

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  
CHAIRMAN OF THE BOARD

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CHIEF ADMINISTRATIVE OFFICER

May 21, 2013

Mr. Mike Bratcher  
Oil Conservation Division  
811 S. First St.  
Artesia, NM 88210



RE: Mimosa AHS Federal SWD #1  
30-015-26449  
Section 4, T20S-R24E  
Eddy County, New Mexico

Dear Mr. Bratcher,

Yates Petroleum Corporation would like to submit for your consideration the enclosed work plan for the above captioned well. The plan is being submitted in response to the C-141 report dated April 17, 2013.

If there are no objections with the scope of work described in the plan, Yates Petroleum Corporation will have a contractor begin work on or after the week of May 27, 2013, or earlier with your approval.

If you have any questions please feel free to contact me at (575) 748-4350.

Thank You,

Lupe Carrasco  
Environmental Regulatory Agent  
Yates Petroleum Corporation

Enclosure(s):      Work Plan  
                         Site Diagram  
                         Analytical Results Summary Table  
                         Analytical Report (H300914/H301025)

**Yates Petroleum Corporation**  
**Mimosa AHS Federal SWD #1 Work Plan**  
**Section 4, T20S-R24E**  
**Eddy County, New Mexico**  
**May 21, 2013**

**I. Location**

Head south for 15 miles south of Artesia to Rock Daisy Road. Turn west and go approximately 11 miles to location on right just off of the road.

**II. Background**

On April 5, 2013, a release occurred consisting of 20 B/O and 900 B/PW of which 20 B/O and 700 B/PW were recovered. The release occurred from a waterleg on a produced water tank that fell over because the brace holding the waterleg failed due to age and corrosion. The release was contained within the berm area of the SWD. The impacted area was approximately 20' X 150'. Vacuum trucks were dispatched to recover the standing fluid. The impacted area was excavated from six inches to a foot and all excavated material was disposed at an NMOCD approved disposal. Delineation samples were taken and sent to an NMOCD approved laboratory (results enclosed). Sample points were labeled as S1, S2, and S3 with the sample areas S2 and S3 being the major pooling areas for standing fluid. S1 is believed to be associated with the south edge of a historic production pit.

**III. Surface and Ground Water**

Area surface geology is Cenozoic. The nearest Depth to Groundwater record listed on the Chevron Texaco Trend Map (Section 4, T20S-R24E) shows depth of groundwater to be approximately 275 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**

According to the Natural Resource Conservation Service Web Soil Survey, the area consists of soils that are considered to be a very cobbly loam to extremely rocky loam with a restrictive barrier of lithic bedrock at 4 to 20 inches below the surface.

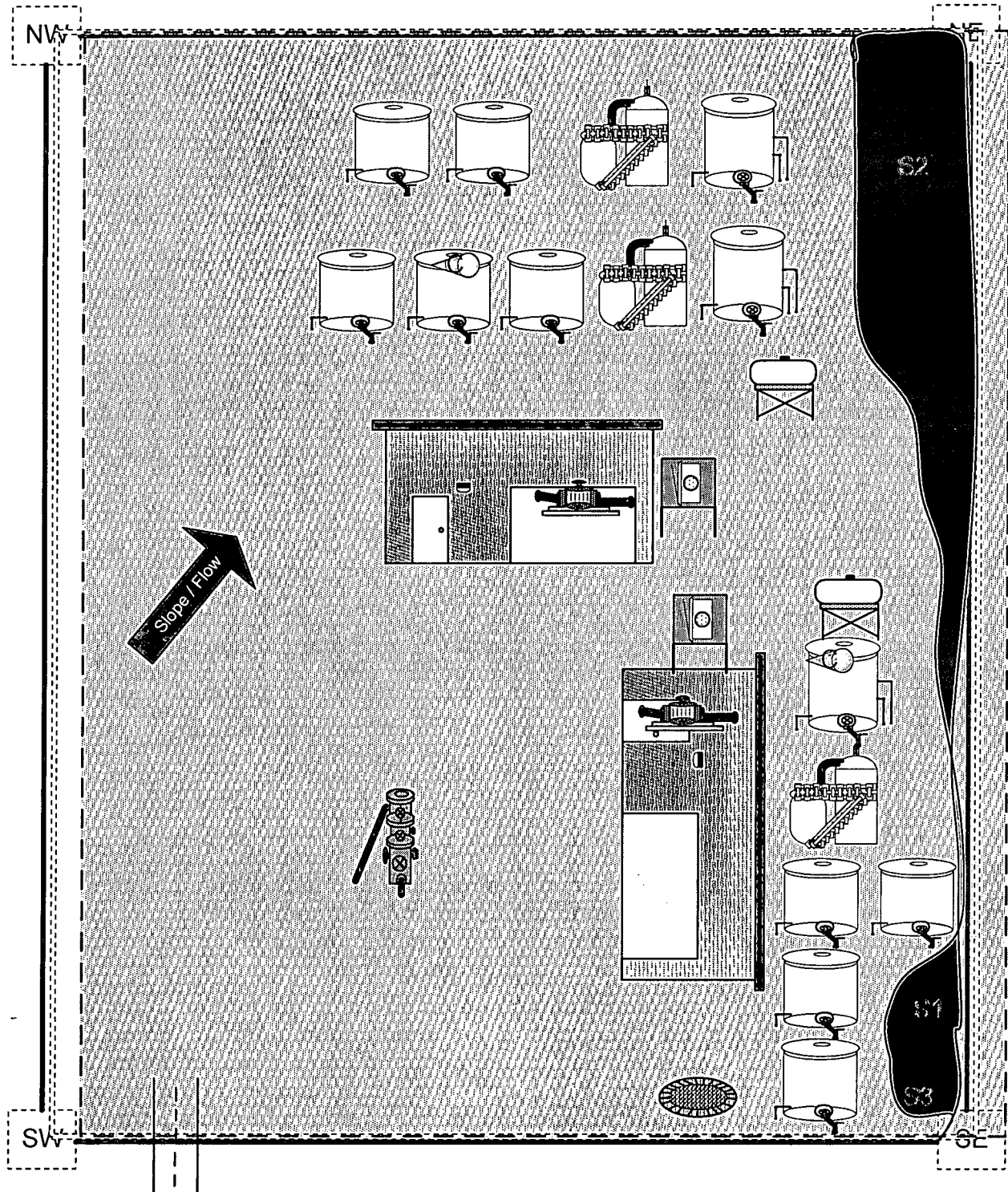
**V. Scope of Work**

Upon approval of this work plan and based on the enclosed analytical results, Yates Petroleum Corporation will have a contractor excavate the area labeled as S1 on the Site Diagram (enclosed) down to a depth of approximately 8' or until bedrock is reached. Impacted soils from excavation will be disposed at a NMOCD approved site. Upon inspection of the excavated site and witnessed by Mr. Mike Bratcher, a field vapor headspace sample will be taken to determine the BTEX level at the bedrock surface. Upon approval, the excavation will be backfilled with caliche.

# YATES PETROLEUM CORPORATION

Mimosa Federal SWD #4

Monday, May 13, 2013



## Mimosa AHS Federal SWD #1

Analytical Report- H300914/H301025	Sample Date	Depth	BTEX	GRO	DRO	TOTAL	Chlorides
S1-1'	4/22/2013	1'	22.4	2880	8680	11560	688
S1-3'	4/22/2013	3'	130	3380	5290	8670	288
S1-5'	4/22/2013	5'	187	5060	9150	14210	384
S1-6'	5/8/2013	6'	163	2690	4340	7030	336
S1-7'	5/8/2013	7'	95.5	2210	6370	8580	928
S1-8'	5/8/2013	8'	200	2810	4370	7180	224
S2-2'	4/22/2013	2'	0.252	ND	37.1	37.1	1680
S2-3'	4/22/2013	3'	ND	ND	16.1	16.1	1550
S3-1'	5/8/2013	1'	0.772	ND	39.6	39.6	1920
S3-3'	5/8/2013	3'	0.307	ND	17.7	17.7	848
S3-5'	5/8/2013	5'	ND	ND	ND	0	1020
S3-6'	5/8/2013	6'	ND	ND	ND	0	1140
S3-7'	5/8/2013	7'	ND	ND	ND	0	896
S3-8'	5/8/2013	8'	ND	ND	ND	0	784

← EX to 8' or bedrock

**Site Ranking is (0).** Depth to Ground Water >100' (275', per Trend Map ).

All results are ppm.Chlorides for documentation.

Released: 20 B/O; 900 B/PW Recovered: 20 B/O; 700 B/PW. Release Date: 4/5/13

\* Impacted area scraped and disposed at an NMOCD approved facility.



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

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April 22, 2013

LUPE CARRASCO

Yates Energy Petroleum Corp

105 S 4th Street

Artesia, NM 88210

RE: MIMOSA 'AHS' FED #1

Enclosed are the results of analyses for samples received by the laboratory on 04/17/13 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,

A handwritten signature in cursive script that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 04/17/2013  
 Reported: 04/22/2013  
 Project Name: MIMOSA 'AHS' FED #1  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 04/16/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S1 - 1' (H300914-01)**

BTX 8021B			mg/kg		Analyzed By: AP				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	0.295	0.050	04/18/2013	ND	2.04	102	2.00	7.37		
Toluene*	3.18	0.050	04/18/2013	ND	2.01	100	2.00	7.72		
Ethylbenzene*	2.73	0.050	04/18/2013	ND	2.01	101	2.00	7.77		
Total Xylenes*	16.2	0.150	04/18/2013	ND	5.94	99.0	6.00	7.35		
Total BTX	22.4	0.300	04/18/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIB) 594 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	04/18/2013	ND	432	108	400	3.77	

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	2880	10.0	04/18/2013	ND	220	110	200	2.55	
DRO >C10-C28	8680	10.0	04/18/2013	ND	218	109	200	3.13	

Surrogate: 1-Chlorooctane 247 % 65.2-140

Surrogate: 1-Chlorooctadecane 322 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	04/17/2013	Sampling Date:	04/16/2013
Reported:	04/22/2013	Sampling Type:	Soil
Project Name:	MIMOSA 'AHS' FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NONE GIVEN		

**Sample ID: S1 - 3' (H300914-02)**

BTX 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	04/19/2013	ND	2.04	102	2.00	7.37	
Toluene*	6.47	0.500	04/19/2013	ND	2.01	100	2.00	7.72	
Ethylbenzene*	12.0	0.500	04/19/2013	ND	2.01	101	2.00	7.77	
Total Xylenes*	111	1.50	04/19/2013	ND	5.94	99.0	6.00	7.35	
Total BTX	130	3.00	04/19/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 204 % 89.4-126

Chloride, SM4500Cl-B			mg/kg				Analyzed By: DW		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	04/18/2013	ND	432	108	400	3.77	

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	3380	10.0	04/18/2013	ND	220	110	200	2.55	
DRO >C10-C28	5290	10.0	04/18/2013	ND	218	109	200	3.13	

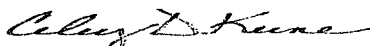
Surrogate: 1-Chlorooctane 268 % 65.2-140

Surrogate: 1-Chlorooctadecane 227 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

 Received: 04/17/2013  
 Reported: 04/22/2013  
 Project Name: MIMOSA 'AHS' FED #1  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

 Sampling Date: 04/16/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S1 - 5' (H300914-03)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	04/19/2013	ND	2.04	102	2.00	7.37	
Toluene*	9.49	0.500	04/19/2013	ND	2.01	100	2.00	7.72	
Ethylbenzene*	16.3	0.500	04/19/2013	ND	2.01	101	2.00	7.77	
Total Xylenes*	161	1.50	04/19/2013	ND	5.94	99.0	6.00	7.35	
Total BTEX	187	3.00	04/19/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 218 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	04/18/2013	ND	432	108	400	3.77	

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	5060	10.0	04/18/2013	ND	220	110	200	2.55	
DRO >C10-C28	9150	10.0	04/18/2013	ND	218	109	200	3.13	

Surrogate: 1-Chlorooctane 242 % 65.2-140

Surrogate: 1-Chlorooctadecane 291 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 04/17/2013  
Reported: 04/22/2013  
Project Name: MIMOSA 'AHS' FED #1  
Project Number: NONE GIVEN  
Project Location: NONE GIVEN

Sampling Date: 04/16/2013  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S2 - 2' (H300914-04)**

BTX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/19/2013	ND	2.04	102	2.00	7.37	
Toluene*	<0.050	0.050	04/19/2013	ND	2.01	100	2.00	7.72	
Ethylbenzene*	<0.050	0.050	04/19/2013	ND	2.01	101	2.00	7.77	
<b>Total Xylenes*</b>	<b>0.252</b>	0.150	04/19/2013	ND	5.94	99.0	6.00	7.35	
Total BTX	<0.300	0.300	04/19/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 111 % 89.4-126

Chloride, SM4500Cl-B			mg/kg		Analyzed By: DW				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1680</b>	16.0	04/18/2013	ND	432	108	400	3.77	

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	04/18/2013	ND	220	110	200	2.55	
<b>DRO &gt;C10-C28</b>	<b>37.1</b>	10.0	04/18/2013	ND	218	109	200	3.13	


Surrogate: 1-Chlorooctane 100 % 65.2-140

Surrogate: 1-Chlorooctadecane 122 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 04/17/2013  
 Reported: 04/22/2013  
 Project Name: MIMOSA 'AHS' FED #1  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

 Sampling Date: 04/16/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S2 - 3' (H300914-05)**

BTEX 80218			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/19/2013	ND	2.04	102	2.00	7.37		
Toluene*	<0.050	0.050	04/19/2013	ND	2.01	100	2.00	7.72		
Ethylbenzene*	<0.050	0.050	04/19/2013	ND	2.01	101	2.00	7.77		
Total Xylenes*	<0.150	0.150	04/19/2013	ND	5.94	99.0	6.00	7.35		
Total BTEX	<0.300	0.300	04/19/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 105 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1550	16.0	04/18/2013	ND	432	108	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	04/18/2013	ND	220	110	200	2.55	
DRO >C10-C28	16.1	10.0	04/18/2013	ND	218	109	200	3.13	

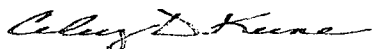
Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 119 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

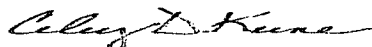
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.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

\* = Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



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

## Page 8 of 8

**Project Manager:** Lupe Carrasco

**Project Name:** Mimosa "AHS" Fed #1

Comp: (505) 393-2326 Yates Petroleum Corporation

**Project #:**

**Company Address:** 105 South 4th Street

**Project Loc:**

City/State/Zip: Artesia, NM 88210

PO #: 103-163

Telephone No: 575-748-4350

**Fax No:**

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

**Sampler Signature:**

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

(lab use only)

ORDER #: H300914

**Special Instructions:**

Laboratory Comments:

Relinquished by:

Date: \_\_\_\_\_

Time

Received by:

Date \_\_\_\_\_

Time

## Sample Containers Intact?

## VOCs Free of Headspace?

Labels on container(s)

Custody seals on container(s)

## Custody seals on cooler

Sample Hand Delivered

by Sampler/Client Rep. ?

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:

#54



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

---

May 08, 2013

LUPE CARRASCO

Yates Energy Petroleum Corp

105 S 4th Street

Artesia, NM 88210

RE: MIMOSA #1

Enclosed are the results of analyses for samples received by the laboratory on 05/01/13 10:00.

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).

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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, appearing to read "Coley D. Keene". The signature is fluid and cursive, with a large, stylized 'C' at the beginning.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 05/01/2013  
Reported: 05/08/2013  
Project Name: MIMOSA #1  
Project Number: 103-163  
Project Location: NOT GIVEN

Sampling Date: 04/24/2013  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S1 - 6' (H301025-01)**

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	05/07/2013	ND	1.99	99.4	2.00	9.39	
Toluene*	8.27	0.500	05/07/2013	ND	1.79	89.6	2.00	9.05	
Ethylbenzene*	10.8	0.500	05/07/2013	ND	1.90	95.2	2.00	9.42	
Total Xylenes*	143	1.50	05/07/2013	ND	5.57	92.9	6.00	8.68	
Total BTEX	163	3.00	05/07/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID) 215 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	05/02/2013	ND	448	112	400	7.41	

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	2690	10.0	05/03/2013	ND	198	98.8	200	0.182	
DRO >C10-C28	4340	10.0	05/03/2013	ND	191	95.7	200	0.202	

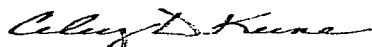
Surrogate: 1-Chlorooctane 165 % 65.2-140

Surrogate: 1-Chlorooctadecane 165 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 05/01/2013  
Reported: 05/08/2013  
Project Name: MIMOSA #1  
Project Number: 103-163  
Project Location: NOT GIVEN

Sampling Date: 04/24/2013  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S1 - 7' (H301025-02)**

BTEX 8021B			mg/kg		Analyzed By: AP			S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	05/07/2013	ND	1.99	99.4	2.00	9.39	
Toluene*	5.69	0.200	05/07/2013	ND	1.79	89.6	2.00	9.05	
Ethylbenzene*	7.99	0.200	05/07/2013	ND	1.90	95.2	2.00	9.42	
Total Xylenes*	81.8	0.600	05/07/2013	ND	5.57	92.9	6.00	8.68	
Total BTEX	95.5	1.20	05/07/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 219 % 89.4-126

Chloride, SM4500Cl-B			mg/kg		Analyzed By: DW				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	928	16.0	05/02/2013	ND	448	112	400	7.41	

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	2210	10.0	05/03/2013	ND	198	98.8	200	0.182	
DRO >C10-C28	6370	10.0	05/03/2013	ND	191	95.7	200	0.202	

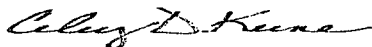
Surrogate: 1-Chlorooctane 157 % 65.2-140

Surrogate: 1-Chlorooctadecane 206 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

 Received: 05/01/2013  
 Reported: 05/08/2013  
 Project Name: MIMOSA #1  
 Project Number: 103-163  
 Project Location: NOT GIVEN

 Sampling Date: 04/24/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S1 - 8' (H301025-03)**

BTEX 8021B		mg/kg	Analyzed By: AP					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	05/07/2013	ND	1.99	99.4	2.00	9.39	
Toluene*	8.09	0.200	05/07/2013	ND	1.79	89.6	2.00	9.05	
Ethylbenzene*	11.4	0.200	05/07/2013	ND	1.90	95.2	2.00	9.42	
Total Xylenes*	181	0.600	05/07/2013	ND	5.57	92.9	6.00	8.68	
Total BTEX	200	1.20	05/07/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 220 % 89.4-126

Chloride, SM4500Cl-B		mg/kg	Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	05/02/2013	ND	432	108	400	0.00	

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	2810	10.0	05/03/2013	ND	198	98.8	200	0.182	
DRO >C10-C28	4370	10.0	05/03/2013	ND	191	95.7	200	0.202	

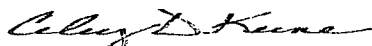
Surrogate: 1-Chlorooctane 152 % 65.2-140

Surrogate: 1-Chlorooctadecane 162 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 05/01/2013  
 Reported: 05/08/2013  
 Project Name: MIMOSA #1  
 Project Number: 103-163  
 Project Location: NOT GIVEN

 Sampling Date: 04/24/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S3 - 1' (H301025-04)**

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	05/07/2013	ND	1.99	99.4	2.00	9.39		
Toluene*	0.144	0.050	05/07/2013	ND	1.79	89.6	2.00	9.05		
Ethylbenzene*	<0.050	0.050	05/07/2013	ND	1.90	95.2	2.00	9.42		
Total Xylenes*	0.628	0.150	05/07/2013	ND	5.57	92.9	6.00	8.68		
Total BTEX	0.772	0.300	05/07/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 123 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1920	16.0	05/02/2013	ND	432	108	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	05/03/2013	ND	198	98.8	200	0.182	
DRO >C10-C28	39.6	10.0	05/03/2013	ND	191	95.7	200	0.202	


Surrogate: 1-Chlorooctane 109 % 65.2-140

Surrogate: 1-Chlorooctadecane 112 % 63.6-154

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**Analytical Results For:**

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

Received: 05/01/2013  
Reported: 05/08/2013  
Project Name: MIMOSA #1  
Project Number: 103-163  
Project Location: NOT GIVEN

Sampling Date: 04/24/2013  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S3 - 3' (H301025-05)**

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	05/07/2013	ND	1.99	99.4	2.00	9.39	
Toluene*	<b>0.062</b>	0.050	05/07/2013	ND	1.79	89.6	2.00	9.05	
Ethylbenzene*	<0.050	0.050	05/07/2013	ND	1.90	95.2	2.00	9.42	
<b>Total Xylenes*</b>	<b>0.245</b>	0.150	05/07/2013	ND	5.57	92.9	6.00	8.68	
<b>Total BTX</b>	<b>0.307</b>	0.300	05/07/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 114 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>848</b>	16.0	05/02/2013	ND	432	108	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	05/03/2013	ND	198	98.8	200	0.182	
<b>DRO &gt;C10-C28</b>	<b>17.7</b>	10.0	05/03/2013	ND	191	95.7	200	0.202	

Surrogate: 1-Chlorooctane 94.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 100 % 63.6-154

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**Analytical Results For:**

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

Received: 05/01/2013  
Reported: 05/08/2013  
Project Name: MIMOSA #1  
Project Number: 103-163  
Project Location: NOT GIVEN

Sampling Date: 04/24/2013  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S3 - 5' (H301025-06)**

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	05/07/2013	ND	1.99	99.4	2.00	9.39	
Toluene*	<0.050	0.050	05/07/2013	ND	1.79	89.6	2.00	9.05	
Ethylbenzene*	<0.050	0.050	05/07/2013	ND	1.90	95.2	2.00	9.42	
Total Xylenes*	<0.150	0.150	05/07/2013	ND	5.57	92.9	6.00	8.68	
Total BTEX	<0.300	0.300	05/07/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 111 % 89.4-126

Chloride, SM4500Cl-B			mg/kg		Analyzed By: DW				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1020	16.0	05/02/2013	ND	432	108	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	05/03/2013	ND	198	98.8	200	0.182	
DRO >C10-C28	<10.0	10.0	05/03/2013	ND	191	95.7	200	0.202	

Surrogate: 1-Chlorooctane 104 % 65.2-140

Surrogate: 1-Chlorooctadecane 107 % 63.6-154

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**Analytical Results For:**

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

 Received: 05/01/2013  
 Reported: 05/08/2013  
 Project Name: MIMOSA #1  
 Project Number: 103-163  
 Project Location: NOT GIVEN

 Sampling Date: 04/24/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S3 - 6' (H301025-07)**

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	05/07/2013	ND	1.99	99.4	2.00	9.39		
Toluene*	<0.050	0.050	05/07/2013	ND	1.79	89.6	2.00	9.05		
Ethylbenzene*	<0.050	0.050	05/07/2013	ND	1.90	95.2	2.00	9.42		
Total Xylenes*	<0.150	0.150	05/07/2013	ND	5.57	92.9	6.00	8.68		
Total BTEX	<0.300	0.300	05/07/2013	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1140	16.0	05/02/2013	ND	432	108	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	05/03/2013	ND	198	98.8	200	0.182	
DRO >C10-C28	<10.0	10.0	05/03/2013	ND	191	95.7	200	0.202	

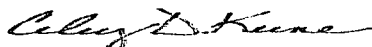
Surrogate: 1-Chlorooctane 105 % 65.2-140

Surrogate: 1-Chlorooctadecane 113 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 05/01/2013  
 Reported: 05/08/2013  
 Project Name: MIMOSA #1  
 Project Number: 103-163  
 Project Location: NOT GIVEN

 Sampling Date: 04/24/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S3 - 7' (H301025-08)**

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	05/03/2013	ND	1.75	87.7	2.00	15.9	
Toluene*	<0.050	0.050	05/03/2013	ND	1.65	82.6	2.00	14.7	
Ethylbenzene*	<0.050	0.050	05/03/2013	ND	1.73	86.5	2.00	16.9	
Total Xylenes*	<0.150	0.150	05/03/2013	ND	5.15	85.8	6.00	17.6	
Total BTEX	<0.300	0.300	05/03/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 89.4-126

Chloride, SM4500CI-B			mg/kg		Analyzed By: DW				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	896	16.0	05/02/2013	ND	432	108	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	05/03/2013	ND	198	98.8	200	0.182	
DRO >C10-C28	<10.0	10.0	05/03/2013	ND	191	95.7	200	0.202	

Surrogate: 1-Chlorooctane 90.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 94.3 % 63.6-154

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**Analytical Results For:**

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

Received: 05/01/2013  
Reported: 05/08/2013  
Project Name: MIMOSA #1  
Project Number: 103-163  
Project Location: NOT GIVEN

Sampling Date: 04/24/2013  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S3 - 8' (H301025-09)**

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	05/03/2013	ND	1.75	87.7	2.00	15.9	
Toluene*	<0.050	0.050	05/03/2013	ND	1.65	82.6	2.00	14.7	
Ethylbenzene*	<0.050	0.050	05/03/2013	ND	1.73	86.5	2.00	16.9	
Total Xylenes*	<0.150	0.150	05/03/2013	ND	5.15	85.8	6.00	17.6	
Total BTEX	<0.300	0.300	05/03/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 89.4-126

Chloride, SM4500Cl-B			mg/kg		Analyzed By: DW				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	05/02/2013	ND	432	108	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	05/03/2013	ND	198	98.8	200	0.182	
DRO >C10-C28	<10.0	10.0	05/03/2013	ND	191	95.7	200	0.202	


Surrogate: 1-Chlorooctane 91.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 96.7 % 63.6-154

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

**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





ARDINAL LABORATORIES  
101 East Marland, Hobbs, NM 88240

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Page 12 of 12

Project Manager: Lupe Carrasco

Project Name: Mimosa #1

Comp: (505) 393-2326 Yates Petroleum Corporation

Project #:

Company Address: 105 South 4th Street

Project Loc:

City/State/Zip: Artesia, NM 88210

PO #: 103-163

Telephone No: 575-748-4350

Fax No:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature: Lupe Carrasco

e-mail: lcarrasco@yatespetroleum.com

(lab use only)  
ORDER #: H301025

ORDER #: H501025												Preservation & # of Containers										Matrix														
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	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/6030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	SAR	RUSH TAT (Pre-Schedule) 24, 48, 72	Standard TAT		
1	S1 - 6'			4/24/2013													X											X				X				
2	S1 - 7'			4/24/2013													X											X				X				
3	S1-8'			4/24/2013													X											X				X				
4	S3- 1'			4/24/2013													X											X				X				
5	S3-3'			4/24/2013													X											X				X				
6	S3- 5'			4/24/2013													X											X				X				
7	S3-6'			4/24/2013													X											X				X				
8	S3-7'			4/24/2013													X											X				X				
9	S3-8'			4/24/2013													X											X				X				

Special Instructions:

Laboratory Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
			<u>Wendi Benson</u>	<u>5/1/13</u>	<u>10:00</u>
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by: ELOT	Date	Time

Sample Containers Intact?	<u>Y</u>	<u>N</u>
VOCs Free of Headspace?	<u>Y</u>	<u>N</u>
Labels on container(s)	<u>Y</u>	<u>N</u>
Custody seals on container(s)	<u>Y</u>	<u>N</u>
Custody seals on cooler(s)	<u>Y</u>	<u>N</u>
Sample Hand Delivered	<u>Y</u>	<u>N</u>
by Sampler/Client Rep. ?	<u>Y</u>	<u>N</u>
by Courier? UPS DHL FedEx Lone Star	<u>Y</u>	<u>N</u>
Temperature Upon Receipt:	<u>4</u>	<u>°C</u>

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