



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

June 28, 2016

Amber Griffin

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

RE: Satchmo SWD State 1

OrderNo.: 1606A45

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/17/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order: 1606A45

Date Reported: 6/28/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation
Project: Satchmo SWD State 1

Lab Order: 1606A45

Lab ID: 1606A45-001

Collection Date: 6/15/2016 9:18:00 AM

Client Sample ID: Pad 2-1'

Matrix: SOIL

Analyses Result PQL Qual Units DF Date Analyzed Batch ID

EPA METHOD 300.0: ANIONS

Analyst: MRA

Chloride 640 30 mg/Kg 20 6/22/2016 1:18:26 AM 25980

Lab ID: 1606A45-002

Collection Date: 6/15/2016 8:54:00 AM

Client Sample ID: Pad 3-1'

Matrix: SOIL

Analyses Result PQL Qual Units DF Date Analyzed Batch ID

EPA METHOD 300.0: ANIONS

Analyst: MRA

Chloride 120 30 mg/Kg 20 6/22/2016 1:55:39 AM 25980

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

Table with 2 columns: Qualifiers and descriptions. Includes codes like *, D, H, ND, R, S, B, E, J, P, RL, W and their corresponding meanings.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606A45

28-Jun-16

Client: Yates Petroleum Corporation

Project: Satchmo SWD State 1

Sample ID	MB-25980	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	25980	RunNo:	35076					
Prep Date:	6/21/2016	Analysis Date:	6/22/2016	SeqNo:	1084819	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-25980	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	25980	RunNo:	35076					
Prep Date:	6/21/2016	Analysis Date:	6/22/2016	SeqNo:	1084820	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.4	90	110			

Sample ID	MB-25980	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	25980	RunNo:	35049					
Prep Date:	6/21/2016	Analysis Date:	6/22/2016	SeqNo:	1085079	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-25980	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	25980	RunNo:	35049					
Prep Date:	6/21/2016	Analysis Date:	6/22/2016	SeqNo:	1085080	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

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



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Sample Log-In Check List

Client Name: Yates Petroleum Corporat

Work Order Number: 1606A45

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

06/17/16
6/17/2016 9:40:00 AM

Completed By: Lindsay Mangin

6/20/2016 5:44:05 AM

Reviewed By:

06/20/16

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			

Chain-of-Custody Record

Client: Yates Petroleum Corporation

Turn-Around Time:

Standard Rush

Project Name:

Satchmo SWD State #1

Project #:

6/3/2016 Release

Project Manager:

Amber Griffin
PO # 205-2020

Sampler:

Amber Griffin *AG*

On Ice: Yes No

Sample Temperature: 2.3

Standard Level 4 (Full Validation) Other

Accreditation: NELAP Other

QC Package: Level 4 (Full Validation) Other

Standard: Level 4 (Full Validation) Other

Accreditation: NELAP Other

QC Package: Level 4 (Full Validation) Other

Standard: Level 4 (Full Validation) Other

Accreditation: NELAP Other

QC Package: Level 4 (Full Validation) Other

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Standard: Level 4 (Full Validation) Other

Accreditation: NELAP Other

QC Package: Level 4 (Full Validation) Other

Standard: Level 4 (Full Validation) Other

Accreditation: NELAP Other

QC Package: Level 4 (Full Validation) Other

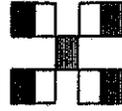
Standard: Level 4 (Full Validation) Other

Accreditation: NELAP Other

QC Package: Level 4 (Full Validation) Other

Standard: Level 4 (Full Validation) Other

Accreditation: NELAP Other



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Analysis Request	TPH Method 418.1	EDB (Method 504.1)	3310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
BTEX + MTBE + TPH (Gas only)	X								
BTEX + MTBE + TMB's (8021)	X								
TPH Method 8015B (Gas/Diesel)	X								
TPH (Method 418.1)									
EDB (Method 504.1)									
3310 (PNA or PAH)									
RCRA 8 Metals					X				
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)					X				
8081 Pesticides / 8082 PCB's									
8260B (VOA)									
8270 (Semi-VOA)									
Air Bubbles (Y or N)									

Remarks: TPH: 8015B, BTEX: 8021B. Please show BTEX results as mg/kg. Anions: Chloride only, please show on a separate report.

Received by: *Amber Griffin* Date: 06/17/16 Time: 0940

Relinquished by: *Amber Griffin* Date: Relinquished by: Time:

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.