

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

New Well  Re-Entry  Workover

Oil  WSW  SWD

Gas  DH  EOR

OG  GSW

CM (Coal Bed Methane)

Cathodic  Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

Deepening  Re-perf.  Conv. to EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

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  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, 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 log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	DREILING C 1
Doc ID	1353934

Tops

Name	Top	Datum
Anhydrite	976'	(+877)
Base/Anhydrite	1015'	(+838)
Topeka	2765'	(-912)
Heebner	3018'	(-1165)
Toronto	3038'	(-1185)
Lansing	3069'	(-1216)
Base/KC	3311'	(-1458)
Arbuckle	3342'	(-1489)
L.T.D.	3418'	(-1565)

Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	DREILING C 1
Doc ID	1353934

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	Lansing "C" 3096-3100'	1750 gals. 15% NE	
4	Lansing "D" 3112-3117'	500 gals. 15% NE	
	Lansing "C" & "D"	Retreat w/1000 gals. 15% NE	
4	Arbuckle 3348-3360'	500 gals. 15% NE	(Non-productive)



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 7313

Date	Sec.	Twp.	Range	County	State	On Location	Finish
1-4-17	24	12	16	Ellis	KS		9:00 p.m.

Location Cochran 1w 80 Lowest Cave 3/4w North

Lease Dreiling C Well No. 1 Owner To Quality Oilwell Cementing, Inc.

Contractor D. Scoven #1  
Type Job Surface  
Hole Size 12 1/4 T.D. 221 Charge To JO Farmer

Csg. 8 5/8 Depth 220 Street \_\_\_\_\_

Tbg. Size \_\_\_\_\_ Depth \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

Tool \_\_\_\_\_ Depth \_\_\_\_\_ The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 10' Shoe Joint \_\_\_\_\_ Cement Amount Ordered 150 #/20 3/4 2/4 2/4 2/4

Meas Line \_\_\_\_\_ Displace 13BL

EQUIPMENT			Common
Pumptrk	No.	Cement Helper	<u>150 120</u>
		Driver	<u>30</u>
Bulktrk	No.	Driver	<u>3</u>
		Driver	<u>6</u>
Bulktrk	No.	Driver	
		Driver	

JOB SERVICES & REMARKS

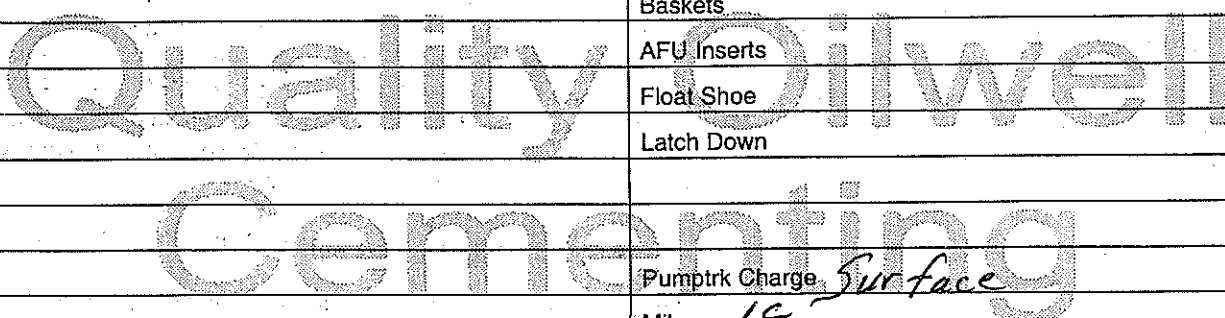
Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38

8 5/8 on bottom Est. Circulation  
Mix 150 SIC & Displace  
Cement Circulated

FLOAT EQUIPMENT	
Handling	<u>159</u>
Mileage	
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Pumptrk Charge Surface  
Mileage 18

Signature <u>[Signature]</u>	Tax
	Discount
	Total Charge



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 7319

Date	1-12-17	Sec.	24	Twp.	12	Range	16	County	Ellis	State	KS	On Location		Finish	4:30 pm
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Lease Dreiling C Well No. 1 Location Garham 1w 8N Locust Grove 3/4 W Sinto

Contractor D. Scoville Owner To Quality Oilwell Cementing, Inc.

Type Job Production String You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size 7 7/8 T.D. 3420 Charge To S.O. Farmer

Csg. 5 1/2 Depth 3414 Street

Tbg. Size Depth City State

Tool Port Collar Depth 970 The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 34' Shoe Joint 34' Cement Amount Ordered 175 lb/salt @ 5/1 C/sawite

Meas Line Displace 82 1/2 BCL 10 BCL + 50 gal mud clear

**EQUIPMENT** Common 175

Pumptrk 20 No. Cementer Gray Poz. Mix

Bulktrk No. Driver Dett Gel.

Bulktrk 15 No. Driver Doug Calcium

**JOB SERVICES & REMARKS** Halls KCH 1 gal

Remarks: Salt 15

Rat Hole 305K Flowseal

Mouse Hole 155K Kol-Seal 800 FT

Centralizers Mud CLR 48 500 gal

Baskets CFL-117 or CD110 CAF 38

D/V or Port Collar Sand

5 1/2 set @ 3414. Insure @ 3380. Handling 198

Est Circulation Pump seal and clear Mileage

10 BCL Plus Reducer mud hole. **FLOAT EQUIPMENT**

Cement 5 1/2 with 1305K Guide Shoe

Plus Landed @ 1400 FT Centralizer 7 Turbo's

Baskets 2

AFU Inserts Port Collar (Company's)

Float Shoe 1

Latch Down 1

Pumptrk Charge prod string

Mileage 18

Tax

Discount

Total Charge

X Signature Chris W. ...

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 3139

Date	2-7-17	Sec.	24	Twp.	12	Range	16	County	Ellis	State	Ks	On Location		Finish	12:00 PM
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Lease Dreiling C Location Gorham - 1W, N to Locust Grove, 1/2 W

Well No.	#1	Owner	N/Info
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Contractor	Western well Service	To Quality Oilwell Cementing, Inc.
Type-Job	Port Collar	You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size	5 1/2"	T.D.		Charge To	J.O. Farmer
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Csg.	3415'	Depth		Street	
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Tbg. Size	964'	Depth		City		State	
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Tool	Port Collar	Depth		The above was done to satisfaction and supervision of owner agent or contractor.		
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Cement Left in Csg.		Shoe Joint		Cement Amount Ordered	175 80/20 QMDC 1/4# Flo-seal
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Meas Line	Displace	4 1/2 BLS	6 gal on side	used 165
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EQUIPMENT			Common	132	} 165 80/20 QMDC
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Pumptrk	18	No.	Cementer		Poz. Mix	33
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Bulktrk	3	No.	Driver	Nick #4 Nick	Gel.	6
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Bulktrk	p.u.	No.	Driver	Rick	Calcium	
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JOB SERVICES & REMARKS			Hulls
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Remarks:	tool closed test to 1000# held	Salt
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Rat Hole	open tool <del>can</del> establish a blow	Flowseal	40 #
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Mouse Hole	mix 6 gal + 165 QMDC 1/4#	Kol-Seal
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Centralizers	Displaced w/ 4 1/2 BLS	Mud CLR	48
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Baskets	Closed tool test to 1000# held	CFL-117 or CD110 CAF	38
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D/V or Port Collar	Run 5 Jts tubing + work	Sand
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Clean.	wash up + Rigged down	Handling	175
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		Mileage
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FLOAT EQUIPMENT		
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Cement did	Circulate	Guide Shoe
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		Centralizer
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		Baskets
--	--	---------

		AFU Inserts
--	--	-------------

		Float Shoe
--	--	------------

		Latch Down
--	--	------------

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		Pumptrk Charge	part collar
--	--	----------------	-------------

		Mileage	18
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		Tax
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		Discount
--	--	----------

		Total Charge
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X Signature	Del Wheeler	
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# QUALITY OILWELL CEMENTING, INC.

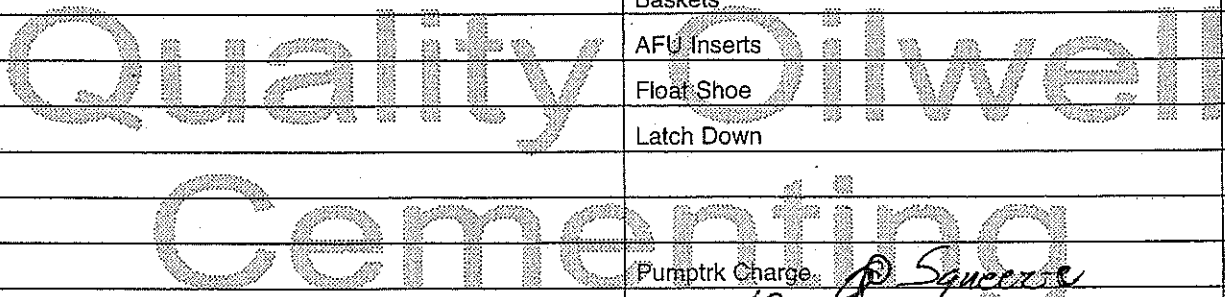
Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 130

Date	3-27-12	Sec.		Twsp.		Range		County	Ellis	State	KS	On Location		Finish	245pm						
Location														Corham 1W 8N Lowst Grove 1/2W 1N10							
Lease	Drilling C			Well No.			1			Owner											
Contractor										To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.											
Type Job										Retain											
Hole Size										7/8			T.D.			Charge To			50 Farmer		
Csg.										5/2			Depth			Street					
Tbg. Size										2 7/8			Depth			City State					
Tool										Richardt Chris			Depth			The above was done to satisfaction and supervision of owner agent or contractor.					
Cement Left in Csg.										Shoe Joint			Cement Amount Ordered						75 lbm 2/1-12		
Meas Line										Displace			19 1/4 BCL			Used 50					
<b>EQUIPMENT</b>														Common		Used 50					
Pumptrk										5 No. Cementer			Graig			Hulls					
										Helper			Brett			Salt					
Bulktrk										No. Driver			Brett			Flowseal					
										Driver			Dore			Kol-Seal					
Bulktrk										9 No. Driver			Dore			Mud CLR 48					
										Driver			Dore			CFL-117 or CD110 CAF 38					
<b>JOB SERVICES &amp; REMARKS</b>														Sand							
Remarks:														Handling		75					
Rat Hole														Mileage		18					
Mouse Hole														<b>FLOAT EQUIPMENT</b>							
Centralizers														Guide Shoe							
Baskets														Centralizer							
D/V or Port Collar														Baskets							
Retain set 3530														AFU Inserts							
Lead Hole Rate 4 BCL 1500 ft														Float Shoe							
M-V 50 SK + Displace 18 3/4 BCL														Latch Down							
										Pumptrk Charge			9 Squire								
										Mileage			18								
										Tax											
										Discount											
										Total Charge											
X Signature										Val Oh											





# Discovery Drilling

P.O. Box 763 • Hays, KS 67601 • OFFICE (785) 623-2920 • CELLULAR (785) 635-1511

## DRILLER'S LOG

Operator: John O. Farmer, Inc. Lic# 5135 Contractor: Discovery Drilling Co., Inc. LIC#31548  
370 West Wichita Avenue - P.O. Box 352 PO Box 763  
Russell, KS 67665 + 2635 Hays, KS 67601

Lease: Dreiling "C" # 1 Location: 2075 FSL - 1995 FEL  
SE/NW/NW/SE  
Section 24/ 12S/ 16W  
Ellis County, KS

Loggers Total Depth: 3418' API#15- 051-26,859-00-00  
Rotary Total Depth: 3420' Elevation: 1845 GL - 1853 KB  
Commenced: 1/4/2017 Completed: 1/12/2017  
Casing: 8 5/8" @ 221.47'W/150sks Status: Oilwell  
5 1/2" @ 3414'W/130sks  
(Port Collar @ 970')

### DEPTHS & FORMATIONS (All from KB)

Surface, Sand & Shale	<u>0'</u>	Shale	<u>1015'</u>
Dakota Sand	<u>433'</u>	Shale & Lime	<u>1324'</u>
Shale	<u>535'</u>	Shale	<u>1986'</u>
Cedar Hill Sand	<u>577'</u>	Shale & Lime	<u>2312'</u>
Red Bed Shale	<u>691'</u>	Lime & Shale	<u>2963'</u>
Anhydrite	<u>969'</u>	RTD	<u>3420'</u>
Base Anhydrite	<u>1015'</u>		

STATE OF KANSAS) )  
) ss  
COUNTY OF ELLIS )

Thomas H. Alm of Discovery Drilling states that to the best of his knowledge the above and foregoing is a true and correct log of the above captioned well.

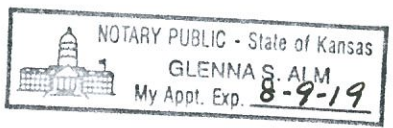
\_\_\_\_\_  
Thomas H. Alm

Subscribed and sworn to before me on 1-13-2017

My Commission expires: 8-9-2019

(Place stamp or seal below)

\_\_\_\_\_  
Notary Public





## DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

370 W. Wichita Ave  
PO Box 352  
Russell KS 67665-2635

ATTN: JO FarmerIV, Jason AI

### **Dreiling C#1**

#### **24-12s-16w Ellis,KS**

Start Date: 2017.01.09 @ 14:50:22

End Date: 2017.01.09 @ 21:50:16

Job Ticket #: 64084                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.01.12 @ 13:23:21



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

John O Farmer Inc  
370 W. Wichita Ave  
PO Box 352  
Russell KS 67665-2635  
ATTN: JO Farmer IV, Jason AI

**24-12s-16w Ellis, KS**

**Dreiling C#1**

Job Ticket: 64084

**DST#: 1**

Test Start: 2017.01.09 @ 14:50:22

## GENERAL INFORMATION:

Formation: **LKC A-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:03:47

Time Test Ended: 21:50:16

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 77

**Interval: 3045.00 ft (KB) To 3110.00 ft (KB) (TVD)**

Reference Elevations: 1853.00 ft (KB)

Total Depth: 3110.00 ft (KB) (TVD)

1845.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8018 Inside**

Press@RunDepth: 60.42 psig @ 3049.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.01.09 End Date: 2017.01.09

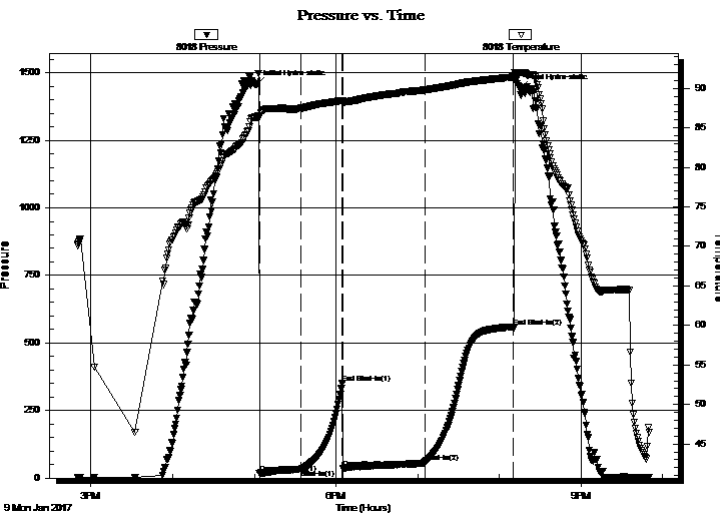
Last Calib.: 2017.01.09

Start Time: 14:50:22 End Time: 21:50:16

Time On Btm: 2017.01.09 @ 17:01:47

Time Off Btm: 2017.01.09 @ 20:15:16

**TEST COMMENT:** 30-IFP-w k bl thru-out 1/4" to 1 1/2" bl  
30-ISIP-no bl  
60-FFP-w k to a fr bl 2 1/2" to 4" bl  
60-FSIP-no bl



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1456.15	86.36	Initial Hydro-static
2	17.90	86.43	Open To Flow (1)
32	33.65	87.45	Shut-In(1)
63	350.86	88.44	End Shut-In(1)
64	37.27	88.30	Open To Flow (2)
124	60.42	89.79	Shut-In(2)
189	560.12	91.42	End Shut-In(2)
194	1442.38	92.01	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
80.00	OCGM 30% G10% O60% M	0.59
0.00	235' GIP	0.00

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

John O Farmer Inc  
370 W. Wichita Ave  
PO Box 352  
Russell KS 67665-2635  
ATTN: JO Farmer IV, Jason AI

**24-12s-16w Ellis, KS**

**Dreiling C#1**

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Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1853.00 ft (KB)

1845.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8700 Outside**

Press@RunDepth: psig @ 3049.00 ft (KB)

Start Date: 2017.01.09

End Date:

2017.01.09

Start Time: 14:50:46

End Time:

21:50:40

Capacity: 8000.00 psig

Last Calib.:

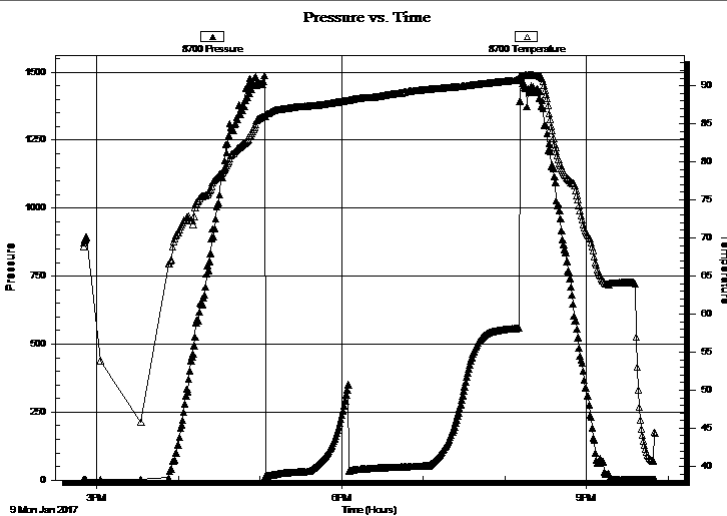
2017.01.09

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 30-IFP-w k bl thru-out 1/4" to 1 1/2" bl  
30-ISIP-no bl  
60-FFP-w k to a fr bl 2 1/2" to 4" bl  
60-FSIP-no bl

## PRESSURE SUMMARY



Time (Min.)

Pressure (psig)

Temp (deg F)

Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
80.00	OCGM 30%G10%O60%M	0.59
0.00	235'GIP	0.00

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

John O Farmer Inc

**24-12s-16w Ellis,KS**

370 W.Wichita Ave  
PO Box 352  
Russell KS 67665-2635  
ATTN: JO FarmerIV,Jason AI

**Dreiling C#1**

Job Ticket: 64084

**DST#: 1**

Test Start: 2017.01.09 @ 14:50:22

## Tool Information

Drill Pipe:	Length: 2771.00 ft	Diameter: 3.80 inches	Volume: 38.87 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 280.00 ft	Diameter: 2.75 inches	Volume: 2.06 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 40.93 bbl</u>	Tool Chased 10.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3045.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	65.00 ft			
Tool Length:	86.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3025.00	
Shut In Tool	5.00			3030.00	
Hydraulic tool	5.00			3035.00	
Packer	5.00			3040.00	21.00 Bottom Of Top Packer
Packer	5.00			3045.00	
Stubb	1.00			3046.00	
Perforations	3.00			3049.00	
Recorder	0.00	8018	Inside	3049.00	
Recorder	0.00	8700	Outside	3049.00	
Blank Spacing	33.00			3082.00	
Perforations	25.00			3107.00	
Bullnose	3.00			3110.00	65.00 Bottom Packers & Anchor

**Total Tool Length: 86.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

John O Farmer Inc

**24-12s-16w Ellis,KS**

370 W.Wichita Ave  
PO Box 352  
Russell KS 67665-2635  
ATTN: JO FarmerIV,Jason AI

**Dreiling C#1**

Job Ticket: 64084

**DST#: 1**

Test Start: 2017.01.09 @ 14:50:22

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 52.00 sec/qt  
Water Loss: 8.71 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 8500.00 ppm  
Filter Cake: 1.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: ppm

## Recovery Information

Recovery Table

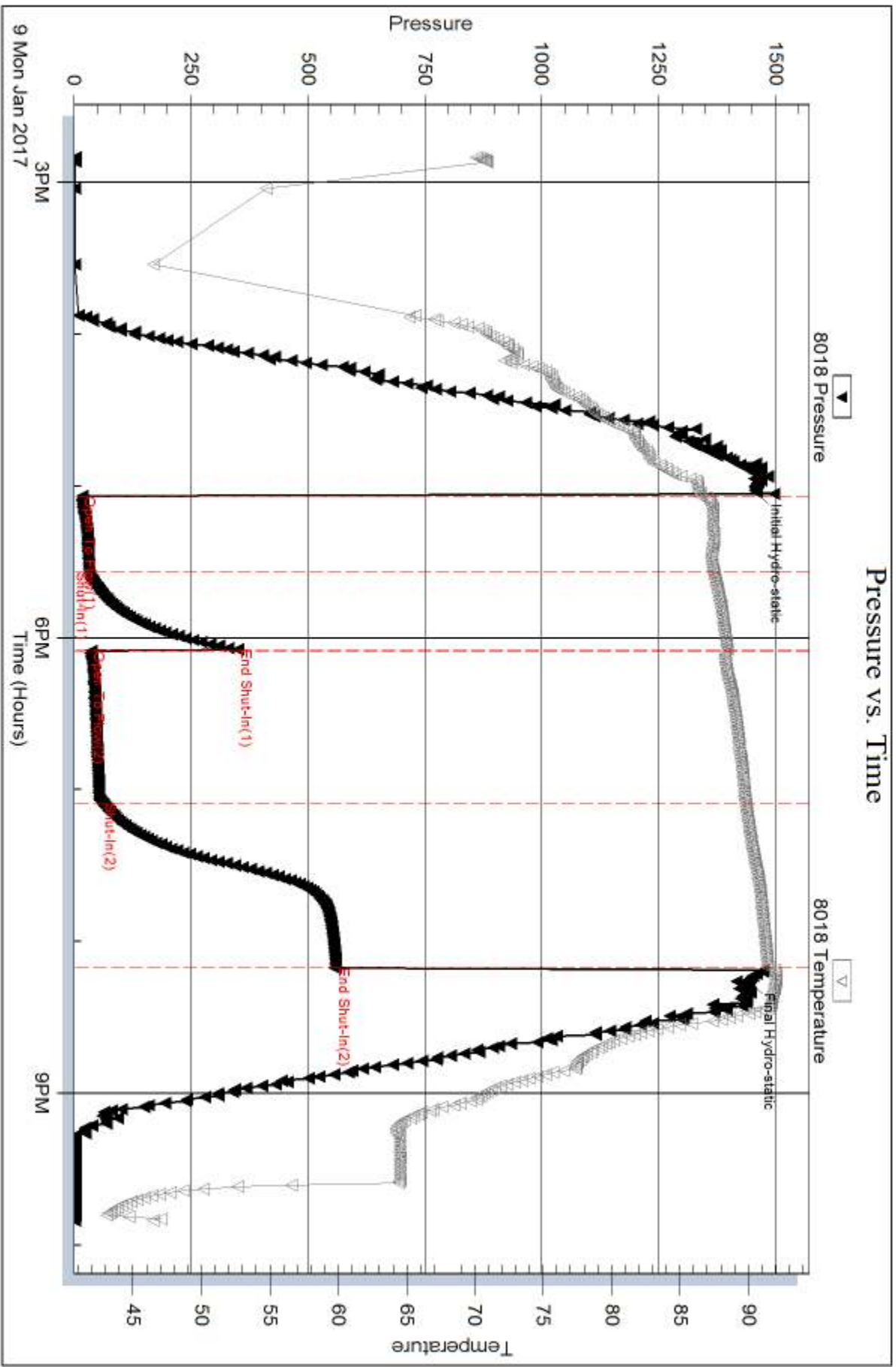
Length ft	Description	Volume bbl
80.00	OCGM 30%G10%O60%M	0.588
0.00	235'GIP	0.000

Total Length: 80.00 ft      Total Volume: 0.588 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: slid tool 10' to bottom



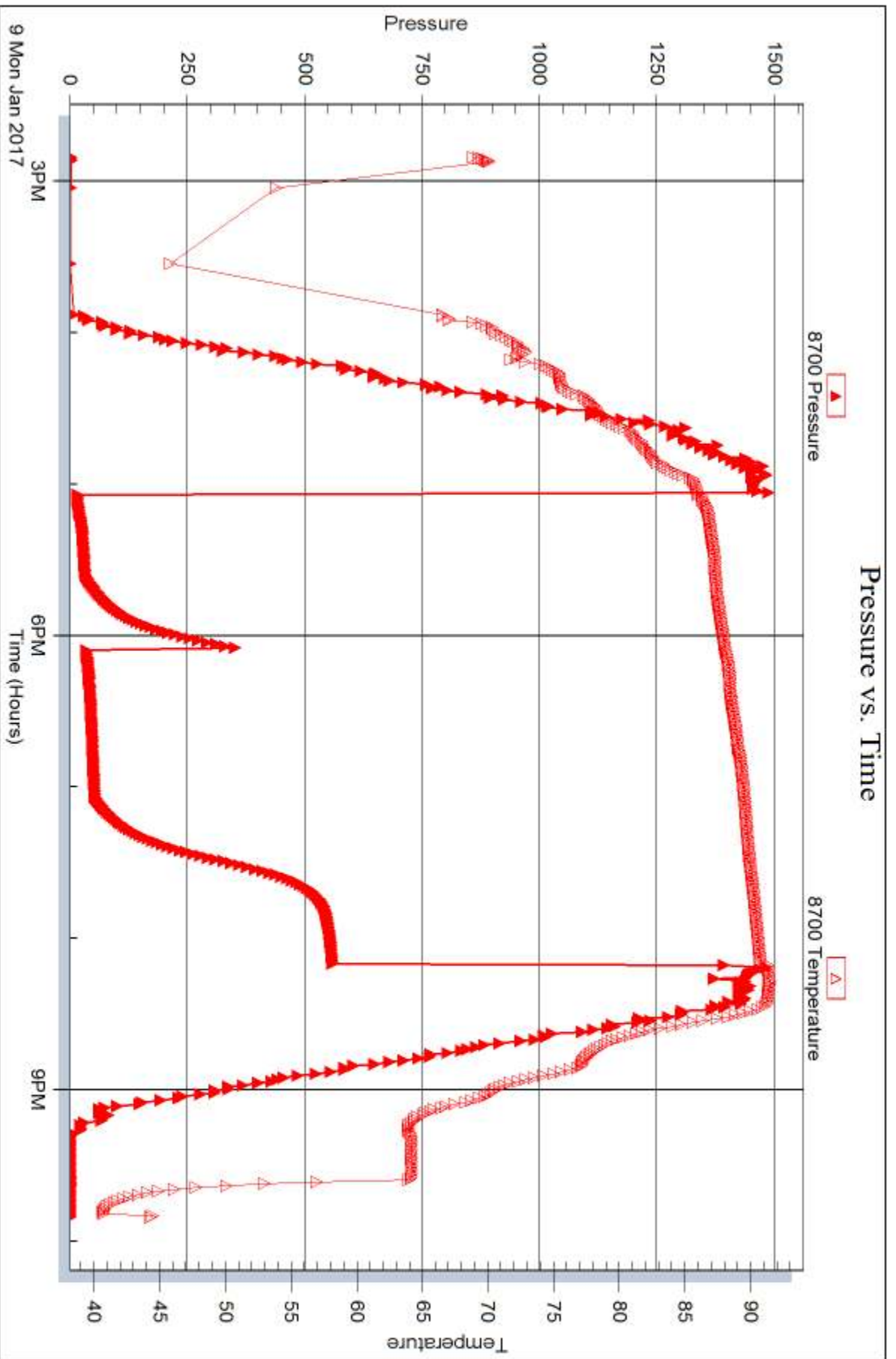


Serial #: 8700

Outside John O Farmer Inc

Drilling C#1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 64084

Printed: 2017.01.12 @ 13:23:22



## DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

370 W. Wichita Ave  
PO Box 352  
Russell KS 67665-2635

ATTN: JO FarmerIV, Jason AI

### **Dreiling C#1**

#### **24-12s-16w Ellis,KS**

Start Date: 2017.01.10 @ 05:35:46

End Date: 2017.01.10 @ 13:06:10

Job Ticket #: 64085                      DST #: 2

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.01.12 @ 13:22:49



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

John O Farmer Inc  
370 W. Wichita Ave  
PO Box 352  
Russell KS 67665-2635  
ATTN: JO Farmer IV, Jason AI

**24-12s-16w Ellis, KS**

**Dreiling C#1**

Job Ticket: 64085

**DST#: 2**

Test Start: 2017.01.10 @ 05:35:46

## GENERAL INFORMATION:

Formation: **LKC D-F**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:17:11  
 Time Test Ended: 13:06:10  
 Interval: **3104.00 ft (KB) To 3158.00 ft (KB) (TVD)**  
 Total Depth: 3158.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ray Schwager  
 Unit No: 77  
 Reference Elevations: 1853.00 ft (KB)  
 1845.00 ft (CF)  
 KB to GR/CF: 8.00 ft

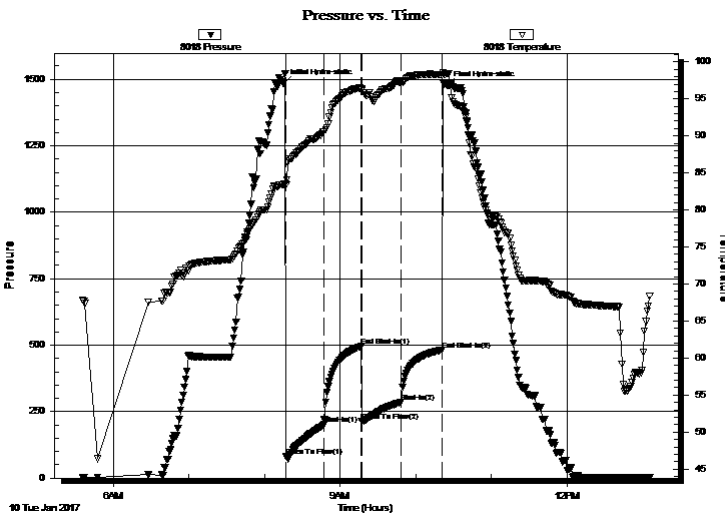
## Serial #: 8018

Inside

Press@RunDepth: 286.33 psig @ 3108.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.01.10 End Date: 2017.01.10 Last Calib.: 2017.01.10  
 Start Time: 05:35:46 End Time: 13:06:10 Time On Btm: 2017.01.10 @ 08:15:11  
 Time Off Btm: 2017.01.10 @ 10:24:55

TEST COMMENT: 30-IFP-strg bl in 1 min  
 30-ISIP-strg bl bk , 8 min into  
 30-FFP-strg bl thru-out  
 30-FSIP-strg bl bk ,GTS 2 min into

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1483.28	83.47	Initial Hydro-static
2	81.43	83.43	Open To Flow (1)
32	201.15	90.59	Shut-In(1)
62	495.24	96.43	End Shut-In(1)
62	213.80	96.31	Open To Flow (2)
94	286.33	97.20	Shut-In(2)
126	482.70	98.22	End Shut-In(2)
130	1476.36	98.39	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	SO&GCMW 15%G2%O10%M73%W	0.66
280.00	GMO 50%G10%M5%W35%O	2.66
310.00	CO	4.35
0.00	GTS	0.00

\* Recovery from multiple tests

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

John O Farmer Inc  
370 W.Wichita Ave  
PO Box 352  
Russell KS 67665-2635  
ATTN: JO FarmerIV, Jason AI

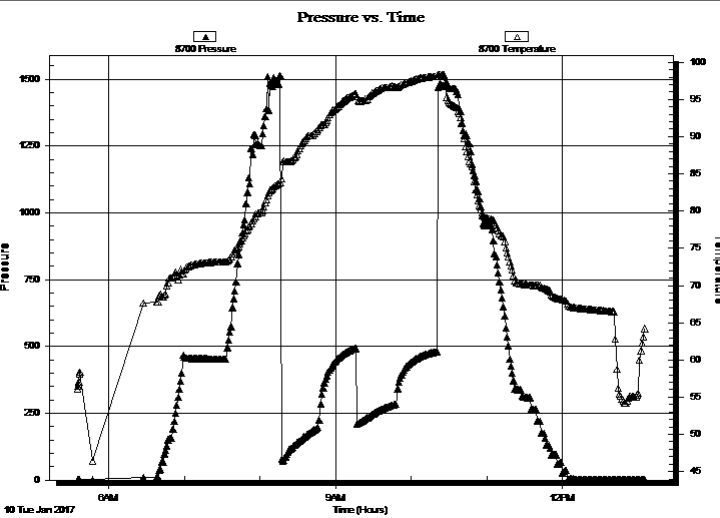
**24-12s-16w Ellis,KS**  
**Dreiling C#1**  
Job Ticket: 64085      **DST#: 2**  
Test Start: 2017.01.10 @ 05:35:46

## GENERAL INFORMATION:

Formation: **LKC D-F**  
Deviated: No Whipstock:      ft (KB)  
Time Tool Opened: 08:17:11  
Time Test Ended: 13:06:10  
Interval: **3104.00 ft (KB) To 3158.00 ft (KB) (TVD)**  
Total Depth: 3158.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Reference Elevations: 1853.00 ft (KB)  
1845.00 ft (CF)  
KB to GR/CF: 8.00 ft

**Serial #: 8700      Outside**  
Press@RunDepth:      psig @ 3108.00 ft (KB)  
Start Date: 2017.01.10      End Date: 2017.01.10  
Start Time: 05:35:20      End Time: 13:05:44  
Capacity: 8000.00 psig  
Last Calib.: 2017.01.10  
Time On Btm:  
Time Off Btm:

**TEST COMMENT:** 30-IFP-strg bl in 1 min  
30-ISIP-strg bl bk , 8 min into  
30-FFP-strg bl thru-out  
30-FSIP-strg bl bk ,GTS 2 min into



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery		
Length (ft)	Description	Volume (bbl)
90.00	SO&GCMW 15%G2%O10%M73%W	0.66
280.00	GMO 50%G10%M5%W35%O	2.66
310.00	CO	4.35
0.00	GTS	0.00

\* Recovery from multiple tests

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

John O Farmer Inc

**24-12s-16w Ellis,KS**

370 W.Wichita Ave  
PO Box 352  
Russell KS 67665-2635  
ATTN: JO FarmerIV,Jason AI

**Dreiling C#1**

Job Ticket: 64085

**DST#: 2**

Test Start: 2017.01.10 @ 05:35:46

## Tool Information

Drill Pipe:	Length: 2834.00 ft	Diameter: 3.80 inches	Volume: 39.75 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 280.00 ft	Diameter: 2.75 inches	Volume: 2.06 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 41.81 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3104.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	54.00 ft			
Tool Length:	75.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3084.00	
Shut In Tool	5.00			3089.00	
Hydraulic tool	5.00			3094.00	
Packer	5.00			3099.00	21.00 Bottom Of Top Packer
Packer	5.00			3104.00	
Stubb	1.00			3105.00	
Perforations	3.00			3108.00	
Recorder	0.00	8018	Inside	3108.00	
Recorder	0.00	8700	Outside	3108.00	
Blank Spacing	33.00			3141.00	
Perforations	14.00			3155.00	
Bullnose	3.00			3158.00	54.00 Bottom Packers & Anchor

**Total Tool Length: 75.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

John O Farmer Inc

**24-12s-16w Ellis,KS**

370 W.Wichita Ave  
PO Box 352  
Russell KS 67665-2635  
ATTN: JO FarmerIV,Jason AI

**Dreiling C#1**

Job Ticket: 64085

**DST#: 2**

Test Start: 2017.01.10 @ 05:35:46

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 8.00 lb/gal  
Viscosity: 51.00 sec/qt  
Water Loss: 8.76 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 8500.00 ppm  
Filter Cake: 1.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: 37 deg API  
Water Salinity: 90000 ppm

## Recovery Information

Recovery Table

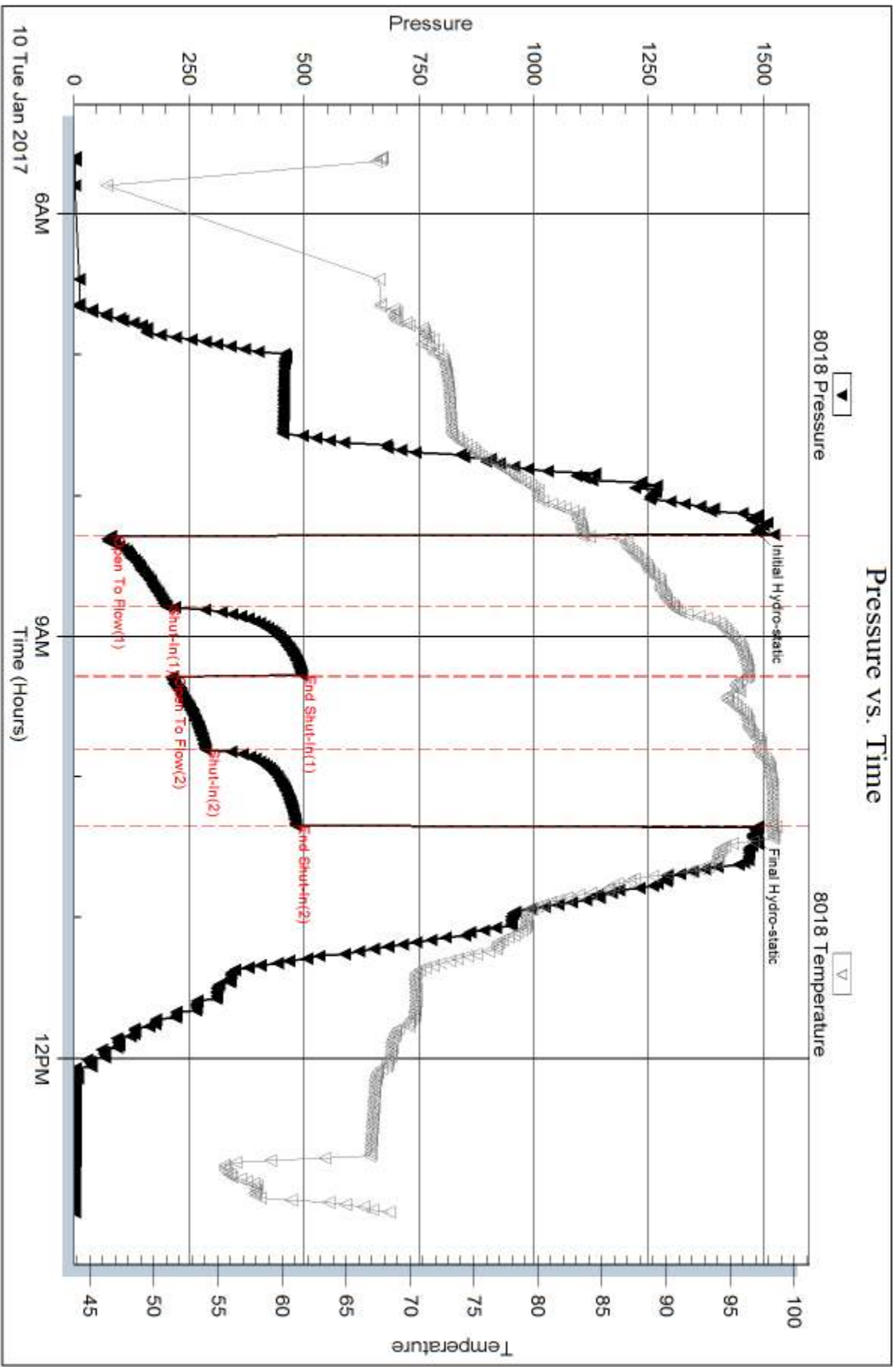
Length ft	Description	Volume bbl
90.00	SO&GCMW 15%G2%O10%M73%W	0.661
280.00	GMO 50%G10%M5%W35%O	2.658
310.00	CO	4.348
0.00	GTS	0.000

Total Length: 680.00 ft      Total Volume: 7.667 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: RW .08@75F

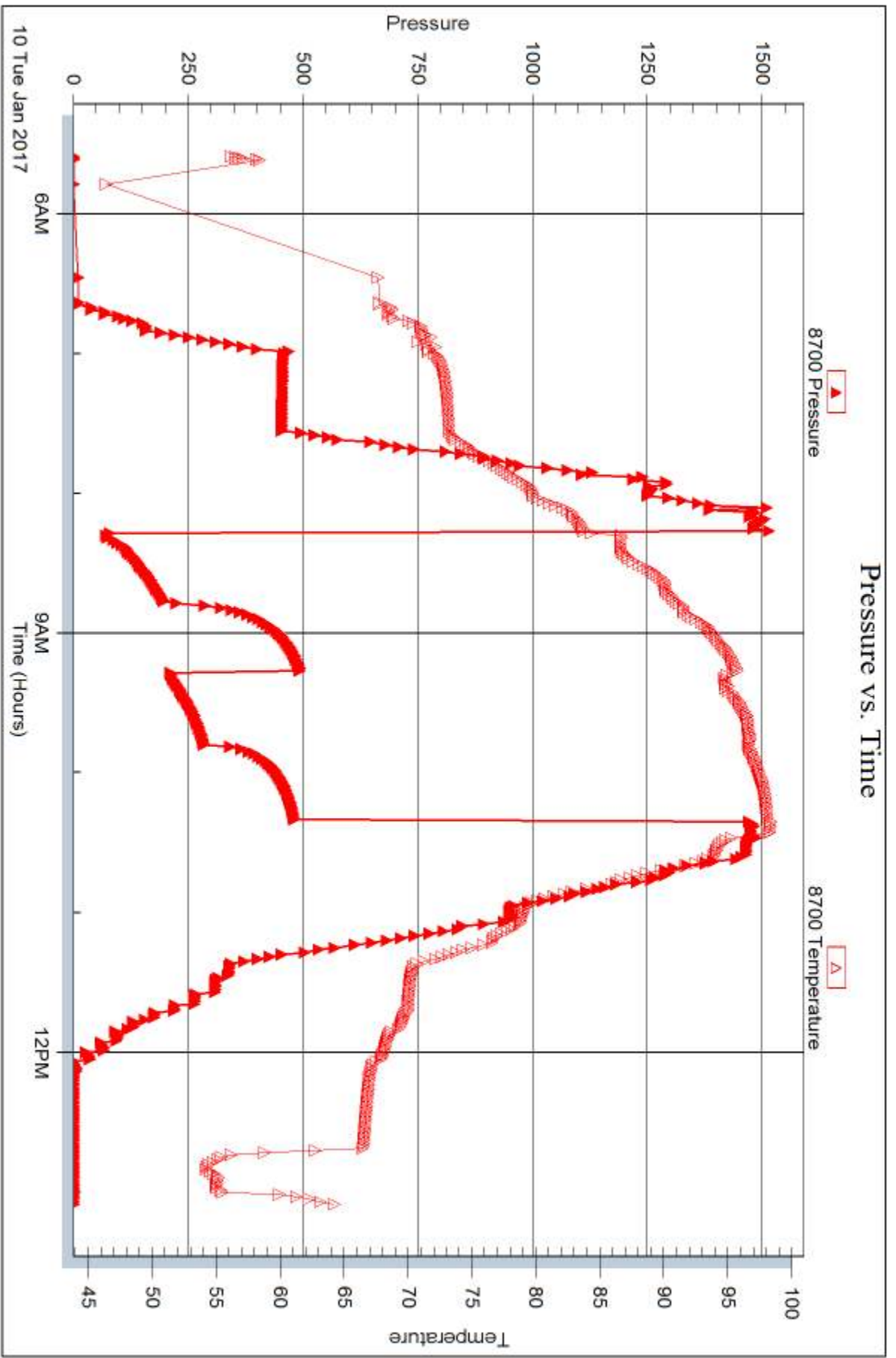


Serial #: 8700

Outside John O Farmer Inc

Drilling C#1

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 64085

Printed: 2017.01.12 @ 13:22:52





## DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

370 W. Wichita Ave  
PO Box 352  
Russell KS 67665-2635

ATTN: JO FarmerIV, Jason AI

### **Dreiling C#1**

#### **24-12s-16w Ellis,KS**

Start Date: 2017.01.11 @ 12:15:27

End Date: 2017.01.11 @ 18:03:06

Job Ticket #: 64086                      DST #: 3

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.01.12 @ 13:22:24



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

John O Farmer Inc  
370 W. Wichita Ave  
PO Box 352  
Russell KS 67665-2635  
ATTN: JO Farmer IV, Jason AI

**24-12s-16w Ellis, KS**

**Dreiling C#1**

Job Ticket: 64086

**DST#: 3**

Test Start: 2017.01.11 @ 12:15:27

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:17:07

Time Test Ended: 18:03:06

Test Type: Conventional Straddle (Reset)

Tester: Ray Schwager

Unit No: 77

**Interval: 3346.00 ft (KB) To 3360.00 ft (KB) (TVD)**

Reference Elevations: 1853.00 ft (KB)

Total Depth: 3418.00 ft (KB) (TVD)

1845.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8018 Inside**

Press@RunDepth: 25.45 psig @ 3351.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.01.11 End Date: 2017.01.11

Last Calib.: 2017.01.11

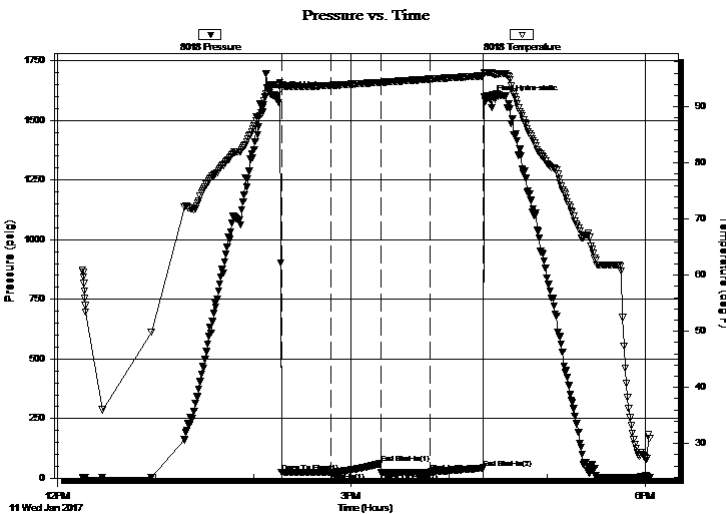
Start Time: 12:15:27 End Time: 18:03:06

Time On Btm: 2017.01.11 @ 14:14:22

Time Off Btm: 2017.01.11 @ 16:24:52

**TEST COMMENT:** 30-IFP-w k bl thru-out 1/2" to 1 1/4" bl  
30-ISIP-no bl  
30-FFP-no bl  
30-FSIP-no bl

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1605.25	93.90	Initial Hydro-static
3	23.18	93.86	Open To Flow (1)
34	24.43	93.81	Shut-In(1)
64	61.14	94.36	End Shut-In(1)
64	24.96	94.34	Open To Flow (2)
94	25.45	94.92	Shut-In(2)
127	42.93	95.51	End Shut-In(2)
131	1587.90	96.03	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud w/show of oil	0.07

\* Recovery from multiple tests

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

John O Farmer Inc  
370 W. Wichita Ave  
PO Box 352  
Russell KS 67665-2635  
ATTN: JO Farmer IV, Jason AI

**24-12s-16w Ellis, KS**

## Dreiling C#1

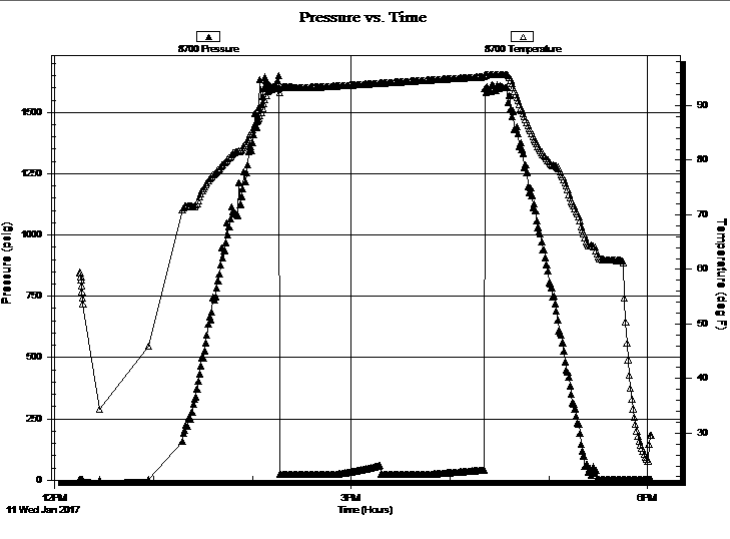
Job Ticket: 64086      **DST#: 3**  
Test Start: 2017.01.11 @ 12:15:27

### GENERAL INFORMATION:

Formation: <b>Arbuckle</b>			
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Straddle (Reset)	
Time Tool Opened: 14:17:07		Tester: Ray Schwager	
Time Test Ended: 18:03:06		Unit No: 77	
<b>Interval: 3346.00 ft (KB) To 3360.00 ft (KB) (TVD)</b>		Reference Elevations: 1853.00 ft (KB)	
Total Depth: 3418.00 ft (KB) (TVD)		1845.00 ft (CF)	
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF: 8.00 ft	

<b>Serial #: 8700</b>	<b>Outside</b>				
Press@RunDepth:      psig @	3351.00 ft (KB)	Capacity:	8000.00 psig		
Start Date: 2017.01.11	End Date: 2017.01.11	Last Calib.:	2017.01.11		
Start Time: 12:15:17	End Time: 18:02:56	Time On Btm:			
		Time Off Btm:			

TEST COMMENT: 30-IFP-w k bl thru-out 1/2" to 1 1/4" bl  
30-ISIP-no bl  
30-FFP-no bl  
30-FSIP-no bl



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

### Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud w/show of oil	0.07

\* Recovery from multiple tests

### Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

John O Farmer Inc  
 370 W. Wichita Ave  
 PO Box 352  
 Russell KS 67665-2635  
 ATTN: JO Farmer IV, Jason AI

**24-12s-16w Ellis, KS**

**Dreiling C#1**

Job Ticket: 64086

**DST#: 3**

Test Start: 2017.01.11 @ 12:15:27

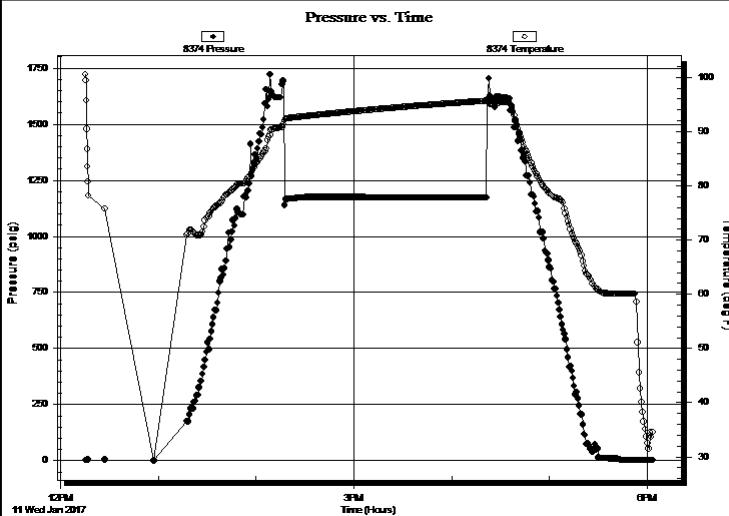
## GENERAL INFORMATION:

Formation:	<b>Arbuckle</b>			
Deviated:	No Whipstock:	ft (KB)	Test Type:	Conventional Straddle (Reset)
Time Tool Opened:	14:17:07		Tester:	Ray Schwager
Time Test Ended:	18:03:06		Unit No:	77
<b>Interval:</b>	<b>3346.00 ft (KB) To 3360.00 ft (KB) (TVD)</b>		Reference Elevations:	1853.00 ft (KB)
Total Depth:	3418.00 ft (KB) (TVD)			1845.00 ft (CF)
Hole Diameter:	7.88 inches Hole Condition: Fair		KB to GR/CF:	8.00 ft

## Serial #: 8374 Below (Straddle)

Press@RunDepth:	psig @ 3386.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2017.01.11 End Date:	2017.01.11	Last Calib.:	2017.01.11
Start Time:	12:15:26 End Time:	18:03:20	Time On Btm:	
			Time Off Btm:	

TEST COMMENT: 30-IFP-w k bl thru-out 1/2" to 1 1/4" bl  
 30-ISIP-no bl  
 30-FFP-no bl  
 30-FSIP-no bl



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud w/show of oil	0.07

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

John O Farmer Inc

**24-12s-16w Ellis,KS**

370 W.Wichita Ave  
PO Box 352  
Russell KS 67665-2635  
ATTN: JO FarmerIV,Jason AI

**Dreiling C#1**

Job Ticket: 64086

**DST#: 3**

Test Start: 2017.01.11 @ 12:15:27

## Tool Information

Drill Pipe:	Length: 3054.00 ft	Diameter: 3.80 inches	Volume: 42.84 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 280.00 ft	Diameter: 2.75 inches	Volume: 2.06 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 44.90 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3346.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	3360.00 ft			
Interval between Packers:	14.00 ft			
Tool Length:	97.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3326.00	
Shut In Tool	5.00			3331.00	
Hydraulic tool	5.00			3336.00	
Packer	5.00			3341.00	21.00 Bottom Of Top Packer
Packer	5.00			3346.00	
Stubb	1.00			3347.00	
Perforations	4.00			3351.00	
Recorder	0.00	8018	Inside	3351.00	
Recorder	0.00	8700	Outside	3351.00	
Perforations	5.00			3356.00	
Blank Off Sub	1.00			3357.00	
Blank Spacing	3.00			3360.00	14.00 Tool Interval
Packer	5.00			3365.00	
Stubb	1.00			3366.00	
Perforations	20.00			3386.00	
Recorder	0.00	8374	Below	3386.00	
Blank Spacing	33.00			3419.00	
Bullnose	3.00			3422.00	62.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>97.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

John O Farmer Inc

**24-12s-16w Ellis,KS**

370 W.Wichita Ave  
PO Box 352  
Russell KS 67665-2635  
ATTN: JO FarmerIV,Jason AI

**Dreiling C#1**

Job Ticket: 64086

**DST#: 3**

Test Start: 2017.01.11 @ 12:15:27

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 56.00 sec/qt

Water Loss: 8.37 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 9000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: deg API

ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud w/show of oil	0.073

Total Length: 10.00 ft      Total Volume: 0.073 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

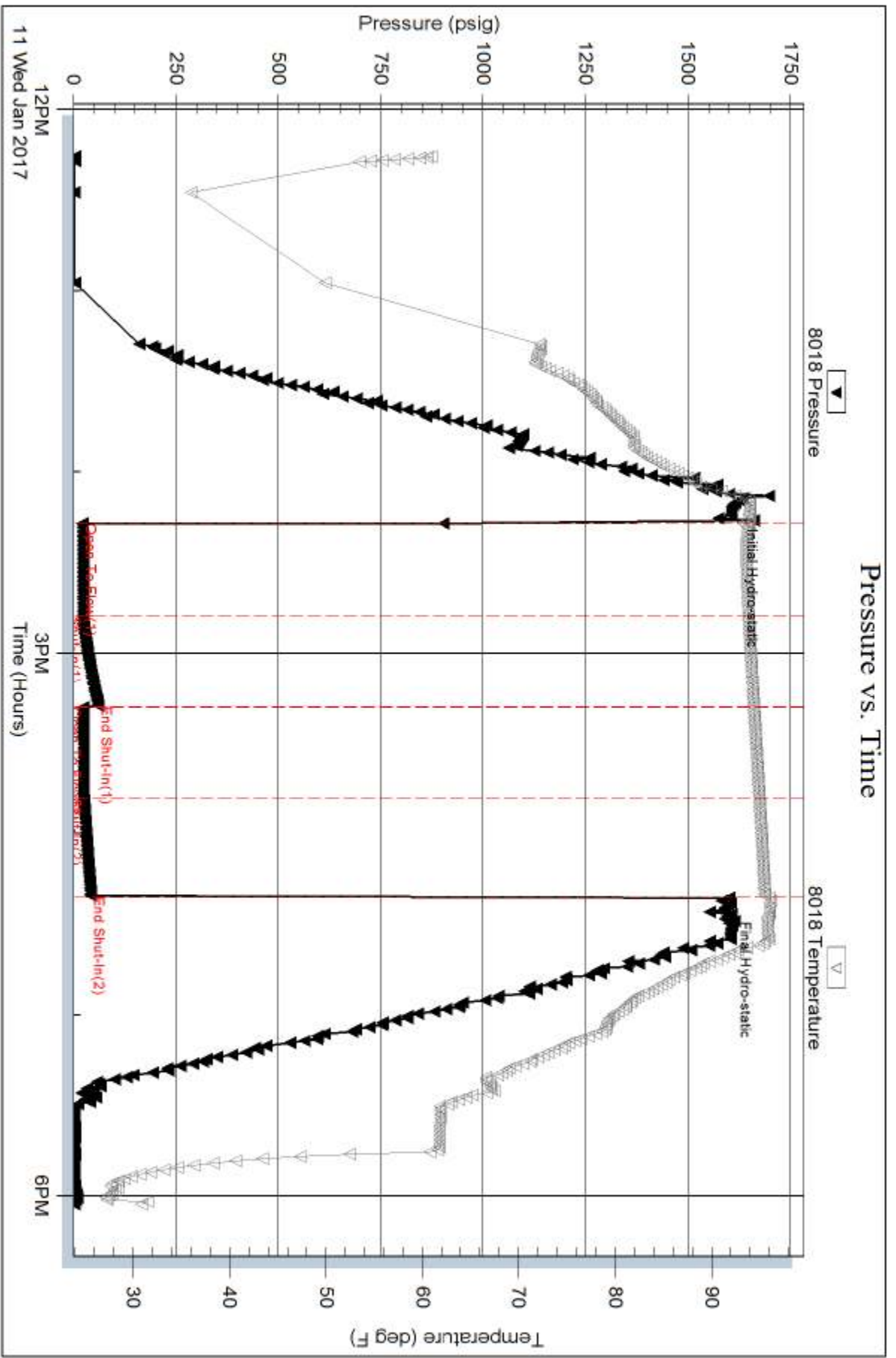
Serial #: 8018

Inside

John O Farmer Inc

Drilling C#1

DST Test Number: 3



Tribble Testing, Inc

Ref. No: 64086

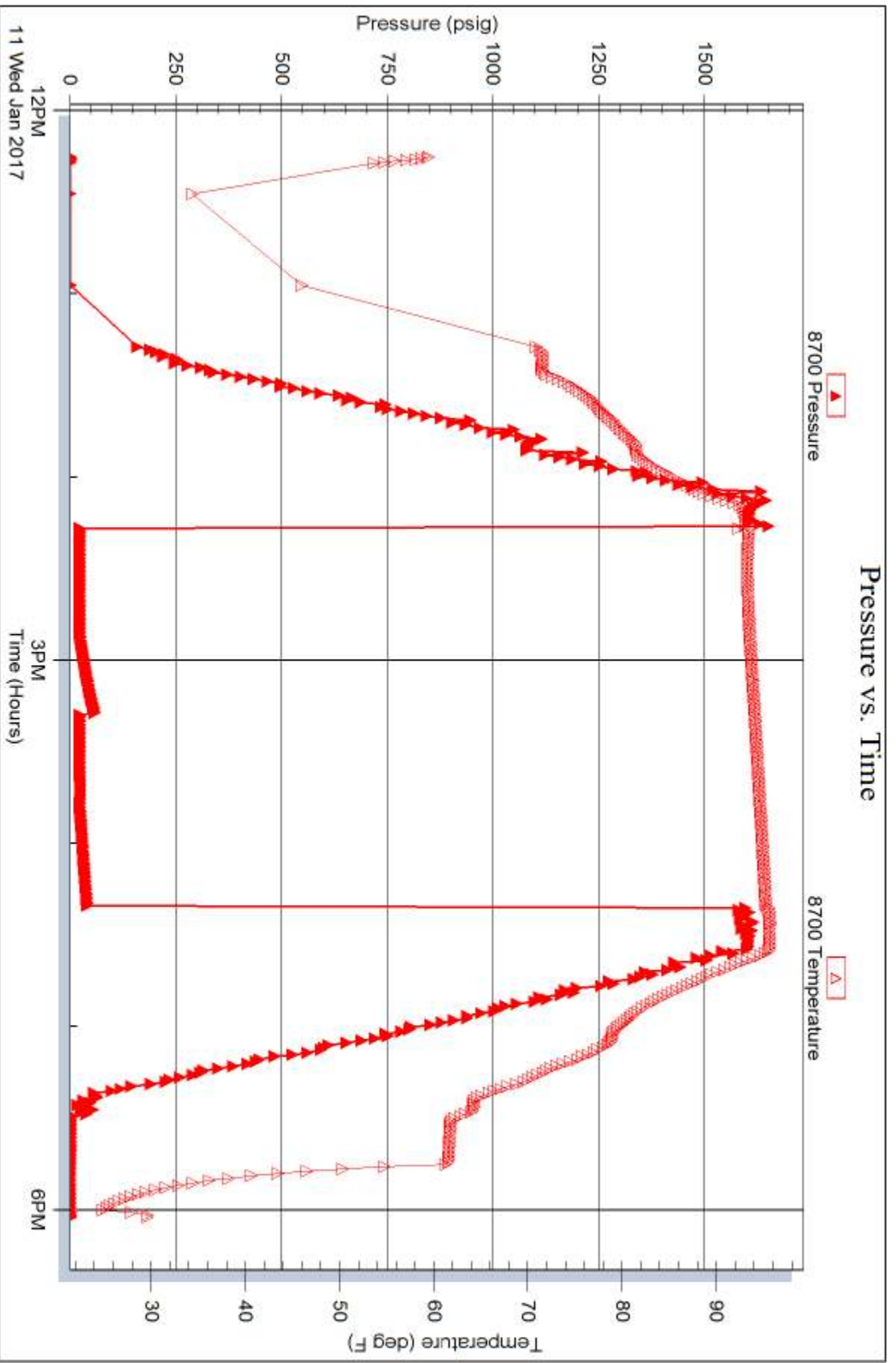
Printed: 2017.01.12 @ 13:22:25

Serial #: 8700

Outside John O Farmer Inc

Drilling C#1

DST Test Number: 3

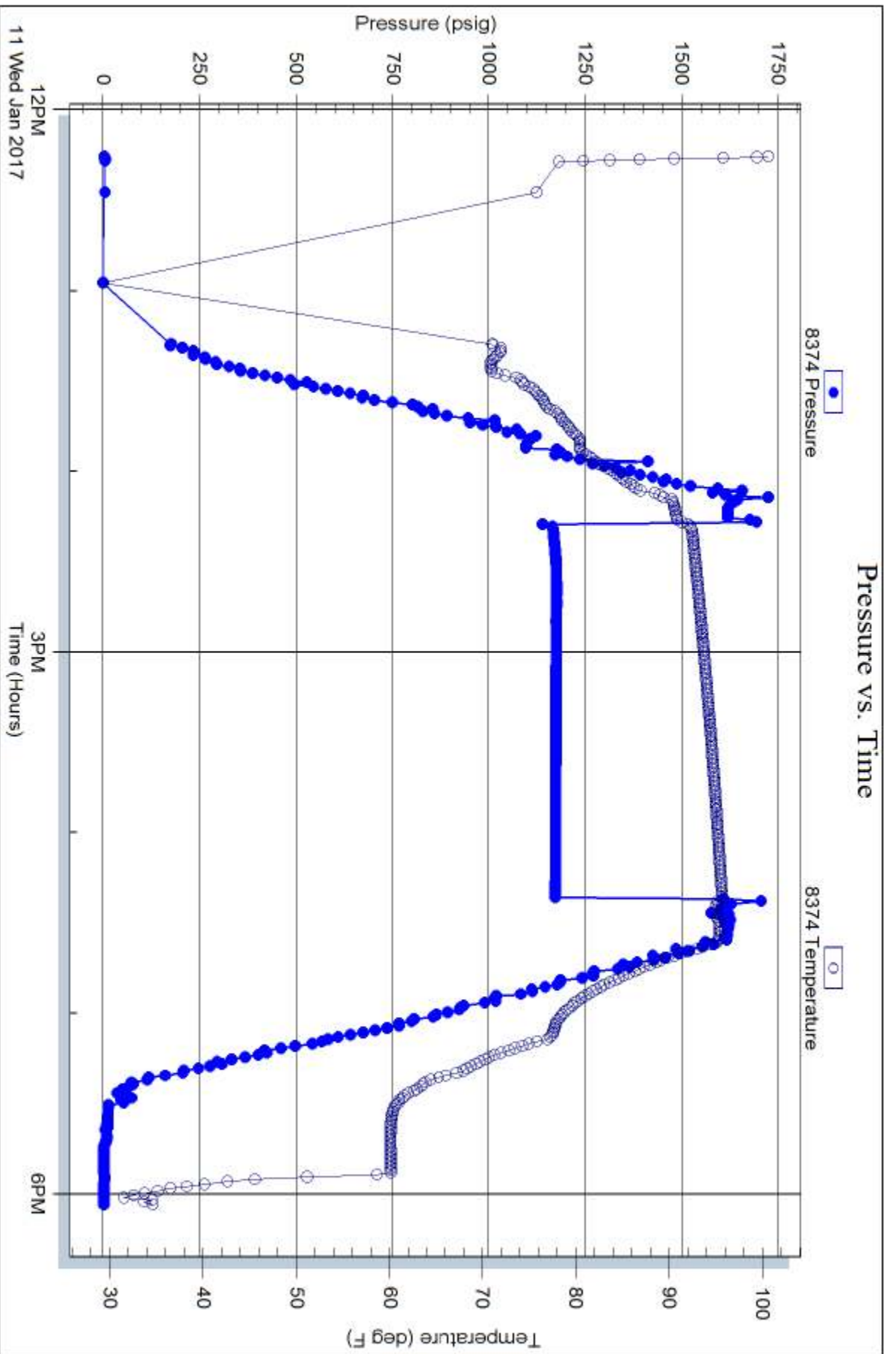


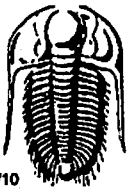
Trilobite Testing, Inc

Ref. No: 64086

Printed: 2017.01.12 @ 13:22:25







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 64084

Well Name & No. Dreiling C#1 Test No. 1 Date 1-9-2017  
 Company John D. Farmer Inc Elevation 1853 KB 1845 GL  
 Address 370 W. Wichita Ave PO Box 352 Russell, Ks 67665-2635  
 Co. Rep / Geo. Jason Alm Rig Discovery rig  
 Location: Sec. 24 Twp. 12<sup>s</sup> Rge. 16<sup>w</sup> Co. Ellis State Ks

Interval Tested 3045-3110 Zone Tested LKC A-C  
 Anchor Length 65 Drill Pipe Run 2771 Mud Wt. 8.9  
 Top Packer Depth 3040 Drill Collars Run - Vis 52  
 Bottom Packer Depth 3045 Wt. Pipe Run 280 WL 8.8  
 Total Depth 3110 Chlorides 8500 ppm System LCM 2 1/2#  
 Blow Description JFP - WEAK BLOW THRU-OUT 1/4" TO 1/2 BLOW  
JSTP - NO BLOW  
FFP - WEAK TO A FAIR BLOW 2 1/2" TO 4" BLOW  
FSTP - NO BLOW

Rec	Feet of	%gas	%oil	%water	%mud
<u>235</u>	<u>GIP</u>				
<u>80</u>	<u>OCGM</u>	<u>30</u>	<u>10</u>		<u>60</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 80 BHT \_\_\_\_\_ Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1456  Test 1050 T-On Location 1325  
 (B) First Initial Flow 17  Jars \_\_\_\_\_ T-Started 1450  
 (C) First Final Flow 33  Safety Joint \_\_\_\_\_ T-Open 1705  
 (D) Initial Shut-In 350  Circ Sub \_\_\_\_\_ T-Pulled 2005  
 (E) Second Initial Flow 37  Hourly Standby \_\_\_\_\_ T-Out 2150  
 (F) Second Final Flow 60  Mileage 45 RT 33.75 Comments \_\_\_\_\_  
 (G) Final Shut-In 560  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1442  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 60  
 Final Shut-In 60

Sub Total 1083.75 Total 1083.75 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative RAY SCHWAGN *Thank you*  
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 64085

Well Name & No. Dreiling C#1 Test No. 2 Date 1-10-2017  
 Company John O. Farmer Inc Elevation 1853 KB 1845 GL  
 Address 370 W. Wichita Ave PO Box 352 Russell Ks 67665-2635  
 Co. Rep / Geo. Jason Alm Rig Discovery r.g 1  
 Location: Sec. 24 Twp. 12<sup>s</sup> Rge. 16<sup>w</sup> Co. Ellis State Ko

Interval Tested 3104-3158 Zone Tested LKC 0-F  
 Anchor Length 54 Drill Pipe Run 2834 Mud Wt. 8.4  
 Top Packer Depth 3099 Drill Collars Run - Vis 51  
 Bottom Packer Depth 3104 Wt. Pipe Run 280 WL 8.8  
 Total Depth 3158 Chlorides 8500 ppm System LCM 2#

Blow Description TFP - STRONG BLOW IN 1min  
TSP - STRONG BLOW BACK 8min into  
FFP - STRONG BLOW THRU-OUT  
FSTP - STRONG BLOW BACK 6TS 2min into

Rec	Feet of	%gas	%oil	%water	%mud
	<u>GTS</u>				
Rec <u>310</u>	Feet of <u>CO</u>				
Rec <u>280</u>	Feet of <u>GMO</u>	<u>50</u> %gas	<u>35</u> %oil	<u>5</u> %water	<u>10</u> %mud
Rec <u>90</u>	Feet of <u>50+GCMW</u>	<u>15</u> %gas	<u>2</u> %oil	<u>73</u> %water	<u>10</u> %mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 680 BHT 98 Gravity 37 API RW .08 @ 75 °F Chlorides 90000 ppm

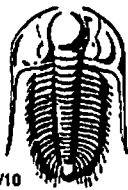
(A) Initial Hydrostatic 1483  Test 1050 T-On Location 0520  
 (B) First Initial Flow 81  Jars \_\_\_\_\_ T-Started 0535  
 (C) First Final Flow 201  Safety Joint \_\_\_\_\_ T-Open 0815  
 (D) Initial Shut-In 495  Circ Sub \_\_\_\_\_ T-Pulled 1015  
 (E) Second Initial Flow 213  Hourly Standby \_\_\_\_\_ T-Out 1306  
 (F) Second Final Flow 286  Mileage 45RT 33.75  
 (G) Final Shut-In 482  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1476  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 30

Sub Total 1083.75

Comments \_\_\_\_\_  
\_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1083.75  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Ray Schwager *Thank you*  
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 64086

Well Name & No. DREILING "C" #1 Test No. 3 Date 1-11-2017  
 Company John O. Farmer Inc Elevation 1853 KB 1845 GL  
 Address 370 W. WICHITA AVE PO Box 352 Russell, Ks 67665-2635  
 Co. Rep / Geo. Jasen Alm Rig Discovery rig 1  
 Location: Sec. 24 Twp. 12<sup>s</sup> Rge. 16<sup>w</sup> Co. ELLIS State Ks

Interval Tested 3346-3360 Zone Tested Arbuckle  
 Anchor Length 14 Drill Pipe Run 3054 Mud Wt. 9  
 Top Packer Depth 3346-3341 Drill Collars Run — Vis 56  
 Bottom Packer Depth 3360 Wt. Pipe Run 280 WL 8.4  
 Total Depth 3418 Chlorides 9000 ppm System LCM 4#  
 Blow Description IFP - WEAK BLOW thru-out 1/2" to 1/4" blow  
ISIP - NO BLOW  
FFP - NO BLOW  
FSIP - NO BLOW

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud</u>				
	<u>w/ slight show of oil</u>				

Rec Total 10 BHT 95 Gravity — API RW — @ — °F Chlorides — ppm

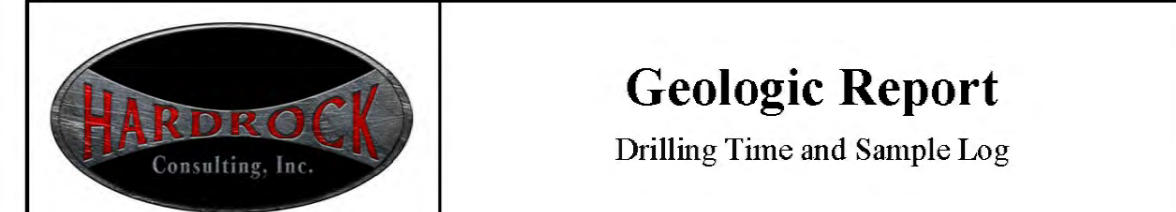
(A) Initial Hydrostatic <u>1605</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>1105</u>
(B) First Initial Flow <u>23</u>	<input type="checkbox"/> Jars <u>—</u>	T-Started <u>1215</u>
(C) First Final Flow <u>24</u>	<input type="checkbox"/> Safety Joint <u>—</u>	T-Open <u>1415</u>
(D) Initial Shut-In <u>61</u>	<input type="checkbox"/> Circ Sub <u>—</u>	T-Pulled <u>1615</u>
(E) Second Initial Flow <u>24</u>	<input type="checkbox"/> Hourly Standby <u>—</u>	T-Out <u>1803</u>
(F) Second Final Flow <u>25</u>	<input checked="" type="checkbox"/> Mileage <u>33.75</u>	Comments <u>—</u>
(G) Final Shut-In <u>42</u>	<input type="checkbox"/> Sampler <u>—</u>	
(H) Final Hydrostatic <u>1587</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	
	<input type="checkbox"/> Shale Packer <u>—</u>	<input type="checkbox"/> Ruined Shale Packer <u>—</u>
	<input type="checkbox"/> Extra Packer <u>—</u>	<input type="checkbox"/> Ruined Packer <u>—</u>
	<input type="checkbox"/> Extra Recorder <u>—</u>	<input type="checkbox"/> Extra Copies <u>—</u>
	<input type="checkbox"/> Day Standby <u>—</u>	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility <u>—</u>	Total <u>1683.75</u>
	Sub Total <u>1683.75</u>	MP/DST Disc't <u>—</u>

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 30

Approved By \_\_\_\_\_ Our Representative RAY SCHWAGN *THANK YOU*

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# Geologic Report

Drilling Time and Sample Log

Operator <b>John O. Farmer, Inc.</b>		Elevation KB 1853'
Lease <b>Dreiling C</b>		No. <b>1</b>
API # <b>15-051-26859-0000</b>		Casing Record Surface 8 5/8" @ 220'
Field <b>Wildcat</b>		Production 5 1/2" @ 3419'
Location <b>2075' FSL &amp; 1995' FEL</b>		Electrical Surveys CNL/CDL, DIL, MEL
Sec. <b>24</b>	Twp. <b>12s</b>	Rge. <b>16w</b>
County <b>Ellis</b>	State <b>Kansas</b>	

Formation	Log Tops	Sample Tops	Struct Comp
Anhydrite	976' +877	980' +873	
Base	1015' +838	1015' +838	
Topeka	2765' -912	2765' -912	+6
Heebner	3018' -1165	3018' -1165	+5
Toronto	3038' -1185	3040' -1187	+6
Lansing	3069' -1216	3069' -1216	+5
BKC	3311' -1458	3311' -1458	+8
Arbuckle	3342' -1489	3342' -1489	+5
Total Depth	3418' -1565	3420' -1567	

Drilling Contractor	Discovery Drilling Co. Inc.	Rig #1
Commenced	1-3-2017	Completed 1-11-2017
Samples Saved From	2750'	To RTD
Drilling Time Kept From	2750'	To RTD
Samples Examined From	2750'	To RTD
Geological Supervision From	2750'	To RTD

Displacement 2600' Mud Type Chemical

**Summary and Recommendations**

The location for the Dreiling C #1 was found via 3-D seismic survey. The new well ran structurally as expected via the survey. Three Drill Stem Tests were conducted, one of which recovered commercial amounts of oil from the Lansing-Kansas City Formation. After all gathered data had been examined the decision was made to run 5 1/2 inch production casing to further evaluate the Dreiling C #1 well.

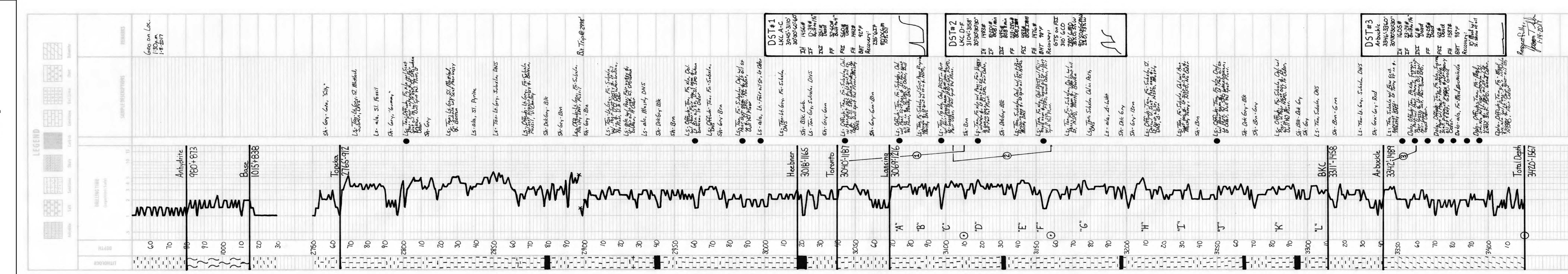
Recommended Perforations

Primary:	LKC F 3152' - 3158'
Secondary:	LKC J 3245' - 3248'
	LKC D 3113' - 3116'
	LKC C 3097' - 3100'
Before Abandonment:	LKC A 3071' - 3073'

Respectfully Submitted,

Jason T Alm  
Hard Rock Consulting, Inc.

Reference Well For Structural Comparison Leo J. Dreiling Oil Co. Dreiling G #7  
NW NE SW Sec. 24 T12s R16w Ellis Co. Kansas



Respectfully,  
Jason T Alm  
1-14-2017