

Confidentiality Requested:

Yes No

#### Kansas Corporation Commission Oil & Gas Conservation Division

1234706

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

## WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License #			API No. 15						
Name:			Spot Description:						
Address 1:			Sec	TwpS. R	East West				
Address 2:			F6	eet from North /	South Line of Section				
City:	State: Z	ip:+	Fe	eet from East /	West Line of Section				
Contact Person:			Footages Calculated from I	Nearest Outside Section C	Corner:				
Phone: ()			□NE □NW □SE □SW						
CONTRACTOR: License #			GPS Location: Lat:	, Long: _					
Name:				(e.g. xx.xxxxx)	(e.gxxx.xxxxx)				
Wellsite Geologist:			Datum: NAD27	NAD83 WGS84					
Purchaser:			County:						
Designate Type of Completion:			Lease Name:	W	/ell #:				
	e-Entry	Workover	Field Name:						
	_		Producing Formation:						
☐ Oil ☐ WSW ☐ D&A	☐ SWD	∐ SIOW □ SIGW	Elevation: Ground:	Kelly Bushing:	:				
	GSW	Temp. Abd.	Total Vertical Depth:	Plug Back Total C	Depth:				
CM (Coal Bed Methane)	dow	Temp. Abd.	Amount of Surface Pipe Se	et and Cemented at:	Feet				
☐ Cathodic ☐ Other (Co	ore, Expl., etc.):		Multiple Stage Cementing	Collar Used? Yes	No				
If Workover/Re-entry: Old Well I			If yes, show depth set:		Feet				
Operator:			If Alternate II completion, c	cement circulated from:					
Well Name:			feet depth to:	w/	sx cmt.				
Original Comp. Date:									
Deepening Re-perf	•	NHR Conv. to SWD	Drilling Fluid Managemer	nt Plan					
☐ Plug Back	Conv. to G		(Data must be collected from the						
Commingled	Pormit #:		Chloride content:	ppm Fluid volume	e: bbls				
Dual Completion			Dewatering method used: _						
SWD			Location of fluid disposal if	hauled offsite					
☐ ENHR			1						
GSW	Permit #:		Operator Name:						
_ <del>_</del>			Lease Name:	License #:_					
Spud Date or Date R	eached TD	Completion Date or	Quarter Sec	TwpS. R	East _ West				
Recompletion Date		Recompletion Date	County:	Permit #:					

#### **AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

**Submitted Electronically** 

KCC Office Use ONLY							
Confidentiality Requested							
Date:							
Confidential Release Date:							
Wireline Log Received							
Geologist Report Received							
UIC Distribution							
ALT I II Approved by: Date:							

Sec Twp S. R East West County:	erator Name:		Lease Name:	me: Well #:				
open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recover and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.  Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).  Drill Stem Tests Taken	TwpS. R	_	County:					
files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).  Drill Stem Tests Taken	n and closed, flowing and shut-in p	ssures, whether shut-in pre	essure reached stati	c level, hydrosta	tic pressures, bott			
(Attach Additional Sheets)  Samples Sent to Geological Survey				gs must be ema	iled to kcc-well-lo	gs@kcc.ks.go	v. Digital electronic log	
Samples Sent to Geological Survey  Cores Taken  Electric Log Run  Yes  No  Yes  No  Yes  No		Yes No			on (Top), Depth an			
Electric Log Run Yes No	nples Sent to Geological Survey	Yes No	Name	Э		Тор	Datum	
List All E. Logs Run:								
	All E. Logs Run:							
CASING RECORD New Used  Report all strings set-conductor, surface, intermediate, production, etc.					on etc			
Size Hele Size Casing Weight Setting Tune of # Seeks Time and Person	Size Hole	· -		· · · · · · · · · · · · · · · · · · ·		# Sacks	Type and Percent	
Purpose of String Drilled Set (In O.D.) Lbs. / Ft. Depth Cement Used Additives								
ADDITIONAL CEMENTING / SQUEEZE RECORD		ADDITIONAL	L CEMENTING / SQU	EEZE RECORD	I			
Purpose:  Perforate Protect Casing Plug Back TD  Depth Top Bottom  Type of Cement # Sacks Used Type and Percent Additives  # Sacks Used Type and Percent Additives	Perforate Top Bottom Protect Casing	Type of Cement	# Sacks Used	Type and Percent Additives				
Plug Off Zone								
Did you perform a hydraulic fracturing treatment on this well?  Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No (If No, skip questions 2 and 3)  (If No, skip question 3)  Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No (If No, skip question 3)	s the volume of the total base fluid of the	ydraulic fracturing treatment ex		Yes	No (If No, ski	p question 3)		
Shots Per Foot PERFORATION RECORD - Bridge Plugs Set/Type Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used) Depth								
				( ,		ona essay	Jopa.	
TUBING RECORD: Size: Set At: Packer At: Liner Run: Yes No	BING RECORD: Size:	Set At:	Packer At:	Liner Run:	Yes No			
Date of First, Resumed Production, SWD or ENHR.  Producing Method:  Flowing Pumping Gas Lift Other (Explain)	e of First, Resumed Production, SWD o			Gas Lift □ ∩	Other (Explain)			
Estimated Production Per 24 Hours  Oil Bbls. Gas Mcf Water Bbls. Gas-Oil Ratio Gravity	=					as-Oil Ratio	Gravity	
DISPOSITION OF GAS: METHOD OF COMPLETION: PRODUCTION INTERVAL:	DISPOSITION OF GAS:		METHOD OF COMPLE	TION		PRODI ICTIO	ON INTERVAL:	
Vented Sold Used on Lease Open Hole Perf. Dually Comp. (Submit ACO-4)  (If vented, Submit ACO-18.)	Vented Sold Used on Le		Perf. Dually	Comp. Cor		THODOGIN	ZIVIIVI EI IVAE.	

Form	ACO1 - Well Completion
Operator	Chieftain Oil Co., Inc.
Well Name	Butch A 1
Doc ID	1234706

## All Electric Logs Run

Borehole Volume Caliper Log
Compensated Neutron PEL Density Log
Composite Log
Geologist Log
Phased Induction Log

Form	ACO1 - Well Completion
Operator	Chieftain Oil Co., Inc.
Well Name	Butch A 1
Doc ID	1234706

## Tops

Name	Тор	Datum
Heebner	3630	-2117
Toronto	3646	-2133
Lansing	3796	-2283
Stark	4250	-2737
Hushpuckney	4250	-2737
Mississippian	4456	-2943
Viola	4700	-3187
Simpson SH	4792	-3279
Arbuckle	4925	-3412
Total Depth	4991	

Form	ACO1 - Well Completion
Operator	Chieftain Oil Co., Inc.
Well Name	Butch A 1
Doc ID	1234706

### Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement		Type and Percent Additives
Surface	17.25	13.375	48	318	60/40 Poz	350	



PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1000719	1718	10/15/2014
	TMTO.	TOW NITME	FP

### INVOICE NUMBER 91622336

Pratt

(620) 672-1201

B CHIEFTAIN OIL COMPANY

I PO Box: 124

L KIOWA

KS US 67070

o ATTN:

ACCOUNTS PAYABLE

LEASE NAME

Butch Α 1

0 LOCATION

В COUNTY

s

Barber

STATE KS

T

JOB DESCRIPTION Cement-New Well Casing/Pi

JOB CONTACT

JOB #	EQUIPMENT #	JIPMENT # PURCHASE ORDER NO.					DUE DATE			
40776486	19843				Net - 3	0 days	11/14,	/2014		
	1		QTY	U of M	UNIT I	PRICE	INVOICE	AMOUN		
or Service Dates	:: 10/14/2014 to 10	0/14/2014	<b></b>	ري. ا						
				كلمر		'				
040776486			100	Ą						
		A CONTRACTOR OF THE PROPERTY O	9,70					· · · · •		
	ent-New Well Casing/Pi		007,81		,	4.		01		
Cement 13 3/8"_Co	nductor Pipe	P <u>10</u> ,	OX		20 401	<b>7</b> I		10.		
60/40 POZ	10: 83	NO OTEST COLL	350.00	EA		9.24		-3,234.0		
Celloflake			88.00	EA		2.85		250.7		
Calcium Chloride			903.00			0.81		730.0		
Unit Mileage Chg ( leavy Equipment M	PU, cars one way)"		40.00 80.00			3.47 5.78		138 462		
	el. Chgs., per ton mil		602.00			1.93		1,158		
Pepth Charge; 0-50	0'		1.00			770.00		770		
Blending & Mixing S	-		350.00 1.00			1.08 134.75		377 134		
'Service Supervisor	, first 6 hrs on loc.		1.00	LA		104.70				
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PLEASE REMIT TO:

SEND OTHER CORRESPONDENCE TO:

PO BOX 841903 DALLAS, TX 75284-1903

BASIC ENERGY SERVICES, LP BASIC ENERGY SERVICES, LP 801 CHERRY ST, STE 2100 FORT WORTH, TX 76102

INVOICE TOTAL

SUB TOTAL

TAX

7,256.29

301.36

557.65

# BASIC\*\*\* 10244 NE Hwy. 61 P.O. Box 8613 Pratt, Kansas 67124

#### FIELD SERVICE TICKET

			SERVICES PING & WIRELINE	Phone 620-		73 11 les		DATE	TICKET NO.				
DATE OF JOB	11-14	<i>J</i> . <sub>D</sub>	ISTRICT				OLD	PROD INJ	□ WDW	□S	USTOMER ORDER NO.:		
CUSTOMER (	3/2 /	1-/0	(4	1 (1	Inc	LEASE Suich "I" WELL NO. /							
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					M	ATERIALS		%TA	X ON \$				
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FIELD SERVICE		·					(WELL O	WNER OPERAT	OR CONTRACT	OR OR	AGENT)		



## TREATMENT REPORT

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Lease Bu	12.	A		Vell #	:			A Comment of the Comm	7 /	1)-161-16	,	•
Field Order	# Statio	Prutt				Casing	3/8 De	epth 3/	County	Bache	<b>-</b> .	State /75
	3/8 (	londu	c-1150				Format			Legal De	escription	5 11W
	E DATA		FORATING	DATA		FLUID (	JSED		TF	REATMENT		
Casing Size	Tubing S	ize Shots/F	=t		Acid					PRESS	ISIP	
Depth 3/8	Depth	From	То		Pre P	ad		Max		<del></del>	5 Min.	
Volume_/ &	Volume	From	То		Pad		7	Min	1		-10 Min.	
Max Press	Max Pres		То		Frac			Avg		· . · · · · · · · · · · · · · · · · · ·	.15 Min.	
Well Connecti	on Annulus	Vol. From	То					HHP U	sed		Annulus F	Pressure
Plug Depth	Packer D		То		Flush			Gas Vo	lume		Total Loa	d.
Customer Re	presentative	010		Station	Manag	jer for	111 /-	ordle	Treate	50011	Gia	urc
Service Units		09859	19860	1		,			<del>-   - `</del>			
Driver Names	500-11	Shown				•						
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PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1000719	1718	10/28/2014

## INVOICE NUMBER

## 91634268

Pratt

(620) 672-1201

B CHIEFTAIN OIL COMPANY

I PO Box: 124

\_ KIOWA

KS US 67070

o ATTN:

ACCOUNTS PAYABLE

LEASE NAME

Butch A

LOCATION

В COUNTY

Barber

KS STATE I

JOB DESCRIPTION Cement-New Well Casing/Pi

T JOB CONTACT

JOB #	EQUIPMENT #	PURCHASE	ORDER NO.		TERMS	DUE DATE
40780779	20920				Net - 30 days	11/27/2014
			QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates	s: 10/24/2014 to 10	/24/2014				
0040780779						
010700770		7				
171811496A Ceme	ent-New Well Casing/Pi 1	0/24/2014	<u>,                                      </u>			7. 250
Cement PTA	· · · · · · /		Je	, ·	32. ,	·
20/40 POZ	<u>V</u>	MOV 09 20H	200.00	EA	9.24	1,848.00
Cement Gel		NOV	344.00		0.19	66.22
"Unit Mileage Chg ( Heavy Equipment M		Olyn I	40.00 80.00		3.47 5.78	138.6 462.0
"Proppant & Bulk D	el. Chgs., per ton mil	P. B. L. D. L.	344.00	EA	1.93	662.2
Depth Charge; 400° Blending & Mixing S		• (	1.00 200.00		1,940.40 1.08	
"Service Supervisor			1.00		134.75	
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PLEASE REMIT TO:

SEND OTHER CORRESPONDENCE TO:

BASIC ENERGY SERVICES, LP
PO BOX 841903
BASIC ENERGY SERVICES, LP
801 CHERRY ST, STE 2100
FORT WORTH, TX 76102

SUB TOTAL

TAX

INVOICE TOTAL



5,467.77

136.87 5,604.64



FIELD SERVICE ORDER NO

10244 NE Hwy. 61 P.O. Box 8613 Pratt, Kansas 67124 Phone 620-672-1201

# 1718 **11496** A

	PRESSU	RE PUN	IPING & WIRELINE				e Lington	DATE	TICKET NO			
DATE OF JOB	24-1	4	DISTRICT PRA	T. KS		WELL X	OLD D	PROD INJ	ı □ WDW		USTOMER ORDER NO.:	
CUSTOMER	Hiel	Fan	) and Co	,		LEASE /	307	cH A	• .	/.	WELL NO.	
ADDRESS		:		•		COUNTY	BARBE	2	STATE	15		
CITY			STATE			SERVICE CI	REW (	Misnis	Whotas	7	Zust	•
AUTHORIZED E	BY	•		• • • • • • • • • • • • • • • • • • • •		JOB TYPE:	(راله	/	A		7.2	• • •
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## TREATMENT REPORT

			0 1	Lease No.					Date	<del></del>		
Customer	Gotta	11) 00	2									
Lease So	STCH	A		Weli #					10	7-24	1-14	
Field Order #	Station	1147				Casing	Dept		County	4RBER		State.
Type Job	CNW	P.T.A					Formation	າ ′		Legal	Description アュー3 ヱ	-11
PIP	E DATA	PER	FORATING	DATA		FLUID L	ISED ·		TF	EATMEN	T RESUME	*
Casing Size	Tubing Si	ze Shots/F	Ft		Acid				RATE F	PRESS	ISIP	
Depth 949	Depth	From	То		Pre P	'ad	<del></del>	Max		* *	5 Min.	
Volume	Volume	From	То	•	Pad			Min		• • • •	10 Min	
Max Press	Max Pres	s From	То		Frac			Avg			15 Min.	
Well Connection	on Annulus \	/ol. From	То					HHP Use	ed	ř.	Annulus F	ressure .
Plug Depth	Packer D	epth From	То	í	Flush			Gas Volu	ime		Total Load	į.
Customer Rep	oresentative			Station	Manag	jer OAUE	Soft		Treate	Robert	1///-	5
Service Units	37700	33708	20520			3860						
Driver Names	Sullis	NEta	1. ~	821		<u> </u>						,
Time	Casing Pressure	Tubing Pressure	Bbls. Pui			ate	-			Service Log		
11,30	l <sub>m</sub>						on Lc			* + +	· · · · · · · · · · · · · · · · · · ·	•
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										<u> </u>		
	·						330					
615			5		٠.	•	STACE.					
			10	2			cont					
4:25				>			DISP			: 		
	·	<u> </u>				* .		· ,			¥(t	
7.15							101	60	w/20	<u>IH</u>	w/30	
2130		[ "						Ja	136	reff sh	Than	Kui



Page 1 of 2 Pages



butch1dst1

Company Chieftain Oil Company, Inc.		Lease & Well No. But	ch No. 1		
Elevation 1513 KB Formation Toronto	•	Effective Pay		Ft. Tic	ket No. K187
Date 10-18-14 Sec. 32 Twp.	32S Range	11W County	Barber	State	Kansas
Test Approved By Aaron You		iamond Representative		Jason McLe	more
Formation Test No. 1 Interval Test	ed from	3,654 <sub>ft. to</sub> 3,	,685 <sub>ft.</sub>	Total Depth	3,685 <sub>ft</sub>
	ze6 3/4 <sub>in.</sub>			ft. Size	
	ze <u>6 3/4</u> in.			ft. Size	
Depth of Selective Zone Set					
Top Recorder Depth (Inside)	3,635 ft.	Recorder Num	ber	5513 Cap	5,000 <sub>psi.</sub>
Bottom Recorder Depth (Outside)	3,636 <sub>ft.</sub>	Recorder Num	ber	5588_ Cap	6,000 <sub>psi.</sub>
Below Straddle Recorder Depth	ft.	Recorder Num	ber	Сар	psi.
Drilling Contractor Fossil Drilling, Inc Rig	2	Drill Collar Length		155 ft I.D.	2 1/4 in
Mud TypeChemicalViscosity	47	Weight Pipe Length			
WeightWater Loss_	9.2cc.	Drill Pipe Length		2.400	3 <sub>in.</sub>
4.000	P.P.M.	Test Tool Length			ol Size 3 1/2-IF in
Jars: Make <u>Sterling</u> Serial Nun	nber6	Anchor Length			
Did Well Flow? <u>No</u> Reversed Out		Surface Choke Size	1 <sub>in.</sub>	Bottom Choke	e Size5/8 <sub>in</sub>
		Main Hole Size			ze <u>4-FH</u> in.
Blow: 1st Open: Weak blow increasing to 3/4 in. No	blow back during shut-i	n.			
2nd Open: Weak blow increasing to 1 in. No I	olow back during shut-in				
Recovered75_ft. of drilling mud w/oil specks	s = .369000 bbls. (Grind	out: <1%-oil; >99%-mud)			
Recovered ft. of					
Recoveredft. of					
Recoveredft. of					
Recovered ft. of					
Recovered ft. of					
Remarks Tool slid 7 ft. on 1st open.					
44.50.514		22244		•	
Time Set Packer(s) 11:53 P.M. Tim	ne Started off Bottor		Maximu	um Temperature	109°
nitial Hydrostatic Pressure	` · ·				
nitial Flow PeriodMinutes	30 (B)	41 P.S.I.	to (C)		<sup>55</sup> P.S.I.
nitial Closed In PeriodMinutes	60(D)_				
Final Flow PeriodMinutes	45 (E)_	60 P.S.I	to (F)		62 P.S.I.
Final Closed In PeriodMinutes	75 (G)	212 P.S.I.			
Final Hydrostatic Pressure	(H)_	1718 P.S.I.			



#### JASON MCLEMORE

CELL # 620-617-0527

#### **General Information**

Company Name Chieftain Oil Company, Inc

Contact Ryan Molz Job Number K187 **Well Name Butch #1 Representative Jason McLemore** Unique Well ID DST #1 Toronto 3654-3685 Well Operator Chieftain Oil Company, Inc **Surface Location** 32-32s-11w-Barber Prepared By **Jason McLemore** Field **Aaron Young** 

Wildcat Qualified By Well Type **Vertical Test Unit** 

**Test Information** 

Representative Jason McLemore **Drill Stem Test Well Operator Test Type** Chieftain Oil Company, Inc Formation Toronto Report Date 2014/10/19 Well Fluid Type 01 Oil Prepared By **Jason McLemore** Test Purpose (AEUB) **Initial Test** 

Start Test Date 2014/10/18 Start Test Time 21:52:00 **Final Test Date** 2014/10/19 Final Test Time 05:27:00

#### **Test Results**

#### RECOVERED:

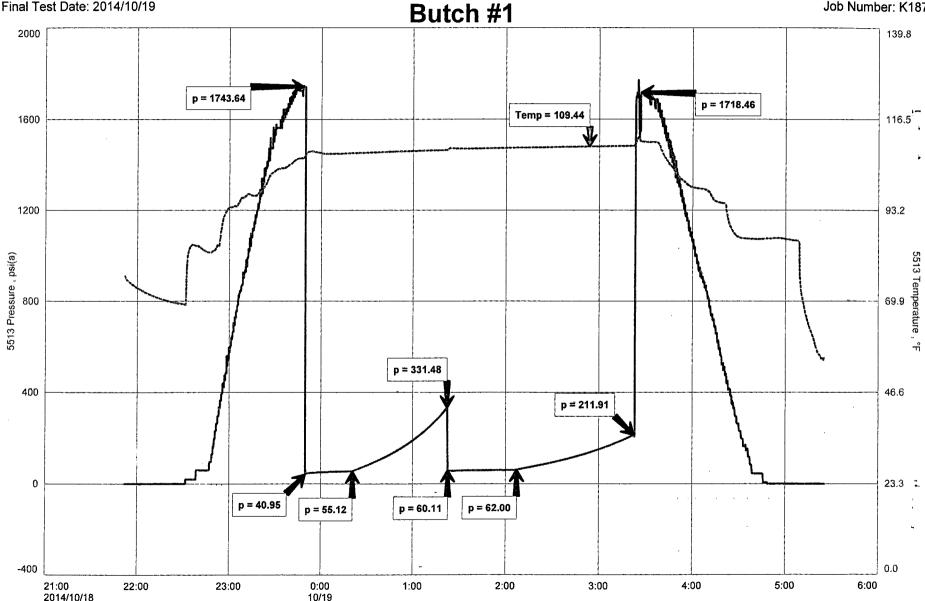
Drilling Mud W/Oil Specks, <1% Oil

TOTAL FLUID

Chieftain Oil Company, Inc DST #1 Toronto 3654-3685 Start Test Date: 2014/10/18 Final Test Date: 2014/10/19

2014/10/18

Butch #1 Formation: Toronto Pool: Wildcat Job Number: K187



5513-Time

This is an actual photograph of recorder chart.

PSI
PSI
PŚI
PSI

## **NOMENCLATURE**

=	Approximate Radius of Investigation	Feet
=	Approximate Radius of Investigation (Net Pay Zone h <sup>1</sup> )	Feet
=	Damage Ratio	. ———
=	Elevation	Feet
=	B.T. Gauge Depth (From Surface Reference)	Feet
=	Interval Tested	Feet
_	Net Pay Thickness	Feet
=	Permeability	md
=	Permeability (From Net Pay Zone h1)	md
	Slope Extrapolated Pressure Plot (Psi²/cycle Gas)	psi/cycle
=	Maximum Indicated Flow Rate	MCF/D
=	Minimum Indicated Flow Rate	MCF/D
	Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
=	Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
	Extrapolated Static Pressure	Psig.
	Final Flow Pressure	Psig.
=	Potentiometric Surface (Fresh Water*)	Feet
	Potentiometric Surface (Fresh Water*)  Average Adjusted Production Rate During Test	
=		bbls/day
=	Average Adjusted Production Rate During Test	bbls/day bbls/day
<u>=</u>	Average Adjusted Production Rate During Test  Theoretical Production w/Damage Removed	bbls/day bbls/day MCF/D
<u> </u>	Average Adjusted Production Rate During Test  Theoretical Production w/Damage Removed  Measured Gas Production Rate	bbls/day bbls/day MCF/D bbls
= = = =	Average Adjusted Production Rate During Test Theoretical Production w/Damage Removed Measured Gas Production Rate Corrected Recovery	bbls/day bbls/day MCF/D bbls Feet
= = = = =	Average Adjusted Production Rate During Test  Theoretical Production w/Damage Removed  Measured Gas Production Rate  Corrected Recovery  Radius of Well Bore	bbls/day bbls/day MCF/D bbls Feet Minutes
	Average Adjusted Production Rate During Test Theoretical Production w/Damage Removed Measured Gas Production Rate Corrected Recovery Radius of Well Bore Flow Time	bbls/day bbls/day MCF/D bbls Feet Minutes Minutes
= = = = = =	Average Adjusted Production Rate During Test Theoretical Production w/Damage Removed Measured Gas Production Rate Corrected Recovery Radius of Well Bore Flow Time Total Flow Time	bbls/day bbls/day MCF/D bbls Feet Minutes Minutes PR
= = = = = = =	Average Adjusted Production Rate During Test Theoretical Production w/Damage Removed Measured Gas Production Rate Corrected Recovery Radius of Well Bore Flow Time Total Flow Time Temperature Rankine	bbls/day bbls/day MCF/D bbls Feet Minutes Minutes PR
		<ul> <li>Approximate Radius of Investigation (Net Pay Zone h¹)</li> <li>Damage Ratio</li> <li>Elevation</li> <li>B.T. Gauge Depth (From Surface Reference)</li> <li>Interval Tested</li> <li>Net Pay Thickness</li> <li>Permeability</li> <li>Permeability (From Net Pay Zone h¹)</li> <li>Slope Extrapolated Pressure Plot (Psi²/cycle Gas)</li> <li>Maximum Indicated Flow Rate</li> <li>Minimum Indicated Flow Rate</li> <li>Theoretical Open Flow Potential with/Damage Removed Max.</li> <li>Theoretical Open Flow Potential with/Damage Removed Min.</li> <li>Extrapolated Static Pressure</li> <li>Final Flow Pressure</li> </ul>

<sup>\*</sup> Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.



P.O. Box 157

HOISINGTON, KANSAS 67544
(620) 653-7550 • (800) 542-7313 butch1dst2

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Company Chieftain Oil Cor	npany, Inc.			Lease & Well No. B	utch No. 1			
Elevation 1513 KB For	mation Douglas			Effective Pay		Ft.	Ticket No.	K188
Date10-19-14 Sec	Twp	32SRa	nge	11W County	Barber	State	Kans	as
Test Approved By	Aaron Young	g	Dia	mond Representativ		Jason M	cLemore	
Formation Test No. 2	Interval Tester	l from	3,	713 ft. to	3,732 ft	Total Depth	3,73	32 ft
Packer Depth 3,70		0.044		<del></del>		ft. Size		
Packer Depth 3,7		2.24				t. Size		'''' <sup></sup> in.
Depth of Selective Zone Se				, dono, 2 op	***		~ <u></u>	_''''
Top Recorder Depth (Inside	)	3,694 ft.		Recorder No	umber	5513 C	ap	5,000 <sub>psi</sub>
Bottom Recorder Depth (Ou	ıtside)	3,695 ft.		Recorder No				6,000 <sub>psi</sub> .
Below Straddle Recorder De	epth	ft.		Recorder Nu	<del></del>		ар	
Drilling Contractor Fossil Dr	illing, Inc Rig 2			Drill Collar Length_		155 ft	I.D	2 1/4 ir
Mud TypeChemical	Viscosity	47	,	Weight Pipe Length		ft	I.D	in.
Weight9.0	Water Loss	9.2	_cc.	Drill Pipe Length		3,525 <sub>ft</sub>	I.D	3 <sub>in.</sub>
Chlorides 4,50	0P	.P.M.	•	Test Tool Length		33 <sub>ft</sub>	Tool Size_	3 1/2-IF <sub>in</sub>
Jars: Make Sterling	Serial Numb	er6		Anchor Length		19 <sub>ft.</sub>	Size4	1/2-FH <sub>in.</sub>
Did Well Flow? No Re	eversed OutN	10	;	Surface Choke Size	1 <sub>in.</sub>	Bottom Cl	noke Size	5/8 <sub>in</sub>
				Main Hole Size	770		t Size	
Recovered	easing. Off bottom of	bucket in 10 min	ns. No b	low back during shut-in. ter; 5%-mud) Chlorides:			85 @ 60°	
Fime Set Packer(s)4:55 P		Started off B	_	7:55 P.M. 1755 <sub>P.S</sub>		um Temperat	ture <u> </u>	16°
nitial Hydrostatic Pressure nitial Flow Period		20	(A)				285 <sub>P.S.I.</sub>	
nitial Closed In Period			(B) (D)		.I. to (C)_		P.S.I.	
Final Flow Period		20	(E)		 .I to (F)_		448 P.S.	ı
Final Closed In Period		60	(G)	r.s 1288 <sub>P.S</sub>			F.3.	1.
Final Hydrostatic Pressure			. ,	1734 P.S				
			· · ·/					



#### **JASON MCLEMORE**

#### CELL # 620-617-0527

#### **General Information**

Company Name Chieftain Oil Company, Inc

Contact Ryan Molz Job Number K188 Well Name **Butch #1 Representative** Jason McLemore **Unique Well ID** DST #2 Douglas 3713-3732 Well Operator Chieftain Oil Company, Inc

**Surface Location** 32-32s-11w-Barber Prepared By **Jason McLemore** Field Wildcat Qualified By **Aaron Young** Well Type **Vertical Test Unit** 

#### **Test Information**

Representative **Jason McLemore Test Type** Drill Stem Test Well Operator Chieftain Oil Company, Inc. Formation **Douglas Report Date** 2014/10/19 Well Fluid Type 01 Oil Prepared By Jason McLemore Test Purpose (AEUB) Initial Test

**Start Test Date** 2014/10/19 Start Test Time 14:24:00 **Final Test Date** 2014/10/19 Final Test Time 22:21:00

#### **Test Results**

#### RECOVERED:

875 Muddy Water, 95% Water, 5% Mud 875

TOTAL FLUID

CHLORIDES: 140,000

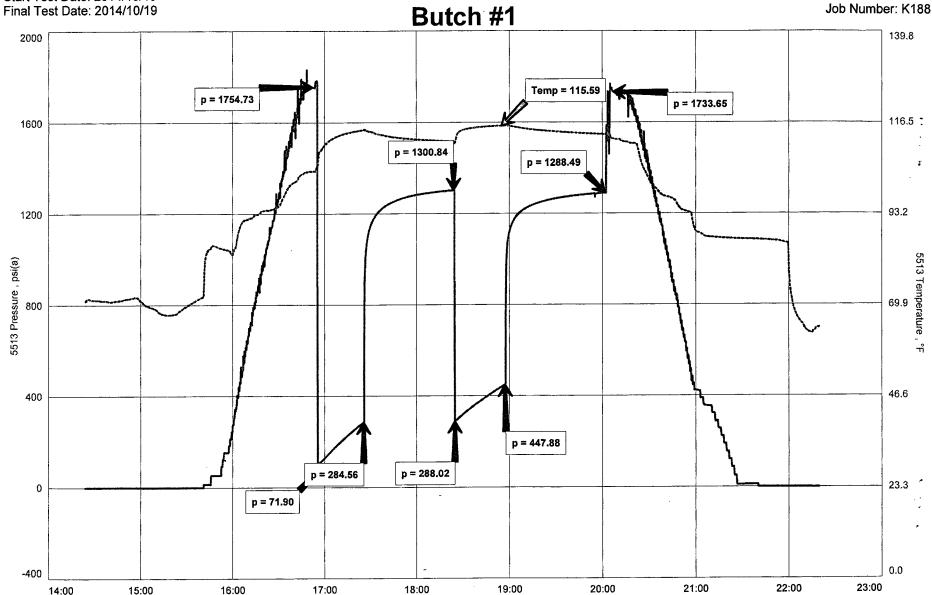
PH: 7

RW: .850 @ 60

Chieftain Oil Company, Inc DST #2 Douglas 3713-3732 Start Test Date: 2014/10/19

2014/10/19

Butch #1 Formation: Douglas Pool: Wildcat Job Number: K188



5513-Time

This is an actual photograph of recorder chart.

POINT		PRESSURE Electronic Reading	
(A)	Initial Hydrostatic Mud	1755	PSI
(B)	First Initial Flow Pressure		
(C)	First Final Flow Pressure		
(D)	Initial Closed-in Pressure		
(E)	Second Initial Flow Pressure		
(F)	Second Final Flow Pressure		
(G)	Final Closed-in Pressure		
(H)	Final Hydrostatic Mud		
V 17	i iliai i lydiostatio Mud	***************************************	

## **NOMENCLATURE**

b	= Approxir	nate Radius of Investigation	Feet
b <sup>1</sup>	Approxir	nate Radius of Investigation (Net Pay Zone h <sup>1</sup> )	Feet
D.R.	Damage	Ratio	
EI	<u> </u>	l	Feet
GD	B.T. Gau	ge Depth (From Surface Reference)	Feet
h	= Interval	Tested	Feet
h¹	= Net Pay	Thickness	Feet
K	— Permeabi	ility	. md
Κ¹	- Permeabi	ility (From Net Pay Zone h¹)	md
m	= Slope Ext	trapolated Pressure Plot (Psi²/cycle Gas)	psi/cycle
OF1	<u> </u>	n Indicated Flow Rate	.MCF/D
OF <sup>2</sup>	<u> </u>	Indicated Flow Rate	MCF/D
OF <sup>3</sup>	Theoretic	al Open Flow Potential with/Damage Removed Max.	MCF/D
OF4	Theoretic	al Open Flow Potential with/Damage Removed Min.	MCF/D
PS	<u> </u>	ted Static Pressure	Psig.
PF	= Final Flo	w Pressure	Psig.
Pot	= Potention	netric Surface (Fresh Water*)	Feet
Q	Average	Adjusted Production Rate During Test	.bbls/day
Q <sup>1</sup>	Theoretic	al Production w/Damage Removed	.bbls/day
Q9	Measured	Gas Production Rate	MCF/D
R	<u> </u>	Recovery	bbls
r w	= Radius of	Well Bore	Feet
t	Flow Tim	ie	Minutes
† o	Total Flo	w Time	Minutes
T	Temperat	ure Rankine	. <b>.ºR</b>
Z	Compress	sibility Factor	.,
U	Viscosity	Gas or Liquid	СР
Log	Common	Log	

<sup>\*</sup> Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.