

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
November 2016

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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QUALITY OILWELL CEMENTING, INC.

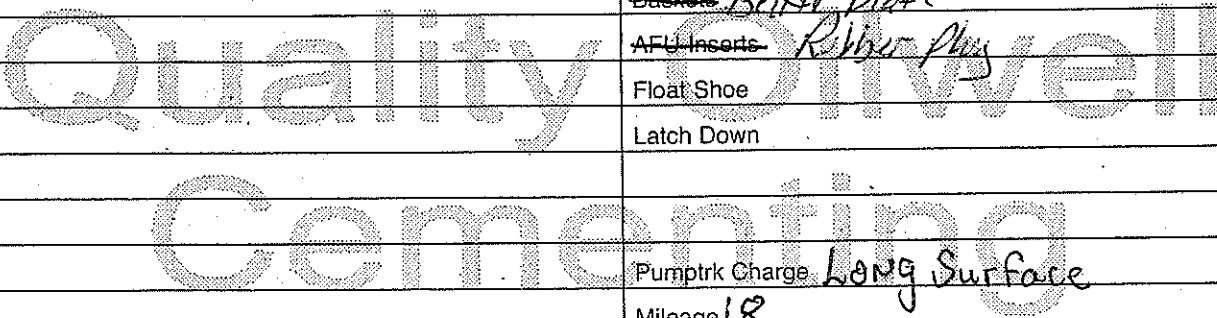
Federal Tax I.D.# 20-2886107

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

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

No. 1916

Date	11-11-15	Sec.	17	Twp.	11	Range	18	County	Ellis	State	KS	On Location		Finish	7:30 p.m.
Location <i>Hays N River Road 2015 into</i>															
Lease	<i>Frisbie</i>			Well No.											
Contractor	<i>D. S. Perry #4</i>			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	<i>Surface</i>														
Hole Size	<i>12 1/4</i>			T.D.	<i>1255</i>			Charge To	<i>F.O. Farmer</i>						
Csg.	<i>8 5/8</i>			Depth	<i>1255</i>			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.	<i>240'</i>			Shoe Joint	<i>240'</i>			Cement Amount Ordered <i>450 30/20 3/4 2.662 1/4 #10</i>							
Meas Line				Displace	771432										
EQUIPMENT								Common <i>360</i>							
Pumptrk	<i>5</i>	No.	Cementer	<i>mg</i>			Poz. Mix <i>90</i>								
			Helper	<i>Brett</i>			Gel. <i>9</i>								
Bulktrk		No.	Driver	<i>Brett</i>			Calcium <i>17</i>								
Bulktrk	<i>19</i>	No.	Driver	<i>Greg</i>											
JOB SERVICES & REMARKS								Hulls							
Remarks:				Salt											
Rat Hole				Flowseal											
Mouse Hole				Kol-Seal											
Centralizers				Mud CLR 48											
Baskets				CFL-117 or CD110 CAF 38											
D/V or Port Collar				Sand											
<i>8 5/8 on bottom Est. Cholesterol</i>								Handling <i>476</i>							
<i>Mix 450 30/20 3/4 2.662 1/4 #10</i>								Mileage							
<i>Cement + Core drilled</i>								FLOAT EQUIPMENT							
								Guide Shoe							
								Centralizer <i>2</i>							
								Baskets <i>Brill Plate</i>							
								AFU Inserts <i>Rubber Plug</i>							
								Float Shoe							
								Latch Down							
								Pumptrk Charge <i>Long Surface</i>							
								Mileage <i>18</i>							
								Tax							
								Discount							
								Total Charge							
X Signature <i>Jim Dabbe</i>															



QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

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

No. 1922

Cell 785-324-1041

Date	11-17-15	Sec.	17	Twp.	11	Range	18	County	Ellis	State	KS	On Location		Finish	4:30 PM
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Location Hays N River Road 2W. Sinto

Lease Frisbie Well No. 1 Owner

Contractor Discovery #4 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 Rotary Plug Charge To J.O. Farmell

Hole Size 7/8 T.D. 3600

Csg. 4 1/2 X-H Depth 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. Shoe Joint Cement Amount Ordered 255 1/2 140 4/162 1/4 #70

Meas Line Displace

EQUIPMENT Common 153

Pumptrk 5 No. Cementer Craig Poz. Mix 102

Bulktrk No. Helper Brett Driver Gel. 9

Bulktrk 15 No. Driver Mike Driver Calcium

JOB SERVICES & REMARKS Hulls

Remarks: Salt

Rat Hole 305K Flowseal 564

Mouse Hole 155K Kol-Seal

Centralizers Mud CLR 48

Baskets CFL-117 or CD110 CAF 38

D/V or Port Collar Sand

1st 3510 505K Handling 264

2nd 1310 505K Mileage

3rd 650 1005K **FLOAT EQUIPMENT**

4th 40' 105K Guide Shoe

Centralizer 8 7/8 Dry Hole Plug

Baskets

AFU Inserts

Float Shoe

Latch Down

Pumptrk Charge plug

Mileage 18

Tax

Discount

Total Charge

Signature Mike Sanchez



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 Hays, KS 67601

Lease: Frisbie # 1 Location: 2210 FNL - 330 FEL
NE/4
Section 17/ 11S/ 18W
Ellis County, KS

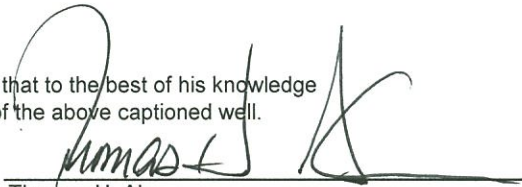
Loggers Total Depth: 3601' API#15- 051-26,810-00-00
Rotary Total Depth: 3600' Elevation: 1937 GI - 1945 KB
Commenced: 11/10/2015 Completed: 11/17/2015
Casing: 8 5/8" @ 1255'W/450sks Status: D & A

DEPTHS & FORMATIONS (All from KB)

Surface, Sand & Shale	<u>0'</u>	Shale	<u>1274'</u>
Dakota Sand	<u>520'</u>	Shale & Lime	<u>1842'</u>
Shale	<u>603'</u>	Shale	<u>2120'</u>
Cedar Hill Sand	<u>736'</u>	Shale & Lime	<u>2630'</u>
Red Bed Shale	<u>922'</u>	Lime & Shale	<u>3119'</u>
Anhydrite	<u>1244'</u>	RTD	<u>3600'</u>
Base Anhydrite	<u>1274'</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.

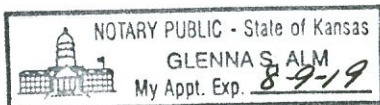

Thomas H. Alm

Subscribed and sworn to before me on 11-25-15

My Commission expires: 8-9-19

(Place stamp or seal below)


Notary Public





DRILL STEM TEST REPORT

Prepared For: **Farmer, John O Inc**

370 W Wichita Ave
Russell KS 67665

ATTN: Austin Klaus

Frisbie #1

17-11s-18w Ellis KS

Start Date: 2015.11.14 @ 18:02:00

End Date: 2015.11.15 @ 00:54:45

Job Ticket #: 64877 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.11.17 @ 13:38:43

Farmer, John O Inc
17-11s-18w Ellis KS
Frisbie #1
DST # 1
LKC "A - C"
2015.11.14



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Farmer, John O Inc

17-11s-18w Ellis KS

370 W Wichita Ave
Russell KS 67665

Frisbie #1

Job Ticket: 64877

DST#: 1

ATTN: Austin Klaus

Test Start: 2015.11.14 @ 18:02:00

GENERAL INFORMATION:

Formation: **LKC "A - C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:26:00

Time Test Ended: 00:54:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 73

Interval: 3176.00 ft (KB) To 3238.00 ft (KB) (TVD)

Reference Elevations: 1945.00 ft (KB)

Total Depth: 3238.00 ft (KB) (TVD)

1937.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6748

Inside

Press@RunDepth: 77.23 psig @ 3181.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.11.14

End Date:

2015.11.15

Last Calib.: 2015.11.15

Start Time: 18:02:05

End Time:

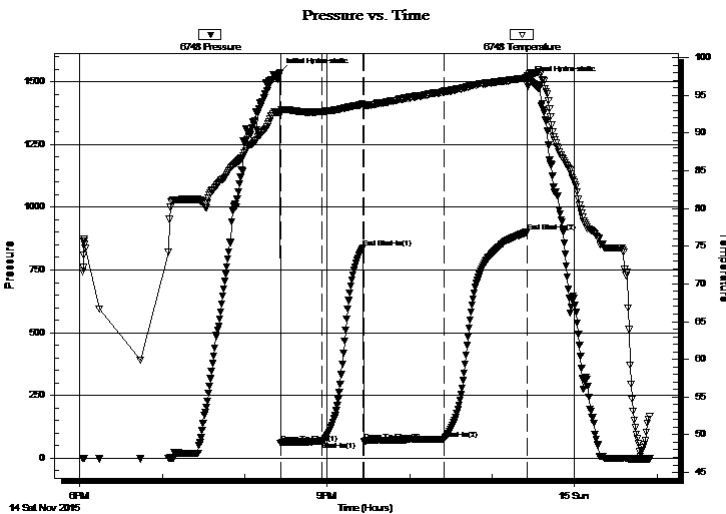
00:54:44

Time On Btm: 2015.11.14 @ 20:25:30

Time Off Btm: 2015.11.14 @ 23:25:45

TEST COMMENT: 30 - IF- 1 3/4" blow
30 - IS- No return
60 - FF- 1 1/2" blow
60 - FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1536.86	92.73	Initial Hydro-static
1	60.57	92.57	Open To Flow (1)
31	67.81	92.84	Shut-In(1)
61	837.88	93.78	End Shut-In(1)
62	67.98	93.59	Open To Flow (2)
120	77.23	95.42	Shut-In(2)
180	901.54	97.31	End Shut-In(2)
181	1504.42	97.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
82.00	GV/SOCM, 5%G, 15%O, 80%M	0.88

Gas Rates

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



DRILL STEM TEST REPORT

Farmer, John O Inc

17-11s-18w Ellis KS

370 W Wichita Ave
Russell KS 67665

Frisbie #1

Job Ticket: 64877

DST#: 1

ATTN: Austin Klaus

Test Start: 2015.11.14 @ 18:02:00

GENERAL INFORMATION:

Formation: **LKC "A - C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:26:00

Time Test Ended: 00:54:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 73

Interval: 3176.00 ft (KB) To 3238.00 ft (KB) (TVD)

Reference Elevations: 1945.00 ft (KB)

Total Depth: 3238.00 ft (KB) (TVD)

1937.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8940 **Outside**

Press@RunDepth: psig @ 3181.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.11.14 End Date: 2015.11.15

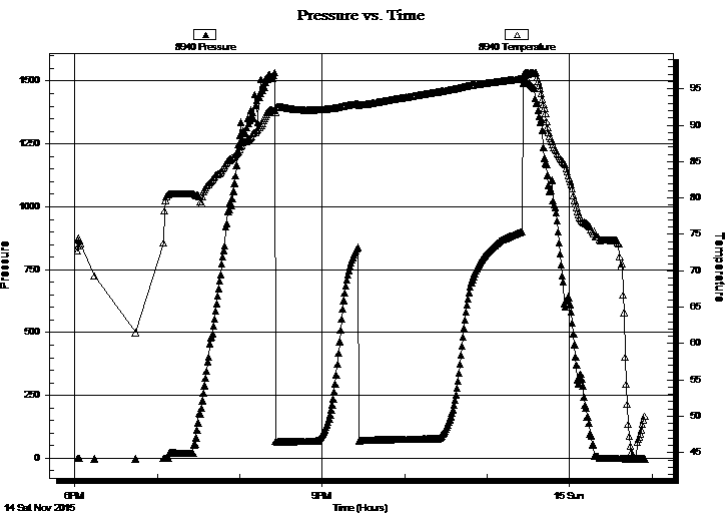
Last Calib.: 2015.11.15

Start Time: 18:02:05 End Time: 00:54:44

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF- 1 3/4" blow
30 - ISI- No return
60 - FF- 1 1/2" blow
60 - FSI- No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
82.00	GV SOCM, 5%G, 15%O, 80%M	0.88

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Farmer, John O Inc

17-11s-18w Ellis KS

370 W Wichita Ave
Russell KS 67665

Frisbie #1

Job Ticket: 64877

DST#: 1

ATTN: Austin Klaus

Test Start: 2015.11.14 @ 18:02:00

Tool Information

Drill Pipe:	Length: 3158.00 ft	Diameter: 3.80 inches	Volume: 44.30 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 46000.00 lb
			<u>Total Volume: 44.45 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3176.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	82.00 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			3157.00	
Shut In Tool	5.00			3162.00	
Hydraulic tool	5.00			3167.00	
Packer	5.00			3172.00	20.00 Bottom Of Top Packer
Packer	4.00			3176.00	
Stubb	1.00			3177.00	
Anchor	3.00			3180.00	
Change Over Sub	1.00			3181.00	
Recorder	0.00	6748	Inside	3181.00	
Recorder	0.00	8940	Outside	3181.00	
Drill Pipe	31.00			3212.00	
Change Over Sub	1.00			3213.00	
Anchor	22.00			3235.00	
Bullnose	3.00			3238.00	62.00 Bottom Packers & Anchor

Total Tool Length: 82.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Farmer, John O Inc

17-11s-18w Ellis KS

370 W Wichita Ave
Russell KS 67665

Frisbie #1

Job Ticket: 64877

DST#: 1

ATTN: Austin Klaus

Test Start: 2015.11.14 @ 18:02:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2250.00 ppm

Filter Cake: 1.50 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
82.00	GVSOCM, 5%G, 15%O, 80%M	0.877

Total Length: 82.00 ft Total Volume: 0.877 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

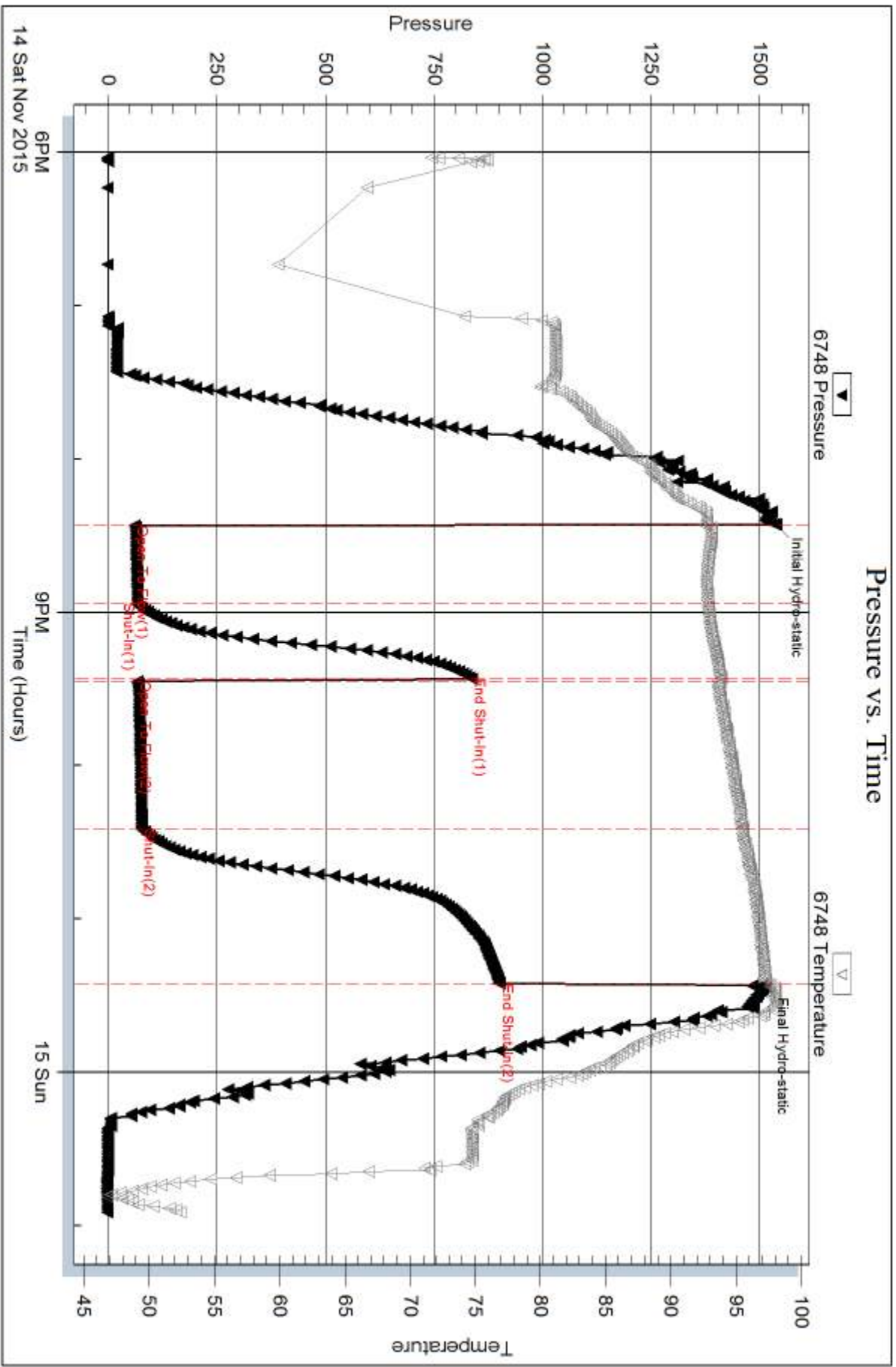
Serial #: 6748

Inside

Farmer, John O Inc

Frisbie #1

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 64877

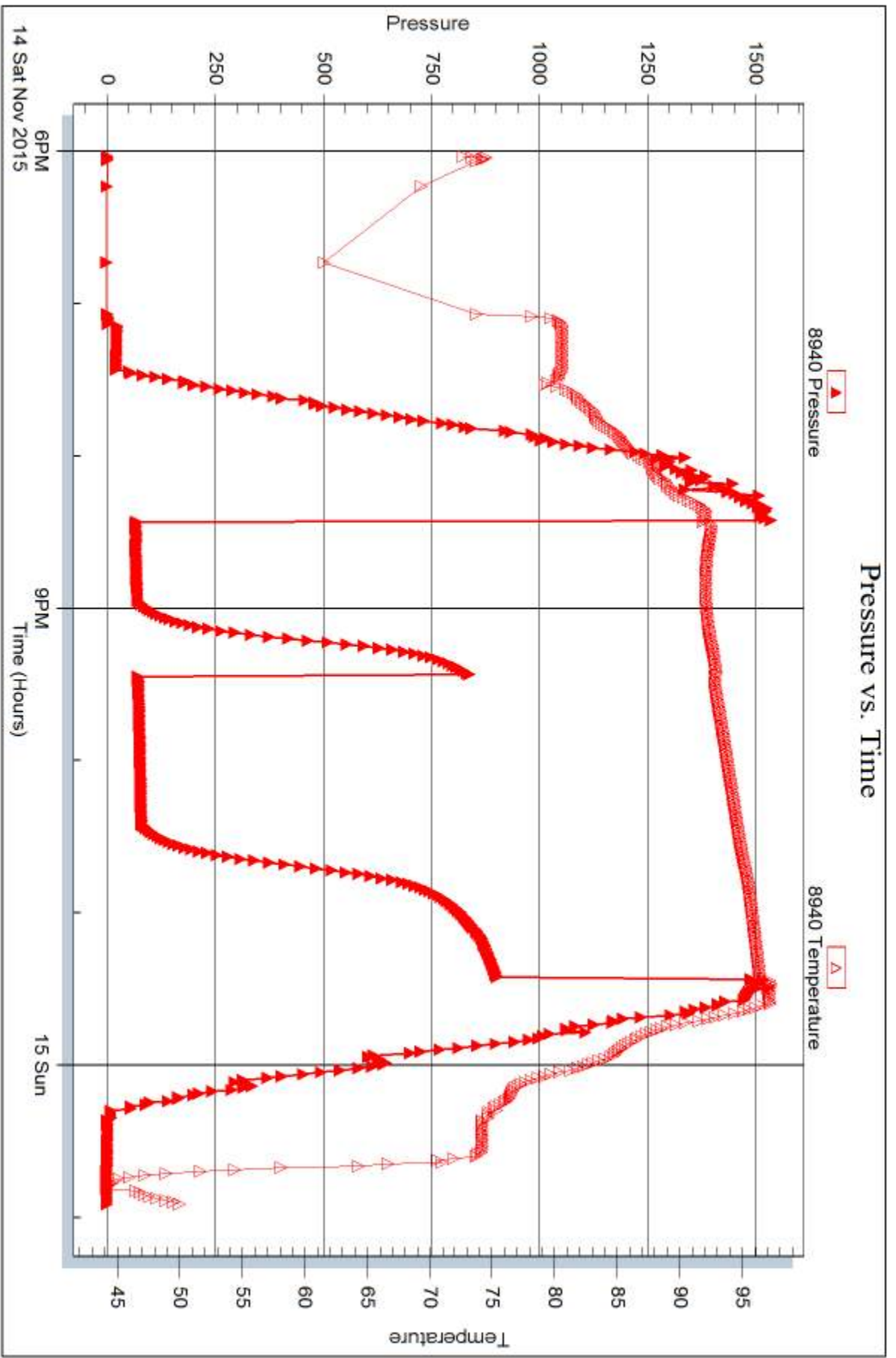
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Serial #: 8940

Outside Farmer, John O Inc

Frisbie #1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 64877

Printed: 2015.11.17 @ 13:38:45



DRILL STEM TEST REPORT

Prepared For: **Farmer, John O Inc**

370 W Wichita Ave
Russell KS 67665

ATTN: Austin Klaus

Frisbie #1

17-11s-18w Ellis KS

Start Date: 2015.11.15 @ 09:09:00

End Date: 2015.11.15 @ 13:47:15

Job Ticket #: 64878 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.11.17 @ 13:38:17



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Farmer, John O Inc

17-11s-18w Ellis KS

370 W Wichita Ave
Russell KS 67665

Frisbie #1

Job Ticket: 64878

DST#: 2

ATTN: Austin Klaus

Test Start: 2015.11.15 @ 09:09:00

GENERAL INFORMATION:

Formation: **LKC "E - F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:04:00

Time Test Ended: 13:47:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

Interval: 3253.00 ft (KB) To 3280.00 ft (KB) (TVD)

Reference Elevations: 1945.00 ft (KB)

Total Depth: 3280.00 ft (KB) (TVD)

1937.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6748

Inside

Press@RunDepth: 13.17 psig @ 3257.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.11.15

End Date:

2015.11.15

Last Calib.:

2015.11.15

Start Time: 09:09:05

End Time:

13:47:14

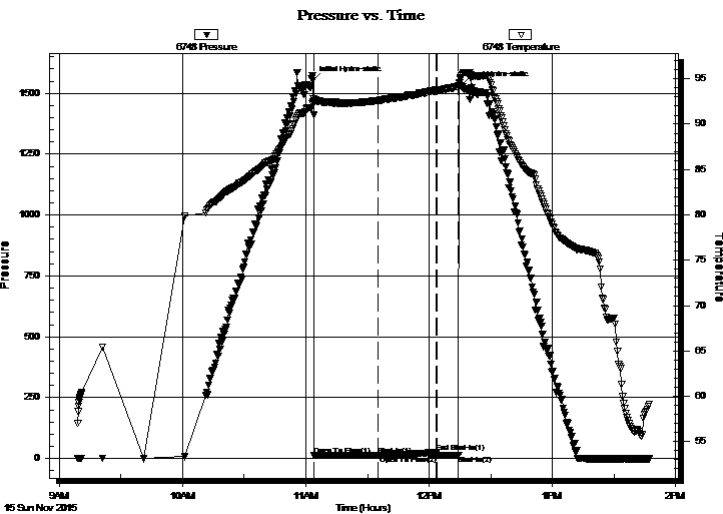
Time On Btm:

2015.11.15 @ 11:03:30

Time Off Btm:

2015.11.15 @ 12:15:30

TEST COMMENT: 30 - IF- Surface blow
30 - IS- No return
10 - FF- No blow , Pulled tool after 10 minutes.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1552.57	92.51	Initial Hydro-static
1	12.67	92.39	Open To Flow (1)
32	13.17	92.61	Shut-In(1)
60	23.78	93.64	End Shut-In(1)
61	13.17	93.76	Open To Flow (2)
71	11.98	94.18	Shut-In(2)
72	1531.20	95.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud, 100%M	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Farmer, John O Inc

17-11s-18w Ellis KS

370 W Wichita Ave
Russell KS 67665

Frisbie #1

Job Ticket: 64878

DST#: 2

ATTN: Austin Klaus

Test Start: 2015.11.15 @ 09:09:00

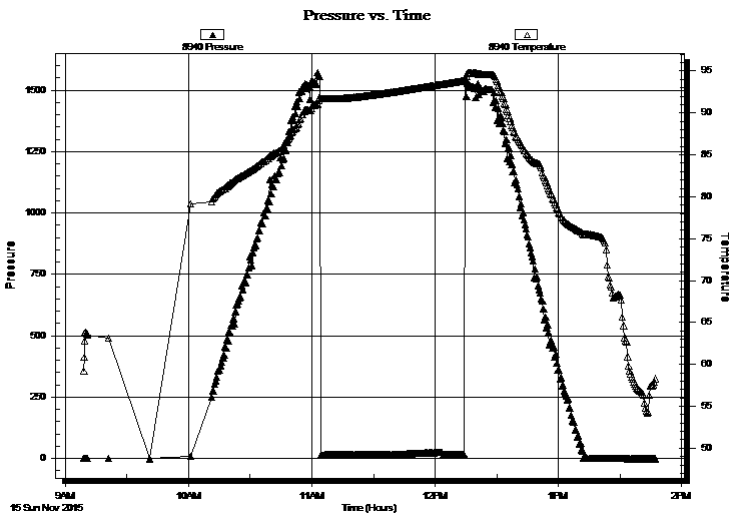
GENERAL INFORMATION:

Formation: **LKC "E - F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:04:00
 Time Test Ended: 13:47:15
Interval: 3253.00 ft (KB) To 3280.00 ft (KB) (TVD)
 Total Depth: 3280.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Cody Bloedorn
 Unit No: 73
 Reference Elevations: 1945.00 ft (KB)
 1937.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8940 Outside

Press@RunDepth: psig @ 3257.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.11.15 End Date: 2015.11.15 Last Calib.: 2015.11.15
 Start Time: 09:09:05 End Time: 13:47:14 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF- Surface blow
 30 - IS- No return
 10 - FF- No blow , Pulled tool after 10 minutes.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud, 100%M	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

Farmer, John O Inc

17-11s-18w Ellis KS

370 W Wichita Ave
Russell KS 67665

Frisbie #1

Job Ticket: 64878

DST#: 2

ATTN: Austin Klaus

Test Start: 2015.11.15 @ 09:09:00

Tool Information

Drill Pipe:	Length: 3220.00 ft	Diameter: 3.80 inches	Volume: 45.17 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	46000.00 lb
			<u>Total Volume: 45.32 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial	42000.00 lb
Depth to Top Packer:	3253.00 ft			Final	42000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	27.00 ft				
Tool Length:	47.00 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			3234.00	
Shut In Tool	5.00			3239.00	
Hydraulic tool	5.00			3244.00	
Packer	5.00			3249.00	20.00 Bottom Of Top Packer
Packer	4.00			3253.00	
Stubb	1.00			3254.00	
Anchor	3.00			3257.00	
Recorder	0.00	6748	Inside	3257.00	
Recorder	0.00	8940	Outside	3257.00	
Anchor	20.00			3277.00	
Bullnose	3.00			3280.00	27.00 Bottom Packers & Anchor

Total Tool Length: 47.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Farmer, John O Inc

17-11s-18w Ellis KS

370 W Wichita Ave
Russell KS 67665

Frisbie #1

Job Ticket: 64878

DST#: 2

ATTN: Austin Klaus

Test Start: 2015.11.15 @ 09:09:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2250.00 ppm

Filter Cake: 1.50 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud, 100%M	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

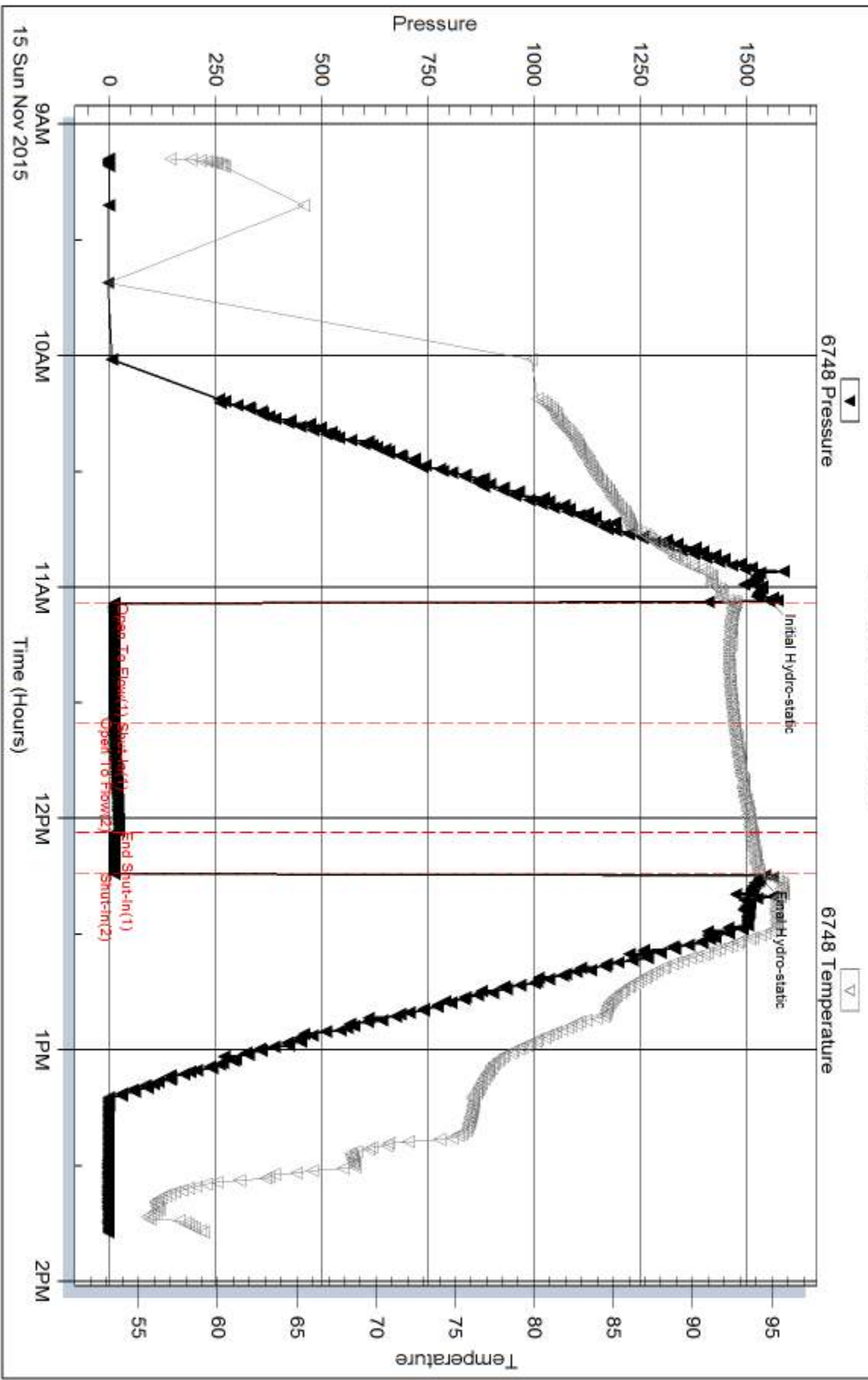
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

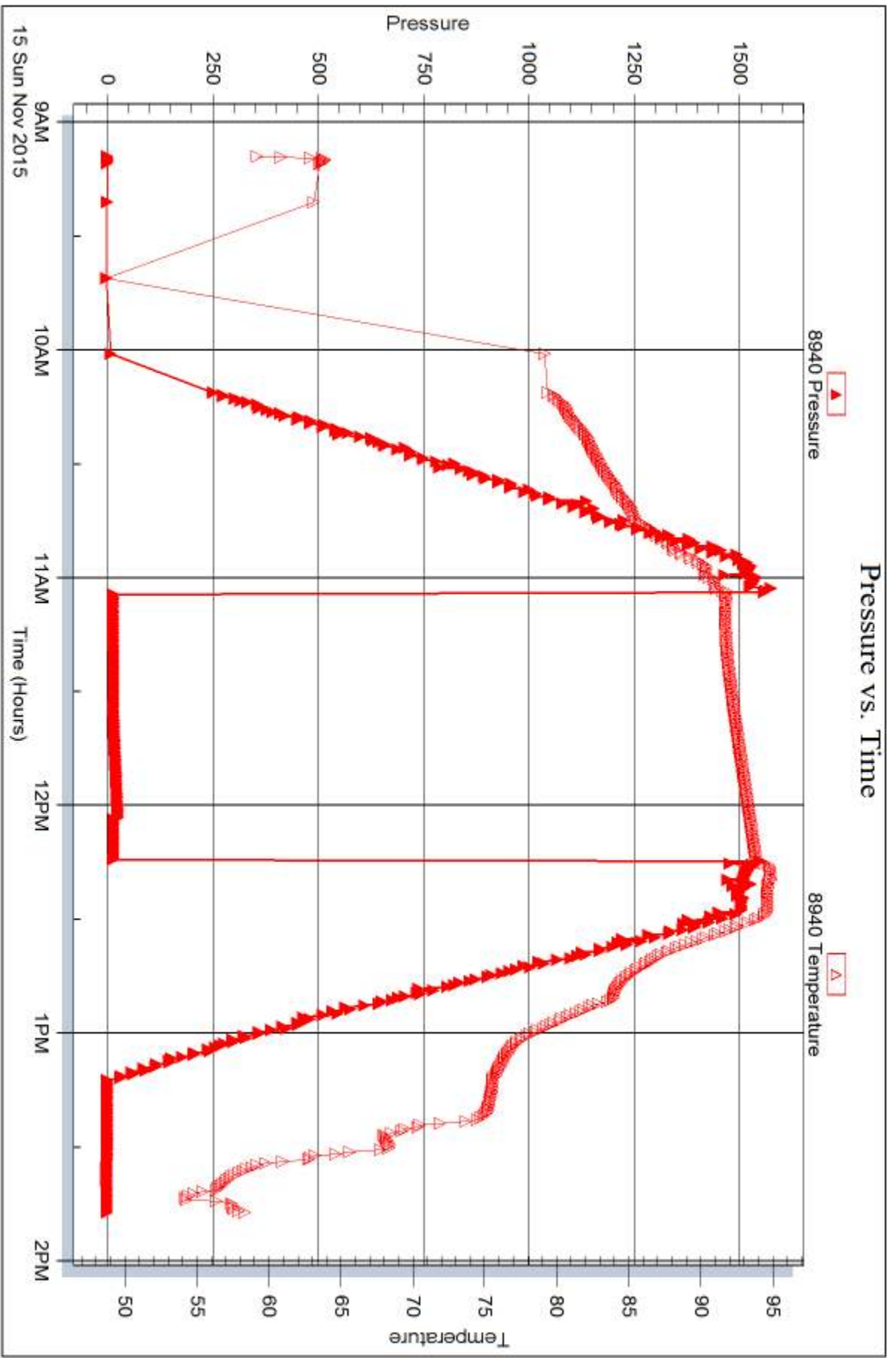


Serial #: 8940

Outside Farmer, John O Inc

Frisbie #1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Farmer, John O Inc**

370 W Wichita Ave
Russell KS 67665

ATTN: Austin Klaus

Frisbie #1

17-11s-18w Ellis KS

Start Date: 2015.11.15 @ 23:36:00

End Date: 2015.11.16 @ 04:44:30

Job Ticket #: 64879 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.11.17 @ 13:37:32



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Farmer, John O Inc

17-11s-18w Ellis KS

370 W Wichita Ave
Russell KS 67665

Frisbie #1

Job Ticket: 64879

DST#: 3

ATTN: Austin Klaus

Test Start: 2015.11.15 @ 23:36:00

GENERAL INFORMATION:

Formation: **LKC "I - K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:02:30

Time Test Ended: 04:44:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

Interval: 3340.00 ft (KB) To 3410.00 ft (KB) (TVD)

Reference Elevations: 1945.00 ft (KB)

Total Depth: 3410.00 ft (KB) (TVD)

1937.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6748

Inside

Press@RunDepth: 35.40 psig @ 3345.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.11.15

End Date:

2015.11.16

Last Calib.:

2015.11.16

Start Time: 23:36:05

End Time:

04:44:29

Time On Btm:

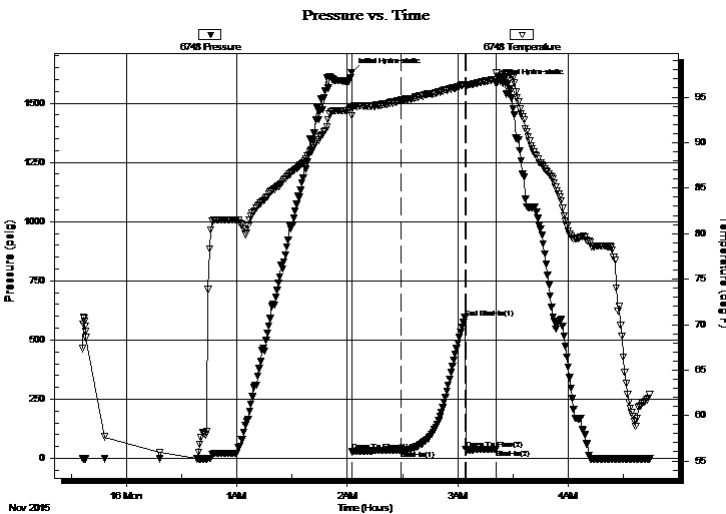
2015.11.16 @ 02:02:15

Time Off Btm:

2015.11.16 @ 03:21:00

TEST COMMENT: 30 - IF- Surface blow
30 - IS- No return
10 - FF- No blow for 10 minutes, pulled tool

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1629.98	93.86	Initial Hydro-static
1	28.74	92.97	Open To Flow (1)
27	35.40	94.55	Shut-In(1)
62	594.48	96.40	End Shut-In(1)
62	38.32	96.25	Open To Flow (2)
79	39.68	96.88	Shut-In(2)
79	1583.89	97.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	SOCM 10%O 90%M	0.07

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Farmer, John O Inc

17-11s-18w Ellis KS

370 W Wichita Ave
Russell KS 67665

Frisbie #1

Job Ticket: 64879

DST#: 3

ATTN: Austin Klaus

Test Start: 2015.11.15 @ 23:36:00

GENERAL INFORMATION:

Formation: **LKC " I - K "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:02:30

Time Test Ended: 04:44:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

Interval: 3340.00 ft (KB) To 3410.00 ft (KB) (TVD)

Reference Elevations: 1945.00 ft (KB)

Total Depth: 3410.00 ft (KB) (TVD)

1937.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8940 Outside

Press@RunDepth: psig @ 3345.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.11.15

End Date:

2015.11.16

Last Calib.:

2015.11.16

Start Time: 23:36:05

End Time:

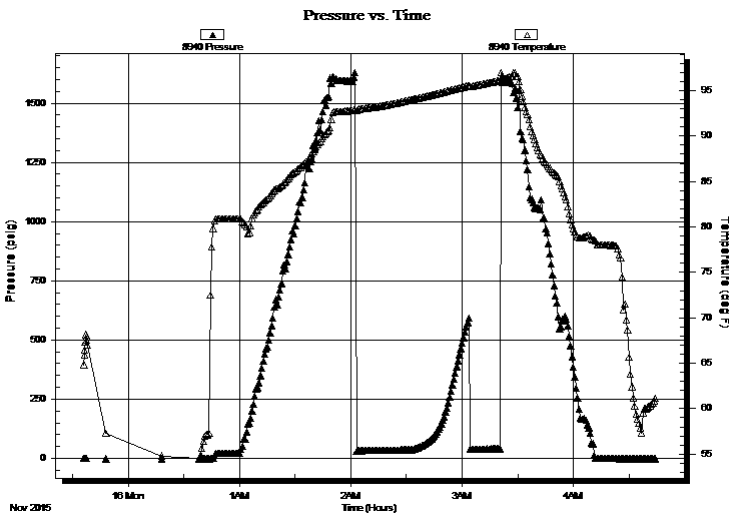
04:44:29

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF- Surface blow
30 - IS- No return
10 - FF- No blow for 10 minutes, pulled tool

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
15.00	SOCM 10%O 90%M	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

Farmer, John O Inc

17-11s-18w Ellis KS

370 W Wichita Ave
Russell KS 67665

Frisbie #1

Job Ticket: 64879

DST#: 3

ATTN: Austin Klaus

Test Start: 2015.11.15 @ 23:36:00

Tool Information

Drill Pipe:	Length: 3313.00 ft	Diameter: 3.80 inches	Volume: 46.47 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	44000.00 lb
			<u>Total Volume: 46.62 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial	42000.00 lb
Depth to Top Packer:	3340.00 ft			Final	42000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	70.00 ft				
Tool Length:	90.00 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			3321.00	
Shut In Tool	5.00			3326.00	
Hydraulic tool	5.00			3331.00	
Packer	5.00			3336.00	20.00 Bottom Of Top Packer
Packer	4.00			3340.00	
Stubb	1.00			3341.00	
Anchor	3.00			3344.00	
Change Over Sub	1.00			3345.00	
Recorder	0.00	6748	Inside	3345.00	
Recorder	0.00	8940	Outside	3345.00	
Drill Pipe	31.00			3376.00	
Change Over Sub	1.00			3377.00	
Anchor	30.00			3407.00	
Bullnose	3.00			3410.00	70.00 Bottom Packers & Anchor

Total Tool Length: 90.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Farmer, John O Inc

17-11s-18w Ellis KS

370 W Wichita Ave
Russell KS 67665

Frisbie #1

Job Ticket: 64879

DST#: 3

ATTN: Austin Klaus

Test Start: 2015.11.15 @ 23:36:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	SOCM 10%O 90%M	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

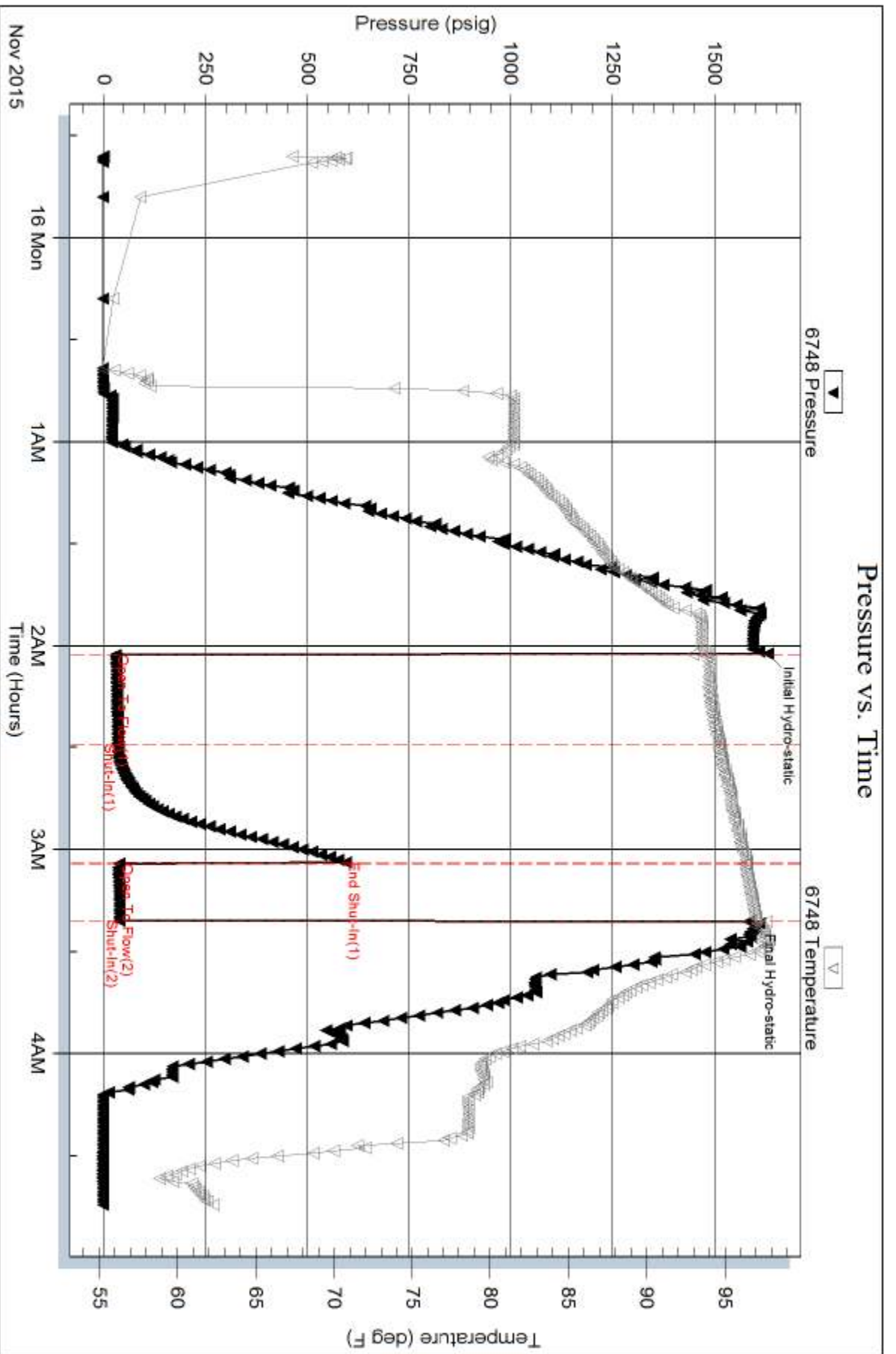
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

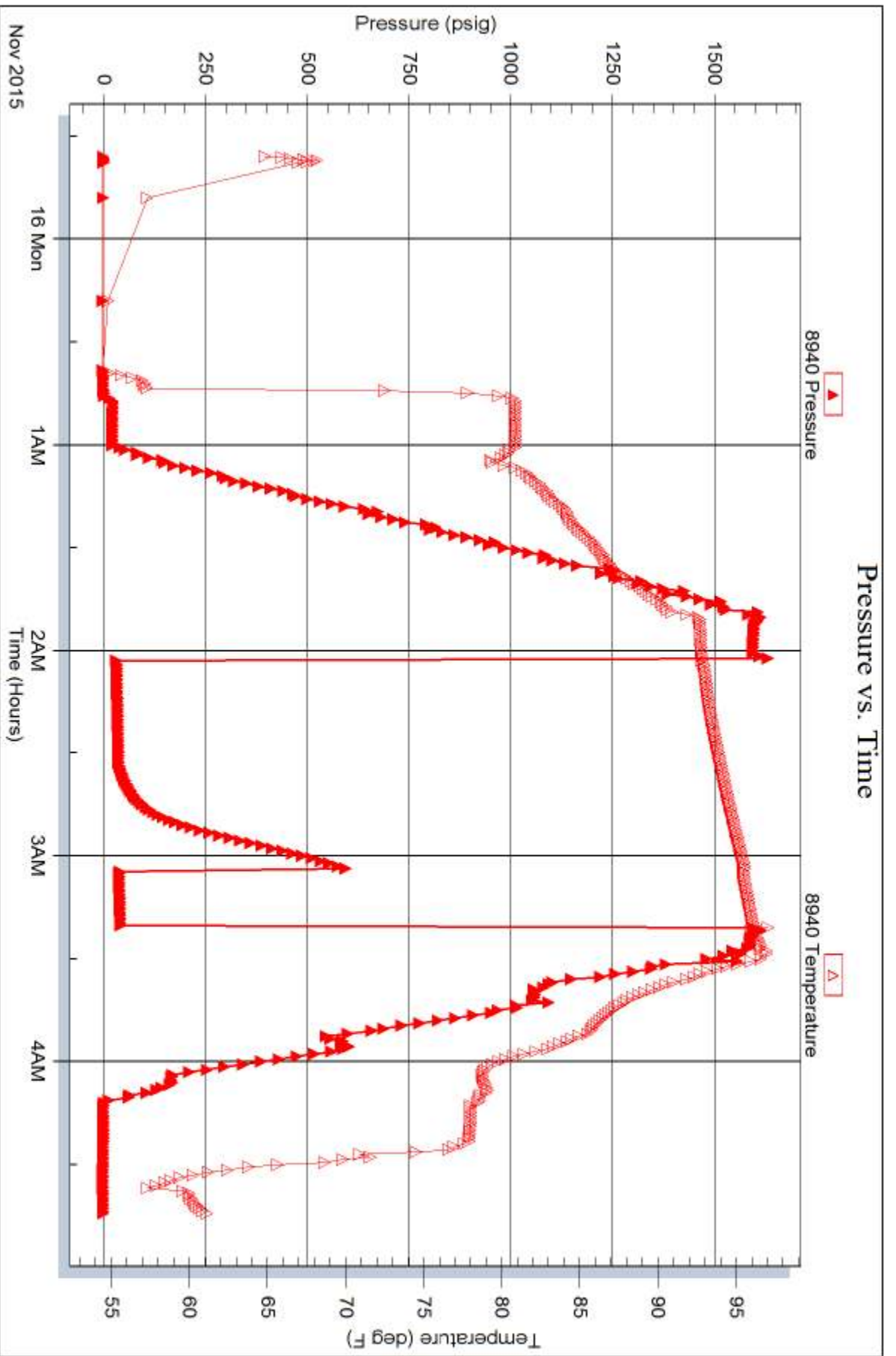


Serial #: 8940

Outside Farmer, John O Inc

Frisbie #1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 64879

Printed: 2015.11.17 @ 13:37:34



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64877

Well Name & No. Frisbie #1 Test No. 1 Date 11-14-15
 Company Farmer, John O. Inc Elevation 1945 KB 1937 GL
 Address 370 W Wichita AVE, Russell KS, 67665
 Co. Rep / Geo. Austin Klaus Rig Discovery #4
 Location: Sec. 17 Twp. 11S Rge. 18W Co. Ellis State KS

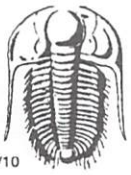
Interval Tested 3176-3238 Zone Tested LKC "A-C"
 Anchor Length 62' Drill Pipe Run 3158' Mud Wt. 8.6
 Top Packer Depth 3171 Drill Collars Run 30' Vis 50
 Bottom Packer Depth 3176 Wt. Pipe Run — WL 8.8
 Total Depth 3238 Chlorides 2250 ppm System LCM 1 1/2
 Blow Description IF-1 3/4" blow
ISI - No return
FF-1 1/2" blow
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>82</u>	<u>6V5 OCM</u>	<u>5</u>	<u>15</u>	<u>80</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 82' BHT 970 Gravity — API RW — @ — °F Chlorides — ppm
 (A) Initial Hydrostatic 1536 Test 1050 T-On Location 1635
 (B) First Initial Flow 60 Jars — T-Started 1802
 (C) First Final Flow 67 Safety Joint — T-Open 2025
 (D) Initial Shut-In 837 Circ Sub — T-Pulled 2325
 (E) Second Initial Flow 67 Hourly Standby — T-Out 0054
 (F) Second Final Flow 77 Mileage 43RT Comments —
 (G) Final Shut-In 901 Sampler —
 (H) Final Hydrostatic 1504 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Initial Open 30 Extra Recorder — Sub Total 0
 Initial Shut-In 30 Day Standby — Total 1093
 Final Flow 60 Accessibility — MP/DST Disc't —
 Final Shut-In 60 Sub Total 1093

Approved By _____ Our Representative Cody B...

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. **64878**

Well Name & No. Frisbie #1 Test No. 1 Date 11-15-15
 Company Farmer, John O. Inc Elevation 1945 KB 1937 GL
 Address 370 W Wichita AVE, Russell KS, 67665
 Co. Rep / Geo. Austin Klaus Rig Discovery #4
 Location: Sec. 17 Twp. 11s Rge. 18w Co. Ellis State KS

Interval Tested 3253-3280 Zone Tested LKC "E-F"
 Anchor Length 27' Drill Pipe Run 3220' Mud Wt. 9.6
 Top Packer Depth 3248 Drill Collars Run 30' Vis 50
 Bottom Packer Depth 3253 Wt. Pipe Run — WL 8.8
 Total Depth 3280 Chlorides 2250 ppm System LCM 1.5

Blow Description IF - Surface blow
ISI - No return
FF - No blow for 10 minutes. Pulled tool.
FSI -

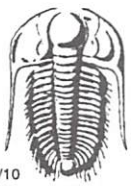
Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1' BHT 94° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1552</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>0919</u>
(B) First Initial Flow <u>12</u>	<input type="checkbox"/> Jars	T-Started <u>0909</u>
(C) First Final Flow <u>13</u>	<input type="checkbox"/> Safety Joint	T-Open <u>1104</u>
(D) Initial Shut-In <u>23</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1214</u>
(E) Second Initial Flow <u>13</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1347</u>
(F) Second Final Flow <u>11</u>	<input checked="" type="checkbox"/> Mileage <u>43RT</u>	Comments
(G) Final Shut-In <u>—</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1531</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>10</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In	<input type="checkbox"/> Day Standby	Total <u>1093</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1093</u>	

Approved By _____ Our Representative Cody Bloodorn

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. **64879**

Well Name & No. Frisbie #1 Test No. 3 Date 11-15-15
 Company Farmer, John O. Inc Elevation 1945 KB 1937 GL
 Address 370 W Wichita AVE, Russell KS, 67665
 Co. Rep / Geo. Austin Klaus Rig Discovery #4
 Location: Sec. 17 Twp. 11s Rge. 18W Co. Ellis State KS

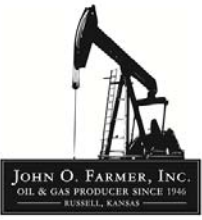
Interval Tested 3340 - 3410 Zone Tested LKC "I-K"
 Anchor Length 70' Drill Pipe Run 3313 Mud Wt. 8.9
 Top Packer Depth 3335 Drill Collars Run 30' Vis 48
 Bottom Packer Depth 3340 Wt. Pipe Run — WL 8.4
 Total Depth 3410 Chlorides 3500 ppm System LCM 1
 Blow Description ± F - Surface blow
ISI - No return
FF - No blow for 10 minutes. Pulled tool
FSI -

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>SOCM</u>	<u>10</u>		<u>90</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15' BHT 96° Gravity — API RW — @ — F Chlorides — ppm
 (A) Initial Hydrostatic 1629 Test 1050 T-On Location 2324
 (B) First Initial Flow 28 Jars — T-Started 2336
 (C) First Final Flow 35 Safety Joint — T-Open 0203
 (D) Initial Shut-In 594 Circ Sub — T-Pulled 0313
 (E) Second Initial Flow 38 Hourly Standby — T-Out 0444
 (F) Second Final Flow 39 Mileage 43RTx2 Comments Loaded tools 11-16-15
 (G) Final Shut-In — Sampler — (# 2149)
 (H) Final Hydrostatic 1583 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Initial Open 30 Extra Recorder — Sub Total 0
 Initial Shut-In 30 Day Standby — Total 1136
 Final Flow 10 pull Accessibility — MP/DST Disc't —
 Final Shut-In — Sub Total 1136

Approved By _____ Our Representative Cody Bell

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.



AUSTIN B. KLAUS



Cell 785.650.3629
Work 785.483.3145
Ext 225

PO BOX 352
Russell, KS 67665
austin.klaus@johnofarmer.com

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: Frisbie #1
Location: Ellis County
License Number: API #15-051-26810-0000
Spud Date: 11/10/15
Surface Coordinates: Section 17, Township 11 South, Range 18 West
2,210' FNL & 330' FEL
Bottom Hole Coordinates: Vertical well with minimal deviation, same as above
Ground Elevation (ft): 1,937' **K.B. Elevation (ft):** 1,945'
Logged Interval (ft): 2,900' **To:** RTD **Total Depth (ft):** 3,600'
Formation: LKC-Arbuckle
Type of Drilling Fluid: Chemical (Andy's)

Region: Kansas
Drilling Completed: 11/16/15

Printed by STRIP.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: John O. Farmer, Inc.
Address: 370 W. Wichita Ave.
Russell, KS 67665

Comments

The Frisbie #1 well was drilled by Discovery Drilling Rig #4 (Tool Pusher: Mike Gaschler).

The location for the Frisbie #1 well was found via 3-D seismic survey. Geologic samples were collected and evaluated from 2,900'-3,600'. Structurally, the Frisbie #1 ran 2' low at the Lansing and 3' low at the Arbuckle, to the Frisbie G #1, 1,880' to the north. Three bottom-hole tests were conducted in the Lansing, all yielding negative results. Based upon limited sample shows, poor DST results, and low structural position, the decision was made to plug and abandon the Frisbie #1 well on 11/17/15.

OTHER SYMBOLS

- POROSITY**
 Earthy
 Fenest
 Fracture
 Inter
 Moldic
 Organic
 Pinpoint

Vuggy

- SORTING**
 Well
 Moderate
 Poor

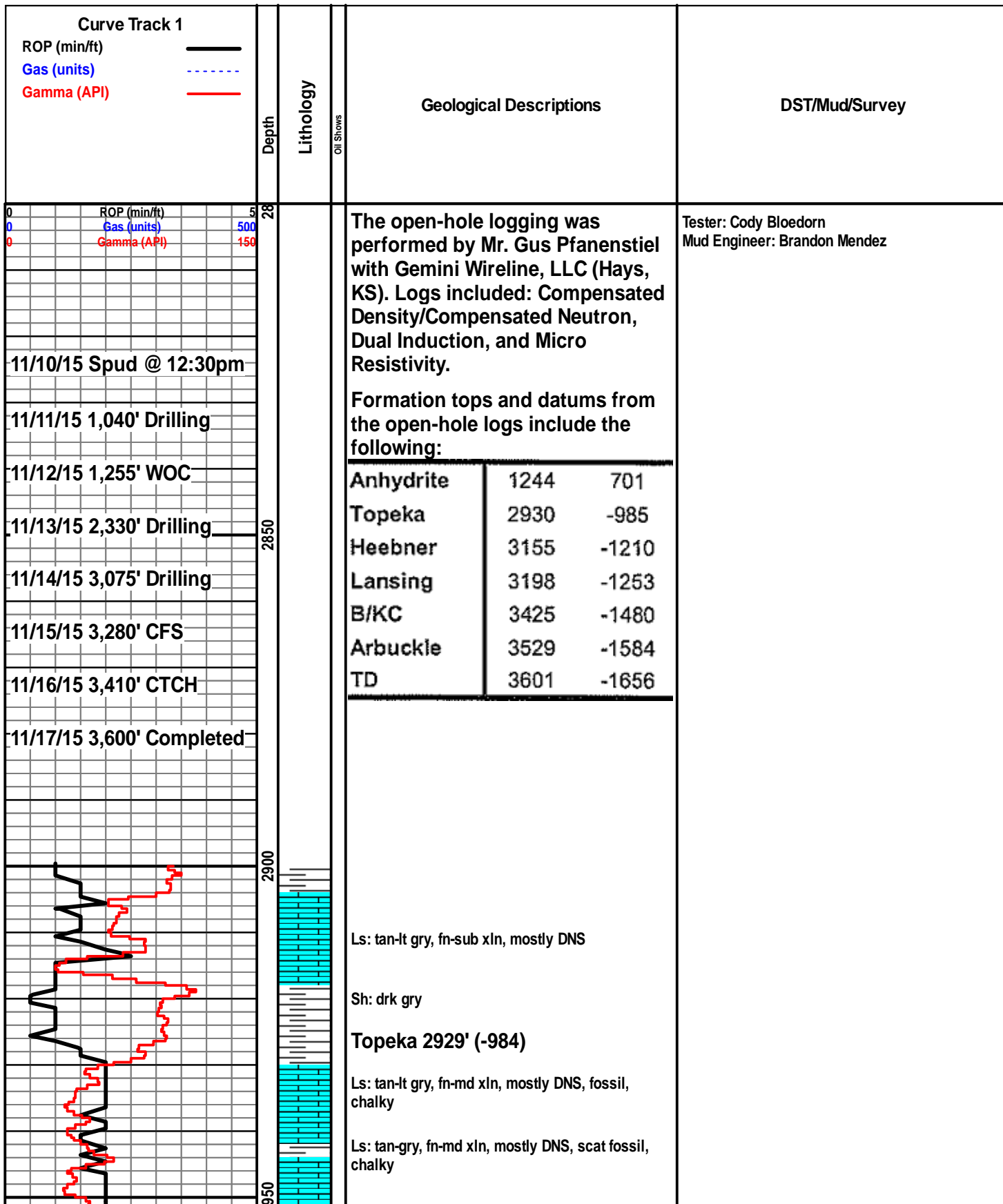
- ROUNDING**
 Rounded
 Subrnd
 Subang
 Angular

- Spotted
 Ques
 Dead

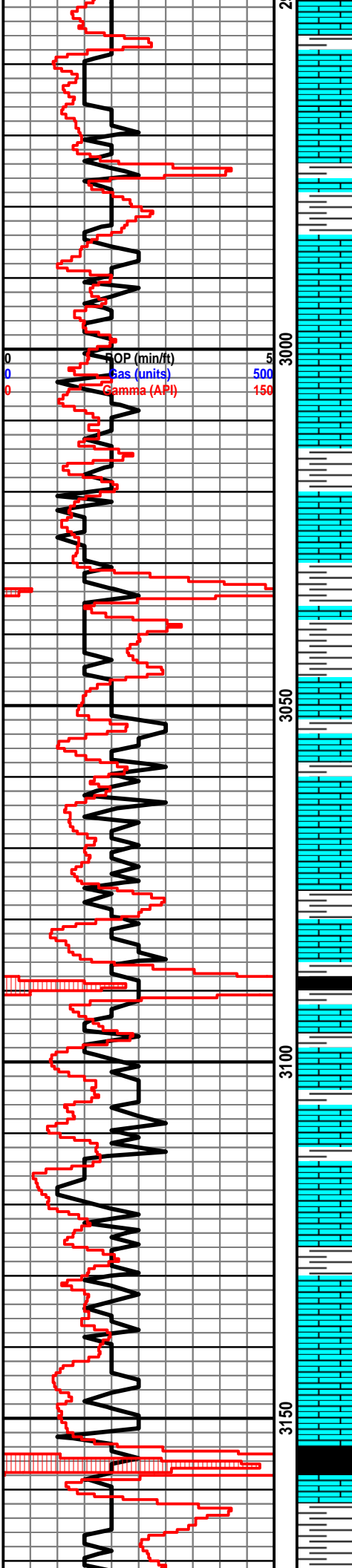
- EVENT**
 Rft
 Sidewall

- INTERVAL**
 Core
 Dst

- OIL SHOW**
 Even



Tester: Cody Bloedorn
Mud Engineer: Brandon Mendez



Ls: ala

Ls: off wh-tan, fn xln, scat vuggy porosity, scat chert-off wh, scat fossil, NSFO

Ls: tan-gry, fn xln, mostly DNS, NSFO

Sh: lt gry

Ls: off wh-tan, fn-md xln, mostly DNS, scat fossil, chalky

Ls: ala

Sh: lt gry-drk gry

Ls: tan-lt gry, fn-md xln, mostly DNS, NSFO, scat fossil, scat chert

Sh: lt gry-drk gry

Ls: ala

Ls: off wh-tan, fn-md xln, scat vuggy porosity, NSFO, scat fossil, chalky

Ls: ala

Sh: drk gry-blk

Ls: tan-lt gry, fn xln, scat int xln porosity, scat chalk, fossil

Ls: tan-gry, fn-md xln, scat pp vuggy porosity, NSFO, scat chert-off wh

Ls: ala

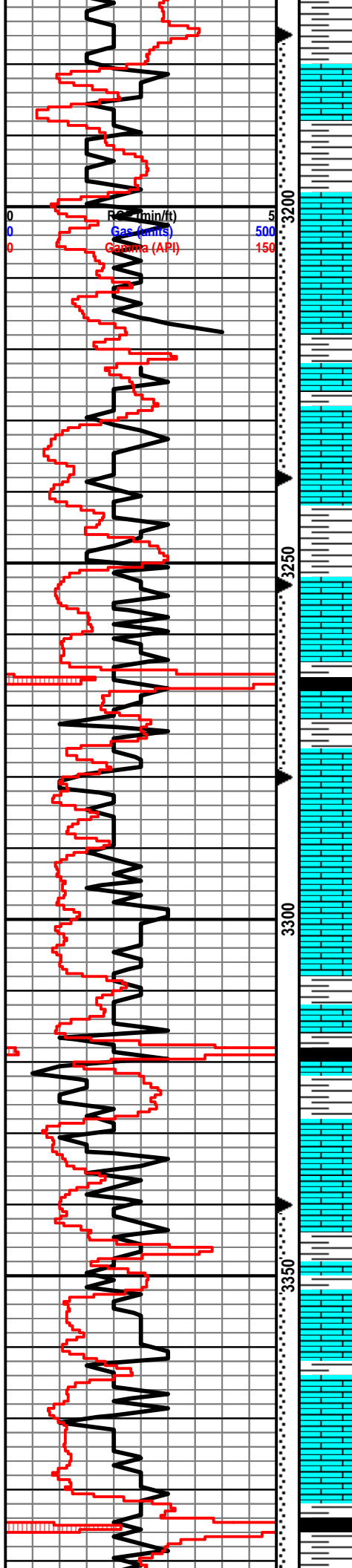
Sh: lt gry-drk gry

Ls: tan-gry, fn-md xln, mostly DNS, scat chalky, chert-off wh

Heebner 3154' (-1209)

Sh: blk, carb, fissile

Sh: drk gry-brn



Ls: off wh-tan, fn xln, scat int xln & vuggy porosity, NSFO, no odor

Sh: drk gry

Lansing 3195' (-1250)

Ls: off wh-tan, fn xln, ool, fair ool porosity, scat oil st, SSFO, sl odor

Sh: lt gry

Ls: off wh-tan, fn-md xln, poor int xln porosity, NSFO, no odor

Sh: drk gry-blk

Ls: off wh-tan, fn xln, poor int xln & vuggy porosity, fair oil st, SSFO, sl odor, scat fossil

Sh: lt gry-brn

Ls: off wh-tan, fn-md xln, scat int xln porosity, scat oil st, VSSFO, sl odor, scat chalk

Sh: drk gry-blk

Sh: lt gry

Ls: off wh-tan, fn-md xln, fossil, poor int fossil porosity, fair oil st, SSFO, sl odor, chalky

Ls: off wh-tan, fn xln, poor int xln porosity, scat oil st, VSSFO, sl odor, scat chalk

Ls: off wh-tan, fn-md xln, poor int xln porosity, scat chert, NSFO

Sh: drk gry-blk, carb

Sh: lt gry-drk gry

Ls: off wh-tan, fn-md xln, poor int xln porosity, scat oil st, NSFO, no odor, scat chalk, chert-off wh

Sh: drk gry

Ls: off wh-tan, fn xln, poor-fair int xln porosity, good oil sat, FSFO, fair odor, scat fossil

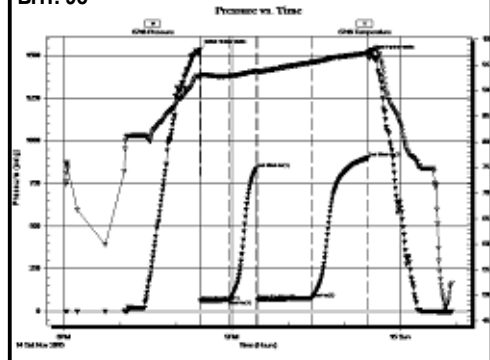
Sh: lt gry-drk gry

Ls: off wh-tan, fn xln, ool, fair ool porosity, fair-good oil sat, FSFO, fair odor, scat fossil, chalky

Sh: drk gry

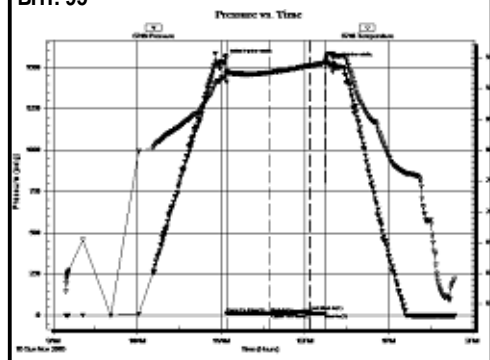
DST #1 3,176-3,238' (Lansing A-C)
30"-30"-60"-60"

IF: weak blow built to 1.75"
FF: weak blow built to 1.5"
Rec: 82' G&OCM (5% G, 15% O, 80% M)
FP: 61-68, 68-77#
SIP: 838-902#
HP: 1,537-1,504#
BHT: 98



DST #2 3,253-3,280' (Lansing E-F)
30"-30"-10"

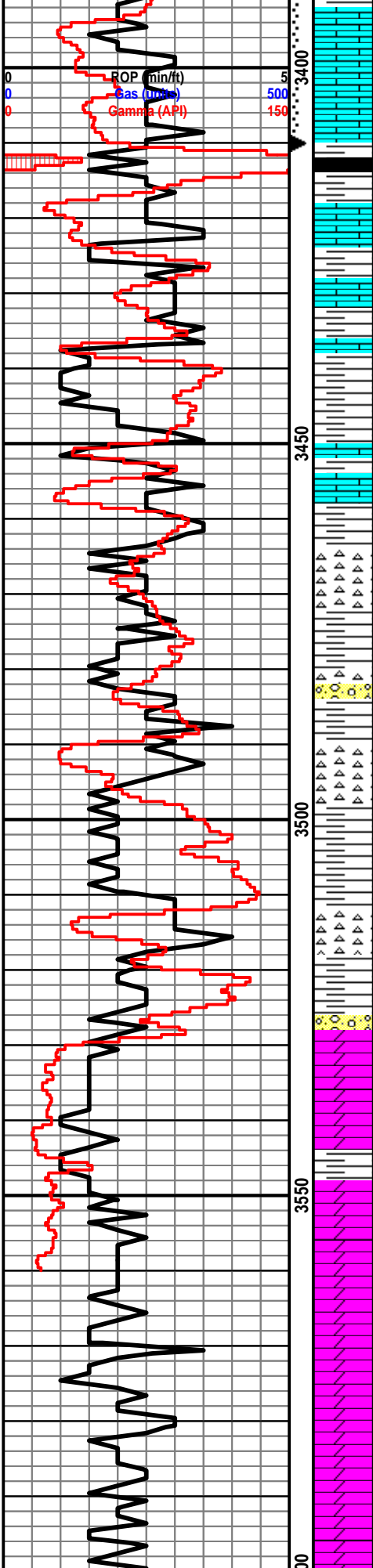
IF: weak surface blow
FF: no blow, pulled tool after 10 minutes
Rec: 1' Mud
FP: 13-13, 14-12#
SIP: 24#
HP: 1,553-1,531#
BHT: 95



DST #3 3,340-3,410' (Lansing I-K)
30"-30"-10"

IF: weak surface blow
FF: no blow, pulled tool after 10 minutes
Rec: 1' Mud
FP: 29-35, 38-40#
SIP: 594#
HP: 1,630-1,584#
BHT: 98





Ls: off wh-tan, fn xln, poor pp vuggy porosity, scat oil st, VSSF0, sl odor, scat fossil

Sh: drk gry

Ls: off wh-tan, fn xln, poor int xln & pp vuggy porosity, scat oil st, VSSF0, sl odor, scat fossil

B/KC 3422' (1477)

Sh: drk gry-brn-grn

Ls: tan-lt gry, fn-md xln, mostly DNS, NSFO

Sh: drk gry-brn-grn

Conglomerate 3449' (-1504)

Ls: tan-lt gry, fn xln, mostly DNS, scat sh: drk gry-brn

Chrt: wh-lt yellow, trip, scat pp vuggy porosity, scat st, NSFO, no odor

Sh: drk gry-brn-grn

Chert: off wh-lt yellow, fn xln, mostly DNS, trip, poor int xln porosity, scat sh: drk gry-drk brn

Sh: lt gry-drk gry

Chert: off wh-lt tan, fn-md xln, mostly DNS, trip, NSFO, qtz: off wh-clr, fn grn, mostly rnd, fairly well sorted, scat oil sat, VSSF0, sl odor

Cong: off wh-tan-brn, fn xln, mostly DNS, chert-off wh, trip, scat sh: drk gry-brn

Arbuckle 3538' (-1593)

Dolo: off wh-tan, fn-md xln, poor-fair int xln porosity, fair oil sat, SSFO, sl odor, scat chert-off wh

Dolo: off wh-tan, fn-md xln, poor int xln porosity, lt oil st, NSFO, no odor, scat cher-off wh

Dolo: ala

Dolo: off wh-tan, fn-md xln, poor-fair int xln porosity, NSFO, no odor, hvy chert-off wh

Dolo: ala

Dolo: off wh-tan, fn-md xln, poor int xln porosity, mostly barren, NSFO

