



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

October 19, 2015

HARLEY EVERHART

FRONTIER FIELD SERVICES

4200 SKELLY DRIVE, SUITE 700

TULSA, OK 74135

RE: CEDAR BREAK 12" LATERAL

Enclosed are the results of analyses for samples received by the laboratory on 10/15/15 11:14.

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.

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:

FRONTIER FIELD SERVICES
HARLEY EVERHART
4200 SKELLY DRIVE, SUITE 700
TULSA OK, 74135
Fax To: (575) 676-2401

Received:	10/15/2015	Sampling Date:	10/15/2015
Reported:	10/19/2015	Sampling Type:	Soil
Project Name:	CEDAR BREAK 12" LATERAL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	CEDAR BREAK 12" LATERAL		

Sample ID: #7- CEDAR BREAK (SW WALL) (H502697-01)

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	10/15/2015	ND	1.81	90.3	2.00	0.905		
Toluene*	<0.050	0.050	10/15/2015	ND	1.93	96.5	2.00	1.98		
Ethylbenzene*	<0.050	0.050	10/15/2015	ND	1.72	86.1	2.00	0.174		
Total Xylenes*	<0.150	0.150	10/15/2015	ND	5.59	93.2	6.00	1.20		
Total BTEX	<0.300	0.300	10/15/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	10/16/2015	ND	416	104	400	7.41		

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	10/16/2015	ND	193	96.4	200	5.03		
DRO >C10-C28	<10.0	10.0	10/16/2015	ND	205	102	200	4.87		

Surrogate: 1-Chlorooctane 93.6 % 47.2-157

Surrogate: 1-Chlorooctadecane 98.5 % 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

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 AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Frontier Field Services (Hydro Energy)
Project Manager:

Address:

City: Malaga

Phone #: 505-513-4922

Project #:

Project Name: Cedar Break 12" lateral

Project Location: Cedar Break 12" lateral

Sampler Name: Mark Buckner

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

147 - Cedar Break
(5th well)

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

1 TPH
1 BTEX
1 chlorides

BILL TO

ANALYSIS REQUEST

P.O. #:

Company:

Attn:

Address:

City:

State:

Phone #:

Fax #:

PRESERV

SAMPLING

Relinquished By:

Date: 10-15-15

Received By:

Date: 10-15-15

Time: 11:14

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Judy Garcia
CHECKED BY: (Initials)

Sample Condition

Cool Intact

Yes Yes

No No

REMARKS:

Phone Result:

Fax Result:

Yes Yes

No No

Add'l Phone #:

Add'l Fax #:

REMARKS: