MARTIN YATES, III
1912-1985

FRANK W. YATES
1936-1986

S.P. YATES



### 105 SOUTH FOURTH STREET ARTESIA, NEW MEXICO 88210-2118

TELEPHONE (575) 748-1471

www.yatespetroleum.com

JOHN A. YATES

JOHN A. YATES JR.

DOUGLAS E. BROOKS
PRESIDENT
CHIEF EXECUTIVE OFFICER

JOHN D. PERINI EXECUTIVE VICE PRESIDENT CHIEF FINANCIAL DEFICER

JAMES S. BROWN CHIEF OPERATING OFFICER

January 22, 2016

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

RE:

Livingston Ridge SWD Water Line

Section 1, T22S-R31E Eddy County, New Mexico

Mr. Bratcher or Ms. Patterson,

Yates Petroleum Corporation would like to submit the attached plan of work to you regarding the release that occurred at the above mentioned facility on June 3, 2015 (2RP-3045).

With NMOCD and BLM 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 Regulatory Agent

Yates Petroleum Corporation

amber Griffin

Yates Petroleum Corporation
Livingston Ridge SWD Work Plan
Section 1, T22S-R31E
Eddy County, New Mexico

January 22, 2016

### I. Location

The release area is located approximately 31.1 miles east of Carlsbad, NM on Highway 62/180, approximately 9 miles south of Highway 62/180 on Campbell Road (County Road 29) and approximately 1/2 mile west of Campbell Road (County Road 29) on a lease road.

### II. Background

On June 3, 2015, Yates had a release of 140 barrels produced water and 5 barrels crude oil, with 125 barrels produced water and 5 barrels crude oil recovered. The area affected from this release was along the pipeline right-of-way for a Yates water transfer line that transports produced water to salt water disposal facilities in the area. An initial Form C-141 was submitted, via e-mail, to the NMOCD District II on June 12, 2015.

On June 11, 2015 an initial scrape was completed of the pooling area of the release, and the overspray area was treated with a 3% Micro-Blaze solution.

On June 15, 2015 Yates returned to the release area and collected initial soil samples from the depths of 1' – 13' below surface level using a backhoe. The release area was split into three separate sections for the initial sampling process. The 1' – 3' soil samples were sent to an approved NMOCD laboratory and tested for BTEX 8021B, TPH 8015M, and Chlorides SM4500Cl-B. The 4' – 13' soil samples were sent to the same laboratory and tested only for Chlorides SM4500Cl-B. Yates received the analytical results on June 22 & 23, 2015 (Reports H501577 and H501579 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 within the release area.

The release area contains mostly sandy soils and these soils would collapse while digging with heavy equipment. The collapsing of soils created personnel safety issues and made it impossible to obtain discrete samples from deeper depths. As a result, it was determined that a hollow stem auger core rig would be needed to complete further vertical delineation within the release area.

On November 9, 2015 Yates contacted a company with a hollow stem auger core rig to conduct further vertical delineation of the release area. The hollow stem auger was scheduled for December 16-17, 2015 and complete vertical delineation of chlorides was completed. Soil samples obtained with the hollow stem auger were sent to an approved NMOCD laboratory and tested for Chlorides 300.0. Yates received the analytical results on January 6, 2016 (Report 1512A77 attached to this work plan). The analytical results showed that Yates had successfully found the bottom of the chloride contamination.

### 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 125 feet making the site ranking for this site a zero (0). Watercourses in the area are dry except for infrequent flows in response to major precipitation events.

The ranking for this site is zero (0) based on the following:

Depth to ground water >100' Wellhead Protection Area > 1000' Distance to surface water body > 1000'

### IV. Soils

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

### V. Scope of Work

Based off the analytical reports which show complete vertical delineation, Yates proposes to excavate four (4) feet from the release area. The excavation will be approximately 133' long, 92' wide. Once all soils have been excavated, a 20 mil synthetic liner will be placed in the bottom of the excavation. The backfill of the excavation will then be started with caliche (up to 2' below surface level) and finished with 2' of top soil or sand.

Contaminated soils that are excavated will be hauled to a NMOCD approved disposal facility, The Lea Land, Inc. Landfill.

Soil samples have been collected from the overspray area of the release and sent to an approved NMOCD laboratory. The collected soil was tested in the field using Hach Chloride QuanTab® Test Strips, 30-600 mg/L with a result of less than 1,000 ppm. If official laboratory results confirm these results, no further work will be conducted in the overspray area of the release. The official results will be forwarded to NMOCD and BLM once Yates receives them from the laboratory.

The backfill material for the excavation will be purchased from the nearest BLM pit.

Once all excavation and backfill work is complete, Yates will submit a Final Form C-141 to NMOCD and BLM requesting closure of this release.

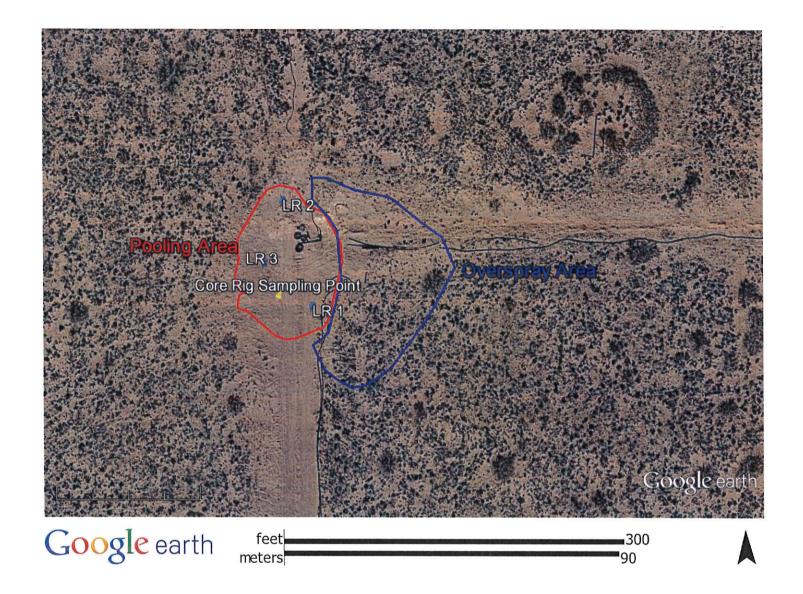
In April 2016 the release area will be re-seeded with the BLM Seed Mixture #2. The area will then be monitored for the re-establishment of vegetation.



Google earth

miles 1 2

A



# Livingston Ridge SWD Water Line

| Grab/Backhoe<br>Grab/Backhoe |
|------------------------------|
| Grab/Backhoe                 |

Site Ranking is ZERO (0). Depth to Ground Water >100' (150' PER TREND MAP)

All results are ppm.Chlorides for documentation.

Released: 140 B/PW, 5 B/O; Recovered: 125 B/PW, 5 B/O. Release Date: 6/3/2015. 2RP-3045

# Livingston Ridge SWD Water Line

|        |              |             | Analytical |                   |       |              |     |   |       |           |
|--------|--------------|-------------|------------|-------------------|-------|--------------|-----|---|-------|-----------|
|        | Sample Area  | Sample Date | Report     | Sample Type       | Depth | BTEX GRO DRO | GRO |   | TOTAL | Chlorides |
| LR 15' | Release Area | 12/16/2015  | 1512A77    | Hollow Stem Auger | 15'   |              |     |   | 1     | 19,000    |
| LR 20' | Release Area | 12/16/2015  | 1512A77    | Hollow Stem Auger | 20.   | •            |     |   |       | 11,000    |
| LR 25' | Release Area | 12/16/2015  | 1512A77    | Hollow Stem Auger | 25"   | •            | ٠   |   |       | 13,000    |
| LR 30' | Release Area | 12/16/2015  | 1512A77    | Hollow Stem Auger | 30,   |              |     |   |       | 3,900     |
| LR 35' | Release Area | 12/16/2015  | 1512A77    | Hollow Stem Auger | 35"   | 1            |     |   | •     | 3,500     |
| LR 40' | Release Area | 12/16/2015  | 1512A77    | Hollow Stem Auger | 40.   |              |     |   |       | 2,700     |
| LR 45' | Release Area | 12/16/2015  | 1512A77    | Hollow Stem Auger | 45'   | 1            |     |   |       | 4,100     |
| LR 50' | Release Area | 12/17/2015  | 1512A77    | Hollow Stem Auger | 50'   | ,            | ,   |   |       | 4,600     |
| LR 55' | Release Area | 12/17/2015  | 1512A77    | Hollow Stem Auger | 55'   | 1            | •   | - |       | 260       |
| LR 60' | Release Area | 12/17/2015  | 1512A77    | Hollow Stem Auger | .09   | -            |     |   | •     | 140       |
|        |              |             |            |                   |       |              |     |   |       |           |

Site Ranking is ZERO (0). Depth to Ground Water >100' (150' PER TREND MAP)

All results are ppm.Chlorides for documentation.

Released: 140 B/PW, 5 B/O; Recovered: 125 B/PW, 5 B/O. Release Date: 6/3/2015. 2RP-3045



June 22, 2015

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

RE: LIVINGSTON RIDGE SWD WATER LINE

Enclosed are the results of analyses for samples received by the laboratory on 06/17/15 16:30.

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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accred certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keene

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

06/17/2015 06/22/2015

LIVINGSTON RIDGE SWD WATER LINE

Project Number: 6/3/2015 RELEASE

Project Location: EDDY COUNTY, NM

Sampling Date:

Sampling Type: Sampling Condition:

Sample Received By:

06/15/2015

Soil

Con

Cool & Intact Jodi Henson

Sample ID: LR 1 - 1 (H501577-01)

Received:

Reported:

Project Name:

| BTEX 8021B                           | mg/    | kg              | Analyze    | d By: MS     |      |            |               |       |           |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|-------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD   | Qualifier |
| Benzene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.74 | 86.8       | 2.00          | 1.25  |           |
| Toluene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.73 | 86.6       | 2.00          | 1.70  |           |
| Ethylbenzene*                        | <0.050 | 0.050           | 06/19/2015 | ND           | 1.82 | 91.2       | 2.00          | 2.34  |           |
| Total Xylenes*                       | <0.150 | 0.150           | 06/19/2015 | ND           | 5.01 | 83.5       | 6.00          | 2.12  |           |
| Total BTEX                           | <0.300 | 0.300           | 06/19/2015 | ND           |      |            |               |       |           |
| Surrogate: 4-Bromofluorobenzene (PIC | 108 5  | 6 61-154        | r          |              |      |            |               |       |           |
| TPH 8015M                            | mg/    | kg              | Analyze    | d By: MS     |      |            |               |       |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD   | Qualifier |
| GRO C6-C10                           | <10.0  | 10.0            | 06/19/2015 | ND           | 185  | 92.7       | 200           | 2.20  |           |
| DRO >C10-C28                         | <10.0  | 10.0            | 06/19/2015 | ND           | 199  | 99.3       | 200           | 0.567 |           |
| Surrogate: 1-Chlorooctane            | 114 9  | 6 47.2-15       | 7          |              |      |            |               |       |           |
| Surrogate: 1-Chlorooctadecane        | 131 9  | 6 52.1-17       | 6          |              |      |            |               |       |           |

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\*=Accredited Analyte

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YATES PETROLEUM CORPORATION AMBER CANNON 105 S 4th Street Artesia NM, 88210 Fax To:

(505) 748-4635

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

06/22/2015

Sampling Type:

Soil

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number:

6/3/2015 RELEASE

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

### Sample ID: LR 1 - 2 (H501577-02)

| BTEX 8021B                           | mg/    | kg              | Analyze    | d By: MS     |      |            |               |       |   |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|-------|---|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD   | Qualifier                               |
| Benzene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.74 | 86.8       | 2.00          | 1.25  |   |
| Toluene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.73 | 86.6       | 2.00          | 1.70  |   |
| Ethylbenzene*                        | <0.050 | 0.050           | 06/19/2015 | ND           | 1.82 | 91.2       | 2.00          | 2.34  |   |
| Total Xylenes*                       | <0.150 | 0.150           | 06/19/2015 | ND           | 5.01 | 83.5       | 6.00          | 2.12  |   |
| Total BTEX                           | <0.300 | 0.300           | 06/19/2015 | ND           |      |            |               |       |   |
| Surrogate: 4-Bromofluorobenzene (PIL | 106 9  | 61-154          |            |              |      |            |               |       |   |
| TPH 8015M                            | mg/    | kg              | Analyze    | d By: MS     |      |            |               |       |   |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD   | Qualifier                               |
| GRO C6-C10                           | <10.0  | 10.0            | 06/19/2015 | ND           | 185  | 92.7       | 200           | 2.20  |   |
| DRO >C10-C28                         | <10.0  | 10.0            | 06/19/2015 | ND           | 199  | 99.3       | 200           | 0.567 |   |
| Surrogate: 1-Chlorooctane            | 108 9  | 6 47.2-15       | 7          |              |      |            |               |       | *************************************** |
| Surrogate: 1-Chlorooctadecane        | 134 %  | 6 52.1-17       | 6          |              |      |            |               |       |   |

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\*=Accredited Analyte

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

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

Sampling Type:

Soil

06/22/2015

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number:

6/3/2015 RELEASE

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: LR 1 - 3 (H501577-03)

| BTEX 8021B                           | mg/    | kg              | Analyze    | d By: MS     |      |            |               |       |           |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|-------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD   | Qualifier |
| Benzene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.90 | 95.0       | 2.00          | 0.282 |           |
| Toluene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.90 | 94.8       | 2.00          | 0.258 |           |
| Ethylbenzene*                        | <0.050 | 0.050           | 06/19/2015 | ND           | 2.01 | 100        | 2.00          | 0.289 |           |
| Total Xylenes*                       | <0.150 | 0.150           | 06/19/2015 | ND           | 5.53 | 92.2       | 6.00          | 0.300 |           |
| Total BTEX                           | <0.300 | 0.300           | 06/19/2015 | ND           |      |            |               |       |           |
| Surrogate: 4-Bromofluorobenzene (PIL | 105 9  | % 61-154        | 1          |              |      |            |               |       |           |
| TPH 8015M                            | mg/    | kg              | Analyze    | d By: MS     |      |            |               |       |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD   | Qualifier |
| GRO C6-C10                           | <10.0  | 10.0            | 06/19/2015 | ND           | 185  | 92.7       | 200           | 2.20  |           |
| DRO >C10-C28                         | <10.0  | 10.0            | 06/19/2015 | ND           | 199  | 99.3       | 200           | 0.567 |           |
| Surrogate: 1-Chlorooctane            | 104 9  | % 47.2-15       | 7          |              |      |            |               |       |           |
| Surrogate: 1-Chlorooctadecane        | 129 9  | % 52.1-17       | 6          |              |      |            |               |       |           |

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\*=Accredited Analyte

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Cellen D. Freene -



YATES PETROLEUM CORPORATION AMBER CANNON 105 S 4th Street

Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

06/22/2015

Sampling Type:

Soil

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number:

6/3/2015 RELEASE

Sample Received By:

Jodi Henson

Project Number:
Project Location:

EDDY COUNTY, NM

Sample ID: LR 2 - 1 (H501577-04)

| BTEX 8021B                           | mg/    | kg              | Analyze    | d By: MS     |        | things of the same |               |       |           |
|--------------------------------------|--------|-----------------|------------|--------------|--------|--|---------------|-------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS     | % Recovery   | True Value QC | RPD   | Qualifier |
| Benzene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.90   | 95.0   | 2.00          | 0.282 |           |
| Toluene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.90   | 94.8   | 2.00          | 0.258 |           |
| Ethylbenzene*                        | <0.050 | 0.050           | 06/19/2015 | ND           | 2.01   | 100  | 2.00          | 0.289 |           |
| Total Xylenes*                       | <0.150 | 0.150           | 06/19/2015 | ND           | 5.53   | 92.2   | 6.00          | 0.300 |           |
| Total BTEX                           | <0.300 | 0.300           | 06/19/2015 | ND           |        |  |               |       |           |
| Surrogate: 4-Bromofluorobenzene (PIL | 107 5  | % 61-154        | r          |              | -0-12- |  |               |       |           |
| TPH 8015M                            | mg/    | kg              | Analyze    | d By: MS     |        |  |               |       |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS     | % Recovery   | True Value QC | RPD   | Qualifier |
| GRO C6-C10                           | <10.0  | 10.0            | 06/19/2015 | ND           | 185    | 92.7   | 200           | 2.20  |           |
| DRO >C10-C28                         | 45.6   | 10.0            | 06/19/2015 | ND           | 199    | 99.3   | 200           | 0.567 |           |
| Surrogate: 1-Chlorooctane            | 114 9  | 6 47.2-15       | 7          |              |        |  |               |       |           |
| Surrogate: 1-Chlorooctadecane        | 131 9  | 6 52.1-17       | 6          |              |        |  |               |       |           |

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\*=Accredited Analyte

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

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

06/22/2015

Sampling Type:

Soil

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number:

6/3/2015 RELEASE

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: LR 2 - 2 (H501577-05)

| BTEX 8021B                           | mg/    | kg              | Analyze    | d By: MS     |      |            |               |       |           |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|-------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD   | Qualifier |
| Benzene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.90 | 95.0       | 2.00          | 0.282 |           |
| Toluene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.90 | 94.8       | 2.00          | 0.258 |           |
| Ethylbenzene*                        | <0.050 | 0.050           | 06/19/2015 | ND           | 2.01 | 100        | 2.00          | 0.289 |           |
| Total Xylenes*                       | <0.150 | 0.150           | 06/19/2015 | ND           | 5.53 | 92.2       | 6.00          | 0.300 |           |
| Total BTEX                           | <0.300 | 0.300           | 06/19/2015 | ND           |      |            |               |       |           |
| Surrogate: 4-Bromofluorobenzene (PIL | 104    | % 61-154        | r          |              |      |            |               |       |           |
| TPH 8015M                            | mg/    | 'kg             | Analyze    | d By: MS     |      |            |               |       |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD   | Qualifier |
| GRO C6-C10                           | <10.0  | 10.0            | 06/19/2015 | ND           | 185  | 92.7       | 200           | 2.20  |           |
| DRO >C10-C28                         | <10.0  | 10.0            | 06/19/2015 | ND           | 199  | 99.3       | 200           | 0.567 |           |
| Surrogate: 1-Chlorooctane            | 103    | % 47.2-15       | 7          |              |      |            |               |       |           |
| Surrogate: 1-Chlorooctadecane        | 128    | % 52.1-17       | 76         |              |      |            |               |       |           |

### Cardinal Laboratories

\*=Accredited Analyte

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

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

06/22/2015

Sampling Type:

Soil

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number:

6/3/2015 RELEASE

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: LR 2 - 3 (H501577-06)

| BTEX 8021B                           | mg/     | kg              | Analyze    | d By: MS     |      |            |               |       |           |
|--------------------------------------|---------|-----------------|------------|--------------|------|------------|---------------|-------|-----------|
| Analyte                              | Result  | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD   | Qualifier |
| Benzene*                             | <0.050  | 0.050           | 06/19/2015 | ND           | 1.90 | 95.0       | 2.00          | 0.282 |           |
| Toluene*                             | < 0.050 | 0.050           | 06/19/2015 | ND           | 1.90 | 94.8       | 2.00          | 0.258 |           |
| Ethylbenzene*                        | <0.050  | 0.050           | 06/19/2015 | ND           | 2.01 | 100        | 2.00          | 0.289 |           |
| Total Xylenes*                       | <0.150  | 0.150           | 06/19/2015 | ND           | 5.53 | 92.2       | 6.00          | 0.300 |           |
| Total BTEX                           | <0.300  | 0.300           | 06/19/2015 | ND           |      |            |               |       |           |
| Surrogate: 4-Bromofluorobenzene (PIL | 103 %   | 6 61-154        | !          |              |      |            |               |       |           |
| TPH 8015M                            | mg/     | kg              | Analyze    | d By: MS     |      |            |               |       |           |
| Analyte                              | Result  | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD   | Qualifier |
| GRO C6-C10                           | <10.0   | 10.0            | 06/19/2015 | ND           | 185  | 92.7       | 200           | 2.20  |           |
| DRO >C10-C28                         | <10.0   | 10.0            | 06/19/2015 | ND           | 199  | 99.3       | 200           | 0.567 |           |
| Surrogate: 1-Chlorooctane            | 99.1    | % 47.2-15       | 7          |              |      |            |               |       |           |
| Surrogate: 1-Chlorooctadecane        | 119 9   | 6 52.1-17       | 6          |              |      |            |               |       |           |

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\*=Accredited Analyte

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

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

Soil

06/22/2015

Sampling Type:

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number:

6/3/2015 RELEASE

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: LR 3 - 1 (H501577-07)

| BTEX 8021B                           | mg/    | kg              | Analyze    | d By: MS     |      |            |               |       |           |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|-------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD   | Qualifier |
| Benzene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.90 | 95.0       | 2.00          | 0.282 |           |
| Toluene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.90 | 94.8       | 2.00          | 0.258 |           |
| Ethylbenzene*                        | <0.050 | 0.050           | 06/19/2015 | ND           | 2.01 | 100        | 2.00          | 0.289 |           |
| Total Xylenes*                       | <0.150 | 0.150           | 06/19/2015 | ND           | 5.53 | 92.2       | 6.00          | 0.300 |           |
| Total BTEX                           | <0.300 | 0.300           | 06/19/2015 | ND           |      |            |               |       |           |
| Surrogate: 4-Bromofluorobenzene (PIL | 104 9  | % 61-154        |            |              |      |            |               |       |           |
| TPH 8015M                            | mg/    | 'kg             | Analyze    | d By: MS     |      | Marion 11  |               |       |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD   | Qualifier |
| GRO C6-C10                           | <10.0  | 10.0            | 06/19/2015 | ND           | 185  | 92.7       | 200           | 2.20  |           |
| DRO >C10-C28                         | <10.0  | 10.0            | 06/19/2015 | ND           | 199  | 99.3       | 200           | 0.567 |           |
| Surrogate: 1-Chlorooctane            | 104 5  | % 47.2-15       | 7          |              |      |            |               |       |           |
| Surrogate: 1-Chlorooctadecane        | 124 9  | % 52.1-17       | 6          |              |      |            |               |       |           |

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Celley D. Freens -



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

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

Soil

06/22/2015

Sampling Type:

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number:

6/3/2015 RELEASE

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: LR 3 - 2 (H501577-08)

| BTEX 8021B                           | mg/    | kg              | Analyze    | d By: MS     |      |            |               |       |           |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|-------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD   | Qualifier |
| Benzene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.90 | 95.0       | 2.00          | 0.282 |           |
| Toluene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.90 | 94.8       | 2.00          | 0.258 |           |
| Ethylbenzene*                        | <0.050 | 0.050           | 06/19/2015 | ND           | 2.01 | 100        | 2.00          | 0.289 |           |
| Total Xylenes*                       | <0.150 | 0.150           | 06/19/2015 | ND           | 5.53 | 92.2       | 6.00          | 0.300 |           |
| Total BTEX                           | <0.300 | 0.300           | 06/19/2015 | ND           |      |            |               |       |           |
| Surrogate: 4-Bromofluorobenzene (PIL | 105 9  | % 61-154        |            |              |      |            |               |       |           |
| TPH 8015M                            | mg/    | kg              | Analyze    | d By: MS     |      |            |               |       |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD   | Qualifier |
| GRO C6-C10                           | <10.0  | 10.0            | 06/19/2015 | ND           | 185  | 92.7       | 200           | 2.20  |           |
| DRO >C10-C28                         | <10.0  | 10.0            | 06/19/2015 | ND           | 199  | 99.3       | 200           | 0.567 |           |
| Surrogate: 1-Chlorooctane            | 100 5  | % 47.2-15       | 7          |              |      |            |               |       |           |
| Surrogate: 1-Chlorooctadecane        | 122 5  | % 52.1-17       | 6          |              |      |            |               |       |           |

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

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

06/22/2015

Sampling Type:

Soil

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number:

6/3/2015 RELEASE

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: LR 3 - 3 (H501577-09)

| BTEX 8021B                           | mg/    | kg              | Analyze    | d By: MS     |                |            |               |       |           |
|--------------------------------------|--------|-----------------|------------|--------------|----------------|------------|---------------|-------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS             | % Recovery | True Value QC | RPD   | Qualifier |
| Benzene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.90           | 95.0       | 2.00          | 0.282 |           |
| Toluene*                             | <0.050 | 0.050           | 06/19/2015 | ND           | 1.90           | 94.8       | 2.00          | 0.258 |           |
| Ethylbenzene*                        | <0.050 | 0.050           | 06/19/2015 | ND           | 2.01           | 100        | 2.00          | 0.289 |           |
| Total Xylenes*                       | <0.150 | 0.150           | 06/19/2015 | ND           | 5.53           | 92.2       | 6.00          | 0.300 |           |
| Total BTEX                           | <0.300 | 0.300           | 06/19/2015 | ND           |                |            |               |       |           |
| Surrogate: 4-Bromofluorobenzene (PIL | 103 5  | % 61-154        | 6)         |              | and an area of |            |               |       |           |
| TPH 8015M                            | mg/    | 'kg             | Analyze    | d By: MS     |                |            |               |       |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS             | % Recovery | True Value QC | RPD   | Qualifier |
| GRO C6-C10                           | <10.0  | 10.0            | 06/19/2015 | ND           | 185            | 92.7       | 200           | 2.20  |           |
| DRO >C10-C28                         | <10.0  | 10.0            | 06/19/2015 | ND           | 199            | 99.3       | 200           | 0.567 |           |
| Surrogate: 1-Chlorooctane            | 115    | % 47.2-15       | 7          |              |                |            |               |       |           |
| Surrogate: 1-Chlorooctadecane        | 125    | % 52.1-17       | 6          |              |                |            |               |       |           |

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Celeg to Keens -



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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

\*\*\* Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C samples reported on an as received basis (wet) unless otherwise noted on report

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Calay D. Keena



### Project Manager: ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240

Amber Cannon

Company Address: 105 South 4th Street

Company Name

Yates Petroleum Corporation

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

|              |                  |                                 | CHAIN OF CUSTO                               |
|--------------|------------------|---------------------------------|--|
| Project Loc: | Project #:       | Project Name:                   | DY RECORD AN                                 |
| Eddy County  | 6/3/2015 Release | Livingston Ridge SWD Water Line | CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST |
|              |                  | Pag                             | e 12 of 12                                   |
|              |                  |                                 |  |

|            |  | स्र  | क्र   | Z)                      | T                         | S                                  |            | a La      |           |           |           | T         | Т              | Т         | Т            | -      |   |  | West parts     |                            |  | U.                |
|------------|--|--|---|-------------------------|---------------------------|------------------------------------|------------|-----------|-----------|-----------|-----------|-----------|----------------|-----------|--------------|--------|---|--|----------------|----------------------------|--|-------------------|
|            |  | Relinquished by:   | Relinquished by   | Relinquished by         |                           | Special Instructions:              | 2          | 1         | 0_        | 16        | 5         |           |                | 16        | 1            | uprais | LAB # (lab use only)  | יייייייייייייייייייייייייייייייייייייי | (lab use only) |                            |  |                   |
|            |  | shed   | www   | shed                    |                           | Ins                                | E          |           | E         | -         | -         | -         | -              | -         | -            | -      |   | _ <u> </u>                             | seor           |                            |  |                   |
| 1          |  | Š.   | S &   | by:                     |                           | truc                               | LR 3-3     | LR 3-2    | LR 3-1    | LR 2-3    | LR 2-2    | LR 2-1    | E 1-3          | 1-1 V-1   | 0 2          | B 1-1  |   | 7.                                     | ıly)           | Sampler Signature:         | Telephone No:  | City/State/Zip:   |
| 1          |  |  | 6   | ,                       |                           | tion                               | ώ          | 2         | 1         | W         | N         | 1         | ú              | 1         | 2 -          | 7      |   |  | -              | ple                        | pho  | 100               |
|            |  |  | 2   |                         |                           | S                                  |            |           |           |           |           |           |                |           |              |        |   | -                                      | コピン マカー        | S                          | one  | ale/              |
|            |  |  | 1   |                         |                           |                                    |            |           |           |           |           |           |                |           |              |        |   | 7                                      | ۱ ا            | gna                        | 8  | d V               |
| 1          |  |  | 0   |                         |                           |                                    |            |           |           |           |           |           |                |           |              |        | <u> </u>  | /                                      | ا ر            | at u                       | •••  |                   |
| 1          |  |  | P   |                         |                           |                                    |            |           |           |           |           |           |                |           |              |        | FIELD CODE  | C                                      | <u> </u>       | D                          |  | 1.                |
|            | y.   |  | l   |                         |                           |                                    |            |           |           |           |           |           |                |           |              |        | CO  |  | ï              |                            | 575  | Arte              |
|            |  |  |   | 1                       | se                        | F                                  |            |           |           |           |           |           | 1              |           | 1            |        | DE  |  | Ĩ              | 3                          | 748  | sia,              |
| -          |  | -  |   | $\dashv$                | par                       | Ä                                  |            |           |           |           |           |           |                |           |              | 1      |   |  |                | 8                          | 4  | Z                 |
| 1          |  |  | 6   |                         | ate                       | 801                                |            |           |           |           |           |           |                |           |              |        |   |  |                | 6                          | 1 0  | 88                |
|            |  | Date   | 7   | Date                    | Te C                      | 5B,                                | -          |           |           |           |           |           |                |           |              |        |   |  |                | 1                          | 57   | Artesia, NM 88210 |
|            |  |  | 5   |                         | separate report.          | В                                  |            |           |           |           |           |           |                |           |              |        |   |  |                | 6                          | 551  |                   |
| T          |  |  |   | 1                       |                           | 찟                                  |            |           |           |           |           |           | $\vdash$       | +         | +            | +      |   | -                                      |                | 3                          | 575-748-4111 or 575-513-8799   |                   |
|            | 3  |  | Time I  | lime                    | Than                      | TPH: 8015B, BTEX: 8021B            | ယ္         | 2         |           | ယ္        | vi        |           | ω              | 2         | -:           |        | Beginning Depth   |  |                | annon                      | 799  |                   |
| -          |  |  |   |                         | Thank you                 | 18.                                | ယ္         | 15        | <u>-</u>  | ω         | νī        | -;        | ω              | 15        | _;           | 1      | Ending Depth  |  |                | 3                          |  |                   |
|            | Neceived by ELOT.  | Reived by.   |   | Redeive                 |                           | 0                                  | 6/1        | 6/1       | 6/        | 6/        | 6/        | 6/        | 6/             | 6/        | 0            |        |   |  |                |                            |  |                   |
|            | ě  | , e  | 1   | Ve de                   |                           | eas                                | 6/15/2015  | 6/15/2015 | 6/15/2015 | 6/15/2015 | 6/15/2015 | 6/15/2015 | 6/15/2015      | 6/15/2015 | 6/15/2015    |        | Date Sampled  |  |                |                            |  |                   |
|            | oy n   | , ox   | 8   | S.                      |                           | e si                               | 25         | 015       | 015       | 015       | 01:       | 01:       | 01             | 01        | 01           |        |   |  |                |                            |  |                   |
|            | 5  | 2  | (   |                         |                           | WOL                                | -          |           | -         | 01        | 01        | 5         | 5              | 5         | 5            | 1      | THE REAL PROPERTY AND ADDRESS OF THE PROPERTY |  |                |                            |  |                   |
|            |  |  |   | 1                       |                           | BI                                 | _          | 12        | 12        | 11        |           |           | 10             | 10        | 10           | 1      |   |  |                | ē.                         |  |                   |
|            |  |  | 7   |                         |                           | 贝                                  | 1:22 AM    | 12:35 PM  | 12:30 PM  | :44       | :40       | :37       | :38            | :35       | :32          | 1      | Time Sampled  |  |                | Ф                          | 71   |                   |
| 2000       |  |  | B   | 4                       | Marin.                    | res                                | Ž          | PM        | PM        | 11:44 AM  | 11:40 AM  | 11:37 AM  | 10:38 AM       | 10:35 AM  | 10:32 AM     |        | 1 y 314 a Carlot - 1 CCC - 1 CCC a consideration Conf ♥ (3.44 de 2000)  |  |                | e-mail:                    | Fax No:  |                   |
|            |  |  | 4   | ı                       |                           | Please show BTEX results as mg/kg. | $\dashv$   | -         |           |           |           |           |                |           | _            | _      |   |  |                | <u></u>                    | 0  |                   |
|            |  | Troppine   | Z   | +                       | moreous (S.)              | as                                 | SW-C       |           |           |           | 7         | 7         |                | -         | -            | -      | ield Filtered   |  |                | Pagaran                    | VIII A SOURCE TO |                   |
|            |  |  | 5   | 1                       | 4                         | 3                                  | _          | -         | ×         | -         |           | -         | ×              | ×         | ×            | -      | otal # of Containers  | _                                      |                | S                          | 575-   |                   |
|            |  |  | ant,  | 1                       | Ġ                         | ka -                               | +          |           |           |           |           |           | _              | F         | 十            | +      | HNO <sub>3</sub>  | Pre                                    |                | nn                         | 748  |                   |
|            |  |  | 1   | I                       | 1                         | 0                                  | $\dashv$   | -         | $\dashv$  | -         | $\dashv$  | -         | -              | _         | +            | -      |   | Nese                                   |                | on                         | 575-748-4131   |                   |
| Heat St    |  |  |   |                         |                           | Please pir                         | $\dashv$   |           | $\dashv$  | $\dashv$  | -         | $\dashv$  | ***********    | -         | +-           | -      | HCI<br>H <sub>2</sub> SO <sub>4</sub>   | Preservation & # of                    |                | acannon@yatespetroleum.com | 31   |                   |
|            |  |  |   |                         | C                         |                                    | $\dashv$   | -         | $\dashv$  | -         | -         | $\dashv$  |                | _         | $\vdash$     | -      | NaOH  | go<br>#£                               |                | vat                        |  |                   |
|            |  |  |   | ı                       | 10                        | 7                                  | $\dashv$   | $\dashv$  | $\dashv$  | +         | $\dashv$  | $\dashv$  |                |           | -            | -      | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>   |  |                | Ses                        |  |                   |
|            |  | West Land  | 6   | 1                       | of lives                  | 3                                  | +          | +         | _         |           | -         | $\dashv$  | of the Landson |           | -            | +      | None  | Containers                             |                | et                         |  |                   |
|            | Date   | Date   | 3   |                         | 2                         |                                    | $\top$     | 1         | $\neg$    | $\neg$    | $\dashv$  | $\dashv$  |                |           | -            | +-     | Other ( Specify)  | ners                                   |                | 0                          |  |                   |
|            | ite  | ite  | 7/10  |                         | o o                       |                                    | $\top$     | $\dashv$  | $\dashv$  | $\dashv$  | _         | $\dashv$  | -              | -         | <del> </del> | -      | W=Drinking Water SL=Sludge  | $\dashv$                               |                | E E                        |  |                   |
|            |  |  | O,  |                         | 210                       | 3                                  | 0 0        | 0         | S         | S         | S         | 0         | S              | S         | S            | 1      | W = Groundwater S=Soli/Solid  | Matrix                                 |                | 0.0                        | R  |                   |
|            | 4  |  | ÷-  |                         | 2                         | , <u> </u>                         | $\perp$    |           |           |           |           |           |                |           |              | 1      | P=Non-Potable Specify Other   | X                                      |                | 100                        | por  |                   |
|            | Time   | Time   | ST IME  | 1                       |                           | 2                                  | < >        | < >       | × !       | × ;       | × >       | × >       | ×              | ×         | ×            | TF     | PH: 418.1 8015M 801   | 151                                    | TT             | 1                          | t Fo   |                   |
|            |  | - 10   | $\bigcirc$  | L                       | 10                        | 1                                  |            |           |           |           |           |           |                |           |              | TF     | PH: TX 1005 TX 1006   |  |                |                            | Report Format:   | 0                 |
|            | Temperature Upon Receipt:  | Sample Hand Delivered by Sampler/Client Re                       | Labels on container(s) Custody seals on container(s) Custody seals on cooler(s) | VOCs Free of Headspace? | Sample Containers Intact? | - 15                               | _          | _         | 1         | _         |           |           |                |           |              | Ca     | ations (Ca, Mg, Na, K)  |  |                |                            |  | PO#:              |
|            | )era   | nple Hand [<br>by Sampler<br>by Courier?                         | ody<br>ody  | SF                      | ple (                     | 1                                  | +          | 1         | _         |           |           |           |                |           |              | An     | nions (CI, SO4, Alkalinity)   | 70                                     | 1              |                            | ×  |                   |
|            | tra l  | tand   | sea<br>sea  | 99                      | Con                       |                                    | _          |           | 4         |           | _         |           |                | -         |              | SA     | AR / ESP / CEC  | TOTAL                                  | CLP:           |                            | x Standard   |                   |
| 1          | Upc  | 380  | ntair<br>s or   | He                      | aine                      | ?_                                 | +          | _         |           |           | _         | _         |                |           |              | Me     | etals: As Ag Ba Cd Cr Pb Hg :   | Se                                     | ₽              |                            | inda   |                   |
|            | 5<br>D (   | nple Hand Delivered<br>by Sampler/Client Rep.<br>by Courier? UPS | cor<br>cor  | ads                     | TS II                     | -                                  | +          | -         | _         | _         | _         | 4         | 4              |           |              | -      | latiles   |  | Analyze        |                            | 2  | li                |
| -          | 600  | /ered  | tain  | pac                     | itaci                     | -                                  | -          | -         | +         | _         | _         | _         | 1              |           |              | -      | mivolatiles   |  | ZeF            |                            |  |                   |
| 7          | 8 ,  |  | er(s  | 63                      | -5 ·                      | ×                                  | \ <u>\</u> | 4         | <  >      | <  >      | <   >     | < >       | <              | ×         | ×            | -      | EX 80218/5030 or BTEX 826   | 0                                      | - Fo:          |                            |  | 20                |
|            | i  | g ~  |   |                         |                           | -                                  | +          | +         | +         | _         | +         | 1         | +              |           |              | RC     |   | The section is a                       | _              |                            | TRRP   | 205-2020          |
|            |  | TI .   |   |                         |                           | -                                  | +          | +         | +         | 1         | +         | +         | -              | _         |              | -      | ORM   |  | _              |                            | P  | )20               |
| N          |  | <b>1989</b> -  | < B/2   | 1                       | 3                         | ×                                  | <u>~</u>   | +         | ( )       | 4         | 4         | ( )       | 4              | ×         | ×            | -      | lorides   |  |                |                            | -  |                   |
| 1          | 1 8  |  |   |                         |                           | -                                  | +          | +         | +         | +         | +         | +         | +              | $\dashv$  |              | SA     | 117   |  | 41             |                            |  |                   |
| C          | 7 5 5  | zze  | ZZ  | z                       | z                         | -                                  | +          | +         | +         | +         | +         | -         | +              | -         |              | PI     | ISH TAT IS  |  | Щ              |                            | NPDES  |                   |
|            | 6  |  |   |                         |                           | ×                                  | ×          | ×         | · >       | <  ×      | <  ×      | × ×       | +              | ×         | -            |        | JSH TAT (Pre-Schedule) 24, 40<br>andard TAT   | 3, 72 1                                | nrs            |                            | ES.  |                   |
| ********** | - Control of the Cont | more Service Constitution and                                    |   | -                       |                           | -                                  |            | 1         | 1         | 1         | 1         | 1         | 1              | 1         |              |        | mady (A)  |  |                |                            |  |                   |



June 22, 2015

AMBER CANNON

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: LIVINGSTON RIDGE SWD WATER LINE

Enclosed are the results of analyses for samples received by the laboratory on 06/17/15 16:30.

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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accred certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Fax To:

(505) 748-4635

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

06/22/2015

Sampling Type:

Soil

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number:

6/3/2015 RELEASE

Sample Received By:

BS

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: LR 1 - 1 (H501577-01)

| CL | lawida. | CMAFOOCI D |  |
|----|---------|------------|--|
| Cn | ioriae, | SM4500CI-B |  |

### mg/kg

### Analyzed By: AP

Analyte Chloride

Result 144

16.0

Reporting Limit

Reporting Limit

16.0

Reporting Limit

16.0

06/22/2015 ND

Method Blank

% Recovery 432 108

True Value QC 400

RPD

3.77

RPD

0.00

0.00

Qualifier

Sample ID: LR 1 - 2 (H501577-02)

Chloride, SM4500CI-B

Analyte

Analyte

mg/kg

Analyzed By: AP

BS

416

BS

416

Chloride

Chloride

Result 80.0

Result

176

Analyzed 06/18/2015

Analyzed

ND

% Recovery 104

True Value QC 400

Qualifier

Sample ID: LR 1 - 3 (H501577-03)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AP

Method Blank

ND

Method Blank

% Recovery

104

True Value QC

400

RPD

Qualifier

Sample ID: LR 2 - 1 (H501577-04)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyte Chloride

Result 10900 Reporting Limit 16.0

Analyzed 06/18/2015

Analyzed

06/18/2015

Method Blank ND

BS 416 % Recovery 104

True Value QC 400

RPD 0.00 **Oualifier** 

Cardinal Laboratories

\*=Accredited Analyte

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Colog Ditreme -



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

Fax To:

(505) 748-4635

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

06/22/2015

Sampling Type:

Soil

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Project Number:

6/3/2015 RELEASE

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: LR 2 - 2 (H501577-05)

| Ch  | loride | SM45  | OOCI-B |
|-----|--------|-------|--------|
| CII | oriue, | 31143 | OOCI-D |

Chloride

Chloride

mg/kg

Analyzed By: AP

Analyte

Result Reporting Limit

16.0

Reporting Limit

16.0

2720

Result

400

Analyzed 06/18/2015

Analyzed

06/18/2015

Method Blank ND

Method Blank

ND

BS % Recovery

104

% Recovery

104

True Value QC 400

**RPD** 

Qualifier

Sample ID: LR 2 - 3 (H501577-06)

Chloride, SM4500CI-B

Analyte

mg/kg

Analyzed By: AP

BS

416

416

0.00

RPD

0.00

Qualifier

Sample ID: LR 3 - 1 (H501577-07)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyte

Result Reporting Limit Analyzed

Method Blank

ND

ND

Method Blank

ND

% Recovery

RPD

Qualifier

Chloride

1220

16.0 06/18/2015

BS 416

BS

416

BS

416

104

True Value QC 400

True Value QC

400

0.00

Sample ID: LR 3 - 2 (H501577-08)

Chloride, SM4500CI-B

Analyte

Analyte

mg/kg

Analyzed By: AP

Chloride

Chloride

Result 12300 Reporting Limit 16.0

Reporting Limit

16.0

Analyzed

06/18/2015

Analyzed

06/18/2015

Method Blank

% Recovery 104

% Recovery

104

True Value QC 400

RPD 0.00 Qualifier

Sample ID: LR 3 - 3 (H501577-09)

Chloride, SM4500CI-B

mg/kg

Result

11200

Analyzed By: AP

True Value QC

400

**RPD** 

0.00

Qualifier

Cardinal Laboratories

\*=Accredited Analyte

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Celen thema



### **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 to Keens-



### Project Manager: ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

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

| Project Name:                            |  |  |  |
|--|--|--|--|
| Livingston Rida                          |  |  |  |
| D 20 20 20 20 20 20 20 20 20 20 20 20 20 |  |  |  |

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project #: 6/3/2015 Release ge SWD Water Line

Project Loc:

**Eddy County** 205-2020

| Report Format: |  |
|----------------|--|
| x Standard     |  |

| Standa   |  |
|----------|--|
| <u>a</u> |  |
| Ų        |  |
| TRR      |  |

**JNPDES** 

| -     | - money      |
|-------|--------------|
| TCLP: | Analyze For: |
| - 1   | 1            |

acannon@yatespetroleum.com

(lab use only) ORDER #:

Sampler Signature:

300

Cannon

Telephone No:

575-748-4111 or 575-513-8799

Fax No e-mail:

575-748-4131

City/State/Zip:

Artesia, NM 88210

Company Address:

105 South 4th Street

Company Name

Yates Petroleum Corporation

Amber Cannon

LAB # (lab use only)

FIELD CODE

Beginning Depth

**Ending Depth** 

**Date Sampled** 

Time Sampled

ield Filtered Total # of Containers

HNO

NaOH Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

HCI H<sub>2</sub>SO<sub>4</sub>

|   | 0    | _                |   |   |   |   |                  |   |   |  | None S                       |    |   |
|---|------|------------------|---|---|---|---|------------------|---|---|--|------------------------------|----|---|
| a Laboratory Comments Sample Containers Intac | L    | Other ( Specify) |   |   |   |   | Other ( Specify) |   |   |  |                              |    |   |
|   | S    | S                | S | Ş | S | S | S                | S | S | DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Soild NP=Non-Potable Specify Other |                              |    |   |
|   | ×    | ×                | × | × | × | × | ×                | × | × | TPH: 418.1 8015M 8015  | 1                            | T  |   |
|   |      |                  |   |   |   |   |                  |   | T | TPH: TX 1005 TX 1006   | 1                            | 1  |   |
| Sam   | Lab  |                  |   |   |   |   |                  |   |   |  | Cations (Ca, Mg, Na, K)      | 1  |   |
| ple   | orat |                  |   |   |   |   |                  |   |   |  | Anions (CI, SO4, Alkalinity) | 7  | _ |
| Laboratory Comm<br>Sample Containers          |      |                  |   |   |   |   |                  |   |   | SAR / ESP / CEC  | TOTAL                        | CC |   |
|   |      |                  | _ |   |   |   |                  |   |   | Metals: As Ag Ba Cd Cr Pb Hg Se  |                              | T  |   |
|   |      |                  |   |   |   |   |                  |   |   | Volatiles  |                              | -  |   |
| Intac   | ente |                  |   |   |   |   |                  |   |   |  | Semivolatiles                |    | T |
| 77  | Ÿ.   | ×                | × | × | × | × | ×                | × | × | ×  | BTEX 8021B/5030 or BTEX 8260 |    | T |
|   |      |                  |   |   |   |   |                  |   |   | RCI  |                              | _  |   |
|   |      |                  |   |   |   |   |                  |   |   | N.O.R.M.   |                              | -  |   |
|   |      | ×                | × | × | × | × | ×                | V | V | V  | Chloristae                   | -  | - |

SAR

Standard TAT

RUSH TAT (Pre-Schedule) 24, 48, 72 hrs

10°0

Lone Star

Relinquished by

Date

Time

Received by ELOT:

Relinquished by:

separate report. TPH: 8015B, BTEX:

Thank you

8021B. ω ń

Please show BTEX results as mg/kg.

Please put ch

Labels on container(s)
Custody seals on container(s)
Custody seals on cooler(s)
Sample Hand Delivered
by Sampler/Client Rep. ?
by Counier? UPS DHL

zzgzzz

×

VOCs Free of Headspace?

Date

lime

Temperature Upon Receipt

6/15/2015 6/15/2015 6/15/2015 6/15/2015

1:22 AM

12:35 PM 12:30 PM

×

Relinquished by

Sachwill .

annor

3

Time

Special Instructions:

LR 3-2 LR 3-3

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w N

11:44 AM 11:40 AM 11:37 AM

× × × × ×

w N

w ń

6/15/2015

10:38 AM 10:35 AM

6/15/2015 6/15/2015

10:32 AM

6/15/2015 6/15/2015

LR 3-1 LR 2-3 LR 2-2 LR 2-1 LR 1-3 LR 1-2 LR 1-1

Page 5 of 5



June 23, 2015

AMBER CANNON

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: LIVINGSTON RIDGE SWD WATER LINE

Enclosed are the results of analyses for samples received by the laboratory on 06/17/15 16:45.

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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accredited certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celes D. Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Fax To:

(505) 748-4635

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

06/23/2015

Sampling Type:

Soil

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number:

6/3/2015 RELEASE

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

### Sample ID: LR 1-4 (H501579-01)

| Chloride, SM4500CI-B       | mg       | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
|----------------------------|----------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                    | Result   | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                   | 1340     | 16.0            | 06/18/2015 | ND           | 416 | 104        | 400           | 0.00 |           |
|                            |          |                 |            |              |     |            |               |      |           |
| Sample ID: LR 1-5 (H501    | .579-02) |                 |            |              |     |            |               |      |           |
| Chloride, SM4500CI-B       | mg       | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
| Analyte                    | Result   | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                   | 3280     | 16.0            | 06/18/2015 | ND           | 416 | 104        | 400           | 0.00 |           |
| Sample ID: LR 1-6 (H501    | .579-03) |                 |            |              |     |            |               |      |           |
| Chloride, SM4500CI-B       | mg,      | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
| Analyte                    | Result   | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                   | 10800    | 16.0            | 06/18/2015 | ND           | 416 | 104        | 400           | 0.00 |           |
| Sample ID: LR 1-7 (H501    | .579-04) |                 |            |              |     |            |               |      |           |
| Chloride, SM4500Cl-B mg/kg |          | Analyze         | d By: AP   |              |     |            |               |      |           |
| Analyte                    | Result   | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                   | 13200    | 16.0            | 06/18/2015 | ND           | 416 | 104        | 400           | 0.00 |           |

### Cardinal Laboratories

\*=Accredited Analyte

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Celen theme-



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

Fax To:

(505) 748-4635

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

06/23/2015

Sampling Type:

Soil

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number:

6/3/2015 RELEASE

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

### Sample ID: LR 1-8 (H501579-05)

| Chloride, SM4500CI-B        | mg     | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
|-----------------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                     | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                    | 10400  | 16.0            | 06/18/2015 | ND           | 416 | 104        | 400           | 0.00 |           |
| Sample ID: LR 1-9 (H501579- | 06)    |                 |            |              |     |            |               |      |           |
| Chloride, SM4500CI-B        | mg     | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
| Analyte                     | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                    | 12000  | 16.0            | 06/18/2015 | ND           | 416 | 104        | 400           | 0.00 |           |
| Sample ID: LR 1-10 (H501579 | 9-07)  |                 |            |              |     |            |               |      |           |
| Chloride, SM4500CI-B        | mg     | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
| Analyte                     | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                    | 8400   | 16.0            | 06/18/2015 | ND           | 416 | 104        | 400           | 0.00 |           |
| Sample ID: LR 1-11 (H501579 | 9-08)  |                 |            |              |     |            |               |      |           |
| Chloride, SM4500CI-B        | mg     | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
| Analyte                     | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                    | 4800   | 16.0            | 06/22/2015 | ND           | 416 | 104        | 400           | 3.92 |           |
| Sample ID: LR 1-12 (H501579 | 9-09)  |                 |            |              |     |            |               |      |           |
| Chloride, SM4500Cl-B mg/kg  |        | Analyze         | d By: AP   |              |     |            |               |      |           |
| Analyte                     | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                    | 9730   | 16.0            | 06/22/2015 | ND           | 416 | 104        | 400           | 3.92 | 3 ""      |
|                             |        |                 |            |              |     |            |               |      |           |

### Cardinal Laboratories

\*=Accredited Analyte

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Celeg Theene.



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

Fax To:

(505) 748-4635

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

Project Name:

06/23/2015

Sampling Type:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number:

6/3/2015 RELEASE

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

### Sample ID: LR 1-13 (H501579-10)

| Chloride, SM4500CI-B      | mg     | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
|---------------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                   | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifie  |
| Chloride                  | 12000  | 16.0            | 06/22/2015 | ND           | 416 | 104        | 400           | 3.92 |           |
| Sample ID: LR 2-4 (H50157 | 9-11)  |                 |            |              |     |            |               |      |           |
| Chloride, SM4500CI-B      | mg     | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
| Analyte                   | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                  | 544    | 16.0            | 06/22/2015 | ND           | 416 | 104        | 400           | 3.92 |           |
| Sample ID: LR 2-5 (H50157 | 9-12)  |                 |            |              |     |            |               |      |           |
| Chloride, SM4500CI-B      | mg     | /kg             | Analyze    |              |     |            |               |      |           |
| Analyte                   | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                  | 1010   | 16.0            | 06/22/2015 | ND           | 416 | 104        | 400           | 3.92 |           |
| Sample ID: LR 2-6 (H50157 | 9-13)  |                 |            |              |     |            |               |      |           |
| Chloride, SM4500CI-B      | mg     | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
| Analyte                   | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                  | 4400   | 16.0            | 06/22/2015 | ND           | 416 | 104        | 400           | 3.92 |           |
| Sample ID: LR 2-7 (H50157 | 9-14)  |                 |            |              |     |            |               |      |           |
| Chloride, SM4500CI-B      | mg     | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
| Analyte                   | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
|                           |        |                 |            |              |     |            |               |      |           |

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Celley & trune



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

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

06/23/2015

Sampling Type:

Soil

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number:

6/3/2015 RELEASE

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

### Sample ID: LR 2-8 (H501579-15)

| Chloride, SM4500CI-B       | mg,      | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
|----------------------------|----------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                    | Result   | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                   | 5360     | 16.0            | 06/22/2015 | ND           | 416 | 104        | 400           | 3.92 |           |
| Sample ID: LR 2-9 (H501    | 579-16)  |                 |            |              |     |            |               |      |           |
| Chloride, SM4500CI-B       | mg,      | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
| Analyte                    | Result   | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                   | 4720     | 16.0            | 06/22/2015 | ND           | 416 | 104        | 400           | 3.92 |           |
| Sample ID: LR 2-10 (H50    | 1579-17) |                 |            |              |     |            |               |      |           |
| Chloride, SM4500CI-B       | mg       | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
| Analyte                    | Result   | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                   | 4320     | 16.0            | 06/22/2015 | ND           | 416 | 104        | 400           | 3.92 |           |
| Sample ID: LR 2-11 (H50    | 1579-18) |                 |            |              |     |            |               |      |           |
| Chloride, SM4500CI-B       | mg       | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
| Analyte                    | Result   | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                   | 4480     | 16.0            | 06/22/2015 | ND           | 416 | 104        | 400           | 3.92 |           |
| Sample ID: LR 2-12 (H50    |          |                 |            |              |     |            |               |      |           |
| Chloride, SM4500CI-B mg/kg |          | Analyze         | d By: AP   |              |     |            |               |      |           |
| Analyte                    | Result   | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                   | 6640     | 16.0            | 06/22/2015 | ND           | 416 | 104        | 400           | 3.92 |           |
|                            |          |                 |            |              |     |            |               |      |           |

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

Fax To:

(505) 748-4635

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

Sampling Type:

06/23/2015

Soil

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number: Project Location:

6/3/2015 RELEASE

EDDY COUNTY, NM

Sample Received By:

Jodi Henson

### Sample ID: LR 2-13 (H501579-20)

| Chloride, SM4500CI-B        | mg     | /kg             | Analyze                | d By: AP     |     |            |               |      |           |
|-----------------------------|--------|-----------------|------------------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                     | Result | Reporting Limit | Analyzed               | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                    | 6480   | 16.0            | 06/22/2015             | ND           | 416 | 104        | 400           | 3.92 |           |
| Sample ID: LR 3-4 (H501579  | -21)   |                 |                        |              |     |            |               |      |           |
| Chloride, SM4500CI-B        | mg     | /kg             | Analyze                | d By: AP     |     |            |               |      |           |
| Analyte                     | Result | Reporting Limit | Analyzed               | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                    | 64.0   | 16.0            | 06/22/2015             | ND           | 416 | 104        | 400           | 3.92 |           |
| Sample ID: LR 3-5 (H501579- | -22)   |                 |                        |              |     |            |               |      |           |
| Chloride, SM4500CI-B        | mg     | /kg             | Analyze                | d By: AP     |     |            |               |      |           |
| Analyte                     | Result | Reporting Limit | Analyzed               | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                    | 32.0   | 16.0            | 06/22/2015             | ND           | 416 | 104        | 400           | 3.92 |           |
| Sample ID: LR 3-6 (H501579  | -23)   |                 |                        |              |     |            |               |      |           |
| Chloride, SM4500CI-B        | mg     | /kg             | Analyze                | d By: AP     |     |            |               |      |           |
| Analyte                     | Result | Reporting Limit | Analyzed               | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                    | 64.0   | 16.0            | 06/22/2015             | ND           | 416 | 104        | 400           | 3.92 |           |
| Sample ID: LR 3-7 (H501579  | -24)   |                 |                        |              |     |            |               |      |           |
| Chloride, SM4500Cl-B        | mg     | /kg             | Analyze                | d By: AP     |     |            |               |      |           |
| Analyte                     | Result | Reporting Limit |                        |              | DC. | 0/ D       | T 1/1 55      |      |           |
| Chloride                    | 496    | 16.0            | Analyzed<br>06/22/2015 | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                    | 430    | 10.0            | 00/22/2015             | ND           | 416 | 104        | 400           | 3.92 |           |

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

Fax To:

(505) 748-4635

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

06/23/2015

Sampling Type:

Soil

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number:

6/3/2015 RELEASE

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

### Sample ID: LR 3-8 (H501579-25)

| mg     | /kg   | Analyze   | d By: AP  |  | Office drawn discharge  |  |  |  |
|--------|---|---|---|--|---|--|--|--|
| Result | Reporting Limit   | Analyzed  | Method Blank  | BS   | % Recovery  | True Value QC  | RPD  | Qualifier  |
| 1100   | 16.0  | 06/22/2015  | ND  | 416  | 104   | 400  | 3.92   |  |
| -26)   |   |   |   |  |   |  |  |  |
| mg,    | /kg   | Analyze   | d By: AP  |  |   |  |  |  |
| Result | Reporting Limit   | Analyzed  | Method Blank  | BS   | % Recovery  | True Value QC  | RPD  | Qualifier  |
| 8400   | 16.0  | 06/22/2015  | ND  | 416  | 104   | 400  | 3.92   |  |
| 9-27)  |   |   |   |  |   |  |  |  |
| mg     | /kg   | Analyze   | d By: AP  | William Company  |   |  |  |  |
| Result | Reporting Limit   | Analyzed  | Method Blank  | BS   | % Recovery  | True Value QC  | RPD  | Qualifier  |
| 6800   | 16.0  | 06/22/2015  | ND  | 416  | 104   | 400  | 3.92   |  |
| 9-28)  |   |   |   |  |   |  |  |  |
| mg     | /kg   | Analyze   | d By: AP  |  |   |  |  |  |
| Result | Reporting Limit   | Analyzed  | Method Blank  | BS   | % Recovery  | True Value QC  | RPD  | Qualifier  |
| 8640   | 16.0  | 06/22/2015  | ND  | 416  | 104   | 400  | 3.92   |  |
| 9-29)  |   |   |   |  |   |  |  |  |
| mg     | /kg   | Analyze   | d By: AP  |  |   |  |  |  |
| Result | Reporting Limit   | Analyzed  | Method Blank  | BS   | % Recovery  | True Value QC  | RPD  | Qualifier  |
|        |   |   |   |  |   |  |  |  |
| •      | Result 1100 -26) mg Result 8400 9-27) mg Result 6800 9-28) mg Result 8640 | 1100 16.0  -26)  mg/kg  Result Reporting Limit  8400 16.0  9-27)  mg/kg  Result Reporting Limit  6800 16.0  9-28)  mg/kg  Result Reporting Limit  8640 16.0  9-29)  mg/kg | Result         Reporting Limit         Analyzed           1100         16.0         06/22/2015           -26)         mg/kg         Analyze           Result         Reporting Limit         Analyzed           8400         16.0         06/22/2015           9-27)         mg/kg         Analyze           Result         Reporting Limit         Analyzed           6800         16.0         06/22/2015           9-28)         mg/kg         Analyze           Result         Reporting Limit         Analyze           8640         16.0         06/22/2015           9-29)         mg/kg         Analyze | Result         Reporting Limit         Analyzed         Method Blank           1100         16.0         06/22/2015         ND           -26)           mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed         Method Blank           8400         16.0         06/22/2015         ND           9-27)         mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed         Method Blank           6800         16.0         06/22/2015         ND           9-28)         mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed         Method Blank           8640         16.0         06/22/2015         ND           9-29)         mg/kg         Analyzed By: AP | Result         Reporting Limit         Analyzed         Method Blank         BS           1100         16.0         06/22/2015         ND         416           -26)           mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed By: AP           Result         Reporting Limit         Analyzed         Method Blank         BS           6800         16.0         06/22/2015         ND         416           9-28)           mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed         Method Blank         BS           8640         16.0         06/22/2015         ND         416           9-29)           mg/kg         Analyzed By: AP | Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery           1100         16.0         06/22/2015         ND         416         104           -26)         mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed By: AP           Ng/kg         Analyzed By: AP | Result   Reporting Limit   Analyzed   Method Blank   BS   % Recovery   True Value QC | Result   Reporting Limit   Analyzed   Method Blank   BS   % Recovery   True Value QC   RPD |

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YATES PETROLEUM CORPORATION

AMBER CANNON 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

06/17/2015

Sampling Date:

06/15/2015

Reported:

06/23/2015

Sampling Type:

Soil

Project Name:

LIVINGSTON RIDGE SWD WATER LINE

Sampling Condition:

Cool & Intact

Project Number: Project Location:

6/3/2015 RELEASE EDDY COUNTY, NM

Sample Received By:

Jodi Henson

### Sample ID: LR 3-13 (H501579-30)

| Chloride, SM4500CI-B | mg,    | /kg             | Analyze    | d By: AP     |     |            |               |      | -         |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 7280   | 16.0            | 06/22/2015 | ND           | 416 | 104        | 400           | 3.92 |           |

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### **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

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## ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240

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

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Page 10 of 12

| City/State/Zip:   | Company Address:                      | Company Name                             | Project Manager: Amber Cannon |
|-------------------|---------------------------------------|--|-------------------------------|
| Artesia, NM 88210 | Company Address: 105 South 4th Street | Company Name Yates Petroleum Corporation | Amber Cannon                  |
|                   |                                       | 10                                       |                               |
| Project Loc:      | Froject #:                            |  | Project Name:                 |
| Eddy County       | 6/3/2015 Release                      | cringswith Nage SWD Water                | livingston Didgo OMD M.       |

Sampler Signature: (Linubea

Telephone No:

575-748-4111 or 575-513-8799

Fax No: e-mail:

575-748-4131

Report Format:

x Standard

TRRP 205-2020

NPDES

PO#:

|                           | varii Quisited by: | Selion ishad be                               | Relinquished by:  | No inquisined by:       | Deligation  | opecial Instructions: | /U LR 1-13      | 7 LR 1-12 | X LR 1-11  | LR 1-10   | 16 LV 1-8 | 1010      | S IR 1-8                           | 4 LR 1-7                                | 3 LR 1-6  | 0 K13     | <b>V</b>  | IR 1-4      | LAB # (lab use only)                                    |                     | ORDER# 土ひつつつ |               | ab use only) |                  |
|---------------------------|--------------------|---|---|-------------------------|---|-----------------------|-----------------|-----------|------------|-----------|-----------|-----------|------------------------------------|---|-----------|-----------|-----------|-------------|---|---------------------|--------------|---------------|--------------|------------------|
|                           | Date               |   | 0/17/15<br>Date   | Date                    |   | Page 1 of 3           |                 |           |            |           |           |           |                                    |   |           |           |           |             | ÖDE   |                     | 2            | 5             |              | LAN MUNICIPALITY |
|                           | Time               |   | Time  | Time                    |   |                       | ಭ               | 12        | 11'        | 10'       | œ         | α         | -                                  | 7.                                      | තු        | Q,        | 4         | E           | Beginning Depth   |                     |              |               |              | annon            |
|                           |                    | Č   | no no   | ne                      |   |                       | <u>سَ</u>       | 12        | - <u>;</u> | 10'       | ω,        | σô        | -                                  | 7,                                      | တ္        | Q.        | 4         | E           | inding Depth  | $\forall$           |              |               |              | 3                |
|                           | Received by ELOT:  | Control by.                                   | June  | Received by:            |   |                       | 6/15/2015       | 6/15/2015 | 6/15/2015  | 6/15/2015 | 6/15/2015 | 6/15/2015 | 0107/61/0                          | 6/46/2046                               | 6/15/2015 | 6/15/2015 | 6/15/2015 |             | Date Sampled  |                     |              |               |              |                  |
|                           |                    | 7   | ton   | 3                       |   |                       | 11:32 AM        | 11.23 AM  | 11:17 AM   | 11:14 AM  | 11:10 AM  | 11:06 AM  | 17:02 AM                           | 10.02 AW                                | 10-80 AM  | 10:45 AM  | 10:41 AM  |             | Fime Sampled  |                     |              |               |              | e-mail:          |
|                           |                    |   | 0   |                         |   | -                     | <u>.</u>        | _         |            |           | _7        |           | 1                                  | N                                       |           |           |           | TO STATE OF | eld Filtered<br>tal # of Containers                     |                     |              |               |              | (Q)              |
|                           |                    |   |   |                         |   | +                     | +               | $\dashv$  | +          | $\dashv$  |           |           | -                                  |   | 1         |           | 1200      | lo          |   | D                   |              |               |              | acannon@yate     |
|                           |                    |   |   | 1                       |   | H                     | +               | +         | +          | $\dashv$  | -         |           | $\vdash$                           | +                                       | +         | $\dashv$  |           | H           | NO₃   | Preservation & # of |              |               |              | JOL              |
|                           |                    |   |   | ı                       |   |                       | 1               | $\top$    | $\forall$  | $\forall$ |           |           | $\vdash$                           | +                                       | +         | $\dashv$  | -         | 1           | SO <sub>4</sub>   | ation               |              |               |              | 0                |
|                           |                    |   |   |                         |   |                       | T               |           |            |           |           | -         | T                                  | T                                       | $\dagger$ | $\dashv$  | -         | -           | эOН   | \$0<br>##           |              |               |              | ate              |
|                           |                    | -   |   | _                       |   | L                     | -               |           |            |           |           |           |                                    | T                                       | T         | 1         |           | -           | 3 <sub>2</sub> S <sub>2</sub> O <sub>3</sub>            |                     |              |               |              | dSc              |
|                           |                    |   | 0   |                         |   | L                     |                 |           |            |           |           |           |                                    | Ι                                       |           | 1         |           | No          | one   | Containers          |              |               |              | et               |
|                           | Date               | Date  | T   |                         |   | -                     | +               | _         |            |           |           |           |                                    |   |           | I         |           | Ot          | her ( Specify)  | SJS                 |              |               |              | 0                |
|                           |                    |   | 45  |                         |   | S                     | S               | U         | 0          | 0         | 0         | S         | S                                  | S                                       | C.        |           | 2         | GW          | =Drinking Water SL=Sludge<br>= Groundwater S=Soil/Solid | Matrix              |              |               |              | spetroleum com   |
|                           | Time               | Time  | 1   | 3                       |   | -                     | $\dagger$       | +         | +          | +         | +         | $\dashv$  | *********                          | +                                       | +         | +         | _         | NP=         | Non-Potable Specify Other I: 418.1 8015M 80             |                     |              | _             | _            | 3                |
|                           |                    |   | <u>~~</u> "   | L                       |   |                       |                 | T         | 1          | -         | $\forall$ | 1         | -                                  | $\vdash$                                | +         | +         | -         | TPH         |   | 151                 |              | 1             | I            |                  |
| Temperature Upon Receipt: |                    | Sample Hand Delivered<br>by Sampler/Client Re | Cus   | 50                      | San   |                       |                 |           |            | T         | 1         | 1         |                                    | 1                                       | 1         | 1         | -         | -           | ons (Ca, Mg, Na, K)                                     | -                   | 1            | 1             | ı            |                  |
| pera                      | by Courier?        | ple l   | tody<br>tody  | SF                      | orat  | L                     |                 |           |            |           |           |           | ************                       | T                                       | T         | 1         | -         | -           | ns (Cl, SO4, Alkalinity)                                | -                   | 7            |               | 1            |                  |
| ture                      | airuc              | Hand  | Sea   | Гее                     | Con   | _                     | _               |           |            |           |           | I         |                                    |   | T         | T         | ********* | -           | /ESP/CEC  | -                   | TOTAL        | 100           | 1            |                  |
| Upc                       | 3                  | er/C  | ntall<br>s or   | of H                    | Cor   |                       | 1               |           |            |           |           |           |                                    |   |           | T         | 1         | Meta        | ils: As Ag Ba Cd Cr Pb Hg                               |                     | +            | 1             |              |                  |
| n R                       | _ ·                | iver  | Custody seals on cont                                       | eads                    | as li   | -                     | 1               | 1         |            | _         | _         |           |                                    | *************************************** |           |           | ١         | /olai       | tiles   | 1                   | 1            | - la          |              |                  |
| ecei                      | UPS                | nple Hand Delivered by Sampler/Client Ren     | Custody seals on container(s) Custody seals on container(s) | VOCs Free of Headspace? | Laboratory Comments:<br>Sample Containers Intact? |                       | -               | +-        | +          | +         | _         | 1         |                                    |   |           |           | S         | Sem         | ivolatiles  | 7                   | +            | Alidiyze For. |              |                  |
| St.                       | 뮢                  | v Š   | er(s)   | e?                      | 2   |                       | -               | -         | -          | +         | +         | +         | _                                  | **********                              | _         | _         | E         | STE.        | X 8021B/5030 or BTEX 820                                | 30                  | T            | 2             |              |                  |
|                           | Ė                  |   |   |                         |   |                       | -               | +-        | +          | +         | +         | +         |                                    |   | _         | 1         | -         | RCI         | Market of Experience (e.g., 1945)                       | -                   |              |               |              |                  |
| 1                         | Fec                |   |   |                         |   | ×                     | ×               | ×         | ×          | ×         | +×        | +         |                                    | ~                                       |           | +         | -         | 1.0.1       | VIII.   |                     |              |               |              |                  |
|                           | Ď(-                | 3   | BB  | 191                     | 3)  | -                     | - Communication | Ť         | 1          | +         | £         | +         | $\stackrel{\checkmark}{\parallel}$ | ×                                       | ×         | ×         | -         | AR          | ides  | -                   |              | 1             |              |                  |
| 2000                      | FedEx Lone Star    | 00  |   |                         |   |                       |                 |           | T          | T         | +         | +         | +                                  |   | -         | +         | +         |             |   |                     |              | 1             |              |                  |
| റ്                        | Sts e              | 438   | zz  | Z                       | Z   |                       |                 |           |            | T         | +         | +         | +                                  | -                                       |           | +         | R         | US          | H TAT (Pre-Schedule) 24, 4                              | 0 ~                 |              | L             |              |                  |
|                           | =                  |   |   |                         |   | ×                     | ×               | ×         | ×          | 1×        | ×         | 1         | 7                                  | $\overline{}$                           | ~         | U         |           |             | dard TAT  | 0, 72               | nrs          |               |              |                  |

Sampler Signature:

Telephone No:

575-748-4111 or 575-513-8799

Fax No: e-mail:

575-748-4131

Report Format: X Standard

TRRP 205-2020

NPDES

PO #:

Project Loc:

**Eddy County** 

Limber Cannon

City/State/Zip:

Artesia, NM 88210

| K     | ARDINAL LA    | ARDINAL LABORATORIES  101 East Marland, Hobbs, NM 88240 |                                   | CHAIN OF CUSTOD | Y RECORD AN   | TODY RECORD AND ANALYSIS REQUEST 5 |
|-------|---------------|---|-----------------------------------|-----------------|---------------|------------------------------------|
| Ø     | 101 East Marl | 101 East Marland, Hobbs, NM 88240                       | (505) 393-2326 FAX (505) 393-2476 |                 |               | I1 o                               |
| Proje | ct Manager:   | Project Manager: Amber Cannon                           |                                   |                 |               |                                    |
| )     |               |   |                                   |                 | Project Name: | Livingston Ridge SWD Water Line    |
| Comp  | any Name      | Company Name Yates Petroleum Corporation                |                                   |                 | Project #:    | 6/3/2015 Release                   |
| Comp  | anv Address:  | Company Address: 105 South 4th Street                   |                                   |                 | 1             |                                    |

|                           | Relinquished by:                          | a second establishment | Chambon Services                                    | Relinquished by:        |                           | Special               | Special In | 37        | Ď c       |            | 36        |           | 7            | 14        | 13        |           |           | LAB # (lab use only)   | OX.0.EX #:      | Opportuny, | an ilea     |
|---------------------------|---|------------------------|---|-------------------------|---------------------------|-----------------------|------------|-----------|-----------|------------|-----------|-----------|--------------|-----------|-----------|-----------|-----------|--|-----------------|------------|-------------|
|                           | d by:                                     | 2 29.                  | mber lannon   | d by:                   |                           | Special instructions: | LR 2-13    | LR 2-12   | K 2-17    | LV 4-10    | LD 2 10   | ID 3 0    | IR 2-8       | LR 2-7    | LR 2-6    | LR 2-5    | LR 2-4    | FIELD CODE   | 1 91061         | THE STA    | BE          |
|                           | Date                                      | Date                   | Siltilo   | Date                    |                           | Page 2 of 3           |            |           |           |            |           |           |              |           |           |           |           | ODE  | 1               | )          |             |
|                           | Time                                      | lime                   |   | 11                      |                           |                       | 13         | 12"       |           | 10         | 9         | o,        | 2            | 7.        | oj.       | ΩĨ        | 4.        | Beginning Depth  | 1               |            |             |
|                           | ले  | ne                     |   | ime                     |                           |                       | 13'        | 12"       | 11        | 10'        | Θ         | 00        | 2            | 71        | oj.       | Ωĩ        | 4.        | Ending Depth   | 1               |            |             |
|                           | Received by ELOT:                         | Beceived by:           | Sauch   | Received by:            | )                         |                       | 6/15/2015  | 6/15/2015 | 6/15/2015 | 6/15/2015  | 6/15/2015 | 6/15/2015 | 0.010        | 6/15/2015 | 6/15/2015 | 6/15/2015 | 6/15/2015 | Date Sampled   |                 |            |             |
|                           |   | 7                      | (in the second                                      |                         |                           |                       | 12:28 PM   | 12:24 PM  | 12:20 PM  | 12:16 PM   | 12:12 PM  | 12:08 PM  | 141 1 00.71  | 12:03 PM  | 11:59 AM  | 11:53 AM  | 11:47 AM  | Time Sampled   |                 |            |             |
|                           |   |                        | 0   | ı                       |                           |                       |            |           |           | -          | _         |           | -            |           | _         |           |           | Field Filtered Total #. of Containers  |                 |            |             |
|                           |   |                        | J   | -                       |                           |                       |            |           |           |            |           | I         | İ            | 1         |           |           |           | Ice  | П               |            |             |
|                           |   |                        | P   | 1                       |                           |                       |            |           |           |            |           | _         |              |           |           |           |           | HNO₃   | Preservation    |            |             |
|                           |   |                        |   | 1                       |                           | ŀ                     | -          | -         |           |            | 1         | _         | $\perp$      | _         | _         |           |           | HCI  | watic           |            |             |
|                           |   |                        |   | 1                       |                           | -                     |            |           |           |            | -         | <u> </u>  | 1            | 4         | _         | _         |           | H₂SO₄  | 90              |            |             |
|                           |   |                        |   |                         |                           | ŀ                     |            |           | -         | -          | _         | _         | $\downarrow$ | _         | _         |           |           | NaOH   | # of            |            |             |
|                           |   | -                      | _   | 1                       |                           | ŀ                     | -          | *****     | -         | -          | ļ         | <u> </u>  | +            | _         | _         | _         |           | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>  | Containers      |            |             |
|                           |   |                        | 0   |                         |                           | 1                     | -          | -         |           | ********** | -         | -         | 1            | +         | _         | _         |           | None   | iner            |            |             |
| Cain                      | ato                                       | Date                   | 7 ale   |                         |                           | ŀ                     | -          |           | -         | -          | _         | -         | +            | +         | +         | _         | _         | Other ( Specify)   | S               |            |             |
|                           |   |                        | 9   |                         |                           | 1                     | S          | S         | S         | S          | S         | S         | S.           | 0         | 0         | 0         | - 1       | DW=Drinking Water SL=Sludge<br>GW = Groundwater S=Soil/Solid   | ×               |            |             |
|                           |   | h                      | A   | 1                       |                           | 1                     |            |           |           |            |           |           | 1            |           |           | "         |           | NP=Non-Potable Specify Other   | Matrix          |            |             |
| Time                      |   | Time                   | The second  | 1                       |                           |                       | T          |           |           | -          |           | -         | T            | +         | 1         | +         | -         | TPH: 418.1 8015M 80  | 151             | ТТ         | ٦           |
|                           |   | L                      | 9   | L                       |                           |                       |            |           |           |            |           |           | T            |           | $\top$    | $\top$    | 7         | TPH: TX 1005 TX 1006   |                 | П          | 1           |
| Terr                      |   | Sample Hand Delivered  | Cus   | 5                       | Sample Containers Intact? | עב                    |            |           |           |            |           |           | T            |           |           | 1         | 1         | Cations (Ca, Mg, Na, K)  | -               | П          | 1           |
| per                       | by Sampler<br>by Courier?                 | ple                    | Labels on container(s) Custody seals on cont        | SE                      | nple                      |                       |            |           |           |            |           |           | Γ            | T         |           |           | ,         | Anions (CI, SO4, Alkalinity)   | ٦,              |            | 1           |
| ature                     | ouri                                      | Han                    | on co   | 1ee                     | 00                        |                       |            |           |           |            |           |           |              |           |           | 7         | -         | SAR / ESP / CEC  | TOTAL           | TCLP:      | ı           |
| dD 6                      | es ler                                    | d D                    | als o   | of H                    | Itain                     | 3                     |            |           |           |            |           |           |              |           |           | 1         | 1         | Metals: As Ag Ba Cd Cr Pb Hg   | Marian Parings  | 11         |             |
| 3                         | _ Clier                                   | elive                  | iner<br>in co                                       | ead                     | ers                       |                       |            |           |           |            |           |           |              |           | T         | 1         | -         | /olatiles  |                 | H          | na          |
| Rece                      | by Sampler/Client Rep.<br>by Courier? UPS | Be de                  | (s)   | VOCs Free of Headspace? | Sample Containers Intact  |                       |            |           |           |            |           |           |              | T         |           |           | 5         | Semivolatiles  | +               | 1          | 570         |
| Temperature Upon Receipt: | Ö   | (5)                    | Labels on container(s) Custody seals on container(s | ce?                     | 017                       |                       |            | I         |           |            |           |           |              |           | T         | 1         | E         | BTEX 8021B/5030 or BTEX 826  | 60              |            | Analyze For |
|                           | PH-                                       |                        | s)  |                         |                           | L                     |            |           |           |            |           |           |              |           | T         | 1         | -         | RCI  |                 | Н          | -           |
| 1                         |   |                        |   |                         |                           | L                     |            |           |           |            |           |           |              |           |           | T         | N         | I.O.R.M.   |                 | $\dashv$   |             |
| 7                         | FedEx Lone Star                           |                        | DO  | ٨                       | 0                         | 2                     | < >        | < :       | ×         | ×          | ×         | ×         | ×            | ×         | <br> ×    | < >       | < 0       | Chlorides  |                 | $\dashv$   |             |
| 11                        | ×'O                                       | ` `                    | 99  | y                       | 3                         | L                     |            |           |           |            |           |           |              | $\prod$   | T         | T         | 5         | SAR  | -               |            | 1           |
| 2° 47                     | one                                       | AA                     | zz  |                         |                           | L                     | 1          |           |           |            |           |           |              |           |           |           |           | The state of the s | - Anglianian an |            | -           |
|                           | A Section                                 | O F                    | Man Man   | Acres .                 | -                         |                       | 1          |           |           | - 1        | - 1       |           |              | 1         |           | 1         |           | RUSH TAT (Pre-Schedule) 24, 4  | -               |            | -           |

NPDES

Page 12 of 12

RUSH TAT (Pre-Schedule) 24, 48, 72 hrs

Standard TAT

× × ×

× ×



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

January 06, 2016

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

FAX

RE: Livingston Ridge SWD Water Line

OrderNo.: 1512A77

### Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 10 sample(s) on 12/23/2015 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

andyl

Albuquerque, NM 87109

### **Analytical Report**

Lab Order: 1512A77

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/6/2016

|                   |   |        |        | STREET, STREET | Children Children Children Children |                   |
|-------------------|---|--------|--------|--|-------------------------------------|-------------------|
|                   | ates Petroleum Corpo<br>ivingston Ridge SWI |        |        | L  | ab Order: 1512A                     |                   |
| Lab ID:           | 1512A77-001                                 |        |        | Collection Date:   | : 12/16/2015 3:15:00 I              | PM                |
| Client Sample ID: | 15'   |        |        | Matrix:  | SOIL                                |                   |
| Analyses          |   | Result | RL Qua | al Units   | DF Date Analyzed                    | Batch ID          |
| EPA METHOD 300    | .0: ANIONS                                  |        |        |  | Ana                                 | alyst: <b>LGT</b> |
| Chloride          |   | 19000  | 750    | mg/Kg  | 500 12/30/2015 5:04:5               | 1 PM 23001        |
| Lab ID:           | 1512A77-002                                 |        |        | Collection Date:   | : 12/16/2015 3:25:00 1              | PM                |
| Client Sample ID: | 20'   |        |        | Matrix   | : SOIL                              |                   |
| Analyses          |   | Result | RL Qua | al Units   | DF Date Analyzed                    | Batch ID          |
| EPA METHOD 300    | .0: ANIONS                                  |        |        |  | An                                  | alyst: <b>LGT</b> |
| Chloride          |   | 11000  | 750    | mg/Kg  | 500 12/30/2015 5:17:1               | 5 PM 23001        |
| Lab ID:           | 1512A77-003                                 |        |        | Collection Date  | : 12/16/2015 3:35:00                | PM                |
| Client Sample ID: | 25'   |        |        | Matrix   | : SOIL                              |                   |
| Analyses          |   | Result | RL Qu  | al Units   | DF Date Analyzed                    | Batch ID          |
| EPA METHOD 300    | 0.0: ANIONS                                 |        |        |  | An                                  | alyst: <b>LGT</b> |
| Chloride          |   | 13000  | 750    | mg/Kg  | 500 12/30/2015 5:29:3               | 9 PM 23001        |
| Lab ID:           | 1512A77-004                                 |        |        | Collection Date  | : 12/16/2015 3:50:00                | PM                |
| Client Sample ID: | 30'   |        |        | Matrix   | : SOIL                              |                   |
| Analyses          |   | Result | RL Qu  | al Units   | DF Date Analyzed                    | Batch ID          |
| EPA METHOD 300    | 0.0: ANIONS                                 |        |        |  | An                                  | alyst: <b>LGT</b> |
| Chloride          |   | 3900   | 150    | mg/Kg  | 100 12/30/2015 5:42:0               | 3 PM 23001        |
| Lab ID:           | 1512A77-005                                 |        |        | Collection Date  | : 12/16/2015 4:05:00                | PM                |
| Client Sample ID: | 35'   |        |        | Matrix   | : SOIL                              |                   |
| Analyses          |   | Result | RL Qu  | al Units   | DF Date Analyzed                    | Batch ID          |
| EPA METHOD 300    | 0.0: ANIONS                                 |        |        |  | An                                  | alyst: <b>LGT</b> |
| Chloride          |   | 3500   | 150    | mg/Kg  | 100 12/30/2015 5:54:2               | 8 PM 23001        |

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

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 3
- P Sample pH Not In Range
- RL Reporting Detection Limit

### **Analytical Report**

Lab Order: 1512A77

Inc. Date Reported: 1/6/2016

| Hall Environmental Analys | sis Laboratory, Inc. |
|---------------------------|----------------------|
|---------------------------|----------------------|

CLIENT: Yates Petroleum Corporation Lab Order: 1512A77 Project: Livingston Ridge SWD Water Line Collection Date: 12/16/2015 4:25:00 PM Lab ID: 1512A77-006 Client Sample ID: Matrix: SOIL **RL Qual Units** Result DF Date Analyzed **Batch ID** Analyses **EPA METHOD 300.0: ANIONS** Analyst: LGT Chloride 2700 150 mg/Kg 100 12/30/2015 6:06:53 PM 23001 1512A77-007 Collection Date: 12/16/2015 4:41:00 PM Lab ID: Client Sample ID: 45' Matrix: SOIL **RL Qual Units DF** Date Analyzed Analyses Result **Batch ID EPA METHOD 300.0: ANIONS** Analyst: LGT Chloride 4100 150 100 12/30/2015 6:19:18 PM 23001 mg/Kg Lab ID: 1512A77-008 Collection Date: 12/17/2015 7:50:00 AM Client Sample ID: 50' Matrix: SOIL Result **RL Qual Units DF** Date Analyzed **Batch ID** Analyses **EPA METHOD 300.0: ANIONS** Analyst: LGT Chloride 4600 150 ma/Ka 100 12/30/2015 6:31:43 PM 23001 Lab ID: 1512A77-009 Collection Date: 12/17/2015 8:12:00 AM Client Sample ID: 55' Matrix: SOIL DF Date Analyzed Result **RL Qual Units** Batch ID **Analyses EPA METHOD 300.0: ANIONS** Analyst: LGT 12/30/2015 10:02:38 PM 23001 Chloride 260 30 mg/Kg Lab ID: 1512A77-010 Collection Date: 12/17/2015 8:55:00 AM Matrix: SOIL Client Sample ID: 60' Result RL Qual Units **DF** Date Analyzed **Batch ID Analyses EPA METHOD 300.0: ANIONS** Analyst: LGT 20 12/30/2015 10:15:02 PM 23001 Chloride 140 30 mg/Kg

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

### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 3
- P Sample pH Not In Range
- RL Reporting Detection Limit

### **QC SUMMARY REPORT**

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1512A77

06-Jan-16

Client:

Yates Petroleum Corporation

Project:

Livingston Ridge SWD Water Line

Sample ID MB-23001

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 23001

**PQL** 

1.5

RunNo: 31145

Prep Date: 12/29/2015

Analysis Date: 12/30/2015

SeqNo: 953296

Units: mg/Kg

HighLimit

**RPDLimit** 

Qual

Analyte Chloride

Result ND

Sample ID LCS-23001

SampType: LCS

PQL

1.5

TestCode: EPA Method 300.0: Anions

RunNo: 31145

Prep Date: 12/29/2015

LCSS

Batch ID: 23001 Analysis Date: 12/30/2015

Units: mg/Kg

SPK value SPK Ref Val %REC LowLimit

SeqNo: 953297

%REC LowLimit

**RPDLimit** 

Qual

Analyte

Client ID:

Result

93.4

%RPD

%RPD

0

HighLimit

110

Chloride

14

15.00

SPK value SPK Ref Val

90

### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Η
- Not Detected at the Reporting Limit ND
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- Analyte detected below quantitation limits
- Page 3 of 3

- 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

Yates Petroleum Corporat Work Order Number: 1512A77 Client Name: RcptNo: 1 Received by/date: Logged By: Lindsay Mangin 12/23/2015 9:40:00 AM Completed By: **Lindsay Mangin** 12/23/2015 10:37:19 AM 12/23/15 Reviewed By: Chain of Custody Yes No 🗔 Not Present 1. Custody seals intact on sample bottles? No [] 2. Is Chain of Custody complete? Yes Not Present [.] 3. How was the sample delivered? Courier Log In 4. Was an attempt made to cool the samples? Yes No I NA [] 5. Were all samples received at a temperature of >0° C to 6.0°C No [] NA [] No [] Sample(s) in proper container(s)? 7. Sufficient sample volume for indicated test(s)? No [] 8. Are samples (except VOA and ONG) properly preserved? Yes No 🖈 NA [] 9. Was preservative added to bottles? 10.VOA vials have zero headspace? Yes | No [ No VOA Vials Yes [] 11. Were any sample containers received broken? No 🖈 # of preserved bottles checked Yes No [] for pH: 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) (<2 or >12 unless noted) Adjusted? No 🗌 13. Are matrices correctly identified on Chain of Custody? No [ Yes 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? Yes 🐼 No L.] Checked by: (If no, notify customer for authorization.) Special Handling (if applicable) Yes 🗌 16. Was client notified of all discrepancies with this order? 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 Good Yes

| Slent                            | Yates P      | T-Cus           | Chain-or-Custody Record Yates Petroleum Corporation                                 | X Standard              | Rush                  |  |                   |                 | I A  | A F       | EN                                   | AR<br>S L      | AB O             | ME                      | HALL ENVIRONMENTAL<br>ANALYSIS LABORATORY | ٦,٢                  |
|----------------------------------|--------------|-----------------|---|-------------------------|-----------------------|--|-------------------|-----------------|--|-----------|--------------------------------------|----------------|------------------|-------------------------|---|----------------------|
|                                  |              |                 |   | Project Name:           |                       |  |                   |                 | ww   | w.hall    | www.hallenvironmental.com            | ment           | al.con           | _                       |   |                      |
| Wailing Address:                 | .ess:        |                 |   | Living                  | ston Ridge SI         | Livingston Ridge SWD Water Line  | - 64              | 1901 Hawkins NE | wkins  | N.        | Albuq                                | neudn          | e, NM            | - Albuquerque, NM 87109 |   |                      |
| 105 South 4th Street Artesia, NM | th Stree     | t Artesi        | ia, NM 88210  | Project #:              |                       |  |                   | Tel. 505        | 505-345-3975   | 3975      | ri<br>g                              | 505            | Fax 505-345-4107 | 1107                    |   | Michigan Calabana (A |
| Phone #:                         |              | 575-513         | 575-513-8799 or 575-748-4111  |                         | 2RP-3045              | 145  |                   | 100             | THE STATE OF THE S | Ā         | Analysis Request                     | Red            | nest             |                         |   |                      |
| email or Fax#:                   |              | agriffin@       | agriffin@yatespetroleum.com   | Project Manager.        | ger:                  |  | -                 |                 |  |           | os                                   | ,              | inecces-in-      |                         |   |                      |
| QA/QC Package:                   |              |                 |   |                         | Amber Griffin         |  | -                 |                 |  | d         | .,0q                                 |                |                  |                         |   |                      |
| ☐ Standard                       |              |                 | ☐ Level 4 (Full Validation)   |                         | PO # 205-2020         | -2020  |                   | 9) (B           |  |           | 10°                                  |                |                  |                         |   | (1                   |
| Accreditation:                   | <b>:</b>     | C               |   | Sampler:<br>On Ice:     | TY Yes                | Amber Griffin ‡(1)   | -                 | 3910            |  | 1 11      |                                      | -              | .,,,             | (A(                     |   | 0.10                 |
| D EDD (Type)                     | (e)          |                 |   | 1                       |                       | 4.8  | enterent of the   | )8 P            |  | -         |                                      |                |                  | 2Λ-Ι                    |   | 人) ·                 |
| Date                             | E            | Matrix          | Sample Request ID   | Container<br>Type and # | Preservativ<br>e Type | HEAL NO.<br>1512477  | FTEX + MT         | orlieM HqT      | TPH (Meth  | AN9) 01E8 | RCRA 8 Md<br>Aniona (F, <sup>C</sup> | ilse9 1808     | OV) 80828        | m92) 0728               |   | Air Bubble           |
| 12/16/2015                       | 3:15 Soil    | Soil            | 131   | 1 - 4oz.                | 1                     | 100-   |                   |                 |  |           | ×                                    |                |                  |                         |   |                      |
| 12/16/2015                       | 3-25 Soil    | Soil            | 20.   | 1 - 402.                | ,                     | -005   |                   |                 |  |           | _×                                   |                |                  |                         |   |                      |
| 12/16/2015                       | 3:35 Soil    | Soil            | 25'   | 1 - 4oz.                |                       | -002   |                   |                 |  |           | ×                                    |                |                  |                         |   |                      |
| 12/16/2015                       | 3:50 Soil    | Soil            | 30'   | 1 - 4oz.                |                       | -03  |                   |                 |  |           | ×                                    |                |                  |                         |   |                      |
| 12/16/2015                       | 4:05 Soil    | Soil            | 35.   | 1 - 402.                |                       | -08  |                   |                 |  |           | ×                                    |                |                  |                         |   | -                    |
| 12/16/2015                       | 4:25 Soil    | Soil            | 40.   | 1 - 402.                | •                     | -000-  |                   |                 |  |           | ×                                    |                |                  |                         | -   |                      |
| 12/16/2015                       | 4:41 Soil    | Soil            | 45.   | 1 - 4oz.                |                       | ±00-   |                   |                 |  |           | ×                                    |                |                  |                         |   |                      |
| 12/17/2015                       | 7:50 Soil    | Soil            | 50,   | 1 - 402.                |                       | - CS   |                   |                 |  |           | ×                                    |                | 1                | -                       | 1   |                      |
| 12/17/2015                       | 8:12 Soil    | Soil            | 55'   | 1 - 4oz.                |                       | - 250  |                   |                 |  |           | ×                                    |                | 1                |                         | 1   | $\exists$            |
| 12/17/2015                       | 8:55 Soil    | Soil            | .09   | 1 - 4oz.                | -                     | 00-  |                   |                 | $\dashv$   |           | ×                                    |                | $\dagger$        |                         | E I                                       |                      |
|                                  |              |                 |   |                         |                       |  | 03000000 (0500000 |                 | -  |           |                                      |                |                  |                         | +   |                      |
|                                  | Time:        | Refinquished by |   | Received by:            | \<br>\<br>\           | Date Time  | Remarks:          |                 | ions   | Chlo      | Anions: Chloride only.               | - <del>'</del> |                  |                         |   |                      |
| $\overline{\overline{\chi}}$     | 4            |                 | se Grightin   | 1                       | 2<br> 2               | 4  |                   |                 |  |           |                                      |                |                  |                         |   |                      |
| Date:                            | Time:        | Reinquished by. |   | Received by:            | 1                     | Date Time  |                   |                 |  |           |                                      |                |                  |                         |   |                      |
| I I                              | ecessary, st | ampes subn      | If necessary, samples submitted to Half Environmental may be subconfracted to other | ontracted to other at   | coredited laboratori  | er accredited laboratories. This serves as notice of this possibility. Any sub-contracted date will be clearly notated on the analytical report. | his possibility   | Any su          | o-contra   | sted date | will be o                            | carly no       | tated on         | the analyt              | Scal report.                              |                      |