



NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
[http://emr.d.state.nm.us/ocd/District III/3district.htm](http://emr.d.state.nm.us/ocd/District%20III/3district.htm)

OIL CONS. DIV DIST. 3

BRADENHEAD TEST REPORT

(submit 1 copy to above address)

APR 04 2014

Date of Test 4-1-14 Operator FOUR STAR OIL-S&S API #30-045-06545

Property Name JOHN CHARLES Well No. 6 Location: Unit A Section 13 Township 27 Range 9

Well Status (Shut-In or Producing) Initial PSI: Tubing 70 Intermediate X Casing 76 Bradenhead 23

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

PRESSURE

Testing	Bradenhead			INTERM	
	BH	Int	Csg	Int	Csg
TIME					
5 min	2	1	76	1	1
10 min	2	1	76	1	1
15 min	2	1	74	1	1
20 min	2	1	67	1	1
25 min	2	1	63	1	1
30 min	2	1	61	1	1

FLOW CHARACTERISTICS

BRADENHEAD INTERMEDIATE

Steady Flow	X	
Surges		
Down to Nothing		
Nothing		
Gas		
Gas & Water		
Water	X	21 1/2 gal Flow Total

If bradenhead flowed water, check all of the descriptions that apply below:

CLEAR X FRESH first SALTY first SULFUR first BLACK X first

5 MINUTE SHUT-IN PRESSURE

BRADENHEAD 22.

INTERMEDIATE X

REMARKS:

Dirty/Black at first open, 4 gal per 4 min, next 4 gal in 6 min
next 4 gal in 6 min AT 17 min well blowing to cause csg to drop
next 4 gal - 6 min, 4 gal in 8 min water sample taken

By Handy calder

Witness Monica Kuehling

calder service
(Position)

E-mail address Handy.calder@state.nm.us

21 1/2 gal Total Flow

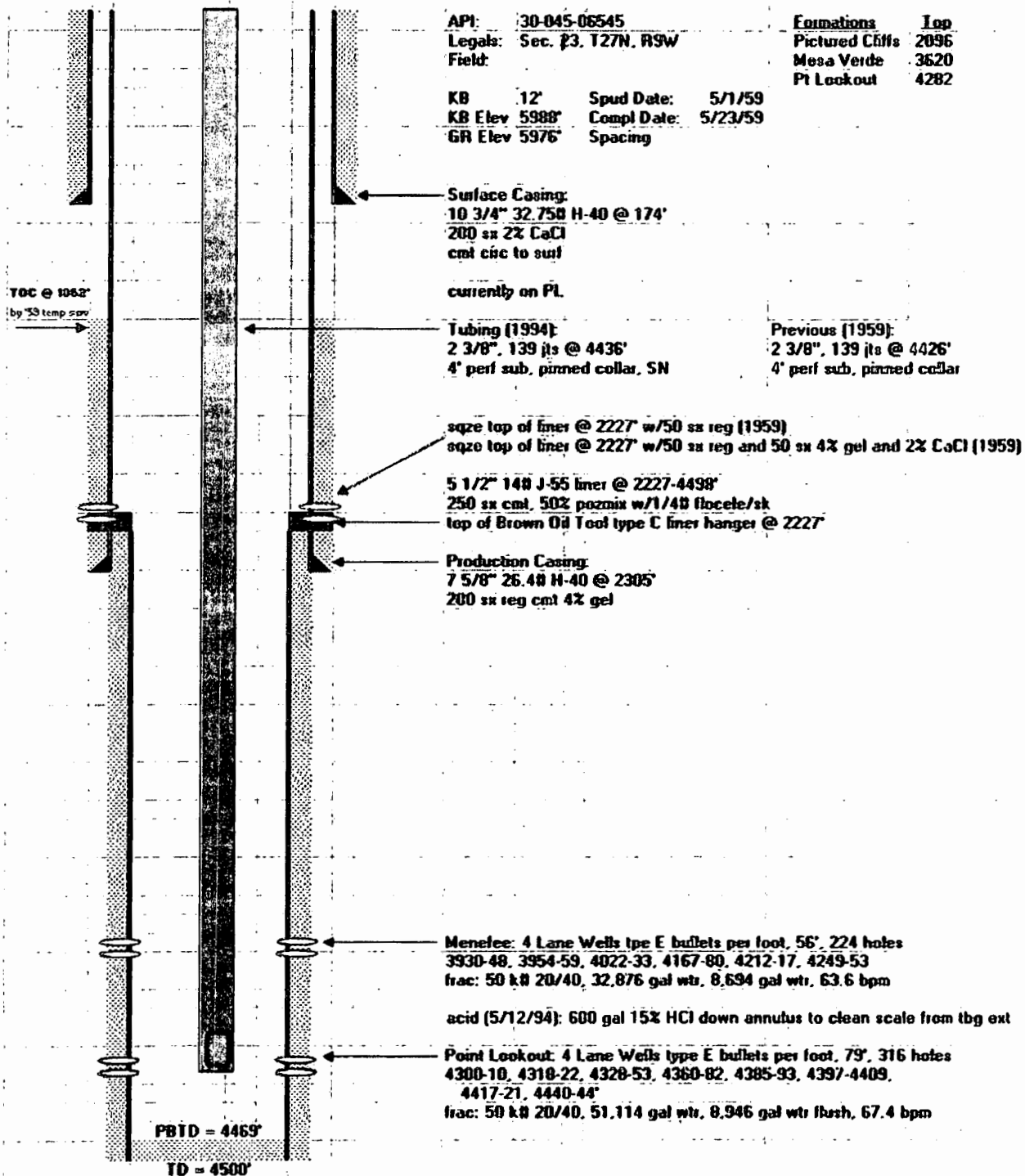
John Charles 6 Bradenhead/Tubing Hydrocarbon Comparison

	Analytical Results		
	GRO (C6-C10)	DRO (C10 -C28)	Ext. DRO (C28-C35)
	mg/kg	mg/kg	mg/kg
John Charles 6 (Tubing - Clear Oil)	1000000	77000	5950
John Charles 6 (Bradenhead)	140000	354000	58900

	Normalized Results (% by Wt.)		
	GRO (C6-C10)	DRO (C10 -C28)	Ext. DRO (C28-C35)
John Charles 6 (Tubing - Clear Oil)	92%	7%	1%
John Charles 6 (Bradenhead)	25%	64%	11%



John Charles 6
San Juan County, New Mexico
Current Well Schematic as of May 11, 2010



Prepared by: Jason Chow
Date: 5/11/2010

Revised by:
Date:



75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
970.247.4227 Fax
www.greenanalytical.com

13 November 2013

Tim Ulrich
Baker Hughes
1215 Basin Rd
Farmington, NM 87401
RE: TPH 8015

Enclosed are the results of analyses for samples received by the laboratory on 11/05/13 14:50.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Debbie Zufelt". The signature is written in a cursive, flowing style.

Debbie Zufelt
Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. Our NELAP accreditation can be viewed at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Baker Hughes
1215 Basin Rd
Farmington NM, 87401

Project: TPH 8015
Project Name / Number: [none]
Project Manager: Tim Ulrich

Reported:
11/13/13 17:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
John Charles #6 Braden Head	1311023-01	Water	10/29/13 00:00	11/05/13 14:50
John Charles #6 Clear Oil Sample	1311023-02	Water	10/29/13 00:00	11/05/13 14:50

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GAL's liability, and clients exclusive remedy for any claim arising, 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 within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Baker Hughes
1215 Basin Rd
Farmington NM, 87401

Project: TPH 8015
Project Name / Number: [none]
Project Manager: Tim Ulrich

Reported:
11/13/13 17:09

Subcontracted – Cardinal Laboratories

John Charles #6 Braden Head
1311023-01 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Petroleum Hydrocarbons by GC FID

S-06

Surrogate: 1-Chlorooctadecane			514 %	63.6-154		11/11/13	8015B		MS
Surrogate: 1-Chlorooctane			366 %	65.2-140		11/11/13	8015B		MS
DRO >C10-C28	354000	2000	394	mg/kg	200	11/11/13	8015B		MS
EXT DRO >C28-C35	58900	2000	394	mg/kg	200	11/11/13	8015B		MS
GRO C6-C10	140000	2000	256	mg/kg	200	11/11/13	8015B		MS

John Charles #6 Clear Oil Sample
1311023-02 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Petroleum Hydrocarbons by GC FID

S-06

Surrogate: 1-Chlorooctadecane			185 %	63.6-154		11/11/13	8015B		MS
Surrogate: 1-Chlorooctane			433 %	65.2-140		11/11/13	8015B		MS
DRO >C10-C28	77000	2000	394	mg/kg	200	11/11/13	8015B		MS
EXT DRO >C28-C35	5980	2000	394	mg/kg	200	11/11/13	8015B		MS
GRO C6-C10	1000000	2000	256	mg/kg	200	11/11/13	8015B		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, 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 within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Baker Hughes
1215 Basin Rd
Farmington NM, 87401

Project: TPH 8015
Project Name / Number: [none]
Project Manager: Tim Ulrich

Reported:
11/13/13 17:09

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 3111002 - General Prep - Organics

Blank (3111002-BLK1)

Prepared: 11/10/13 Analyzed: 11/11/13

Surrogate: 1-Chlorooctadecane	52.4		mg/kg	50.0		105	63.6-154			
Surrogate: 1-Chlorooctane	46.4		mg/kg	50.0		92.8	63.2-140			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							

LCS (3111002-BS1)

Prepared: 11/10/13 Analyzed: 11/11/13

Surrogate: 1-Chlorooctadecane	50.9		mg/kg	50.0		102	63.6-154			
Surrogate: 1-Chlorooctane	45.4		mg/kg	50.0		90.8	63.2-140			
DRO >C10-C28	169	10.0	mg/kg	200		84.5	61.6-132			
GRO C6-C10	170	10.0	mg/kg	200		84.9	66.4-124			
Total TPH C6-C28	339	10.0	mg/kg	400		84.7	69.7-122			

LCS Dup (3111002-BS1)

Prepared: 11/10/13 Analyzed: 11/11/13

Surrogate: 1-Chlorooctadecane	55.6		mg/kg	50.0		111	63.6-154			
Surrogate: 1-Chlorooctane	51.4		mg/kg	50.0		103	63.2-140			
DRO >C10-C28	180	10.0	mg/kg	200		90.2	61.6-132	6.55	23.1	
GRO C6-C10	191	10.0	mg/kg	200		95.4	66.4-124	11.6	23.4	
Total TPH C6-C28	371	10.0	mg/kg	400		92.8	69.7-122	9.11	20.6	

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, 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 within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Baker Hughes
1215 Basin Rd
Farmington NM, 87401

Project: TPH 8015
Project Name / Number: [none]
Project Manager: Tim Ulrich

Reported:
11/13/13 17:09

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.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis
*Results reported on as received basis unless designated as dry.

RPD Relative Percent Difference

LCS Laboratory Control Sample (Blank Spike)

RL Report Limit

MDL Method Detection Limit

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, 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 within thirty days after completion of the applicable service.

Client: Baker-Hughes
1215 Basin Road
Farmington, NM 87401

Phone#
E-Mail Address: timothy.ulrich@bakerhughes.com
kevin.scott@bakerhughes.com

Contact: 505-486-5652

Green Analytical Labs
75 Suttle Street
Durango, CO 81303
Phone: 970-247-4220
FAX: 970-247-4227

21.4°C
NO₂U

GAL Work Order # 1311-023,01-02
PO#
Project Name: Blanco Wash CHEVRON

G°C #9
on ice

Collection			Miscellaneous				Preservative			Analyses Required			
Sample ID	Date	Time	Collected By: (init.)	Matrix Type	No. of Containers	Filtered: Y / N	Unpreserved	H2SO4	Other	Iron and Manganese PD	THP-8015	Oil & Grease	Corrosion Coupon
1. John Charles #6 Braden head	10/29/2013				1						x		
2. John Charles #6 Clear Oil sample	10/29/2013				1						x		
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													
11.													
12.													
13.													
14.													
15.													
16.													
17.													
18.													
19.													
20.													
21.													
22.													
23.													
24.													
25.													
26.													
27.													
28.													
29.													
30.													

Relinquished by: *[Signature]* Date: 11/5/13 Time: 1450
Kangaroo Express 11/5/13 1645
 11/6/13 930

Received By: *[Signature]* Date: 11/5/13 Time: 1450
Kangaroo Express 11/5/13 1645
 11/6/13 908