

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

JOHN A. YATES  
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CHIEF OPERATING OFFICER

September 24, 2014

Dr. Tomas Oberding  
NMOCD District I  
1625 N. French Drive  
Hobbs, New Mexico 88240

Re: Lotus ALT State #9  
30-025-37661  
Section 32, T22S-R32E  
Lea County, New Mexico

Dr. Oberding:

Yates Petroleum Corporation is submitting the enclosed work plan for the above captioned well. The plan is being submitted in response to the C-141 report dated September 6, 2013.

If you have any questions, feel free to call me at (575) 748-4171

Thank you.

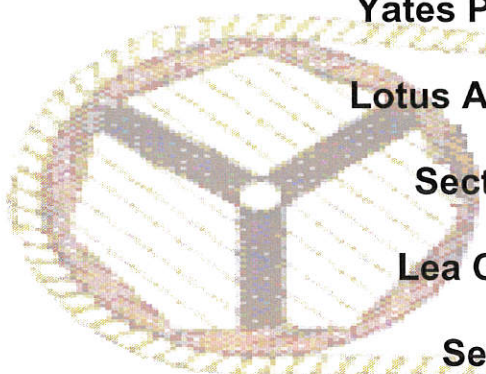
YATES PETROLEUM CORPORATION

Chase Settle  
Environmental Regulatory Agent

Enclosure(s)

KATHY H. PORTER  
SECRETARY

DENNIS G. KINSEY  
TREASURER



**Yates Petroleum Corporation**

**Lotus ALT State #9 Work Plan**

**Section 32, T22S-R32E**

**Lea County, New Mexico**

**September 24, 2014**

## **I. Location**

The well is located approximately 6 miles southeast of the Waste Isolation Pilot Plant which is located 31 miles east of Carlsbad, NM.

## **II. Background**

On September 6, 2013, Yates submitted to the NMOCD District I office a Form C-141 for the release of 15 B/O and 25 B/PW with 0 B/O and 0 B/PW recovered. The total affected area is approximately a 50 feet by 60 feet area (off the east side of the location). The release was from failure of a poly flow line causing oil and produced water to spray across the location and surrounding areas (east of the location). Initial delineation samples were taken (10/10/2013) and sent to a NMOCD approved laboratory (10/21/2013, results enclosed). Cross contamination occurred on the S4 sample due to the collapse of the walls during the sampling process. Based on analytical results (10/21/13), Yates Petroleum Corporation excavated six (6) feet of impacted soils in the S4 sample area. Those soils were taken to an approved NMOCD facility. A second sampling of the S4 sample area was conducted after excavation (02/03/2014) and sent to a NMOCD approved laboratory (02/12/14, results enclosed).

## **III. Surface and Ground Water**

Area surface geology ranges from Cenozoic Quaternary to Cenozoic Quaternary-Tertiary. The ChevronTexaco Trend Map displays at this location (Section 8, T25S-R28E) that depth to groundwater is approximately 325' feet making the site ranking for this site a zero (0). Watercourses in the area are dry except for infrequent flows in response to major precipitation events.

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

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

## **IV. Soils**

The area consists of soils that are caliche and loamy top soil and are interspersed with clay seams providing a low permeability barrier to retard vertical percolation of contaminants into the subsurface.

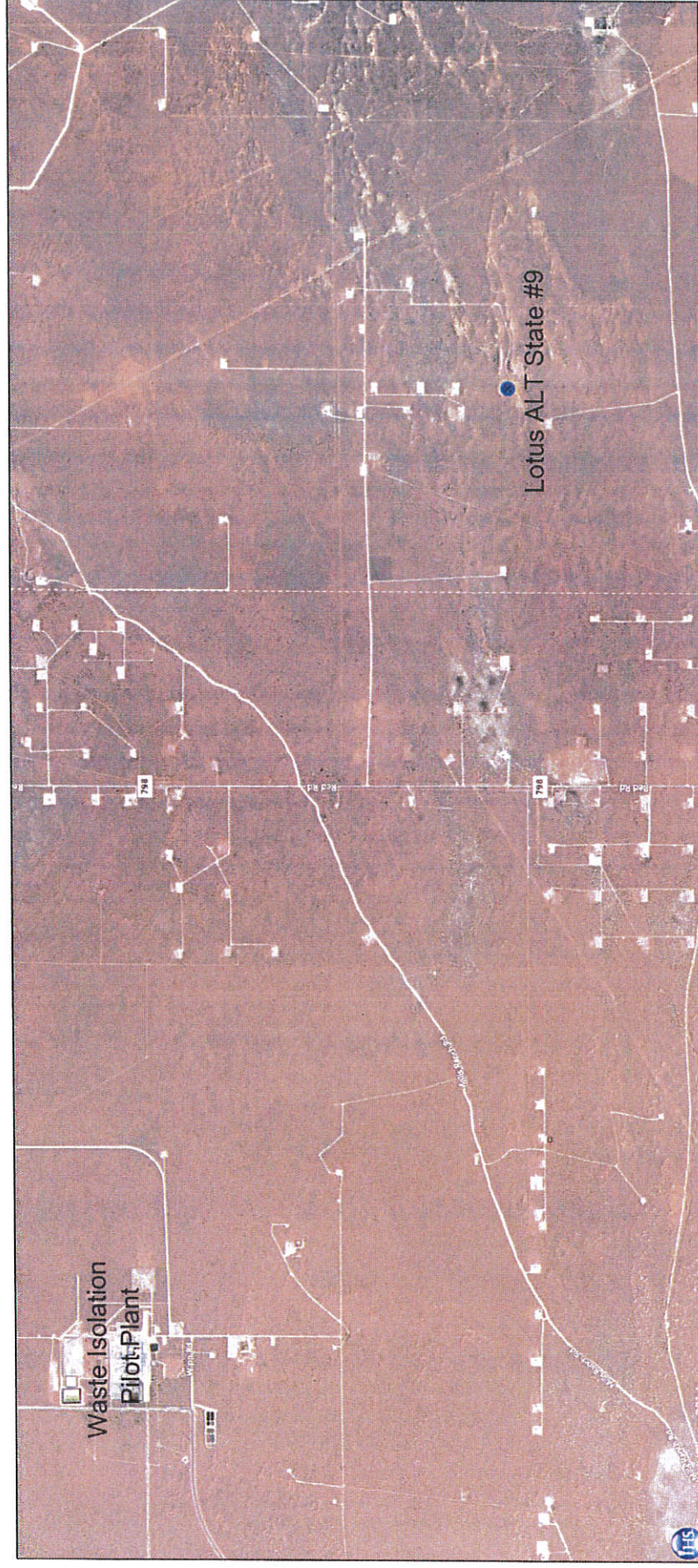
## **V. Scope of Work**

Based on enclosed analytical results, the depth to groundwater (325'), and a decrease in chlorides, Yates Petroleum Corporation will backfill the excavated area with four (4) feet of packed caliche to serve as a clay liner to restrict vertical migration of chlorides upward or downward, and two (2) feet of like, similar topsoil which will allow for vegetative repopulation of the disturbed area which will further restrict water percolation through the vadose zone. The TPH & BTEX are within the RRAL's for BTEX (50 ppm) and TPH (5000 ppm) for the Total Ranking Score of zero (0), no further analytical testing of TPH and/or BTEX will be conducted (all chloride analytical results are for documentation). When remediation work is completed a C-141, Final Report, analytical results and a site sample diagram will be submitted to the NMOCD and request closure of the site.

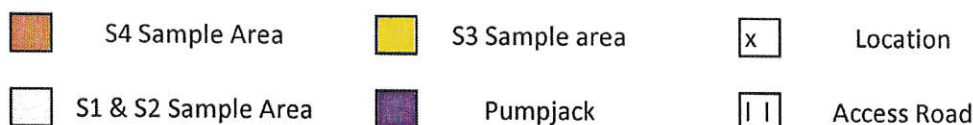
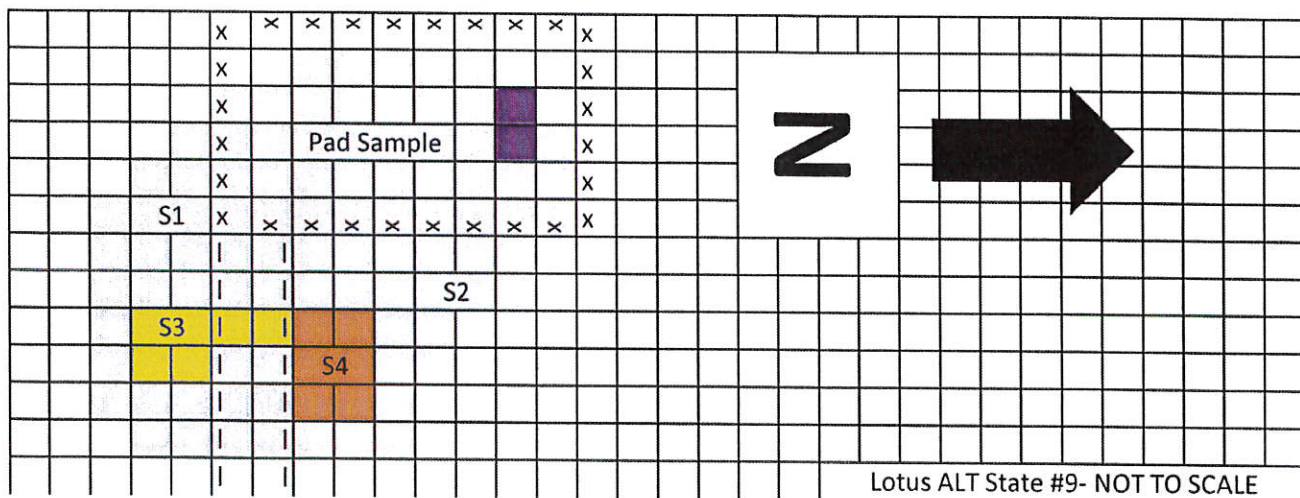




Lotus ALT State #9 Map







Analytical Report- H302508-01 (Card)	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
S1-SUR	Release Area	10/10/2013	Shovel	Surface	<0.3	<10.0	<10.0	48
S1-1'	Release Area	10/10/2013	Backhoe	1'	<0.3	<10.0	<10.0	<16.0
S1-2'	Release Area	10/10/2013	Backhoe	2'	<0.3	<10.0	<10.0	<16.0
S2-SUR	Release Area	10/10/2013	Shovel	Surface	<0.3	<10.0	<10.0	<16.0
S2-1'	Release Area	10/10/2013	Backhoe	1'	<0.3	<10.0	<10.0	<16.0
S2-2'	Release Area	10/10/2013	Backhoe	2'	<0.3	<10.0	<10.0	<16.0
PAD-SUR	Release Area	10/10/2013	Shovel	Surface	<0.3	<10.0	<10.0	64
PAD-1'	Release Area	10/10/2013	Backhoe	1'	<0.3	<10.0	<10.0	96
PAD-2'	Release Area	10/10/2013	Backhoe	2'	<0.3	<10.0	<10.0	32
H302509-01								
S3-5'	Release Area	10/10/2013	Backhoe	5'	<0.3	<10.0	<10.0	<16.0
S3-6'	Release Area	10/10/2013	Backhoe	6'	<0.3	<10.0	<10.0	32
S3-7'	Release Area	10/10/2013	Backhoe	7'	<0.3	<10.0	<10.0	<16.0
S3-8'	Release Area	10/10/2013	Backhoe	8'	<0.3	<10.0	<10.0	<16.0
S4-6'	Release Area	10/10/2013	Backhoe	6'	<0.3	<10.0	<10.0	5120
S4-7'	Release Area	10/10/2013	Backhoe	7'	<0.3	<10.0	10	13300
S4-8'	Release Area	10/10/2013	Backhoe	8'	<0.3	<10.0	<10.0	26800
H400380-01								
S4-7'	Release Area	2/3/2014	Backhoe	7'	<0.3	<10.0	<10.0	5440
S4-8'	Release Area	2/3/2014	Backhoe	8'	<0.3	<10.0	<10.0	7720
S4-9'	Release Area	2/3/2014	Backhoe	9'	<0.3	<10.0	<10.0	4400
S4-10'	Release Area	2/3/2014	Backhoe	10'	<0.3	<10.0	<10.0	1420

Site Ranking is Zero (0). DTGW >100' (approx 325', Section 32, T22S-R32E, Trend Map)

All results are ppm.

Released: 15 B/O, 25 B/PW; Recovered: 0 B/O, 0 B/PW Release Date: 09/03/2013



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

October 21, 2013

LUPE CARRASCO

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: LOTUS ALT STATE #9

Enclosed are the results of analyses for samples received by the laboratory on 10/16/13 10:30.

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,

Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	10/16/2013	Sampling Date:	10/10/2013
Reported:	10/21/2013	Sampling Type:	Soil
Project Name:	LOTUS ALT STATE #9	Sampling Condition:	Cool & Intact
Project Number:	103-163	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

**Sample ID: S1-SUR (H302508-01)**

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	10/19/2013	ND	1.93	96.4	2.00	1.36			
Toluene*	<0.050	0.050	10/19/2013	ND	1.99	99.3	2.00	2.92			
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	2.01	100	2.00	2.99			
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.85	97.4	6.00	2.79			
Total BTEX	<0.300	0.300	10/19/2013	ND							

Surrogate: 4-Bromofluorobenzene (PIL) 101 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	10/17/2013	ND	416	104	400	0.00	

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	10/17/2013	ND	189	94.6	200	4.47	
DRO >C10-C28	<10.0	10.0	10/17/2013	ND	181	90.6	200	1.79	

Surrogate: 1-Chlorooctane 109 % 65.2-140

Surrogate: 1-Chlorooctadecane 119 % 63.6-154

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/16/2013	Sampling Date:	10/10/2013
Reported:	10/21/2013	Sampling Type:	Soil
Project Name:	LOTUS ALT STATE #9	Sampling Condition:	Cool & Intact
Project Number:	103-163	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

**Sample ID: S1-1' (H302508-02)**

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	10/19/2013	ND	1.93	96.4	2.00	1.36		
Toluene*	<0.050	0.050	10/19/2013	ND	1.99	99.3	2.00	2.92		
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	2.01	100	2.00	2.99		
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.85	97.4	6.00	2.79		
Total BTEX	<0.300	0.300	10/19/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 99.9 % 89.4-126

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	10/17/2013	ND	416	104	400	0.00		

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	10/17/2013	ND	189	94.6	200	4.47		
DRO >C10-C28	<10.0	10.0	10/17/2013	ND	181	90.6	200	1.79		

Surrogate: 1-Chlorooctane 97.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 104 % 63.6-154

**Cardinal Laboratories**

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/16/2013	Sampling Date:	10/10/2013
Reported:	10/21/2013	Sampling Type:	Soil
Project Name:	LOTUS ALT STATE #9	Sampling Condition:	Cool & Intact
Project Number:	103-163	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

**Sample ID: S1-2' (H302508-03)**

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	10/19/2013	ND	1.93	96.4	2.00	1.36				
Toluene*	<0.050	0.050	10/19/2013	ND	1.99	99.3	2.00	2.92				
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	2.01	100	2.00	2.99				
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.85	97.4	6.00	2.79				
Total BTEX	<0.300	0.300	10/19/2013	ND								

Surrogate: 4-Bromofluorobenzene (PIC) 100 % 89.4-126

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	10/17/2013	ND	416	104	400	0.00			

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	10/17/2013	ND	189	94.6	200	4.47			
DRO >C10-C28	<10.0	10.0	10/17/2013	ND	181	90.6	200	1.79			

Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 112 % 63.6-154

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\*=Accredited Analyte

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Celest D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/16/2013	Sampling Date:	10/10/2013
Reported:	10/21/2013	Sampling Type:	Soil
Project Name:	LOTUS ALT STATE #9	Sampling Condition:	Cool & Intact
Project Number:	103-163	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

**Sample ID: S2-SUR (H302508-04)**

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	10/19/2013	ND	1.89	94.4	2.00	0.484			
Toluene*	<0.050	0.050	10/19/2013	ND	1.95	97.4	2.00	0.486			
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	1.97	98.4	2.00	0.735			
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.81	96.8	6.00	0.984			
Total BTEX	<0.300	0.300	10/19/2013	ND							

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 89.4-126

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	10/17/2013	ND	416	104	400	0.00	

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	10/17/2013	ND	189	94.6	200	4.47	
DRO >C10-C28	<10.0	10.0	10/17/2013	ND	181	90.6	200	1.79	

Surrogate: 1-Chlorooctane 99.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 115 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	10/16/2013	Sampling Date:	10/10/2013
Reported:	10/21/2013	Sampling Type:	Soil
Project Name:	LOTUS ALT STATE #9	Sampling Condition:	Cool & Intact
Project Number:	103-163	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

**Sample ID: S2-1' (H302508-05)**

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	10/19/2013	ND	1.89	94.4	2.00	0.484	
Toluene*	<0.050	0.050	10/19/2013	ND	1.95	97.4	2.00	0.486	
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	1.97	98.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.81	96.8	6.00	0.984	
Total BTEX	<0.300	0.300	10/19/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 89.4-126

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	10/17/2013	ND	416	104	400	0.00	

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	10/17/2013	ND	189	94.6	200	4.47	
DRO >C10-C28	<10.0	10.0	10/17/2013	ND	181	90.6	200	1.79	

Surrogate: 1-Chlorooctane 111 % 65.2-140

Surrogate: 1-Chlorooctadecane 113 % 63.6-154

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received: 10/16/2013  
Reported: 10/21/2013  
Project Name: LOTUS ALT STATE #9  
Project Number: 103-163  
Project Location: NOT GIVEN

Sampling Date: 10/10/2013  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: S2-2' (H302508-06)**

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	10/19/2013	ND	1.89	94.4	2.00	0.484	
Toluene*	<0.050	0.050	10/19/2013	ND	1.95	97.4	2.00	0.486	
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	1.97	98.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.81	96.8	6.00	0.984	
Total BTEX	<0.300	0.300	10/19/2013	ND					
<hr/>									
Surrogate: 4-Bromofluorobenzene (PIL)			101 %	89.4-126					
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	10/17/2013	ND	416	104	400	0.00	
<hr/>									
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	10/17/2013	ND	189	94.6	200	4.47	
DRO >C10-C28	<10.0	10.0	10/17/2013	ND	181	90.6	200	1.79	
<hr/>									
Surrogate: 1-Chlorooctane			97.6 %	65.2-140					
Surrogate: 1-Chlorooctadecane			110 %	63.6-154					

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/16/2013	Sampling Date:	10/10/2013
Reported:	10/21/2013	Sampling Type:	Soil
Project Name:	LOTUS ALT STATE #9	Sampling Condition:	Cool & Intact
Project Number:	103-163	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

**Sample ID: PAD-SUR (H302508-07)**

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	10/19/2013	ND	1.89	94.4	2.00	0.484			
Toluene*	<0.050	0.050	10/19/2013	ND	1.95	97.4	2.00	0.486			
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	1.97	98.4	2.00	0.735			
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.81	96.8	6.00	0.984			
Total BTEX	<0.300	0.300	10/19/2013	ND							

Surrogate: 4-Bromofluorobenzene (PIC) 101 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	10/17/2013	ND	416	104	400	0.00	

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	10/17/2013	ND	189	94.6	200	4.47	
DRO >C10-C28	<10.0	10.0	10/17/2013	ND	181	90.6	200	1.79	

Surrogate: 1-Chlorooctane 100 % 65.2-140

Surrogate: 1-Chlorooctadecane 110 % 63.6-154

**Cardinal Laboratories**

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/16/2013	Sampling Date:	10/10/2013
Reported:	10/21/2013	Sampling Type:	Soil
Project Name:	LOTUS ALT STATE #9	Sampling Condition:	Cool & Intact
Project Number:	103-163	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

**Sample ID: PAD-1' (H302508-08)**

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	10/19/2013	ND	1.89	94.4	2.00	0.484			
Toluene*	<0.050	0.050	10/19/2013	ND	1.95	97.4	2.00	0.486			
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	1.97	98.4	2.00	0.735			
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.81	96.8	6.00	0.984			
Total BTEX	<0.300	0.300	10/19/2013	ND							

Surrogate: 4-Bromofluorobenzene (PIC) 100 % 89.4-126

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	10/17/2013	ND	400	100	400	3.92	

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	10/17/2013	ND	189	94.6	200	4.47		
DRO >C10-C28	<10.0	10.0	10/17/2013	ND	181	90.6	200	1.79		

Surrogate: 1-Chlorooctane 90.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 99.3 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 10/16/2013  
 Reported: 10/21/2013  
 Project Name: LOTUS ALT STATE #9  
 Project Number: 103-163  
 Project Location: NOT GIVEN

 Sampling Date: 10/10/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Kathy Perez

**Sample ID: PAD-2' (H302508-09)**

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	10/19/2013	ND	1.89	94.4	2.00	0.484				
Toluene*	0.065	0.050	10/19/2013	ND	1.95	97.4	2.00	0.486				
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	1.97	98.4	2.00	0.735				
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.81	96.8	6.00	0.984				
Total BTEX	<0.300	0.300	10/19/2013	ND								

Surrogate: 4-Bromofluorobenzene (PIC) 100 % 89.4-126

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	10/17/2013	ND	400	100	400	3.92			

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	10/17/2013	ND	189	94.6	200	4.47			
DRO >C10-C28	<10.0	10.0	10/17/2013	ND	181	90.6	200	1.79			

Surrogate: 1-Chlorooctane 104 % 65.2-140

Surrogate: 1-Chlorooctadecane 109 % 63.6-154

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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: Lupe Carrasco

Company: (505) 393-2326 Yates Petroleum Corporation

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4350

Fax No:

Sampler Signature: Lupe Carrasco

e-mail:

lcarrasco@yatespetroleum.com

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

PO #: 103-163

Project Name:

Lotus AIT State #9

Project #:

Project Loc:

Page 12 of 12

(lab use only)

ORDER #: H302508

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 8015H	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	S1-Sur			10/10/2013																											
2	S1-1'			10/10/2013																											
3	S1-2'			10/10/2013																											
4	S2-Sur			10/10/2013																											
5	S2-1'			10/10/2013																											
6	S2-2'			10/10/2013																											
7	Pad-Sur			10/10/2013																											
8	Pad-1'			10/10/2013																											
9	Pad-2'			10/10/2013																											

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October 21, 2013

LUPE CARRASCO

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: LOTUS ALT STATE #9

Enclosed are the results of analyses for samples received by the laboratory on 10/16/13 10:30.

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,



Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

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

Received: 10/16/2013  
Reported: 10/21/2013  
Project Name: LOTUS ALT STATE #9  
Project Number: 103-163  
Project Location: NOT GIVEN

Sampling Date: 10/10/2013  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: S3-5' (H302509-01)**
**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	10/19/2013	ND	1.89	94.4	2.00	0.484	
Toluene*	<0.050	0.050	10/19/2013	ND	1.95	97.4	2.00	0.486	
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	1.97	98.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.81	96.8	6.00	0.984	
Total BTEX	<0.300	0.300	10/19/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 101 % 89.4-126

**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	10/17/2013	ND	400	100	400	3.92	

**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	10/17/2013	ND	189	94.6	200	4.47	
DRO >C10-C28	<10.0	10.0	10/17/2013	ND	181	90.6	200	1.79	

Surrogate: 1-Chlorooctane 115 % 65.2-140

Surrogate: 1-Chlorooctadecane 117 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	10/16/2013	Sampling Date:	10/10/2013
Reported:	10/21/2013	Sampling Type:	Soil
Project Name:	LOTUS ALT STATE #9	Sampling Condition:	Cool & Intact
Project Number:	103-163	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

**Sample ID: S3-6' (H302509-02)**

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	10/19/2013	ND	1.89	94.4	2.00	0.484	
Toluene*	<0.050	0.050	10/19/2013	ND	1.95	97.4	2.00	0.486	
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	1.97	98.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.81	96.8	6.00	0.984	
Total BTEX	<0.300	0.300	10/19/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 89.4-126

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	10/17/2013	ND	400	100	400	3.92	

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	10/18/2013	ND	204	102	200	8.49	
DRO >C10-C28	<10.0	10.0	10/18/2013	ND	199	99.4	200	8.56	

Surrogate: 1-Chlorooctane 110 % 65.2-140

Surrogate: 1-Chlorooctadecane 118 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/16/2013	Sampling Date:	10/10/2013
Reported:	10/21/2013	Sampling Type:	Soil
Project Name:	LOTUS ALT STATE #9	Sampling Condition:	Cool & Intact
Project Number:	103-163	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

**Sample ID: S3-7' (H302509-03)**

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	10/19/2013	ND	1.89	94.4	2.00	0.484	
Toluene*	<0.050	0.050	10/19/2013	ND	1.95	97.4	2.00	0.486	
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	1.97	98.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.81	96.8	6.00	0.984	
Total BTEX	<0.300	0.300	10/19/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 99.6 % 89.4-126

Chloride, SM4500CI-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	10/17/2013	ND	400	100	400	3.92	

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	10/18/2013	ND	204	102	200	8.49	
DRO >C10-C28	<10.0	10.0	10/18/2013	ND	199	99.4	200	8.56	

Surrogate: 1-Chlorooctane 117 % 63.2-140

Surrogate: 1-Chlorooctadecane 118 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/16/2013	Sampling Date:	10/10/2013
Reported:	10/21/2013	Sampling Type:	Soil
Project Name:	LOTUS ALT STATE #9	Sampling Condition:	Cool & Intact
Project Number:	103-163	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

**Sample ID: S3-8' (H302509-04)**

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	10/19/2013	ND	1.89	94.4	2.00	0.484	
Toluene*	<0.050	0.050	10/19/2013	ND	1.95	97.4	2.00	0.486	
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	1.97	98.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.81	96.8	6.00	0.984	
Total BTEX	<0.300	0.300	10/19/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 101 % 89.4-126

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	10/17/2013	ND	400	100	400	3.92	

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	10/18/2013	ND	204	102	200	8.49	
DRO >C10-C28	<10.0	10.0	10/18/2013	ND	199	99.4	200	8.56	

Surrogate: 1-Chlorooctane 117 % 65.2-140

Surrogate: 1-Chlorooctadecane 123 % 63.6-154

**Cardinal Laboratories**

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 10/16/2013  
 Reported: 10/21/2013  
 Project Name: LOTUS ALT STATE #9  
 Project Number: 103-163  
 Project Location: NOT GIVEN

 Sampling Date: 10/10/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Kathy Perez

**Sample ID: S4-6' (H302509-05)**

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	10/19/2013	ND	1.89	94.4	2.00	0.484	
Toluene*	<0.050	0.050	10/19/2013	ND	1.95	97.4	2.00	0.486	
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	1.97	98.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.81	96.8	6.00	0.984	
Total BTEX	<0.300	0.300	10/19/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 99.7 % 89.4-126

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	10/17/2013	ND	400	100	400	3.92	

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	10/18/2013	ND	204	102	200	8.49	
DRO >C10-C28	<10.0	10.0	10/18/2013	ND	199	99.4	200	8.56	

Surrogate: 1-Chlorooctane 109 % 65.2-140

Surrogate: 1-Chlorooctadecane 115 % 63.6-154

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received: 10/16/2013  
Reported: 10/21/2013  
Project Name: LOTUS ALT STATE #9  
Project Number: 103-163  
Project Location: NOT GIVEN

Sampling Date: 10/10/2013  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: S4-7' (H302509-06)**

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	10/19/2013	ND	1.89	94.4	2.00	0.484	
Toluene*	<0.050	0.050	10/19/2013	ND	1.95	97.4	2.00	0.486	
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	1.97	98.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.81	96.8	6.00	0.984	
Total BTEX	<0.300	0.300	10/19/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 99.8 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13300	16.0	10/17/2013	ND	400	100	400	3.92	

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	10/18/2013	ND	204	102	200	8.49	
DRO >C10-C28	10.0	10.0	10/18/2013	ND	199	99.4	200	8.56	

Surrogate: 1-Chlorooctane 106 % 65.2-140

Surrogate: 1-Chlorooctadecane 110 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/16/2013	Sampling Date:	10/10/2013
Reported:	10/21/2013	Sampling Type:	Soil
Project Name:	LOTUS ALT STATE #9	Sampling Condition:	Cool & Intact
Project Number:	103-163	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

**Sample ID: S4-8' (H302509-07)**

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	10/19/2013	ND	1.89	94.4	2.00	0.484	
Toluene*	<0.050	0.050	10/19/2013	ND	1.95	97.4	2.00	0.486	
Ethylbenzene*	<0.050	0.050	10/19/2013	ND	1.97	98.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	10/19/2013	ND	5.81	96.8	6.00	0.984	
Total BTEX	<0.300	0.300	10/19/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 100 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	26800	16.0	10/17/2013	ND	400	100	400	3.92	

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	10/18/2013	ND	204	102	200	8.49	
DRO >C10-C28	<10.0	10.0	10/18/2013	ND	199	99.4	200	8.56	

Surrogate: 1-Chlorooctane 120 % 65.2-140

Surrogate: 1-Chlorooctadecane 121 % 63.6-154

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\*=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







February 12, 2014

LUPE CARRASCO  
YATES PETROLEUM CORPORATION  
105 S 4th Street  
Artesia, NM 88210

RE: LOTUS ALT STATE #9

Enclosed are the results of analyses for samples received by the laboratory on 02/06/14 15:00.

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

Received:	02/06/2014	Sampling Date:	02/03/2014
Reported:	02/12/2014	Sampling Type:	Soil
Project Name:	LOTUS ALT STATE #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	NOT GIVEN		

**Sample ID: S4-7' (H400380-01)**

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	02/11/2014	ND	2.34	117	2.00	4.12		
Toluene*	<0.050	0.050	02/11/2014	ND	2.32	116	2.00	3.68		
Ethylbenzene*	<0.050	0.050	02/11/2014	ND	2.30	115	2.00	4.18		
Total Xylenes*	<0.150	0.150	02/11/2014	ND	6.76	113	6.00	3.04		
Total BTEX	<0.300	0.300	02/11/2014	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 120 % 89.4-126

Chloride, SM4500Cl-B			mg/kg							
			Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5440	16.0	02/11/2014	ND	400	100	400	3.92		

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	02/10/2014	ND	214	107	200	0.383		
DRO >C10-C28	<10.0	10.0	02/10/2014	ND	198	99.1	200	3.57		

Surrogate: 1-Chlorooctane 105 % 65.2-140

Surrogate: 1-Chlorooctadecane 111 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 02/06/2014  
Reported: 02/12/2014  
Project Name: LOTUS ALT STATE #9  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/03/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S4-8' (H400380-02)**

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	02/11/2014	ND	2.34	117	2.00	4.12	
Toluene*	0.081	0.050	02/11/2014	ND	2.32	116	2.00	3.68	
Ethylbenzene*	<0.050	0.050	02/11/2014	ND	2.30	115	2.00	4.18	
Total Xylenes*	<0.150	0.150	02/11/2014	ND	6.76	113	6.00	3.04	
Total BTEX	<0.300	0.300	02/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 120 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7720	16.0	02/11/2014	ND	400	100	400	3.92	

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	02/10/2014	ND	214	107	200	0.383	
DRO >C10-C28	<10.0	10.0	02/10/2014	ND	198	99.1	200	3.57	

Surrogate: 1-Chlorooctane 100 % 65.2-140

Surrogate: 1-Chlorooctadecane 104 % 63.6-154

**Cardinal Laboratories**

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/06/2014	Sampling Date:	02/03/2014
Reported:	02/12/2014	Sampling Type:	Soil
Project Name:	LOTUS ALT STATE #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	NOT GIVEN		

**Sample ID: S4-9' (H400380-03)**

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	02/11/2014	ND	2.34	117	2.00	4.12	
<b>Toluene*</b>	<b>0.140</b>	0.050	02/11/2014	ND	2.32	116	2.00	3.68	
Ethylbenzene*	<0.050	0.050	02/11/2014	ND	2.30	115	2.00	4.18	
Total Xylenes*	<0.150	0.150	02/11/2014	ND	6.76	113	6.00	3.04	
Total BTEX	<0.300	0.300	02/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 120 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>4400</b>	16.0	02/11/2014	ND	400	100	400	3.92		

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	02/10/2014	ND	214	107	200	0.383		
DRO >C10-C28	<10.0	10.0	02/10/2014	ND	198	99.1	200	3.57		

Surrogate: 1-Chlorooctane 114 % 65.2-140

Surrogate: 1-Chlorooctadecane 118 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	02/06/2014	Sampling Date:	02/03/2014
Reported:	02/12/2014	Sampling Type:	Soil
Project Name:	LOTUS ALT STATE #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	NOT GIVEN		

**Sample ID: S4-10' (H400380-04)**

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	02/11/2014	ND	2.34	117	2.00	4.12	
Toluene*	<0.050	0.050	02/11/2014	ND	2.32	116	2.00	3.68	
Ethylbenzene*	<0.050	0.050	02/11/2014	ND	2.30	115	2.00	4.18	
Total Xylenes*	<0.150	0.150	02/11/2014	ND	6.76	113	6.00	3.04	
Total BTEX	<0.300	0.300	02/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 119 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1420	16.0	02/11/2014	ND	400	100	400	3.92	

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	02/10/2014	ND	214	107	200	0.383	
DRO >C10-C28	<10.0	10.0	02/10/2014	ND	198	99.1	200	3.57	

Surrogate: 1-Chlorooctane 110 % 65.2-140

Surrogate: 1-Chlorooctadecane 117 % 63.6-154

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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



## Page 7 of 7

Lotus #9

(lab use only)		ORDER #:	
		<b>H400380-</b>	
LAB # (lab use only)		FIELD CODE	
<b>01</b>	S4-7'	Beginning Depth	
<b>02</b>	S4-8'	Ending Depth	
<b>03</b>	S4-9'	Date Sampled	2/3/2014
<b>04</b>	S4-10'	Time Sampled	2/3/2014
		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 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	
		RCl	
		N.O.R.M.	
		Chlorides	
		SAR	
		RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	
		Standard TAT	
Special Instructions:			
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by ELDT:
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:			
°C			