

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

**RECEIVED**

By OCD District 1 at 10:30 am, Sep 16, 2015

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

## Release Notification and Corrective Action

<b>OPERATOR</b>		<input checked="" type="checkbox"/> Initial Report	<input type="checkbox"/> Final Report
Name of Company Yates Petroleum Corporation	Contact Amber Cannon		
Address 104 S. 4 <sup>th</sup> Street	Telephone No. 575-748-4111		
Facility Name Caravan State Unit #7H	Facility Type Well/Flow line		
Surface Owner State	Mineral Owner State	API No. 30-025-41655	

## LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	33	24S	33E	50	North	400	West	Lea

Latitude 32.1811 Longitude 103.58392

## NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 500 B/PW	Volume Recovered 450 B/PW
Source of Release 8 inch poly line	Date and Hour of Occurrence 9/8/2014; AM	Date and Hour of Discovery 9/8/2014; AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Tomas Oberding, PhD/NMOCD I	
By Whom? Robert Asher/Yates Petroleum Corporation	Date and Hour 9/8/2014; PM (Email)	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully. N/A

Describe Cause of Problem and Remedial Action Taken.

An 8 inch buried poly line broke, causing pipe failure and the release to occur. Valves and water transfer pumps were shut off; called vacuum truck(s) to recover fluid and roustabout/backhoe crew.

Describe Area Affected and Cleanup Action Taken.\*

An approximate area of 150' X 300' along the roadway and off of location was affected. The valves were closed and vacuum trucks were called to recover the released fluid. Roustabout crew was called to repair the buried poly line. Excavated soils will be hauled to a NMOCD approved facility. Vertical and horizontal delineation samples will be taken and analysis ran for TPH & BTEX (chlorides for documentation). If initial analytical results for TPH & BTEX are under RRAL's (site ranking is 0) a Final Report, C-141 will be submitted to the OCD requesting closure. If the analytical results are above the RRAL's a work plan will be submitted to the OCD. **Depth to Ground Water: > 100' (approximately 100-125', Section 33, T24S-R33E, per ChevronTexaco Trend Map), Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 0.**

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <u>Amber Cannon</u>		<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Amber Cannon		Approved by Environmental Specialist:	
Title: NM Environmental Regulatory Agent	Approval Date:	Expiration Date:	
E-mail Address: ACannon@yatespetroleum.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: September 16, 2014	Phone: 575-748-4111	2RP-	

MARTIN YATES, III

1912-1985

FRANK W. YATES

1936-1986

S.P. YATES

1914-2008



105 SOUTH FOURTH STREET  
ARTESIA, NEW MEXICO 88210-2118

TELEPHONE (575) 748-1471

www.yatespetroleum.com

JOHN A. YATES  
CHAIRMAN EMERITUS

JOHN A. YATES JR.  
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JOHN D. PERINI  
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CHIEF FINANCIAL OFFICER

JAMES S. BROWN  
CHIEF OPERATING OFFICER

March 4, 2015

Dr. Tomáš 'Doc' Oberding, PhD  
NMOCD District I  
1625 N. French Dr.  
Hobbs, NM 88240

**APPROVED**

**By OCD District 1 at 10:30 am, Sep 16, 2015**

Stipulations:

Ensure State Land Office concurrence/approval.

RE: Caravan State Unit #7H  
30-025-41655  
Section 33, T24S-R33E  
Lea County, New Mexico

Dr. Oberding,

Yates Petroleum Corporation would like to submit the following plan of work to you regarding the release that occurred at the above mentioned facility on September 8, 2014 (1RP-3332). The release was 500 barrels produced water, with 450 barrels of produced water recovered. The release occurred in a pasture along a lease road and pipeline right-of-way. I've attached a Google Earth map showing a GPS of the release area and approximate sample points.

Initial TPH/BTEX and Chloride delineation samples were taken and were sent to a NMOCD approved facility. The release area was split and sampled in fifteen (15) separate sections on 12/9/2014. Analytical results in sections Car N 1, Car N 3, Car N 4, Car N 7, and Car N 9 showed elevated chloride levels. As a result of the elevated chlorides, Yates completed further vertical delineation of these sections on 2/10/2015. All analytical results from the sampling events are attached for your review.

Based off vertical delineation of the release area, Yates proposes the following work:

- No excavation work to take place from sections Car N 2, Car N 5, Car N 6, Car N 8, Car N 11, Car N 12, Car S 1, Car S 2, or Car S 3.
- No further excavation to occur in section Car N 10. The soils that showed TPH levels above RRAL's in this section have already been excavated and hauled to a disposal facility.
- Excavate 3' from section Car N 4 and backfill with like soils.
- Excavate 3' from sections Car N 3, Car N 7, and Car N 9; lay a synthetic liner in the bottom of the excavation, and backfill with like soils.
- Excavate 3' from section Car N 1; lay a synthetic liner in the bottom of the excavation, and backfill with like soils. Further vertical delineation of this section was impracticable due to a rock layer, which was impenetrable after 30 minutes of scraping and trying to bust through with a trackhoe, that inhibited sampling past 12'. We spoke about this on the phone on

KATHY H. PORTER  
SECRETARY

DENNIS G. KINSEY  
TREASURER

2/23/2015 and you instructed me to not attempt to sample past this rock layer because we did not need to create a conduit for contaminant migration beneath the rock layer.

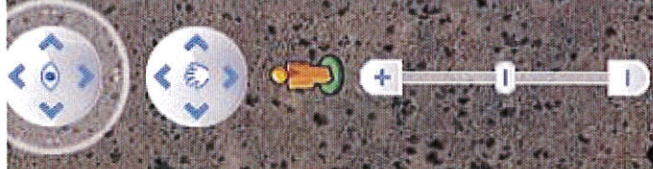
If you have any questions or concerns, I can be reached at (575) 748-4111 or by email at [acannon@yatespetroleum.com](mailto:acannon@yatespetroleum.com).

Thank You,



Amber Cannon  
Environmental Regulatory Agent  
Yates Petroleum Corporation





288 ft



# Caravan State Unit #7H

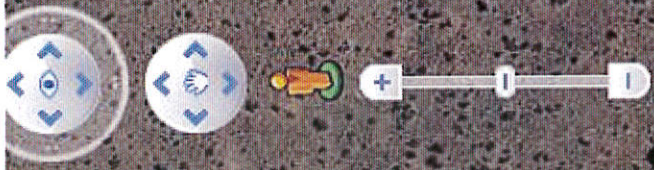
Analytical Report- H403781	Sample Area	Sample Date	Analytical Report	Sample Type	Depth	BTEX	GRO	DRO	TOTAL	Chlorides
Car N 1-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	5,200
Car N 1-2	Release area	12/9/2014	H403880	Grab/Backhoe	2'	-	-	-	-	5,200
Car N 1-3	Release area	12/9/2014	H403880	Grab/Backhoe	3'	-	-	-	-	8,080
Car N 1-4	Release area	12/9/2014	H403880	Grab/Backhoe	4'	-	-	-	-	5,120
Car N 1-6	Release area	2/10/2015	H500425	Grab/Trackhoe	6'	-	-	-	-	8,530
Car N 1-8	Release area	2/10/2015	H500425	Grab/Trackhoe	8'	-	-	-	-	10,000
Car N 1-10	Release area	2/10/2015	H500425	Grab/Trackhoe	10'	-	-	-	-	6,400
Car N 1-12	Release area	2/10/2015	H500425	Grab/Trackhoe	12'	-	-	-	-	13,700
Car N 2-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	ND
Car N 3-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	2,400
Car N 3-2	Release area	12/9/2014	H403880	Grab/Backhoe	2'	-	-	-	-	3,280
Car N 3-3	Release area	12/9/2014	H403880	Grab/Backhoe	3'	-	-	-	-	3,160
Car N 3-4	Release area	12/9/2014	H403880	Grab/Backhoe	4'	-	-	-	-	3,280
Car N 3-6	Release area	2/10/2015	H500425	Grab/Trackhoe	6'	-	-	-	-	2,600
Car N 3-8	Release area	2/10/2015	H500425	Grab/Trackhoe	8'	-	-	-	-	2,080
Car N 3-10	Release area	2/10/2015	H500425	Grab/Trackhoe	10'	-	-	-	-	480
Car N 4-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	4,960
Car N 4-2	Release area	12/9/2014	H403880	Grab/Backhoe	2'	-	-	-	-	4,560
Car N 4-3	Release area	12/9/2014	H403880	Grab/Backhoe	3'	-	-	-	-	5,360
Car N 4-4	Release area	12/9/2014	H403880	Grab/Backhoe	4'	-	-	-	-	1,090
Car N 4-6	Release area	2/10/2015	H500425	Grab/Trackhoe	6'	-	-	-	-	96
Car N 4-8	Release area	2/10/2015	H500425	Grab/Trackhoe	8'	-	-	-	-	176
Car N 4-10	Release area	2/10/2015	H500425	Grab/Trackhoe	10'	-	-	-	-	192
Car N 5-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	133	133	176
Car N 6-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	11.9	11.9	256
Car N 7-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	5,920
Car N 7-2	Release area	12/9/2014	H403880	Grab/Backhoe	2'	-	-	-	-	7,920
Car N 7-3	Release area	12/9/2014	H403880	Grab/Backhoe	3'	-	-	-	-	7,280
Car N 7-4	Release area	12/9/2014	H403880	Grab/Backhoe	4'	-	-	-	-	7,040
Car N 7-6	Release area	2/10/2015	H500425	Grab/Trackhoe	6'	-	-	-	-	3,720
Car N 7-8	Release area	2/10/2015	H500425	Grab/Trackhoe	8'	-	-	-	-	208
Car N 7-10	Release area	2/10/2015	H500425	Grab/Trackhoe	10'	-	-	-	-	240
Car N 8-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	96
Car N 9-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	5,680
Car N 9-2	Release area	12/9/2014	H403880	Grab/Backhoe	2'	-	-	-	-	8,720
Car N 9-3	Release area	12/9/2014	H403880	Grab/Backhoe	3'	-	-	-	-	9,120
Car N 9-4	Release area	12/9/2014	H403880	Grab/Backhoe	4'	-	-	-	-	6,960
Car N 9-6	Release area	2/10/2015	H500425	Grab/Trackhoe	6'	-	-	-	-	1,220
Car N 9-8	Release area	2/10/2015	H500425	Grab/Trackhoe	8'	-	-	-	-	240
Car N 10-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	1.90	235	4290	4525	32
Car N 10-2	Release area	12/9/2014	H403879	Grab/Backhoe	2'	-	98.6	5100	5198.6	-
Car N 10-3	Release area	12/9/2014	H403879	Grab/Backhoe	3'	-	ND	976	976	-
Car N 10-4	Release area	12/9/2014	H403879	Grab/Backhoe	4'	-	ND	191	191	-
Car N 11-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	ND
Car N 12-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	272
Car S 1-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	112
Car S 2-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	ND
Car S 3-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	96

Site Ranking is ZERO (0). Depth to Ground Water >100' (approx. 100-125', per ChevronTexaco trend map).

All results are ppm.Chlorides for documentation.

Released: 500 B/PW; Recovered: 450 B/PW. Release Date: 9/8/2014, 1RP-3332







Caravan State Unit #7H

Analytical Report- H403781	Sample Area	Sample Date	Analytical Report	Sample Type	Depth	BTEX	GRO	DRO	TOTAL	Chlorides
Car N 1-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	5,200
Car N 1-2	Release area	12/9/2014	H403880	Grab/Backhoe	2'	-	-	-	-	5,200
Car N 1-3	Release area	12/9/2014	H403880	Grab/Backhoe	3'	-	-	-	-	8,080
Car N 1-4	Release area	12/9/2014	H403880	Grab/Backhoe	4'	-	-	-	-	5,120
Car N 1-6	Release area	2/10/2015	H500425	Grab/Trackhoe	6'	-	-	-	-	8,530
Car N 1-8	Release area	2/10/2015	H500425	Grab/Trackhoe	8'	-	-	-	-	10,000
Car N 1-10	Release area	2/10/2015	H500425	Grab/Trackhoe	10'	-	-	-	-	6,400
Car N 1-12	Release area	2/10/2015	H500425	Grab/Trackhoe	12'	-	-	-	-	13,700
Car N 2-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	ND
Car N 3-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	2,400
Car N 3-2	Release area	12/9/2014	H403880	Grab/Backhoe	2'	-	-	-	-	3,280
Car N 3-3	Release area	12/9/2014	H403880	Grab/Backhoe	3'	-	-	-	-	3,160
Car N 3-4	Release area	12/9/2014	H403880	Grab/Backhoe	4'	-	-	-	-	3,280
Car N 3-6	Release area	2/10/2015	H500425	Grab/Trackhoe	6'	-	-	-	-	2,600
Car N 3-8	Release area	2/10/2015	H500425	Grab/Trackhoe	8'	-	-	-	-	2,080
Car N 3-10	Release area	2/10/2015	H500425	Grab/Trackhoe	10'	-	-	-	-	480
Car N 4-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	4,960
Car N 4-2	Release area	12/9/2014	H403880	Grab/Backhoe	2'	-	-	-	-	4,560
Car N 4-3	Release area	12/9/2014	H403880	Grab/Backhoe	3'	-	-	-	-	5,360
Car N 4-4	Release area	12/9/2014	H403880	Grab/Backhoe	4'	-	-	-	-	1,090
Car N 4-6	Release area	2/10/2015	H500425	Grab/Trackhoe	6'	-	-	-	-	96
Car N 4-8	Release area	2/10/2015	H500425	Grab/Trackhoe	8'	-	-	-	-	176
Car N 4-10	Release area	2/10/2015	H500425	Grab/Trackhoe	10'	-	-	-	-	192
Car N 5-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	133	133	176
Car N 6-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	11.9	11.9	256
Car N 7-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	5,920
Car N 7-2	Release area	12/9/2014	H403880	Grab/Backhoe	2'	-	-	-	-	7,920
Car N 7-3	Release area	12/9/2014	H403880	Grab/Backhoe	3'	-	-	-	-	7,280
Car N 7-4	Release area	12/9/2014	H403880	Grab/Backhoe	4'	-	-	-	-	7,040
Car N 7-6	Release area	2/10/2015	H500425	Grab/Trackhoe	6'	-	-	-	-	3,720
Car N 7-8	Release area	2/10/2015	H500425	Grab/Trackhoe	8'	-	-	-	-	208
Car N 7-10	Release area	2/10/2015	H500425	Grab/Trackhoe	10'	-	-	-	-	240
Car N 8-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	96
Car N 9-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	5,680
Car N 9-2	Release area	12/9/2014	H403880	Grab/Backhoe	2'	-	-	-	-	8,720
Car N 9-3	Release area	12/9/2014	H403880	Grab/Backhoe	3'	-	-	-	-	9,120
Car N 9-4	Release area	12/9/2014	H403880	Grab/Backhoe	4'	-	-	-	-	6,960
Car N 9-6	Release area	2/10/2015	H500425	Grab/Trackhoe	6'	-	-	-	-	1,220
Car N 9-8	Release area	2/10/2015	H500425	Grab/Trackhoe	8'	-	-	-	-	240
Car N 10-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	1.90	235	4290	4525	32
Car N 10-2	Release area	12/9/2014	H403879	Grab/Backhoe	2'	-	98.6	5100	5198.6	-
Car N 10-3	Release area	12/9/2014	H403879	Grab/Backhoe	3'	-	ND	976	976	-
Car N 10-4	Release area	12/9/2014	H403879	Grab/Backhoe	4'	-	ND	191	191	-
Car N 11-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	ND
Car N 12-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	272
Car S 1-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	112
Car S 2-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	ND
Car S 3-1	Release area	12/9/2014	H403781	Grab/Backhoe	1'	ND	ND	ND	ND	96

Site Ranking is ZERO (0). Depth to Ground Water >100' (approx. 100-125', per ChevronTexaco trend map).

All results are ppm.Chlorides for documentation.

Released: 500 B/PW; Recovered: 450 B/PW. Release Date: 9/8/2014, 1RP-3332



December 16, 2014

AMBER CANNON

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: CARAVAN STATE UNIT #7H

Enclosed are the results of analyses for samples received by the laboratory on 12/11/14 10:55.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	12/11/2014	Sampling Date:	12/09/2014
Reported:	12/16/2014	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	Cool & Intact
Project Number:	30-025-41655	Sample Received By:	Kathy Perez
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR N 1-1 (H403781-01)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/12/2014	ND	1.99	99.4	2.00	2.42		
Toluene*	<0.050	0.050	12/12/2014	ND	1.97	98.4	2.00	4.12		
Ethylbenzene*	<0.050	0.050	12/12/2014	ND	1.86	92.8	2.00	2.58		
Total Xylenes*	<0.150	0.150	12/12/2014	ND	5.55	92.5	6.00	1.84		
Total BTEX	<0.300	0.300	12/12/2014	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 99.9 % 61-154

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/12/2014	ND	188	94.0	200	4.00		
DRO >C10-C28	<10.0	10.0	12/12/2014	ND	200	99.8	200	3.72		

Surrogate: 1-Chlorooctane 79.7 % 47.2-157

Surrogate: 1-Chlorooctadecane 79.0 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received: 12/11/2014  
Reported: 12/16/2014  
Project Name: CARAVAN STATE UNIT #7H  
Project Number: 30-025-41655  
Project Location: 33-24S-33E, LEA

Sampling Date: 12/09/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: CAR N 2-1 (H403781-02)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/12/2014	ND	1.99	99.4	2.00	2.42	
Toluene*	<0.050	0.050	12/12/2014	ND	1.97	98.4	2.00	4.12	
Ethylbenzene*	<0.050	0.050	12/12/2014	ND	1.86	92.8	2.00	2.58	
Total Xylenes*	<0.150	0.150	12/12/2014	ND	5.55	92.5	6.00	1.84	
Total BTEX	<0.300	0.300	12/12/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 101 % 61-154

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/12/2014	ND	188	94.0	200	4.00	
DRO >C10-C28	<10.0	10.0	12/12/2014	ND	200	99.8	200	3.72	

Surrogate: 1-Chlorooctane 82.3 % 47.2-157

Surrogate: 1-Chlorooctadecane 80.5 % 52.1-176

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	12/11/2014	Sampling Date:	12/09/2014
Reported:	12/16/2014	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	Cool & Intact
Project Number:	30-025-41655	Sample Received By:	Kathy Perez
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR N 3-1 (H403781-03)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/12/2014	ND	1.99	99.4	2.00	2.42	
Toluene*	<0.050	0.050	12/12/2014	ND	1.97	98.4	2.00	4.12	
Ethylbenzene*	<0.050	0.050	12/12/2014	ND	1.86	92.8	2.00	2.58	
Total Xylenes*	<0.150	0.150	12/12/2014	ND	5.55	92.5	6.00	1.84	
Total BTEX	<0.300	0.300	12/12/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 97.7 % 61-154

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/12/2014	ND	188	94.0	200	4.00	
DRO >C10-C28	<10.0	10.0	12/12/2014	ND	200	99.8	200	3.72	

Surrogate: 1-Chlorooctane 86.8 % 47.2-157

Surrogate: 1-Chlorooctadecane 84.2 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received: 12/11/2014  
Reported: 12/16/2014  
Project Name: CARAVAN STATE UNIT #7H  
Project Number: 30-025-41655  
Project Location: 33-24S-33E, LEA

Sampling Date: 12/09/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: CAR N 4-1 (H403781-04)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/12/2014	ND	1.99	99.4	2.00	2.42	
Toluene*	<0.050	0.050	12/12/2014	ND	1.97	98.4	2.00	4.12	
Ethylbenzene*	<0.050	0.050	12/12/2014	ND	1.86	92.8	2.00	2.58	
Total Xylenes*	<0.150	0.150	12/12/2014	ND	5.55	92.5	6.00	1.84	
Total BTEX	<0.300	0.300	12/12/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 98.2 % 61-154

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/12/2014	ND	188	94.0	200	4.00	
DRO >C10-C28	<10.0	10.0	12/12/2014	ND	200	99.8	200	3.72	

Surrogate: 1-Chlorooctane 85.1 % 47.2-157

Surrogate: 1-Chlorooctadecane 83.0 % 52.1-176

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**Analytical Results For:**

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

Received: 12/11/2014  
Reported: 12/16/2014  
Project Name: CARAVAN STATE UNIT #7H  
Project Number: 30-025-41655  
Project Location: 33-24S-33E, LEA

Sampling Date: 12/09/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: CAR N 5-1 (H403781-05)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/12/2014	ND	1.99	99.4	2.00	2.42	
Toluene*	<0.050	0.050	12/12/2014	ND	1.97	98.4	2.00	4.12	
Ethylbenzene*	<0.050	0.050	12/12/2014	ND	1.86	92.8	2.00	2.58	
Total Xylenes*	<0.150	0.150	12/12/2014	ND	5.55	92.5	6.00	1.84	
Total BTEX	<0.300	0.300	12/12/2014	ND					

Surrogate: 4-Bromofluorobenzene (PII) 99.1 % 61-154

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/12/2014	ND	188	94.0	200	4.00	
DRO >C10-C28	133	10.0	12/12/2014	ND	200	99.8	200	3.72	

Surrogate: 1-Chlorooctane 91.6 % 47.2-157

Surrogate: 1-Chlorooctadecane 92.1 % 52.1-176

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**Analytical Results For:**

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

Received: 12/11/2014  
Reported: 12/16/2014  
Project Name: CARAVAN STATE UNIT #7H  
Project Number: 30-025-41655  
Project Location: 33-24S-33E, LEA

Sampling Date: 12/09/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: CAR N 6-1 (H403781-06)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/12/2014	ND	1.99	99.4	2.00	2.42	
Toluene*	<0.050	0.050	12/12/2014	ND	1.97	98.4	2.00	4.12	
Ethylbenzene*	<0.050	0.050	12/12/2014	ND	1.86	92.8	2.00	2.58	
Total Xylenes*	<0.150	0.150	12/12/2014	ND	5.55	92.5	6.00	1.84	
Total BTEX	<0.300	0.300	12/12/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.7 % 61-154

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/12/2014	ND	188	94.0	200	4.00	
DRO >C10-C28	11.9	10.0	12/12/2014	ND	200	99.8	200	3.72	

Surrogate: 1-Chlorooctane 87.4 % 47.2-157

Surrogate: 1-Chlorooctadecane 85.5 % 52.1-176

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

Received:	12/11/2014	Sampling Date:	12/09/2014
Reported:	12/16/2014	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	Cool & Intact
Project Number:	30-025-41655	Sample Received By:	Kathy Perez
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR N 7-1 (H403781-07)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/12/2014	ND	1.99	99.4	2.00	2.42	
Toluene*	<0.050	0.050	12/12/2014	ND	1.97	98.4	2.00	4.12	
Ethylbenzene*	<0.050	0.050	12/12/2014	ND	1.86	92.8	2.00	2.58	
Total Xylenes*	<0.150	0.150	12/12/2014	ND	5.55	92.5	6.00	1.84	
Total BTEX	<0.300	0.300	12/12/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 103 % 61-154

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/12/2014	ND	188	94.0	200	4.00	
DRO >C10-C28	<10.0	10.0	12/12/2014	ND	200	99.8	200	3.72	

Surrogate: 1-Chlorooctane 86.3 % 47.2-157

Surrogate: 1-Chlorooctadecane 85.4 % 52.1-176

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

Received:	12/11/2014	Sampling Date:	12/09/2014
Reported:	12/16/2014	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	Cool & Intact
Project Number:	30-025-41655	Sample Received By:	Kathy Perez
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR N 8-1 (H403781-08)**

BTX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/12/2014	ND	1.99	99.4	2.00	2.42	
Toluene*	<0.050	0.050	12/12/2014	ND	1.97	98.4	2.00	4.12	
Ethylbenzene*	<0.050	0.050	12/12/2014	ND	1.86	92.8	2.00	2.58	
Total Xylenes*	<0.150	0.150	12/12/2014	ND	5.55	92.5	6.00	1.84	
Total BTX	<0.300	0.300	12/12/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 61-154

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/12/2014	ND	188	94.0	200	4.00	
DRO >C10-C28	<10.0	10.0	12/12/2014	ND	200	99.8	200	3.72	

Surrogate: 1-Chlorooctane 84.9 % 47.2-157

Surrogate: 1-Chlorooctadecane 81.0 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager



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

Received: 12/11/2014  
Reported: 12/16/2014  
Project Name: CARAVAN STATE UNIT #7H  
Project Number: 30-025-41655  
Project Location: 33-24S-33E, LEA

Sampling Date: 12/09/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: CAR N 9-1 (H403781-09)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/12/2014	ND	1.99	99.4	2.00	2.42	
Toluene*	<0.050	0.050	12/12/2014	ND	1.97	98.4	2.00	4.12	
Ethylbenzene*	<0.050	0.050	12/12/2014	ND	1.86	92.8	2.00	2.58	
Total Xylenes*	<0.150	0.150	12/12/2014	ND	5.55	92.5	6.00	1.84	
Total BTEX	<0.300	0.300	12/12/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 61-154

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/12/2014	ND	188	94.0	200	4.00	
DRO >C10-C28	<10.0	10.0	12/12/2014	ND	200	99.8	200	3.72	

Surrogate: 1-Chlorooctane 87.4 % 47.2-157

Surrogate: 1-Chlorooctadecane 84.8 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 12/11/2014  
Reported: 12/16/2014  
Project Name: CARAVAN STATE UNIT #7H  
Project Number: 30-025-41655  
Project Location: 33-24S-33E, LEA

Sampling Date: 12/09/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: CAR N 10-1 (H403781-10)**

BTEX 8021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/13/2014	ND	1.99	99.4	2.00	2.42	
Toluene*	<b>0.077</b>	0.050	12/13/2014	ND	1.97	98.4	2.00	4.12	
Ethylbenzene*	<b>0.339</b>	0.050	12/13/2014	ND	1.86	92.8	2.00	2.58	
Total Xylenes*	<b>1.48</b>	0.150	12/13/2014	ND	5.55	92.5	6.00	1.84	
Total BTEX	<b>1.90</b>	0.300	12/13/2014	ND					

Surrogate: 4-Bromofluorobenzene (PII) 120 % 61-154

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<b>235</b>	10.0	12/12/2014	ND	188	94.0	200	4.00	
DRO >C10-C28	<b>4290</b>	10.0	12/12/2014	ND	200	99.8	200	3.72	

Surrogate: 1-Chlorooctane 122 % 47.2-157

Surrogate: 1-Chlorooctadecane 119 % 52.1-176

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

Received:	12/11/2014	Sampling Date:	12/09/2014
Reported:	12/16/2014	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	Cool & Intact
Project Number:	30-025-41655	Sample Received By:	Kathy Perez
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR N 11-1 (H403781-11)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/15/2014	ND	1.90	95.1	2.00	3.04	
Toluene*	<0.050	0.050	12/15/2014	ND	1.88	93.8	2.00	0.356	
Ethylbenzene*	<0.050	0.050	12/15/2014	ND	1.79	89.5	2.00	0.736	
Total Xylenes*	<0.150	0.150	12/15/2014	ND	5.39	89.9	6.00	0.413	
Total BTEX	<0.300	0.300	12/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.0 % 61-154

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/12/2014	ND	188	94.0	200	4.00	
DRO >C10-C28	<10.0	10.0	12/12/2014	ND	200	99.8	200	3.72	

Surrogate: 1-Chlorooctane 85.6 % 47.2-157

Surrogate: 1-Chlorooctadecane 84.7 % 52.1-176

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**Analytical Results For:**

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

Received: 12/11/2014  
Reported: 12/16/2014  
Project Name: CARAVAN STATE UNIT #7H  
Project Number: 30-025-41655  
Project Location: 33-24S-33E, LEA

Sampling Date: 12/09/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: CAR N 12-1 (H403781-12)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/15/2014	ND	1.90	95.1	2.00	3.04	
Toluene*	<0.050	0.050	12/15/2014	ND	1.88	93.8	2.00	0.356	
Ethylbenzene*	<0.050	0.050	12/15/2014	ND	1.79	89.5	2.00	0.736	
Total Xylenes*	<0.150	0.150	12/15/2014	ND	5.39	89.9	6.00	0.413	
Total BTEX	<0.300	0.300	12/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 61-154

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/12/2014	ND	188	94.0	200	4.00	
DRO >C10-C28	<10.0	10.0	12/12/2014	ND	200	99.8	200	3.72	

Surrogate: 1-Chlorooctane 83.9 % 47.2-157

Surrogate: 1-Chlorooctadecane 81.1 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received: 12/11/2014  
Reported: 12/16/2014  
Project Name: CARAVAN STATE UNIT #7H  
Project Number: 30-025-41655  
Project Location: 33-24S-33E, LEA

Sampling Date: 12/09/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: CAR S 1-1 (H403781-13)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/15/2014	ND	1.90	95.1	2.00	3.04	
Toluene*	<0.050	0.050	12/15/2014	ND	1.88	93.8	2.00	0.356	
Ethylbenzene*	<0.050	0.050	12/15/2014	ND	1.79	89.5	2.00	0.736	
Total Xylenes*	<0.150	0.150	12/15/2014	ND	5.39	89.9	6.00	0.413	
Total BTEX	<0.300	0.300	12/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PI) 102 % 61-154

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/12/2014	ND	188	94.0	200	4.00	
DRO >C10-C28	<10.0	10.0	12/12/2014	ND	200	99.8	200	3.72	

Surrogate: 1-Chlorooctane 86.9 % 47.2-157

Surrogate: 1-Chlorooctadecane 83.9 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/11/2014	Sampling Date:	12/09/2014
Reported:	12/16/2014	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	Cool & Intact
Project Number:	30-025-41655	Sample Received By:	Kathy Perez
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR S 2-1 (H403781-14)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/15/2014	ND	1.90	95.1	2.00	3.04	
Toluene*	<0.050	0.050	12/15/2014	ND	1.88	93.8	2.00	0.356	
Ethylbenzene*	<0.050	0.050	12/15/2014	ND	1.79	89.5	2.00	0.736	
Total Xylenes*	<0.150	0.150	12/15/2014	ND	5.39	89.9	6.00	0.413	
Total BTEX	<0.300	0.300	12/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 103 % 61-154

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/12/2014	ND	188	94.0	200	4.00	
DRO >C10-C28	<10.0	10.0	12/12/2014	ND	200	99.8	200	3.72	

Surrogate: 1-Chlorooctane 88.0 % 47.2-157

Surrogate: 1-Chlorooctadecane 83.7 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received: 12/11/2014  
Reported: 12/16/2014  
Project Name: CARAVAN STATE UNIT #7H  
Project Number: 30-025-41655  
Project Location: 33-24S-33E, LEA

Sampling Date: 12/09/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: CAR S 3-1 (H403781-15)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/15/2014	ND	1.90	95.1	2.00	3.04	
Toluene*	<0.050	0.050	12/15/2014	ND	1.88	93.8	2.00	0.356	
Ethylbenzene*	<0.050	0.050	12/15/2014	ND	1.79	89.5	2.00	0.736	
Total Xylenes*	<0.150	0.150	12/15/2014	ND	5.39	89.9	6.00	0.413	
Total BTEX	<0.300	0.300	12/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 61-154

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/12/2014	ND	188	94.0	200	4.00	
DRO >C10-C28	<10.0	10.0	12/12/2014	ND	200	99.8	200	3.72	

Surrogate: 1-Chlorooctane 87.5 % 47.2-157

Surrogate: 1-Chlorooctadecane 83.7 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager





ARDINAL LABORATORIES  
101 East Marland, Hobbs, NM 88240

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Amber Cannon

Company (505) 393-2326 Yates Petroleum Corporation

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4111 or 575-513-8799

Sampler Signature: *Amber Cannon*

e-mail:

[acannon@yatespetroleum.com](mailto:acannon@yatespetroleum.com)

Project Name: Caravan State Unit #7H

Project #: 30-025-41655

Project Loc: 33-24S-33E, Lea

PO #: 205-2020

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(see only)

ORDER #: *H403781*

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice	HNO <sub>3</sub>	HCl	H <sub>2</sub> SO <sub>4</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None	Other (Specify)	DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Matrix	TPH: 418.1 8015M <b>8015B</b>	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO <sub>4</sub> , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	SAR	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT			
1	Car N 1-1	1'	1'	12/9/2014			1	X								S	X																		
2	Car N 2-1	1'	1'	12/9/2014			1	X								S	X																		
3	Car N 3-1	1'	1'	12/9/2014			1	X								S	X																		
4	Car N 4-1	1'	1'	12/9/2014			1	X								S	X																		
5	Car N 5-1	1'	1'	12/9/2014			1	X								S	X																		
6	Car N 6-1	1'	1'	12/9/2014			1	X								S	X																		
7	Car N 7-1	1'	1'	12/9/2014			1	X								S	X																		
8	Car N 8-1	1'	1'	12/9/2014			1	X								S	X																		
9	Car N 9-1	1'	1'	12/9/2014			1	X								S	X																		
10	Car N 10-1	1'	1'	12/9/2014			1	X								S	X																		

Special Instructions:

TPH: 8015B, BTEX: 8021B. Please show BTEX results as mg/kg. Please put chlorides on a separate report. Thank you.

Relinquished by:

*Amber Cannon*

Date

12/11/14

Time

Received by:

*James Jones*

Date

12/11/14

Time

10:55

Relinquished by:

Date

Time

Laboratory Comments:

Sample Containers Intact?

VOCs Free of Headspace?

Labels on container(s)

Custody seals on container(s)

Custody seals on cooler(s)

Sample Hand Delivered

by Courier?

UPS

DHL

FedEx

Lone Star

Temperature Upon Receipt:

5.4

°C





# ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

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

## CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Amber Cannon

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4111 or 575-513-8799

Sample Signature: Amber Cannon

Order #: H403781

(see only)

Fax No: 575-748-4131

e-mail: acannon@yatespetroleum.com

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

PO #: 205-2020

Project Name: Caravan State Unit #7H

Project #: 30-025-41655

Project Loc: 33-24S-33E, Lea

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice	HNO <sub>3</sub>	HCl	H <sub>2</sub> SO <sub>4</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None	Other (Specify)	DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO <sub>4</sub> , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	SAR	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT	
11	Car N 11-1	1'	1'	12/9/2014			1	X								S	X															X
12	Car N 12-1	1'	1'	12/9/2014			1	X								S	X															X
13	Car S 1-1	1'	1'	12/9/2014			1	X								S	X															X
14	Car S 2-1	1'	1'	12/9/2014			1	X								S	X															X
15	Car S 3-1	1'	1'	12/9/2014			1	X								S	X															X

Special Instructions: **TPH: 8015B, BTEX: 8021B.** Please show BTEX results as mg/kg. **Please put chlorides on a**

**separate report.** Thank you.

Relinquished by: Amber Cannon Date: 12/11/14 Time: 10:55

Relinquished by: Amber Cannon Date: 12/11/14 Time: 10:55

Relinquished by: Amber Cannon Date: 12/11/14 Time: 10:55

Laboratory Comments: **Sample Containers Intact?** ☒ **VOCs Free of Headspace?** ☒ **Labels on container(s)?** ☒ **Custody seals on container(s)?** ☒ **Custody seals on cooler(s)?** ☒ **Sample Hand-Delivered by Sampler/Client Rep.?** ☒ **by Courier?** ☐ **UPS** ☐ **DHL** ☐ **FedEx** ☐ **Lone Star** ☐ **Temperature Upon Receipt:** 54 °C





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

December 16, 2014

AMBER CANNON

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: CARAVAN STATE UNIT #7H

Enclosed are the results of analyses for samples received by the laboratory on 12/11/14 10:55.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 12/11/2014  
Reported: 12/16/2014  
Project Name: CARAVAN STATE UNIT #7H  
Project Number: 30-025-41655  
Project Location: 33-24S-33E, LEA

Sampling Date: 12/09/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: CAR N 1-1 (H403781-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5200	16.0	12/12/2014	ND	400	100	400	0.00	

**Sample ID: CAR N 2-1 (H403781-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/12/2014	ND	400	100	400	0.00	

**Sample ID: CAR N 3-1 (H403781-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2400	16.0	12/12/2014	ND	400	100	400	0.00	

**Sample ID: CAR N 4-1 (H403781-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4960	16.0	12/12/2014	ND	400	100	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	12/11/2014	Sampling Date:	12/09/2014
Reported:	12/16/2014	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	Cool & Intact
Project Number:	30-025-41655	Sample Received By:	Kathy Perez
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR N 5-1 (H403781-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	12/12/2014	ND	400	100	400	0.00		

**Sample ID: CAR N 6-1 (H403781-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	12/12/2014	ND	400	100	400	0.00	

**Sample ID: CAR N 7-1 (H403781-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5920	16.0	12/12/2014	ND	400	100	400	0.00		

**Sample ID: CAR N 8-1 (H403781-08)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	12/12/2014	ND	400	100	400	0.00		

**Sample ID: CAR N 9-1 (H403781-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5680	16.0	12/12/2014	ND	400	100	400	0.00		

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/11/2014	Sampling Date:	12/09/2014
Reported:	12/16/2014	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	Cool & Intact
Project Number:	30-025-41655	Sample Received By:	Kathy Perez
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR N 10-1 (H403781-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/12/2014	ND	400	100	400	0.00	

**Sample ID: CAR N 11-1 (H403781-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/12/2014	ND	400	100	400	0.00	

**Sample ID: CAR N 12-1 (H403781-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	12/12/2014	ND	400	100	400	0.00	

**Sample ID: CAR S 1-1 (H403781-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	12/12/2014	ND	400	100	400	0.00	

**Sample ID: CAR S 2-1 (H403781-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/12/2014	ND	400	100	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	12/11/2014	Sampling Date:	12/09/2014
Reported:	12/16/2014	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	Cool & Intact
Project Number:	30-025-41655	Sample Received By:	Kathy Perez
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR S 3-1 (H403781-15)**

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	12/12/2014	ND	400	100	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager





ARDINAL LABORATORIES  
101 East Marland, Hobbs, NM 88240

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Amber Cannon

Company: (505) 393-2326 Yates Petroleum Corporation

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4111 or 575-513-8799

Sampler Signature: Amber Cannon

e-mail: acannon@yatespetroleum.com

Fax No: 575-748-4131

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Project Name: Caravan State Unit #7H  
Project #: 30-025-41655

Project Loc: 33-24S-33E, Lea

PO #: 205-2020

(lab use only)

ORDER #: 4403781

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice	HNO <sub>3</sub>	HCl	H <sub>2</sub> SO <sub>4</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None	Other (Specify)	DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1 8015M	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO <sub>4</sub> , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	SAR	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
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Car N 1-1	1'	1'	12/9/2014				1	X								S	X															X
Car N 2-1	1'	1'	12/9/2014				1	X								S	X															X
Car N 3-1	1'	1'	12/9/2014				1	X								S	X															X
Car N 4-1	1'	1'	12/9/2014				1	X								S	X															X
Car N 5-1	1'	1'	12/9/2014				1	X								S	X															X
Car N 6-1	1'	1'	12/9/2014				1	X								S	X															X
Car N 7-1	1'	1'	12/9/2014				1	X								S	X															X
Car N 8-1	1'	1'	12/9/2014				1	X								S	X															X
Car N 9-1	1'	1'	12/9/2014				1	X								S	X															X
Car N 10-1	1'	1'	12/9/2014				1	X								S	X															X

Special Instructions: **TPH: 8015B, BTEX: 8021B.** Please show BTEX results as mg/kg. **Please put chlorides on a separate report.** Thank you.

Relinquished by: <u>Amber Cannon</u>	Date: <u>12/11/14</u>	Time: <u>12:11:14</u>	Received by: <u>Janet Lane</u>	Date: <u>12/11/14</u>	Time: <u>10:55</u>
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Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
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Laboratory Comments:  
Sample Containers Intact? ☒  
VOCs Free of Headspace? ☒  
Labels on container(s) ☒  
Custody seals on container(s) ☒  
Custody seals on cooler(s) ☒  
Sample Hand Delivered by Sample Client Rep. ?  
by Courier? ☐ UPS ☐ DHL ☐ FedEx ☐ Lone Star

Temperature Upon Receipt: 5.4 °C

5.4





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

Page 8 of 8



December 23, 2014

AMBER CANNON

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: CARAVAN STATE UNIT #7H

Enclosed are the results of analyses for samples received by the laboratory on 12/18/14 16:11.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/18/2014	Sampling Date:	12/09/2014
Reported:	12/23/2014	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	** (See Notes)
Project Number:	30-025-41655	Sample Received By:	Kathy Perez
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR N 1-2 (H403880-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5200	16.0	12/22/2014	ND	416	104	400	3.92	

**Sample ID: CAR N 1-3 (H403880-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8080	16.0	12/22/2014	ND	416	104	400	3.92	

**Sample ID: CAR N 1-4 (H403880-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5120	16.0	12/22/2014	ND	416	104	400	3.92	

**Sample ID: CAR N 3-2 (H403880-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3280	16.0	12/22/2014	ND	416	104	400	3.92	

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received: 12/18/2014  
Reported: 12/23/2014  
Project Name: CARAVAN STATE UNIT #7H  
Project Number: 30-025-41655  
Project Location: 33-24S-33E, LEA

Sampling Date: 12/09/2014  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Kathy Perez

**Sample ID: CAR N 3-3 (H403880-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3160	16.0	12/22/2014	ND	416	104	400	3.92	

**Sample ID: CAR N 3-4 (H403880-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3280	16.0	12/22/2014	ND	416	104	400	3.92	

**Sample ID: CAR N 4-2 (H403880-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4560	16.0	12/22/2014	ND	416	104	400	3.92	

**Sample ID: CAR N 4-3 (H403880-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5360	16.0	12/22/2014	ND	416	104	400	3.92	

**Sample ID: CAR N 4-4 (H403880-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1090	16.0	12/22/2014	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 12/18/2014  
Reported: 12/23/2014  
Project Name: CARAVAN STATE UNIT #7H  
Project Number: 30-025-41655  
Project Location: 33-24S-33E, LEA

Sampling Date: 12/09/2014  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Kathy Perez

**Sample ID: CAR N 7-2 (H403880-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7920	16.0	12/22/2014	ND	416	104	400	3.92	

**Sample ID: CAR N 7-3 (H403880-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7280	16.0	12/22/2014	ND	416	104	400	3.92	

**Sample ID: CAR N 7-4 (H403880-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7040	16.0	12/22/2014	ND	416	104	400	3.92	

**Sample ID: CAR N 9-2 (H403880-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8720	16.0	12/22/2014	ND	416	104	400	3.92	

**Sample ID: CAR N 9-3 (H403880-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9120	16.0	12/22/2014	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received: 12/18/2014  
Reported: 12/23/2014  
Project Name: CARAVAN STATE UNIT #7H  
Project Number: 30-025-41655  
Project Location: 33-24S-33E, LEA

Sampling Date: 12/09/2014  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Kathy Perez

**Sample ID: CAR N 9-4 (H403880-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6960	16.0	12/22/2014	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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RPD	Relative Percent Difference
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***	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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---

Celey D. Keene, Lab Director/Quality Manager











December 23, 2014

AMBER CANNON

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: CARAVAN STATE UNIT #7H

Enclosed are the results of analyses for samples received by the laboratory on 12/18/14 16:11.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/18/2014	Sampling Date:	12/09/2014
Reported:	12/23/2014	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	Cool & Intact
Project Number:	30-025-41655	Sample Received By:	Kathy Perez
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR N 10-2 (H403879-01)**

TPH 8015M	mg/kg	Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	98.6	10.0	12/22/2014	ND	191	95.3	200	4.92	
DRO >C10-C28	5100	10.0	12/22/2014	ND	204	102	200	1.30	
<i>Surrogate: 1-Chlorooctane</i>									
	109 %	47.2-157							
<i>Surrogate: 1-Chlorooctadecane</i>									
	125 %	52.1-176							

**Sample ID: CAR N 10-3 (H403879-02)**

TPH 8015M	mg/kg	Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/23/2014	ND	183	91.3	200	0.177	
DRO >C10-C28	976	10.0	12/23/2014	ND	195	97.4	200	2.52	
<i>Surrogate: 1-Chlorooctane</i>									
	86.5 %	47.2-157							
<i>Surrogate: 1-Chlorooctadecane</i>									
	93.0 %	52.1-176							

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	12/18/2014	Sampling Date:	12/09/2014
Reported:	12/23/2014	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	Cool & Intact
Project Number:	30-025-41655	Sample Received By:	Kathy Perez
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR N 10-4 (H403879-03)**

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/23/2014	ND	183	91.3	200	0.177	
<b>DRO &gt;C10-C28</b>	<b>191</b>	10.0	12/23/2014	ND	195	97.4	200	2.52	
<hr/>									
Surrogate: 1-Chlorooctane	89.4 %	47.2-157							
Surrogate: 1-Chlorooctadecane	91.1 %	52.1-176							

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





February 19, 2015

AMBER CANNON

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: CARAVAN STATE UNIT #7H

Enclosed are the results of analyses for samples received by the laboratory on 02/13/15 11:10.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/13/2015	Sampling Date:	02/10/2015
Reported:	02/19/2015	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	** (See Notes)
Project Number:	1RP-3332	Sample Received By:	Celey D. Keene
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR N 1-6 (H500425-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8530	16.0	02/16/2015	ND	400	100	400	3.92	

**Sample ID: CAR N 1-8 (H500425-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10000	16.0	02/16/2015	ND	400	100	400	3.92	

**Sample ID: CAR N 1-10 (H500425-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6400	16.0	02/16/2015	ND	400	100	400	3.92	

**Sample ID: CAR N 1-12 (H500425-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13700	16.0	02/16/2015	ND	400	100	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	02/13/2015	Sampling Date:	02/10/2015
Reported:	02/19/2015	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	** (See Notes)
Project Number:	1RP-3332	Sample Received By:	Celey D. Keene
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR N 3-6 (H500425-05)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2600	16.0	02/16/2015	ND	400	100	400	3.92	

**Sample ID: CAR N 3-8 (H500425-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2080	16.0	02/16/2015	ND	400	100	400	3.92	

**Sample ID: CAR N 3-10 (H500425-07)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	02/16/2015	ND	400	100	400	3.92	

**Sample ID: CAR N 4-6 (H500425-08)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	02/16/2015	ND	400	100	400	3.92	

**Sample ID: CAR N 4-8 (H500425-09)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	02/16/2015	ND	400	100	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/13/2015	Sampling Date:	02/10/2015
Reported:	02/19/2015	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	** (See Notes)
Project Number:	1RP-3332	Sample Received By:	Celey D. Keene
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR N 4-10 (H500425-10)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	02/16/2015	ND	400	100	400	0.00	

**Sample ID: CAR N 7-6 (H500425-11)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3720	16.0	02/16/2015	ND	400	100	400	0.00	

**Sample ID: CAR N 7-8 (H500425-12)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	02/16/2015	ND	400	100	400	0.00	

**Sample ID: CAR N 7-10 (H500425-13)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	02/16/2015	ND	400	100	400	0.00	

**Sample ID: CAR N 9-6 (H500425-14)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1220	16.0	02/16/2015	ND	400	100	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/13/2015	Sampling Date:	02/10/2015
Reported:	02/19/2015	Sampling Type:	Soil
Project Name:	CARAVAN STATE UNIT #7H	Sampling Condition:	** (See Notes)
Project Number:	1RP-3332	Sample Received By:	Celey D. Keene
Project Location:	33-24S-33E, LEA		

**Sample ID: CAR N 9-8 (H500425-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	02/16/2015	ND	400	100	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



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

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

**CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST**

Project Manager: Amber Cannon

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4111 or 575-513-8799

Sample Signature: Amber Cannon

Project Name: Caravan State Unit #7H

Project #: 1RP-3332

Project Loc: 33-24S-33E, Lea

PO #: 205-2020

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Order #: HS00425

Field Code

Beginning Depth

Ending Depth

Date Sampled

Time Sampled

Field Filtered

Total #. of Containers

Ice

HNO<sub>3</sub>

HCl

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

NaOH

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

None

e-mail: acannon@yatespetroleum.com

Matrix

TPH: 418.1 8015M 8015

TPH: TX 1005 TX 1006

Cations (Ca, Mg, Na, K)

Anions (Cl, SO<sub>4</sub>, Alkalinity)

SAR / ESP / CEC

Metals: As Ag Ba Cd Cr Pb Hg Se

Volatiles

Semivolatiles

BTEX 8021B/5030 or BTEX 8260

RCI

N.O.R.M.

Chlorides

SAR

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

Standard TAT

Sample Containers Intact?

VOCs Free of Headpace?

Labels on container(s)

Sample Hand Delivered

by Courier? UPS DHL FedEx

Temperature Upon Receipt: 20.6 °C

Special Instructions:

Reinquired by: Amber Cannon

Date: 2/13/15

Time: 11:10

Received by: Jeffery Sheene

Received by ELDT:

Date: 2/13/15

Time: 11:10

Reinquired by:

Date:

Time:

Received by:

Date:

Time:

Received by:

Date:

Time:



