limit

16.0

Analyzed 01/04/2016 Method Blank ND

ND

BS 400 % Recovery

100

True Value QC

RPD

Qualifier

Sample ID: 2 - 8' (H600008-04)

Analyte

Chloride, SM4500Cl-B

mg/kg

mg/kg

Analyzed By: AP

400

3.92

Result

1960

Analyzed 01/04/2016 Method Blank

BS 400 % Recovery 100

True Value QC 400

RPD 3.92 Qualifier

Cardinal Laboratories

*=Accredited Analyte

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Celleg & treens

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

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

Fax To:

(505) 748-4635

Received:

01/04/2016

Sampling Date:

12/07/2015

Reported:

Chloride

01/05/2016

Sampling Type:

Soil

400

3.92

Project Name:

LOVING AIB STATE #2

Sampling Condition:

100

** (See Notes)

Project Number:

2RP-2570

2400

16.0

Sample Received By:

400

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: 2 - 9' (H600008-05)

Chloride, SM4500CI-B	mg/kg	Analyzed By: AP			
Analyte	Result Reporting Li	mit Analyzed Method Blank	BS % Recovery	True Value QC	RPD Qualifier
Chloride	2560 16.0	01/04/2016 ND	400 100	400	3.92
Sample ID: 2 - 10' (H600	008-06)				
Chloride, SM4500CI-B	mg/kg	Analyzed By: AP			
Analyte	Result Reporting Li	mit Analyzed Method Blank	BS % Recovery	True Value QC	RPD Qualifier

ND

01/04/2016

Cardinal Laboratories

*=Accredited Analyte

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Celeg D. Keens



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.

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

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

Cardinal Laboratories *=Accredited Analyte

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Celeg D. Keene

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ined by:	(Griffon 1/4	Chlorides only.				2-10'		2-8'				FIELD CODE	ER#: HLODOOD 8	Sampler Signature: () mubu.	Telephone No: 575-748-4111	City/State/Zip: Artesia, NM 88210	Company Address: 105 South 4th Street	Company Name Yates Petroleum Corporation	Project Manager: Amber Griffin	ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240
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Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 04, 2016

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

FAX

RE: Loving AIB State #2 OrderNo.: 1602B45

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 4 sample(s) on 2/26/2016 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

Analytical Report

Lab Order: 1602B45

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 3/4/2016

CLIENT: Yates Petroleum Corporation Lab Order: 1602B45 Project: Loving AIB State #2 Lab ID: 1602B45-001 Collection Date: 2/24/2016 10:53:00 AM Client Sample ID: 2-12' Matrix: SOIL Analyses Result PQL Qual Units **DF** Date Analyzed **Batch ID EPA METHOD 300.0: ANIONS** Analyst: JRR Chloride 2100 75 mg/Kg 50 3/4/2016 10:56:41 AM 24065 Lab ID: 1602B45-002 Collection Date: 2/24/2016 10:59:00 AM Client Sample ID: 2-14' Matrix: SOIL Analyses Result **PQL Qual Units DF** Date Analyzed **Batch ID EPA METHOD 300.0: ANIONS** Analyst: JRR Chloride 1900 75 mg/Kg 3/4/2016 11:09:05 AM 24083 Lab ID: 1602B45-003 Collection Date: 2/24/2016 11:04:00 AM Client Sample ID: 2-16' Matrix: SOIL Analyses Result PQL Qual Units **DF** Date Analyzed **Batch ID EPA METHOD 300.0: ANIONS** Analyst: JRR 1200 Chloride 30 mg/Kg 20 3/3/2016 9:02:19 PM 24083 Lab ID: 1602B45-004 Collection Date: 2/24/2016 11:09:00 AM Client Sample ID: 2-18' Matrix: SOIL Analyses Result **PQL Qual Units DF** Date Analyzed **Batch ID EPA METHOD 300.0: ANIONS** Analyst: JRR Chloride 340 30 mg/Kg 3/3/2016 9:14:43 PM 24083

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 2
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1602B45

04-Mar-16

Client:

Yates Petroleum Corporation

Project:

Loving AIB State #2

Sample ID MB-24065

SampType: mblk

Result

Client ID:

PBS

Batch ID: 24065

RunNo: 32563

TestCode: EPA Method 300.0: Anions

Prep Date:

3/3/2016

Analysis Date: 3/3/2016

PQL

SeqNo: 996302

Units: mg/Kg HighLimit

%RPD **RPDLimit**

Qual

Analyte Chloride

ND 1.5

Sample ID LCS-24065 LCSS

SampType: Ics Batch ID: 24065

TestCode: EPA Method 300.0: Anions

RunNo: 32563 SeqNo: 996303

95.0

Units: mg/Kg

Analyte Chloride

Client ID:

Prep Date: 3/3/2016 Analysis Date: 3/3/2016 Result PQL

15.00

SPK value SPK Ref Val %REC

SPK value SPK Ref Val %REC LowLimit

LowLimit

HighLimit 90 110 %RPD **RPDLimit**

Qual

Sample ID MB-24083

Prep Date:

Client ID: PBS

3/3/2016

SampType: mblk

14

RunNo: 32563

TestCode: EPA Method 300.0: Anions

Units: mg/Kg

Analyte

Result

Batch ID: 24083 Analysis Date: 3/3/2016

1.5

SPK value SPK Ref Val %REC LowLimit

SeqNo: 996348

HighLimit

%RPD **RPDLimit**

Chloride

ND

Result

14

PQL 1.5

Qual

Sample ID LCS-24083 LCSS

SampType: Ics

TestCode: EPA Method 300.0: Anions

RunNo: 32563 SeqNo: 996349

Units: mg/Kg

%RPD

RPDLimit Qual

Analyte Chloride

Client ID:

Prep Date:

3/3/2016

Batch ID: 24083 Analysis Date: 3/3/2016

PQL

1.5

15.00

SPK value SPK Ref Val

0

%REC 93.5

LowLimit 90

HighLimit 110

Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Holding times for preparation or analysis exceeded Η

ND Not Detected at the Reporting Limit

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

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 Albuquorque, NM 87109

TEL: 505-345-3575 FAX: 505-345-4107 Website: www.hallenviroamental.com

Sample Log-In Check List

Client Name	Yates Petroleum Corpora	Work Order Number	: 16028	45		ReptNo	1
Received by/date	e: A	02/24/11	ρ				
Logged By	Ashley Gallegos	/ 2/26/2016 8:55:00 AN	1		Az		
Completed By:	Ashley Gallegos	2/26/2016 3;12:59 PN	1		1		
Reviewed By:	1	02/2/16			- , 0		
	tody	05/54/10					
Chain of Cus			Yes	AT - 100 - 1	No 🗍	Not Present 🗸	
53 **** ** **** ** ****	als intact on sample bottles?		Yes	J	No 🗍	Not Present	
	Custody complete?		Cour				
3, How was the	s sample delivered?		V.//	CII			
Log In							
4. Was an atte	empt made to cool the sample	es?	Yes	v	No	NA	
5. We/e all sar	mples received at a temperati	ure of >0° C to 6.0°C	Yes	Z	No L	NA 🗌	
6. Sample(s) i	in proper container(s)?		Yes	•	No 🗍		
7. Sufficient sa	ample volume for indicated te	s:(s)?	Yes	~	No 🗆		
8. Are samples	s (except VOA and ONG) pro	perly preserved?	Yes	V	No 🗀		
	vative added to bottles?		Yes		No 🗸	NA	
10. VOA vials h	ave zero headspace?		Yes		No 📋	No VOA Vials 🗸	
11, Were any s	sample containers received br	oken?	Yes	An other or	No 🗸	41-6	
					5 40	# of preserved bottles checked	
7) 7),	work match boltle labels?		Yes	~	No L	for pH: (<)	2 or >12 unless noted)
	epancies on chain of custody) is correctly identified on Chair		Yes	V	No 🗔	Adjusted?	•
	hat analyses were requested		Yes	1	No 🗆		
15. Were all ho	ilding times able to be met? customer for authorization.)		Yes	Y	No 🗆	Checked by	
Special Hand	dling (if applicable)						
	notified of all discrepancies w	ith this order?	Yes	-	No 🗌	NA V	1
Perso	on Notified:	na (aprilia) distribution (aprilia) distribut	<u> </u>		and the plants of the transfer make the make the second and the se	e e	
	thom:	via.	eM	ail 💮	Phone Fax	(] In Person	
	ording:		urijeno rijagi izac orusko		And		
Clien	t Instructions	destruction of contents (and content for specific field (and the following transfer of the specific medium and		the same of the sa	Gallati (ARCC) (CHOCKET FOR EAST SHROW MARKAGE LANG	ericone malare essara esculue e actividad (consultation) conscional (MALSA) (con SC) (PV 200 M	
17. Additional	remarks						
18. Cooler In	formation						
Ccolor	A CONTRACTOR OF THE PROPERTY O	Seal Intact Seal No	Seal D	ate	Signed By	and the second s	
1	3.2 Good	Yes					

TAL	FORY					ALL SOUTH	Name at complete	(1)	110	٧)	Air Bubbles	orangument .	and the second s	030				**************************************
HALL ENVIRONMENTAL	ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	2111	7OS	IQ\asé	1) 1) (I)	814 910 94 91 81 81 81 81	bobis Post po Post post Post post post post Post post post post Post post post post post post post Post post post post post post post post p	HTEX + METO Methologine B310 (Methologine RORA 8 Metons (P.C ROB (VO. B260B (VO.	×	×	×	×		ks: Chlorides only.	Cafe Time
To the second street		BIEX + MTBE + TPH (636 opt)											C8	3	<u>ー</u>		Time Remarks:	0
Turn-Around Time:	X Standard Rush	Project Name:	Loving AIB State #2	Project #:	2RP-2570	Project Manager.	Amber Griffin PO# 205-2020	Sampler: Amber Griffin	X Yes	emperature: 3,7	Preservativ HEAL No. e Type	8-	200-	0-	8- 1		Date Time (1) 03/26/19 08:	Cafe Time
										Sample Temper	Container P	1 - 402.	1 - 40z.	1 · 4oz.	1 - 402.		Received by:	Received by:
Chain-of-Custody Record	Olient: Yates Petroleum Corporation		Mailing Address:	105 South 4th Street Artesia, NM 88210	575-513-8799 or 575-748-4111	acannon@yatespetroleum.com	Level 4 (Full Validation)				Sample Request ID	2-12	2-14'	2-16	2 - 18		Relinquished by:	Time: Relinquished by: Received by
						acannon(c	_		□ Other		Mairix						Relinquished by Relinquished by:	Relinquished by:
						ax#:	ckago: rd	, uo	tion:	(ype)	T T	10:53 Soil	10:59 Soil	11:04 Soil	11:09 Soil		Time:	Time:
					Phone #:	email or Fax#:	QAVQC Package:		□ NELAP	□ EDD (Type)		2/24/2016	2/24/2016	2/24/2016	2/24/2016		Date:	Date:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited aboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report