



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

December 16, 2016

Chase Settle

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

RE: Spunky BUK State Com #1-H

OrderNo.: 1612564

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/10/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612564

Date Reported: 12/16/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: Stockpile - 3-6"

Project: Spunky BUK State Com #1-H

Collection Date: 12/1/2016 8:30:00 AM

Lab ID: 1612564-001

Matrix: SOIL

Received Date: 12/10/2016 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	750	10		mg/Kg	1	12/14/2016 4:19:41 PM	29146
Surr: DNOP	92.2	70-130		%Rec	1	12/14/2016 4:19:41 PM	29146
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/13/2016 3:41:01 PM	29139
Surr: BFB	87.3	68.3-144		%Rec	1	12/13/2016 3:41:01 PM	29139

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612564

16-Dec-16

Client: Yates Petroleum Corporation
Project: Spunky BUK State Com #1-H

Sample ID MB-29146	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 29146		RunNo: 39372							
Prep Date: 12/13/2016	Analysis Date: 12/14/2016		SeqNo: 1233445		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.4		10.00		84.1	70	130			

Sample ID LCS-29146	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 29146		RunNo: 39372							
Prep Date: 12/13/2016	Analysis Date: 12/14/2016		SeqNo: 1233446		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.7	63.8	116			
Surr: DNOP	4.2		5.000		84.3	70	130			

Sample ID LCS-29181	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 29181		RunNo: 39405							
Prep Date: 12/14/2016	Analysis Date: 12/15/2016		SeqNo: 1234480		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.2		5.000		84.5	70	130			

Sample ID MB-29181	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 29181		RunNo: 39405							
Prep Date: 12/14/2016	Analysis Date: 12/15/2016		SeqNo: 1234481		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.9		10.00		78.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612564

16-Dec-16

Client: Yates Petroleum Corporation
Project: Spunky BUK State Com #1-H

Sample ID MB-29139	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 29139		RunNo: 39349							
Prep Date: 12/12/2016	Analysis Date: 12/13/2016		SeqNo: 1231993		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		87.8	68.3	144			

Sample ID LCS-29139	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 29139		RunNo: 39349							
Prep Date: 12/12/2016	Analysis Date: 12/13/2016		SeqNo: 1231994		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	116	74.6	123			
Surr: BFB	1200		1000		117	68.3	144			

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: EOG/Yates

Work Order Number: 1612564

RcptNo: 1

Received by/date: LM 12/10/16

Logged By: Andy Jansson 12/10/2016 10:00:00 AM *only/10/16*

Completed By: Andy Jansson 12/12/16

Reviewed By: JC 12/12/16

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: EOG Y Resources, Inc.

Mailing Address:

105 South 4th Street Artesia, NM 88210

Phone #: 575-703-6537

email or Fax#: Chase Settle@eogresources.com

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation:

NELAP Other

EDD (Type)

Turn-Around Time:

Standard Rush

Project Name:

Spunky BUK State Com #1-H

Project #:

30-015-42304

Project Manager:

Chase Settle

PO # 205. 0750

Sampler: Chase Settle

On Ice: Yes No

Sample Temperature: 2.3

Container Type and #

Preservative Type

HEAL No. 1612564

1 - 4oz.

ICE

HEAL No. -001

Date Time Matrix Sample Request ID

12/1/2016 8:30A Soil Stockpile- 3-6"

Date: 12-8-16 3:00pm

Relinquished by: [Signature]

Date: 12/1/2016

Relinquished by: [Signature]

Received by: [Signature]

Date: 12/1/2016

Time: 1000

Received by: [Signature]

Date

Time

Date

Time

BTEX + MTBE + TMB's (8021)

BTEX + MTBE + TPH (Gas only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

8310 (PNA or PAH)

RCRA 8 Metals

Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

8081 Pesticides / 8082 PCB's

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)

Analysis Request

Remarks: Please take note of the email address change. Need analytical results no later than December 16, 2016.

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.