



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

February 17, 2016

CHRISTINE ALDERMAN

CIMAREX ENERGY CO.-MIDLAND

600 N. MARIENFELD ST, SUITE 600

MIDLAND, TX 79701

RE: COTTONWOOD DRAW 22 FED #2H

Enclosed are the results of analyses for samples received by the laboratory on 02/16/16 11:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. 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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

CIMAREX ENERGY CO.-MIDLAND
CHRISTINE ALDERMAN
600 N. MARIENFELD ST, SUITE 600
MIDLAND TX, 79701
Fax To: UNK-NOWN

Received:	02/16/2016	Sampling Date:	02/15/2016
Reported:	02/17/2016	Sampling Type:	Soil
Project Name:	COTTONWOOD DRAW 22 FED #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	NONE GIVEN		

Sample ID: 7' EXCAVATION BOTTOM (H600352-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2016	ND	1.99	99.4	2.00	6.93	
Toluene*	<0.050	0.050	02/16/2016	ND	1.96	97.9	2.00	6.53	
Ethylbenzene*	<0.050	0.050	02/16/2016	ND	1.79	89.4	2.00	6.11	
Total Xylenes*	<0.150	0.150	02/16/2016	ND	5.51	91.9	6.00	5.87	
Total BTEX	<0.300	0.300	02/16/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	02/17/2016	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	02/16/2016	ND	208	104	200	1.10	
DRO >C10-C28	<10.0	10.0	02/16/2016	ND	218	109	200	0.367	

Surrogate: 1-Chlorooctane 94.0 % 35-147

Surrogate: 1-Chlorooctadecane 103 % 28-171

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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

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Celey D. Keene, Lab Director/Quality Manager



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† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326