

MARTIN YATES, III  
1912-1985

FRANK W. YATES  
1936-1986

S.P. YATES  
1914-2008



105 SOUTH FOURTH STREET  
ARTESIA, NEW MEXICO 88210-2118

TELEPHONE (575) 748-1471

JOHN A. YATES  
CHAIRMAN OF THE BOARD

JOHN A. YATES JR.  
PRESIDENT

JOHN D. PERINI  
EXECUTIVE V.P. OF MONETIZATION  
CHIEF FINANCIAL OFFICER

JAMES S. BROWN  
CHIEF OPERATING OFFICER

April 16, 2015

Mr. Mike Bratcher/Mrs. Heather Patterson  
NMOCD District II  
811 S. First St.  
Artesia, NM 88210

Re: Benson Deep BDX Federal Com #1  
30-015-22793  
Section 33, T18S-R30E  
Eddy County, New Mexico  
2RP-2732

Mr. Bratcher/Mrs. Patterson,

Yates Petroleum Corporation is submitting the enclosed work plan for the above captioned well. The plan is being submitted in response to the C-141 report dated January 13, 2015.

**If there are no objections with the scope of work described in the plan, Yates will have a contractor begin work on or after May 1, 2015.**

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

Thank you.

YATES PETROLEUM CORPORATION

Chase Settle  
Environmental Regulatory Agent

Enclosure(s)

KATHY H. PORTER  
SECRETARY

DENNIS G. KINSEY  
TREASURER

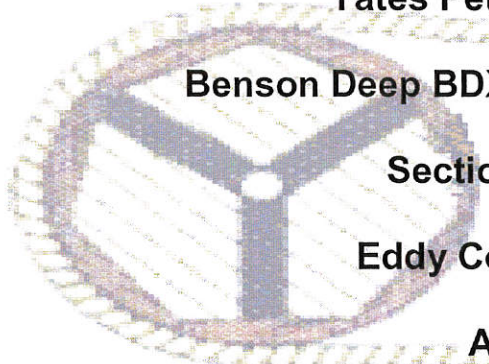
**Yates Petroleum Corporation**

**Benson Deep BDX Federal Com #1 Work Plan**

**Section 33, T18S-R30E**

**Eddy County, New Mexico**

**April 16, 2015**



## **I. Location**

The release is located off of Duval Shaft Road that is between mile marker 11 and 12 off of Highway 360.

## **II. Background**

On January 13, 2015, Yates submitted to the NMOCD District II office a Form C-141 for the release of 200 B/O and 200 B/FW with 60 B/O and 170 B/FW recovered. The affected area was approximately 920 feet by 205 feet on and off the location, as well as within the bermed/lined battery. Initial delineation samples were taken at the Pit, Pad, Sep, and MR release areas (1/15/2015) and sent to a NMOCD approved laboratory (1/20/2015, results enclosed). After completing an Archeological Survey required by BLM, initial scraping was undertaken allowing for further sampling. Samples were taken from the MR and ER release areas (3/12/2015) and sent to NMOCD approved laboratory (3/20/2015, results enclosed). Based on analytical data (3/20/2015), further sampling was conducted in the MR release area (3/23/2015) and sent to a NMOCD approved laboratory (4/1/2015, results enclosed). This analytical data led Yates personnel to believe that previous sampling conducted in the MR area (1/15/2015) was tainted due to cross contamination from the area remaining saturated so shortly after the release. Therefore sampling was again conducted in the MR release area (4/8/2015) and sent to a NMOCD approved laboratory (4/14/2015, results enclosed).

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

Area surface geology is Cenozoic Quaternary. The ChevronTexaco Trend Map displays at this location (Section 33, T18S-R30E) that depth to groundwater is approximately 175 feet making the site ranking for this site a zero (0). Watercourses in the area are dry except for infrequent flows in response to major precipitation events.

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

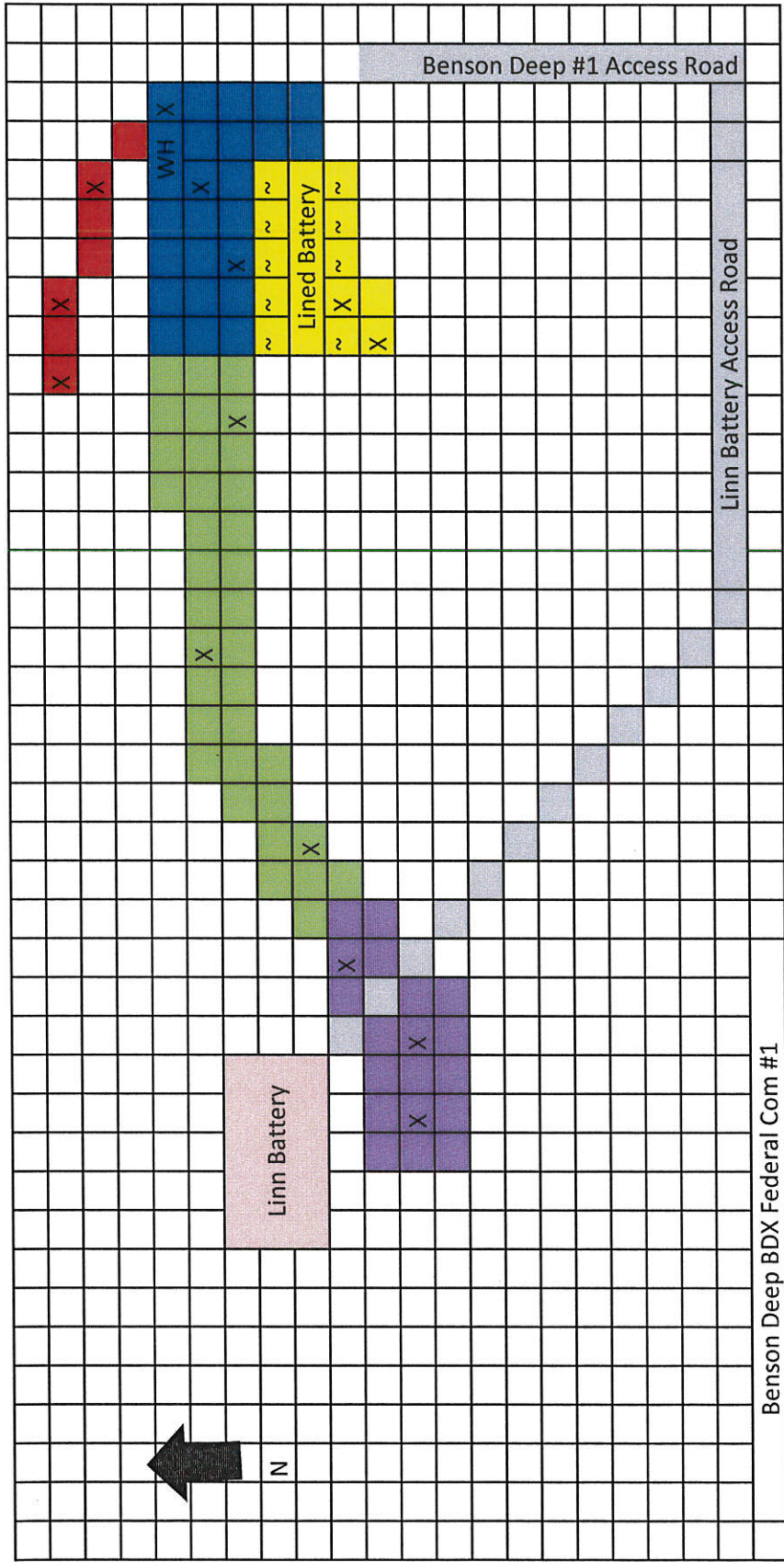
Depth to ground water	> 100'
Wellhead Protection Area	> 1000'
Distance to surface water body	> 1000'

## **IV. Soils**

The area consists of soils that are sandy and loam topsoil, which are interspersed with clay layers providing a low permeability barrier to retard vertical percolation of contaminants into the subsurface.

## **V. Scope of Work**

Based on enclosed analytical results and the depth to groundwater (175'), Yates Petroleum Corporation will apply a treatment of 3% MicroBlaze to the Sep, MR, and ER release areas and monitor the breakdown of TPH and BTEX in the MR release area at the surface level, taking soil samples every 30 days that will be sent to NMOCD approved laboratory. If the MR surface area has not been remediated below RRALs by 90 days, another application of 3% MicroBlaze will occur with the same monitoring parameters. If the area is remediated below RRALs prior to August 15, 2015, Yates will reseed the MR and ER areas with BLM LPC Seed Mixture, if remediation below RRALs occurs after August 15, 2016, then seeding will occur in the 2016 planting season. Low areas remaining from the initial scrape will be smoothed out with a box blade prior to seeding. The TPH & BTEX are within the RRAL's for BTEX (50 ppm) and TPH (5000 ppm) for the Total Ranking Score of zero (0) in the Pit, Pad, Sep, and ER release area, no further analytical testing of TPH and/or BTEX will be conducted (all chloride analytical results are for documentation) in those areas. When remediation work is completed a C-141, Final Report will be submitted to the NMOCD requesting closure of the site.



Release Area

MR Sample Point

ER Sample Point

Pit Sample Point

Pad Sample Point

Sep Sample Point



H500160	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
Pit- Surface	Release Area	1/15/2015	Hand Auger	3"	1.2	<10.0	<10.0	816
Pit- 1'	Release Area	1/15/2015	Hand Auger	1'	<0.3	<10.0	<10.0	272
Pad- Surface	Release Area	1/15/2015	Hand Auger	3"	5.12	<50.0	3900	560
Pad-1'	Release Area	1/15/2015	Hand Auger	1'	<0.3	<10.0	42.2	48
Sep- Surface	Release Area	1/15/2015	Hand Auger	3"	3.41	234	3270	416
Sep-1'	Release Area	1/15/2015	Hand Auger	1'	0.411	10.2	260	48
MR- Surface	Release Area	1/15/2015	Hand Auger	3"	406	2350	6780	752
MR-1' (X-contam)	Release Area	1/15/2015	Hand Auger	1'	105	795	1510	304
H500700	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
MR-3'	Release Area	3/12/2015	Hand Auger	3'	<0.3	<10.0	13.1	64
ER-1'	Release Area	3/12/2015	Hand Auger	1'	<0.3	<10.0	<10.0	256
ER-2'	Release Area	3/12/2015	Hand Auger	2'	<0.3	<10.0	<10.0	192
ER-3'	Release Area	3/12/2015	Hand Auger	3'	<0.3	<10.0	<10.0	64
H500824	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
MR-2'	Release Area	3/23/2015	Hand Auger	2'	<0.3	<10.0	<10.0	32
H500937	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
MR-1'	Release Area	4/8/2015	Hand Auger	1'	<0.3	<10.0	12.7	N/A

Site Ranking is Zero (0). >100' (175', Section 33, T18S-R30E, Trend Map

All results are ppm. Chlorides for documentation

Released: 200 B/O & 200 B/FW; Recovered: 60 B/O & 170 B/FW Release Date: 01/09/2015

January 20, 2015

CHASE SETTLE

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: BENSON DEEP BDX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 01/16/15 12:05.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	01/16/2015	Sampling Date:	01/15/2015
Reported:	01/20/2015	Sampling Type:	Soil
Project Name:	BENSON DEEP BDX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PIT - SURFACE (H500160-01)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	0.156	0.050	01/19/2015	ND	1.79	89.5	2.00	13.9		
Toluene*	0.705	0.050	01/19/2015	ND	1.81	90.4	2.00	16.3		
Ethylbenzene*	0.160	0.050	01/19/2015	ND	1.77	88.5	2.00	14.9		
Total Xylenes*	0.178	0.150	01/19/2015	ND	5.33	88.8	6.00	14.6		
Total BTX	1.20	0.300	01/19/2015	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 99.2 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>816</b>	16.0	01/19/2015	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/17/2015	ND	195	97.5	200	0.878		
DRO >C10-C28	<10.0	10.0	01/17/2015	ND	207	103	200	3.71		

Surrogate: 1-Chlorooctane 101 % 47.2-157

Surrogate: 1-Chlorooctadecane 113 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	01/16/2015	Sampling Date:	01/15/2015
Reported:	01/20/2015	Sampling Type:	Soil
Project Name:	BENSON DEEP BDX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PIT - 1' (H500160-02)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/19/2015	ND	1.79	89.5	2.00	13.9		
Toluene*	<0.050	0.050	01/19/2015	ND	1.81	90.4	2.00	16.3		
Ethylbenzene*	<0.050	0.050	01/19/2015	ND	1.77	88.5	2.00	14.9		
Total Xylenes*	<0.150	0.150	01/19/2015	ND	5.33	88.8	6.00	14.6		
Total BTX	<0.300	0.300	01/19/2015	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	01/19/2015	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/17/2015	ND	195	97.5	200	0.878		
DRO >C10-C28	<10.0	10.0	01/17/2015	ND	207	103	200	3.71		

Surrogate: 1-Chlorooctane 96.5 % 47.2-157

Surrogate: 1-Chlorooctadecane 107 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	01/16/2015	Sampling Date:	01/15/2015
Reported:	01/20/2015	Sampling Type:	Soil
Project Name:	BENSON DEEP BDX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PAD - SURFACE (H500160-03)**

BTEX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.380</b>	0.050	01/19/2015	ND	1.79	89.5	2.00	13.9	
<b>Toluene*</b>	<b>2.72</b>	0.050	01/19/2015	ND	1.81	90.4	2.00	16.3	
<b>Ethylbenzene*</b>	<b>0.805</b>	0.050	01/19/2015	ND	1.77	88.5	2.00	14.9	
<b>Total Xylenes*</b>	<b>1.21</b>	0.150	01/19/2015	ND	5.33	88.8	6.00	14.6	
<b>Total BTEX</b>	<b>5.12</b>	0.300	01/19/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 100 % 61-154

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>560</b>	16.0	01/19/2015	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	01/17/2015	ND	195	97.5	200	0.878	
<b>DRO &gt;C10-C28</b>	<b>3900</b>	50.0	01/17/2015	ND	207	103	200	3.71	

Surrogate: 1-Chlorooctane 102 % 47.2-157

Surrogate: 1-Chlorooctadecane 153 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	01/16/2015	Sampling Date:	01/15/2015
Reported:	01/20/2015	Sampling Type:	Soil
Project Name:	BENSON DEEP BDX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PAD - 1' (H500160-04)**

BTEx 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/19/2015	ND	1.79	89.5	2.00	13.9	
Toluene*	0.109	0.050	01/19/2015	ND	1.81	90.4	2.00	16.3	
Ethylbenzene*	<0.050	0.050	01/19/2015	ND	1.77	88.5	2.00	14.9	
Total Xylenes*	<0.150	0.150	01/19/2015	ND	5.33	88.8	6.00	14.6	
Total BTEX	<0.300	0.300	01/19/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 100 % 61-154

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	01/19/2015	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/17/2015	ND	195	97.5	200	0.878	
DRO >C10-C28	42.2	10.0	01/17/2015	ND	207	103	200	3.71	

Surrogate: 1-Chlorooctane 95.8 % 47.2-157

Surrogate: 1-Chlorooctadecane 110 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	01/16/2015	Sampling Date:	01/15/2015
Reported:	01/20/2015	Sampling Type:	Soil
Project Name:	BENSON DEEP BDX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SEP - SURFACE (H500160-05)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/19/2015	ND	1.79	89.5	2.00	13.9	
Toluene*	0.372	0.050	01/19/2015	ND	1.81	90.4	2.00	16.3	
Ethylbenzene*	0.894	0.050	01/19/2015	ND	1.77	88.5	2.00	14.9	
Total Xylenes*	2.14	0.150	01/19/2015	ND	5.33	88.8	6.00	14.6	
Total BTEX	3.41	0.300	01/19/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIB) 113 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	01/19/2015	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	234	50.0	01/17/2015	ND	195	97.5	200	0.878	
DRO >C10-C28	3270	50.0	01/17/2015	ND	207	103	200	3.71	

Surrogate: 1-Chlorooctane 125 % 47.2-157

Surrogate: 1-Chlorooctadecane 149 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	01/16/2015	Sampling Date:	01/15/2015
Reported:	01/20/2015	Sampling Type:	Soil
Project Name:	BENSON DEEP BDX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SEP - 1' (H500160-06)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/20/2015	ND	1.69	84.6	2.00	4.80	
Toluene*	0.101	0.050	01/20/2015	ND	1.71	85.5	2.00	4.41	
Ethylbenzene*	0.097	0.050	01/20/2015	ND	1.68	83.8	2.00	4.10	
Total Xylenes*	0.214	0.150	01/20/2015	ND	5.00	83.3	6.00	5.01	
Total BTEX	0.411	0.300	01/20/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	01/19/2015	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	10.2	10.0	01/17/2015	ND	195	97.5	200	0.878	
DRO >C10-C28	260	10.0	01/17/2015	ND	207	103	200	3.71	

Surrogate: 1-Chlorooctane 92.4 % 47.2-157

Surrogate: 1-Chlorooctadecane 113 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	01/16/2015	Sampling Date:	01/15/2015
Reported:	01/20/2015	Sampling Type:	Soil
Project Name:	BENSON DEEP BDX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: MR - SURFACE (H500160-07)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	25.0	2.00	01/20/2015	ND	1.69	84.6	2.00	4.80		
Toluene*	170	2.00	01/20/2015	ND	1.71	85.5	2.00	4.41		
Ethylbenzene*	81.0	2.00	01/20/2015	ND	1.68	83.8	2.00	4.10		
Total Xylenes*	130	6.00	01/20/2015	ND	5.00	83.3	6.00	5.01		
Total BTEx	406	12.0	01/20/2015	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 108 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>752</b>	16.0	01/19/2015	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	2350	50.0	01/17/2015	ND	195	97.5	200	0.878	
DRO >C10-C28	6780	50.0	01/17/2015	ND	207	103	200	3.71	

Surrogate: 1-Chlorooctane 223 % 47.2-157

Surrogate: 1-Chlorooctadecane 181 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	01/16/2015	Sampling Date:	01/15/2015
Reported:	01/20/2015	Sampling Type:	Soil
Project Name:	BENSON DEEP BDX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: MR - 1' (H500160-08)**

BTEX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>7.37</b>	0.500	01/20/2015	ND	1.69	84.6	2.00	4.80	
<b>Toluene*</b>	<b>42.8</b>	0.500	01/20/2015	ND	1.71	85.5	2.00	4.41	
<b>Ethylbenzene*</b>	<b>21.0</b>	0.500	01/20/2015	ND	1.68	83.8	2.00	4.10	
<b>Total Xylenes*</b>	<b>33.9</b>	1.50	01/20/2015	ND	5.00	83.3	6.00	5.01	
<b>Total BTEX</b>	<b>105</b>	3.00	01/20/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 61-154

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>304</b>	16.0	01/19/2015	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>795</b>	50.0	01/17/2015	ND	195	97.5	200	0.878	
<b>DRO &gt;C10-C28</b>	<b>1510</b>	50.0	01/17/2015	ND	207	103	200	3.71	

Surrogate: 1-Chlorooctane 132 % 47.2-157

Surrogate: 1-Chlorooctadecane 135 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager



### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

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

Project Manager: Chase Settle

Project Name:

Benson Deep BDX Federal Com #

Company Address: 105 South 4th Street

Project #:

Project Loc:

Benson Deep BDX Federal Com #1

City/State/Zip: Artesia, NM 88210

PO #: 205-0750

Telephone No: 575-748-4171

Fax No: 575-748-4131

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature:

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

(lab use only)

ORDER #: H500160

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice	HNO <sub>3</sub>	HCl	H <sub>2</sub> SO <sub>4</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None	Other (Specify)	DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO <sub>4</sub> , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	SAR	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT	
1	Pit- Sur			1/15/2015	11:45 AM		1	X								S	X														X	X
2	Pit- 1'			1/15/2015	11:45 AM		1	X								S	X														X	X
3	Pad- Sur			1/15/2015	12:30 PM		1	X								S	X														X	X
4	Pad- 1'			1/15/2015	12:30 PM		1	X								S	X														X	X
5	Sep- Sur			1/15/2015	12:45 PM		1	X								S	X														X	X
6	Sep- 1'			1/15/2015	12:45 PM		1	X								S	X														X	X
7	MR- Sur			1/15/2015	1:15 PM		1	X								S	X														X	X
8	MR- 1'			1/15/2015	1:15 PM		1	X								S	X														X	X

Special Instructions:

Relinquished by: *[Signature]* Date: 1-16-15 Time: Received by: *[Signature]* Date: 1/16/15 Time: 12:05

Relinquished by: Date: Time: Received by: Date: Time:

Relinquished by: Date: Time: Received by: Date: Time:

Laboratory Comments:

Sample Containers Intact? ☒ VOCs Free of Headspace? ☒ Labels on container(s) ☒ Custody seals on container(s) ☒ Custody seals on cooler(s) ☒ Sample Hand Delivered by Sampler/Client Rep. ? ☒ by Courier? ☒ UPS ☒ DHL ☒ FedEx ☒ Lone Star

Temperature Upon Receipt: 3.0 °C

March 20, 2015

CHASE SETTLE

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: BENSON DEEP BDX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 03/13/15 11:25.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	03/13/2015	Sampling Date:	03/12/2015
Reported:	03/20/2015	Sampling Type:	Soil
Project Name:	BENSON DEEP BDX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	BENSON DEEP BDX FEDERAL COM #1		

**Sample ID: M R - 3' (H500700-01)**

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/19/2015	ND	2.17	109	2.00	5.29		
Toluene*	<0.050	0.050	03/19/2015	ND	1.99	99.3	2.00	4.00		
Ethylbenzene*	<0.050	0.050	03/19/2015	ND	1.91	95.3	2.00	6.10		
Total Xylenes*	<0.150	0.150	03/19/2015	ND	5.69	94.9	6.00	7.55		
Total BTEX	<0.300	0.300	03/19/2015	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 106 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	03/17/2015	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/17/2015	ND	200	100	200	0.434		
DRO >C10-C28	13.1	10.0	03/17/2015	ND	213	106	200	1.78		

Surrogate: 1-Chlorooctane 91.3 % 47.2-157

Surrogate: 1-Chlorooctadecane 96.8 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	03/13/2015	Sampling Date:	03/12/2015
Reported:	03/20/2015	Sampling Type:	Soil
Project Name:	BENSON DEEP BDX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	BENSON DEEP BDX FEDERAL COM #1		

**Sample ID: E R - 1' (H500700-02)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/19/2015	ND	2.17	109	2.00	5.29		
Toluene*	<0.050	0.050	03/19/2015	ND	1.99	99.3	2.00	4.00		
Ethylbenzene*	<0.050	0.050	03/19/2015	ND	1.91	95.3	2.00	6.10		
Total Xylenes*	0.218	0.150	03/19/2015	ND	5.69	94.9	6.00	7.55		
Total BTX	<0.300	0.300	03/19/2015	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>256</b>	16.0	03/17/2015	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/17/2015	ND	200	100	200	0.434		
DRO >C10-C28	<10.0	10.0	03/17/2015	ND	213	106	200	1.78		

Surrogate: 1-Chlorooctane 83.3 % 47.2-157

Surrogate: 1-Chlorooctadecane 90.5 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	03/13/2015	Sampling Date:	03/12/2015
Reported:	03/20/2015	Sampling Type:	Soil
Project Name:	BENSON DEEP BDX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	BENSON DEEP BDX FEDERAL COM #1		

**Sample ID: E R - 2' (H500700-03)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/19/2015	ND	2.17	108	2.00	2.16	
Toluene*	<0.050	0.050	03/19/2015	ND	1.95	97.6	2.00	0.782	
Ethylbenzene*	<0.050	0.050	03/19/2015	ND	1.93	96.6	2.00	1.69	
Total Xylenes*	<0.150	0.150	03/19/2015	ND	5.85	97.6	6.00	1.86	
Total BTEX	<0.300	0.300	03/19/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	03/17/2015	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/17/2015	ND	200	100	200	0.434	
DRO >C10-C28	<10.0	10.0	03/17/2015	ND	213	106	200	1.78	

Surrogate: 1-Chlorooctane 88.1 % 47.2-157

Surrogate: 1-Chlorooctadecane 94.1 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	03/13/2015	Sampling Date:	03/12/2015
Reported:	03/20/2015	Sampling Type:	Soil
Project Name:	BENSON DEEP BDx FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	BENSON DEEP BDx FEDERAL COM #1		

**Sample ID: E R - 3' (H500700-04)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/19/2015	ND	2.17	108	2.00	2.16	
Toluene*	<0.050	0.050	03/19/2015	ND	1.95	97.6	2.00	0.782	
Ethylbenzene*	<0.050	0.050	03/19/2015	ND	1.93	96.6	2.00	1.69	
Total Xylenes*	<0.150	0.150	03/19/2015	ND	5.85	97.6	6.00	1.86	
Total BTEX	<0.300	0.300	03/19/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 105 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	03/17/2015	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/17/2015	ND	200	100	200	0.434	
DRO >C10-C28	<10.0	10.0	03/17/2015	ND	213	106	200	1.78	

Surrogate: 1-Chlorooctane 83.2 % 47.2-157

Surrogate: 1-Chlorooctadecane 92.7 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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

---

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





ARDINAL LABORATORIES  
101 East Marland, Hobbs, NM 88240

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4171

Fax No: 575-748-4131

Sampler Signature: [Signature] e-mail: csettle@yatespetroleum.com

Project Name: Benson Deep BDX Federal Com #

Project #: [Redacted]

Project Loc: Benson Deep BDX Federal Com #

PO #: 205-0750

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #: H500700

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

1	MR-3'			3/12/2015	12:00 PM		1	X								S	X															X
2	ER-1'			3/12/2015	1:40 PM		1	X								S	X															X
3	ER-2'			3/12/2015	1:40 PM		1	X								S	X															X
4	ER-3'			3/12/2015	1:40 PM		1	X								S	X															X

Special Instructions:

[Redacted]

Relinquished by: [Signature] Date: 3/13/15 Time: [Redacted] Received by: [Signature] Date: 3/13/15 Time: 11:25

Relinquished by: [Signature] Date: [Redacted] Time: [Redacted] Received by: [Signature] Date: [Redacted] Time: [Redacted]

Relinquished by: [Signature] Date: [Redacted] Time: [Redacted] Received by: [Signature] Date: [Redacted] Time: [Redacted]

Laboratory Comments:

Sample Containers Intact? ☒  
VOCs Free of Headspace? ☒  
Labels on container(s) ☒  
Custody seals on container(s) ☒  
Sample Hand Delivered ☒  
by Sampler/Client Rep. ? ☒  
by Courier? ☒ UPS ☒ DHL ☒ FedEx ☒ Lone Star ☒

Temperature Upon Receipt: 30°C

Temperature Upon Receipt: 30°C

April 01, 2015

CHASE SETTLE

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: BENSON DEEP BDX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 03/27/15 11:15.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	03/27/2015	Sampling Date:	03/23/2015
Reported:	04/01/2015	Sampling Type:	Soil
Project Name:	BENSON DEEP BDX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	BENSON DEEP BDX FEDERAL COM #1		

**Sample ID: MR - 2 ' (H500824-01)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/31/2015	ND	2.04	102	2.00	4.46		
Toluene*	<0.050	0.050	03/31/2015	ND	1.86	92.9	2.00	7.17		
Ethylbenzene*	<0.050	0.050	03/31/2015	ND	1.81	90.3	2.00	7.28		
Total Xylenes*	<0.150	0.150	03/31/2015	ND	5.49	91.5	6.00	7.97		
Total BTX	<0.300	0.300	03/31/2015	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	03/27/2015	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/27/2015	ND	192	96.2	200	1.47		
DRO >C10-C28	<10.0	10.0	03/27/2015	ND	204	102	200	5.54		

Surrogate: 1-Chlorooctane 121 % 47.2-157

Surrogate: 1-Chlorooctadecane 125 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager



**Notes and Definitions**

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

---

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

## CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

**Director of Memoranda: Chaco Sattler**

Comp:(505) 393-2326 Yates Petroleum Corporation

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4171

Sampler Signature: 2

Fax No: 575-748-4131

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

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

PO #: 205-0750

**Project Name:** Benson Deep BVA Federal Coll

Project #:

Project Loc: Benson Deep BDX Federal Com #1

Page 4 of 4

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

Special Instructions:			
Relinquished by: [Signature] Date: 3-27-15 Time: Received by: JACI Skinner Date: 3/27/15 Time: 11:15			
Relinquished by: Date: Time: Received by ELDT: Date: Time:			
Temperature Upon Receipt: 1.4 °C			

Laboratory Comments:			
Sample Containers Intact? VOCs Free of Headspaces?			
Labels on container(s)? Custody seals on container(s)?			
Sample Hand Delivered by Sampler/Client Rep.? by Courier? UPS DHL FedEx Lone Star			
#54			

April 14, 2015

CHASE SETTLE

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: BENSON DEEP BDX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 04/09/15 11:13.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	04/09/2015	Sampling Date:	04/08/2015
Reported:	04/14/2015	Sampling Type:	Soil
Project Name:	BENSON DEEP BDx FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	BENSON DEEP BDx FEDERAL COM #1		

**Sample ID: MR-1' (H500937-01)**

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/13/2015	ND	2.05	103	2.00	0.425		
Toluene*	<0.050	0.050	04/13/2015	ND	1.92	96.0	2.00	2.17		
Ethylbenzene*	<0.050	0.050	04/13/2015	ND	1.84	91.9	2.00	0.0379		
Total Xylenes*	<0.150	0.150	04/13/2015	ND	5.94	99.1	6.00	0.120		
Total BTEX	<0.300	0.300	04/13/2015	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 111 % 61-154

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	04/10/2015	ND	181	90.7	200	1.65		
DRO >C10-C28	12.7	10.0	04/10/2015	ND	186	92.8	200	2.24		

Surrogate: 1-Chlorooctane 91.2 % 47.2-157

Surrogate: 1-Chlorooctadecane 87.1 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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

---

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





ARDINAL LABORATORIES  
101 East Marland, Hobbs, NM 88240

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Project Name: Benson Deep BDX Federal Com #1

Company: (505) 393-2326 Yates Petroleum Corporation

Project #:

Company Address: 105 South 4th Street

Project Loc: Benson Deep BDX Federal Com #1

City/State/Zip: Artesia, NM 88210

PO #: 205-0750

Telephone No: 575-748-4171

Fax No: 575-748-4131

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature:

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

(lab use only)

ORDER #: H500937

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice	HNO <sub>3</sub>	HCl	H <sub>2</sub> SO <sub>4</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None	Other (Specify)	DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO <sub>4</sub> , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	SAR	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
1	MR-1'			4/8/2015	10:30 AM		1	X								S	X								X						X

Special Instructions:

Relinquished by:

Relinquished by:

Relinquished by:

Date

Date

Date

Time

Time

Time

Received by:

Received by:

Received by ELDT:

Date

Date

Date

Time

Time

Time

Date

Date

Date

Time

Time

Time

Laboratory Comments:

Sample Containers Intact?

VOCs Free of Headspace?

Labels on container(s)

Custody seals on container(s)

Custody seals on cooler(s)

Sample Hand Delivered

by Courier? UPS DHL FedEx Lone Star

Y

Y

Y

Y

Y

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N