

MARTIN YATES, III  
1912-1985

FRANK W. YATES  
1936-1986

S.P. YATES  
1914-2008



105 SOUTH FOURTH STREET  
ARTESIA, NEW MEXICO 88210-2118  
TELEPHONE (575) 748-1471

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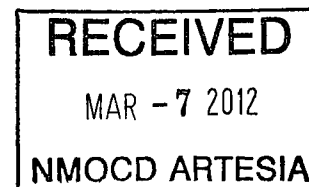
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CHIEF ADMINISTRATIVE OFFICER

March 6, 2012

Mr. Mike Bratcher  
NMOCD District II  
811 S. First Street  
Artesia, NM 88210



Re: Deeter ADV #1  
30-015-25638  
Section 27, T18S-R26E  
Eddy County, New Mexico

Dear Mr. Bratcher,

Enclosed please find a Form C-141, Final Report for the above captioned site regarding the release on August 31, 2011 (2RP-895). Approximately six feet of impacted soils were excavated and at this depth we hit some sort of a hard layer (not bedrock). We could see that release seeped through this layer; however, neither a backhoe nor trackhoe could break the layer for sample delineation. Yates Petroleum then obtained an air rig crew to take delineation samples. The analytical results from delineation are enclosed. On February 21, 2012 I visited the District II OCD office to discuss Yates' proposal of laying a liner in the bottom of the excavation and then backfilling. This proposal was accepted by OCD personnel and I sent you confirmation email the same day of our verbal discussion. On March 5, 2012 the liner was laid and the excavation was backfilled. Yates Petroleum Corporation requests closure based on sample delineation and approval by OCD personal of work proposal

If you have any questions, please call me at 575-748-4111.

Thank you

YATES PETROLEUM CORPORATION

Amber Cannon  
Environmental Regulatory Agent

/anc  
Enclosure(s)

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. 1<sup>st</sup> Street, 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

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

## Release Notification and Corrective Action

### OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Yates Petroleum Corporation	OGRID Number 25575	Contact Amber Cannon
Address 105 S. 4 <sup>TH</sup> Street	Telephone No. 575-748-1471	
Facility Name Deeter ADV #1	API Number 30-015-25638	Facility Type Battery

Surface Owner Fee	Mineral Owner	Lease No.
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### LOCATION OF RELEASE

Unit Letter M	Section 27	Township 18S	Range 26E	Feet from the 560	North/South Line South	Feet from the 990	East/West Line West	County Eddy
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Latitude 32.71305 Longitude 104.37481

### NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 167 B/O	Volume Recovered 0 B/O
Source of Release Hole in swedge on back on tank	Date and Hour of Occurrence 8/31/2011; AM	Date and Hour of Discovery 8/31/2011; AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher/NMOCD II	
By Whom? Robert Asher/Yates Petroleum Corporation	Date and Hour 8/31/2011; PM (E-mail)	
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.\*

A hole/split in a 4" by 3" swedge on back of oil tank caused the spill. The well was shut off and the two oil tanks and gun barrel have been disconnected from service.

Describe Area Affected and Cleanup Action Taken.\*

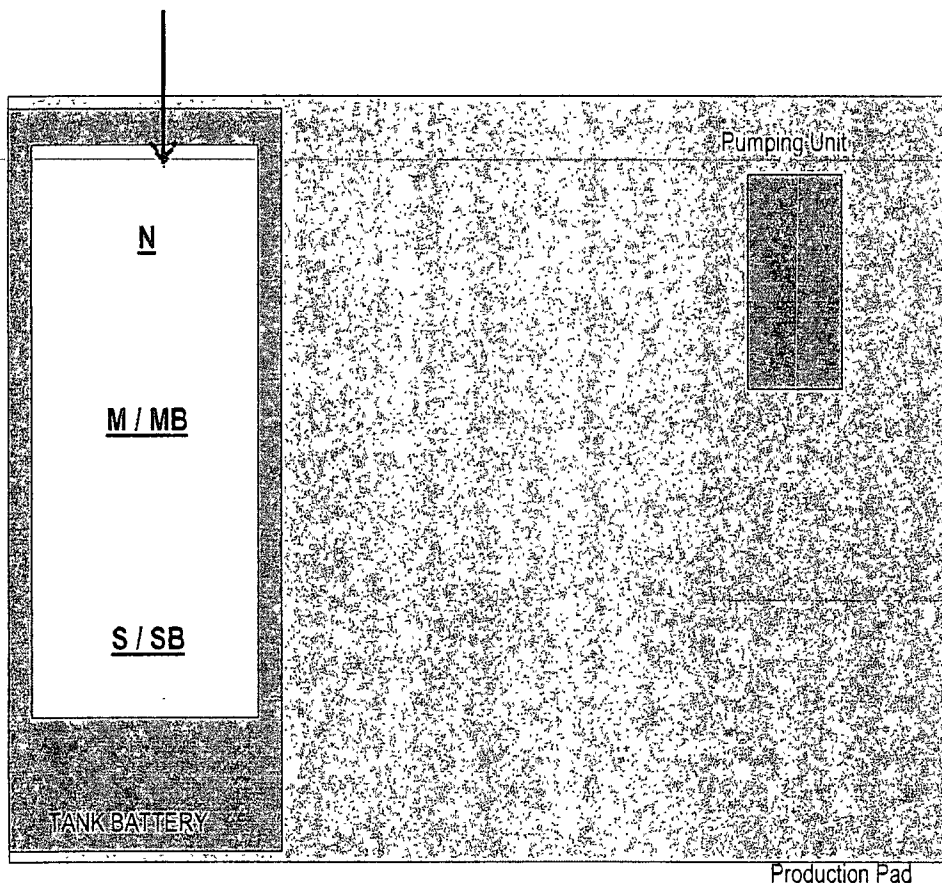
An approximate area of 9' X 30' (on production pad inside the unlined berm). Both oil tanks and the gun barrel will be removed from the affected area so that impacted soils can be excavated from the location. All impacted soils will be taken to a NMOCD approved disposal facility. Vertical and horizontal 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 10) a Final Report, C-141 will be submitted to the OCD requesting closure. If the analytical results are above the RRAL a work plan will be submitted to the OCD. **Depth to Ground Water: 50-99' (75', Section 27, T18S-R26E, NMOSE), Wellhead Protection Area: No, Distance to Surface Water Body: > 1000', SITE RANKING IS 10. Based on delineation samples and approval of work by OCD personnel, Yates Petroleum request closure.**

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>		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Amber Cannon		Approved by District Supervisor:	
Title: Environmental Regulatory Agent		Approval Date:	Expiration Date:
E-mail Address: <u>acannon@yatespetroleum.com</u>		Conditions of Approval:	
Date: Tuesday, March 06, 2012 Phone: 575-748-4111		2RP-895	Attached <input type="checkbox"/>



RELEASE AREA



Deeter ADV #1

30-015-25638

Section 27, T18S-R26E

Eddy County, NM

SAMPLE DIAGRAM(Not to Scale)

Analytical Results attached

Prepared by Amber Cannon  
Environmental Regulatory Agent

# Deeter ADV Com #1

Analytical Report 427323& 427342	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	TOTAL	Chlorides
Sample 1 (1')	Release Area	9/7/2011	Grab/Backhoe	1'	644	7760	14100	21900	63.3
Sample 2 (4')	Release Area	9/7/2011	Grab/Backhoe	4'	496	5740	12000	17700	17.5

Analytical Report H102699	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	TOTAL	Chlorides
MB-2	Release Area	12/12/2011	Grab/Trackhoe	8' BSL	182.2	2290	5820	8110	16
MB-4	Release Area	12/12/2011	Grab/Trackhoe	10' BSL	185.35	2510	5200	7710	ND
MB-6	Release Area	12/12/2011	Grab/Trackhoe	12' BSL	154.49	1190	4300	5490	208
SB-2	Release Area	12/12/2011	Grab/Trackhoe	8' BSL	423.3	3410	7450	10860	144
SB-4	Release Area	12/12/2011	Grab/Trackhoe	10' BSL	209.96	2320	4990	7310	304
SB-5	Release Area	12/12/2011	Grab/Trackhoe	11' BSL	93.22	1250	4100	5350	288

Analytical Report H200204	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	TOTAL	Chlorides
N-10	Release Area	1/26/2012	Grab/Split Spoon	10' BSL	154.55	927	2860	3787	
N-12	Release Area	1/26/2012	Grab/Split Spoon	12' BSL	24.92	431	3410	3841	
N-14	Release Area	1/26/2012	Grab/Split Spoon	14' BSL	202.62	2190	6140	8330	
N-16	Release Area	1/26/2012	Grab/Split Spoon	16' BSL	25.28	291	1920	2211	
N-18	Release Area	1/26/2012	Grab/Split Spoon	18' BSL	ND	ND	68.9	68.9	
N-22	Release Area	1/26/2012	Grab/Split Spoon	22' BSL	ND	14.4	115	129.4	
M-14	Release Area	1/26/2012	Grab/Split Spoon	14' BSL	94.7	1720	5570	7290	
M-18	Release Area	1/26/2012	Grab/Split Spoon	18' BSL	4.312	96.8	983	1079.8	
M-20	Release Area	1/26/2012	Grab/Split Spoon	20' BSL	ND	ND	12.7	12.7	
M-22	Release Area	1/26/2012	Grab/Split Spoon	22' BSL	ND	ND	ND	ND	
S-14	Release Area	1/26/2012	Grab/Split Spoon	14' BSL	29.06	244	1410	1654	
S-16	Release Area	1/26/2012	Grab/Split Spoon	16' BSL	ND	13.6	308	321.6	
S-20	Release Area	1/26/2012	Grab/Split Spoon	20' BSL	0.454	18.3	197	215.3	
S-22	Release Area	1/26/2012	Grab/Split Spoon	22' BSL	30.5	368	2160	2528	
S-24	Release Area	1/26/2012	Grab/Split Spoon	24' BSL	0.299	ND	14.3	14.3	
S-26	Release Area	1/26/2012	Grab/Split Spoon	26' BSL	ND	11.5	20.9	32.4	

Site Ranking is Ten (10). Depth to Ground Water 50-99' (approx. 75', Section 27-18S-26E, per NMOSE)

All results are ppm.Chlorides for documentation.

Released: 167 B/O; Recovered: 0 B/O. Release Date: 8/31/2011

## Amber Cannon

---

**From:** Amber Cannon  
**Sent:** Tuesday, February 21, 2012 2:53 PM  
**To:** Bratcher, Mike, EMNRD (mike.bratcher@state.nm.us)  
**Cc:** Bob Asher; Jerry Fanning; Amanda Trujillo  
**Subject:** Deeter ADV #1

Mike,

Per our conversation this afternoon concerning the Deeter ADV #1, Yates Petroleum Corporation is going to lay a liner in the bottom of our excavation and backfill.

A Final C-141 along with a site diagram and analytical results will be submitted to your office once backfill has been completed.

Thank you,

Amber Cannon  
Environmental Regulatory Agent  
Yates Petroleum Corporation

Tracking:



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

February 03, 2012

AMBER CANNON

Yates Energy Petroleum Corp

105 S 4th Street

Artesia, NM 88210

RE: DEETER ADV #1

Enclosed are the results of analyses for samples received by the laboratory on 01/27/12 10:03.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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 Trichloromethanes (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 Energy Petroleum Corp  
 AMBER CANNON  
 105 S 4th Street  
 Artesia NM, 88210  
 Fax To: (505) 748-4635

 Received: 01/27/2012  
 Reported: 02/03/2012  
 Project Name: DEETER ADV #1  
 Project Number: 30-015-25638  
 Project Location: 27-18S-26E, EDDY COUNTY

 Sampling Date: 01/26/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: N 10 (H200204-01)**

BTX 8021B		mg/kg		Analyzed By: AP				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>2.45</b>	0.500	02/01/2012	ND	2.03	101	2.00	1.25	
<b>Toluene*</b>	<b>38.4</b>	0.500	02/01/2012	ND	2.20	110	2.00	0.126	
<b>Ethylbenzene*</b>	<b>42.6</b>	0.500	02/01/2012	ND	2.22	111	2.00	0.577	
<b>Total Xylenes*</b>	<b>71.1</b>	1.50	02/01/2012	ND	7.03	117	6.00	1.48	

Surrogate 4-Bromofluorobenzene (PIL) 143 % 64 4-134

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>927</b>	10.0	01/30/2012	ND	184	92.1	200	0.807	
<b>DRO &gt;C10-C28</b>	<b>2860</b>	10.0	01/30/2012	ND	224	112	200	2.97	

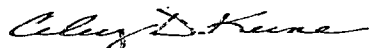
Surrogate 1-Chlorooctane 108 % 55 5-154

Surrogate 1-Chlorooctadecane 98 6 % 57 6-158

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 01/27/2012  
Reported: 02/03/2012  
Project Name: DEETER ADV #1  
Project Number: 30-015-25638  
Project Location: 27-18S-26E, EDDY COUNTY

Sampling Date: 01/26/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: N 12 (H200204-02)**

BTX 8021B		mg/kg		Analyzed By: AP				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2012	ND	2.03	101	2.00	1.25	
Toluene*	2.93	0.050	02/01/2012	ND	2.20	110	2.00	0.126	
Ethylbenzene*	7.39	0.050	02/01/2012	ND	2.22	111	2.00	0.577	
Total Xylenes*	14.6	0.150	02/01/2012	ND	7.03	117	6.00	1.48	

Surrogate: 4-Bromofluorobenzene (PIL) 158 % 64 4-134

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	431	10.0	01/30/2012	ND	184	92.1	200	0.807	
DRO >C10-C28	3410	10.0	01/30/2012	ND	224	112	200	2.97	

Surrogate: 1-Chlorooctane 125 % 55 5-154

Surrogate: 1-Chlorooctadecane 123 % 57 6-158

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received: 01/27/2012  
Reported: 02/03/2012  
Project Name: DEETER ADV #1  
Project Number: 30-015-25638  
Project Location: 27-18S-26E, EDDY COUNTY

Sampling Date: 01/26/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: N 14 (H200204-03)**

BTX 8021B		mg/kg		Analyzed By: AP				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>3.32</b>	1.00	02/01/2012	ND	2.03	101	2.00	1.25	
<b>Toluene*</b>	<b>47.5</b>	1.00	02/01/2012	ND	2.20	110	2.00	0.126	
<b>Ethylbenzene*</b>	<b>56.8</b>	1.00	02/01/2012	ND	2.22	111	2.00	0.577	
<b>Total Xylenes*</b>	<b>95.0</b>	3.00	02/01/2012	ND	7.03	117	6.00	1.48	

Surrogate: 4-Bromofluorobenzene (PIL) 135 % 64 4-134

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>2190</b>	50.0	01/31/2012	ND	184	92.1	200	0.807	
<b>DRO &gt;C10-C28</b>	<b>6140</b>	50.0	01/31/2012	ND	224	112	200	2.97	

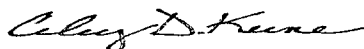
Surrogate: 1-Chlorooctane 128 % 55 5-154

Surrogate: 1-Chlorooctadecane 102 % 57 6-158

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 01/27/2012  
 Reported: 02/03/2012  
 Project Name: DEETER ADV #1  
 Project Number: 30-015-25638  
 Project Location: 27-18S-26E, EDDY COUNTY

 Sampling Date: 01/26/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: N 16 (H200204-04)**

BTEx 8021B		mg/kg	Analyzed By: AP					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2012	ND	2.03	101	2.00	1.25	
Toluene*	1.83	0.050	02/01/2012	ND	2.20	110	2.00	0.126	
Ethylbenzene*	8.15	0.050	02/01/2012	ND	2.22	111	2.00	0.577	
Total Xylenes*	15.3	0.150	02/01/2012	ND	7.03	117	6.00	1.48	

Surrogate 4-Bromofluorobenzene (PIL) 178 % 64 4-134

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	291	10.0	01/30/2012	ND	184	92.1	200	0.807	
DRO >C10-C28	1920	10.0	01/30/2012	ND	224	112	200	2.97	

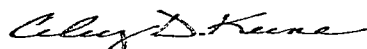
Surrogate 1-Chlorooctane 109 % 55 5-154

Surrogate 1-Chlorooctadecane 104 % 57 6-158

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	01/27/2012	Sampling Date:	01/26/2012
Reported:	02/03/2012	Sampling Type:	Soil
Project Name:	DEETER ADV #1	Sampling Condition:	Cool & Intact
Project Number:	30-015-25638	Sample Received By:	Jodi Henson
Project Location:	27-185-26E, EDDY COUNTY		

**Sample ID: N 18 (H200204-05)**

BTEx 8021B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2012	ND	2.03	101	2.00	1.25	
Toluene*	<0.050	0.050	02/01/2012	ND	2.20	110	2.00	0.126	
Ethylbenzene*	<0.050	0.050	02/01/2012	ND	2.22	111	2.00	0.577	
Total Xylenes*	<0.150	0.150	02/01/2012	ND	7.03	117	6.00	1.48	

Surrogate: 4-Bromofluorobenzene (PIL) 112 % 64 4-134

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	01/30/2012	ND	184	92.1	200	0.807	
DRO >C10-C28	68.9	10.0	01/30/2012	ND	224	112	200	2.97	

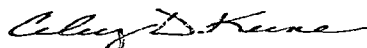
Surrogate: 1-Chlorooctane 106 % 55 5-154

Surrogate: 1-Chlorooctadecane 148 % 57 6-158

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 01/27/2012  
Reported: 02/03/2012  
Project Name: DEETER ADV #1  
Project Number: 30-015-25638  
Project Location: 27-18S-26E, EDDY COUNTY

Sampling Date: 01/26/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: N 22 (H200204-06)**

BTEx 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2012	ND	2.03	101	2.00	1.25	
Toluene*	<0.050	0.050	02/01/2012	ND	2.20	110	2.00	0.126	
Ethylbenzene*	<0.050	0.050	02/01/2012	ND	2.22	111	2.00	0.577	
Total Xylenes*	<0.150	0.150	02/01/2012	ND	7.03	117	6.00	1.48	

Surrogate 4-Bromofluorobenzene (PIL) 117 % 64 4-134

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	14.4	10.0	01/30/2012	ND	184	92.1	200	0.807	
DRO >C10-C28	115	10.0	01/30/2012	ND	224	112	200	2.97	

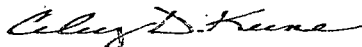
Surrogate 1-Chlorooctane 99.8 % 55 5-154

Surrogate 1-Chlorooctadecane 122 % 57 6-158

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 01/27/2012  
 Reported: 02/03/2012  
 Project Name: DEETER ADV #1  
 Project Number: 30-015-25638  
 Project Location: 27-18S-26E, EDDY COUNTY

Sampling Date: 01/26/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: M 14 (H200204-07)**

BTX 8021B		mg/kg	Analyzed By: AP					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	02/01/2012	ND	2.03	101	2.00	1.25	
Toluene*	17.5	0.500	02/01/2012	ND	2.20	110	2.00	0.126	
Ethylbenzene*	28.3	0.500	02/01/2012	ND	2.22	111	2.00	0.577	
Total Xylenes*	48.9	1.50	02/01/2012	ND	7.03	117	6.00	1.48	

Surrogate 4-Bromofluorobenzene (PII) 137 % 64 4-134

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	1720	50.0	01/31/2012	ND	186	93.0	200	8.98	
DRO >C10-C28	5570	50.0	01/31/2012	ND	212	106	200	4.78	

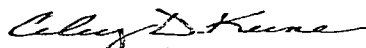
Surrogate: 1-Chlorooctane 131 % 55 5-154

Surrogate: 1-Chlorooctadecane 111 % 57.6-158

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Celey D. Keene, Lab Director/Quality Manager



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### Analytical Results For:

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

Received: 01/27/2012  
Reported: 02/03/2012  
Project Name: DEETER ADV #1  
Project Number: 30-015-25638  
Project Location: 27-18S-26E, EDDY COUNTY

Sampling Date: 01/26/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

### Sample ID: M 18 (H200204-08)

BTX 8021B	mg/kg		Analyzed By: AP					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2012	ND	2.03	101	2.00	1.25	
Toluene*	0.332	0.050	02/01/2012	ND	2.20	110	2.00	0.126	
Ethylbenzene*	1.08	0.050	02/01/2012	ND	2.22	111	2.00	0.577	
Total Xylenes*	2.90	0.150	02/01/2012	ND	7.03	117	6.00	1.48	

Surrogate 4-Bromofluorobenzene (PIL) 141 % 64 4-134

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	96.8	10.0	01/31/2012	ND	186	93.0	200	8.98	
DRO >C10-C28	983	10.0	01/31/2012	ND	212	106	200	4.78	

Surrogate 1-Chlorooctane 103 % 55 5-154

Surrogate 1-Chlorooctadecane 106 % 57 6-158

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 01/27/2012  
 Reported: 02/03/2012  
 Project Name: DEETER ADV #1  
 Project Number: 30-015-25638  
 Project Location: 27-18S-26E, EDDY COUNTY

 Sampling Date: 01/26/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: M 20 (H200204-09)**

BTX 8021B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2012	ND	2.03	101	2.00	1.25	
Toluene*	<0.050	0.050	02/01/2012	ND	2.20	110	2.00	0.126	
Ethylbenzene*	<0.050	0.050	02/01/2012	ND	2.22	111	2.00	0.577	
Total Xylenes*	<0.150	0.150	02/01/2012	ND	7.03	117	6.00	1.48	

Surrogate 4-Bromofluorobenzene (PIL) 109 % 64 4-134

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	01/31/2012	ND	186	93.0	200	8.98	
<b>DRO &gt;C10-C28</b>	<b>12.7</b>	10.0	01/31/2012	ND	212	106	200	4.78	

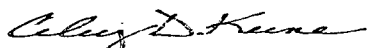
Surrogate 1-Chlorooctane 92.3 % 55 5-154

Surrogate 1-Chlorooctadecane 116 % 57 6-158

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### Analytical Results For:

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

Received: 01/27/2012  
Reported: 02/03/2012  
Project Name: DEETER ADV #1  
Project Number: 30-015-25638  
Project Location: 27-18S-26E, EDDY COUNTY

Sampling Date: 01/26/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

### Sample ID: M 22 (H200204-10)

BTEX 8021B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2012	ND	2.03	101	2.00	1.25	
Toluene*	<0.050	0.050	02/01/2012	ND	2.20	110	2.00	0.126	
Ethylbenzene*	<0.050	0.050	02/01/2012	ND	2.22	111	2.00	0.577	
Total Xylenes*	<0.150	0.150	02/01/2012	ND	7.03	117	6.00	1.48	

Surrogate: 4-Bromofluorobenzene (PIL) 109 % 64 4-134

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	01/31/2012	ND	186	93.0	200	8.98	
DRO >C10-C28	<10.0	10.0	01/31/2012	ND	212	106	200	4.78	

Surrogate: 1-Chlorooctane 100 % 55 5-154

Surrogate: 1-Chlorooctadecane 118 % 57 6-158

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

Received: 01/27/2012  
 Reported: 02/03/2012  
 Project Name: DEETER ADV #1  
 Project Number: 30-015-25638  
 Project Location: 27-18S-26E, EDDY COUNTY

Sampling Date: 01/26/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S 14 (H200204-11)**

BTEX 8021B		mg/kg		Analyzed By: AP				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	02/01/2012	ND	2.03	101	2.00	1.25	
Toluene*	2.78	0.500	02/01/2012	ND	2.20	110	2.00	0.126	
Ethylbenzene*	7.08	0.500	02/01/2012	ND	2.22	111	2.00	0.577	
Total Xylenes*	19.2	1.50	02/01/2012	ND	7.03	117	6.00	1.48	

Surrogate 4-Bromofluorobenzene (PII) 139 % 64 4-134

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	244	10.0	01/31/2012	ND	186	93.0	200	8.98	
DRO >C10-C28	1410	10.0	01/31/2012	ND	212	106	200	4.78	

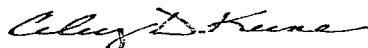
Surrogate 1-Chlorooctane 109 % 55 5-154

Surrogate 1-Chlorooctadecane 113 % 57 6-158

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**Analytical Results For:**

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

 Received: 01/27/2012  
 Reported: 02/03/2012  
 Project Name: DEETER ADV #1  
 Project Number: 30-015-25638  
 Project Location: 27-18S-26E, EDDY COUNTY

 Sampling Date: 01/26/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S 16 (H200204-12)**

BTEx 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2012	ND	2.03	101	2.00	1.25	
Toluene*	<0.050	0.050	02/01/2012	ND	2.20	110	2.00	0.126	
Ethylbenzene*	<0.050	0.050	02/01/2012	ND	2.22	111	2.00	0.577	
Total Xylenes*	<0.150	0.150	02/01/2012	ND	7.03	117	6.00	1.48	

Surrogate 4-Bromofluorobenzene (PIL) 120 % 64 4-134

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	13.6	10.0	01/31/2012	ND	186	93.0	200	8.98	
DRO >C10-C28	308	10.0	01/31/2012	ND	212	106	200	4.78	

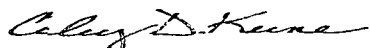
Surrogate 1-Chlorooctane 98.5 % 55 5-154

Surrogate 1-Chlorooctadecane 115 % 57 6-158

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**Analytical Results For:**

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

Received:	01/27/2012	Sampling Date:	01/26/2012
Reported:	02/03/2012	Sampling Type:	Soil
Project Name:	DEETER ADV #1	Sampling Condition:	Cool & Intact
Project Number:	30-015-25638	Sample Received By:	Jodi Henson
Project Location:	27-18S-26E, EDDY COUNTY		

**Sample ID: S 20 (H200204-13)**

BTEx 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2012	ND	1.63	81.4	2.00	8.01	
Toluene*	<0.050	0.050	02/02/2012	ND	2.00	100	2.00	7.90	
Ethylbenzene*	<0.050	0.050	02/02/2012	ND	2.13	107	2.00	7.08	
<b>Total Xylenes*</b>	<b>0.454</b>	0.150	02/02/2012	ND	6.67	111	6.00	7.25	

Surrogate: 4-Bromofluorobenzene (PIL) 122 % 64 4-134

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>18.3</b>	10.0	01/31/2012	ND	186	93.0	200	8.98	
<b>DRO &gt;C10-C28</b>	<b>197</b>	10.0	01/31/2012	ND	212	106	200	4.78	

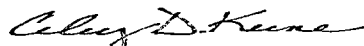
Surrogate 1-Chlorooctane 104 % 55 5-154

Surrogate: 1-Chlorooctadecane 121 % 57 6-158

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**Analytical Results For:**

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

 Received: 01/27/2012  
 Reported: 02/03/2012  
 Project Name: DEETER ADV #1  
 Project Number: 30-015-25638  
 Project Location: 27-18S-26E, EDDY COUNTY

 Sampling Date: 01/26/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S 22 (H200204-14)**

BTX 8021B		mg/kg		Analyzed By: AP				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2012	ND	1.63	81.4	2.00	8.01	
Toluene*	2.75	0.050	02/02/2012	ND	2.00	100	2.00	7.90	
Ethylbenzene*	6.15	0.050	02/02/2012	ND	2.13	107	2.00	7.08	
Total Xylenes*	21.6	0.150	02/02/2012	ND	6.67	111	6.00	7.25	

Surrogate 4-Bromofluorobenzene (PIL) 197 % 64 4-134

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	368	10.0	01/31/2012	ND	186	93.0	200	8.98	
DRO >C10-C28	2160	10.0	01/31/2012	ND	212	106	200	4.78	

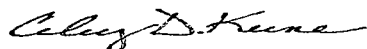
Surrogate 1-Chlorooctane 111 % 55 5-154

Surrogate 1-Chlorooctadecane 103 % 57 6-158

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

 Received: 01/27/2012  
 Reported: 02/03/2012  
 Project Name: DEETER ADV #1  
 Project Number: 30-015-25638  
 Project Location: 27-18S-26E, EDDY COUNTY

 Sampling Date: 01/26/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S 24 (H200204-15)**

BTEX 8021B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2012	ND	1.63	81.4	2.00	8.01	
Toluene*	<b>0.184</b>	0.050	02/02/2012	ND	2.00	100	2.00	7.90	
Ethylbenzene*	<b>0.115</b>	0.050	02/02/2012	ND	2.13	107	2.00	7.08	
Total Xylenes*	<0.150	0.150	02/02/2012	ND	6.67	111	6.00	7.25	

Surrogate 4-Bromofluorobenzene (PIL) 112 % 64.4-134

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	01/31/2012	ND	186	93.0	200	8.98	
<b>DRO &gt;C10-C28</b>	<b>14.3</b>	10.0	01/31/2012	ND	212	106	200	4.78	

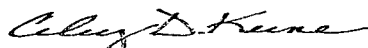
Surrogate 1-Chlorooctane 97.5 % 55.5-154

Surrogate 1-Chlorooctadecane 130 % 57.6-158

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



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

**Analytical Results For:**

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

Received: 01/27/2012  
Reported: 02/03/2012  
Project Name: DEETER ADV #1  
Project Number: 30-015-25638  
Project Location: 27-18S-26E, EDDY COUNTY

Sampling Date: 01/26/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S 26 (H200204-16)**

BTEX 80218		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2012	ND	1.63	81.4	2.00	8.01	
Toluene*	<0.050	0.050	02/02/2012	ND	2.00	100	2.00	7.90	
Ethylbenzene*	<0.050	0.050	02/02/2012	ND	2.13	107	2.00	7.08	
Total Xylenes*	<0.150	0.150	02/02/2012	ND	6.67	111	6.00	7.25	

Surrogate 4-Bromofluorobenzene (PIL) 110 % 64 4-134

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	11.5	10.0	01/31/2012	ND	186	93.0	200	8.98	
DRO >C10-C28	20.9	10.0	01/31/2012	ND	212	106	200	4.78	

Surrogate 1-Chlorooctane 101 % 55 5-154

Surrogate 1-Chlorooctadecane 127 % 57 6-158

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

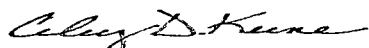
- S-04      The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- ND      Analyte NOT DETECTED at or above the reporting limit
- RPD      Relative Percent Difference
- \*\*      Samples not received at proper temperature of 6°C or below.
- \*\*\*      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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\*=Accredited Analyte

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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

Project Name: Deeter ADV #1

Company Name: Yates Petroleum Corporation

Project #: 30-015-25638

Company Address: 105 South 4th Street

Project Loc: 27-18S-26E, Eddy County

City/State/Zip: Artesia, NM 88210

PO #: 1032020

Telephone No: 575-748-4111

Fax No: 575-748-4131

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature: Amber Cannon

e-mail: acannon@yatespetroleum.com

(lab use only)

ORDER #:

LAB # (lab use only)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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Special Instructions: **TPH: 8015B, BTEX: 8021B. Please show BTEX results as mg/kg. Thank you.**

Laboratory Comments:

Sample Containers Intact? ☒ Y ☐ N  
 VOCs Free of Headspace? ☒ Y ☐ N  
 Labels on container(s)? ☒ Y ☐ N  
 Custody seals on container(s)? ☒ Y ☐ N  
 Custody seals on cooler(s)? ☒ Y ☐ N  
 Sample Hand Delivered? ☒ Y ☐ N  
 by Sampler/Client Rep? ☒ Y ☐ N  
 by Courier? ☐ UPS ☐ DHL ☐ FedEx ☐ Lone Star  
 Temperature Upon Receipt: 10.0

Relinquished by: <u>Amber Cannon</u>	Date: <u>1/27/12</u>	Time: <u>10:03</u>	Received by: <u>Jodi Benson</u>	Date: <u>1/27/12</u>	Time: <u>10:03</u>
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by: ELOT:	Date:	Time:

#26







**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

Project Name: Deeter ADV #1

Company Name: Yates Petroleum Corporation

Project #: 30-015-25638

Company Address: 105 South 4th Street

Project Loc: 27-18S-26E, Eddy County

City/State/Zip: Artesia, NM 88210

PO #: 1032020

Telephone No: 575-748-4111

Fax No: 575-748-4131

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature: Amber Cannon

e-mail: acannon@yatespetroleum.com

(lab use only)

ORDER #:

LAB # (lab use only)		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	TPH 8015B	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	NORM	Chlorides	SAR	RUSH TAT (Pre-Schedule) 24, 48	Standard TAT	
	H200204 FIELD CODE																																
1	N10	10'	10'	1/26/2012	3:00 PM		1	X								S	X									X							X
2	N12	12'	12'	1/26/2012	3:00 PM		1	X								S	X									X							X
3	N14	14'	14'	1/26/2012	11:00 AM		1	X								S	X									X							X
4	N16	16'	16'	1/26/2012	10:45 AM		1	X								S	X									X							X
5	N18	18'	18'	1/26/2012	10:13 AM		1	X								S	X									X							
6	N22	22'	22'	1/26/2012	10:13 AM		1	X								S	X									X							X
7	M14	14'	14'	1/26/2012	3:00 PM		1	X								S	X									X							X
8	M18	18'	18'	1/26/2012	11:30 AM		1	X								S	X									X							X
9	M20	20'	20'	1/26/2012	11:30 AM		1	X								S	X									X							X
10	M22	22'	22'	1/26/2012	11:40 AM		1	X								S	X									X							X

Special Instructions: **TPH: 8015B, BTEX: 8021B. Please show BTEX results as mg/kg. Thank you.**

**Laboratory Comments:**

Sample Containers Intact? ☒ Y ☐ N

VOCs Free of Headspace? ☒ Y ☐ N

Labels on container(s)? ☒ Y ☐ N

Custody seals on container(s)? ☒ Y ☐ N

Custody seals on cooler(s)? ☒ Y ☐ N

Sample Hand Delivered by Sampler/Client Rep.? ☒ Y ☐ N

by Courier? ☐ UPS ☐ DHL ☐ FedEx ☐ Lone Star

Temperature Upon Receipt: 10°C

Relinquished by: <u>Amber Cannon</u>	Date	Time	Received by: <u>Jodi Benson</u>	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time

### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Amber Cannon

Project Name: Deeter ADV #1

Company Name	Yates Petroleum Corporation
--------------	-----------------------------

Project #: 30-015-25638

Company Address: 105 South 4th Street

Project Loc: 27-18S-26E, Eddy County

City/State/Zip: Artesia, NM 88210

PO #: 1032020

Telephone No: 575-748-4111

Fax No: 575-748-4131

**Report Format:** ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature: Michaelannon

e-mail: [acannon@yatespetroleum.com](mailto:acannon@yatespetroleum.com)

[illegible]



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

December 19, 2011

AMBER CANNON

Yates Energy Petroleum Corp

105 S 4th Street

Artesia, NM 88210

RE: DEETER ADV #1

Enclosed are the results of analyses for samples received by the laboratory on 12/15/11 13:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 12/15/2011  
 Reported: 12/19/2011  
 Project Name: DEETER ADV #1  
 Project Number: 30-015-25638  
 Project Location: 27-18S-26E, EDDY COUNTY

 Sampling Date: 12/12/2011  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: MB-2 8' (H102699-01)**

BTX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>2.20</b>	0.500	12/18/2011	ND	1.97	98.5	2.00	1.16	
<b>Toluene*</b>	<b>22.2</b>	0.500	12/18/2011	ND	1.89	94.6	2.00	1.71	
<b>Ethylbenzene*</b>	<b>23.8</b>	0.500	12/18/2011	ND	2.15	107	2.00	1.59	
<b>Total Xylenes*</b>	<b>134</b>	1.50	12/18/2011	ND	6.16	103	6.00	0.930	

Surrogate 4-Bromofluorobenzene (PIL) 165 % 64 4-134

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>2290</b>	100	12/17/2011	ND	193	96.4	200	4.86	
<b>DRO &gt;C10-C28</b>	<b>5820</b>	100	12/17/2011	ND	189	94.7	200	1.39	

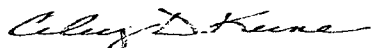
Surrogate 1-Chlorooctane 81.3 % 55 5-154

Surrogate 1-Chlorooctadecane 170 % 57 6-158

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 12/15/2011  
 Reported: 12/19/2011  
 Project Name: DEETER ADV #1  
 Project Number: 30-015-25638  
 Project Location: 27-18S-26E, EDDY COUNTY

Sampling Date: 12/12/2011  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: MB-4 10' (H102699-02)**

BTEX 8021B	mg/kg	Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>4.05</b>	0.500	12/18/2011	ND	1.97	98.5	2.00	1.16	
<b>Toluene*</b>	<b>44.9</b>	0.500	12/18/2011	ND	1.89	94.6	2.00	1.71	
<b>Ethylbenzene*</b>	<b>53.6</b>	0.500	12/18/2011	ND	2.15	107	2.00	1.59	
<b>Total Xylenes*</b>	<b>82.8</b>	1.50	12/18/2011	ND	6.16	103	6.00	0.930	

Surrogate 4-Bromofluorobenzene (PII) 134 % 64 4-134

TPH 8015M	mg/kg		Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	2510	100	12/17/2011	ND	193	96.4	200	4.86	
DRO >C10-C28	5200	100	12/17/2011	ND	189	94.7	200	1.39	

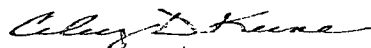
Surrogate 1-Chlorooctane 142 % 55 5-154

Surrogate 1-Chlorooctadecane 210 % 57 6-158

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/15/2011  
Reported: 12/19/2011  
Project Name: DEETER ADV #1  
Project Number: 30-015-25638  
Project Location: 27-18S-26E, EDDY COUNTY

Sampling Date: 12/12/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: MB-6 12' (H102699-03)**

BTX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	2.09	0.500	12/18/2011	ND	1.97	98.5	2.00	1.16	
Toluene*	29.3	0.500	12/18/2011	ND	1.89	94.6	2.00	1.71	
Ethylbenzene*	43.5	0.500	12/18/2011	ND	2.15	107	2.00	1.59	
Total Xylenes*	79.6	1.50	12/18/2011	ND	6.16	103	6.00	0.930	

Surrogate 4-Bromofluorobenzene (PIE) 148 % 64 4-134

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	1190	100	12/17/2011	ND	193	96.4	200	4.86	
DRO >C10-C28	4300	100	12/17/2011	ND	189	94.7	200	1.39	

Surrogate 1-Chlorooctane 128 % 55 5-154

Surrogate 1-Chlorooctadecane 139 % 57 6-158

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Celest D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 12/15/2011  
 Reported: 12/19/2011  
 Project Name: DEETER ADV #1  
 Project Number: 30-015-25638  
 Project Location: 27-18S-26E, EDDY COUNTY

Sampling Date: 12/12/2011  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SB-2 8' (H102699-04)**

BTX 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>22.3</b>	0.500	12/18/2011	ND	1.97	98.5	2.00	1.16	
<b>Toluene*</b>	<b>122</b>	0.500	12/18/2011	ND	1.89	94.6	2.00	1.71	
<b>Ethylbenzene*</b>	<b>107</b>	0.500	12/18/2011	ND	2.15	107	2.00	1.59	
<b>Total Xylenes*</b>	<b>172</b>	1.50	12/18/2011	ND	6.16	103	6.00	0.930	

Surrogate: 4-Bromofluorobenzene (PIL) 173 % 64.4-134

TPH 8015M		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>3410</b>	100	12/17/2011	ND	193	96.4	200	4.86	
<b>DRO &gt;C10-C28</b>	<b>7450</b>	100	12/17/2011	ND	189	94.7	200	1.39	

Surrogate 1-Chlorooctane 164 % 53.5-154

Surrogate 1-Chlorooctadecane 166 % 57.6-158

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	12/15/2011	Sampling Date:	12/12/2011
Reported:	12/19/2011	Sampling Type:	Soil
Project Name:	DEETER ADV #1	Sampling Condition:	Cool & Intact
Project Number:	30-015-25638	Sample Received By:	Jodi Henson
Project Location:	27-18S-26E, EDDY COUNTY		

**Sample ID: SB-4 10' (H102699-05)**

BTX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	5.06	0.500	12/18/2011	ND	1.97	98.5	2.00	1.16	
Toluene*	50.4	0.500	12/18/2011	ND	1.89	94.6	2.00	1.71	
Ethylbenzene*	53.5	0.500	12/18/2011	ND	2.15	107	2.00	1.59	
Total Xylenes*	101	1.50	12/18/2011	ND	6.16	103	6.00	0.930	

Surrogate: 4-Bromofluorobenzene (PII) 159 % 64 4-134

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	2320	100	12/17/2011	ND	193	96.4	200	4.86	
DRO >C10-C28	4990	100	12/17/2011	ND	189	94.7	200	1.39	

Surrogate 1-Chlorooctane 133 % 55 5-154

Surrogate 1-Chlorooctadecane 137 % 57 6-158

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Celey D. Keene, Lab Director/Quality Manager



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### Analytical Results For:

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

Received: 12/15/2011  
Reported: 12/19/2011  
Project Name: DEETER ADV #1  
Project Number: 30-015-25638  
Project Location: 27-18S-26E, EDDY COUNTY

Sampling Date: 12/12/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

### Sample ID: SB-5 11' (H102699-06)

BTX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.02	0.500	12/18/2011	ND	1.97	98.5	2.00	1.16	
Toluene*	15.9	0.500	12/18/2011	ND	1.89	94.6	2.00	1.71	
Ethylbenzene*	27.7	0.500	12/18/2011	ND	2.15	107	2.00	1.59	
Total Xylenes*	48.6	1.50	12/18/2011	ND	6.16	103	6.00	0.930	

Surrogate 4-Bromofluorobenzene (PIL) 152 % 64 4-134

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	1250	100	12/17/2011	ND	193	96.4	200	4.86	
DRO >C10-C28	4100	100	12/17/2011	ND	189	94.7	200	1.39	

Surrogate 1-Chlorooctane 121 % 55 5-154

Surrogate 1-Chlorooctadecane 160 % 57 6-158

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

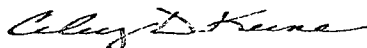
- S-04            The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- ND             Analyte NOT DETECTED at or above the reporting limit
- RPD            Relative Percent Difference
- \*\*             Samples not received at proper temperature 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





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---

December 19, 2011

AMBER CANNON

Yates Energy Petroleum Corp

105 S 4th Street

Artesia, NM 88210

RE: DEETER ADV #1

Enclosed are the results of analyses for samples received by the laboratory on 12/15/11 13:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/15/2011	Sampling Date:	12/12/2011
Reported:	12/19/2011	Sampling Type:	Soil
Project Name:	DEETER ADV #1	Sampling Condition:	Cool & Intact
Project Number:	30-015-25638	Sample Received By:	Jodi Henson
Project Location:	27-18S-26E, EDDY COUNTY		

**Sample ID: MB-2 8' (H102699-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/16/2011	ND	416	104	400	3.77	

**Sample ID: MB-4 10' (H102699-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/16/2011	ND	416	104	400	3.77	

**Sample ID: MB-6 12' (H102699-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	12/16/2011	ND	416	104	400	3.77	

**Sample ID: SB-2 8' (H102699-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	12/16/2011	ND	416	104	400	3.77	

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**Analytical Results For:**

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

Received:	12/15/2011	Sampling Date:	12/12/2011
Reported:	12/19/2011	Sampling Type:	Soil
Project Name:	DEETER ADV #1	Sampling Condition:	Coil & Intact
Project Number:	30-015-25638	Sample Received By:	Jodi Henson
Project Location:	27-18S-26E, EDDY COUNTY		

**Sample ID: SB-4 10' (H102699-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	12/16/2011	ND	416	104	400	3.77	

**Sample ID: SB-5 11' (H102699-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	12/16/2011	ND	416	104	400	3.77	

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**Notes and Definitions**

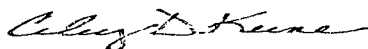
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Amber Cannon

Project Name: Deeter ADV #1

Company Name	Yales Petroleum Corporation
--------------	-----------------------------

Project #: 30-015-25638

Company Address: 105 South 4th Street

**Project Loc:** 27-18S-26E, Eddy County

City/State/Zip:       Artesia, NM 88210

PO #: 1032020

Telephone No: 575-748-4111

Fax No: 575-748-4131.

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature: Kimber Cannon

e-mail: [acannon@yatespetroleum.com](mailto:acannon@yatespetroleum.com)

[illegible]

# Analytical Report 427323

## for Yates Petroleum Corporation

Project Manager: Amanda Trujillo

Deeter AV # 1

21-SEP-11

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)  
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)  
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)  
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)  
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)



21-SEP-11

Project Manager: **Amanda Trujillo**  
**Yates Petroleum Corporation**  
105 South Fourth St.  
Artesia, NM 88210

Reference: XENCO Report No: **427323**  
**Deeter AV # 1**  
Project Address:

**Amanda Trujillo:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 427323. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 427323 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Brent Barron II**

Odessa Laboratory Manager

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## Sample Cross Reference 427323



Yates Petroleum Corporation, Artesia, NM

Deeter AV # 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Sample 1 (1')	S	09-07-11 13:00	1 - 1 ft	427323-001
Sample 2 (4')	S	09-07-11 13:00	4 - 4 ft	427323-002



## CASE NARRATIVE

*Client Name: Yates Petroleum Corporation*

*Project Name: Deeter AV # 1*



*Project ID:*

*Work Order Number: 427323*

*Report Date: 21-SEP-11*

*Date Received: 09/09/2011*

---

**Sample receipt non conformances and comments:**

*None*

---

**Sample receipt non conformances and comments per sample:**

*None*

---

**Analytical non nonformances and comments:**

*Batch: LBA-869713 BTEX by EPA 8021B*

*SW8021BM*

*Batch 869713, Ethylbenzene, Toluene, m\_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.*

*Samples affected are: 427323-001, -002.*

*The Laboratory Control Sample for Toluene, Ethylbenzene, m\_p-Xylenes , o-Xylene is within laboratory Control Limits*

*SW8021BM*

*Batch 869713, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis*

*Samples affected are: 427323-002,427323-001.*



## CASE NARRATIVE

*Client Name: Yates Petroleum Corporation*

*Project Name: Deeter AV # 1*



*Project ID:*

*Work Order Number: 427323*

*Report Date: 21-SEP-11*

*Date Received: 09/09/2011*

---

*Batch: LBA-870524 TPH By SW8015B Mod  
SW8015B\_NM*

*Batch 870524, 1-Chlorooctane, o-Terphenyl recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis  
Samples affected are: 427323-002, 427323-001.*

*SW8015B\_NM*

*Batch 870524, C10-C28 Diesel Range Hydrocarbons recovered above QC limits in the Matrix Spike.*

*Samples affected are: 427323-001, -002.*

*The Laboratory Control Sample for C10-C28 Diesel Range Hydrocarbons is within laboratory Control Limits*

*SW8015B\_NM*

*Batch 870524, C10-C28 Diesel Range Hydrocarbons RPD was outside QC limits.*

*Samples affected are: 427323-001, -002*



# Certificate of Analysis Summary 427323

Yates Petroleum Corporation, Artesia, NM

Project Name: Deeter AV # 1



Project Id:

Contact: Amanda Trujillo

Project Location:

Date Received in Lab: Fri Sep-09-11 10:00 am

Report Date: 21-SEP-11

Project Manager: Brent Barron II

Analysis Requested	Lab Id:	427323-001	427323-002				
	Field Id:	Sample 1 (1')	Sample 2 (4')				
	Depth:	1-1 ft	4-4 ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Sep-07-11 13:00	Sep-07-11 13:00				
BTEX by EPA 8021B	Extracted:	Sep-09-11 17:00	Sep-09-11 17:00				
	Analyzed:	Sep-10-11 08:34	Sep-10-11 09:42				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		21.3 0.531	9.55 0.523				
Toluene		162 1.06	106 1.05				
Ethylbenzene		179 0.531	145 0.523				
m_p-Xylenes		206 1.06	171 1.05				
o-Xylene		75.6 0.531	64.7 0.523				
Total Xylenes		282 0.531	236 0.523				
Total BTEX		644 0.531	496 0.523				
Percent Moisture	Extracted:	Sep-09-11 15:12	Sep-09-11 15:12				
	Analyzed:	Sep-09-11 15:12	Sep-09-11 15:12				
	Units/RL:	% RL	% RL				
Percent Moisture		5.86 1.00	4.72 1.00				
TPH By SW8015B Mod	Extracted:	Sep-12-11 13:05	Sep-12-11 13:05				
	Analyzed:	Sep-20-11 16:14	Sep-20-11 16:45				
	Units/RL:	mg/kg RL	mg/kg RL				
C6-C10 Gasoline Range Hydrocarbons		7760 79.7	5740 78.4				
C10-C28 Diesel Range Hydrocarbons		14100 79.7	12000 78.4				
Total TPH		21900 79.7	17700 78.4				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end user of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron II  
Odessa Laboratory Manager

# Analytical Report 427324

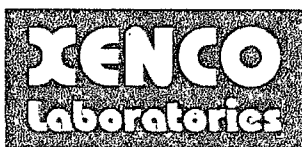
for  
Yates Petroleum Corporation

Project Manager: Amanda Trujillo

Deeter AV # 1

21-SEP-11

Collected By: Client



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12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)  
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)  
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)  
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)  
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)





21-SEP-11

Project Manager: **Amanda Trujillo**  
**Yates Petroleum Corporation**  
105 South Fourth St.  
Artesia, NM 88210

Reference: XENCO Report No: **427324**  
**Deeter AV # 1**  
Project Address:

----- **Amanda Trujillo:** -----

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 427324. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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Odessa Laboratory Manager

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## Sample Cross Reference 427324



Yates Petroleum Corporation, Artesia, NM

Deeter AV # 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Sample 1 (1')	S	09-07-11 13:00	1 - 1 ft	427324-001
Sample 2 (4')	S	09-07-11 13:00	4 - 4 ft	427324-002



## CASE NARRATIVE

*Client Name: Yates Petroleum Corporation*

*Project Name: Deeter AV # 1*



*Project ID:*

*Work Order Number: 427324*

*Report Date: 21-SEP-11*

*Date Received: 09/09/2011*

---

***Sample receipt non conformances and comments:***

*None*

---

***Sample receipt non conformances and comments per sample:***

*None*

---



# Certificate of Analysis Summary 427324

Yates Petroleum Corporation, Artesia, NM

Project Name: Deeter AV # 1



Project Id:

Contact: Amanda Trujillo

Date Received in Lab: Fri Sep-09-11 10:00 am

Report Date: 21-SEP-11


Project Location:

Project Manager: Brent Barron II

<b>Analysis Requested</b>	<b>Lab Id:</b>	427324-001	427324-002				
	<b>Field Id:</b>	Sample 1 (1')	Sample 2 (4')				
	<b>Depth:</b>	1-1 ft	4-4 ft				
	<b>Matrix:</b>	SOIL	SOIL				
	<b>Sampled:</b>	Sep-07-11 13:00	Sep-07-11 13:00				
<b>Anions by E300</b>	<b>Extracted:</b>						
	<b>Analyzed:</b>	Sep-11-11 19:03	Sep-11-11 19:03				
	<b>Units/RL:</b>	mg/kg RL	mg/kg RL				
Chloride		63.3 4 46	17.5 4 41				
<b>Percent Moisture</b>	<b>Extracted:</b>						
	<b>Analyzed:</b>	Sep-09-11 15:12	Sep-09-11 15:12				
	<b>Units/RL:</b>	% RL	% RL				
Percent Moisture		5.86 1 00	4.72 1.00				

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Brent Barron II  
Odessa Laboratory Manager



## Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection

**PQL** Practical Quantitation Limit      **MQL** Method Quantitation Limit      **LOQ** Limit of Quantitation

**DL** Method Detection Limit

**NC** Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

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2505 North Falkenburg Rd, Tampa, FL 33619  
5757 NW 158th St, Miami Lakes, FL 33014  
12600 West I-20 East, Odessa, TX 79765  
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(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	



## BS / BSD Recoveries



Project Name: Deeter AV # 1

Work Order #: 427324

Analyst: BRB

Date Prepared: 09/11/2011

Project ID:

Date Analyzed: 09/11/2011

Lab Batch ID: 869667

Sample: 869667-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Anions by E300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.840	20.0	21.9	110	20.0	21.9	110	0	75-125	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] =  $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries



Project Name: Deeter AV # 1

Work Order #: 427324

Lab Batch #: 869667

Date Analyzed: 09/11/2011

Date Prepared: 09/11/2011

Project ID:

Analyst: BRB

QC- Sample ID: 427256-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	19100	4830	24200	106	75-125	

Lab Batch #: 869667

Date Analyzed: 09/11/2011

Date Prepared: 09/11/2011

Analyst: BRB

QC- Sample ID: 427304-005 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	7.78	101	99.8	91	75-125	

Matrix Spike Percent Recovery [D] =  $100 \times (C-A)/B$   
Relative Percent Difference [E] =  $200 \times (C-A)/(C+B)$   
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



# Sample Duplicate Recovery



Project Name: Deeter AV # 1

Work Order #: 427324

Lab Batch #: 869667

Date Analyzed: 09/11/2011 19:03

Date Prepared: 09/11/2011

Project ID:

Analyst: BRB

QC- Sample ID: 427256-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	19100	18800	2	20	

Lab Batch #: 869627

Date Analyzed: 09/09/2011 11:15

Date Prepared: 09/09/2011

Analyst: BRB

QC- Sample ID: 427302-002 D

Batch #: 1

Matrix: Soil

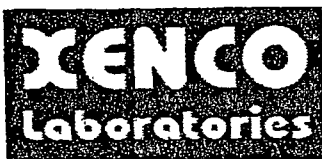
Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	1.57	1.41	11	20	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$   
All Results are based on MDL and validated for QC purposes.  
BRL - Below Reporting Limit





**XENCO Laboratories**

Atlanta, Boca Raton, Corpus Christi, Dallas  
Houston, Miami, Odessa, Philadelphia  
Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

**Prelogin / Nonconformance Report - Sample Log-In**Client: Yates PetroleumDate/Time: 9-7-11 10:00Lab ID #: 427323 / 427324Initials: GR**Sample Receipt Checklist**

1. Samples on ice?	Blue	<u>Water</u>	No	
2. Shipping container in good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	<u>N/A</u>	
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>No</u>		
7. Chain of custody signed when relinquished / received?	<u>Yes</u>	No		
8. Chain of custody agrees with sample label(s)?	<u>Yes</u>	No		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	Yes	No	<u>N/A</u>	
17. VOC sample have zero head space?	<u>Yes</u>	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs <u>36</u> °C	lbs °C	lbs °C	lbs °C	lbs °C

**Nonconformance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
  - ☐ Initial and Backup Temperature confirm out of temperature conditions
  - ☐ Client understands and would like to proceed with analysis