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*By OCD; Dr. Oberding at 10:24 am, Mar 02, 2015*

**AP - 80**

**STAGE 2  
Closure**

**Date**

**03/02/2015\_**

January, 2015

**State QE 13 #1  
Section 1, T 12S, R 34E, Unit L  
Lea County, New Mexico  
NMOCD Case # AP-080**

**Prepared For:  
Yates Petroleum**

**Prepared by  
R.T. Hicks Consultants, Ltd.  
Albuquerque, New Mexico**

# R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

January 26, 2015

Mr. Jim Griswold and  
Dr. Tomas Oberding  
New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

RE: Yates Petroleum State QE #1, T12S R34E Section 1, Lea County NM  
NMOCD #AP-080  
Abatement Completion Report

Dear Mr. Griswold:

On behalf of Yates Petroleum Corporation, R.T. Hicks Consultants (Hicks Consultants), is pleased to submit this Abatement Completion Report. For the benefit of YPC and their partner in this well, Pride Energy, Rule 19.15.30.19, which describes completion of abatement is reproduced below with *emphasis added*.

**19.15.30.19 COMPLETION AND TERMINATION:**

**A.** The division shall consider abatement complete when the responsible person meets the *standards and requirements set forth in 19.15.30.9 NMAC*. At that time, the responsible person shall submit an abatement completion report, documenting compliance with the standards and requirements set forth in 19.15.30.9 NMAC, to the director for approval. The abatement completion report also shall propose changes to long term monitoring and site maintenance activities, if needed, to be performed after the abatement plan's termination.

**B.** Provided that the responsible person meets the other requirements of 19.15.30 NMAC and provided further that *the responsible person has met the standards and requirements set forth in 19.15.30.9 NMAC, the director shall approve the abatement completion report*. When the director approves the abatement completion report, the director shall also notify the responsible person in writing that the abatement plan is terminated.

Applicable portions of Section 19.15.30.9 [*emphasis added*] are reproduced below for the benefit of YPC and Pride Energy.

**19.15.30.9 ABATEMENT STANDARDS AND REQUIREMENTS:**

**A.** The responsible person shall *abate the vadose zone so that water contaminants in the vadose zone will not with reasonable probability contaminate ground water* or surface water, in excess of the standards in Subsections B and C of 19.15.30.9 NMAC, through leaching, percolation or other transport mechanisms, or as the water table elevation fluctuates.

**B.** The responsible person shall *abate ground-water pollution at a place of withdrawal for present or reasonably foreseeable future use*, where the TDS concentration is 10,000 mg/l or less, to conform to the following standards:

- (1) toxic pollutants as defined in 20.6.2.7 NMAC shall not be present; and
- (2) the standards of 20.6.2.3103 NMAC shall be met.

**C.** The responsible person shall abate surface-water pollution ....

**D.** The division shall not consider subsurface-water and surface-water abatement complete until eight consecutive quarterly samples, or an alternate lesser number of samples the director approves, from the compliance sampling stations the director approved meet the abatement standards in Subsections A, B and C of 19.15.30.9 NMAC. The division shall consider abatement of water contaminants measured in solid-matrix samples of the vadose zone complete after one-time sampling from compliance stations the director approves.

The purpose of this report is to

- provide the results from ongoing investigations
- demonstrate that the operator has met the standards and requirements set forth in 19.15.30.9 NMAC

## **Background**

On March 6, 2009, NMOCD determined the State QE 13 #1 Site - Stage 1 Abatement Plan dated April 14, 2008 administratively complete.

On December 18, 2008, Hicks Consultants submitted a Stage 2 Abatement Plan. Groundwater monitoring continued from 2008 to 2014.

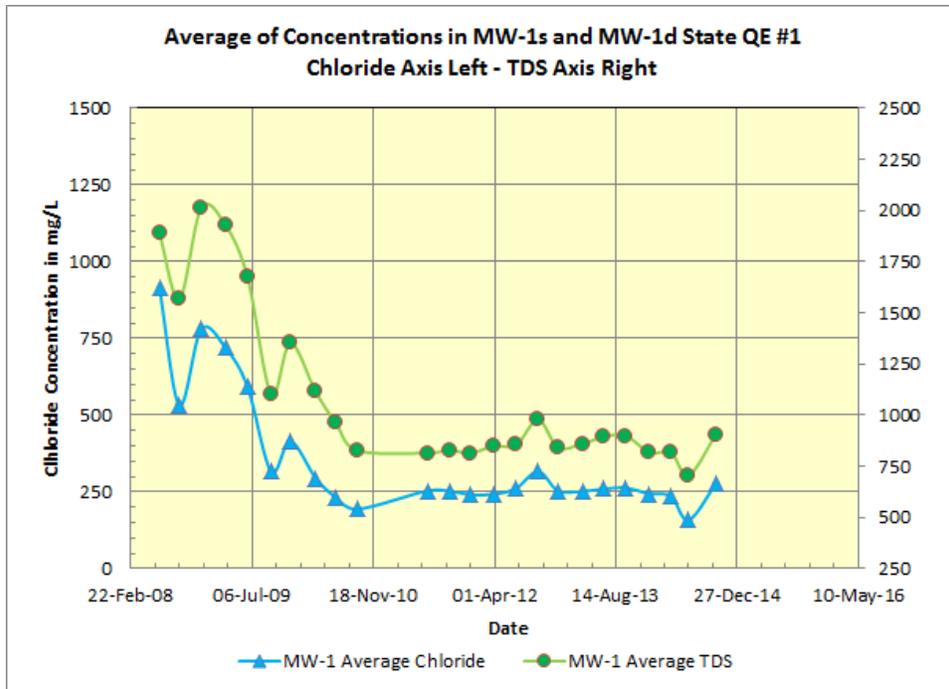
In 2014, the operator implemented an OCD-approved vadose zone remedy. Because of the approved vadose zone remedy of 2014, this submission summarizes the groundwater data only.

## **Ground Water Sampling and Monitoring**

Plate 1 shows the site location on a topographic map and includes ground water contours. As can be seen, ground water movement is to the southeast. Appendix A presents logs for MW-1s and MW-1d. An examination of the logs and forms shows that:

- i. The screened interval in the saturated zone for MW-1s is 38.5 to 46 feet (measured from top of casing)
- ii. MW-1s measures ground water quality in the uppermost 7 to 8 feet of the uppermost aquifer.
- iii. The screened interval for MW-1d is 54.5 to 64.5 feet (measured from top of casing)
- iv. MW-1d measures ground water quality in the aquifer from about 16 feet below the water table to about 27 feet below the water table

The results of all sampling events are presented in Table 1 (see Attachment A at the end of this report). Plate 2 is a site map showing recent ground water elevation; chloride and TDS concentrations. Figure 1 shows the average chloride and TDS concentration in the uppermost 27 feet of the aquifer: The average concentrations in MW-1 are calculated by averaging the concentration from MW-1s with the concentration from MW-1d. All laboratory data is in Appendix B.



**Figure 1:** Averaged TDS and Chloride concentrations from MW-1d and MW-1s at the State QE 13 #1 site.

An examination of Table 1 and Figure 1 show that:

- Since routine monitoring began in 2008, TDS and chloride concentrations in MW-1s have declined to less than 1/3 of their original values.
- TDS and chloride concentrations in MW-1d have never exceeded 542 mg/L and 68 mg/L respectively. Average concentrations over this time interval are 490 mg/L and 63 mg/L. New Mexico ground water standards are 1000 mg/L and 250 mg/L respectively.
- The average TDS concentration of MW-1s and MW-1d has been below WQCC standards since June 2010.
- Since June 2010, 40% of the 17 sampling events show average chloride concentration in MW-s and MW-1d below 250 mg/L. However, during this 4-year period, chloride concentration exceeded 260 mg/L on four events and 275 mg/L only once.
- Since June 2010, the average chloride concentration in the uppermost 27 feet of the aquifer is 246 mg/L (17 sampling events)
- Since June 2010, there has been comparatively little variation in concentration

## Conclusions

Based upon work at the site since 2008, we conclude:

- A. The responsible person has abated the vadose zone so that water contaminants in the vadose zone will not with reasonable probability contaminate ground water or surface water, in excess of the standards in Subsections B and C of 19.15.30.9 NMAC, through leaching, percolation or other transport mechanisms, or as the water table elevation fluctuates.

- B. Ground water more than 54.5 feet below ground surface (MW-1d) is not impacted by seepage from the Pride drilling pit or the previous pit used by Tenneco
- C. TDS and chloride concentrations in the uppermost 27 feet of ground water have been, on average, below New Mexico ground water standards since June 2010.
- D. Natural dispersion and dilution have effectively restored ground water quality
- E. The operator has abated groundwater pollution at a place of withdrawal for present or reasonably foreseeable future use, where the TDS concentration is 10,000 mg/l or less, to conform to the following standards:
  - (1) toxic pollutants as defined in 20.6.2.7 NMAC shall not be present; and
  - (2) the standards of 20.6.2.3103 NMAC shall be met.

We respectfully request that the Director approve the abatement completion report and notify the operator in writing that the abatement plan is terminated.

If you have any question or comments, please contact me or David Hamilton at 505-266-5004.

Sincerely,  
R.T. Hicks Consultants



Randall Hicks  
Principal

cc: Katie Parker, Yates Petroleum Corporation  
Matt Pride, Pride Energy  
Dave Hamilton

## Attachment A

**Table 1: Sampling results for TDS, Chloride, BTEX and Naphthalene at MW-1 Deep and Mw-1 Shallow.**

*ND is not-detected. NA is not analyzed for.*

MW-1 Deep								
Date	Depth to Water	Chloride	TDS	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
3/18/2008		60	498	<.001	<.001	<.001	<.003	<.001
6/19/2008	38.03	66.7	464	NA				
9/9/2008	38.07	64	542	<.001	<.001	<.001	<.003	<.001
12/8/2008	38.05	60	515	<.001	<.001	<.001	<.003	<.001
3/18/2009	38.08	60	498	<.001	<.001	<.001	<.003	<.001
6/17/2009	38.21	64	490	<.001	<.001	<.001	<.003	<.001
9/22/2009	38.06	64	447	<.001	<.001	<.001	<.003	<.001
3/25/2010		60	469	<.001	<.001	<.001	<.003	<.001
6/16/2010		64	493	<.001	<.001	<.001	<.003	<.001
9/14/2010		64	475	<.001	<.001	<.001	<.003	<.001
12/16/2010		64	474	NA				
3/23/2011		64	475					
6/30/2011		64	490					
9/30/2011		64	440					
12/20/2011		64	487					
3/28/2012		64	499					
6/28/2012		64	459					
9/27/2012		64	627					
12/18/2012		68	485					
3/28/2013		64	480					
6/26/2013		68	500					
9/24/2013		56	479					
12/30/2013		52	465					
3/28/2014		60	524					
6/9/14		60	474					
9/29/14		60	476					

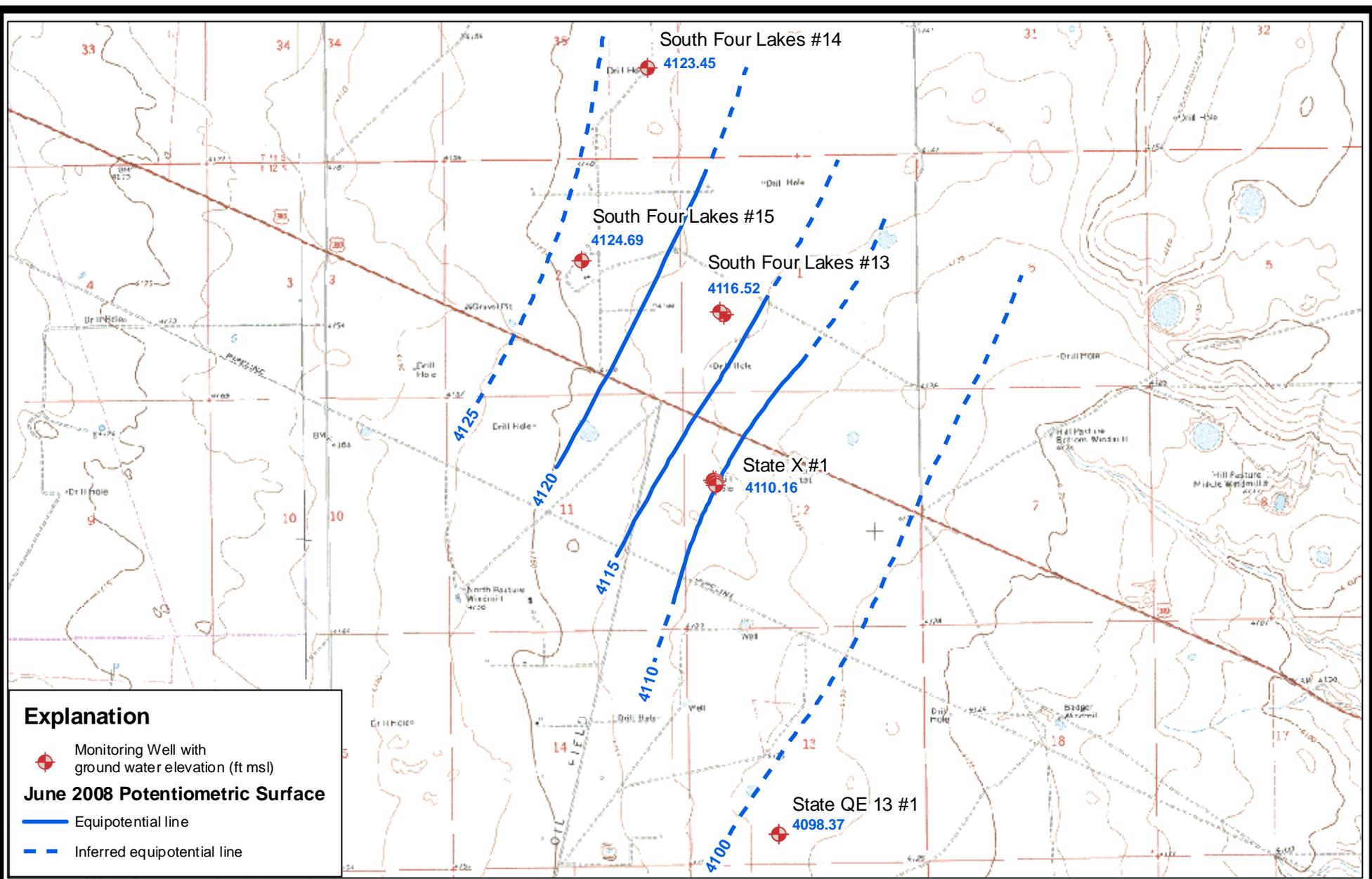
MW-1 Shallow								
Date	Depth to Water	Chloride	TDS	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
1/24/2008	38.5	1490						
3/13/2008	38.48	4340	6040	<.001	<.001	<.001	<.003	NA
3/18/2008		1380	3360	<.001	<.001	<.001	<.003	<.001
6/19/2008	38.59	1760	3310	NA				
9/9/2008	38.59	1000	2590	<.001	<.001	<.001	<.003	<.001
12/8/2008	38.52	1500	3510	<.001	<.001	<.001	<.003	<.001
3/18/2009	38.53	1380	3360	<.001	<.001	<.001	<.003	<.001
6/17/2009	38.67	1120	2860	<.001	<.001	<.001	<.003	<.001
9/22/2009	38.58	570	1760	<.001	<.001	<.001	<.003	<.001
3/25/2010		530	1760	<.001	<.001	<.001	<.003	<.001
6/16/2010		400	1430	<.001	<.001	<.001	<.003	<.001
9/14/2010		324	1180	<.001	<.001	<.001	<.003	<.001
12/16/2010		444	1230	NA				
3/23/2011		276	943					
6/30/2011		444	1140					
9/30/2011		440	1220					
12/20/2011		420	1140					
3/28/2012		420	1200					
6/28/2012		460	1250					
9/27/2012		570	1430					
12/18/2012		440	1200					
3/28/2013		440	1240					
6/26/2013		452	1290					
9/24/2013		470	1320					
12/30/2013		436	1170					
3/28/2014		412	1110					
6/9/14		256	936					
9/29/14		490	1330					

Averaged Chloride and TDS		
Date	Chloride	TDS
3/18/2008	720	1929
6/19/2008	913	1887
9/9/2008	532	1566
12/8/2008	780	2013
3/18/2009	720	1929
6/17/2009	592	1675
9/22/2009	317	1104
3/25/2010	295	1115
6/16/2010	232	962
9/14/2010	194	828
12/16/2010	254	852
3/23/2011	170	709
6/30/2011	254	815
9/30/2011	252	830
12/20/2011	242	814
3/28/2012	242	850
6/28/2012	262	855
9/27/2012	317	1029
12/18/2012	254	843
3/28/2013	252	860
6/26/2013	260	895
9/24/2013	263	900
12/30/2013	244	818
3/28/2014	236	817
6/9/14	158	705
9/29/14	275	903

# Plates

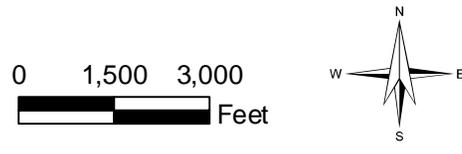
**R.T. Hicks Consultants, Ltd.**

901 Rio Grande Blvd. NW, Suite F-142  
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**Explanation**

-  Monitoring Well with ground water elevation (ft msl)
- June 2008 Potentiometric Surface**
-  Equipotential line
-  Inferred equipotential line



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Potentiometric Surface (June 2008)  
 Yates Petroleum: State QE 13 #1

Plate 1  
 May 2014



Note: Ground water elevations approximate; casing elevations not surveyed.



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Chloride and TDS in Ground Water (Sept 14, 2010)

Yates Petroleum: State QE 13 #1

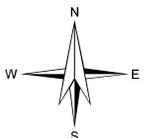
Plate 2

May 2014



**Explanation**

-  3-point composite (soil stockpile)
-  Discrete sample for 5-point composite (reserve pit floor)
-  Wellhead
-  Well pad
-  Drilling pit
-  Burial trench



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Soil Sample Locations (September 2009)  
 Yates Petroleum: State QE 13 #1

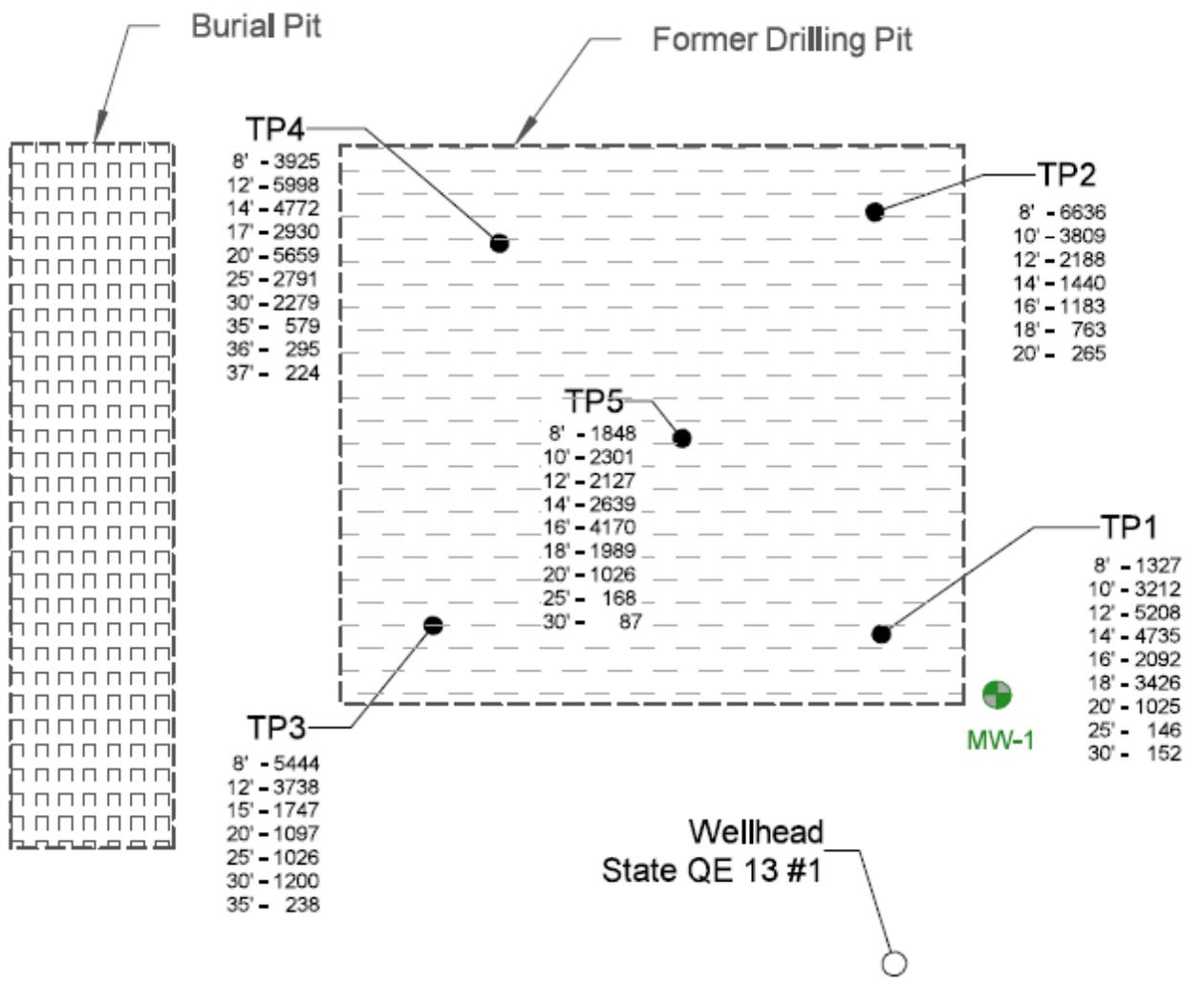
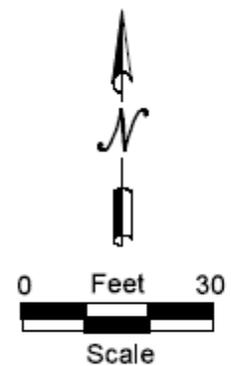
Plate 3  
 May 2014

# Legend

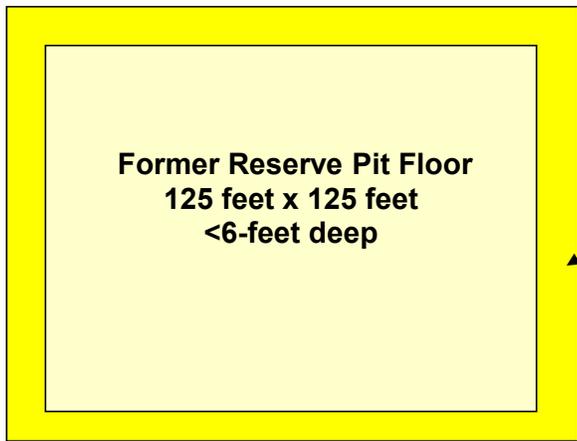
- TP1 Initial Soil Sample Location
- 8' - 1327
  - 10' - 3212
  - 12' - 5208
  - 14' - 4735
  - 16' - 2092
  - 18' - 3426
  - 20' - 1025
  - 25' - 146
  - 30' - 152
- Field Chloride Results in ppm at depths (Ft) below ground surface

All data is based on field testing performed by Elke Environmental.

- MW-1
- Monitoring Well (No soil samples)



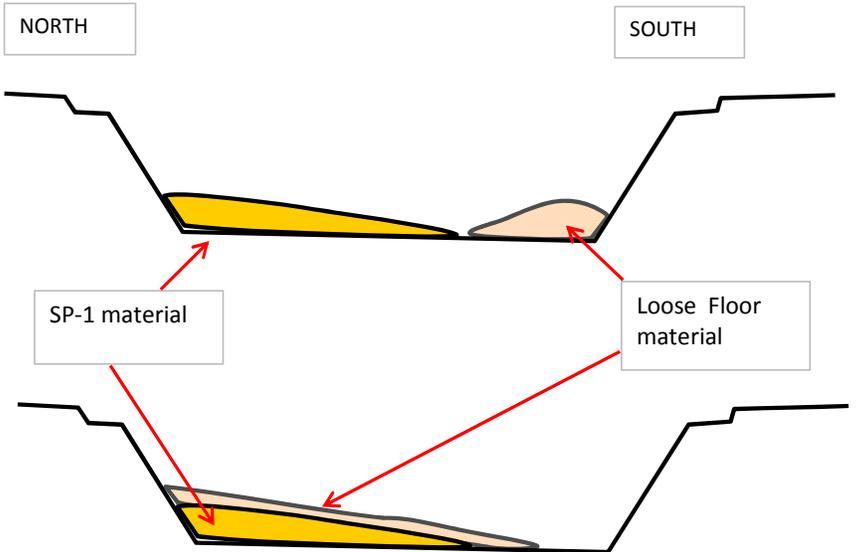
<p><b>R.T. Hicks Consultants, Ltd</b>                  901 Rio Grande Blvd NW Suite F-142                  Albuquerque, NM 87104                  Ph: 505.266.5004</p>	<p>Soil Sampling Map                  Dec. 31, 2007 / Jan 2-3, 2008</p>	<p>Plate 4</p>
	<p>Yates Petroleum: State QE 13 #1</p>	<p>May 2014</p>



**Step 1**

Excavate as required to create a 3 foot wide clean zone around chloride impact.

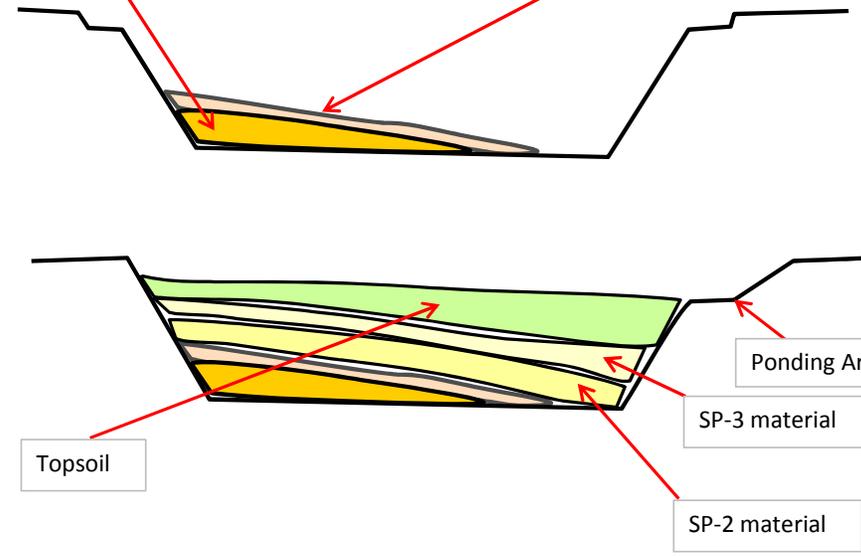
Reserve all topsoil and clean caliche



**Step 2**

Push loose floor material to one side.

Place SP -1 material in wedge on other side



**Step 3**

Push loose floor material over SP-1 material

**Step 4**

Place SP-2 and SP-3 material over floor material

Place topsoil over SP-2 and SP-3 material

Grade to send runoff to ponding area

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Albuquerque, NM 87104

**Yates Petroleum**

**Plate 5**

**State QE 13 #1 Reserve Pit Excavation Closure**

**May, 2014**

# Appendix A

**R.T. Hicks Consultants, Ltd.**

901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

1. OWNER OF WELL

Name: Pride Energy Work Phone: \_\_\_\_\_  
Contact: \_\_\_\_\_ Home Phone: \_\_\_\_\_  
Address: P.O. Box 701950  
City: Tulsa State: OK Zip: 74170

2. LOCATION OF WELL (A,B,C, or D required, E or F if known)

A. \_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 Section: 13 Township: 12S Range: 34E N.M.P.M.  
in Lea County.

B. X = \_\_\_\_\_ feet, Y = \_\_\_\_\_ feet, N.M. Coordinate System  
\_\_\_\_\_ Zone in the \_\_\_\_\_ Grant.  
U.S.G.S. Quad Map \_\_\_\_\_

C. Latitude: 33 d 16 m 24.0 s Longitude: 103 d 27 m 58.6 s

D. East \_\_\_\_\_ (m), North \_\_\_\_\_ (m), UTM Zone 13, NAD \_\_\_\_\_ (27 or 83)

E. Tract No. \_\_\_\_\_, Map No. \_\_\_\_\_ of the \_\_\_\_\_ Hydrographic Survey

F. Lot No. \_\_\_\_\_, Block No. \_\_\_\_\_ of Unit/Tract N of the  
\_\_\_\_\_ Subdivision recorded in \_\_\_\_\_ County.

G. Other: \_\_\_\_\_

H. Give State Engineer File Number if existing well: \_\_\_\_\_

I. On land owned by (required): State of New Mexico

3. DRILLING CONTRACTOR

License Number: WD-1456  
Name: White Drilling Company, Inc. Work Phone: 325-893-2950  
Agent: John W. White Home Phone: 325-893-2950  
Mailing Address: P.O. Box 906  
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD: QE 13 #1 MW-1

Drilling began: 01/22/08; Completed: 01/22/08; Type tools: Air Rotary;  
Size of hole: 6 1/8 in.; Total depth of well: 46.0 ft.;  
Completed well is: shallow (shallow, artesian);  
Depth to water upon completion of well: 25.90 ft.

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 1 of 4

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA: QE 13 #1 MW-1

Depth in Feet		Thickness	Description of water-bearing formation	Estimated Yield (GPM)
From	To	in feet		
25.9	46.0	20.1	Reddish brown sandy clay	
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
2.0	Sch. 40	4.0	0.0	26.0	26.0			
2.0	.020	4.0	26.0	46.0	20.0		26.0	46.0
_____	_____	_____	_____	_____	_____	_____	_____	_____

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
From	To				
46.0	24.0	6 1/8	10.0		8/16 sand.
24.0	10.0	6 1/8	2.0		Bentonite Pellets
10.0	0.0	6 1/8	10.0	1.997	Cement
_____	_____	_____	_____	_____	_____

8. PLUGGING RECORD

Plugging Contractor: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Plugging Method: \_\_\_\_\_  
 Date Well Plugged: \_\_\_\_\_

Plugging approved by: \_\_\_\_\_  
 State Engineer Representative

No.	Depth in Feet		Cubic Feet of Cement
	Top	Bottom	
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
 Form: wr-20 page 2 of 4



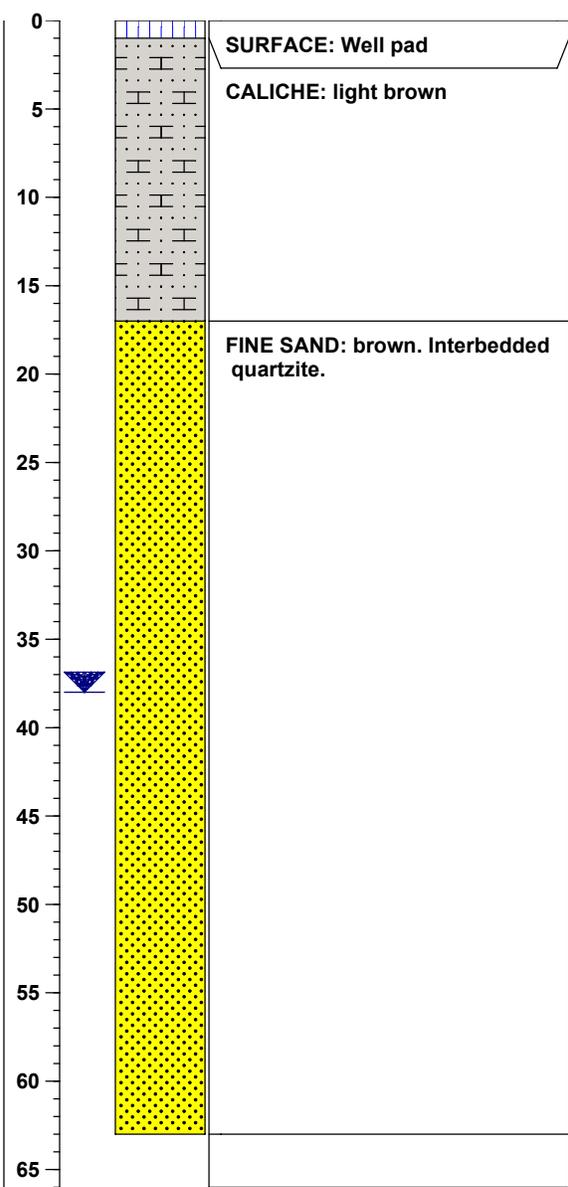


# Borehole/Well Log

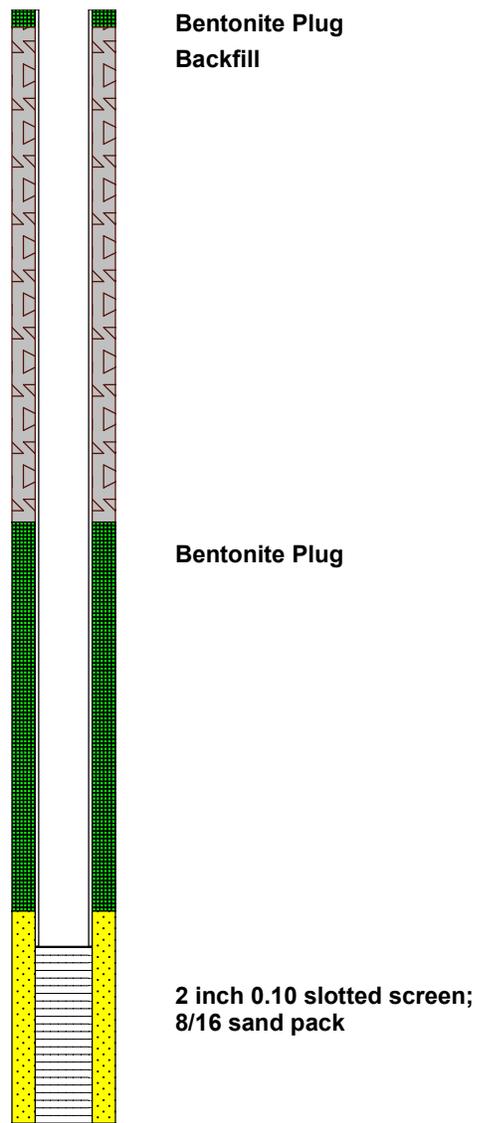
Site Name: State QE 13 #1  
 Address: 8.6 miles west on Hwy 380  
 City, State: Tatum, NM  
 County: Lea  
 Driller: Atkins Engineering  
 Auger Type: Hollow Stem  
 Auger Dia.: 7.25  
 Drill Date: 05/07/08

Coordinate System: UTM Zone 13 (meters)  
 X: 642847.12  
 Y: 3682646.04  
 Z:  
 Datum: NAD 83  
 Borehole ID: SB-05  
 Well ID: MW-01 Deep  
 Total Depth: 63

DEPTH	W.L.	Lithology	Soil Description	Field Measurements	Borehole Completion
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SC of water = 2.20mS



# Appendix B

**R.T. Hicks Consultants, Ltd.**

901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 06/18/10  
Reporting Date: 06/22/10  
Project Number: STATE QE 13 #1  
Project Name: YATES PETROLEUM  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-D  
Lab Number: H20153-1

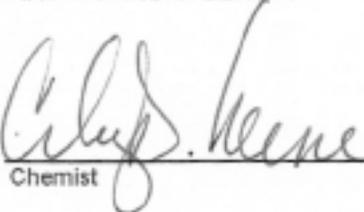
Analysis Date: 06/21/10  
Sampling Date: 06/16/10  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 1.5°C  
Sample Received By: HM  
Analyzed By: ZL

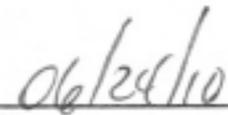
BTEX 8260 (mg/L)	Sample Result H20153-1	Method Blank	QC %Recov.	True Value QC	
Benzene	<0.001	<0.001	0.011	110	0.010
Toluene	<0.001	<0.001	0.010	100	0.010
Ethylbenzene	<0.001	<0.001	0.010	100.0	0.010
m+p - Xylene	<0.002	<0.002	0.023	113	0.020
o-Xylene	<0.001	<0.001	0.011	110	0.010

% Recovery	
Dibromofluoromethane	90.9
Toluene-d8	101
4-Bromofluorobenzene	104

METHODS: EPA 8W-846-8260.

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
AND TOTAL XYLENES.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date



ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

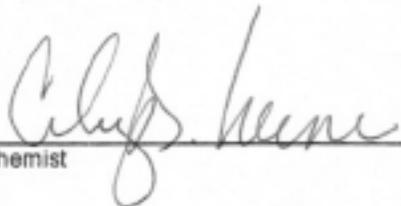
Receiving Date: 06/18/10  
Reporting Date: 06/22/10  
Project Number: STATE QE 13 #1  
Project Name: YATES PETROLEUM  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-D  
Lab Number: H20153-1

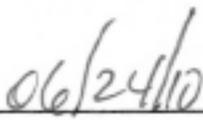
Analysis Date: 06/21/10  
Sampling Date: 06/16/10  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 1.5°C  
Sample Received By: HM  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H20153-1	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.010	100	0.010

	% Recovery
Dibromofluoromethane	90.9
Toluene-d8	101
4-Bromofluorobenzene	104

METHODS: EPA SW-846-8260.  
Not accredited for Naphthalene.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 06/18/10  
 Reporting Date: 06/22/10  
 Project Number: STATE QE 13 #1  
 Project Name: YATES PETROLEUM  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O  
 LEA COUNTY, NM  
 Sample ID: MW-1-S  
 Lab Number: H20153-2

 Analysis Date: 06/21/10  
 Sampling Date: 06/16/10  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT @ 1.5°C  
 Sample Received By: HM  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H20153-2	Method Blank	QC	%Recov.	True Value QC
------------------	---------------------------	-----------------	----	---------	------------------

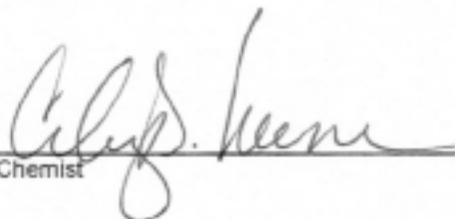
Benzene	<0.001	<0.001	0.011	110	0.010
Toluene	<0.001	<0.001	0.010	100	0.010
Ethylbenzene	<0.001	<0.001	0.010	100.0	0.010
m+p - Xylene	<0.002	<0.002	0.023	113	0.020
o-Xylene	<0.001	<0.001	0.011	110	0.010

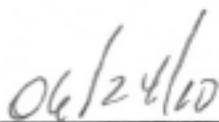
## % Recovery

Dibromofluoromethane	108
Toluene-d8	112
4-Bromofluorobenzene	100

METHODS: EPA SW-846-8260.

 TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES.


  
 Chemist


  
 Date

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

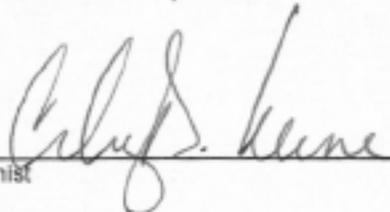
Receiving Date: 06/18/10  
Reporting Date: 06/22/10  
Project Number: STATE QE 13 #1  
Project Name: YATES PETROLEUM  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-S  
Lab Number: H20153-2

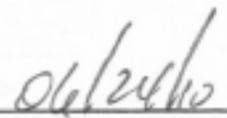
Analysis Date: 06/21/10  
Sampling Date: 06/16/10  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 1.5°C  
Sample Received By: HM  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H20153-2	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.010	100	0.010

	% Recovery
Dibromofluoromethane	108
Toluene-d8	112
4-Bromofluorobenzene	100

METHODS: EPA SW-846-8260.  
Not accredited for Naphthalene.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date



# Cardinal Laboratories, Inc.

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Merland - Hobbs, New Mexico 88240  
 Tel (575) 393-2326  
 Fax (575) 393-2475

LAB Order ID # \_\_\_\_\_

**ANALYSIS REQUEST**  
 (Circle or Specify Method No.)

Turn Around Time - 24 Hours	
Chlorides (325.3 / SM4500 B)	X
Total Dissolved Solids (160.1 / SM2540C)	X
Anions (Cl, SO4, CO3, HCO3)	X
Cations (Ca, Mg, Na, K)	
Moisture Content	
BOD, TSS, pH	
Pesticides 8081A/608	
FCB's 8082/608	
GC/MS Semt. Vol. 8270C/625	
GC/MS Vol. 8260B/624	
FCI	
TCLP Pesticides	
TCLP Semi Volatiles	
TCLP Volatiles	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
PAH 8270C	
TPH 418.1/TX-1005 / TX-1005 Extended (C35)	
BTEX 8260	X
NTBE 8021B/602	X

Phone Results  Yes  No  
 Fax Results  Yes  No  
 Additional Fax Number: \_\_\_\_\_

REMARKS:

Email Results to:  
 andrew@rthicksconsult.com  
 jerryf@yatespetroleum.com  
 rozanne@valornet.com

**BILL TO Company:** Yates Petroleum Jerry Fanning  
 Address: (Street, City, Zip)  
 105 S 4th Street - Artesia, New Mexico 88210  
 Phone#: (575) 748-1471  
 Fax #:

**Project Name:** Yates Petroleum  
**Sampler Signature:** Rozanne Johnson (675) 331-9310  
**rozanne@valornet.com**

**Project Location:** T12S-R34E-Sec13 Unit Letter O ~ Lea County - New Mexico

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	MATRIX			PRESERVATIVE METHOD			SAMPLING	
			WATER	AIR	SLUDGE	HCL (240M VOM)	HNO3	NAHSO4	ICE (1-Liter HDPE)	DATE (2010)
420153-1	MW-1-d	3	X			2		1	6-16	8-10
-2	MW-1-s	3	X			2		1	6-16	9-00

Relinquished by: \_\_\_\_\_ Date: 6-18-10 Time: 8:45  
 Rozanne Johnson

Received by: \_\_\_\_\_ Date: 6-18-10 Time: 8:46  
 (Laboratory Staff)

Relinquished by: \_\_\_\_\_ Date: 6-18-10 Time: 9:50  
 S.M. Jones

Received by: \_\_\_\_\_ Date: 6-18-10 Time: 10:00  
 (Laboratory Staff)

Sample Condition: 1.58g No C

Checked By: \_\_\_\_\_ (Initials) JFW

Delivered By: (Circle One) Sampler - UPS - Bus - Other

September 29, 2010

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 09/17/10 10:36.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: ?

Received:	09/17/2010	Sampling Date:	09/14/2010
Reported:	09/29/2010	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T12S-R34E-SEC13 U LTR 0 ~ LEA CTY -		

**Sample ID: MW - 1 - d (H020879-01)**

BTEX + Naphthalene 8260B		mg/L		Analyzed By: CMS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	09/27/2010	ND	0.018	90.6	0.0200	8.05		
Toluene*	<0.001	0.001	09/27/2010	ND	0.020	99.5	0.0200	10.3		
Ethylbenzene*	<0.001	0.001	09/27/2010	ND	0.017	86.7	0.0200	8.45		
m+p - Xylene	<0.002	0.002	09/27/2010	ND	0.034	86.0	0.0400	8.70		
o-Xylene	<0.001	0.001	09/27/2010	ND	0.018	87.6	0.0200	8.68		
Total Xylenes*	<0.003	0.003	09/27/2010	ND	0.052	86.6	0.0600	8.69		

*Surrogate: Dibromofluoromethane* 83.0 % 80-120

*Surrogate: Toluene-d8* 70.4 % 80-120

*Surrogate: 4-Bromofluorobenzene* 73.4 % 80-120

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	4.00	09/20/2010	ND	112	112	100	3.64		

TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	475	5.00	09/20/2010	ND				0.978		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: ?

Received:	09/17/2010	Sampling Date:	09/14/2010
Reported:	09/29/2010	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T12S-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - s (H020879-02)**

BTEX + Naphthalene 8260B		mg/L		Analyzed By: CMS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	09/27/2010	ND	0.018	90.6	0.0200	8.05		
Toluene*	<0.001	0.001	09/27/2010	ND	0.020	99.5	0.0200	10.3		
Ethylbenzene*	<0.001	0.001	09/27/2010	ND	0.017	86.7	0.0200	8.45		
m+p - Xylene	<0.002	0.002	09/27/2010	ND	0.034	86.0	0.0400	8.70		
o-Xylene	<0.001	0.001	09/27/2010	ND	0.018	87.6	0.0200	8.68		
Total Xylenes*	<0.003	0.003	09/27/2010	ND	0.052	86.6	0.0600	8.69		

Surrogate: Dibromofluoromethane 92.6 % 80-120

Surrogate: Toluene-d8 91.6 % 80-120

Surrogate: 4-Bromofluorobenzene 93.0 % 80-120

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	324	4.00	09/20/2010	ND	112	112	100	3.64		

TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	1180	5.00	09/20/2010	ND				0.978		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500C-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



September 29, 2010

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 09/17/10 10:36.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: ?

Received:	09/17/2010	Sampling Date:	09/14/2010
Reported:	09/29/2010	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T12S-R34E-SEC13 U LTR 0 ~ LEA CTY -		

**Sample ID: MW - 1 - d (H020879-01)**

BTEX + Naphthalene 8260B		mg/L		Analyzed By: CMS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Naphthalene	<0.001	0.001	09/27/2010	ND	0.018	91.5	0.0200	5.42		
Surrogate: Dibromofluoromethane	83.0 %	80-120								
Surrogate: Toluene-d8	70.4 %	80-120								
Surrogate: 4-Bromofluorobenzene	73.4 %	80-120								

**Sample ID: MW - 1 - s (H020879-02)**

BTEX + Naphthalene 8260B		mg/L		Analyzed By: CMS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Naphthalene	<0.001	0.001	09/27/2010	ND	0.018	91.5	0.0200	5.42		
Surrogate: Dibromofluoromethane	92.6 %	80-120								
Surrogate: Toluene-d8	91.6 %	80-120								
Surrogate: 4-Bromofluorobenzene	93.0 %	80-120								

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 analysis. 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. It is noted that Cardinal be liable for incidental or consequential damage, 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

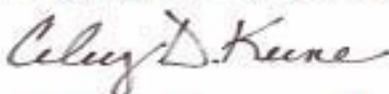
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500C-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



December 22, 2010

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 12/20/10 9:10.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:**

R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	12/20/2010	Sampling Date:	12/16/2010
Reported:	12/22/2010	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T12S-R34E-SEC13 U LTR 0 ~ LEA CTY -		

**Sample ID: MW - 1 - D (H021564-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	4.00	12/22/2010	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	474	5.00	12/21/2010	ND				13.6		

**Sample ID: MW - 1 - S (H021564-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	444	4.00	12/22/2010	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	1230	5.00	12/21/2010	ND				13.6		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

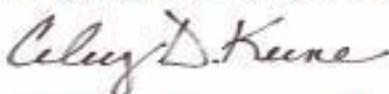
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500C-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



March 29, 2011

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 03/24/11 16:35.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	03/24/2011	Sampling Date:	03/23/2011
Reported:	03/29/2011	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H100578-01)**

Chloride, SM4500Cl-B		mg/L	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	4.00	03/29/2011	ND	104	104	100	0.00		
TDS 160.1		mg/L	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	475	5.00	03/28/2011	ND				0.193		

**Sample ID: MW - 1 - S (H100578-02)**

Chloride, SM4500Cl-B		mg/L	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	276	4.00	03/29/2011	ND	104	104	100	0.00		
TDS 160.1		mg/L	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	943	5.00	03/28/2011	ND				0.193		

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 sample 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

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 SM4500C-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



July 08, 2011

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 07/01/11 15:37.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	07/01/2011	Sampling Date:	06/30/2011
Reported:	07/08/2011	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW-1-D (H101373-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	4.00	07/05/2011	ND	112	112	100	3.64		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	490	5.00	07/05/2011	ND	228	95.0	240	1.06		

**Sample ID: MW-1-S (H101373-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	444	4.00	07/05/2011	ND	112	112	100	3.64		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	1140	5.00	07/05/2011	ND	228	95.0	240	1.06		

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 analysis. 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 sample 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

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 SM4500C-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager

101 East Merland - Itasca, New Mexico 86240  
Tel (575) 383-2326  
Fax (575) 383-2475

# Cardinal Laboratories, Inc.

**Company Name:** RT Hicks Consultants  
**Project Manager:** Andrew Parker  
**Address:** 801 Rio Grande Blvd NW Suite F-142 ~ Albuquerque, NM 87104  
**Phone #:** (505) 266-5004  
**Project Name:** State QE 13 #1

**BILL TO Company:** Yates Petroleum  
**Address:** 105 S. 4th Street ~ Artesia, New Mexico 88210  
**Phone #:** (575) 748-1471  
**POC:** Jerry Fanning  
**Address:** (Street, City, Zip)

**Project Location:** T12S-R34E-Sec13 Unit Letter O ~ Lea County - New Mexico  
**Sampler Signature:** Rozanne Johnson (575) 631-9310  
**Sampler Email:** rozanne@valornet.com

LAB #	FIELD CODE	(g)rab or (Comp)	# CONTAINERS	WATER	SOIL	AIR	SLUDGE	HCL (2.0M VOL)	HNO <sub>3</sub>	NaHSO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	IDE (1-LITER HDPE)	PRESERVATIVE METHOD	SAMPLING	
														DATE (2011)	TIME
1101373		G	1	X								1	NONE	6-30	7:50
		G	1	X								1	NONE	6-30	8:40

**Relinquished by:** Rozanne Johnson  
**Date:** 7-1-2011  
**Time:** 15:36  
**Received by:** Wade Anderson  
**Date:** 7-1-2011  
**Time:** 15:37

**Delivered By:** (Circle One) Sampler UPS - Bus - Other:  
**Sample Condition:** Cool  Yes  No  
**Checked By:** (Initials) JA

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # \_\_\_\_\_

### ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 80218/602	
BTEX 8260	
TPH 418.1/TX1005 / TX1005 Extended (C35)	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 60108/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GCMS Vol. 8250B/824	
GCMS Semi Vol. 8270C/825	
PCBs 8082/808	
Pesticides 8081A/808	
BOD, TSS, pH	
Moisture Content	
Cations (Ca, Mg, Na, K)	
Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )	X
Total Dissolved Solids (TDS) (SM2540C)	X
Chlorides (225.3 / SM4500 B)	X
Turn Around Time - 24 Hours	

**Phone Results:** Yes No  
**Fax Results:** Yes No  
**Additional Fax Number:** \_\_\_\_\_

**REMARKS:**  
Email Results to:  
andrew@rhicksconsult.com  
jerryf@yatespetroleum.com  
rozanne@valornet.com

October 04, 2011

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 09/30/11 14:15.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	09/30/2011	Sampling Date:	09/30/2011
Reported:	10/04/2011	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW-1-D (H102103-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	4.00	10/03/2011	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	440	5.00	09/30/2011	ND	222	92.5	240	2.97		

**Sample ID: MW-1-S (H102103-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	440	4.00	10/03/2011	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	1220	5.00	09/30/2011	ND	222	92.5	240	2.97		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500-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



December 28, 2011

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 12/20/11 13:25.

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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	12/20/2011	Sampling Date:	12/20/2011
Reported:	12/28/2011	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T12S-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H102752-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	64.0	4.00	12/21/2011	ND	108	108	100	3.77		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	487	5.00	12/21/2011	ND	232	96.7	240	4.31		

**Sample ID: MW - 1 - S (H102752-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	420	4.00	12/21/2011	ND	108	108	100	3.77		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1140	5.00	12/21/2011	ND	232	96.7	240	4.31		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



April 05, 2012

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 03/30/12 9:45.

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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	03/30/2012	Sampling Date:	03/28/2012
Reported:	04/05/2012	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H200759-01)**

Chloride, SM4500Cl-B		mg/L	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	64.0	4.00	04/03/2012	ND	100	100	100	0.00		
TDS 160.1		mg/L	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	499	5.00	04/02/2012	ND	236	98.3	240	0.656		

**Sample ID: MW - 1 - S (H200759-02)**

Chloride, SM4500Cl-B		mg/L	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	420	4.00	04/03/2012	ND	100	100	100	0.00		
TDS 160.1		mg/L	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1200	5.00	04/02/2012	ND	236	98.3	240	0.656		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

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RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500C-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



July 03, 2012

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 06/29/12 9:35.

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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	06/29/2012	Sampling Date:	06/28/2012
Reported:	07/03/2012	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H201463-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	64.0	4.00	07/02/2012	ND	100	100	100	3.92		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	459	5.00	07/03/2012	ND	235	97.9	240	1.94		

**Sample ID: MW - 1 - S (H201463-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	460	4.00	07/02/2012	ND	100	100	100	3.92		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1250	5.00	07/03/2012	ND	235	97.9	240	1.94		

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 sample 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

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 SM4500C-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



October 09, 2012

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 10/03/12 14:51.

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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	10/03/2012	Sampling Date:	09/27/2012
Reported:	10/09/2012	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	none given	Sample Received By:	Celey D. Keene
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H202411-01)**

Chloride, SM4500Cl-B		mg/L	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	64.0	4.00	10/08/2012	ND	100	100	100	3.92		
TDS 160.1		mg/L	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	527	5.00	10/04/2012	ND	269	112	240	0.456		

**Sample ID: MW - 1 - S (H202411-02)**

Chloride, SM4500Cl-B		mg/L	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	570	4.00	10/08/2012	ND	100	100	100	3.92		
TDS 160.1		mg/L	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1430	5.00	10/04/2012	ND	269	112	240	0.456		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500C-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



December 21, 2012

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 12/18/12 14:40.

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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	12/18/2012	Sampling Date:	12/18/2012
Reported:	12/21/2012	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	none given	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW-1-D (H203043-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	68.0	4.00	12/19/2012	ND	100	100	100	7.69		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	485	5.00	12/21/2012	ND	210	87.5	240	7.73		

**Sample ID: MW-1-S (H203043-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	440	4.00	12/19/2012	ND	100	100	100	7.69		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1200	5.00	12/21/2012	ND	210	87.5	240	7.73		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



April 04, 2013

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 03/28/13 14:43.

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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	03/28/2013	Sampling Date:	03/28/2013
Reported:	04/04/2013	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H300749-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	64.0	4.00	04/01/2013	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	480	5.00	04/03/2013	ND	240	100	240	1.92		

**Sample ID: MW - 1 - S (H300749-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	440	4.00	04/01/2013	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1240	5.00	04/03/2013	ND	240	100	240	1.92		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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RPD	Relative Percent Difference
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***	Insufficient time to reach temperature.
-	Chloride by SM4500-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

**Cardinal Laboratories**

\* = Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



July 09, 2013

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 06/27/13 8:25.

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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	06/27/2013	Sampling Date:	06/26/2013
Reported:	07/09/2013	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW-1-D (H301522-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	68.0	4.00	06/28/2013	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	500	5.00	07/03/2013	ND	244	102	240	0.157		

**Sample ID: MW-1-S (H301522-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	452	4.00	06/28/2013	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1290	5.00	07/03/2013	ND	244	102	240	0.157		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

**Cardinal Laboratories**

\* = Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager

101 East Alvarado - Hobbs, New Mexico  
 88240  
 (505) 266-2326  
 (505) 266-2478

# Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST  
 LAB Order ID # \_\_\_\_\_

Company Name: RT Hicks Consultants  
 Project Manager: Andrew Parker  
 Address: (Street, City, Zip) 105 S 4th Street - Artesia, New Mexico 88210  
 Phone #: (505) 748-1471  
 Fax #:

BILL TO Company: Yates Petroleum  
 Address: (Street, City, Zip) Jerry Fanning  
 Phone #: (575) 748-1471  
 Fax #:

Project Name: Yates Petroleum  
 Project Location: T12S-R34E-Sect13 Unit Letter O ~ Lea County - New Mexico  
 Sampler Signature: [Signature]  
 Moxanne Johnson 15751831-9310  
 rozanne@yvalornet.com

State OE 13 #1  
 Project #: State OE 13 #1  
 Project Name: Yates Petroleum

LAB #	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX					PRESERVATIVE METHOD				SAMPLING		
				WATER	SOIL	AIR	SLUDGE	HCL (2.40ml VOA)	HNO <sub>3</sub>	NaHSO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	ICE (1-1Liter HDPE)	NONE	DATE (2013)	TIME
1	MM-1-d	G	1	X									1	6/26	8-10
2	MM-1-s	G	1	X									1	6/26	9-15

Requisitioned by: [Signature]  
 Date: 6/27/13 Time: 7:02  
 Received by: [Signature]  
 Date: 6/27/13 Time: 7:03  
 Requisitioned by: [Signature]  
 Date: 6/27/13 Time: 8:24  
 Received by: [Signature]  
 Date: 6/27/13 Time: 8:25

Delivered by: (Circle One) UPS - Bus - Other  
 Sampler - UPS - Bus - Other

ANALYSIS REQUEST (Circle or Specify Method No.)	Phone Results	Yes	No	Additional Fax Number:
MTBE 8021B/602				
BTEX 8260				
TPH 418.1/TX1005 / TX1005 Extended (C35)				
PAH 8270C				
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7				
TCLP Metals Ag As Ba Cd Cr Pb Se Hg				
TCLP Volatiles				
TCLP Semi Volatiles				
TCLP Pesticides				
RCI				
GC/MS Vol. 8260B/624				
GC/MS Semi. Vol. 8270C/625				
PCB's 8082/608				
Pesticides 8081A/608				
BOD, TSS, pH				
Moisture Content				
Cations (Ca, Mg, Na, K)				
Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )				
Total Dissolved Solids (160.1 / SM2540C)		X	X	
Chlorides (325.3 / SM4500 B)		X	X	
Turn Around Time ~ 24 Hours				

Checked by: [Signature]  
 Date: 6/27/13 Time: 8:25  
 (Initials) [Signature]

REMARKS:  
 Email Results to:  
 andrew@rthicksconsult.com  
 jerryf@yatespetroleum.com  
 rozanne@yvalornet.com

September 28, 2013

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 09/25/13 16:06.

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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	09/25/2013	Sampling Date:	09/24/2013
Reported:	09/28/2013	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T12S-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H302333-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	56.0	4.00	09/27/2013	ND	100	100	100	7.69		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	479	5.00	09/27/2013	ND	242	101	240	1.87		

**Sample ID: MW - 1 - S (H302333-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	470	4.00	09/27/2013	ND	100	100	100	7.69		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1320	5.00	09/27/2013	ND	242	101	240	1.87		

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**

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 SM4500-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

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

101 East Mainland - Hobbs, New Mexico  
 88240  
 (575) 389-2328  
 (575) 389-2476

# Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # \_\_\_\_\_

**ANALYSIS REQUEST**  
 (Circle or Specify Method No.)

Page 4 of 4

Company Name: **RT Hicks Consultants**  
 Project Manager: **Andrew Parker**  
 Address: (Street, City, Zip) **901 Rio Grande Blvd NW Suite F-142 - Albuquerque, NM 87104**  
 Phone #: **(505) 266-5004**  
 Project #: **State QE 13 #1**

BILL TO Company: **Yates Petroleum**  
 Address: **105 S 4th Street - Artesia, New Mexico 88210**  
 Phone: **(575) 748-1471**  
 Project Name: **Yates Petroleum**  
 Sampler Signature: *[Signature]*  
 Rozanne Johnson (575) 831-9310  
 rozanne@valcomet.com

Project Location: **T12S-R34E-Sec13 Unit Letter O ~ Lea County - New Mexico**  
 Project Name: **Yates Petroleum**  
 State: **QE 13 #1**

LAB #	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX				PRESERVATIVE METHOD				SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCL (2.40ml VOA)	HNO <sub>3</sub>	NaHSO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	ICE (1-1Liber HDPE)	NONE
1	NW-1-d	G	1	X								9/24	13:20
2	NW-1-s	G	1	X								9/24	14:10

MTBE 8021B/602	
BTEX 8260	
TPH 418.1/TX1005 / TX1005 Extended (C35)	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 8010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	
Moisture Content	
Cations (Ca, Mg, Na, K)	
Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )	
Total Dissolved Solids (180.1 / SM2540C)	X
Chlorides (325.3 / SM4500 B)	X
Turn Around Time ~ 24 Hours	

Received By: *[Signature]* Date: **9/25/2013** Time: **16:05**  
 Received By: *[Signature]* Date: **9/25/2013** Time: **16:06**  
 Received By: (Laboratory Staff) *[Signature]* Date: **9/25/2013** Time: **16:06**  
 Checked By: *[Signature]* (Initials)  
 Delivered By: (Circle One) **UPS - Bus - Other**  
 Remarks: **Phone Results: Yes** **Additional Fax Number: No**  
 Email Results to: **andrew@rhicksconsult.com**  
**terry@yatespetroleum.com**  
**rozanne@valcomet.com**

#54

January 09, 2014

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 12/31/13 14:46.

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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	12/31/2013	Sampling Date:	12/30/2013
Reported:	01/09/2014	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	none given	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H303168-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	52.0	4.00	01/08/2014	ND	104	104	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	465	5.00	01/09/2014	ND	458	86.9	527	2.93		

**Sample ID: MW - 1 - S (H303168-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	436	4.00	01/08/2014	ND	104	104	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1170	5.00	01/09/2014	ND	458	86.9	527	2.93		

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**

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 SM4500-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

101 East Marland - Hobbs, New Mexico  
 88240  
 (505) 289-2325  
 (505) 289-2478

# Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # \_\_\_\_\_

**ANALYSIS REQUEST**  
 (Circle or Specify Method No.)

Company Name: **RT Hicks Consultants** BILL TO Company: **Yates Petroleum** PO#  
 Project Manager: **Andrew Parker** Address: **Katie Parker**  
 (Street, City, Zip) **105 S 4th Street ~ Artesia, New Mexico 88210** (Street, City, Zip)  
 Address: **901 Rio Grande Blvd NW Suite F-142 ~ Albuquerque, NM 87104** Phone#: **(575) 748-1471** Fax#:  
 Phone #: **(505) 288-5004** Fax #:  
 Project #: **State OE 13 #1** Project Name: **Yates Petroleum**  
 Project Location: **T12S-R34E-Sec13 Unit Letter O ~ Lea County - New Mexico** Sampler Signature: *[Signature]* Rozanne Johnson (575) 631-4310

LAB #	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX				PRESERVATIVE METHOD				SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCL (2-40ml VOA)	HNO <sub>3</sub>	NaHSO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	ICE (1-1Liber HDPE)	NONE
1	MW-1-d	G	1	X								1	12/30 13:05
2	MW-1-g	G	1	X								1	12/30 14:00

Relinquished by: *[Signature]* Date: **12/31/2013** Time: **14:45**  
 Received by: **Rozanne Johnson** Date: **12/31/13** Time: **14:46**  
 Received By: (Laboratory Staff) Date: Time:  
 Relinquished by: Date: Time:

MTBE 8021B/602	Yes	No
BTEX 8260	Yes	No
TPH 418.1/TX1005 / TX1005 Extended (C35)	Yes	No
PAH 8270C	Yes	No
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	Yes	No
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	Yes	No
TCLP Volatiles	Yes	No
TCLP Semi Volatiles	Yes	No
TCLP Pesticides	Yes	No
RCI	Yes	No
GC/MS Vol. 8260B/624	Yes	No
GC/MS Semi. Vol. 8270C/825	Yes	No
PCB's 8082/608	Yes	No
Pesticides 8081A/608	Yes	No
BOD, TSS, pH	Yes	No
Moisture Content	Yes	No
Cations (Ca, Mg, Na, K)	Yes	No
Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )	Yes	No
Total Dissolved Solids (160.1 / SM2540C)	X	X
Chlorides (325.3 / SM4500 B)	X	X
Turn Around Time ~ 24 Hours		

Delivered By: (Circle One) **Sampler** - UPS - Bus - Other:  
 Received By: **Rozanne Johnson** Date: **12/31/13** Time: **14:46**  
 Received By: (Laboratory Staff) Date: Time:  
 Relinquished by: Date: Time:  
 Checked By: *[Signature]* (initials)  
 Scale Condition: Cool  Yes  No Heat  Yes  No  
 #54

REMARKS:  
 Email Results to: **andrew@rthicksconsult.com**  
**Katie Parker (katie@yatespetroleum.com)**  
**rozanne11@windstream.net**

April 09, 2014

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 04/03/14 13:26.

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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	04/03/2014	Sampling Date:	03/28/2014
Reported:	04/09/2014	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H400997-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	60.0	4.00	04/04/2014	ND	100	100	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	524	5.00	04/07/2014	ND	494	93.7	527	0.00		

**Sample ID: MW - 1 - S (H400997-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	412	4.00	04/04/2014	ND	100	100	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1110	5.00	04/07/2014	ND	494	93.7	527	0.00		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
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---

**Cardinal Laboratories**

\* = Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager

101 East Mainland - Hobbs, New Mexico  
 BUCAD  
 (505) 393-2028  
 (505) 393-2028  
 (505) 393-2028

# Cardinal Laboratories, Inc.

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # \_\_\_\_\_

### ANALYSIS REQUEST

(Circle or Specify Method No.)

Company Name: RT Hicks Consultants  
 Project Manager: Andrew Parker  
 Address: (Street, City, Zip) 105 S 4th Street - Artesia, New Mexico 88210  
 Phone #: (575) 748-1471  
 Fax #

Project Name: Yates Petroleum  
 Project Location: T12S-R34E-Sect13 Unit Letter O - Lea County - New Mexico  
 Project # State OE 13 #1  
 Project Name: Yates Petroleum  
 Project # State OE 13 #1

Project Name: Yates Petroleum  
 Project # State OE 13 #1  
 Project Name: Yates Petroleum  
 Project # State OE 13 #1

LAB #	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX				PRESERVATIVE METHOD	DATE (2014)	TIME
				WATER	SOIL	AIR	SLUDGE			
1	MW-1-d	G	1	X				1	3/28 8:35	
2	MW-1-g	G	1	X				1	3/28 9:30	

Retrieved By: [Signature] Date: 4/3/2014 Time: 13:25  
 Received By: (Laboratory Staff) [Signature] Date: 4/3/2014 Time: 13:26  
 Retriquested by: [Signature] Date: 4/3/2014 Time: 13:25

Delivered By: (Circle One) [Signature]  
 Sampler - UPS - Bus - Other: [Signature]

MTBE 8021B/602	
BTEX 8260	
TPH 418.1/TX1005 / TX1005 Extended (C35)	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8062/608	
Pesticides 6081A/608	
BOD, TSS, pH	
Moisture Content	
Cations (Ca, Mg, Na, K)	
Anions (Cl, SO4, CO3, HCO3)	
Total Dissolved Solids (160.1 / SM2540C)	X
Chlorides (325.3 / SM4500 B)	X
Turn Around Time ~ 24 Hours	

REMARKS:  
 Phone Results: Yes [ ] No [ ]  
 Fax Results: Yes [ ] No [ ]  
 Additional Fax Number: \_\_\_\_\_

Checked By: [Signature] Date: 4/3/2014 Time: 13:26  
 Email Results to: andrew@rthicksconsult.com  
 katie.parker@yatespetroleum.com  
 rozanne11@windstream.net

#54

# Appendix B

**R.T. Hicks Consultants, Ltd.**

901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

# **Analytical Report 299688**

**for**

**R.T. Hicks Consultants, LTD**

**Project Manager: Randy Hicks**

**Pride Energy Company**

**State QE 13 #1**

**20-MAR-08**



**12600 West I-20 East Odessa, Texas 79765**

Texas certification numbers:  
Houston, TX T104704215

Florida certification numbers:  
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675  
Norcross(Atlanta), GA E87429

South Carolina certification numbers:  
Norcross(Atlanta), GA 98015

North Carolina certification numbers:  
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America  
Midland - Corpus Christi - Atlanta

20-MAR-08

Project Manager: **Randy Hicks**  
**R.T. Hicks Consultants, LTD**  
901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

Reference: XENCO Report No: **299688**  
**Pride Energy Company**  
Project Address: T12S-R34E, Section 1, Unit Letter L.

**Randy Hicks:**

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 299688. 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. 299688 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

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.**Certified and approved by numerous States and Agencies.**A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



**Sample Cross Reference 299688**



**R.T. Hicks Consultants, LTD, Albuquerque, NM**  
Pride Energy Company

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
MW-1	W	Mar-13-08 12:35		299688-001



# Certificate of Analysis Summary 299688

R.T. Hicks Consultants, LTD, Albuquerque, NM

**Project Name: Pride Energy Company**

**Project Id:** State QE 13 #1

**Date Received in Lab:** Mar-14-08 05:16 pm

**Contact:** Randy Hicks

**Report Date:** 20-MAR-08

**Project Location:** T12S-R34E, Section 1, Unit Letter L

**Project Manager:** Brent Barron, II

<b>Analysis Requested</b>	<b>Lab Id:</b> 299688-001 <b>Field Id:</b> MW-1 <b>Depth:</b> <b>Matrix:</b> WATER <b>Sampled:</b> Mar-13-08 12:35			
<b>Anions by EPA 300/300.1</b>	<b>Extracted:</b> <b>Analyzed:</b> Mar-15-08 10:29 <b>Units/RL:</b> mg/L RL			
Chloride	4340	50.0		
Sulfate	566	50.0		
<b>BTEX by EPA 8021B</b>	<b>Extracted:</b> Mar-19-08 10:00 <b>Analyzed:</b> Mar-19-08 17:26 <b>Units/RL:</b> mg/L RL			
Benzene	ND	0.0010		
Toluene	ND	0.0020		
Ethylbenzene	ND	0.0010		
m,p-Xylenes	ND	0.0020		
o-Xylene	ND	0.0010		
Xylenes, Total	ND			
Total BTEX	ND			
<b>Metals per ICP by SW846 6010B</b>	<b>Extracted:</b> <b>Analyzed:</b> Mar-17-08 16:36 <b>Units/RL:</b> mg/L RL			
Calcium	506	0.100		
Magnesium	120	0.010		
Potassium	4.93	0.500		
Sodium	1060	0.500		
<b>TDS by SM2540C</b>	<b>Extracted:</b> <b>Analyzed:</b> Mar-17-08 16:00 <b>Units/RL:</b> mg/L RL			
Total dissolved solids	6040	5.00		
<b>Total Alkalinity by EPA 310.1</b>	<b>Extracted:</b> <b>Analyzed:</b> Mar-17-08 14:15 <b>Units/RL:</b> mg/L RL			
Alkalinity, Total (as CaCO3)	450	4.00		

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 use 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

Odessa Laboratory Director



## 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 effect the recovery of the spike concentration. This condition could also effect 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 MQL(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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 5332 Blackberry Drive, Suite 104, San Antonio, TX 78238  
 2505 N. Falkenburg Rd., Tampa, FL 33619  
 5757 NW 158th St, Miami Lakes, FL 33014  
 6017 Financial Dr., Norcross, GA 30071

Phone	Fax
(281) 589-0692	(281) 589-0695
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(770) 449-8800	(770) 449-5477

**Work Order #:** 299688

**Project ID:** State QE 13 #1

**Lab Batch #:** 717610

**Sample:** 299447-003 S / MS

**Batch:** 1 **Matrix:** Water

**Units:** mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

**Lab Batch #:** 717610

**Sample:** 299447-003 SD / MSD

**Batch:** 1 **Matrix:** Water

**Units:** mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

**Lab Batch #:** 717610

**Sample:** 299688-001 / SMP

**Batch:** 1 **Matrix:** Water

**Units:** mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	

**Lab Batch #:** 717610

**Sample:** 506150-1-BKS / BKS

**Batch:** 1 **Matrix:** Water

**Units:** mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0336	0.0300	112	80-120	
4-Bromofluorobenzene	0.0353	0.0300	118	80-120	

**Lab Batch #:** 717610

**Sample:** 506150-1-BLK / BLK

**Batch:** 1 **Matrix:** Water

**Units:** mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0328	0.0300	109	80-120	

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

**Project Name: Pride Energy Company**

**Work Order #: 299688**

**Project ID: State QE 13 #1**

**Lab Batch #: 717610**

**Sample: 506150-1-BSD / BSD**

**Batch: 1 Matrix: Water**

**Units: mg/L**

<b>SURROGATE RECOVERY STUDY</b>					
<b>BTEX by EPA 8021B</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0331	0.0300	110	80-120	

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

## Project Name: Pride Energy Company

Work Order #: 299688

Project ID:

State QE 13 #1

Lab Batch #: 717368

Sample: 717368-1-BKS

Matrix: Water

Date Analyzed: 03/17/2008

Date Prepared: 03/17/2008

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Total Alkalinity by EPA 310.1  Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Alkalinity, Total (as CaCO3)	ND	200	172	86	80-120	

Lab Batch #: 717419

Sample: 717419-1-BKS

Matrix: Water

Date Analyzed: 03/15/2008

Date Prepared: 03/15/2008

Analyst: LATCOR

Reporting Units: mg/L

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300/300.1  Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.45	95	85-115	
Sulfate	ND	10.0	8.71	87	90-110	L

Blank Spike Recovery [D] = 100\*[C]/[B]

All results are based on MDL and validated for QC purposes.

**Project Name: Pride Energy Company**

Work Order #: 299688

Analyst: SHE

Lab Batch ID: 717610

Sample: 506150-1-BKS

Date Prepared: 03/19/2008

Batch #: 1

Project ID: State QE 13 #1

Date Analyzed: 03/19/2008

Matrix: Water

Units: mg/L

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	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
Benzene	ND	0.1000	0.0867	87	0.1	0.0848	85	2	70-125	25	
Toluene	ND	0.1000	0.0868	87	0.1	0.0848	85	2	70-125	25	
Ethylbenzene	ND	0.1000	0.0916	92	0.1	0.0885	89	3	71-129	25	
m,p-Xylenes	ND	0.2000	0.1841	92	0.2	0.1774	89	4	70-131	25	
o-Xylene	ND	0.1000	0.0998	100	0.1	0.0959	96	4	71-133	25	

Relative Percent Difference RPD =  $200 * (D-F) / (D+F)$   
 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: Pride Energy Company

Work Order #: 299688

Lab Batch #: 717419

Date Analyzed: 03/15/2008

QC- Sample ID: 299690-001 S

Reporting Units: mg/L

Date Prepared: 03/15/2008

Batch #: 1

Project ID: State QE 13 #1

Analyst: LATCOR

Matrix: Water

## MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
	Chloride	4150	1000	5250	110	85-115
Sulfate	415	1000	1400	99	90-110	

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B

Relative Percent Difference [E] = 200\*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes



# Form 3 - MS / MSD Recoveries



Project Name: Pride Energy Company

Work Order #: 299688

Project ID: State QE 13 #1

Lab Batch ID: 717610

Batch #: 1 Matrix: Water

Date Analyzed: 03/19/2008

QC - Sample ID: 299447-003 S  
Date Prepared: 03/19/2008

Analyst: SHE

Reporting Units: mg/L

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Analytes	BTEX by EPA 802 IB	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
		Benzene	ND	0.1000	0.1038	104	0.1000	0.1121	112	112	7	70-125
Toluene	ND	0.1000	0.1030	103	0.1000	0.1122	112	112	8	70-125	25	
Ethylbenzene	ND	0.1000	0.1055	106	0.1000	0.1168	116	116	9	71-129	25	
m,p-Xylenes	ND	0.2000	0.2079	104	0.2000	0.2298	115	115	10	70-131	25	
o-Xylene	ND	0.1000	0.1095	110	0.1000	0.1212	121	121	10	71-133	25	

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B  
Relative Percent Difference RPD = 200\*(D-G)/(D+G)

Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable - See Norms, DQL = Estimated Quantitation Limit

**Project Name: Pride Energy Company**

**Work Order #: 299688**

**Lab Batch #: 717419**

**Project ID: State QE 13 #1**

**Date Analyzed: 03/15/2008**

**Date Prepared: 03/15/2008**

**Analyst: LATCOR**

**QC- Sample ID: 299690-001 D**

**Batch #: 1**

**Matrix: Water**

**Reporting Units: mg/L**

**SAMPLE / SAMPLE DUPLICATE RECOVERY**

Anions by EPA 300/300.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	4150	4140	0	20	
Sulfate	415	406	2	20	

**Lab Batch #: 717329**

**Analyst: LATCOR**

**Date Analyzed: 03/17/2008**

**Date Prepared: 03/17/2008**

**QC- Sample ID: 299654-001 D**

**Batch #: 1**

**Matrix: Water**

**Reporting Units: mg/L**

**SAMPLE / SAMPLE DUPLICATE RECOVERY**

Metals per ICP by SW846 6010B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Calcium	45.1	45.8	2	25	
Magnesium	22.6	21.8	4	25	
Potassium	8.64	8.45	2	25	
Sodium	172	172	0	25	

**Lab Batch #: 717538**

**Analyst: RBA**

**Date Analyzed: 03/17/2008**

**Date Prepared: 03/17/2008**

**QC- Sample ID: 299683-002 D**

**Batch #: 1**

**Matrix: Water**

**Reporting Units: mg/L**

**SAMPLE / SAMPLE DUPLICATE RECOVERY**

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	978	972	1	30	

**Lab Batch #: 717368**

**Analyst: WRU**

**Date Analyzed: 03/17/2008**

**Date Prepared: 03/17/2008**

**QC- Sample ID: 299680-001 D**

**Batch #: 1**

**Matrix: Water**

**Reporting Units: mg/L**

**SAMPLE / SAMPLE DUPLICATE RECOVERY**

Total Alkalinity by EPA 310.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Alkalinity, Total (as CaCO <sub>3</sub> )	228	236	3	20	
Alkalinity, Carbonate (as CaCO <sub>3</sub> )	ND	ND	NC	20	
Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	ND	ND	NC	20	

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



**Environmental Lab of Texas**  
 Variance/ Corrective Action Report- Sample Log-in

Client: P.T. Hicks  
 Date/ Time: 3/14/08 4:15  
 Lab ID #: 279688  
 Initials: AL

**Sample Receipt Checklist**

				Client Initials
#1 Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	No	-1.5 °C	
#2 Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	No		
#3 Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/> Yes	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/> Yes	No	Not Present	
#5 Chain of Custody present?	<input checked="" type="checkbox"/> Yes	No		
#6 Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	No		
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes	No	Not Applicable	
#10 Sample material properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#11 Containers supplied by ELDT?	<input checked="" type="checkbox"/> Yes	No		
#12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	No	See Below	
#13 Samples properly preserved?	<input checked="" type="checkbox"/> Yes	No	See Below	
#14 Sample bottles intact?	<input checked="" type="checkbox"/> Yes	No		
#15 Preservatives documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	No	See Below	
#18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	No	See Below	
#19 Subcontract of sample(s)?	<input checked="" type="checkbox"/> Yes	No	Not Applicable	
#20 VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	No	Not Applicable	

**Variance Documentation**

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

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

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

- Check all that Apply:
- See attached e-mail/ fax
  - Client understands and would like to proceed with analysis
  - Cooling process had begun shortly after sampling event

# **Analytical Report 306330**

**for**

**R.T. Hicks Consultants, LTD**

**Project Manager: Andrew Parker**

**Pride Energy Company**

**State QE 13 # 1**

**27-JUN-08**



**12600 West I-20 East Odessa, Texas 79765**

**Texas certification numbers:**

**Houston, TX T104704215**

**Florida certification numbers:**

**Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675**

**Norcross(Atlanta), GA E87429**

**South Carolina certification numbers:**

**Norcross(Atlanta), GA 98015**

**North Carolina certification numbers:**

**Norcross(Atlanta), GA 483**

**Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America**

**Midland - Corpus Christi - Atlanta**

27-JUN-08

Project Manager: **Andrew Parker**  
**R.T. Hicks Consultants, LTD**  
901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

Reference: XENCO Report No: **306330**  
**Pride Energy Company**  
Project Address: T12S-R34E, Section 13, Unit Letter O

**Andrew Parker:**

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 306330. 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. 306330 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

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.**Certified and approved by numerous States and Agencies.**A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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**Sample Cross Reference 306330**



**R.T. Hicks Consultants, LTD, Albuquerque, NM**  
Pride Energy Company

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
MW-1	W	Jun-19-08 07:20		306330-001
MW-1 Deep	W	Jun-19-08 08:05		306330-002



# Certificate of Analysis Summary 306330

## R.T. Hicks Consultants, LTD, Albuquerque, NM

**Project Name: Pride Energy Company**

**Project Id:** State QE 13 # 1

**Date Received in Lab:** Jun-20-08 05:00 pm

**Contact:** Andrew Parker

**Report Date:** 27-JUN-08

**Project Location:** T12S-R34E, Section 13, Unit Letter O

**Project Manager:** Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	306330-001	306330-002		
	<i>Field Id:</i>	MW-1	MW-1 Deep		
	<i>Depth:</i>				
	<i>Matrix:</i>	WATER	WATER		
	<i>Sampled:</i>	Jun-19-08 07:20	Jun-19-08 08:05		
<b>Alkalinity by SM2320B</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jun-26-08 10:45	Jun-26-08 10:45		
	<i>Units/RL:</i>	mg/L    RL	mg/L    RL		
Alkalinity, Total (as CaCO <sub>3</sub> )		236    4.00	180    4.00		
Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )		236    4.00	180    4.00		
Alkalinity, Carbonate (as CaCO <sub>3</sub> )		ND    4.00	ND    4.00		
<b>Inorganic Anions by EPA 300</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jun-23-08 08:50	Jun-23-08 08:50		
	<i>Units/RL:</i>	mg/L    RL	mg/L    RL		
Chloride		1760    100	66.7    12.5		
Sulfate		348    100	132    12.5		
<b>Metals per ICP by SW846 6010B</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jun-23-08 11:59	Jun-23-08 11:59		
	<i>Units/RL:</i>	mg/L    RL	mg/L    RL		
Calcium		288    0.100	65.8    0.100		
Magnesium		70.4    0.010	15.6    0.010		
Potassium		2.88    0.500	2.76    0.500		
Sodium		751    0.500	63.4    0.500		
<b>TDS by SM2540C</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jun-23-08 16:30	Jun-23-08 16:30		
	<i>Units/RL:</i>	mg/L    RL	mg/L    RL		
Total dissolved solids		3310    5.00	464    5.00		

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 use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Since 1990    Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

  
 Brent Barron  
 Odessa Laboratory Director



## 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 effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
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- 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 MQL(PQL) and above the SQL(MDL).
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- 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.
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- \* Outside XENCO'S scope of NELAC Accreditation

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.  
 Certified and approved by numerous States and Agencies.  
 A Small Business and Minority Status Company that delivers SERVICE and QUALITY  
 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America*

	Phone	Fax
11381 Meadowglen Lane Suite L Houston, Tx 77082-2647	(281) 589-0692	(281) 589-0695
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. Falkenburg Rd., Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477

## Project Name: Pride Energy Company

Work Order #: 306330

Project ID:

State QE 13 # 1

Lab Batch #: 726566

Sample: 726566-1-BKS

Matrix: Water

Date Analyzed: 06/26/2008

Date Prepared: 06/26/2008

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Alkalinity by SM2320B	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	ND	200	176	88	80-120	

Lab Batch #: 726337

Sample: 726337-1-BKS

Matrix: Water

Date Analyzed: 06/23/2008

Date Prepared: 06/23/2008

Analyst: LATCOR

Reporting Units: mg/L

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Chloride	ND	10.0	11.6	116	80-120	
Sulfate	ND	10.0	12.0	120	80-120	

Blank Spike Recovery [D] = 100\*[C]/[B]

All results are based on MDL and validated for QC purposes.



# Form 3 - MS Recoveries



Project Name: Pride Energy Company

Work Order #: 306330

Lab Batch #: 726337

Date Analyzed: 06/23/2008

QC- Sample ID: 306329-001 S

Reporting Units: mg/L

Date Prepared: 06/23/2008

Batch #: 1

Project ID: State QE 13 # 1

Analyst: LATCOR

Matrix: Water

## MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	2600	500	3270	134	80-120	X
Sulfate	477	500	1080	121	80-120	X

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B

Relative Percent Difference [E] = 200\*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes

**Project Name: Pride Energy Company**

**Work Order #: 306330**

**Lab Batch #: 726566**  
**Date Analyzed: 06/26/2008**  
**QC- Sample ID: 306329-001 D**  
**Reporting Units: mg/L**

**Date Prepared: 06/26/2008**  
**Batch #: 1**

**Project ID: State QE 13 # 1**  
**Analyst: WRU**  
**Matrix: Water**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Alkalinity by SM2320B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	190	180	20	20	
Alkalinity, Carbonate (as CaCO <sub>3</sub> )	ND	ND	20	20	
Alkalinity, Total (as CaCO <sub>3</sub> )	190	180	20	20	

**Lab Batch #: 726337**  
**Date Analyzed: 06/23/2008**  
**QC- Sample ID: 306329-001 D**  
**Reporting Units: mg/L**

**Date Prepared: 06/23/2008**  
**Batch #: 1**

**Analyst: LATCOR**  
**Matrix: Water**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	2600	2590	20	20	
Sulfate	477	463	20	20	

**Lab Batch #: 726094**  
**Date Analyzed: 06/23/2008**  
**QC- Sample ID: 306329-001 D**  
**Reporting Units: mg/L**

**Date Prepared: 06/23/2008**  
**Batch #: 1**

**Analyst: LATCOR**  
**Matrix: Water**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Metals per ICP by SW846 6010B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Calcium	ND	603	NC	25	
Magnesium	120	116	3	25	
Potassium	4.41	4.85	10	25	
Sodium	564	575	2	25	
Fluoride	ND	ND	NC	20	

**Lab Batch #: 726342**  
**Date Analyzed: 06/23/2008**  
**QC- Sample ID: 306329-001 D**  
**Reporting Units: mg/L**

**Date Prepared: 06/23/2008**  
**Batch #: 1**

**Analyst: WRU**  
**Matrix: Water**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	5700	5580	2	30	

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



**Environmental Lab of Texas**  
 Variance/ Corrective Action Report- Sample Log-In

Client: R. T. Hicks  
 Date/ Time: 6-20-08 17:00  
 Lab ID #: 306330  
 Initials: AL

**Sample Receipt Checklist**

			Client Initials	
#1	Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	No	<u>6.0</u> °C
#2	Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	No	
#3	Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/> Yes	No	<del>Not Present</del>
#4	Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/> Yes	No	Not Present
#5	Chain of Custody present?	<input checked="" type="checkbox"/> Yes	No	
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	No	
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	No	ID written on Cont/ Lid
#9	Container labels legible and intact?	<input checked="" type="checkbox"/> Yes	No	Not Applicable
#10	Sample matrix properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
#11	Containers supplied by ELOIT?	<input checked="" type="checkbox"/> Yes	No	
#12	Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	No	See Below
#13	Samples properly preserved?	<input checked="" type="checkbox"/> Yes	No	See Below
#14	Sample bottles intact?	<input checked="" type="checkbox"/> Yes	No	
#15	Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
#16	Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	No	See Below
#18	All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	No	See Below
#19	Subcontract of sample(s)?	<input checked="" type="checkbox"/> Yes	No	<del>Not Applicable</del>
#20	VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	No	<del>Not Applicable</del>

**Variance Documentation**

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

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

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

- Check all that Apply
- See attached e-mail/ fax
  - Client understands and would like to proceed with analysis
  - Cooling process had begun shortly after sampling event

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 09/11/08  
 Reporting Date: 09/17/08  
 Project Number: STATE QE 13 #1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O - LEA CO., NM  
 Lab Number: H15916-1  
 Sample ID: MW-1-D

 Analysis Date: 09/13/08  
 Sampling Date: 09/09/08  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT  
 Sample Received By: ML  
 Analyzed By: ZL

VOLATILES (mg/L)	Sample Result H15916-1	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.052	104	0.050
Toluene	<0.001	<0.001	0.048	96.0	0.050
Ethylbenzene	<0.001	<0.001	0.050	100	0.050
m,p-Xylene	<0.002	<0.002	0.098	98.4	0.100
o-Xylene	<0.001	<0.001	0.052	103	0.050

## % RECOVERY

Dibromofluoromethane	102
Toluene-d8	111
Bromofluorobenzene	109

METHODS: EPA SW-846 8260

 TEXAS NELAP CERTIFICATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES

  
 Chemist

 09/17/08  
 Date

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

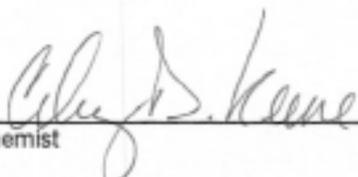
Receiving Date: 09/11/08  
Reporting Date: 09/17/08  
Project Number: STATE QE 13 #1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O ~ LEA CO., NM  
Lab Number: H15916-1  
Sample ID: MW-1-D

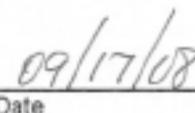
Analysis Date: 09/13/08  
Sampling Date: 09/09/08  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: ML  
Analyzed By: ZL

VOLATILES (mg/kg)	Sample Result H15916-1	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.055	109	0.050

	% RECOVERY
Dibromofluoromethane	102
Toluene-d8	111
Bromofluorobenzene	109

METHODS: EPA SW-846 8260

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 09/11/08  
 Reporting Date: 09/17/08  
 Project Number: STATE QE 13 #1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O - LEA CO., NM  
 Lab Number: H15916-2  
 Sample ID: MW-1-S

 Analysis Date: 09/13/08  
 Sampling Date: 09/09/08  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT  
 Sample Received By: ML  
 Analyzed By: ZL

VOLATILES (mg/L)	Sample Result H15916-2	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.052	104	0.050
Toluene	<0.001	<0.001	0.048	96.0	0.050
Ethylbenzene	<0.001	<0.001	0.050	100	0.050
m,p-Xylene	<0.002	<0.002	0.098	98.4	0.100
o-Xylene	<0.001	<0.001	0.052	103	0.050

## % RECOVERY

Dibromofluoromethane	103
Toluene-d8	106
Bromofluorobenzene	103

METHODS: EPA SW-846 8260

 TEXAS NELAP CERTIFICATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES.

  
 \_\_\_\_\_  
 Chemist

  
 \_\_\_\_\_  
 Date



# ARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 09/11/08  
Reporting Date: 09/17/08  
Project Number: STATE QE 13 #1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O ~ LEA CO., NM  
Lab Number: H15916-2  
Sample ID: MW-1-S

Analysis Date: 09/13/08  
Sampling Date: 09/09/08  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: ML  
Analyzed By: ZL

VOLATILES (mg/kg)	Sample Result	Method	True Value		
	H15916-2	Blank	QC	%Recov.	QC
Naphthalene	<0.001	<0.001	0.055	109	0.050

% RECOVERY

Dibromofluoromethane	103
Toluene-d8	106
Bromofluorobenzene	103

METHODS: EPA SW-846 8260

Chemist

*Ally D. Keene*

Date

09/17/08







ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 12/10/08  
Reporting Date: 12/17/08  
Project Number: STATE QE 13 #1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O ~ LEA CO., NM  
Lab Number: H16487-1  
Sample ID: MW-1-D

Analysis Date: 12/16/08  
Sampling Date: 12/08/08  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: CK  
Analyzed By: ZL

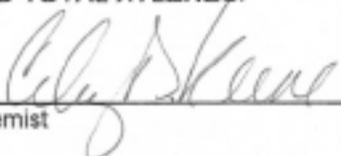
VOLATILES (mg/L)	Sample Result H16487-1	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.055	110	0.050
Toluene	<0.001	<0.001	0.056	112	0.050
Ethylbenzene	<0.001	<0.001	0.056	112	0.050
m,p-Xylene	<0.002	<0.002	0.119	119	0.100
o-Xylene	<0.001	<0.001	0.055	110	0.050

## % RECOVERY

Dibromofluoromethane	103
Fluorobenzene	108
Toluene-d8	99.2
4-Bromofluorobenzene	84.7

METHODS: EPA SW-846 8260

TEXAS NELAP CERTIFICATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
AND TOTAL XYLENES.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 12/10/08  
 Reporting Date: 12/17/08  
 Project Number: STATE QE 13 #1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O ~ LEA CO., NM  
 Lab Number: H16487-1  
 Sample ID: MW-1-D

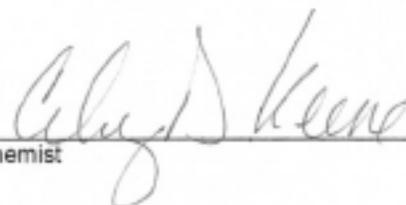
 Analysis Date: 12/16/08  
 Sampling Date: 12/08/08  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT  
 Sample Received By: CK  
 Analyzed By: ZL

VOLATILES (mg/L)	Sample Result H16487-1	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.059	118	0.050

## % RECOVERY

Dibromofluoromethane	103
Fluorobenzene	108
Toluene-d8	99.2
4-Bromofluorobenzene	84.7

METHODS: EPA SW-846 8260

  
 \_\_\_\_\_  
 Chemist

  
 \_\_\_\_\_  
 Date



ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
801 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 12/10/08  
Reporting Date: 12/17/08  
Project Number: STATE QE 13 #1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O - LEA CO., NM  
Lab Number: H16487-2  
Sample ID: MW-1-S

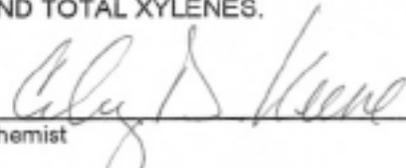
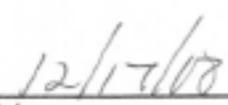
Analysis Date: 12/16/08  
Sampling Date: 12/08/08  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: CK  
Analyzed By: ZL

VOLATILES (mg/L)	Sample Result H16487-2	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.055	110	0.050
Toluene	<0.001	<0.001	0.056	112	0.050
Ethylbenzene	<0.001	<0.001	0.056	112	0.050
m,p-Xylene	<0.002	<0.002	0.119	119	0.100
o-Xylene	<0.001	<0.001	0.055	110	0.050

## % RECOVERY

Dibromofluoromethane	115
Fluorobenzene	115
Toluene-d8	96.0
4-Bromofluorobenzene	69.0

METHODS: EPA SW-846 8260

TEXAS NELAP CERTIFICATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
AND TOTAL XYLENES.  
\_\_\_\_\_  
Chemist  
\_\_\_\_\_  
Date



ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 12/10/08  
Reporting Date: 12/17/08  
Project Number: STATE QE 13 #1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O - LEA CO., NM  
Lab Number: H16487-2  
Sample ID: MW-1-S

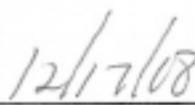
Analysis Date: 12/16/08  
Sampling Date: 12/08/08  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: CK  
Analyzed By: ZL

VOLATILES (mg/L)	Sample Result H16487-2	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.059	118	0.050

% RECOVERY	
Dibromofluoromethane	118
Fluorobenzene	115
Toluene-d8	96.0
4-Bromofluorobenzene	69.0

METHODS: EPA SW-846 8260

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date





ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

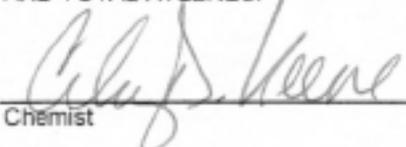
 Receiving Date: 03/19/09  
 Reporting Date: 03/25/09  
 Project Number: STATE QE 13#1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O  
 LEA COUNTY, NM  
 Sample ID: MW-1-D  
 Lab Number: H17096-1

 Analysis Date: 03/24/09  
 Sampling Date: 03/18/09  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT  
 Sample Received By: ML  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H17096-1	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.023	92.0	0.025
Toluene	<0.001	<0.001	0.024	96.0	0.025
Ethylbenzene	<0.001	<0.001	0.027	108	0.025
m+p - Xylene	<0.002	<0.002	0.058	116	0.050
o-Xylene	<0.001	<0.001	0.024	96.0	0.025

% Recovery	
Dibromofluoromethane	83.5
Fluorobenzene	84.8
Toluene-d8	106
4-Bromofluorobenzene	81.9

 METHODS: EPA SW-846-8260.  
 TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES.

  
 \_\_\_\_\_  
 Chemist

 03/25/09  
 \_\_\_\_\_  
 Date

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

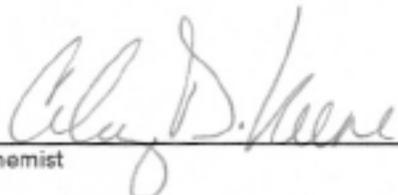
 Receiving Date: 03/19/09  
 Reporting Date: 03/25/09  
 Project Number: STATE QE 13#1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O  
 LEA COUNTY, NM  
 Sample ID: MW-1-D  
 Lab Number: H17096-1

 Analysis Date: 03/24/09  
 Sampling Date: 03/18/09  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT  
 Sample Received By: ML  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H17096-1	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.027	108	0.025

	% Recovery
Dibromofluoromethane	83.5
Fluorobenzene	84.8
Toluene-d8	106
4-Bromofluorobenzene	81.9

METHODS: EPA SW-846-8260.

  
 \_\_\_\_\_  
 Chemist

 03/25/09  
 \_\_\_\_\_  
 Date





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

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

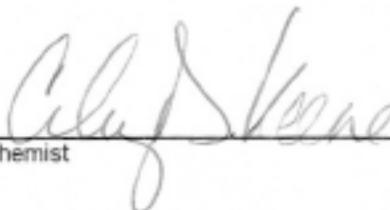
Receiving Date: 03/19/09  
Reporting Date: 03/25/09  
Project Number: STATE QE 13#1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER D  
LEA COUNTY, NM  
Sample ID: MW-1-S  
Lab Number: H17096-2

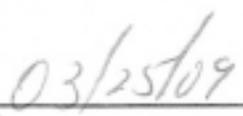
Analysis Date: 03/24/09  
Sampling Date: 03/18/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: ML  
Analyzed By: ZL

BTEX - 8260 (mg/L)	Sample Result H17096-2	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.027	108	0.025

	% Recovery
Dibromofluoromethane	99.0
Fluorobenzene	85.1
Toluene-d8	102
4-Bromofluorobenzene	89.8

METHODS: EPA SW-846-8260.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date





**ARDINAL  
LABORATORIES**

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

---

July 6, 2009

Andrew Parker  
RT Hicks Consultants  
901 Rio Grande Blvd. NW Suite F-142  
Albuquerque, NM 87104

Re: State QE 13 #1

Enclosed are the results of analyses for sample number H17660, received by the laboratory on 06/18/09 at 1:55 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Total Number of Pages of Report: 7 (includes Chain of Custody)

Sincerely,

Celey D. Keene  
Laboratory Director





ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 06/18/09  
Reporting Date: 07/02/09  
Project Number: STATE QE 13#1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-D  
Lab Number: H17660-1

Analysis Date: 06/30/09  
Sampling Date: 06/17/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 5°C  
Sample Received By: AB  
Analyzed By: SS

BTEX 8260 (mg/L)	Sample Result H17660-1	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.019	95.0	0.020
Toluene	<0.001	<0.001	0.018	90.0	0.020
Ethylbenzene	<0.001	<0.001	0.022	112	0.020
m+p Xylene	<0.002	<0.002	0.046	112	0.040
o-Xylene	<0.001	<0.001	0.023	115	0.020

% Recovery

Dibromofluoromethane	102
Toluene-d8	100
4-Bromofluorobenzene	91.5

METHODS: EPA SW-846-8260.  
Subcontracted to SunStar Laboratories, Inc.

  
\_\_\_\_\_  
Chemist

07/04/09  
\_\_\_\_\_  
Date



ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

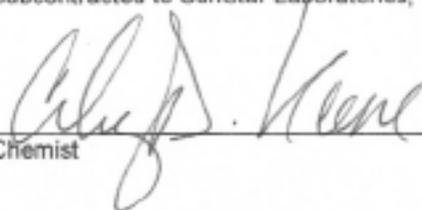
Receiving Date: 06/18/09  
Reporting Date: 07/02/09  
Project Number: STATE QE 13#1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-D  
Lab Number: H17660-1

Analysis Date: 06/30/09  
Sampling Date: 06/17/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 5°C  
Sample Received By: AB  
Analyzed By: SS

BTEX 8260 (mg/L)	Sample Result H17660-1	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.029	144	0.020

	% Recovery
Dibromofluoromethane	102
Toluene-d8	100
4-Bromofluorobenzene	91.5

METHODS: EPA SW-846-8260.  
Subcontracted to SunStar Laboratories, Inc.

  
\_\_\_\_\_  
Chemist

07/06/09  
\_\_\_\_\_  
Date





ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

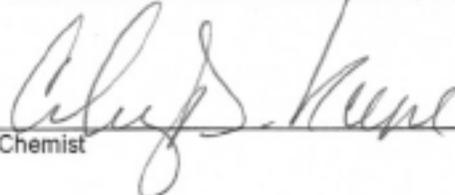
Receiving Date: 06/18/09  
Reporting Date: 07/02/09  
Project Number: STATE QE 13#1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-S  
Lab Number: H17660-2

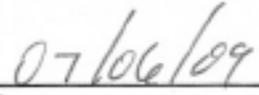
Analysis Date: 06/30/09  
Sampling Date: 06/17/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 5°C  
Sample Received By: AB  
Analyzed By: SS

BTEX - 8260 (mg/L)	Sample Result	Method	QC	%Recov.	True Value
	H17660-2	Blank			QC
Naphthalene	<0.001	<0.001	0.029	144	0.020

	% Recovery
Dibromofluoromethane	99.1
Toluene-d8	101
4-Bromofluorobenzene	106

METHODS: EPA SW-846-8260.  
Subcontracted to SunStar Laboratories, Inc.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date





# ARDINAL LABORATORIES

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

---

October 5, 2009

Andrew Parker  
RT Hicks Consultants  
901 Rio Grande Blvd. NW Suite F-142  
Albuquerque, NM 87104

Re: State QE 13 #1

Enclosed are the results of analyses for sample number H18305, received by the laboratory on 09/24/09 at 11:21 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 7 (includes Chain of Custody)

Sincerely,

Celey D. Keene  
Laboratory Director

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 09/24/09  
 Reporting Date: 10/01/09  
 Project Number: STATE QE 13#1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O  
 LEA COUNTY, NM  
 Sample ID: MW-1-D  
 Lab Number: H18305-1

 Analysis Date: 09/30/09  
 Sampling Date: 09/22/09  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT @ 1.5°C  
 Sample Received By: ML  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18305-1	Method Blank	QC %Recov.	True Value QC	
Benzene	<0.001	<0.001	0.010	100	0.010
Toluene	<0.001	<0.001	0.011	110	0.010
Ethylbenzene	<0.001	<0.001	0.010	100	0.010
m+p - Xylene	<0.002	<0.002	0.022	109	0.020
o-Xylene	<0.001	<0.001	0.011	106	0.010

## % Recovery

Dibromofluoromethane	88.5
Toluene-d8	104
4-Bromofluorobenzene	113

METHODS: EPA SW-846-8260.

 TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES.

  
 \_\_\_\_\_  
 Chemist

 10/05/09  
 \_\_\_\_\_  
 Date



# ARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

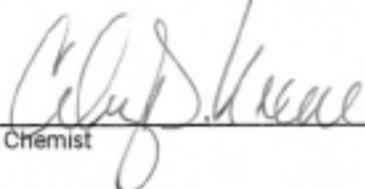
Receiving Date: 09/24/09  
Reporting Date: 10/01/09  
Project Number: STATE QE 13#1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-D  
Lab Number: H18305-1

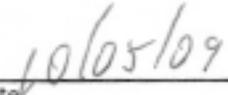
Analysis Date: 09/30/09  
Sampling Date: 09/22/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 1.5°C  
Sample Received By: ML  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18305-1	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.020	98.7	0.020

% Recovery	
Dibromofluoromethane	88.5
Toluene d8	104
4-Bromofluorobenzene	113

METHODS: EPA SW-846-8260.  
Not accredited for Naphthalene.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date



ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

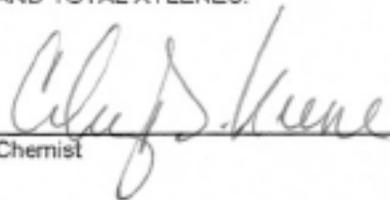
Receiving Date: 09/24/09  
 Reporting Date: 10/01/09  
 Project Number: STATE QE 13#1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O  
 LEA COUNTY, NM  
 Sample ID: MW-1-S  
 Lab Number: H18305-2

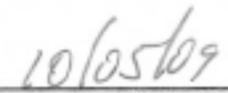
Analysis Date: 09/30/09  
 Sampling Date: 09/22/09  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT @ 1.5°C  
 Sample Received By: ML  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18305-2	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.010	100	0.010
Toluene	<0.001	<0.001	0.011	110	0.010
Ethylbenzene	<0.001	<0.001	0.010	100	0.010
m+p - Xylene	<0.002	<0.002	0.022	109	0.020
o-Xylene	<0.001	<0.001	0.011	106	0.010

	% Recovery
Dibromofluoromethane	90.6
Toluene-d8	107
4-Bromofluorobenzene	107

METHODS: EPA SW-846-8260.  
 TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES.

  
 \_\_\_\_\_  
 Chemist

  
 \_\_\_\_\_  
 Date

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

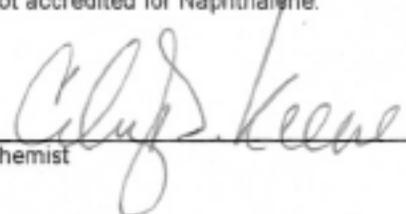
 Receiving Date: 09/24/09  
 Reporting Date: 10/01/09  
 Project Number: STATE QE 13#1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O  
 LEA COUNTY, NM  
 Sample ID: MW-1-S  
 Lab Number: H18305-2

 Analysis Date: 09/30/09  
 Sampling Date: 09/22/09  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT @ 1.5°C  
 Sample Received By: ML  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18305-2	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.020	98.7	0.020

	% Recovery
Dibromofluoromethane	90.6
Toluene-d8	107
4-Bromofluorobenzene	107

 METHODS: EPA SW-846-8260.  
 Not accredited for Naphthalene.

  
 \_\_\_\_\_  
 Chemist

 10/05/09  
 \_\_\_\_\_  
 Date







# ARDINAL LABORATORIES

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

---

December 22, 2009

Andrew Parker  
RT Hicks Consultants  
901 Rio Grande Blvd. NW Suite F-142  
Albuquerque, NM 87104

Re: State QE 13 #1

Enclosed are the results of analyses for sample number H18888, received by the laboratory on 12/16/09 at 9:00 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 7 (includes Chain of Custody)

Sincerely,

Celey D. Keene  
Laboratory Director



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

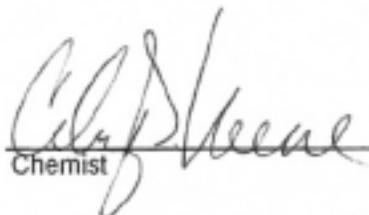
ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

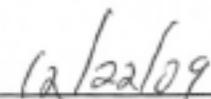
Receiving Date: 12/16/09	Sampling Date: 12/11/08
Reporting Date: 12/17/09	Sample Type: WATER
Project Number: STATE QE 13 #1	Sample Condition: COOL & INTACT @ 1.5°C
Project Name: PRIDE ENERGY COMPANY	Sample Received By: CK
Project Location: T12S-R34E-SEC13 UNIT LETTER O ~ LEA COUNTY - NEW MEXICO	Analyzed By: HM

LAB NO.	SAMPLE ID	TDS (mg/L)	Cl <sup>-</sup> (mg/L)
Analysis Date:		12/16/09	12/16/09
H18888-1	MW-1-d	505	80
H18888-2	MW-1-s	2,200	770
Quality Control		NR	500
True Value QC		NR	500
% Recovery		NR	100
Relative Percent Difference		1.8	< 0.1

METHOD: EPA 600/4-79-020	160.1	SM4500-Cl-B
--------------------------	-------	-------------

Not accredited for TDS and Chloride.

  
 Chemist

  
 Date

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 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 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.

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 12/16/09  
 Reporting Date: 12/18/09  
 Project Number: STATE QE 13 #1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O ~  
 LEA COUNTY, NM  
 Sample ID: MW-1D  
 Lab Number: H18888-1

 Analysis Date: 12/16/09  
 Sampling Date: 12/11/09  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT @1.5°C  
 Sample Received By: CK  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18888-1	Method Blank	QC	%Recov.	True Value QC
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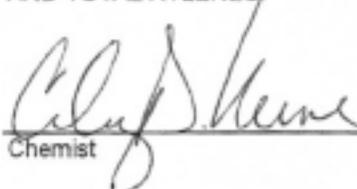
Benzene	<0.001	<0.001	0.021	105	0.020
Toluene	<0.001	<0.001	0.021	105	0.020
Ethylbenzene	<0.001	<0.001	0.022	110	0.020
m+p - Xylene	<0.002	<0.002	0.042	105	0.040
o-Xylene	<0.001	<0.001	0.020	100	0.020

## % Recovery

Dibromofluoromethane	99.7
Toluene-d8	96.2
4-Bromofluorobenzene	94.0

METHODS: EPA SW-846-8260.

 TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES.


  
 Chemist


  
 Date

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

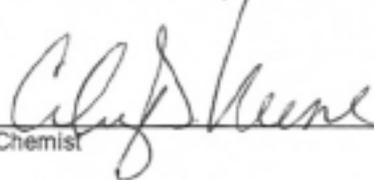
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Reporting Date: 12/18/09  
Project Number: STATE QE 13 #1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O ~  
LEA COUNTY, NM  
Sample ID: MW-1D  
Lab Number: H18888-1

Analysis Date: 12/16/09  
Sampling Date: 12/11/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT @1.5°C  
Sample Received By: CK  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18888-1	Method Blank	QC %Recov.	True Value QC	
Naphthalene	<0.001	<0.001	0.021	105	0.020

	% Recovery
Dibromofluoromethane	99.7
Toluene-d8	96.2
4-Bromofluorobenzene	94.0

METHODS: EPA SW-846-8260.  
Not accredited for Naphthalene.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 12/16/09  
 Reporting Date: 12/18/09  
 Project Number: STATE QE 13 #1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O ~  
 LEA COUNTY, NM  
 Sample ID: MW-1S  
 Lab Number: H18888-2

 Analysis Date: 12/16/09  
 Sampling Date: 12/11/09  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT @1.5°C  
 Sample Received By: CK  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18888-2	Method Blank	QC %Recov.	True Value QC
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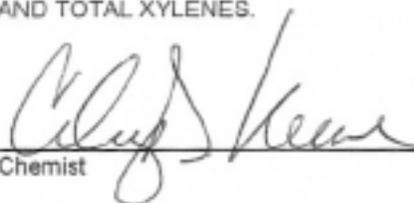
Benzene	<0.001	<0.001	0.021	105	0.020
Toluene	<0.001	<0.001	0.021	105	0.020
Ethylbenzene	<0.001	<0.001	0.022	110	0.020
m+p - Xylene	<0.002	<0.002	0.042	105	0.040
o-Xylene	<0.001	<0.001	0.020	100	0.020

## % Recovery

Dibromofluoromethane	120
Toluene-d8	100
4-Bromofluorobenzene	100

METHODS: EPA 8W-846-8260.

 TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES.

  
 Chemist

  
 Date



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

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

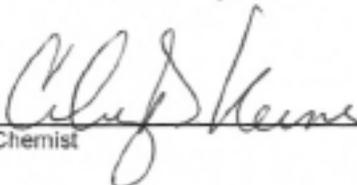
Receiving Date: 12/16/09  
Reporting Date: 12/18/09  
Project Number: STATE QE 13 #1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O ~  
LEA COUNTY, NM  
Sample ID: MW-1S  
Lab Number: H18888-2

Analysis Date: 12/16/09  
Sampling Date: 12/11/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT @1.5°C  
Sample Received By: CK  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18888-2	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.021	105	0.020

	% Recovery
Dibromofluoromethane	120
Toluene-d8	100
4-Bromofluorobenzene	100

METHODS: EPA SW-846-8260.  
Not accredited for Naphthalene.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date



April 1, 2010

Andrew Parker  
RT Hicks Consultants  
901 Rio Grande Blvd. NW Suite F-142  
Albuquerque, NM 87104

Re: State QE 13 #1

Enclosed are the results of analyses for sample number H19560, received by the laboratory on 03/29/10 at 10:20 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 7 (includes Chain of Custody)

Sincerely,



Celey D. Keene  
Laboratory Director







ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

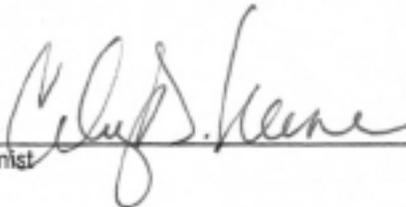
Receiving Date: 03/29/10  
Reporting Date: 03/31/10  
Project Number: STATE QE 13 #1  
Project Name: YATES PETROLEUM  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-D  
Lab Number: H19560-1

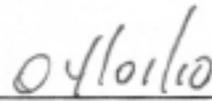
Analysis Date: 03/30/10  
Sampling Date: 03/25/10  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ -1°C  
Sample Received By: JH  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H19560-1	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.010	101	0.010

	% Recovery
Dibromofluoromethane	111
Toluene-d8	113
4-Bromofluorobenzene	95.6

METHODS: EPA SW-846-8260.  
Not accredited for Naphthalene.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date



ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 03/29/10  
Reporting Date: 03/31/10  
Project Number: STATE QE 13 #1  
Project Name: YATES PETROLEUM  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-S  
Lab Number: H19560-2

Analysis Date: 03/30/10  
Sampling Date: 03/25/10  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ -1°C  
Sample Received By: JH  
Analyzed By: ZL

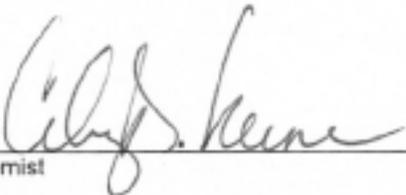
BTEX 8260 (mg/L)	Sample Result H19560-2	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.012	118	0.010
Toluene	<0.001	<0.001	0.011	109	0.010
Ethylbenzene	<0.001	<0.001	0.010	99.0	0.010
m+p - Xylene	<0.002	<0.002	0.021	107	0.020
o-Xylene	<0.001	<0.001	0.011	113	0.010

## % Recovery

Dibromofluoromethane	117
Toluene-d8	112
4-Bromofluorobenzene	101

METHODS: EPA SW-846-8260.

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
AND TOTAL XYLENES.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date



ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

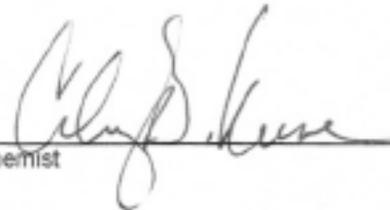
Receiving Date: 03/29/10  
Reporting Date: 03/31/10  
Project Number: STATE QE 13 #1  
Project Name: YATES PETROLEUM  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-S  
Lab Number: H19560-2

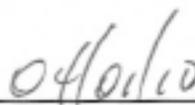
Analysis Date: 03/30/10  
Sampling Date: 03/25/10  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ -1°C  
Sample Received By: JH  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H19560-2	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.010	101	0.010

% Recovery	
Dibromofluoromethane	117
Toluene-d8	112
4-Bromofluorobenzene	101

METHODS: EPA SW-846-8260.  
Not accredited for Naphthalene.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date





# ARDINAL LABORATORIES

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

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June 24, 2010

Andrew Parker  
RT Hicks Consultants  
901 Rio Grande Blvd. NW Suite F-142  
Albuquerque, NM 87104

Re: State QE 13 #1

Enclosed are the results of analyses for sample number H20153, received by the laboratory on 06/18/10 at 10:02 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

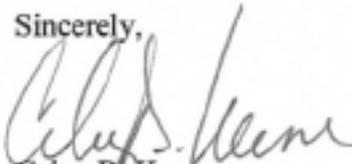
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 7 (includes Chain of Custody)

Sincerely,



Celey D. Keene  
Laboratory Director

---

This report conforms with NELAP requirements.

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 06/18/10  
 Reporting Date: 06/22/10  
 Project Number: STATE QE 13 #1  
 Project Name: YATES PETROLEUM  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O  
 LEA COUNTY, NM  
 Sample ID: MW-1-D  
 Lab Number: H20153-1

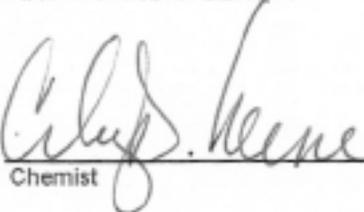
 Analysis Date: 06/21/10  
 Sampling Date: 06/16/10  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT @ 1.5°C  
 Sample Received By: HM  
 Analyzed By: ZL

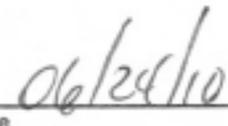
BTEX 8260 (mg/L)	Sample Result H20153-1	Method Blank	QC %Recov.	True Value QC	
Benzene	<0.001	<0.001	0.011	110	0.010
Toluene	<0.001	<0.001	0.010	100	0.010
Ethylbenzene	<0.001	<0.001	0.010	100.0	0.010
m+p - Xylene	<0.002	<0.002	0.023	113	0.020
o-Xylene	<0.001	<0.001	0.011	110	0.010

% Recovery	
Dibromofluoromethane	90.9
Toluene-d8	101
4-Bromofluorobenzene	104

METHODS: EPA 8W-846-8260.

 TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES.

  
 Chemist

  
 Date



ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

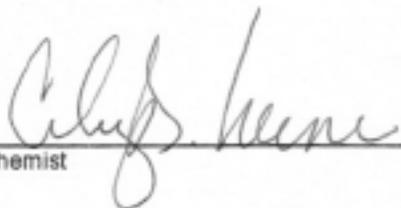
Receiving Date: 06/18/10  
Reporting Date: 06/22/10  
Project Number: STATE QE 13 #1  
Project Name: YATES PETROLEUM  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-D  
Lab Number: H20153-1

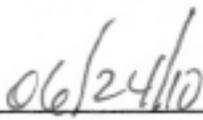
Analysis Date: 06/21/10  
Sampling Date: 06/16/10  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 1.5°C  
Sample Received By: HM  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H20153-1	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.010	100	0.010

	% Recovery
Dibromofluoromethane	90.9
Toluene-d8	101
4-Bromofluorobenzene	104

METHODS: EPA SW-846-8260.  
Not accredited for Naphthalene.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 06/18/10  
 Reporting Date: 06/22/10  
 Project Number: STATE QE 13 #1  
 Project Name: YATES PETROLEUM  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O  
 LEA COUNTY, NM  
 Sample ID: MW-1-S  
 Lab Number: H20153-2

 Analysis Date: 06/21/10  
 Sampling Date: 06/16/10  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT @ 1.5°C  
 Sample Received By: HM  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H20153-2	Method Blank	QC	%Recov.	True Value QC
------------------	---------------------------	-----------------	----	---------	------------------

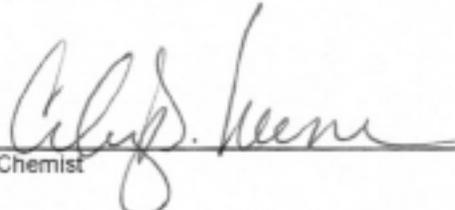
Benzene	<0.001	<0.001	0.011	110	0.010
Toluene	<0.001	<0.001	0.010	100	0.010
Ethylbenzene	<0.001	<0.001	0.010	100.0	0.010
m+p - Xylene	<0.002	<0.002	0.023	113	0.020
o-Xylene	<0.001	<0.001	0.011	110	0.010

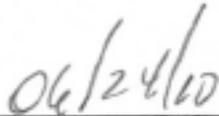
## % Recovery

Dibromofluoromethane	108
Toluene-d8	112
4-Bromofluorobenzene	100

METHODS: EPA SW-846-8260.

 TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES.


  
 Chemist


  
 Date

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

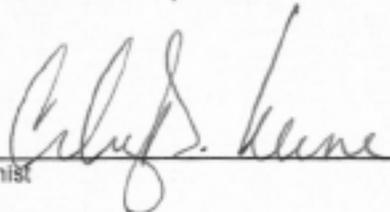
Receiving Date: 06/18/10  
Reporting Date: 06/22/10  
Project Number: STATE QE 13 #1  
Project Name: YATES PETROLEUM  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-S  
Lab Number: H20153-2

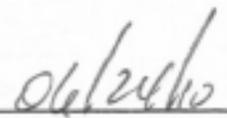
Analysis Date: 06/21/10  
Sampling Date: 06/16/10  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 1.5°C  
Sample Received By: HM  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H20153-2	Method Blank	QC %Recov.	True Value QC	
Naphthalene	<0.001	<0.001	0.010	100	0.010

% Recovery	
Dibromofluoromethane	108
Toluene-d8	112
4-Bromofluorobenzene	100

METHODS: EPA SW-846-8260.  
Not accredited for Naphthalene.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date



# Cardinal Laboratories, Inc.

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Merland - Hobbs, New Mexico 88240  
 Tel (575) 393-2326  
 Fax (575) 393-2476

LAB Order ID # \_\_\_\_\_

**ANALYSIS REQUEST**  
 (Circle or Specify Method No.)

Turn Around Time - 24 Hours	
Chlorides (325.3 / SM4500 B)	X
Total Dissolved Solids (160.1 / SM2540C)	X
Anions (Cl, SO4, CO3, HCO3)	X
Cations (Ca, Mg, Na, K)	
Moisture Content	
BOD, TSS, pH	
Pesticides 8081A/608	
FCR's 8082/608	
GC/MS Semt. Vol. 8270C/625	
GC/MS Vol. 8260B/624	
FCI	
TCLP Pesticides	
TCLP Semi Volatiles	
TCLP Volatiles	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
PAH 8270C	
TPH 418.1/TX-1005 / TX-1005 Extended (C35)	
BTEX 8260	X
NTBE 8021B/602	X

Phone Results  Yes  No  
 Fax Results  Yes  No  
 Additional Fax Number: \_\_\_\_\_

REMARKS:

Email Results to:  
 andrew@rthicksconsult.com  
 jerryf@yatespetroleum.com  
 rozanne@valornet.com

**BILL TO Company:** Yates Petroleum Jerry Fanning  
 Address: (Street, City, Zip)  
 105 S 4th Street - Artesia, New Mexico 88210  
 Phone#: (575) 748-1471  
 Fax #: \_\_\_\_\_

**Project Name:** Yates Petroleum  
**Sampler Signature:** Rozanne Johnson (675) 931-9310  
**rozanne@valornet.com**

**Project Location:** T12S-R34E-Sec13 Unit Letter O ~ Lea County - New Mexico

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	MATRIX			PRESERVATIVE METHOD			SAMPLING		
			WATER	AIR	SLUDGE	HCL (240M VOM)	HNO3	NaHSO4	H2SO4	ICE (1-Liter HDPE)	DATE (2010)
420153-1	MW-1-d	3	X			2			1	6-16	8-10
-2	MW-1-s	3	X			2			1	6-16	9-00

Relinquished by: \_\_\_\_\_ Date: 6-18-10 Time: 8:45  
 Rozanne Johnson

Received by: \_\_\_\_\_ Date: 6-18-10 Time: 8:46  
 (Laboratory Staff)

Relinquished by: \_\_\_\_\_ Date: 6-18-10 Time: 9:50  
 S.M. Johnson

Received by: \_\_\_\_\_ Date: 6-18-10 Time: 10:00  
 (Laboratory Staff)

Sample Condition: 1.58g No C

Checked By: \_\_\_\_\_ (Initials) JFW

Delivered By: (Circle One) Sampler - UPS - Bus - Other

September 29, 2010

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 09/17/10 10:36.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:**

R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: ?

Received:	09/17/2010	Sampling Date:	09/14/2010
Reported:	09/29/2010	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T12S-R34E-SEC13 U LTR 0 ~ LEA CTY -		

**Sample ID: MW - 1 - d (H020879-01)**

BTEX + Naphthalene 8260B		mg/L		Analyzed By: CMS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	09/27/2010	ND	0.018	90.6	0.0200	8.05		
Toluene*	<0.001	0.001	09/27/2010	ND	0.020	99.5	0.0200	10.3		
Ethylbenzene*	<0.001	0.001	09/27/2010	ND	0.017	86.7	0.0200	8.45		
m+p - Xylene	<0.002	0.002	09/27/2010	ND	0.034	86.0	0.0400	8.70		
o-Xylene	<0.001	0.001	09/27/2010	ND	0.018	87.6	0.0200	8.68		
Total Xylenes*	<0.003	0.003	09/27/2010	ND	0.052	86.6	0.0600	8.69		

*Surrogate: Dibromofluoromethane* 83.0 % 80-120

*Surrogate: Toluene-d8* 70.4 % 80-120

*Surrogate: 4-Bromofluorobenzene* 73.4 % 80-120

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	4.00	09/20/2010	ND	112	112	100	3.64		

TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	475	5.00	09/20/2010	ND				0.978		

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 analysis. 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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: ?

Received:	09/17/2010	Sampling Date:	09/14/2010
Reported:	09/29/2010	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T12S-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - s (H020879-02)**

BTEX + Naphthalene 8260B		mg/L		Analyzed By: CMS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	09/27/2010	ND	0.018	90.6	0.0200	8.05		
Toluene*	<0.001	0.001	09/27/2010	ND	0.020	99.5	0.0200	10.3		
Ethylbenzene*	<0.001	0.001	09/27/2010	ND	0.017	86.7	0.0200	8.45		
m+p - Xylene	<0.002	0.002	09/27/2010	ND	0.034	86.0	0.0400	8.70		
o-Xylene	<0.001	0.001	09/27/2010	ND	0.018	87.6	0.0200	8.68		
Total Xylenes*	<0.003	0.003	09/27/2010	ND	0.052	86.6	0.0600	8.69		

Surrogate: Dibromofluoromethane 92.6 % 80-120

Surrogate: Toluene-d8 91.6 % 80-120

Surrogate: 4-Bromofluorobenzene 93.0 % 80-120

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	324	4.00	09/20/2010	ND	112	112	100	3.64		

TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	1180	5.00	09/20/2010	ND				0.978		

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 analysis. 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

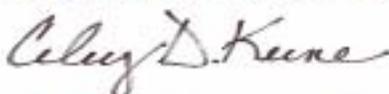
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500C-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

# Cardinal Laboratories, Inc.

101 East Mainland - Hobbs, NM  
 Mesco 88240  
 Tel (505) 263-2328  
 Fax (505) 263-2478

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # \_\_\_\_\_

**Company Name:** RT Hicks Consultants  
**Project Manager:** Andrew Parker  
**Address:** (Street, City, Zip) 901 Rio Grande Blvd NW Suite F-142 ~ Albuquerque, NM 87104  
**Phone #:** (505) 266-5004  
**Project #:** State QE 13 #1

**BILL TO Company:** Yates Petroleum  
**Project Manager:** Jerry Fanning  
**Address:** (Street, City, Zip) 105 S 4th Street ~ Artesia, New Mexico 88210  
**Phone #:** (575) 748-1471

**Project Name:** Yates Petroleum  
**Sampler Signature:** Rozanne Johnson (575) 931-8810  
**Sampler Email:** rozanne@valornet.com

**Project Location:** T12S-R34E-Sec13 Unit Letter O ~ Lea County - New Mexico

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	MATRIX				PRESERVATIVE METHOD				DATE (2010)	TIME
			WATER	AIR	SLUDGE	HCL (P-40/VOX)	HNO <sub>3</sub>	HAHSO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	CE (1-LINK HORB)		
A-1-1	MW-1-d	3	X			2				1	9-14	11:20
A-1-2	MW-1-s	3	X			2				1	9-14	12:10

**Relinquished by:** Rozanne Johnson  
**Date:** 9-17-10  
**Time:** 7:52

**Received by:** Jerry Fanning  
**Date:** 9-17-10  
**Time:** 7:53

**Relinquished by:** Rozanne Johnson  
**Date:** 9-17-10  
**Time:** 10:36

**Received by:** Jerry Fanning  
**Date:** 9-17-10  
**Time:** 10:36

**Delivered By:** (Circle One) \_\_\_\_\_  
**Sampler Condition:** Cool  Yes  No  
**Gas:** 1.5 **NE**  
**Checked By:** Rozanne Johnson  
**Date:** 9/17/10  
**Time:** 10:36  
**Initials:** JF

**ANALYSIS REQUEST**  
 (Circle or Specify Method No.)

GC/MS Vol. 8290B/624	
GC/MS Semi. Vol. 8270C/625	
PCBS 8062/608	
Pesticides 8081A/606	
BOD, TSS, pH	
Moisture Content	
Cations (Ca, Mg, Na, K)	
Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )	X
Total Dissolved Solids (160.1 / SM2540C)	X
Chlorides (325.3 / SM4500 B)	X

Turn Around Time ~ 24 Hours

**REMARKS:**

Phone Results: Yes  No   
 Fax Results: Yes  No   
 Additional Fax Number: \_\_\_\_\_

**Email Results to:**  
 andrew@thicksconsult.com  
 jerryf@yatespetroleum.com  
 rozanne@valornet.com

September 29, 2010

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 09/17/10 10:36.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: ?

Received:	09/17/2010	Sampling Date:	09/14/2010
Reported:	09/29/2010	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T12S-R34E-SEC13 U LTR 0 ~ LEA CTY -		

**Sample ID: MW - 1 - d (H020879-01)**

BTEX + Naphthalene 8260B		mg/L		Analyzed By: CMS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Naphthalene	<0.001	0.001	09/27/2010	ND	0.018	91.5	0.0200	5.42		
Surrogate: Dibromofluoromethane	83.0 %	80-120								
Surrogate: Toluene-d8	70.4 %	80-120								
Surrogate: 4-Bromofluorobenzene	73.4 %	80-120								

**Sample ID: MW - 1 - s (H020879-02)**

BTEX + Naphthalene 8260B		mg/L		Analyzed By: CMS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Naphthalene	<0.001	0.001	09/27/2010	ND	0.018	91.5	0.0200	5.42		
Surrogate: Dibromofluoromethane	92.6 %	80-120								
Surrogate: Toluene-d8	91.6 %	80-120								
Surrogate: 4-Bromofluorobenzene	93.0 %	80-120								

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

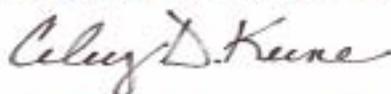
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500C-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



December 22, 2010

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 12/20/10 9:10.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:**

R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	12/20/2010	Sampling Date:	12/16/2010
Reported:	12/22/2010	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T12S-R34E-SEC13 U LTR 0 ~ LEA CTY -		

**Sample ID: MW - 1 - D (H021564-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	4.00	12/22/2010	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	474	5.00	12/21/2010	ND				13.6		

**Sample ID: MW - 1 - S (H021564-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	444	4.00	12/22/2010	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	1230	5.00	12/21/2010	ND				13.6		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500C-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report



# Cardinal Laboratories, Inc.

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland - Hobbs, New Mexico 88240  
 Tel (575) 393-2225  
 Fax (575) 393-2478

Company Name: **RT Hicks Consultants** PO# \_\_\_\_\_  
 Project Manager: **Andrew Parker** Yates Petroleum Jerry Fanning  
 Address: (Street, City, Zip) (Street, City, Zip)  
 901 Rio Grande Blvd NW Suite F-142 ~ Abua, NM 87104 (575) 748-1471  
 Phone #: (505) 266-5004

LAB Order ID# \_\_\_\_\_  
**ANALYSIS REQUEST**  
 (Circle or Specify Method No.)

Project Name: **Yates Petroleum**  
 Project Location: **T12S-R34E-Sec13 Unit Letter O ~ Lea County - New Mexico**  
 Sampler Signature: *Rozanne Johnson* (575) 931-6310  
 Email: [rozanne@valornet.com](mailto:rozanne@valornet.com)

LAB #	FIELD CODE	G/rab or (Comp)	# CONTAINERS	MATRIX		PRESERVATIVE METHOD					SAMPLING	
				WATER	SOIL	SLUDGE	HCL (2.0M VOA)	HNO <sub>3</sub>	NaHSO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	CE (1-Liter HOP)	DATE (2010)
121564-1		G 1	X							1	12-16	8:25
2		G 1	X							1	12-16	9:10

Retinquished by: *Rozanne Johnson* Date: 12-20-2010 Time: 7:00  
 Received by: *Anna Johnson* Date: 12-20-2010 Time: 7:02  
 Retinquished by: *Anna Johnson* Date: 12-20-10 Time: 9:10  
 Received by: (Laboratory Staff) Date: 12/20/10 Time: 9:10  
 Delivered By: (Circle One) UPS - Bus - Other  
 Sample Condition: Good  Inact  Yes  No   
 Checked By: *Rozanne Johnson* (Initials) *RJ*

ATBE 80218/802	3TEX 8260	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 60108/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	KCI	3CIMS Vol. 82608/624	3CIMS Semi Vol. 8270C/625	CB's 8082/808	Pesticides 8081A/808	POD, TSS, pH	Moisture Content	Cations (Ca, Mg, Na, K)	Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )	Total Dissolved Solids (160.1 / SM2540C)	Chlorides (325.3 / SM4500 B)	Turn Around Time ~ 24 Hours	

Phone Results: Yes No  
 Fax Results: Yes No  
 Additional Fax Number: \_\_\_\_\_  
**REMARKS:**  
 Email Results to: [andrew@rthicksconsult.com](mailto:andrew@rthicksconsult.com)  
[jerryf@yatespetroleum.com](mailto:jerryf@yatespetroleum.com)  
[rozanne@valornet.com](mailto:rozanne@valornet.com)

*Handwritten signature*

March 29, 2011

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 03/24/11 16:35.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	03/24/2011	Sampling Date:	03/23/2011
Reported:	03/29/2011	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H100578-01)**

Chloride, SM4500Cl-B		mg/L	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	4.00	03/29/2011	ND	104	104	100	0.00		
TDS 160.1		mg/L	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	475	5.00	03/28/2011	ND				0.193		

**Sample ID: MW - 1 - S (H100578-02)**

Chloride, SM4500Cl-B		mg/L	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	276	4.00	03/29/2011	ND	104	104	100	0.00		
TDS 160.1		mg/L	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	943	5.00	03/28/2011	ND				0.193		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500-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

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---

Celey D. Keene, Lab Director/Quality Manager



July 08, 2011

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 07/01/11 15:37.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	07/01/2011	Sampling Date:	06/30/2011
Reported:	07/08/2011	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW-1-D (H101373-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	4.00	07/05/2011	ND	112	112	100	3.64		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	490	5.00	07/05/2011	ND	228	95.0	240	1.06		

**Sample ID: MW-1-S (H101373-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	444	4.00	07/05/2011	ND	112	112	100	3.64		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	1140	5.00	07/05/2011	ND	228	95.0	240	1.06		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500-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

101 East Merland - Itasca, New Mexico 86240  
Tel (575) 383-2326  
Fax (575) 383-2475

# Cardinal Laboratories, Inc.

Company Name: RT Hicks Consultants  
 Project Manager: Andrew Parker  
 Address: 801 Rio Grande Blvd NW Suite F-142 ~ Albuquerque, NM 87104  
 Phone #: (505) 266-5004  
 Fax #:

BILL TO Company: Yates Petroleum  
 Project Address: 105 S. 4th Street ~ Artesia, New Mexico 88210  
 Phone #: (575) 748-1471  
 Fax #:

Project Name: Yates Petroleum  
 Project Location: T12S-R34E-Sec13 Unit Letter O ~ Lea County - New Mexico  
 Sampler Signature: Rozanne Johnson (575) 631-9310  
 Email: rozanne@valornet.com

LAB #	FIELD CODE	(g)rab or (Comp)	# CONTAINERS	WATER	SOIL	AIR	SLUDGE	HCL (2.0M VOL)	HNO <sub>3</sub>	NaHSO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	IDE (1-LITER HDPE)	PRESERVATIVE METHOD	SAMPLING	
														DATE (2011)	TIME
1101373		G	1	X								1	NONE	6-30	7:50
		G	1	X								1		6-30	8:40

Relinquished by: Rozanne Johnson  
 Date: 7-1-2011 Time: 15:36  
 Received by: Wade Anderson  
 Date: 7-1-2011 Time: 15:37  
 Relinquished by:  
 Date: Time:

Delivered By: (Circle One) Sampler UPS - Bus - Other:  
 Sample Condition: Cool  Yes  No  
 Checked By: (Initials) JA  
 Email Results to: andrew@rhicksconsult.com  
 jerry@yatespetroleum.com  
 rozanne@valornet.com

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

### ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 80218/602	
BTEX 8260	
TPH 418.1/TX1005 / TX1005 Extended (C35)	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 60108/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GCMS Vol. 8250B/824	
GCMS Semi Vol. 8270C/825	
PCBs 8082/808	
Pesticides 8081A/808	
BOD, TSS, pH	
Moisture Content	
Cations (Ca, Mg, Na, K)	
Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )	X
Total Dissolved Solids (TDS) (SM2540C)	X
Chlorides (225.3 / SM4500 B)	X
Turn Around Time - 24 Hours	

Phone Results: Yes No  
 Fax Results: Yes No  
 Additional Fax Number:

REMARKS:  
 Email Results to:

October 04, 2011

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 09/30/11 14:15.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	09/30/2011	Sampling Date:	09/30/2011
Reported:	10/04/2011	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW-1-D (H102103-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	4.00	10/03/2011	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	440	5.00	09/30/2011	ND	222	92.5	240	2.97		

**Sample ID: MW-1-S (H102103-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	440	4.00	10/03/2011	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	1220	5.00	09/30/2011	ND	222	92.5	240	2.97		

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 sample 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

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 SM4500-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



December 28, 2011

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 12/20/11 13:25.

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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	12/20/2011	Sampling Date:	12/20/2011
Reported:	12/28/2011	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T12S-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H102752-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	64.0	4.00	12/21/2011	ND	108	108	100	3.77		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	487	5.00	12/21/2011	ND	232	96.7	240	4.31		

**Sample ID: MW - 1 - S (H102752-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	420	4.00	12/21/2011	ND	108	108	100	3.77		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1140	5.00	12/21/2011	ND	232	96.7	240	4.31		

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 analysis. 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 sample 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**

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 SM4500-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



April 05, 2012

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 03/30/12 9:45.

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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	03/30/2012	Sampling Date:	03/28/2012
Reported:	04/05/2012	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H200759-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	64.0	4.00	04/03/2012	ND	100	100	100	0.00		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	499	5.00	04/02/2012	ND	236	98.3	240	0.656		

**Sample ID: MW - 1 - S (H200759-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	420	4.00	04/03/2012	ND	100	100	100	0.00		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1200	5.00	04/02/2012	ND	236	98.3	240	0.656		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500-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



July 03, 2012

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 06/29/12 9:35.

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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	06/29/2012	Sampling Date:	06/28/2012
Reported:	07/03/2012	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H201463-01)**

Chloride, SM4500Cl-B		mg/L	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	64.0	4.00	07/02/2012	ND	100	100	100	3.92		
TDS 160.1		mg/L	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	459	5.00	07/03/2012	ND	235	97.9	240	1.94		

**Sample ID: MW - 1 - S (H201463-02)**

Chloride, SM4500Cl-B		mg/L	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	460	4.00	07/02/2012	ND	100	100	100	3.92		
TDS 160.1		mg/L	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1250	5.00	07/03/2012	ND	235	97.9	240	1.94		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\* = Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



October 09, 2012

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 10/03/12 14:51.

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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	10/03/2012	Sampling Date:	09/27/2012
Reported:	10/09/2012	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	none given	Sample Received By:	Celey D. Keene
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H202411-01)**

Chloride, SM4500Cl-B		mg/L	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	64.0	4.00	10/08/2012	ND	100	100	100	3.92		
TDS 160.1		mg/L	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	527	5.00	10/04/2012	ND	269	112	240	0.456		

**Sample ID: MW - 1 - S (H202411-02)**

Chloride, SM4500Cl-B		mg/L	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	570	4.00	10/08/2012	ND	100	100	100	3.92		
TDS 160.1		mg/L	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1430	5.00	10/04/2012	ND	269	112	240	0.456		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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RPD	Relative Percent Difference
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***	Insufficient time to reach temperature.
-	Chloride by SM4500-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



December 21, 2012

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 12/18/12 14:40.

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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	12/18/2012	Sampling Date:	12/18/2012
Reported:	12/21/2012	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	none given	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW-1-D (H203043-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	68.0	4.00	12/19/2012	ND	100	100	100	7.69		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	485	5.00	12/21/2012	ND	210	87.5	240	7.73		

**Sample ID: MW-1-S (H203043-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	440	4.00	12/19/2012	ND	100	100	100	7.69		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1200	5.00	12/21/2012	ND	210	87.5	240	7.73		

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 sample 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**

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 SM4500-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

# Cardinal Laboratories, Inc.

101 East Marland - Hobbs, New Mexico  
88240  
(575) 393-2226  
(575) 393-3478

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # \_\_\_\_\_

Company Name: RT Hicks Consultants  
 Project Manager: Andrew Parker  
 Address: 901 Rio Grande Blvd NW Suite F-142 ~ Albuquerque, NM 87104  
 Phone #: (505) 266-5004  
 Project #: State QE 13 #1  
 Project Location: T12S-R34E-Sec13 Unit Letter O ~ Lea County - New Mexico

BILL TO Company: Yates Petroleum  
 Project Manager: Jerry Fanning  
 Address: 105 S 4th Street ~ Artesia, New Mexico 88210  
 Phone #: (575) 748-1471  
 Fax #:

Project Name: Yates Petroleum  
 Sample Signature: Rozanne Johnson (575)831-0310  
 rozanne@valormet.com

### ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 80218/W02	PH 418.1/TX1005 / TX1005 Extended (C35)	FAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	CLP Volatiles	CLP Semi Volatiles	CLP Pesticides	KCI	GCMS Vol. 8260B/624	GCMS Semi Vol. 8270C/625	PCBs 8082/608	Pesticides 8081A/608	ROD, TSS, pH	Moisture Content	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	Total Dissolved Solids (160.1 / SM2540C)	Chlorides (325.3 / SM4500 B)	Turn Around Time ~ 24 Hours

Requested by: Rozanne Johnson Date: 12-18-2012 Time: 13:20  
 Relinquished by: Andrew Parker Date: 12-18-2012 Time: 2:40

Received by: [Signature] Date: 12-18-2012 Time: 13:21  
 Received By: (Laboratory Staff) [Signature] Date: 12/18/2012 Time: 2:40

Delivered By: (Circle One) [Signature]

Sampler - UPS - Bus - Other: [Signature]

Checked By: [Signature] (Initials) #26

Sample Condition: Yes  No  Cool  Frost

### REMARKS:

Email Results to:  
 andrew@rthicksconsult.com  
 jerryf@yatespetroleum.com  
 rozanne@valormet.com

April 04, 2013

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 03/28/13 14:43.

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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	03/28/2013	Sampling Date:	03/28/2013
Reported:	04/04/2013	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H300749-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	64.0	4.00	04/01/2013	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	480	5.00	04/03/2013	ND	240	100	240	1.92		

**Sample ID: MW - 1 - S (H300749-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	440	4.00	04/01/2013	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1240	5.00	04/03/2013	ND	240	100	240	1.92		

Cardinal Laboratories

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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 SM4500C-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



July 09, 2013

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 06/27/13 8:25.

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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	06/27/2013	Sampling Date:	06/26/2013
Reported:	07/09/2013	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW-1-D (H301522-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	68.0	4.00	06/28/2013	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	500	5.00	07/03/2013	ND	244	102	240	0.157		

**Sample ID: MW-1-S (H301522-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	452	4.00	06/28/2013	ND	108	108	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1290	5.00	07/03/2013	ND	244	102	240	0.157		

Cardinal Laboratories

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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 SM4500C-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

101 East Alvarado - Hobbs, New Mexico  
 88240  
 (505) 266-2326  
 (505) 266-2478

# Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST  
 LAB Order ID # \_\_\_\_\_

Company Name: RT Hicks Consultants  
 Project Manager: Andrew Parker  
 Address: (Street, City, Zip) 105 S 4th Street - Artesia, New Mexico 88210  
 Phone #: (505) 748-1471  
 Fax #:

BILL TO Company: Yates Petroleum  
 Address: (Street, City, Zip) Jerry Fanning  
 Phone #: (575) 748-1471  
 Fax #:

Project Name: Yates Petroleum  
 Project Location: T12S-R34E-Sect13 Unit Letter O ~ Lea County - New Mexico  
 Sampler Signature: [Signature]  
 Moxanne Johnson 15751831-9310  
 rozanne@valornet.com

State OE 13 #1  
 Project #: [Blank]  
 Project Name: Yates Petroleum

LAB #	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX					PRESERVATIVE METHOD				SAMPLING		
				WATER	SOIL	AIR	SLUDGE	HCL (2.42ml VOA)	HNO <sub>3</sub>	NaHSO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	ICE (1-1Liter HDPE)	NONE	DATE (2013)	TIME
1	MM-1-d	G	1	X										6/26	8-10
2	MM-1-s	G	1	X										6/26	9-15

Requisitioned by: [Signature]  
 Date: 6/27/13 Time: 7:02  
 Received by: [Signature]  
 Date: 6/27/13 Time: 7:03  
 Requisitioned by: [Signature]  
 Date: 6/27/13 Time: 8:24  
 Received by: [Signature]  
 Date: 6/27/13 Time: 8:25

Delivered by: (Circle One)  UPS - Bus  Other  
 Checked by: [Signature]  
 Date: 6/27/13 Time: 8:25

ANALYSIS REQUEST (Circle or Specify Method No.)	Phone Results	Fax Results	Additional Fax Number:
MTBE 8021B/602	Yes	No	
BTEX 8260	Yes	No	
TPH 418.1/TX1005 / TX1005 Extended (C35)	Yes	No	
PAH 8270C	Yes	No	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	Yes	No	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	Yes	No	
TCLP Volatiles	Yes	No	
TCLP Semi Volatiles	Yes	No	
TCLP Pesticides	Yes	No	
RCI	Yes	No	
GC/MS Vol. 8260B/624	Yes	No	
GC/MS Semi. Vol. 8270C/625	Yes	No	
PCB's 8082/608	Yes	No	
Pesticides 8081A/608	Yes	No	
BOD, TSS, pH	Yes	No	
Moisture Content	Yes	No	
Cations (Ca, Mg, Na, K)	Yes	No	
Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )	Yes	No	
Total Dissolved Solids (160.1 / SM2540C)	X	X	
Chlorides (325.3 / SM4500 B)	X	X	
Turn Around Time ~ 24 Hours			

Requisitioned by: [Signature]  
 Date: 6/27/13 Time: 7:02  
 Received by: [Signature]  
 Date: 6/27/13 Time: 7:03  
 Requisitioned by: [Signature]  
 Date: 6/27/13 Time: 8:24  
 Received by: [Signature]  
 Date: 6/27/13 Time: 8:25

REMARKS:  
 Email Results to:  
 andrew@rthicksconsult.com  
 jerryf@yatespetroleum.com  
 rozanne@valornet.com

September 28, 2013

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 09/25/13 16:06.

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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

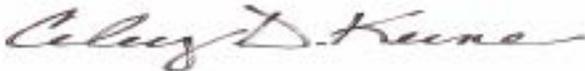
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	09/25/2013	Sampling Date:	09/24/2013
Reported:	09/28/2013	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H302333-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	56.0	4.00	09/27/2013	ND	100	100	100	7.69		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	479	5.00	09/27/2013	ND	242	101	240	1.87		

**Sample ID: MW - 1 - S (H302333-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	470	4.00	09/27/2013	ND	100	100	100	7.69		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1320	5.00	09/27/2013	ND	242	101	240	1.87		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500C-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\* = Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager

101 East Mainland - Hobbs, New Mexico  
 88240  
 (575) 389-2328  
 (575) 389-2476

# Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # \_\_\_\_\_

**ANALYSIS REQUEST**  
 (Circle or Specify Method No.)

Page 4 of 4

Company Name: **RT Hicks Consultants**  
 Project Manager: **Andrew Parker**  
 Address: (Street, City, Zip) **105 S 4th Street - Artesia, New Mexico 88210**  
 Phone #: **(575) 748-1471**  
 Fax #:

BILL TO Company: **Yates Petroleum** PO#  
 Address: **Jerry Fanning**  
 (Street, City, Zip)  
 Phone: **(575) 748-1471**  
 Fax:

Project #: **State QE 13 #1** Project Name: **Yates Petroleum**  
 Project Location: **T12S-R34E-Sec13 Unit Letter O ~ Lea County - New Mexico**  
 Sampler Signature: *[Signature]* Rozanne Johnson (575)831-9510  
 Email: [rozanne@valcomet.com](mailto:rozanne@valcomet.com)

LAB #	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX				PRESERVATIVE METHOD				SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCL (2.40ml VOA)	HNO <sub>3</sub>	NaHSO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	ICE (1-1Liber HDPE)	NONE
1	NW-1-d	G	1	X								9/24	13:20
2	NW-1-s	G	1	X								9/24	14:10

MTBE 8021B/602	
BTEX 8260	
TPH 418.1/TX1005 / TX1005 Extended (C35)	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 8010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	
Moisture Content	
Cations (Ca, Mg, Na, K)	
Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )	
Total Dissolved Solids (180.1 / SM2540C)	X
Chlorides (325.3 / SM4500 B)	X
Turn Around Time ~ 24 Hours	

Received by: *[Signature]* Date: **9/25/2013** Time: **16:05**  
 Received By: (Laboratory Staff) *[Signature]* Date: **9/25/2013** Time: **16:06**

Phone Results: Yes  No   
 Fax Results: Yes  No   
 Additional Fax Number: \_\_\_\_\_

Delivered By: (Circle One) **UPS - Bus - Other**

REMARKS: \_\_\_\_\_  
 Email Results to: [andrew@rhicksconsult.com](mailto:andrew@rhicksconsult.com)  
[jerryf@yatespetroleum.com](mailto:jerryf@yatespetroleum.com)  
[rozanne@valcomet.com](mailto:rozanne@valcomet.com)

Received By: *[Signature]* Date: **9/25/2013** Time: **16:06**  
 Checked By: *[Signature]* (Initials)

Sample Condition: **Yes**  **No**   
 Cool: **Yes**  **No**   
 Heat: **Yes**  **No**

#54

January 09, 2014

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 12/31/13 14:46.

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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	12/31/2013	Sampling Date:	12/30/2013
Reported:	01/09/2014	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	none given	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H303168-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	52.0	4.00	01/08/2014	ND	104	104	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	465	5.00	01/09/2014	ND	458	86.9	527	2.93		

**Sample ID: MW - 1 - S (H303168-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	436	4.00	01/08/2014	ND	104	104	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1170	5.00	01/09/2014	ND	458	86.9	527	2.93		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500-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

101 East Marland - Hobbs, New Mexico  
 88240  
 (505) 289-2225 Tel  
 (505) 289-2478 Fax

# Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # \_\_\_\_\_

**ANALYSIS REQUEST**  
 (Circle or Specify Method No.)

Company Name: **RT Hicks Consultants** BILL TO Company: **Yates Petroleum** PO# **Katie Parker**  
 Project Manager: **Andrew Parker** Address: **105 S 4th Street ~ Artesia, New Mexico 88210** (Street, City, Zip)

Address: **901 Rio Grande Blvd NW Suite F-142 ~ Albuquerque, NM 87104** (Street, City, Zip) Phone: **(575) 748-1471** Fax: \_\_\_\_\_

Phone #: **(505) 288-5004**

Project #: **State OE 13 #1** Project Name: **Yates Petroleum**

Project Location: **T12S-R34E-Sec13 Unit Letter O ~ Lea County - New Mexico** Sampler Signature: \_\_\_\_\_ Rozanne Johnson (575) 631-4310

LAB #	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX				PRESERVATIVE METHOD				SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCL (2-40ml VOA)	HNO <sub>3</sub>	NaHSO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	ICE (1-1Liber HDPE)	NONE
1	MW-1-d	G	1	X								1	12/30 13:05
2	MW-1-g	G	1	X								1	12/30 14:00

MTBE 8021B/602	
BTEX 8260	
TPH 418.1/TX1005 / TX1005 Extended (C35)	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/825	
PCB's 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	
Moisture Content	
Cations (Ca, Mg, Na, K)	
Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )	
Total Dissolved Solids (160.1 / SM2540C)	X
Chlorides (325.3 / SM4500 B)	X
Turn Around Time ~ 24 Hours	

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received By: (Laboratory Staff) **Katie Johnson** Date: **12/31/13** Time: **14:46**

Phone Results: Yes  No   
 Fax Results: Yes  No   
 Additional Fax Number: \_\_\_\_\_

Delivered By: (Circle One)

Signature Condition

CHECKED BY: \_\_\_\_\_ (initials)

REMARKS: \_\_\_\_\_  
 Email Results to: **andrew@rthicksconsult.com**  
**Katie Parker (katie@yatespetroleum.com)**  
**rozanne11@windstream.net**

Sampler - UPS - Bus - Other: \_\_\_\_\_

Yes  No  Cool  Heat

#54

April 09, 2014

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: STATE QE 13 #1

Enclosed are the results of analyses for samples received by the laboratory on 04/03/14 13:26.

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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	04/03/2014	Sampling Date:	03/28/2014
Reported:	04/09/2014	Sampling Type:	Water
Project Name:	STATE QE 13 #1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T125-R34E-SEC13 U LTR O ~ LEA CTY -		

**Sample ID: MW - 1 - D (H400997-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	60.0	4.00	04/04/2014	ND	100	100	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	524	5.00	04/07/2014	ND	494	93.7	527	0.00		

**Sample ID: MW - 1 - S (H400997-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	412	4.00	04/04/2014	ND	100	100	100	0.00		
TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1110	5.00	04/07/2014	ND	494	93.7	527	0.00		

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500-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



# Appendix B

**R.T. Hicks Consultants, Ltd.**

901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

# **Analytical Report 299688**

**for**

**R.T. Hicks Consultants, LTD**

**Project Manager: Randy Hicks**

**Pride Energy Company**

**State QE 13 #1**

**20-MAR-08**



**12600 West I-20 East Odessa, Texas 79765**

Texas certification numbers:  
Houston, TX T104704215

Florida certification numbers:  
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675  
Norcross(Atlanta), GA E87429

South Carolina certification numbers:  
Norcross(Atlanta), GA 98015

North Carolina certification numbers:  
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America  
Midland - Corpus Christi - Atlanta

20-MAR-08

Project Manager: **Randy Hicks**  
**R.T. Hicks Consultants, LTD**  
901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

Reference: XENCO Report No: **299688**  
**Pride Energy Company**  
Project Address: T12S-R34E, Section 1, Unit Letter L.

**Randy Hicks:**

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 299688. 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. 299688 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

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.**Certified and approved by numerous States and Agencies.**A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



**Sample Cross Reference 299688**



**R.T. Hicks Consultants, LTD, Albuquerque, NM**  
Pride Energy Company

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
MW-1	W	Mar-13-08 12:35		299688-001



# Certificate of Analysis Summary 299688

R.T. Hicks Consultants, LTD, Albuquerque, NM

**Project Name: Pride Energy Company**

**Project Id:** State QE 13 #1

**Date Received in Lab:** Mar-14-08 05:16 pm

**Contact:** Randy Hicks

**Report Date:** 20-MAR-08

**Project Location:** T12S-R34E, Section 1, Unit Letter L

**Project Manager:** Brent Barron, II

<b>Analysis Requested</b>	<i>Lab Id:</i>	299688-001		
	<i>Field Id:</i>	MW-1		
	<i>Depth:</i>			
	<i>Matrix:</i>	WATER		
	<i>Sampled:</i>	Mar-13-08 12:35		
<b>Anions by EPA 300/300.1</b>	<i>Extracted:</i>			
	<i>Analyzed:</i>	Mar-15-08 10:29		
	<i>Units/RL:</i>	mg/L RL		
Chloride		4340 50.0		
Sulfate		566 50.0		
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Mar-19-08 10:00		
	<i>Analyzed:</i>	Mar-19-08 17:26		
	<i>Units/RL:</i>	mg/L RL		
Benzene		ND 0.0010		
Toluene		ND 0.0020		
Ethylbenzene		ND 0.0010		
m,p-Xylenes		ND 0.0020		
o-Xylene		ND 0.0010		
Xylenes, Total		ND		
Total BTEX		ND		
<b>Metals per ICP by SW846 6010B</b>	<i>Extracted:</i>			
	<i>Analyzed:</i>	Mar-17-08 16:36		
	<i>Units/RL:</i>	mg/L RL		
Calcium		506 0.100		
Magnesium		120 0.010		
Potassium		4.93 0.500		
Sodium		1060 0.500		
<b>TDS by SM2540C</b>	<i>Extracted:</i>			
	<i>Analyzed:</i>	Mar-17-08 16:00		
	<i>Units/RL:</i>	mg/L RL		
Total dissolved solids		6040 5.00		
<b>Total Alkalinity by EPA 310.1</b>	<i>Extracted:</i>			
	<i>Analyzed:</i>	Mar-17-08 14:15		
	<i>Units/RL:</i>	mg/L RL		
Alkalinity, Total (as CaCO3)		450 4.00		

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 use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

  
 Brent Barron  
 Odessa Laboratory Director



## 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 effect the recovery of the spike concentration. This condition could also effect 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 MQL(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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 9701 Harry Hines Blvd , Dallas, TX 75220  
 5332 Blackberry Drive, Suite 104, San Antonio, TX 78238  
 2505 N. Falkenburg Rd., Tampa, FL 33619  
 5757 NW 158th St, Miami Lakes, FL 33014  
 6017 Financial Dr., Norcross, GA 30071

Phone	Fax
(281) 589-0692	(281) 589-0695
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(770) 449-8800	(770) 449-5477

**Work Order #:** 299688

**Project ID:** State QE 13 #1

**Lab Batch #:** 717610

**Sample:** 299447-003 S / MS

**Batch:** 1 **Matrix:** Water

**Units:** mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

**Lab Batch #:** 717610

**Sample:** 299447-003 SD / MSD

**Batch:** 1 **Matrix:** Water

**Units:** mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

**Lab Batch #:** 717610

**Sample:** 299688-001 / SMP

**Batch:** 1 **Matrix:** Water

**Units:** mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	

**Lab Batch #:** 717610

**Sample:** 506150-1-BKS / BKS

**Batch:** 1 **Matrix:** Water

**Units:** mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0336	0.0300	112	80-120	
4-Bromofluorobenzene	0.0353	0.0300	118	80-120	

**Lab Batch #:** 717610

**Sample:** 506150-1-BLK / BLK

**Batch:** 1 **Matrix:** Water

**Units:** mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0328	0.0300	109	80-120	

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

**Project Name: Pride Energy Company**

**Work Order #:** 299688

**Project ID:** State QE 13 #1

**Lab Batch #:** 717610

**Sample:** 506150-1-BSD / BSD

**Batch:** 1 **Matrix:** Water

**Units:** mg/L

<b>SURROGATE RECOVERY STUDY</b>					
<b>BTEX by EPA 8021B</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0331	0.0300	110	80-120	

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

## Project Name: Pride Energy Company

Work Order #: 299688

Project ID:

State QE 13 #1

Lab Batch #: 717368

Sample: 717368-1-BKS

Matrix: Water

Date Analyzed: 03/17/2008

Date Prepared: 03/17/2008

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Total Alkalinity by EPA 310.1	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Alkalinity, Total (as CaCO3)	ND	200	172	86	80-120	

Lab Batch #: 717419

Sample: 717419-1-BKS

Matrix: Water

Date Analyzed: 03/15/2008

Date Prepared: 03/15/2008

Analyst: LATCOR

Reporting Units: mg/L

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300/300.1	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Chloride	ND	10.0	9.45	95	85-115	
Sulfate	ND	10.0	8.71	87	90-110	L

Blank Spike Recovery [D] = 100\*[C]/[B]

All results are based on MDL and validated for QC purposes.

**Project Name: Pride Energy Company**

Work Order #: 299688  
 Analyst: SHE  
 Lab Batch ID: 717610  
 Sample: 506150-1-BKS  
 Units: mg/L

Date Prepared: 03/19/2008  
 Batch #: 1

Project ID: State QE 13 #1  
 Date Analyzed: 03/19/2008  
 Matrix: Water

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	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
Benzene	ND	0.1000	0.0867	87	0.1	0.0848	85	2	70-125	25	
Toluene	ND	0.1000	0.0868	87	0.1	0.0848	85	2	70-125	25	
Ethylbenzene	ND	0.1000	0.0916	92	0.1	0.0885	89	3	71-129	25	
m,p-Xylenes	ND	0.2000	0.1841	92	0.2	0.1774	89	4	70-131	25	
o-Xylene	ND	0.1000	0.0998	100	0.1	0.0959	96	4	71-133	25	

Relative Percent Difference RPD =  $200 * (D-F) / (D+F)$   
 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: Pride Energy Company

Work Order #: 299688

Lab Batch #: 717419

Date Analyzed: 03/15/2008

QC- Sample ID: 299690-001 S

Reporting Units: mg/L

Date Prepared: 03/15/2008

Batch #: 1

Project ID: State QE 13 #1

Analyst: LATCOR

Matrix: Water

### MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
	Chloride	4150	1000	5250	110	85-115
Sulfate	415	1000	1400	99	90-110	

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B

Relative Percent Difference [E] = 200\*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes



# Form 3 - MS / MSD Recoveries



Project Name: Pride Energy Company

Work Order #: 299688

Project ID: State QE 13 #1

Lab Batch ID: 717610

Batch #: 1 Matrix: Water

Date Analyzed: 03/19/2008

QC - Sample ID: 299447-003 S

Date Prepared: 03/19/2008 Analyst: SHE

Reporting Units: mg/L

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY									
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Duplicate Spiked Sample Result [F]	Spiked Dups %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1038	104	0.1121	112	7	70-125	25	
Toluene	ND	0.1000	0.1030	103	0.1122	112	8	70-125	25	
Ethylbenzene	ND	0.1000	0.1055	106	0.1168	116	9	71-129	25	
m,p-Xylenes	ND	0.2000	0.2079	104	0.2298	115	10	70-131	25	
o-Xylene	ND	0.1000	0.1095	110	0.1212	121	10	71-133	25	

Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/B

Relative Percent Difference RPD = 200\*(D-G)/(D+G)

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable - See Norms, DQL = Estimated Quantitation Limit

**Project Name: Pride Energy Company**

**Work Order #: 299688**

**Lab Batch #: 717419**  
**Date Analyzed: 03/15/2008**  
**QC- Sample ID: 299690-001 D**  
**Reporting Units: mg/L**

**Date Prepared: 03/15/2008**  
**Batch #: 1**

**Project ID: State QE 13 #1**  
**Analyst: LATCOR**  
**Matrix: Water**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300/300.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	4150	4140	0	20	
Sulfate	415	406	2	20	

**Lab Batch #: 717329**  
**Date Analyzed: 03/17/2008**  
**QC- Sample ID: 299654-001 D**  
**Reporting Units: mg/L**

**Date Prepared: 03/17/2008**  
**Batch #: 1**

**Analyst: LATCOR**  
**Matrix: Water**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Metals per ICP by SW846 6010B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Calcium	45.1	45.8	2	25	
Magnesium	22.6	21.8	4	25	
Potassium	8.64	8.45	2	25	
Sodium	172	172	0	25	

**Lab Batch #: 717538**  
**Date Analyzed: 03/17/2008**  
**QC- Sample ID: 299683-002 D**  
**Reporting Units: mg/L**

**Date Prepared: 03/17/2008**  
**Batch #: 1**

**Analyst: RBA**  
**Matrix: Water**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	978	972	1	30	

**Lab Batch #: 717368**  
**Date Analyzed: 03/17/2008**  
**QC- Sample ID: 299680-001 D**  
**Reporting Units: mg/L**

**Date Prepared: 03/17/2008**  
**Batch #: 1**

**Analyst: WRU**  
**Matrix: Water**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Total Alkalinity by EPA 310.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Alkalinity, Total (as CaCO <sub>3</sub> )	228	236	3	20	
Alkalinity, Carbonate (as CaCO <sub>3</sub> )	ND	ND	NC	20	
Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	ND	ND	NC	20	

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



**Environmental Lab of Texas**  
 Variance/ Corrective Action Report- Sample Log-in

Client: P.T. Hicks  
 Date/ Time: 3/14/08 4:15  
 Lab ID #: 279688  
 Initials: AL

**Sample Receipt Checklist**

				Client Initials
#1 Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	No	-1.5 °C	
#2 Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	No		
#3 Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/> Yes	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/> Yes	No	Not Present	
#5 Chain of Custody present?	<input checked="" type="checkbox"/> Yes	No		
#6 Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	No		
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes	No	Not Applicable	
#10 Sample matrix properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#11 Containers supplied by ELDT?	<input checked="" type="checkbox"/> Yes	No		
#12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	No	See Below	
#13 Samples properly preserved?	<input checked="" type="checkbox"/> Yes	No	See Below	
#14 Sample bottles intact?	<input checked="" type="checkbox"/> Yes	No		
#15 Preservatives documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	No	See Below	
#18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	No	See Below	
#19 Subcontract of sample(s)?	<input checked="" type="checkbox"/> Yes	No	Not Applicable	
#20 VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	No	Not Applicable	

**Variance Documentation**

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

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

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

\_\_\_\_\_

\_\_\_\_\_

- Check all that Apply:
- See attached e-mail/ fax
  - Client understands and would like to proceed with analysis
  - Cooling process had begun shortly after sampling event

# **Analytical Report 306330**

**for**

**R.T. Hicks Consultants, LTD**

**Project Manager: Andrew Parker**

**Pride Energy Company**

**State QE 13 # 1**

**27-JUN-08**



**12600 West I-20 East Odessa, Texas 79765**

**Texas certification numbers:**

**Houston, TX T104704215**

**Florida certification numbers:**

**Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675**

**Norcross(Atlanta), GA E87429**

**South Carolina certification numbers:**

**Norcross(Atlanta), GA 98015**

**North Carolina certification numbers:**

**Norcross(Atlanta), GA 483**

**Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America**

**Midland - Corpus Christi - Atlanta**

27-JUN-08

Project Manager: **Andrew Parker**  
**R.T. Hicks Consultants, LTD**  
901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

Reference: XENCO Report No: **306330**  
**Pride Energy Company**  
Project Address: T12S-R34E, Section 13, Unit Letter O

**Andrew Parker:**

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 306330. 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. 306330 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 306330**



**R.T. Hicks Consultants, LTD, Albuquerque, NM**  
Pride Energy Company

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
MW-1	W	Jun-19-08 07:20		306330-001
MW-1 Deep	W	Jun-19-08 08:05		306330-002



# Certificate of Analysis Summary 306330

## R.T. Hicks Consultants, LTD, Albuquerque, NM

**Project Name: Pride Energy Company**

**Project Id:** State QE 13 # 1

**Date Received in Lab:** Jun-20-08 05:00 pm

**Contact:** Andrew Parker

**Report Date:** 27-JUN-08

**Project Location:** T12S-R34E, Section 13, Unit Letter O

**Project Manager:** Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	306330-001	306330-002		
	<i>Field Id:</i>	MW-1	MW-1 Deep		
	<i>Depth:</i>				
	<i>Matrix:</i>	WATER	WATER		
	<i>Sampled:</i>	Jun-19-08 07:20	Jun-19-08 08:05		
<b>Alkalinity by SM2320B</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jun-26-08 10:45	Jun-26-08 10:45		
	<i>Units/RL:</i>	mg/L RL	mg/L RL		
Alkalinity, Total (as CaCO3)		236 4.00	180 4.00		
Alkalinity, Bicarbonate (as CaCO3)		236 4.00	180 4.00		
Alkalinity, Carbonate (as CaCO3)		ND 4.00	ND 4.00		
<b>Inorganic Anions by EPA 300</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jun-23-08 08:50	Jun-23-08 08:50		
	<i>Units/RL:</i>	mg/L RL	mg/L RL		
Chloride		1760 100	66.7 12.5		
Sulfate		348 100	132 12.5		
<b>Metals per ICP by SW846 6010B</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jun-23-08 11:59	Jun-23-08 11:59		
	<i>Units/RL:</i>	mg/L RL	mg/L RL		
Calcium		288 0.100	65.8 0.100		
Magnesium		70.4 0.010	15.6 0.010		
Potassium		2.88 0.500	2.76 0.500		
Sodium		751 0.500	63.4 0.500		
<b>TDS by SM2540C</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jun-23-08 16:30	Jun-23-08 16:30		
	<i>Units/RL:</i>	mg/L RL	mg/L RL		
Total dissolved solids		3310 5.00	464 5.00		

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 use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

  
 Brent Barron  
 Odessa Laboratory Director



## 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 effect the recovery of the spike concentration. This condition could also effect 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 MQL(PQL) and above the SQL(MDL).
  - 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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11381 Meadowglen Lane Suite L Houston, Tx 77082-2647  
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5757 NW 158th St, Miami Lakes, FL 33014  
6017 Financial Dr., Norcross, GA 30071

Phone	Fax
(281) 589-0692	(281) 589-0695
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(770) 449-8800	(770) 449-5477

## Project Name: Pride Energy Company

Work Order #: 306330

Project ID:

State QE 13 # 1

Lab Batch #: 726566

Sample: 726566-1-BKS

Matrix: Water

Date Analyzed: 06/26/2008

Date Prepared: 06/26/2008

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Alkalinity by SM2320B	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Alkalinity, Bicarbonate (as CaCO3)	ND	200	176	88	80-120	

Lab Batch #: 726337

Sample: 726337-1-BKS

Matrix: Water

Date Analyzed: 06/23/2008

Date Prepared: 06/23/2008

Analyst: LATCOR

Reporting Units: mg/L

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Chloride	ND	10.0	11.6	116	80-120	
Sulfate	ND	10.0	12.0	120	80-120	

Blank Spike Recovery [D] = 100\*[C]/[B]

All results are based on MDL and validated for QC purposes.



# Form 3 - MS Recoveries



Project Name: Pride Energy Company

Work Order #: 306330

Lab Batch #: 726337

Date Analyzed: 06/23/2008

QC- Sample ID: 306329-001 S

Reporting Units: mg/L

Date Prepared: 06/23/2008

Batch #: 1

Project ID: State QE 13 # 1

Analyst: LATCOR

Matrix: Water

### MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
	Chloride	2600	500	3270	134	80-120
Sulfate	477	500	1080	121	80-120	X

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B

Relative Percent Difference [E] = 200\*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes

**Project Name: Pride Energy Company**

**Work Order #: 306330**

**Lab Batch #: 726566**  
**Date Analyzed: 06/26/2008**  
**QC- Sample ID: 306329-001 D**  
**Reporting Units: mg/L**

**Date Prepared: 06/26/2008**  
**Batch #: 1**

**Project ID: State QE 13 # 1**  
**Analyst: WRU**  
**Matrix: Water**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Alkalinity by SM2320B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	190	180	20	20	
Alkalinity, Carbonate (as CaCO <sub>3</sub> )	ND	ND	20	20	
Alkalinity, Total (as CaCO <sub>3</sub> )	190	180	20	20	

**Lab Batch #: 726337**  
**Date Analyzed: 06/23/2008**  
**QC- Sample ID: 306329-001 D**  
**Reporting Units: mg/L**

**Date Prepared: 06/23/2008**  
**Batch #: 1**

**Analyst: LATCOR**  
**Matrix: Water**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	2600	2590	20	20	
Sulfate	477	463	20	20	

**Lab Batch #: 726094**  
**Date Analyzed: 06/23/2008**  
**QC- Sample ID: 306329-001 D**  
**Reporting Units: mg/L**

**Date Prepared: 06/23/2008**  
**Batch #: 1**

**Analyst: LATCOR**  
**Matrix: Water**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Metals per ICP by SW846 6010B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Calcium	ND	603	NC	25	
Magnesium	120	116	3	25	
Potassium	4.41	4.85	10	25	
Sodium	564	575	2	25	
Fluoride	ND	ND	NC	20	

**Lab Batch #: 726342**  
**Date Analyzed: 06/23/2008**  
**QC- Sample ID: 306329-001 D**  
**Reporting Units: mg/L**

**Date Prepared: 06/23/2008**  
**Batch #: 1**

**Analyst: WRU**  
**Matrix: Water**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	5700	5580	2	30	

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



**Environmental Lab of Texas**  
 Variance/ Corrective Action Report- Sample Log-In

Client: R. T. Hicks  
 Date/ Time: 6-20-08 17:00  
 Lab ID #: 306330  
 Initials: AL

**Sample Receipt Checklist**

			Client Initials	
#1	Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	No	<u>6.0</u> °C
#2	Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	No	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	<del>Not Present</del>
#4	Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/> Yes	No	Not Present
#5	Chain of Custody present?	<input checked="" type="checkbox"/> Yes	No	
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	No	
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	No	ID written on Cont/ Lid
#9	Container labels legible and intact?	<input checked="" type="checkbox"/> Yes	No	Not Applicable
#10	Sample matrix properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
#11	Containers supplied by ELOTT?	<input checked="" type="checkbox"/> Yes	No	
#12	Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	No	See Below
#13	Samples properly preserved?	<input checked="" type="checkbox"/> Yes	No	See Below
#14	Sample bottles intact?	<input checked="" type="checkbox"/> Yes	No	
#15	Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
#16	Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	No	See Below
#18	All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	No	See Below
#19	Subcontract of sample(s)?	Yes	No	<del>Not Applicable</del>
#20	VOC samples have zero headspace?	Yes	No	<del>Not Applicable</del>

**Variance Documentation**

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

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

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

- Check all that Apply
- See attached e-mail/ fax
  - Client understands and would like to proceed with analysis
  - Cooling process had begun shortly after sampling event.

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 09/11/08  
 Reporting Date: 09/17/08  
 Project Number: STATE QE 13 #1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O - LEA CO., NM  
 Lab Number: H15916-1  
 Sample ID: MW-1-D

 Analysis Date: 09/13/08  
 Sampling Date: 09/09/08  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT  
 Sample Received By: ML  
 Analyzed By: ZL

VOLATILES (mg/L)	Sample Result H15916-1	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.052	104	0.050
Toluene	<0.001	<0.001	0.048	96.0	0.050
Ethylbenzene	<0.001	<0.001	0.050	100	0.050
m,p-Xylene	<0.002	<0.002	0.098	98.4	0.100
o-Xylene	<0.001	<0.001	0.052	103	0.050

## % RECOVERY

Dibromofluoromethane	102
Toluene-d8	111
Bromofluorobenzene	109

METHODS: EPA SW-846 8260

 TEXAS NELAP CERTIFICATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES

  
 \_\_\_\_\_  
 Chemist

 09/17/08  
 \_\_\_\_\_  
 Date

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

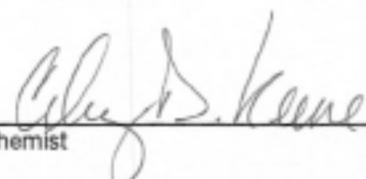
Receiving Date: 09/11/08  
Reporting Date: 09/17/08  
Project Number: STATE QE 13 #1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O ~ LEA CO., NM  
Lab Number: H15916-1  
Sample ID: MW-1-D

Analysis Date: 09/13/08  
Sampling Date: 09/09/08  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: ML  
Analyzed By: ZL

VOLATILES (mg/kg)	Sample Result	Method	True Value		
	H15916-1	Blank	QC	%Recov.	QC
Naphthalene	<0.001	<0.001	0.055	109	0.050

% RECOVERY	
Dibromofluoromethane	102
Toluene-d8	111
Bromofluorobenzene	109

METHODS: EPA SW-846 8260

  
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Chemist

  
\_\_\_\_\_  
Date

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 09/11/08  
 Reporting Date: 09/17/08  
 Project Number: STATE QE 13 #1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O - LEA CO., NM  
 Lab Number: H15916-2  
 Sample ID: MW-1-S

 Analysis Date: 09/13/08  
 Sampling Date: 09/09/08  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT  
 Sample Received By: ML  
 Analyzed By: ZL

VOLATILES (mg/L)	Sample Result H15916-2	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.052	104	0.050
Toluene	<0.001	<0.001	0.048	96.0	0.050
Ethylbenzene	<0.001	<0.001	0.050	100	0.050
m,p-Xylene	<0.002	<0.002	0.098	98.4	0.100
o-Xylene	<0.001	<0.001	0.052	103	0.050

## % RECOVERY

Dibromofluoromethane	103
Toluene-d8	106
Bromofluorobenzene	103

METHODS: EPA SW-846 8260

 TEXAS NELAP CERTIFICATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES.

Chemist

Date



# ARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 09/11/08  
Reporting Date: 09/17/08  
Project Number: STATE QE 13 #1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O - LEA CO., NM  
Lab Number: H15916-2  
Sample ID: MW-1-S

Analysis Date: 09/13/08  
Sampling Date: 09/09/08  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: ML  
Analyzed By: ZL

VOLATILES (mg/kg)	Sample Result	Method	True Value		
	H15916-2	Blank	QC	%Recov.	QC
Naphthalene	<0.001	<0.001	0.055	109	0.050

% RECOVERY

Dibromofluoromethane	103
Toluene-d8	106
Bromofluorobenzene	103

METHODS: EPA SW-846 8260

Chemist

*Ally D. Keene*

Date

*09/17/08*







ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 12/10/08  
Reporting Date: 12/17/08  
Project Number: STATE QE 13 #1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O ~ LEA CO., NM  
Lab Number: H16487-1  
Sample ID: MW-1-D

Analysis Date: 12/16/08  
Sampling Date: 12/08/08  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: CK  
Analyzed By: ZL

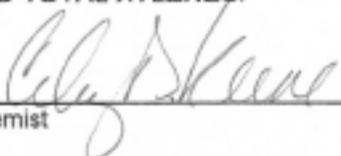
VOLATILES (mg/L)	Sample Result H16487-1	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.055	110	0.050
Toluene	<0.001	<0.001	0.056	112	0.050
Ethylbenzene	<0.001	<0.001	0.056	112	0.050
m,p-Xylene	<0.002	<0.002	0.119	119	0.100
o-Xylene	<0.001	<0.001	0.055	110	0.050

## % RECOVERY

Dibromofluoromethane	103
Fluorobenzene	108
Toluene-d8	99.2
4-Bromofluorobenzene	84.7

METHODS: EPA SW-846 8260

TEXAS NELAP CERTIFICATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
AND TOTAL XYLENES.

  
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Chemist

  
\_\_\_\_\_  
Date

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

Receiving Date: 12/10/08  
 Reporting Date: 12/17/08  
 Project Number: STATE QE 13 #1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O ~ LEA CO., NM  
 Lab Number: H16487-1  
 Sample ID: MW-1-D

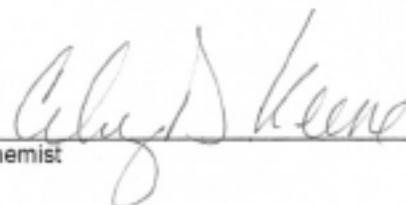
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 Sampling Date: 12/08/08  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT  
 Sample Received By: CK  
 Analyzed By: ZL

VOLATILES (mg/L)	Sample Result H16487-1	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.059	118	0.050

## % RECOVERY

Dibromofluoromethane	103
Fluorobenzene	108
Toluene-d8	99.2
4-Bromofluorobenzene	84.7

METHODS: EPA SW-846 8260

  
 \_\_\_\_\_  
 Chemist

  
 \_\_\_\_\_  
 Date



ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
861 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 12/10/08  
Reporting Date: 12/17/08  
Project Number: STATE QE 13 #1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O - LEA CO., NM  
Lab Number: H16487-2  
Sample ID: MW-1-S

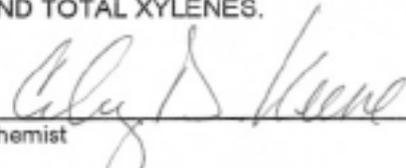
Analysis Date: 12/16/08  
Sampling Date: 12/08/08  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: CK  
Analyzed By: ZL

VOLATILES (mg/L)	Sample Result H16487-2	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.055	110	0.050
Toluene	<0.001	<0.001	0.056	112	0.050
Ethylbenzene	<0.001	<0.001	0.056	112	0.050
m,p-Xylene	<0.002	<0.002	0.119	119	0.100
o-Xylene	<0.001	<0.001	0.055	110	0.050

## % RECOVERY

Dibromofluoromethane	115
Fluorobenzene	115
Toluene-d8	96.0
4-Bromofluorobenzene	69.0

METHODS: EPA SW-846 8260

TEXAS NELAP CERTIFICATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
AND TOTAL XYLENES.  
\_\_\_\_\_  
Chemist  
\_\_\_\_\_  
Date



# ARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 12/10/08  
Reporting Date: 12/17/08  
Project Number: STATE QE 13 #1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O - LEA CO., NM  
Lab Number: H16487-2  
Sample ID: MW-1-S

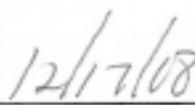
Analysis Date: 12/16/08  
Sampling Date: 12/08/08  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: CK  
Analyzed By: ZL

VOLATILES (mg/L)	Sample Result H16487-2	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.059	118	0.050

% RECOVERY	
Dibromofluoromethane	118
Fluorobenzene	115
Toluene-d8	96.0
4-Bromofluorobenzene	69.0

METHODS: EPA SW-846 8260

  
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Chemist

  
\_\_\_\_\_  
Date





ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 03/19/09  
 Reporting Date: 03/25/09  
 Project Number: STATE QE 13#1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O  
 LEA COUNTY, NM  
 Sample ID: MW-1-D  
 Lab Number: H17096-1

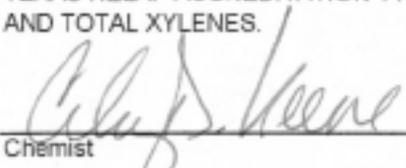
 Analysis Date: 03/24/09  
 Sampling Date: 03/18/09  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT  
 Sample Received By: ML  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H17096-1	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.023	92.0	0.025
Toluene	<0.001	<0.001	0.024	96.0	0.025
Ethylbenzene	<0.001	<0.001	0.027	108	0.025
m+p - Xylene	<0.002	<0.002	0.058	116	0.050
o-Xylene	<0.001	<0.001	0.024	96.0	0.025

## % Recovery

Dibromofluoromethane	83.5
Fluorobenzene	84.8
Toluene-d8	106
4-Bromofluorobenzene	81.9

 METHODS: EPA SW-846-8260.  
 TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES.

  
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 Chemist

 03/25/09  
 \_\_\_\_\_  
 Date

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

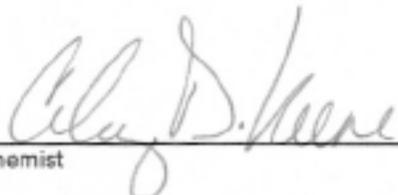
 Receiving Date: 03/19/09  
 Reporting Date: 03/25/09  
 Project Number: STATE QE 13#1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O  
 LEA COUNTY, NM  
 Sample ID: MW-1-D  
 Lab Number: H17096-1

 Analysis Date: 03/24/09  
 Sampling Date: 03/18/09  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT  
 Sample Received By: ML  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H17096-1	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.027	108	0.025

	% Recovery
Dibromofluoromethane	83.5
Fluorobenzene	84.8
Toluene-d8	106
4-Bromofluorobenzene	81.9

METHODS: EPA SW-846-8260.

  
 \_\_\_\_\_  
 Chemist

 03/25/09  
 \_\_\_\_\_  
 Date





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

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 03/19/09  
Reporting Date: 03/25/09  
Project Number: STATE QE 13#1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER D  
LEA COUNTY, NM  
Sample ID: MW-1-S  
Lab Number: H17096-2

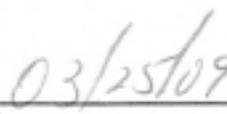
Analysis Date: 03/24/09  
Sampling Date: 03/18/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: ML  
Analyzed By: ZL

BTEX - 8260 (mg/L)	Sample Result H17096-2	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.027	108	0.025

	% Recovery
Dibromofluoromethane	89.0
Fluorobenzene	85.1
Toluene-d8	102
4-Bromofluorobenzene	89.8

METHODS: EPA SW-846-8260.

  
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Chemist

  
\_\_\_\_\_  
Date





**ARDINAL  
LABORATORIES**

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

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July 6, 2009

Andrew Parker  
RT Hicks Consultants  
901 Rio Grande Blvd. NW Suite F-142  
Albuquerque, NM 87104

Re: State QE 13 #1

Enclosed are the results of analyses for sample number H17660, received by the laboratory on 06/18/09 at 1:55 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Total Number of Pages of Report: 7 (includes Chain of Custody)

Sincerely,

Celey D. Keene  
Laboratory Director





ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 06/18/09  
Reporting Date: 07/02/09  
Project Number: STATE QE 13#1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-D  
Lab Number: H17660-1

Analysis Date: 06/30/09  
Sampling Date: 06/17/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 5°C  
Sample Received By: AB  
Analyzed By: SS

BTEX 8260 (mg/L)	Sample Result H17660-1	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.019	95.0	0.020
Toluene	<0.001	<0.001	0.018	90.0	0.020
Ethylbenzene	<0.001	<0.001	0.022	112	0.020
m+p Xylene	<0.002	<0.002	0.046	112	0.040
o-Xylene	<0.001	<0.001	0.023	115	0.020

## % Recovery

Dibromofluoromethane	102
Toluene-d8	100
4-Bromofluorobenzene	91.5

METHODS: EPA SW-846-8260.  
Subcontracted to SunStar Laboratories, Inc.

  
\_\_\_\_\_  
Chemist

07/04/09  
\_\_\_\_\_  
Date



# ARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 06/18/09  
Reporting Date: 07/02/09  
Project Number: STATE QE 13#1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-D  
Lab Number: H17660-1

Analysis Date: 06/30/09  
Sampling Date: 06/17/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 5°C  
Sample Received By: AB  
Analyzed By: SS

BTEX 8260 (mg/L)	Sample Result H17660-1	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.029	144	0.020

	% Recovery
Dibromofluoromethane	102
Toluene-d8	100
4-Bromofluorobenzene	91.5

METHODS: EPA SW-846-8260.  
Subcontracted to SunStar Laboratories, Inc.

  
\_\_\_\_\_  
Chemist

07/06/09  
\_\_\_\_\_  
Date



ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

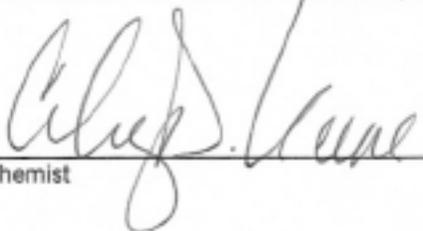
Receiving Date: 06/18/09  
Reporting Date: 07/02/09  
Project Number: STATE QE 13#1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-S  
Lab Number: H17660-2

Analysis Date: 06/30/09  
Sampling Date: 06/17/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 5°C  
Sample Received By: AB  
Analyzed By: SS

BTEX - 8260 (mg/L)	Sample Result	Method	True Value		
	H17660-2	Blank	QC	%Recov.	QC
Benzene	<0.001	<0.001	0.019	95.0	0.020
Toluene	<0.001	<0.001	0.018	90.0	0.020
Ethylbenzene	<0.001	<0.001	0.022	112	0.020
m+p - Xylene	<0.002	<0.002	0.045	113	0.040
o-Xylene	<0.001	<0.001	0.023	115	0.020

% Recovery	
Dibromofluoromethane	99.1
Toluene-d8	101
4-Bromofluorobenzene	106

METHODS: EPA SW-846-8260.  
Subcontracted to SunStar Laboratories, Inc.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date



ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 06/18/09  
Reporting Date: 07/02/09  
Project Number: STATE QE 13#1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-S  
Lab Number: H17660-2

Analysis Date: 06/30/09  
Sampling Date: 06/17/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 5°C  
Sample Received By: AB  
Analyzed By: SS

BTEX - 8260 (mg/L)	Sample Result	Method	QC	%Recov.	True Value
	H17660-2	Blank			QC
Naphthalene	<0.001	<0.001	0.029	144	0.020

	% Recovery
Dibromofluoromethane	99.1
Toluene-d8	101
4-Bromofluorobenzene	106

METHODS: EPA SW-846-8260.  
Subcontracted to SunStar Laboratories, Inc.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date





# ARDINAL LABORATORIES

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

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October 5, 2009

Andrew Parker  
RT Hicks Consultants  
901 Rio Grande Blvd. NW Suite F-142  
Albuquerque, NM 87104

Re: State QE 13 #1

Enclosed are the results of analyses for sample number H18305, received by the laboratory on 09/24/09 at 11:21 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 7 (includes Chain of Custody)

Sincerely,

Celey D. Keene  
Laboratory Director

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 09/24/09  
 Reporting Date: 10/01/09  
 Project Number: STATE QE 13#1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O  
 LEA COUNTY, NM  
 Sample ID: MW-1-D  
 Lab Number: H18305-1

 Analysis Date: 09/30/09  
 Sampling Date: 09/22/09  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT @ 1.5°C  
 Sample Received By: ML  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18305-1	Method Blank	QC %Recov.	True Value QC	
Benzene	<0.001	<0.001	0.010	100	0.010
Toluene	<0.001	<0.001	0.011	110	0.010
Ethylbenzene	<0.001	<0.001	0.010	100	0.010
m+p - Xylene	<0.002	<0.002	0.022	109	0.020
o-Xylene	<0.001	<0.001	0.011	106	0.010

## % Recovery

Dibromofluoromethane	88.5
Toluene-d8	104
4-Bromofluorobenzene	113

METHODS: EPA SW-846-8260.

 TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES.


  
 Chemist

 10/05/09  
 Date



# ARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

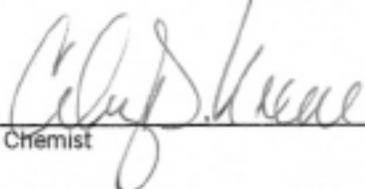
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Reporting Date: 10/01/09  
Project Number: STATE QE 13#1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-D  
Lab Number: H18305-1

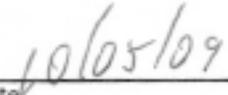
Analysis Date: 09/30/09  
Sampling Date: 09/22/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 1.5°C  
Sample Received By: ML  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18305-1	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.020	98.7	0.020

% Recovery	
Dibromofluoromethane	88.5
Toluene d8	104
4-Bromofluorobenzene	113

METHODS: EPA SW-846-8260.  
Not accredited for Naphthalene.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date



ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

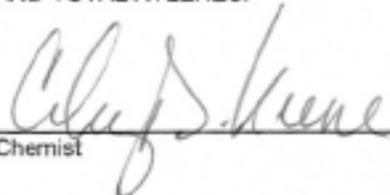
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Reporting Date: 10/01/09  
Project Number: STATE QE 13#1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-S  
Lab Number: H18305-2

Analysis Date: 09/30/09  
Sampling Date: 09/22/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ 1.5°C  
Sample Received By: ML  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18305-2	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.010	100	0.010
Toluene	<0.001	<0.001	0.011	110	0.010
Ethylbenzene	<0.001	<0.001	0.010	100	0.010
m+p - Xylene	<0.002	<0.002	0.022	109	0.020
o-Xylene	<0.001	<0.001	0.011	106	0.010

	% Recovery
Dibromofluoromethane	90.6
Toluene-d8	107
4-Bromofluorobenzene	107

METHODS: EPA SW-846-8260.  
TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
AND TOTAL XYLENES.

  
\_\_\_\_\_  
Chemist

10/05/09  
\_\_\_\_\_  
Date

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

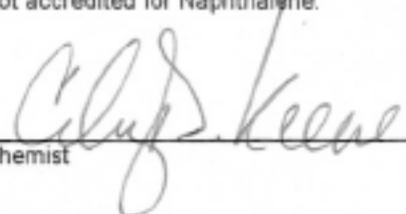
 Receiving Date: 09/24/09  
 Reporting Date: 10/01/09  
 Project Number: STATE QE 13#1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O  
 LEA COUNTY, NM  
 Sample ID: MW-1-S  
 Lab Number: H18305-2

 Analysis Date: 09/30/09  
 Sampling Date: 09/22/09  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT @ 1.5°C  
 Sample Received By: ML  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18305-2	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.020	98.7	0.020

	% Recovery
Dibromofluoromethane	90.6
Toluene-d8	107
4-Bromofluorobenzene	107

 METHODS: EPA SW-846-8260.  
 Not accredited for Naphthalene.

  
 \_\_\_\_\_  
 Chemist

 10/05/09  
 \_\_\_\_\_  
 Date







# ARDINAL LABORATORIES

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

---

December 22, 2009

Andrew Parker  
RT Hicks Consultants  
901 Rio Grande Blvd. NW Suite F-142  
Albuquerque, NM 87104

Re: State QE 13 #1

Enclosed are the results of analyses for sample number H18888, received by the laboratory on 12/16/09 at 9:00 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 7 (includes Chain of Custody)

Sincerely,

Celey D. Keene  
Laboratory Director



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

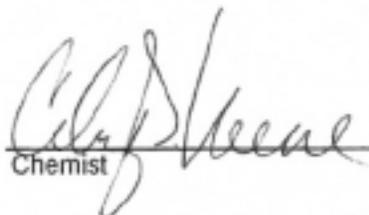
ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

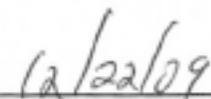
Receiving Date: 12/16/09	Sampling Date: 12/11/08
Reporting Date: 12/17/09	Sample Type: WATER
Project Number: STATE QE 13 #1	Sample Condition: COOL & INTACT @ 1.5°C
Project Name: PRIDE ENERGY COMPANY	Sample Received By: CK
Project Location: T12S-R34E-SEC13 UNIT LETTER O ~ LEA COUNTY - NEW MEXICO	Analyzed By: HM

LAB NO.	SAMPLE ID	TDS (mg/L)	Cl <sup>-</sup> (mg/L)
Analysis Date:		12/16/09	12/16/09
H18888-1	MW-1-d	505	80
H18888-2	MW-1-s	2,200	770
Quality Control		NR	500
True Value QC		NR	500
% Recovery		NR	100
Relative Percent Difference		1.8	< 0.1

METHOD: EPA 600/4-79-020	160.1	SM4500-Cl-B
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Not accredited for TDS and Chloride.

  
 Chemist

  
 Date

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 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 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.

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 12/16/09  
 Reporting Date: 12/18/09  
 Project Number: STATE QE 13 #1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O ~  
 LEA COUNTY, NM  
 Sample ID: MW-1D  
 Lab Number: H18888-1

 Analysis Date: 12/16/09  
 Sampling Date: 12/11/09  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT @1.5°C  
 Sample Received By: CK  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18888-1	Method Blank	QC	%Recov.	True Value QC
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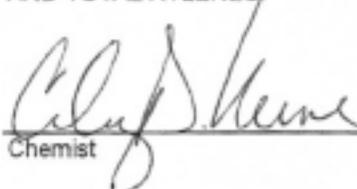
Benzene	<0.001	<0.001	0.021	105	0.020
Toluene	<0.001	<0.001	0.021	105	0.020
Ethylbenzene	<0.001	<0.001	0.022	110	0.020
m+p - Xylene	<0.002	<0.002	0.042	105	0.040
o-Xylene	<0.001	<0.001	0.020	100	0.020

## % Recovery

Dibromofluoromethane	99.7
Toluene-d8	96.2
4-Bromofluorobenzene	94.0

METHODS: EPA SW-846-8260.

 TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES.

  
 Chemist

 12/22/09  
 Date

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

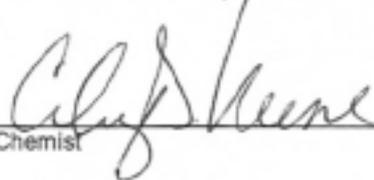
Receiving Date: 12/16/09  
Reporting Date: 12/18/09  
Project Number: STATE QE 13 #1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O ~  
LEA COUNTY, NM  
Sample ID: MW-1D  
Lab Number: H18888-1

Analysis Date: 12/16/09  
Sampling Date: 12/11/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT @1.5°C  
Sample Received By: CK  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18888-1	Method Blank	QC %Recov.	True Value QC	
Naphthalene	<0.001	<0.001	0.021	105	0.020

	% Recovery
Dibromofluoromethane	99.7
Toluene-d8	96.2
4-Bromofluorobenzene	94.0

METHODS: EPA SW-846-8260.  
Not accredited for Naphthalene.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date

ANALYTICAL RESULTS FOR  
 RT HICKS CONSULTANTS  
 ATTN: ANDREW PARKER  
 901 RIO GRANDE BLVD. NW, SUITE F-142  
 ALBUQUERQUE, NM 87104

 Receiving Date: 12/16/09  
 Reporting Date: 12/18/09  
 Project Number: STATE QE 13 #1  
 Project Name: PRIDE ENERGY COMPANY  
 Project Location: T12S-R34E-SEC13 UNIT LETTER O ~  
 LEA COUNTY, NM  
 Sample ID: MW-1S  
 Lab Number: H18888-2

 Analysis Date: 12/16/09  
 Sampling Date: 12/11/09  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT @1.5°C  
 Sample Received By: CK  
 Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18888-2	Method Blank	QC %Recov.	True Value QC
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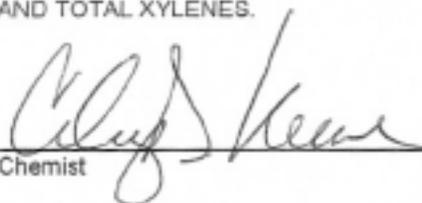
Benzene	<0.001	<0.001	0.021	105	0.020
Toluene	<0.001	<0.001	0.021	105	0.020
Ethylbenzene	<0.001	<0.001	0.022	110	0.020
m+p - Xylene	<0.002	<0.002	0.042	105	0.040
o-Xylene	<0.001	<0.001	0.020	100	0.020

## % Recovery

Dibromofluoromethane	120
Toluene-d8	100
4-Bromofluorobenzene	100

METHODS: EPA 8W-845-8260.

 TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES.

  
 Chemist

  
 Date



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

ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

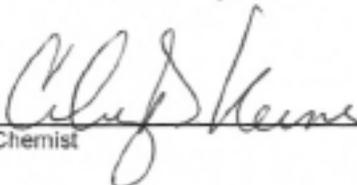
Receiving Date: 12/16/09  
Reporting Date: 12/18/09  
Project Number: STATE QE 13 #1  
Project Name: PRIDE ENERGY COMPANY  
Project Location: T12S-R34E-SEC13 UNIT LETTER O ~  
LEA COUNTY, NM  
Sample ID: MW-1S  
Lab Number: H18888-2

Analysis Date: 12/16/09  
Sampling Date: 12/11/09  
Sample Type: WATER  
Sample Condition: COOL & INTACT @1.5°C  
Sample Received By: CK  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H18888-2	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.021	105	0.020

	% Recovery
Dibromofluoromethane	120
Toluene-d8	100
4-Bromofluorobenzene	100

METHODS: EPA SW-846-8260.  
Not accredited for Naphthalene.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date



April 1, 2010

Andrew Parker  
RT Hicks Consultants  
901 Rio Grande Blvd. NW Suite F-142  
Albuquerque, NM 87104

Re: State QE 13 #1

Enclosed are the results of analyses for sample number H19560, received by the laboratory on 03/29/10 at 10:20 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 7 (includes Chain of Custody)

Sincerely,



Celey D. Keene  
Laboratory Director







ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 03/29/10  
Reporting Date: 03/31/10  
Project Number: STATE QE 13 #1  
Project Name: YATES PETROLEUM  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-D  
Lab Number: H19560-1

Analysis Date: 03/30/10  
Sampling Date: 03/25/10  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ -1°C  
Sample Received By: JH  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H19560-1	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.010	101	0.010

	% Recovery
Dibromofluoromethane	111
Toluene-d8	113
4-Bromofluorobenzene	95.6

METHODS: EPA SW-846-8260.  
Not accredited for Naphthalene.

Chemist

Date



ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

Receiving Date: 03/29/10  
Reporting Date: 03/31/10  
Project Number: STATE QE 13 #1  
Project Name: YATES PETROLEUM  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-S  
Lab Number: H19560-2

Analysis Date: 03/30/10  
Sampling Date: 03/25/10  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ -1°C  
Sample Received By: JH  
Analyzed By: ZL

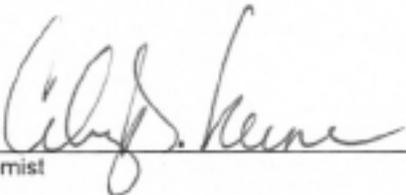
BTEX 8260 (mg/L)	Sample Result H19560-2	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.001	<0.001	0.012	118	0.010
Toluene	<0.001	<0.001	0.011	109	0.010
Ethylbenzene	<0.001	<0.001	0.010	99.0	0.010
m+p - Xylene	<0.002	<0.002	0.021	107	0.020
o-Xylene	<0.001	<0.001	0.011	113	0.010

## % Recovery

Dibromofluoromethane	117
Toluene-d8	112
4-Bromofluorobenzene	101

METHODS: EPA SW-846-8260.

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
AND TOTAL XYLENES.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date



ANALYTICAL RESULTS FOR  
RT HICKS CONSULTANTS  
ATTN: ANDREW PARKER  
901 RIO GRANDE BLVD. NW, SUITE F-142  
ALBUQUERQUE, NM 87104

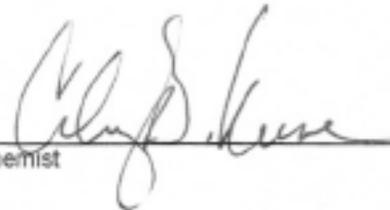
Receiving Date: 03/29/10  
Reporting Date: 03/31/10  
Project Number: STATE QE 13 #1  
Project Name: YATES PETROLEUM  
Project Location: T12S-R34E-SEC13 UNIT LETTER O  
LEA COUNTY, NM  
Sample ID: MW-1-S  
Lab Number: H19560-2

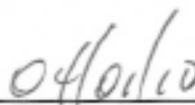
Analysis Date: 03/30/10  
Sampling Date: 03/25/10  
Sample Type: WATER  
Sample Condition: COOL & INTACT @ -1°C  
Sample Received By: JH  
Analyzed By: ZL

BTEX 8260 (mg/L)	Sample Result H19560-2	Method Blank	QC	%Recov.	True Value QC
Naphthalene	<0.001	<0.001	0.010	101	0.010

% Recovery	
Dibromofluoromethane	117
Toluene-d8	112
4-Bromofluorobenzene	101

METHODS: EPA SW-846-8260.  
Not accredited for Naphthalene.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date





# ARDINAL LABORATORIES

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

---

June 24, 2010

Andrew Parker  
RT Hicks Consultants  
901 Rio Grande Blvd. NW Suite F-142  
Albuquerque, NM 87104

Re: State QE 13 #1

Enclosed are the results of analyses for sample number H20153, received by the laboratory on 06/18/10 at 10:02 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

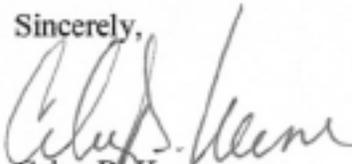
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 7 (includes Chain of Custody)

Sincerely,



Celey D. Keene  
Laboratory Director