

MARTIN YATES, III
1912-1985

FRANK W. YATES
1936-1986

S.P. YATES
1914-2008



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210-2118

TELEPHONE (575) 748-1471

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JOHN A. YATES
CHAIRMAN EMERITUS

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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,

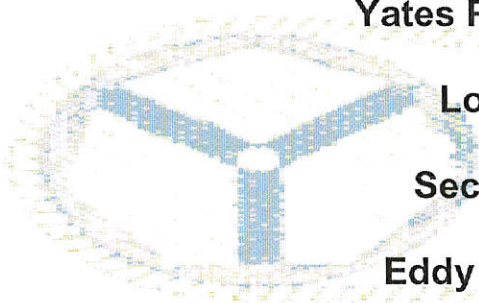
Yates Petroleum Corporation would like to submit the following plan of work to you regarding the release that occurred at the above mentioned facility on October 24, 2014 (2RP-2570). The release was 8 barrels of produced water and 7 barrels of crude oil with 7 barrels of produced water and 6 barrels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

| | Sample Area | Sample Date | Analytical Report | Sample Type | Depth | BTEX | GRO | DRO | TOTAL | Chlorides |
|-------------|--------------|-------------|-------------------|--------------|---------|------|-----|-----|-------|-----------|
| 1 - Surface | Release area | 7/15/2015 | 1507793 | Grab/Auger | Surface | ND | ND | ND | ND | 10,000 |
| 1 - 1' | Release area | 7/15/2015 | 1507793 | Grab/Auger | 1' | ND | ND | ND | ND | 9,900 |
| 1 - 2' | Release area | 7/15/2015 | 1507D94 | Grab/Auger | 2' | - | - | - | - | 6,100 |
| 1 - 3' | Release area | 12/7/2015 | 1512600 | Grab/Backhoe | 3' | - | - | - | - | 1,100 |
| 1 - 4' | Release area | 12/7/2015 | 1512600 | Grab/Backhoe | 4' | - | - | - | - | 840 |
| 1 - 5' | Release area | 12/7/2015 | H600009 | Grab/Backhoe | 5' | - | - | - | - | 512 |
| 1 - 6' | Release area | 12/7/2015 | H600009 | Grab/Backhoe | 6' | - | - | - | - | 432 |
| 1 - 7' | Release area | 12/7/2015 | H600009 | Grab/Backhoe | 7' | - | - | - | - | 432 |
| 1 - 8' | Release area | 12/7/2015 | H600009 | Grab/Backhoe | 8' | - | - | - | - | 288 |
| 2 - Surface | Release area | 7/15/2015 | 1507793 | Grab/Auger | Surface | ND | ND | ND | ND | 7,600 |
| 2 - 1' | Release area | 7/15/2015 | 1507793 | Grab/Auger | 1' | ND | ND | ND | ND | 7,800 |
| 2 - 2' | Release area | 7/15/2015 | 1507D94 | Grab/Auger | 2' | - | - | - | - | 8,200 |
| 2 - 3' | Release area | 12/7/2015 | 1512600 | Grab/Backhoe | 3' | - | - | - | - | 2,400 |
| 2 - 4' | Release area | 12/7/2015 | 1512600 | Grab/Backhoe | 4' | - | - | - | - | 4,100 |
| 2 - 5' | Release area | 12/7/2015 | H600008 | Grab/Backhoe | 5' | - | - | - | - | 6,000 |
| 2 - 6' | Release area | 12/7/2015 | H600008 | Grab/Backhoe | 6' | - | - | - | - | 3,280 |
| 2 - 7' | Release area | 12/7/2015 | H600008 | Grab/Backhoe | 7' | - | - | - | - | 1,280 |
| 2 - 8' | Release area | 12/7/2015 | H600008 | Grab/Backhoe | 8' | - | - | - | - | 1,960 |
| 2 - 9' | Release area | 12/7/2015 | H600008 | Grab/Backhoe | 9' | - | - | - | - | 2,560 |
| 2 - 10' | Release area | 12/7/2015 | H600008 | Grab/Backhoe | 10' | - | - | - | - | 2,400 |
| 2 - 12' | Release area | 2/24/2016 | 1602B45 | Grab/Backhoe | 12' | - | - | - | - | 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' | - | - | - | - | 1,200 |
| 2 - 18' | Release area | 2/24/2016 | 1602B45 | Grab/Backhoe | 18' | - | - | - | - | 340 |

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 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 horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1507793

Date Reported: 7/24/2015

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 | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 7/22/2015 11:45:40 AM | 20309 |
| Surr: DNOP | 106 | 57.9-140 | | %REC | 1 | 7/22/2015 11:45:40 AM | 20309 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: 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 | | | | | | | Analyst: 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. | B | Analyte detected in the associated Method Blank | Page 1 of 7 |
| | 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 | |
| | O | RSD is greater than RSDlimit | P | Sample pH Not In Range | |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | Spike Recovery outside accepted recovery limits | | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1507793

Date Reported: 7/24/2015

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 | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | 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 RANGE | | | | | | | Analyst: 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 | | | | | | | Analyst: 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. | B | Analyte detected in the associated Method Blank | Page 2 of 7 |
| | 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 | |
| | O | RSD is greater than RSDlimit | P | Sample pH Not In Range | |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | Spike Recovery outside accepted recovery limits | | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1507793

Date Reported: 7/24/2015

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 | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | 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 RANGE | | | | | | | 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. | B | Analyte detected in the associated Method Blank |
| | 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 |
| | O | RSD is greater than RSDlimit | P | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | Spike Recovery outside accepted recovery limits | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1507793

Date Reported: 7/24/2015

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 | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: 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 RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 7/20/2015 10:20:42 PM | 20306 |
| Surr: BFB | 89.8 | 75.4-113 | | %REC | 1 | 7/20/2015 10:20:42 PM | 20306 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.049 | | mg/Kg | 1 | 7/20/2015 10:20:42 PM | 20306 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 7/20/2015 10:20:42 PM | 20306 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 7/20/2015 10:20:42 PM | 20306 |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 7/20/2015 10:20:42 PM | 20306 |
| Surr: 4-Bromofluorobenzene | 94.7 | 80-120 | | %REC | 1 | 7/20/2015 10:20:42 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. | B | Analyte detected in the associated Method Blank |
| | 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 |
| | O | RSD is greater than RSDlimit | P | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | Spike Recovery outside accepted recovery limits | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507793

24-Jul-15

Client: Yates Petroleum
Project: Loving AIB State #2

| | | | | | | | | | | |
|-----------------------------|-----------|----------------|-----------|-------------|---|----------|-----------|------|----------|------|
| 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 | SampType: | LCS | TestCode: | EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | LCSS | Batch ID: | 20378 | RunNo: | 27701 | | | | | |
| Prep Date: | 7/22/2015 | Analysis Date: | 7/23/2015 | SeqNo: | 833320 | Units: | %REC | | | |
| 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

QC SUMMARY REPORT

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 | | | | | |
| Prep Date: | 7/17/2015 | Analysis Date: | 7/20/2015 | SeqNo: | 829377 | 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 | 910 | | 1000 | | 90.7 | 75.4 | 113 | | | |

| | | | | | | | | | | |
|-------------------------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-20306 | SampType: | LCS | TestCode: | EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | LCSS | Batch ID: | 20306 | RunNo: | 27604 | | | | | |
| Prep Date: | 7/17/2015 | Analysis Date: | 7/20/2015 | SeqNo: | 829378 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24 | 5.0 | 25.00 | 0 | 97.1 | 79.6 | 122 | | | |
| Surr: BFB | 980 | | 1000 | | 98.1 | 75.4 | 113 | | | |

| | | | | | | | | | | |
|------------|-----------|----------------|-----------|-------------|-----------|----------------------------------|-----------|------|----------|------|
| Sample ID | MB-20308 | SampType: | MBLK | | TestCode: | EPA Method 8015D: Gasoline Range | | | | |
| Client ID: | PBS | Batch ID: | 20308 | | RunNo: | 27604 | | | | |
| Prep Date: | 7/17/2015 | Analysis Date: | 7/20/2015 | | SeqNo: | 829387 | Units: | %REC | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 900 | | 1000 | | 90.4 | 75.4 | 113 | | | |

| | | | | | | | | | | |
|------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-20308 | SampType: | LCS | TestCode: | EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | LCSS | Batch ID: | 20308 | RunNo: | 27604 | | | | | |
| Prep Date: | 7/17/2015 | Analysis Date: | 7/20/2015 | SeqNo: | 829388 | Units: | %REC | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 990 | | 1000 | | 98.5 | 75.4 | 113 | | | |

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

QC SUMMARY REPORT

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 8021B: Volatiles | | | | | |
| Client ID: | PBS | Batch ID: | 20306 | RunNo: | 27604 | | | | | |
| Prep Date: | 7/17/2015 | Analysis Date: | 7/20/2015 | SeqNo: | 829405 | 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 | 0.97 | | 1.000 | | 96.9 | 80 | 120 | | | |

| | | | | | | | | | | |
|------------|-----------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-20306 | SampType: | LCS | TestCode: | EPA Method 8021B: Volatiles | | | | | |
| Client ID: | LCSS | Batch ID: | 20306 | RunNo: | 27604 | | | | | |
| Prep Date: | 7/17/2015 | Analysis Date: | 7/20/2015 | SeqNo: | 829406 | Units: | mg/Kg | | | |
| 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 | 124 | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 107 | 80 | 120 | | | |

| | | | | | | | | | | |
|------------|-----------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID | MB-20308 | SampType: | MBLK | TestCode: | EPA Method 8021B: Volatiles | | | | | |
| Client ID: | PBS | Batch ID: | 20308 | RunNo: | 27604 | | | | | |
| Prep Date: | 7/17/2015 | Analysis Date: | 7/20/2015 | SeqNo: | 829414 | Units: | %REC | | | |
| 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 | SampType: | LCS | TestCode: | EPA Method 8021B: Volatiles | | | | | |
| Client ID: | LCSS | Batch ID: | 20308 | RunNo: | 27604 | | | | | |
| Prep Date: | 7/17/2015 | Analysis Date: | 7/20/2015 | SeqNo: | 829419 | Units: | %REC | | | |
| 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. | B Analyte detected in the associated Method Blank |
| 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 |
| O RSD is greater than RSDlimit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

Sample Log-In Check List

Client Name: Yates Petroleum Corpora

Work Order Number: 1507793

ReptNo: 1

Received by/date: CS 07/17/15

Logged By: Celina Sessa 7/17/2015 10:00:00 AM

Completed By: Celina Sessa 7/17/2015 11:30:00 AM

Reviewed By IO 07/17/15

Celina Sessa

Celina Sessa

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 $>0^{\circ}\text{C}$ 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 $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.0 | Good | Yes | | | |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

| | | | | | | |
|---------|-------|------------------|--------------|----------|------|--|
| Date: | Time: | Relinquished by: | Received by: | Date | Time | Remarks: TPH: 8015B, BTEX: 8021B. Please show BTEX results as mg/kg. Please put chloride results on a separate report. |
| 7/16/15 | | Amber Griffin | Nellie Jones | 07/17/15 | 1000 | |
| Date: | Time: | Relinquished by: | Received by: | Date | 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.



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 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 horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

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 | Qual | Units | DF | Date Analyzed | Batch |
|---------------------------------|--------|-----|------|-------|-----|----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: LGT |
| Chloride | 10000 | 750 | | mg/Kg | 500 | 7/23/2015 4:10:27 PM | 20356 |

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 | Page 1 of 4 |
| | 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 | |
| | O | RSD is greater than RSDlimit | P | Sample pH Not In Range | |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | Spike Recovery outside accepted recovery limits | | | |

Analytical Report

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 | Qual | Units | DF | Date Analyzed | Batch |
|---------------------------------|--------|-----|------|-------|-----|----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: LGT |
| Chloride | 9900 | 300 | | mg/Kg | 200 | 7/23/2015 4:22:51 PM | 20356 |

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 | Page 2 of 4 |
| | 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 | |
| | O | RSD is greater than RSDlimit | P | Sample pH Not In Range | |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | Spike Recovery outside accepted recovery limits | | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1507793

Date Reported: 7/24/2015

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 | Qual | Units | DF | Date Analyzed | Batch |
|---------------------------------|--------|-----|------|-------|-----|----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: LGT |
| Chloride | 7600 | 300 | | mg/Kg | 200 | 7/23/2015 4:35:16 PM | 20356 |

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 | Page 3 of 4 |
| | 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 | |
| | O | RSD is greater than RSDlimit | P | Sample pH Not In Range | |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | Spike Recovery outside accepted recovery limits | | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1507793

Date Reported: 7/24/2015

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 | Qual | Units | DF | Date Analyzed | Batch |
|---------------------------------|--------|-----|------|-------|-----|----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: LGT |
| Chloride | 7800 | 300 | | mg/Kg | 200 | 7/23/2015 4:47:40 PM | 20356 |

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 | Page 4 of 4 |
| | 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 | |
| | O | RSD is greater than RSDlimit | P | Sample pH Not In Range | |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | Spike Recovery outside accepted recovery limits | | | |

Sample Log-In Check List

Client Name: Yates Petroleum Corpora

Work Order Number: 1507793

RcptNo: 1

Received by/date: CS 07/17/15

Logged By: Celina Sessa 7/17/2015 10:00:00 AM

Completed By: Celina Sessa 7/17/2015 11:30:00 AM

Reviewed By: IO 07/17/15

Celina Sessa

Celina Sessa

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 $>0^{\circ}\text{C}$ 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 $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.0 | Good | Yes | | | |



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

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

OrderNo.: 1507D94

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 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 horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1507D94

Date Reported: 8/7/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Yates Petroleum Corporation**Client Sample ID:** Loving 1-2'**Project:** Loving AIB State #2**Collection Date:** 7/15/2015 11:45:00 AM**Lab ID:** 1507D94-001**Matrix:** SOIL**Received Date:** 7/31/2015 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---------------------------------|--------|-----|------|-------|-----|---------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: LGT |
| Chloride | 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. | B | Analyte detected in the associated Method Blank | Page 1 of 3 |
| | 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 | | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1507D94

Date Reported: 8/7/2015

CLIENT: Yates Petroleum Corporation

Client Sample ID: Loving 2-2'

Project: Loving AIB State #2

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

Lab ID: 1507D94-002

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------|--------|-----|------|-------|-----|---------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: LGT |
| Chloride | 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. | 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 | |

QC SUMMARY REPORT

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 | RunNo: | 27959 | | | | | |
| Prep Date: | 8/4/2015 | Analysis Date: | 8/4/2015 | SeqNo: | 841213 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| | | | | | | | | | | |
|------------|-----------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-20603 | SampType: | LCS | TestCode: | EPA Method 300.0: Anions | | | | | |
| Client ID: | LCSS | Batch ID: | 20603 | RunNo: | 27959 | | | | | |
| Prep Date: | 8/4/2015 | Analysis Date: | 8/4/2015 | SeqNo: | 841214 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 96.4 | 90 | 110 | | | |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit



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:

JA

07/31/15

Logged By: Lindsay Mangin

7/31/2015 8:00:00 AM

Completed By: Lindsay Mangin

7/31/2015 9:23:05 AM

Reviewed By:

CS

07/31/15

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 $>0^{\circ}\text{C}$ to 6.0°C ?

Yes ☒

No ☒

APPENDIX NA ☐

6. Sample(s) in proper container(s)?

Yes ☒

No ☐

NA ☐

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
bottles checked
for pH:

(<2 or >12 unless noted)

12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody)

Yes ☒

No ☐

Adjusted? _____

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 ☐

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 $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | -4.9 | Good | Not Present | | | |

www.hallenvironmental.com

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

Analysis Request

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

[illegible]

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.



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

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 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order: 1512600

Date Reported: 12/28/2015

Hall Environmental Analysis Laboratory, Inc.

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**Client Sample ID:** 1-3'**Matrix:** SOIL

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|----|------|-------|----|------------------------|----------|
| EPA METHOD 300.0: ANIONS | | | | | | | |
| Chloride | 1100 | 75 | | mg/Kg | 50 | 12/17/2015 11:54:55 AM | 22833 |

Analyst: LGT

Lab ID: 1512600-002**Collection Date:** 12/7/2015 12:02:00 PM**Client Sample ID:** 1-4'**Matrix:** SOIL

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|----|------|-------|----|-----------------------|----------|
| EPA METHOD 300.0: ANIONS | | | | | | | |
| Chloride | 840 | 30 | | mg/Kg | 20 | 12/16/2015 1:13:10 PM | 22833 |

Analyst: JRR

Lab ID: 1512600-003**Collection Date:** 12/7/2015 12:29:00 PM**Client Sample ID:** 2-3'**Matrix:** SOIL

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|----|------|-------|----|------------------------|----------|
| EPA METHOD 300.0: ANIONS | | | | | | | |
| Chloride | 2400 | 75 | | mg/Kg | 50 | 12/17/2015 12:07:19 PM | 22833 |

Analyst: LGT

Lab ID: 1512600-004**Collection Date:** 12/7/2015 12:32:00 PM**Client Sample ID:** 2-4'**Matrix:** SOIL

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|-----|------|-------|-----|------------------------|----------|
| EPA METHOD 300.0: ANIONS | | | | | | | |
| Chloride | 4100 | 150 | | mg/Kg | 100 | 12/17/2015 12:19:44 PM | 22833 |

Analyst: LGT

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 | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512600

28-Dec-15

Client: Yates Petroleum Corporation

Project: Loving AIB State #2

| | | | | | | | | | | |
|------------|------------|----------------|------------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID | MB-22833 | SampType: | MBLK | TestCode: | EPA Method 300.0: Anions | | | | | |
| Client ID: | PBS | Batch ID: | 22833 | RunNo: | 30906 | | | | | |
| Prep Date: | 12/16/2015 | Analysis Date: | 12/16/2015 | SeqNo: | 944921 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| | | | | | | | | | | |
|------------|------------|----------------|------------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-22833 | SampType: | LCS | TestCode: | EPA Method 300.0: Anions | | | | | |
| Client ID: | LCSS | Batch ID: | 22833 | RunNo: | 30906 | | | | | |
| Prep Date: | 12/16/2015 | Analysis Date: | 12/16/2015 | SeqNo: | 944922 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 92.8 | 90 | 110 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

Sample Log-In Check List

Client Name: Yates Petroleum Corporat

Work Order Number: 1512600

RcptNo: 1

Received by/date:

SA

12/11/15

Logged By: Lindsay Mangin

12/11/2015 9:40:00 AM

Completed By: Lindsay Mangin

12/14/2015 8:35:17 AM

Reviewed By:

JA

12/14/15

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?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

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?

Yes ☒

No ☐

(If no, notify customer for authorization.)

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 | | | |

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/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

| | |
|------------------|------------------------------|
| Method EPA 552.2 | Haloacetic Acids (HAA-5) |
| Method EPA 524.2 | Total Trihalomethanes (TTHM) |
| Method EPA 524.4 | Regulated VOCs (V1, V2, V3) |

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. 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
Reported: 01/05/2016
Project Name: LOVING AIB STATE #2
Project Number: 2RP-2570
Project Location: EDDY COUNTY, NM

Sampling Date: 12/07/2015
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

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

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 512 | 16.0 | 01/04/2016 | ND | 400 | 100 | 400 | 3.92 | |

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

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 432 | 16.0 | 01/04/2016 | ND | 400 | 100 | 400 | 3.92 | |

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

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 432 | 16.0 | 01/04/2016 | ND | 400 | 100 | 400 | 3.92 | |

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

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 288 | 16.0 | 01/04/2016 | ND | 400 | 100 | 400 | 3.92 | |

Cardinal Laboratories

*=Accredited Analyte

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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 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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Celey D. Keene, Lab Director/Quality Manager



Page 4 of 4

| | | | | | | |
|--|--|--------------|--|--------------|--------------|----------------|
| LAB # (lab use only) | | | | | | |
| FIELD CODE | | | | | | |
| Beginning Depth | | Ending Depth | | Date Sampled | Time Sampled | Field Filtered |
| Total #. of Containers | | | | | | |
| Ice | | | | | | |
| HNO ₃ | | | | | | |
| HCl | | | | | | |
| H ₂ SO ₄ | | | | | | |
| NaOH | | | | | | |
| Na ₂ S ₂ O ₃ | | | | | | |
| None | | | | | | |
| Other (Specify) | | | | | | |
| DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other | | | | | | |
| TPH: 418.1 8015M 8015F | | | | | | |
| TPH: TX 1005 TX 1006 | | | | | | |
| Cations (Ca, Mg, Na, K) | | | | | | |
| Anions (Cl, SO ₄ , Alkalinity) | | | | | | |
| SAR / ESP / CEC | | | | | | |
| Metals: As Ag Ba Cd Cr Pb Hg Se | | | | | | |
| Volatiles | | | | | | |
| Semivolatiles | | | | | | |
| BTEX 8021B/5030 or BTEX 8260 | | | | | | |
| RCI | | | | | | |
| N.O.R.M. | | | | | | |
| Chlorides | | | | | | |
| SAR | | | | | | |
| RUSH TAT (Pre-Schedule) 24, 48, 72 hrs | | | | | | |
| Standard TAT | | | | | | |

| | | |
|-------------------------------------|------|------|
| ORDER #: H100009 | | |
| Special Instructions: | | |
| Chlorides only. Thank you. | | |
| Relinquished by: | Date | Time |
| Relinquished by: | Date | Time |
| Relinquished by: | Date | Time |
| Received by: | Date | Time |
| Received by ELOT: | Date | Time |
| Laboratory Comments: | | |
| Sample Containers Intact? | | |
| VOCs Free of Headspace? | | |
| Labels on containers(s) | | |
| Custody seals on container(s) | | |
| Custody seals on cooler(s) | | |
| Sample Hand Delivered | | |
| by Sampler/Client Rep. ? | | |
| by Courier? UPS DHL FedEx Lone Star | | |
| Temperature Upon Receipt: 21.8 °C | | |

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/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

| | |
|------------------|------------------------------|
| Method EPA 552.2 | Haloacetic Acids (HAA-5) |
| Method EPA 524.2 | Total Trihalomethanes (TTHM) |
| Method EPA 524.4 | Regulated VOCs (V1, V2, V3) |

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. 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
Reported: 01/05/2016
Project Name: LOVING AIB STATE #2
Project Number: 2RP-2570
Project Location: EDDY COUNTY, NM

Sampling Date: 12/07/2015
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

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

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 6000 | 16.0 | 01/04/2016 | ND | 400 | 100 | 400 | 3.92 | | |

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

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 3280 | 16.0 | 01/04/2016 | ND | 400 | 100 | 400 | 3.92 | | |

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

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 1280 | 16.0 | 01/04/2016 | ND | 400 | 100 | 400 | 3.92 | | |

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

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 1960 | 16.0 | 01/04/2016 | ND | 400 | 100 | 400 | 3.92 | |

Cardinal Laboratories

*=Accredited Analyte

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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
Reported: 01/05/2016
Project Name: LOVING AIB STATE #2
Project Number: 2RP-2570
Project Location: EDDY COUNTY, NM

Sampling Date: 12/07/2015
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

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

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | 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' (H600008-06)

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 2400 | 16.0 | 01/04/2016 | ND | 400 | 100 | 400 | 3.92 | | |

Cardinal Laboratories

* = Accredited Analyte

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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 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: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Rusthi:

Project Manager: Amber Griffin

Company Name Yates Petroleum Corporation

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4111

Fax No: 575-748-4131

Report Format: ☒ Standard

Sampler Signature:

e-mail: agriffin@yatespetroleum.com

Project Name: Loving AIB State #2

Project #: 2RP-2570

Project Loc: Eddy County

PO #: 205-2020

Page 5 of 5

[illegible]



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 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 horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order: 1602B45

Date Reported: 3/4/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation
Project: Loving AIB State #2

Lab Order: 1602B45

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 | 50 | 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 |
| Chloride | 1200 | 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 | 20 | 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. | 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 | Page 1 of 2 |
| | 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#: 1602B45

04-Mar-16

Client: Yates Petroleum Corporation

Project: Loving AIB State #2

| | | | | | | | | | | |
|------------|----------|----------------|-----------|-------------|-----------|--------------------------|-----------|-------|----------|------|
| Sample ID | MB-24065 | SampType: | mblk | | TestCode: | EPA Method 300.0: Anions | | | | |
| Client ID: | PBS | Batch ID: | 24065 | | RunNo: | 32563 | | | | |
| Prep Date: | 3/3/2016 | Analysis Date: | 3/3/2016 | | SeqNo: | 996302 | Units: | mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| | | | | | | | | | | |
|------------|-----------|-----|-------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID | LCS-24065 | | SampType: lcs | | TestCode: EPA Method 300.0: Anions | | | | | |
| Client ID: | LCSS | | Batch ID: 24065 | | RunNo: 32563 | | | | | |
| Prep Date: | 3/3/2016 | | Analysis Date: 3/3/2016 | | SeqNo: 996303 | | 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 | | | |

| | | | | | | | | | | |
|------------|----------|----------------|-----------|-------------|-----------|--------------------------|-----------|-------|----------|------|
| Sample ID | MB-24083 | SampType: | mblk | | TestCode: | EPA Method 300.0: Anions | | | | |
| Client ID: | PBS | Batch ID: | 24083 | | RunNo: | 32563 | | | | |
| Prep Date: | 3/3/2016 | Analysis Date: | 3/3/2016 | | SeqNo: | 996348 | Units: | mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| | | | | | | | | | | |
|------------|-----------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-24083 | SampType: | lcs | TestCode: | EPA Method 300.0: Anions | | | | | |
| Client ID: | LCSS | Batch ID: | 24083 | RunNo: | 32563 | | | | | |
| Prep Date: | 3/3/2016 | Analysis Date: | 3/3/2016 | SeqNo: | 996349 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 93.5 | 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 |



Hall Environmental Analysis Laboratory
4991 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: 1602B45

ReptNo: 1

Received by/date:

Logged By: Ashley Gallegos

2/26/2016 8:55:00 AM

Completed By: Ashley Gallegos

2/26/2016 3:12:59 PM

Reviewed By:

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 $>0^{\circ}\text{C}$ 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 ☐ # of preserved bottles checked for pH: ☐ (<2 or >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?
(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:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks

18. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 3.2 | Good | Yes | | | |

