

Brooks, David K., EMNRD

From: jamesbruc@aol.com
Sent: Monday, May 17, 2010 12:07 PM
To: Brooks, David K., EMNRD
Subject: Fwd: Water analysis
Attachments: Waterfloodanalysis.pdf

David: I told Richard (I thought I had copied you) that Chi has abandoned plans to use Capitan Reef water for injection water. In addition, it could not locate any Capitan Reef samples, because wells lose circulation as they drill through the zone. It now has an agreement with Shackleford Oil Co. to obtain produced water (from the Yates-Seven Rivers formation) from Shackleford's wells to the south of the unit. A water analysis from that zone is attached (I had forwarded this e-mail to Richard).

Also, Chi has inquired of the State Engineer, and there are no fresh water wells within 2 miles of the injectors.

I will dig up the other samples and get that to you.

Jim

-----Original Message-----

From: John Qualls <johnq@chienergyinc.com>
To: jamesbruc <jamesbruc@aol.com>
Sent: Mon, May 10, 2010 1:46 pm
Subject: Water analysis

Jim. Here is the waterflood analysis on the shackelford well

Chi Energy, Inc.

John W. Qualls

432-685-5001 office

432-557-8774 cell

432-687-2662 fax



ARDINAL LABORATORIES

PHONE (575) 383-2326 • 101 E. MARLAND • HOBBS, NM 88240

May 10, 2010

Clay Houston
Shackelford Oil Co.
3510 N. A Street, Bldg. B, Suite 100
Midland, TX 79705

687-2662

Re: Lebow #6 (Revised Report)

Enclosed are the results of analyses for sample number H19814, received by the laboratory on 05/04/10.

Cardinal Laboratories is accredited through Texas NELAP for:

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

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

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

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

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 4 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director



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

ANALYTICAL RESULTS FOR
SHACKELFORD OIL
ATTN: CLAY HOUSTON
3510 N. A. ST., BLDG. B, SUITE 100
MIDLAND, TX 79705
FAX TO: (432) 684-5026

Receiving Date: 05/04/10
Reporting Date: 05/10/10*
Project Number: NOT GIVEN
Project Name: LEBOW #6 *
Project Location: SEC. 25 - T19S - 30E *

Analysis Start Date: 05/04/10 3:30 PM
Analysis End Date: 05/08/10 3:00 PM
Sampling Date: 05/04/10
Sample Type: WATER
Sample Condition: INTACT @ 39°C
Sample Received By: JH
Analyzed By: CK

<u>Laboratory No.</u>	<u>Sample ID</u>	<u>Total Coliform</u>	<u>E. coli</u>
H19814-1	WATER SAMPLE	ABSENT	ABSENT

METHODS: HACH 8364

*Revised Report



Chemist



Date



PHONE (575) 393-2328 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
 SHACKELFORD OIL
 ATTN: CLAY HOUSTON
 3510 N. A. ST., BLDG. B, SUITE 100
 MIDLAND, TX 79705
 FAX TO: (432) 684-5026

Receiving Date: 05/04/10
 Reporting Date: 05/10/10*
 Project Number: NOT GIVEN
 Project Name: LEBOW #6 *
 Project Location: SEC. 25 - T19S - 30E *

Sampling Date: 05/04/10
 Sample Type: WATER
 Sample Condition: INTACT @ 35°C
 Sample Received By: JH
 Analyzed By: HM/AB

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (µS/cm)	T-Alkalinity (mgCaCO ₃ /L)
ANALYSIS DATE:		05/06/10	05/05/10	05/05/10	05/05/10	05/05/10	05/05/10
H19814-1	WATER SAMPLE	8,160	842	243	200	38,000	750
Quality Control		NR	48.1	51.0	2.92	1,420	NR
True Value QC		NR	60.0	50.0	3.00	1,413	NR
% Recovery		NR	96.2	102	97.3	100	NR
Relative Percent Difference		NR	8.0	4.8	3.1	0.6	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
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	Cl (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:	05/05/10	05/08/10	05/05/10	05/05/10	05/05/10	05/05/10
H19814-1	13,000	1,960	0	915	7.09	22,600
Quality Control	500	44.4	NR	988	6.98	NR
True Value QC	500	40.0	NR	1000	7.00	NR
% Recovery	100	111	NR	98.8	100	NR
Relative Percent Difference	< 0.1	2.0	NR	< 0.1	0.7	0.4

METHODS:	SM4600-Cl-B	375.4	310.1	310.1	150.1	180.1
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*Revised Report

Clay Houston
 Chemist

05/10/10
 Date

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



CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
 (505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Shackelford Pit		P.O. #:		BILL TO		ANALYSIS REQUEST	
Project Manager: Clay Houston		Company:					
Address: 3510 N. A. St. Bldg B, Suite 100		City:					
City: Midland State: TX Zip: 79705		Address:					
Phone #: 432-682-9794 Fax #: 432-684-5026		City:					
Project #:		State:					
Project Name: Lebo #6		Zip:					
Project Location: Sec. 25-T195-30E		Phone #:					
Sampler Name: Med Run you		Fax #:					
FOR USE ONLY		MATRIX		PRESERV		SAMPLING	
Lab I.D.		GROUNDWATER					
Sample I.D.		WASTEWATER					
H19614-1		SOIL					
water sample		OIL					
Lebo #6		SLUDGE					
Site #		OTHER:					
		ACID/BASE:					
		ICE/COOL					
		OTHER:					
		DATE					
		TIME					
		5/11					
		10:00					
		water analysis					
		at Cabin Area					
		bacteria					

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Relinquished By: _____ Date: _____
 Received By: _____ Date: _____
 Relinquished By: _____ Date: _____
 Received By: _____ Date: _____
 Relinquished By: _____ Date: _____
 Received By: _____ Date: _____
 Delivered By: (Initials) _____
 Sampler - UPS - Bus - Other: _____
 Sample Condition: _____
 Checked By: _____
 Phone Results: Yes No Add'l Phone #:
 Fax Results: Yes No Add'l Fax #:
 REMARKS:
 Send results to clay
 Clay
 #19614 added legal name of well. 5/10/10
 ck

#196

+ Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476