

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

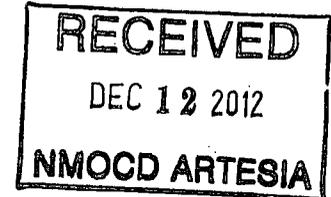
JOHN A. YATES JR.  
PRESIDENT

JAMES S. BROWN  
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JOHN D. PERINI  
CHIEF FINANCIAL OFFICER

JORGE S. MENDOZA  
CHIEF ADMINISTRATIVE OFFICER

December 12, 2012



Attn: Mike Bratcher

NM Oil Conservation Division  
District II Office  
Artesia, NM 88210

Mr. Bratcher,

Enclosed is a request for closure on the Amole AMM State #4. The source of the release occurred due to a buried flowline, noted on the diagram as *Excavation*. The area surrounding the source was excavated to a depth of approximately 10 feet. Beyond 10 feet a petrocalcic barrier was encountered. A split spoon agar rig was required to further delineate chlorides beyond the depth of 10 feet. The items below are enclosed in this packet.

- a) Final C-141
- b) Site diagram with final analytical data
- c) Graphical representation of chloride delineation in the flowline excavation
- d) Third party laboratory analysis

Thank you,

YATES PETROLEUM CORPORATION

Amanda N. Trujillo  
Environmental Scientist  
Yates Petroleum Corporation  
Office 575-748-4310  
Cell 575-703-6537  
Email atrujillo@yatespetroleum.com

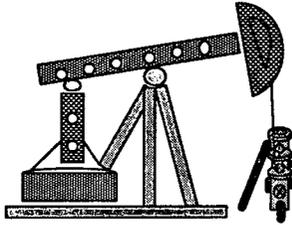
# YATES PETROLEUM CORPORATION

Wednesday, December 12, 2012

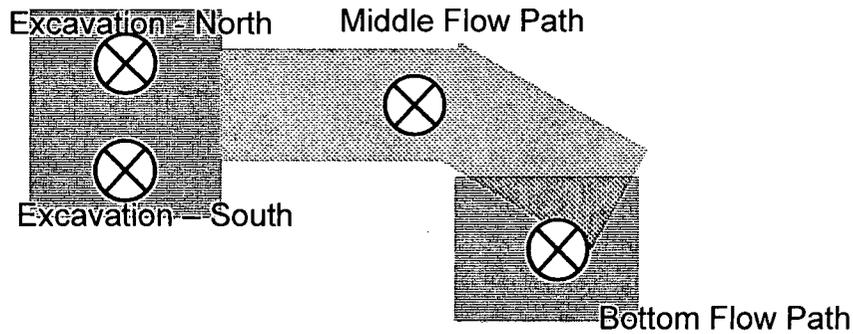
Amole AMM State #4  
30-015-28542

NW

NE



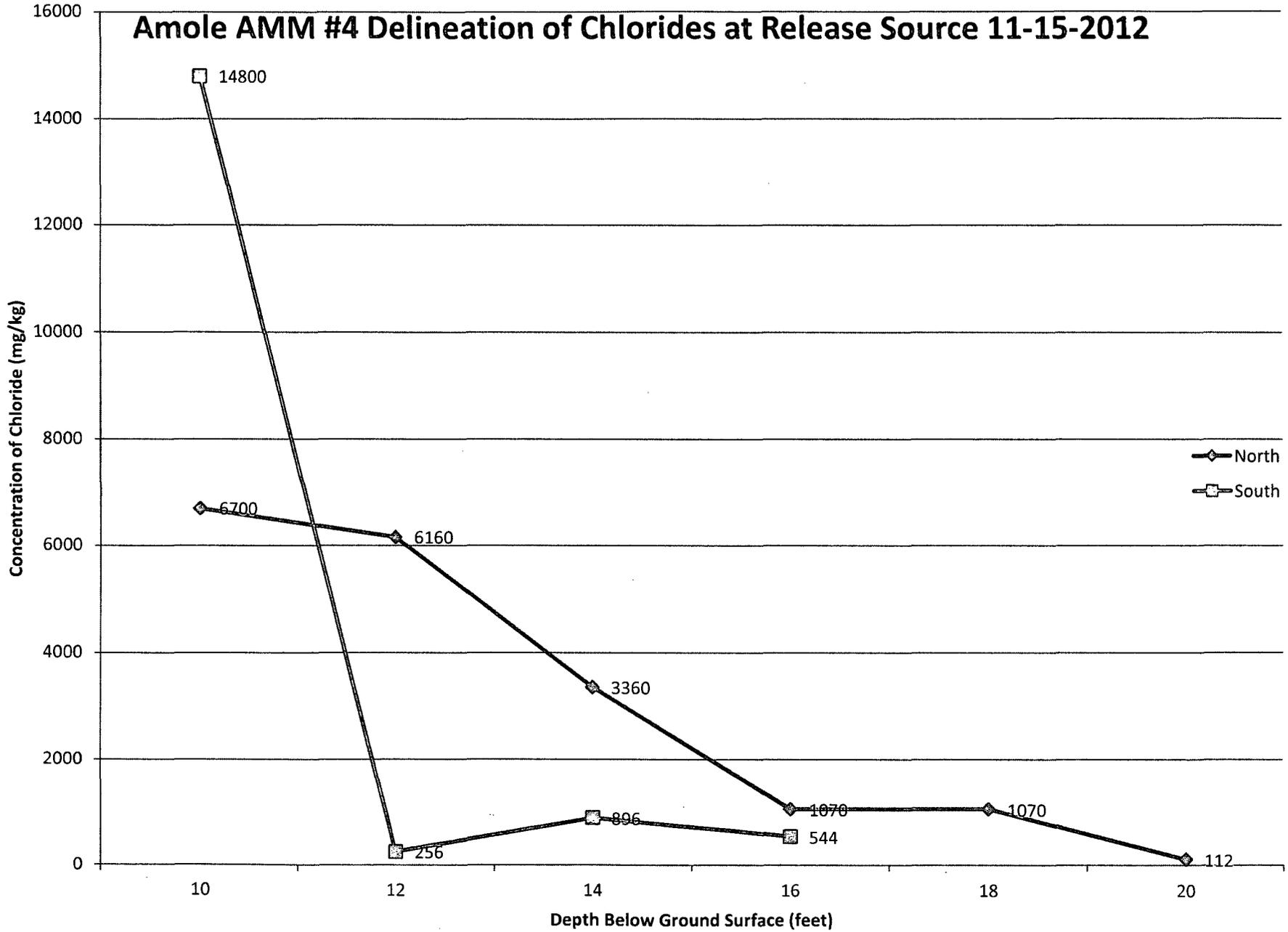
Final Sample Analysis	BTEX	GRO	DRO	Chloride
Bottom Flow Path 4'	ND	ND	ND	464
Middle Flow Path 2'	0.558	<10.0	30.9	192
Excavation North 10'	0.228	ND	564	6700 (DISPOSED)
Excavation North 12'				6160
Excavation North 14'				3360
Excavation North 16'				1070
Excavation North 18'				1070
Excavation North 20'				112
Excavation 10' South	ND	ND	ND	14800 (DISPOSED)
Excavation South 12'				256
Excavation South 14'				896
Excavation South 16'				544



SW

SE

# Amole AMM #4 Delineation of Chlorides at Release Source 11-15-2012



November 26, 2012

AMANDA TRUJILLO

Yates Energy Petroleum Corp

105 S 4th Street

Artesia, NM 88210

RE: AMOLE #4

Enclosed are the results of analyses for samples received by the laboratory on 11/16/12 15:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

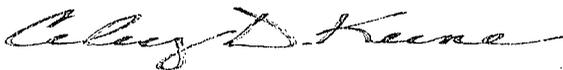
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	11/16/2012	Sampling Date:	11/15/2012
Reported:	11/26/2012	Sampling Type:	Soil
Project Name:	AMOLE #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	SECTION 16 T19S R25E		

**Sample ID: NORTH 12' (H202796-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6160	16.0	11/20/2012	ND	400	100	400	0.00		

**Sample ID: NORTH 14' (H202796-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3360	16.0	11/20/2012	ND	400	100	400	0.00		

**Sample ID: NORTH 16' (H202796-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1070	16.0	11/20/2012	ND	400	100	400	0.00		

**Sample ID: NORTH 18' (H202796-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1070	16.0	11/20/2012	ND	400	100	400	0.00		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	11/16/2012	Sampling Date:	11/15/2012
Reported:	11/26/2012	Sampling Type:	Soil
Project Name:	AMOLE #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	SECTION 16 T19S R25E		

**Sample ID: NORTH 20' (H202796-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	11/20/2012	ND	400	100	400	0.00		

**Sample ID: SOUTH 10' (H202796-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1500	16.0	11/20/2012	ND	400	100	400	0.00		

**Sample ID: SOUTH 12' (H202796-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	11/20/2012	ND	400	100	400	0.00		

**Sample ID: SOUTH 14' (H202796-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	896	16.0	11/20/2012	ND	400	100	400	0.00		

**Sample ID: SOUTH 16' (H202796-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	544	16.0	11/20/2012	ND	400	100	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

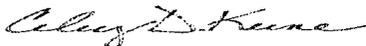
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported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

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---

Celey D. Keene, Lab Director/Quality Manager



October 09, 2012

AMANDA TRUJILLO

Yates Energy Petroleum Corp

105 S 4th Street

Artesia, NM 88210

RE: AMOLE #4

Enclosed are the results of analyses for samples received by the laboratory on 10/01/12 16:25.

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).

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/01/2012	Sampling Date:	09/26/2012
Reported:	10/09/2012	Sampling Type:	Soil
Project Name:	AMOLE #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	SECTION 16 T19S R25E		

**Sample ID: EXC 10' NORTH (H202392-01)**

BTX 8021B		mg/kg		Analyzed By: AP				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/04/2012	ND	1.99	99.4	2.00	6.80	
Toluene*	<0.050	0.050	10/04/2012	ND	2.21	110	2.00	6.99	
Ethylbenzene*	<0.050	0.050	10/04/2012	ND	2.17	109	2.00	7.00	
<b>Total Xylenes*</b>	<b>0.228</b>	0.150	10/04/2012	ND	6.79	113	6.00	6.48	

*Surrogate: 4-Bromofluorobenzene (PIE) 134 % 89.4-126*

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	10/03/2012	ND	205	102	200	3.89	
<b>DRO &gt;C10-C28</b>	<b>564</b>	50.0	10/03/2012	ND	201	101	200	7.92	

*Surrogate: 1-Chlorooctane 98.7 % 65.2-140*
*Surrogate: 1-Chlorooctadecane 104 % 63.6-154*

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

Received:	10/01/2012	Sampling Date:	09/26/2012
Reported:	10/09/2012	Sampling Type:	Soil
Project Name:	AMOLE #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	SECTION 16 T19S R25E		

**Sample ID: EXC 10' SOUTH (H202392-02)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/04/2012	ND	1.99	99.4	2.00	6.80	
Toluene*	<0.050	0.050	10/04/2012	ND	2.21	110	2.00	6.99	
Ethylbenzene*	<0.050	0.050	10/04/2012	ND	2.17	109	2.00	7.00	
Total Xylenes*	<0.150	0.150	10/04/2012	ND	6.79	113	6.00	6.48	

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

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/03/2012	ND	205	102	200	3.89	
DRO >C10-C28	<10.0	10.0	10/03/2012	ND	201	101	200	7.92	

*Surrogate: 1-Chlorooctane 86.8 % 65.2-140*
*Surrogate: 1-Chloroadecane 88.7 % 63.6-154*

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

Received:	10/01/2012	Sampling Date:	09/26/2012
Reported:	10/09/2012	Sampling Type:	Soil
Project Name:	AMOLE #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	SECTION 16 T19S R25E		

**Sample ID: BOTTOM 4' (H202392-03)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/04/2012	ND	1.99	99.4	2.00	6.80		
Toluene*	<0.050	0.050	10/04/2012	ND	2.21	110	2.00	6.99		
Ethylbenzene*	<0.050	0.050	10/04/2012	ND	2.17	109	2.00	7.00		
Total Xylenes*	<0.150	0.150	10/04/2012	ND	6.79	113	6.00	6.48		

*Surrogate: 4-Bromofluorobenzene (PIL) 105 % 89.4-126*

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/03/2012	ND	205	102	200	3.89		
DRO >C10-C28	<10.0	10.0	10/03/2012	ND	201	101	200	7.92		

*Surrogate: 1-Chlorooctane 89.9 % 65.2-140*
*Surrogate: 1-Chlorooctadecane 91.0 % 63.6-154*

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

Received:	10/01/2012	Sampling Date:	09/26/2012
Reported:	10/09/2012	Sampling Type:	Soil
Project Name:	AMOLE #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	SECTION 16 T19S R25E		

**Sample ID: BOTTOM 6' (H202392-04)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/04/2012	ND	1.99	99.4	2.00	6.80		
Toluene*	<0.050	0.050	10/04/2012	ND	2.21	110	2.00	6.99		
Ethylbenzene*	<0.050	0.050	10/04/2012	ND	2.17	109	2.00	7.00		
Total Xylenes*	<0.150	0.150	10/04/2012	ND	6.79	113	6.00	6.48		

*Surrogate: 4-Bromofluorobenzene (PIC) 106 % 89.4-126*

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/03/2012	ND	205	102	200	3.89		
DRO >C10-C28	<10.0	10.0	10/03/2012	ND	201	101	200	7.92		

*Surrogate: 1-Chlorooctane 85.7 % 65.2-140*
*Surrogate: 1-Chlorooctadecane 85.9 % 63.6-154*

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Project Name:	AMOLE #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	SECTION 16 T19S R25E		

**Sample ID: BOTTOM 8' (H202392-05)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/04/2012	ND	1.99	99.4	2.00	6.80	
Toluene*	<0.050	0.050	10/04/2012	ND	2.21	110	2.00	6.99	
Ethylbenzene*	<0.050	0.050	10/04/2012	ND	2.17	109	2.00	7.00	
Total Xylenes*	<0.150	0.150	10/04/2012	ND	6.79	113	6.00	6.48	

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

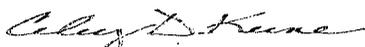
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/04/2012	ND	205	102	200	3.89	
DRO >C10-C28	<10.0	10.0	10/04/2012	ND	201	101	200	7.92	

*Surrogate: 1-Chlorooctane 86.9 % 65.2-140*
*Surrogate: 1-Chlorooctadecane 84.9 % 63.6-154*

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**Analytical Results For:**

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

Received:	10/01/2012	Sampling Date:	09/26/2012
Reported:	10/09/2012	Sampling Type:	Soil
Project Name:	AMOLE #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	SECTION 16 T19S R25E		

**Sample ID: BOTTOM 10' (H202392-06)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/04/2012	ND	1.99	99.4	2.00	6.80		
Toluene*	<0.050	0.050	10/04/2012	ND	2.21	110	2.00	6.99		
Ethylbenzene*	<0.050	0.050	10/04/2012	ND	2.17	109	2.00	7.00		
Total Xylenes*	<0.150	0.150	10/04/2012	ND	6.79	113	6.00	6.48		

*Surrogate: 4-Bromofluorobenzene (PIC) 104 % 89.4-126*

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/04/2012	ND	205	102	200	3.89		
DRO >C10-C28	<10.0	10.0	10/04/2012	ND	201	101	200	7.92		

*Surrogate: 1-Chlorooctane 91.8 % 65.2-140*
*Surrogate: 1-Chlorooctadecane 87.6 % 63.6-154*

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

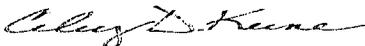
- S-01 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





October 09, 2012

AMANDA TRUJILLO

Yates Energy Petroleum Corp

105 S 4th Street

Artesia, NM 88210

RE: AMOLE #4

Enclosed are the results of analyses for samples received by the laboratory on 10/01/12 16:25.

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:**

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

Received:	10/01/2012	Sampling Date:	09/26/2012
Reported:	10/09/2012	Sampling Type:	Soil
Project Name:	AMOLE #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	SECTION 16 T19S R25E		

**Sample ID: EXC 10' NORTH (H202392-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6700	16.0	10/05/2012	ND	400	100	400	3.92		

**Sample ID: EXC 10' SOUTH (H202392-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	14800	16.0	10/05/2012	ND	400	100	400	3.92		

**Sample ID: BOTTOM 4' (H202392-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	464	16.0	10/05/2012	ND	400	100	400	3.92		

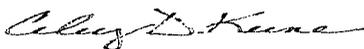
**Sample ID: BOTTOM 6' (H202392-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	640	16.0	10/05/2012	ND	400	100	400	3.92		

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/01/2012	Sampling Date:	09/26/2012
Reported:	10/09/2012	Sampling Type:	Soil
Project Name:	AMOLE #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	SECTION 16 T19S R25E		

**Sample ID: BOTTOM 8' (H202392-05)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	10/05/2012	ND	400	100	400	0.00		

**Sample ID: BOTTOM 10' (H202392-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	464	16.0	10/05/2012	ND	400	100	400	0.00		

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

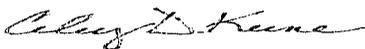
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported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

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Celey D. Keene, Lab Director/Quality Manager





September 04, 2012

AMANDA TRUJILLO

Yates Energy Petroleum Corp

105 S 4th Street

Artesia, NM 88210

RE: AMOLE AMM #4

Enclosed are the results of analyses for samples received by the laboratory on 08/29/12 11:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	08/29/2012	Sampling Date:	08/27/2012
Reported:	09/04/2012	Sampling Type:	Soil
Project Name:	AMOLE AMM #4	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	S16 T19S R25E		

**Sample ID: BOTTOM OF FLOW PATH (H202077-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Benzene*</b>	<b>9.96</b>	1.00	08/31/2012	ND	1.74	87.2	2.00	3.77		
<b>Toluene*</b>	<b>125</b>	1.00	08/31/2012	ND	1.79	89.7	2.00	4.44		
<b>Ethylbenzene*</b>	<b>179</b>	1.00	08/31/2012	ND	1.80	90.2	2.00	4.34		
<b>Total Xylenes*</b>	<b>249</b>	3.00	08/31/2012	ND	5.84	97.4	6.00	4.48		

Surrogate: 4-Bromofluorobenzene (PIE) 144 % 89.4-126

TPH 8015M		mg/kg		Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10</b>	<b>4900</b>	50.0	08/30/2012	ND	199	99.6	200	2.83		
<b>DRO &gt;C10-C28</b>	<b>15000</b>	50.0	08/30/2012	ND	198	98.9	200	3.32		

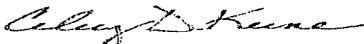
Surrogate: 1-Chlorooctane 249 % 65.2-140

Surrogate: 1-Chlorooctadecane 215 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	08/29/2012	Sampling Date:	08/27/2012
Reported:	09/04/2012	Sampling Type:	Soil
Project Name:	AMOLE AMM #4	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	S16 T19S R25E		

**Sample ID: MIDDLE FLOW PATH (H202077-02)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/31/2012	ND	1.74	87.2	2.00	3.77	
Toluene*	<b>0.071</b>	0.050	08/31/2012	ND	1.79	89.7	2.00	4.44	
Ethylbenzene*	<b>0.201</b>	0.050	08/31/2012	ND	1.80	90.2	2.00	4.34	
Total Xylenes*	<b>0.286</b>	0.150	08/31/2012	ND	5.84	97.4	6.00	4.48	

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

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	08/30/2012	ND	199	99.6	200	2.83	
<b>DRO &gt;C10-C28</b>	<b>30.9</b>	10.0	08/30/2012	ND	198	98.9	200	3.32	

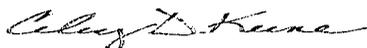
Surrogate: 1-Chlorooctane 84.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 93.2 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	08/29/2012	Sampling Date:	08/27/2012
Reported:	09/04/2012	Sampling Type:	Soil
Project Name:	AMOLE AMM #4	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	S16 T19S R25E		

**Sample ID: EXCAVATION (H202077-03)**

BTEX 8021B		mg/kg		Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Benzene*</b>	<b>59.1</b>	1.00	08/31/2012	ND	1.74	87.2	2.00	3.77		
<b>Toluene*</b>	<b>224</b>	1.00	08/31/2012	ND	1.79	89.7	2.00	4.44		
<b>Ethylbenzene*</b>	<b>141</b>	1.00	08/31/2012	ND	1.80	90.2	2.00	4.34		
<b>Total Xylenes*</b>	<b>173</b>	3.00	08/31/2012	ND	5.84	97.4	6.00	4.48		

Surrogate: 4-Bromofluorobenzene (PIE) 130 % 89.4-126

TPH 8015M		mg/kg		Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10</b>	<b>3640</b>	50.0	08/30/2012	ND	199	99.6	200	2.83		
<b>DRO &gt;C10-C28</b>	<b>5430</b>	50.0	08/30/2012	ND	198	98.9	200	3.32		

Surrogate: 1-Chlorooctane 225 % 65.2-140

Surrogate: 1-Chlorooctadecane 181 % 63.6-154

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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.
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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---

Celey D. Keene, Lab Director/Quality Manager



September 04, 2012

AMANDA TRUJILLO

Yates Energy Petroleum Corp

105 S 4th Street

Artesia, NM 88210

RE: AMOLE AMM #4

Enclosed are the results of analyses for samples received by the laboratory on 08/29/12 11:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

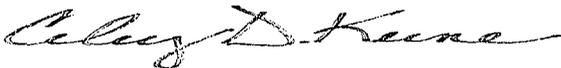
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Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

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Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	08/29/2012	Sampling Date:	08/27/2012
Reported:	09/04/2012	Sampling Type:	Soil
Project Name:	AMOLE AMM #4	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	S16 T19S R25E		

**Sample ID: BOTTOM OF FLOW PATH (H202077-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9700	16.0	08/31/2012	ND	400	100	400	3.92		

**Sample ID: MIDDLE FLOW PATH (H202077-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	08/31/2012	ND	400	100	400	3.92		

**Sample ID: EXCAVATION (H202077-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11000	16.0	08/31/2012	ND	400	100	400	3.92		

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

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- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
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\*=Accredited Analyte

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