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 # 5135
Name: Farmer, John O., Inc.
Address 1: 370 W WICHITA AVE
Address 2: PO BOX 352
City: RUSSELL State: KS Zip: 67665 + 0352
Contact Person: Marge Schulte
Phone: (785) 483-3145
CONTRACTOR: License # 31548
Name: Discovery Drilling
Wellsite Geologist: Austin Klaus
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 #:

09/21/2022	09/25/2022	09/26/2022
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No.: 15-051-27048-00-00
Spot Description: SE NW SW NW
SE - NW - SW - NW Sec. 36 Twp. 11 S. R. 17 ☐ East ☑ West
1753 Feet from ☑ North / ☐ South Line of Section
383 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)*, Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Ellis
Lease Name: SAMUELSON Well #: 9
Field Name: Bemis-Shutts
Producing Formation: NA
Elevation: Ground: 2110 Kelly Bushing: 2118
Total Vertical Depth: 3700 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 223 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: 42000 ppm Fluid volume: 400 bbls
Dewatering method used: Evaporated
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: 12/30/2022
☐ **Confidential Release Date:** 12/29/2024
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☐ **I** ☑ **II** ☐ **III** **Approved by:** David Befort **Date:** 12/30/2022

Page Two

Operator Name: Farmer, John O., Inc. Lease Name: SAMUELSON Well #: 9

Sec. 36 Twp. 11 S. R. 17 ☐ East ☑ West County: Ellis

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

Geologist Report / Mud Logs ☑ Yes ☐ No

List All E. Logs Run:

Compensated Density Neutron Log
Dual Induction Log
Microresistivity Log

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Attached	Attached	Attached

CASING RECORD ☑ New ☐ 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
Surface	12.25	8.625	23	223	80/20 Pozmix	150	3% C.C., 2% gel

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
____ Perforate ____ Protect Casing ____ Plug Back TD ____ 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: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity	

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL: Top / Bottom
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*
TUBING RECORD:	Size:	Set At:	Packer At:		

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	SAMUELSON 9
Doc ID	1678127

Tops

Name	Top	Datum
Anhydrite	1294	(+824)
Topeka	3051'	(-933)
Heebner	3289'	(-1171)
Toronto	3312'	(-1194)
Lansing	3346'	(-1228)
Base/KC	3565'	(-1447)
Arbuckle	3597'	(-1479)
L.T.D.	3700'	(-1582)

Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	SAMUELSON 9
Doc ID	1678127

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	223	80/20 Pozmix	150	3% C.C., 2% gel

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:	Samuelson #9
API:	15-051-27,048-0000
Location:	Ellis County
License Number:	
Region:	Kansas
Spud Date:	09/21/2022
Drilling Completed:	09/25/2022
Surface Coordinates:	Section 36, Township 11 South, Range 17 West 1753' FNL & 383' FWL
Bottom Hole Coordinates:	Vertical well w/ minimal deviation, same as above
Ground Elevation (ft):	2,110
K.B. Elevation (ft):	2,118
Logged Interval (ft):	3,000 To: 3,700
Total Depth (ft):	3,700
Formation:	TOPEKA-ARBUCKLE
Type of Drilling Fluid:	Chemical (Mud Co./Service Mud, Inc.)

Printed by StripLog 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 Samuelson #9 well was drilled by Discovery Drilling Rig #4 (Tool Pusher: Ryan Gaschler).

The location for the Samuelson #9 was discovered via 3D seismic survey. Rock samples were gathered and evaluated from 3,000' - 3,700'. Oil shows were encountered in the Lansing B, C, E, I, J and Arbuckle. Structurally, the Lansing top was picked 7' low to the comparison well, Samuelson #8 (Jolen Operating, 2008). Structural thinning occurred through the lower Lansing and below the B/KC, which resulted in an Arbuckle picked flat to the comparison well. Two bottom-hole drill stem tests were run in the Lansing (see complete results below), both of which yielded negative results. After the open-hole logs were evaluated, three straddle tests were run to evaluate the Arbuckle, all of which yielded negative results (see complete results below). After comprehensive evaluation of all oil shows, DST results, and electric logs, it was decided the Samuelson #9 be plugged and abandoned on 09/26/2022.

ROCK TYPES

Anhy, Bent, Brec, Cht, Clyst, Coal, Congl, Dol, Gyp, Igne, Lmst, Meta, Mrlst, Salt, Shale, Shcol, Shgy, Sltst, Ss, Till

OTHER SYMBOLS

POROSITY
- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

SORTING
- Well
- Moderate
- Poor

ROUNDING
- Rounded
- Subrnd
- Subang
- Angular

OIL SHOW
- Even
- Spotted
- Ques
- Dead

INTERVAL
- Core
- Dst

EVENT
- Rft
- Sidewall

Curve Track 1	MD	Lithology	Oil Shows	Geological Descriptions	DST/Mud/Survey
ROP (min/ft) 0–5; Gas (units) 0–500; Gamma (API) 0–150	29				
DAILY ACTIVITY:					
09/08/2022 - Move in rig up					
09/09/2022 - 223', resume Monday					
09/21/2022 - 1,987', drilling					
09/22/2022 - 2,910', drilling					
09/23/2022 - 3,360', circ for sampl					
09/24/2022 - 3,503', drilling					
09/25/2022 - 3,661', drilling	2950				
09/26/2022 - 3,700', DST #4					

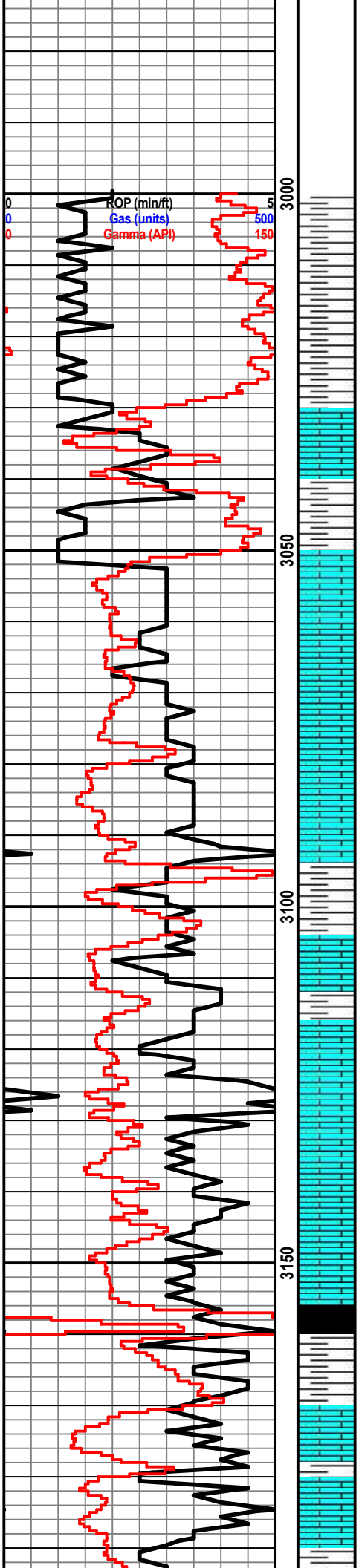
The open-hole logging was performed by Mr. Gus Pfanenstiel with Gemini Wireline, LLC (Hays, KS). Logs included: Compensated Density Neutron, Dual Induction, and Microresistivity.

Formation tops and datums from the open-hole logs include the following:

Formation	E-Log	Datum
Anhydrite	1294	824
Topeka	3051	-933
Heebner	3289	-1171
Toronto	3312	-1194
Lansing	3346	-1228
B/KC	3565	-1447
Arbuckle	3597	-1479
LTD	3700	-1582

Mud Engineer:
Gary Schmidtberger

Tester:
Dustin Day



Sh: lt-drk gry

Sh: ala

Ls: drk gry-brn, fn-sub xln, DNS

Sh: lt gry

Topeka 3052' (-934)

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

Ls: ala

Ls: off wh-tan, fn xln, scat fair int xln porosity, NSFO

Ls: tan-lt gry, fn xln, poor int xln porosity, NSFO

Sh: lt-drk gry

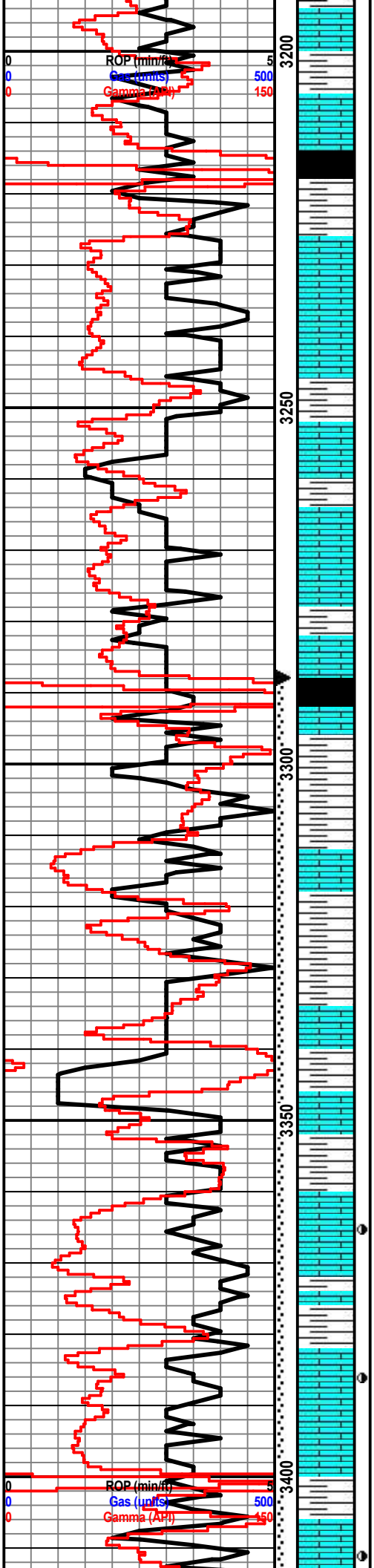
Ls: off wh-tan-lt gry, fn xln, poor int xln porosity, NSFO

Sh: lt-drk gry

Ls: tan-lt gry, fn xln, poor-fair int xln & vuggy porosity, NSFO

Sh: drk gry-blk

Ls: tan-lt gry, fn xln, poor int xln & scat fair int part porosity, NSFO



Sh: drk gry-blk

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

Sh: lt gry

Ls: off wh-tan, fn xln, scat in part porosity, NSFO, scat chalk

Sh: lt-drk gry

Ls: off wh-tan-lt gry, fn xln, fair int part porosity, NSFO, scat chalk

Ls: tan-lt gry, fn xln, poor int xln porosity, NSFO

Heebner 3292' (-1174)

Sh: drk gry-blk

Sh: lt-drk gry

Toronto 3315' (-1197)

Ls: off wh-tan, fn xln, poor-fair int xln porosity, scat pp vuggy porosity, scat oil stn, SSFO in cup, sl odor

Sh: lt gry, soft

Sh: lt-drk gry-brn

Lansing 3348' (-1230)

Ls: off wh-tan-brn, fn-sub xln, mostly DNS

Sh: lt-drk gry

Ls: off wh-tan, fn xln, scat foss, poof-scat fair int part & int foss porosity, scat-fair oil stn in porosity, SFO in cup, fair odor

Sh: lt-drk gry

Ls: off wh-tan, fn xln, poor-fair int xln porosity, scat oil stn, SSFO, sl odor

Ls: off wh-tan-brn, fn xln, poor int xln porosity, NSFO

Sh: lt-drk gry-brn

Ls: off wh-tan, fn xln, fair int xln & scat vuggy porosity, fair oil sat, SFO in cup, fair odor

DST #1 3,288-3,420' (Toronto-Lansing F)

30"-30"-60"-60"

IF: BOB 27 min, no blow back on SI

FF: weak blow built to 5.5", no blow back

Rec: 75' Gas in Pipe

176' Slight Oil & Gas Cut Watery Mud

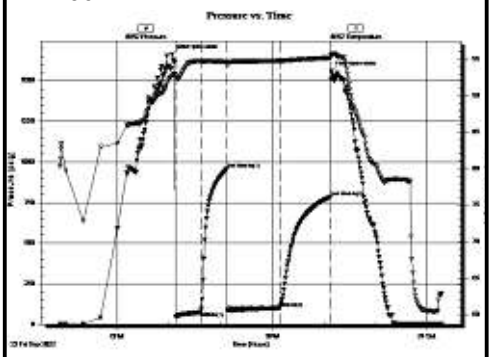
(2%O, 5%G, 15%W, 78%W)

FP: 46-76, 87-100#

SIP: 957-784#

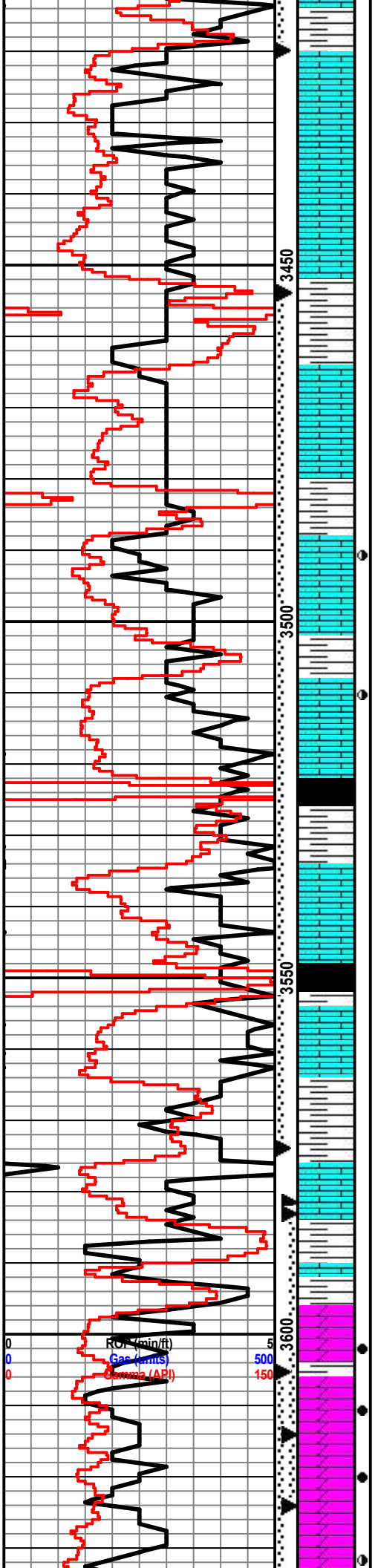
HP: 1,663-1,559#

BHT: 96



Wt: 8.9

Vis: 52



Sh: lt-drk gry-brn

Ls: off wh-tan, fn xln, fair int xln & vuggy porosity, scat lt oil stn, NSFO, chalky

Ls: off wh-tan, fn-sub xln, mostly DNS

Ls: ala

Sh: drk gry

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

Sh: lt-drk gry

Ls: off wh-tan, fn xln, poor-scat fair int xln & pp vuggy porosity, scat oil stn, sl-fair oil sat in few rxs, SSFO in cup, sl odor

Sh: lt gry

Ls: off wh-tan, fn xln, poor int xln porosity, few rxs fair int xln & vuggy porosity, fair oil stn in porosity, fair oil sat in few rxs, SSFO in cup, sl odor

Sh: lt-drk gry, blk

Ls: off wh-tan, fn xln, scat foss, poor int xln porosity, scat oil stn, NSFO

Sh: lt-drk gry

Ls: off wh-tan, fn-sub xln, mostly DNS, NSFO, scat chalk

B/KC 3568' (-1450)

Sh: lt-drk gry-brn

Ls: off wh-lt gry, fn xln, foss, poor int xln porosity

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

Arbuckle 3600' (-1482)

Dolo: off wh-tan, fn xln, poor-few rxs fair int xln porosity, fair-good oil sat, GSFO, good odor

Dolo: off wh-tan, fn xln, few rxs md xln, scat fair int xln porosity, good oil sat, GSFO, good odor

Dolo: off wh-tan, fn-vry fn xln, few rxs md xln, fair-good int xln porosity, good oil sat, GSFO, good odor

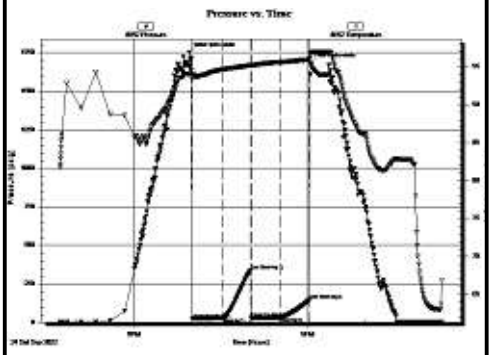
Dolo: off wh-tan, fn-vry fn xln, fair-good int xln porosity, fair-good oil sat, FSFO, fair-good odor, scat chert

DST #2 3,454-3,574' (Lansing H-L)

30"-30"-30"-30"
IF: weak blow built to 1/2"
FF: No blow

Rec: 5' Mud

FP: 23-28, 29-32#
SIP: 337-146#
HP: 1,752-1,682#
BHT: 97

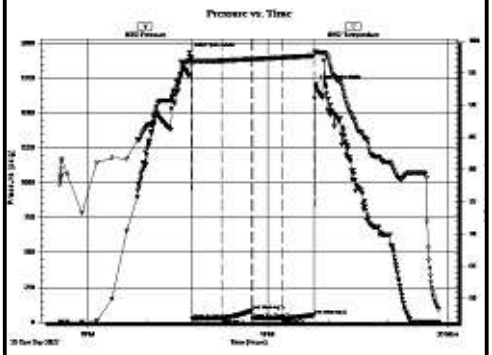


DST #3 3,582-3,610' (Top 13' of Arbuckle)

30"-30"-30"-30"
IF: weak blow built to 1/2"
FF: no blow

Rec: 5' Mud

FP: 23-27, 27-27#
SIP: 85-53#
HP: 1,937-1,706#
BHT: 98

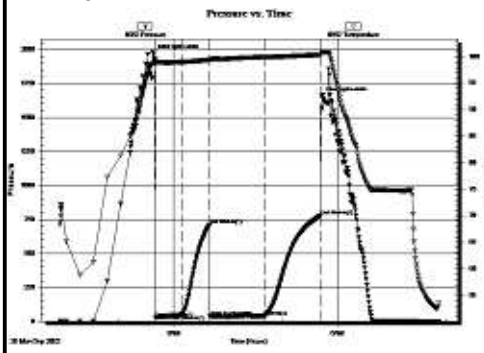


DST #4 3,583-3,624' (Top 27' of Arbuckle)

30"-30"-60"-60"
IF: weak blow built to 1.25"
FF: weak blow built to 1"

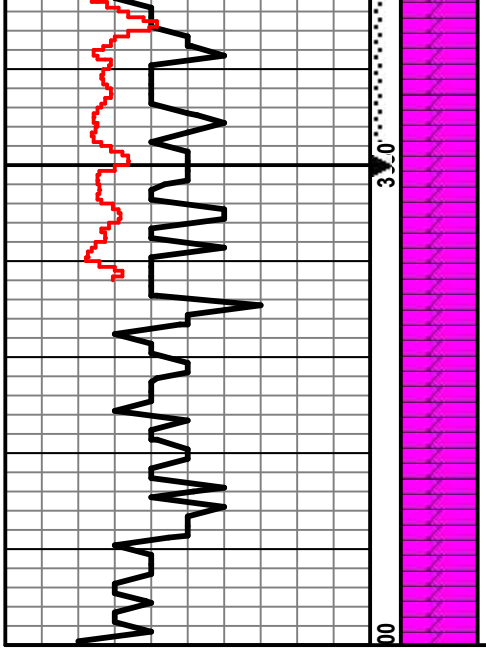
Rec: 35' Slight Oil Cut Mud (2%O, 98%M)

FP: 29-47, 37-40#
SIP: 711-778#
HP: 1,964-1,653#
BHT: 101



DST #5 3,605-3,650' (Top 50' of Arbuckle)

30"-30"-30"-30"



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

Dolo: off wh-tan, fn xln, poor int xln porosity, barren, chert-off wh

Dolo: off wh-tan-lt gry, fn xln, few rxs md xln, fair int xln porosity, barren, hvy chert-off wh, scat trip

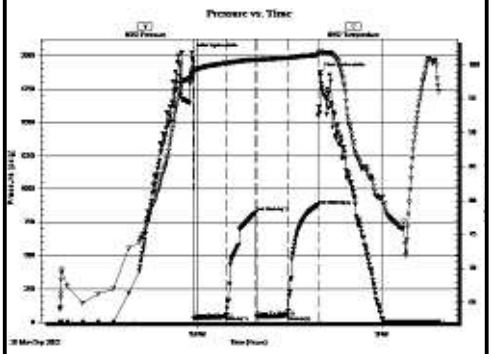
Dolo: tan-lt gry, fn-md xln, fair int xln porosity, barren, chert-off wh

Dolo: ala

IF: weak blow built to 1/2"
FF: weak surface blow

Rec: 35' Water Cut Mud (15%W, 85%M)

FP: 30-49, 43-48#
SIP: 824-879#
HP: 2,020-1875#
BHT: 102



Wt: 9.0
Vis: 60+

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071 Home Office P.O. Box 32 Russell, KS 67665 No. 2400
Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-21-22	36	11	17	Ellis	Ks		9:45 PM

Location Victoria N to Codell Rd, 9.8 N to Flagged

Lease Samuelson Well No. 9 Owner Cattle Guard, .9 mile east, .7 mile South, .3 mile east, .1 South, W & S to Location E/Into

Contractor Discovery #4

Type Job Surface

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.

Hole Size 12 1/4" T.D. 223'

Csg. 8 5/8" Depth 223'

Charge To John O Farmes

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. 15' Shoe Joint 15'

Cement Amount Ordered 150 80/20 3%cc 2% Gel

Meas Line Displace 13 1/4 Bls

EQUIPMENT

Pumptrk 17 No. Cementer / Helper Jordan

Bulktrk 15 No. Driver / Driver Robert

Bulktrk P.U. No. Driver / Driver Rick

JOB SERVICES & REMARKS

Remarks: Cement did Circulate

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

Victoria N to Codell Rd, 9.8 miles N to Flagged Cattle Guard, .9 miles east, .7 miles South, .3 mile east, .1 mile south, west + South to Location, E/Into

Common	120
Poz. Mix	30
Gel.	3
Calcium	6
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	159
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	Surface
Mileage	20
Tax	
Discount	
Total Charge	

Thanks

X Signature Ryan Jacobs

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071 Home Office P.O. Box 32 Russell, KS 67665 No. 3133
Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-26-22	36	11	17	Ellis	KS		11:00 PM

Location HAYS 8N 6E 3½W 3S E/E into

Lease SAMUELSON Well No. 9

Contractor Discovery #2

Type Job PTA

Hole Size 7⅞ T.D.

Csg. Depth

Tbg. Size Depth

Tool Depth

Cement Left in Csg. Shoe Joint

Meas Line Displace

EQUIPMENT

	No.		
Pumptrk 17		Cementer	Bill
		Helper	
Bulktrk		Driver	Nick
		Driver	
Bulktrk 19		Driver	
		Driver	Ross

JOB SERVICES & REMARKS

Remarks:

Rat Hole 30

Mouse Hole 15

Centralizers

Baskets

D/V or Port Collar

3577 - 50sx
1325 - 50sx
825 - 100sx
275 - 50sx
40 - 10sx

X Signature Ryan Gaede

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.

Charge To John O. Farmer Inc.

Street

City State

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered 305sx 60/40 4%Gel ¼# Flo

Common	183
Poz. Mix	122
Gel.	11
Calcium	
Hulls	
Salt	
Flowseal	75#
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	316
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Plug - 1	
Pumptrk Charge plug	
Mileage 20	
Tax	
Discount	
Total Charge	

Thanks

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
370 West Wichita Avenue - P.O. Box 352
Russell, KS 67665 + 0352

Contractor: **Discovery Drilling Co., Inc. LIC#31548**
PO Box 763
Hays, KS 67601

Lease: Samuelson # 9

Location: 1753 FNL - 383 FWL
SE/NW/SW/NW
Section 36/ 11S/ 17W
Ellis County, KS

Loggers Total Depth: 3700'
Rotary Total Depth: 3700'
Commenced: 9/21/2022
Casing: 8 5/8" @ 223'W/150sks

API#15- 051-27,048-00-00
Elevation: 2110 GL - 2118 KB
Completed: 9/26/2022
Status: D & A
KCC Contact: Case Morris
Plugging Info: (1st Plug @ 3577'W/50sks)(2nd Plug @ 1325'W/50sks) 3rd Plug @ 825'W/100sks)(4th Plug @ 275'W/50sks) (5th Plug @ 40'W/10sks)(30sks In Rat Hole)(15sks In Mouse Hole)(Total 305sks 60/40Poz 4%Gel-1/4# FS/sk- By Quality Oilwell Cementing-Completed @ 11:00PM 0/26/2022)

DEPTHS & FORMATIONS
(All from KB)

Surface, Sand & Shale	0'	Shale	1337'
Dakota Sand	723'	Shale & Lime	1825'
Shale	825'	Shale	2206'
Cedar Hill Sand	848'	Shale & Lime	2607'
Red Bed Shale	1070'	Lime & Shale	3294'
Anhydrite	1295'	RTD	3700'
Base Anhydrite	1337'		

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 10-12-22

My Commission expires: 6-28-2026

(Place stamp or seal below)

Myrna S. Hoffman
Notary Public

NOTARY PUBLIC STATE OF KANSAS
MYRNA S. HOFFMAN
NOTARY PUBLIC
STATE OF KANSAS
My App. Exp. 6-28-2026

DRILL STEM TEST REPORT

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11-17 Ellis KS

Samuelson #9

Job Ticket: 69830 **DST#: 1**

Test Start: 2022.09.23 @ 16:53:00

GENERAL INFORMATION:

Formation: **Toronto-LKC F**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:07:45
Time Test Ended: 00:17:45

Test Type: Conventional Bottom Hole (Initial)
Tester: Dustin Day
Unit No: 70

Interval: 3288.00 ft (KB) To 3420.00 ft (KB) (TVD)
Total Depth: 3420.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

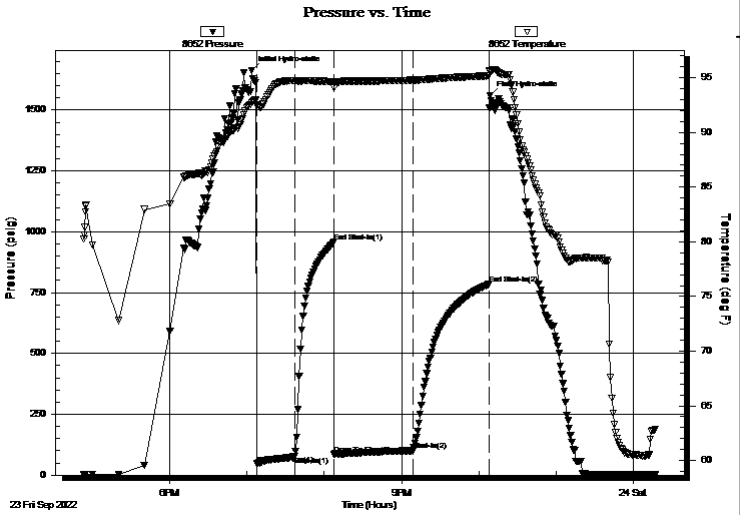
Reference Elevations: 2118.00 ft (KB)
2110.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8652 **Outside**

Press@RunDepth: 100.46 psig @ 3289.00 ft (KB)
Start Date: 2022.09.23 End Date: 2022.09.24
Start Time: 16:53:05 End Time: 00:17:44

Capacity: 8000.00 psig
Last Calib.: 2022.09.24
Time On Btm: 2022.09.23 @ 19:03:30
Time Off Btm: 2022.09.23 @ 22:08:45

TEST COMMENT: IF-30- BOB in 27 min, Built to 12 1/2"
SI1-30- No return
FF-60- Built to 5 1/2"
Si2-60- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1663.02	92.75	Initial Hydro-static
5	46.05	92.52	Open To Flow (1)
34	75.68	94.74	Shut-In(1)
64	957.23	94.67	End Shut-In(1)
65	86.88	94.11	Open To Flow (2)
126	100.46	94.79	Shut-In(2)
185	784.19	95.18	End Shut-In(2)
186	1558.57	95.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
176.00	SOGWCM 5%gas 2%oil 15%w ater 78%n	2.20
0.00	75' GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11-17 Ellis KS

Samuelson #9

Job Ticket: 69830 **DST#: 1**

Test Start: 2022.09.23 @ 16:53:00

GENERAL INFORMATION:

Formation: **Toronto-LKC F**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:07:45
Time Test Ended: 00:17:45

Test Type: Conventional Bottom Hole (Initial)
Tester: Dustin Day
Unit No: 70

Interval: 3288.00 ft (KB) To 3420.00 ft (KB) (TVD)
Total Depth: 3420.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

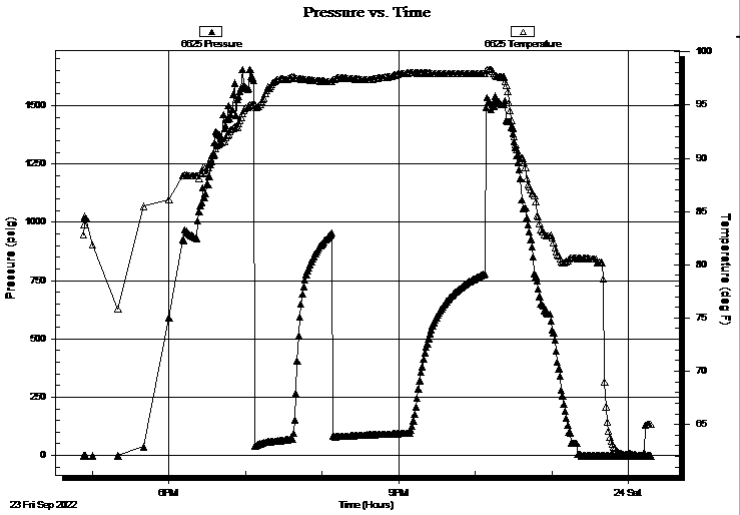
Reference Elevations: 2118.00 ft (KB)
2110.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Inside**

Press@RunDepth: psig @ 3289.00 ft (KB)
Start Date: 2022.09.23 End Date: 2022.09.24
Start Time: 16:53:05 End Time: 00:17:59

Capacity: 8000.00 psig
Last Calib.: 2022.09.24
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-30- BOB in 27 min, Built to 12 1/2"
SI1-30- No return
FF-60- Built to 5 1/2"
Si2-60- No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
176.00	SOGWCM 5%gas 2%oil 15%w ater 78%n	2.20
0.00	75' GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11-17 Ellis KS

Samuelson #9

Job Ticket: 69830 **DST#: 1**

Test Start: 2022.09.23 @ 16:53:00

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:	48000 ppm
Viscosity:	52.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.00 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5900.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
176.00	SOGWCM 5%gas 2%oil 15%w ater 78%mud	2.196
0.00	75' GIP	0.000

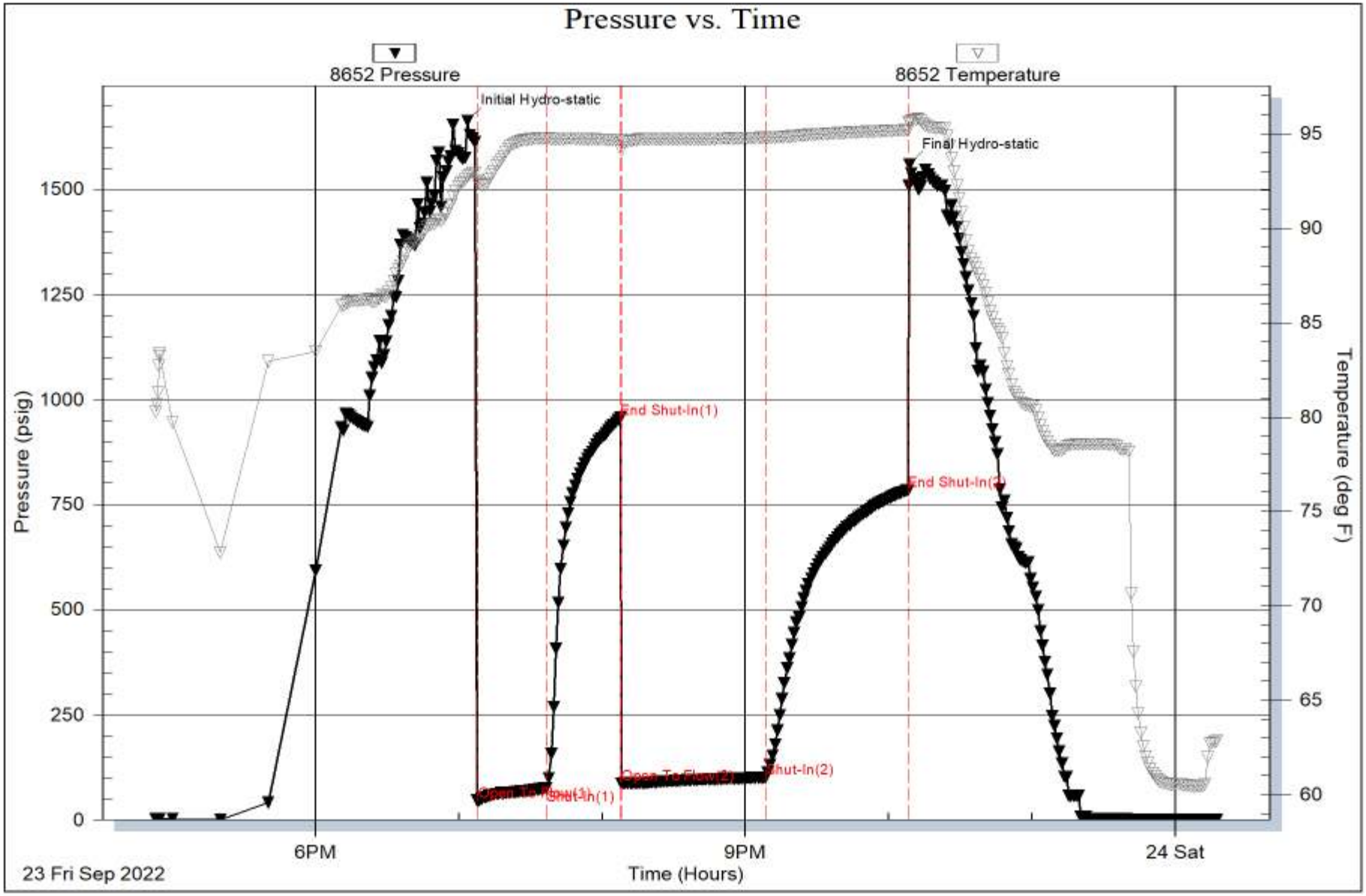
Total Length: 176.00 ft Total Volume: 2.196 bbl

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

Laboratory Name: Laboratory Location:

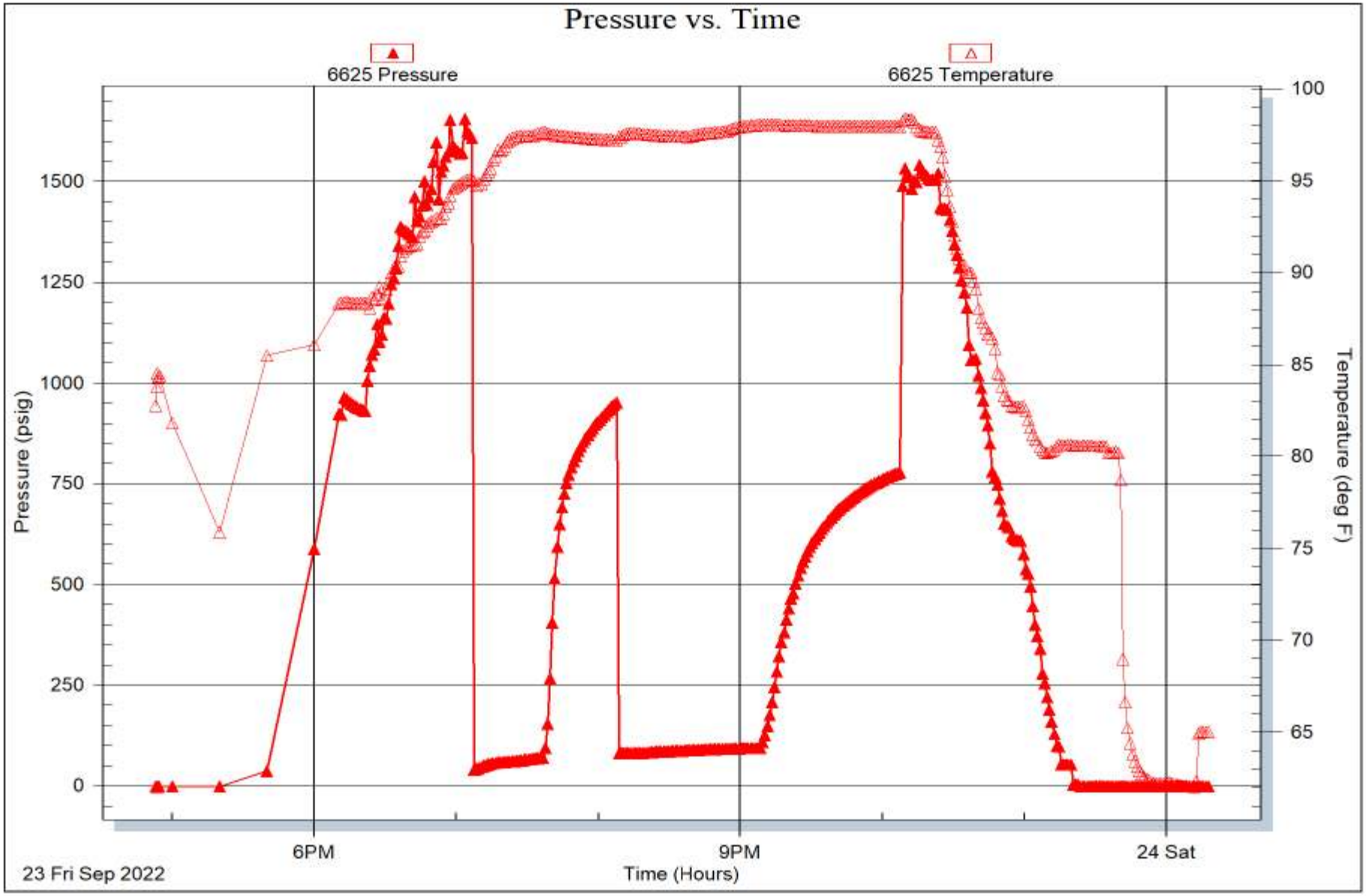
Recovery Comments: LCM 2#

Serial #: 8652 **Outside** John O. Farmer, Inc Samuelson #9 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 69830 Printed: 2022.09.24 @ 08:48:03

Serial #: 6625 **Inside** John O. Farmer, Inc Samuelson #9 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 69830 Printed: 2022.09.24 @ 08:48:03

DRILL STEM TEST REPORT

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69831 **DST#: 2**

Test Start: 2022.09.24 @ 16:43:00

GENERAL INFORMATION:

Formation: **LKC H-L**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:00:00
Time Test Ended: 23:19:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Dustin Day
Unit No: 70

Interval: 3454.00 ft (KB) To 3574.00 ft (KB) (TVD)
Total Depth: 3574.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

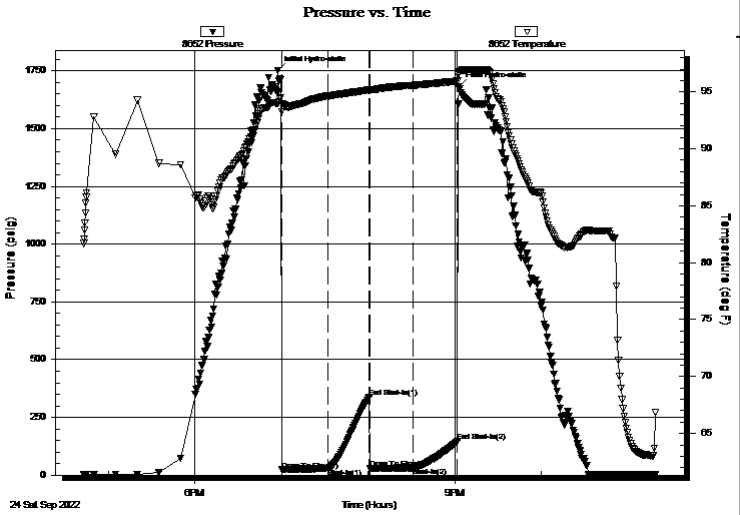
Reference Elevations: 2118.00 ft (KB)
2110.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8652 **Outside**

Press@RunDepth: 31.55 psig @ 3455.00 ft (KB)
Start Date: 2022.09.24 End Date: 2022.09.24
Start Time: 16:43:05 End Time: 23:18:59

Capacity: 8000.00 psig
Last Calib.: 2022.09.24
Time On Btm: 2022.09.24 @ 18:57:30
Time Off Btm: 2022.09.24 @ 21:02:45

TEST COMMENT:
IF-30- Built to 1/2"
SI1-30- No return
FF-30- No blow
SI2-30- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1752.44	94.08	Initial Hydro-static
3	22.65	93.28	Open To Flow (1)
35	28.36	94.63	Shut-In(1)
64	337.21	95.17	End Shut-In(1)
64	29.33	95.09	Open To Flow (2)
94	31.55	95.58	Shut-In(2)
125	146.49	95.95	End Shut-In(2)
126	1682.36	96.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100%	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69831 **DST#: 2**

Test Start: 2022.09.24 @ 16:43:00

GENERAL INFORMATION:

Formation: **LKC H-L**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:00:00
Time Test Ended: 23:19:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Dustin Day
Unit No: 70

Interval: 3454.00 ft (KB) To 3574.00 ft (KB) (TVD)
Total Depth: 3574.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

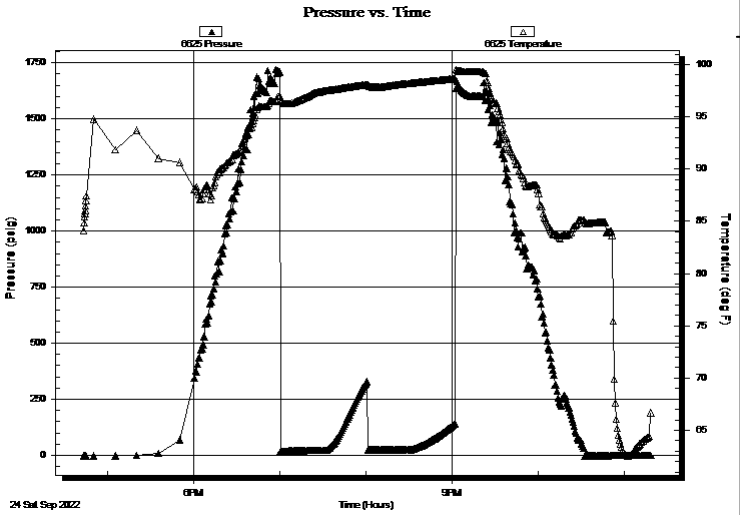
Reference Elevations: 2118.00 ft (KB)
2110.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Inside**

Press@RunDepth: psig @ 3455.00 ft (KB)
Start Date: 2022.09.24 End Date: 2022.09.24
Start Time: 16:43:05 End Time: 23:18:44

Capacity: 8000.00 psig
Last Calib.: 2022.09.24
Time On Btm:
Time Off Btm:

TEST COMMENT:
IF-30- Built to 1/2"
SI1-30- No return
FF-30- No blow
SI2-30- No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100%	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69831 **DST#: 2**

Test Start: 2022.09.24 @ 16:43:00

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:	bbl		
Water Loss:	5.60 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	6000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100%	0.025

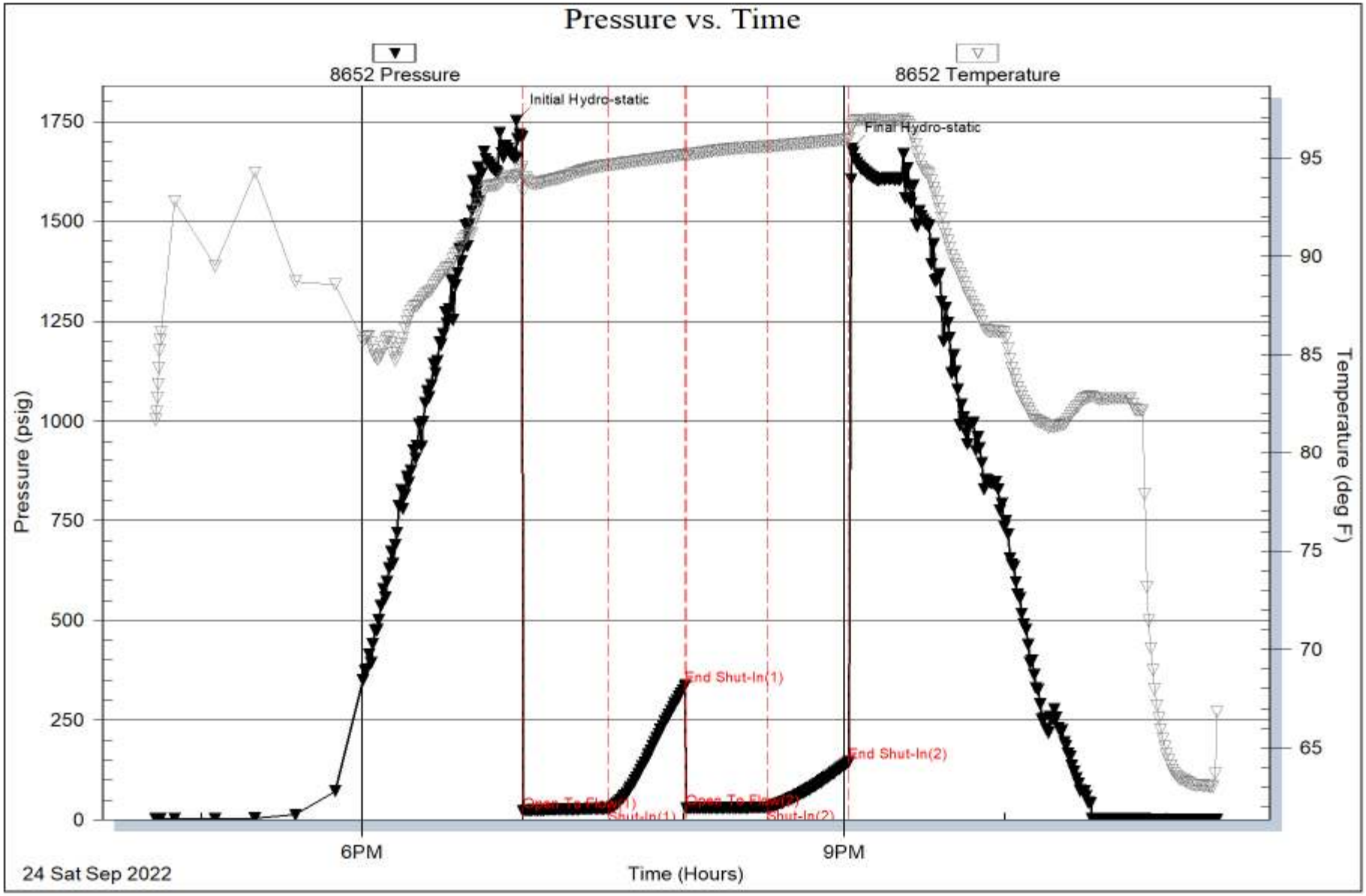
Total Length: 5.00 ft Total Volume: 0.025 bbl

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

Laboratory Name: Laboratory Location:

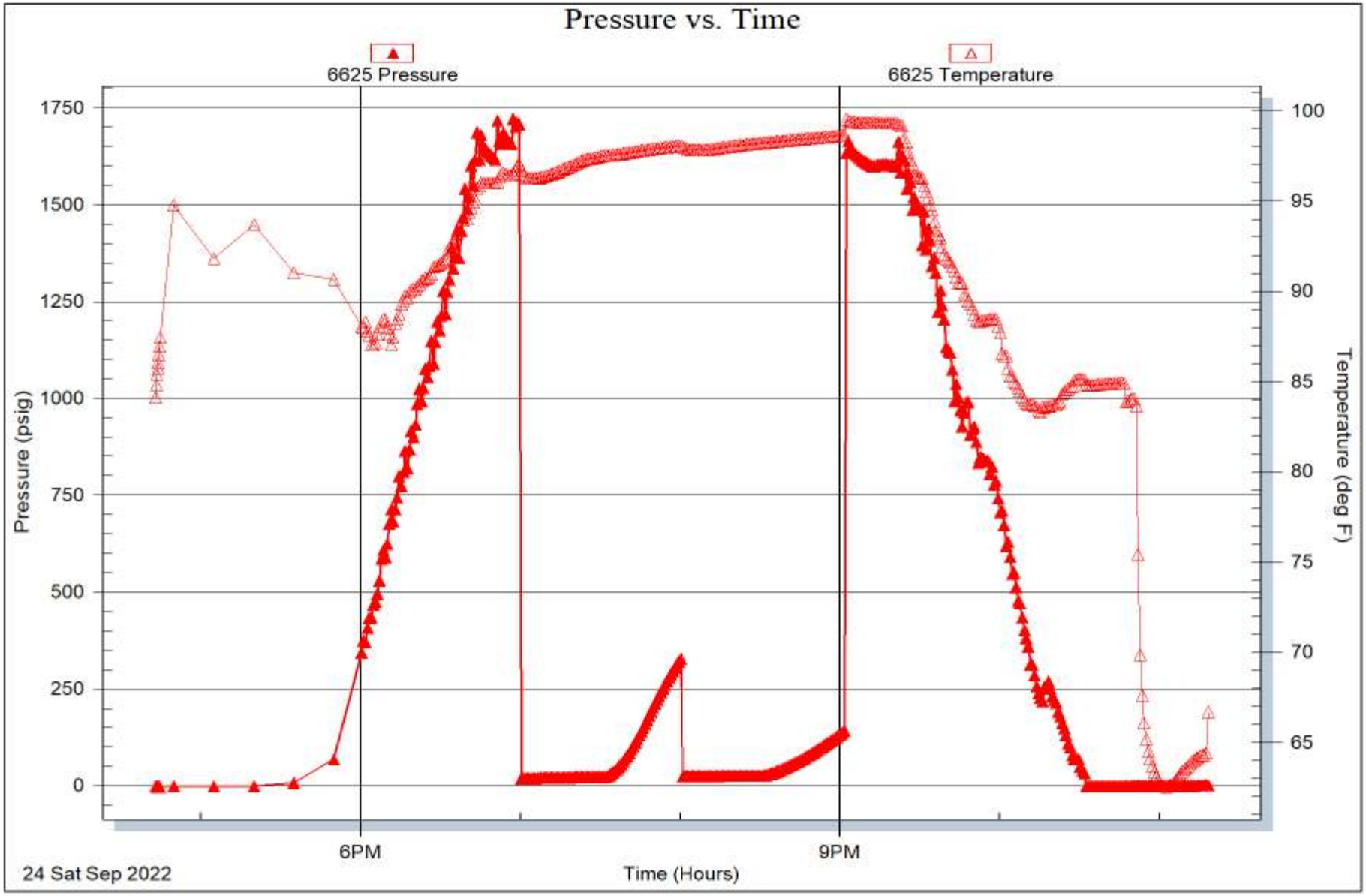
Recovery Comments: 2# LCM

Serial #: 8652 **Outside** John O. Farmer, Inc 36-11S-17W Ellis, KS DST Test Number: 2



Trilobite Testing, Inc Ref. No: 69831 Printed: 2022.09.25 @ 07:48:44

Serial #: 6625 **Inside** John O. Farmer, Inc 36-11S-17W Ellis, KS DST Test Number: 2



Trilobite Testing, Inc Ref. No: 69831 Printed: 2022.09.25 @ 07:48:44

DRILL STEM TEST REPORT

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69832 **DST#: 3**

Test Start: 2022.09.25 @ 17:32:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:44:45
Time Test Ended: 23:51:00

Test Type: Conventional Straddle (Reset)
Tester: Dustin Day
Unit No: 70

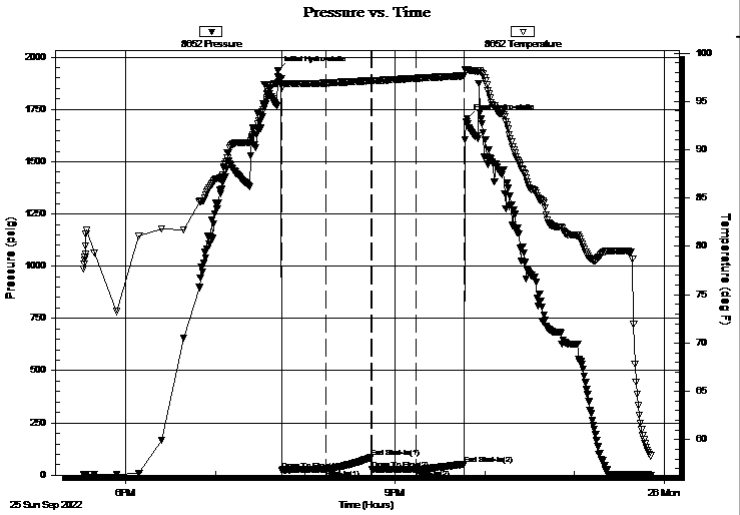
Interval: 3582.00 ft (KB) To 3610.00 ft (KB) (TVD)
Total Depth: 3700.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2118.00 ft (KB)
2110.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8652 **Outside**

Press@RunDepth:	27.41 psig @	3583.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2022.09.25	End Date:	2022.09.25	Last Calib.:	2022.09.26
Start Time:	17:32:05	End Time:	23:50:59	Time On Btm:	2022.09.25 @ 19:42:00
				Time Off Btm:	2022.09.25 @ 21:48:00

TEST COMMENT:
IF-30- Built to 1/2"
SI1-30- No return
FF-30- No blow
SI2-30- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1936.91	96.97	Initial Hydro-static
3	23.29	96.46	Open To Flow (1)
32	27.05	96.90	Shut-In(1)
62	85.29	97.14	End Shut-In(1)
63	26.86	97.11	Open To Flow (2)
93	27.41	97.39	Shut-In(2)
125	53.23	97.65	End Shut-In(2)
126	1706.38	98.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100%	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69832 **DST#: 3**

Test Start: 2022.09.25 @ 17:32:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:44:45
Time Test Ended: 23:51:00

Test Type: Conventional Straddle (Reset)
Tester: Dustin Day
Unit No: 70

Interval: 3582.00 ft (KB) To 3610.00 ft (KB) (TVD)
Total Depth: 3700.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

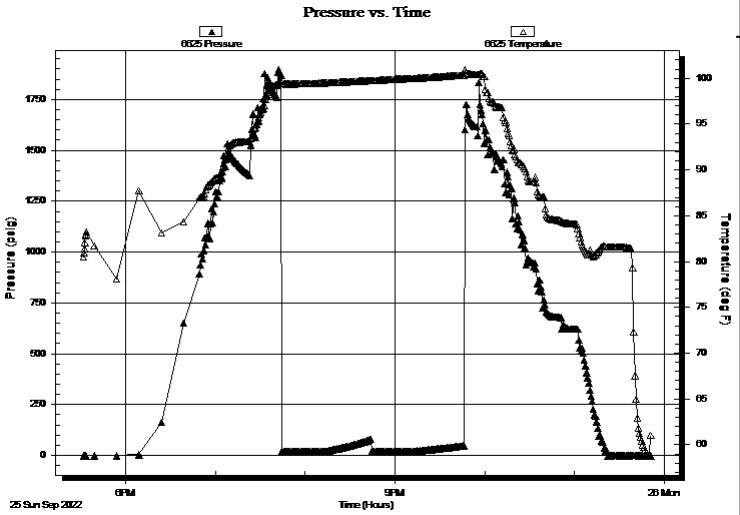
Reference Elevations: 2118.00 ft (KB)
2110.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Inside**

Press@RunDepth: psig @ 3583.00 ft (KB)
Start Date: 2022.09.25 End Date: 2022.09.25
Start Time: 17:32:05 End Time: 23:50:59

Capacity: 8000.00 psig
Last Calib.: 2022.09.26
Time On Btm:
Time Off Btm:

TEST COMMENT:
IF-30- Built to 1/2"
SI1-30- No return
FF-30- No blow
SI2-30- No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100%	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69832 **DST#: 3**

Test Start: 2022.09.25 @ 17:32:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:44:45
Time Test Ended: 23:51:00

Test Type: Conventional Straddle (Reset)
Tester: Dustin Day
Unit No: 70

Interval: 3582.00 ft (KB) To 3610.00 ft (KB) (TVD)
Total Depth: 3700.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

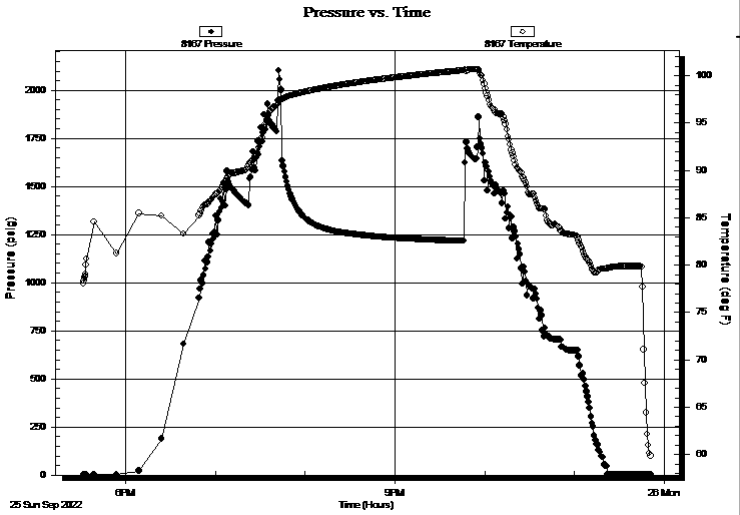
Reference Elevations: 2118.00 ft (KB)
2110.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8167 **Below (Straddle)**

Press@RunDepth: psig @ 3632.00 ft (KB)
Start Date: 2022.09.25 End Date: 2022.09.25
Start Time: 17:32:05 End Time: 23:50:59

Capacity: 8000.00 psig
Last Calib.: 2022.09.26
Time On Btm:
Time Off Btm:

TEST COMMENT:
IF-30- Built to 1/2"
SI1-30- No return
FF-30- No blow
SI2-30- No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100%	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69832 **DST#: 3**

Test Start: 2022.09.25 @ 17:32:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	60.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.80 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	6100.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

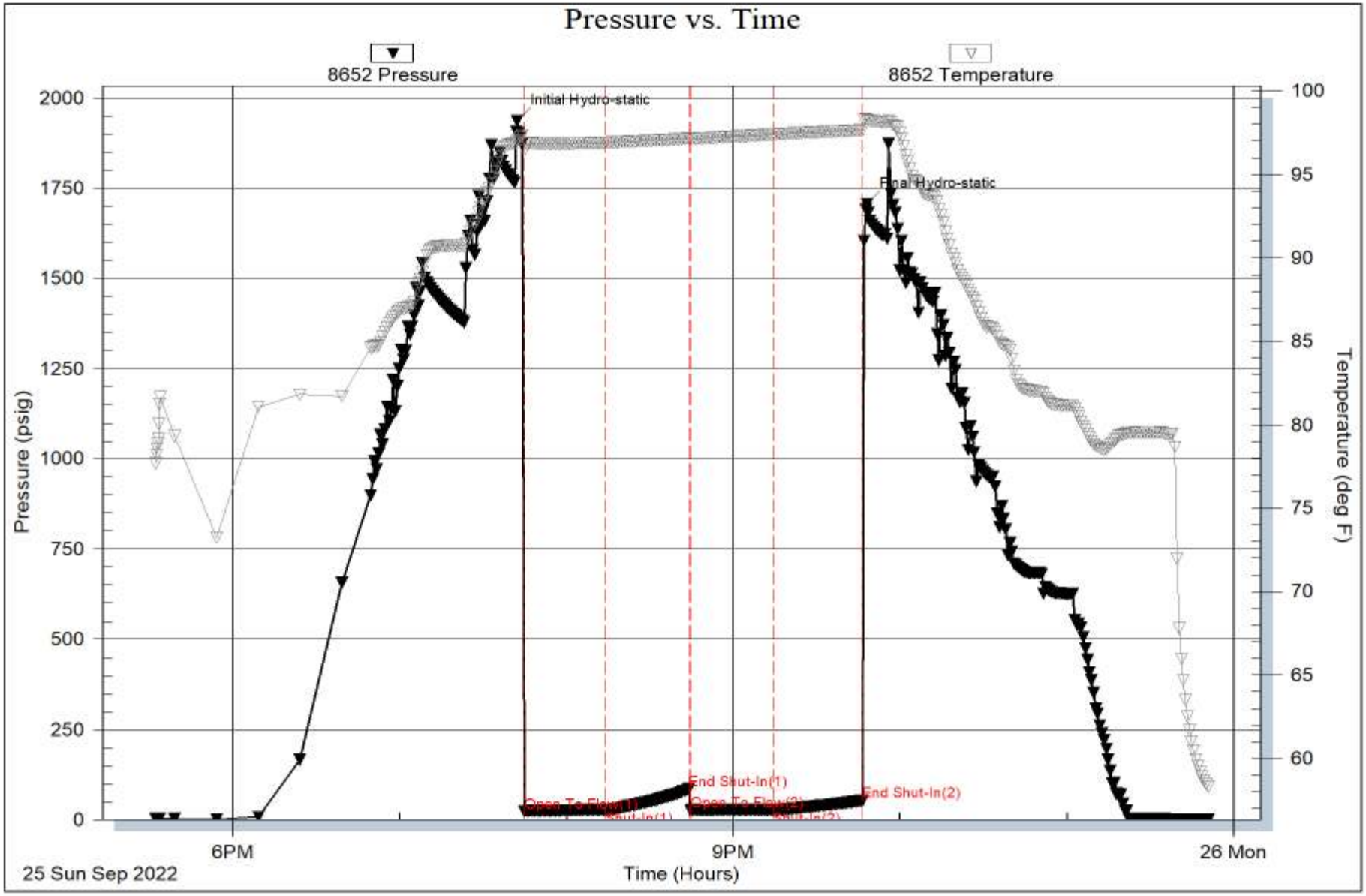
Length ft	Description	Volume bbl
5.00	mud 100%	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

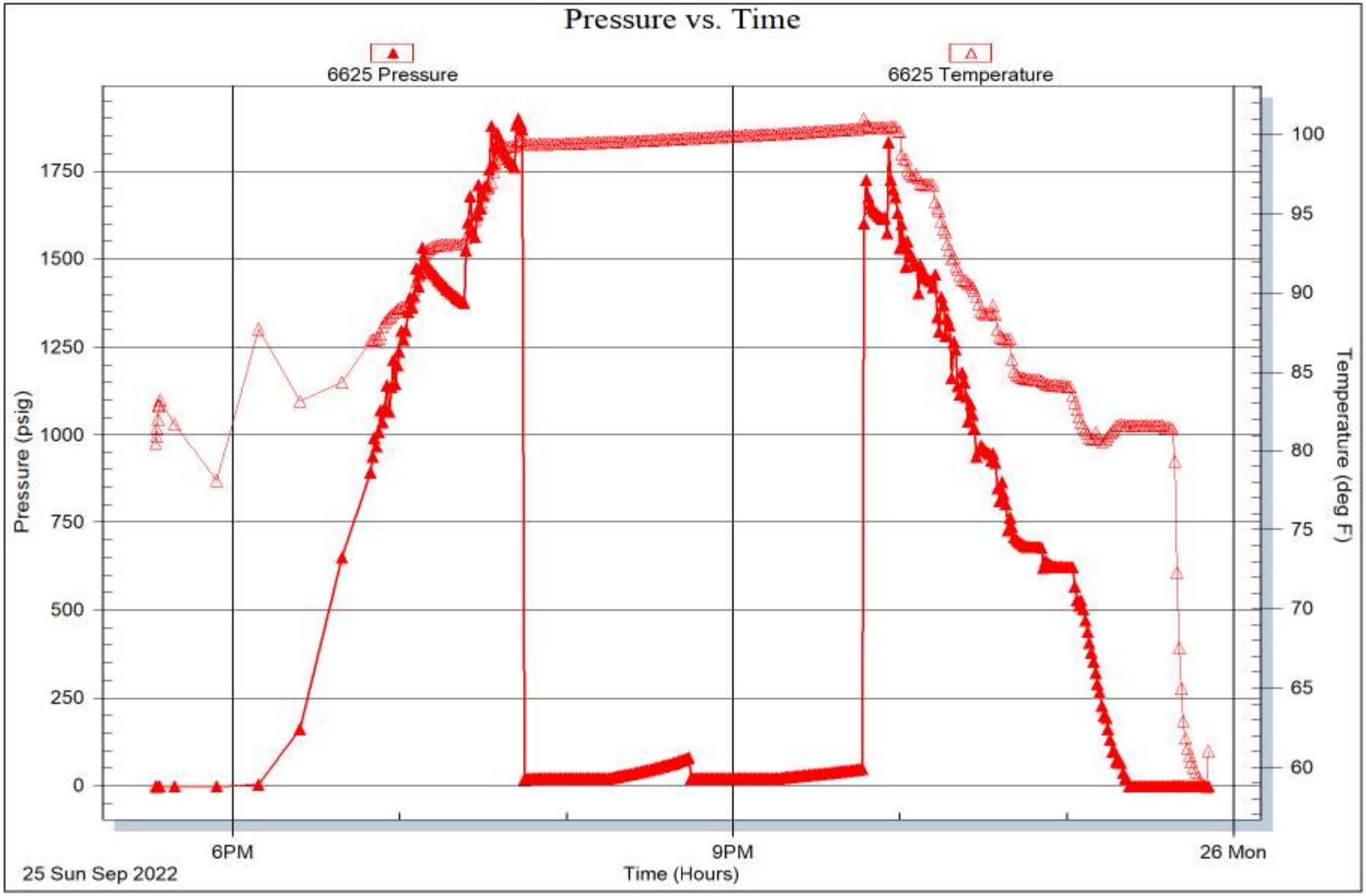
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

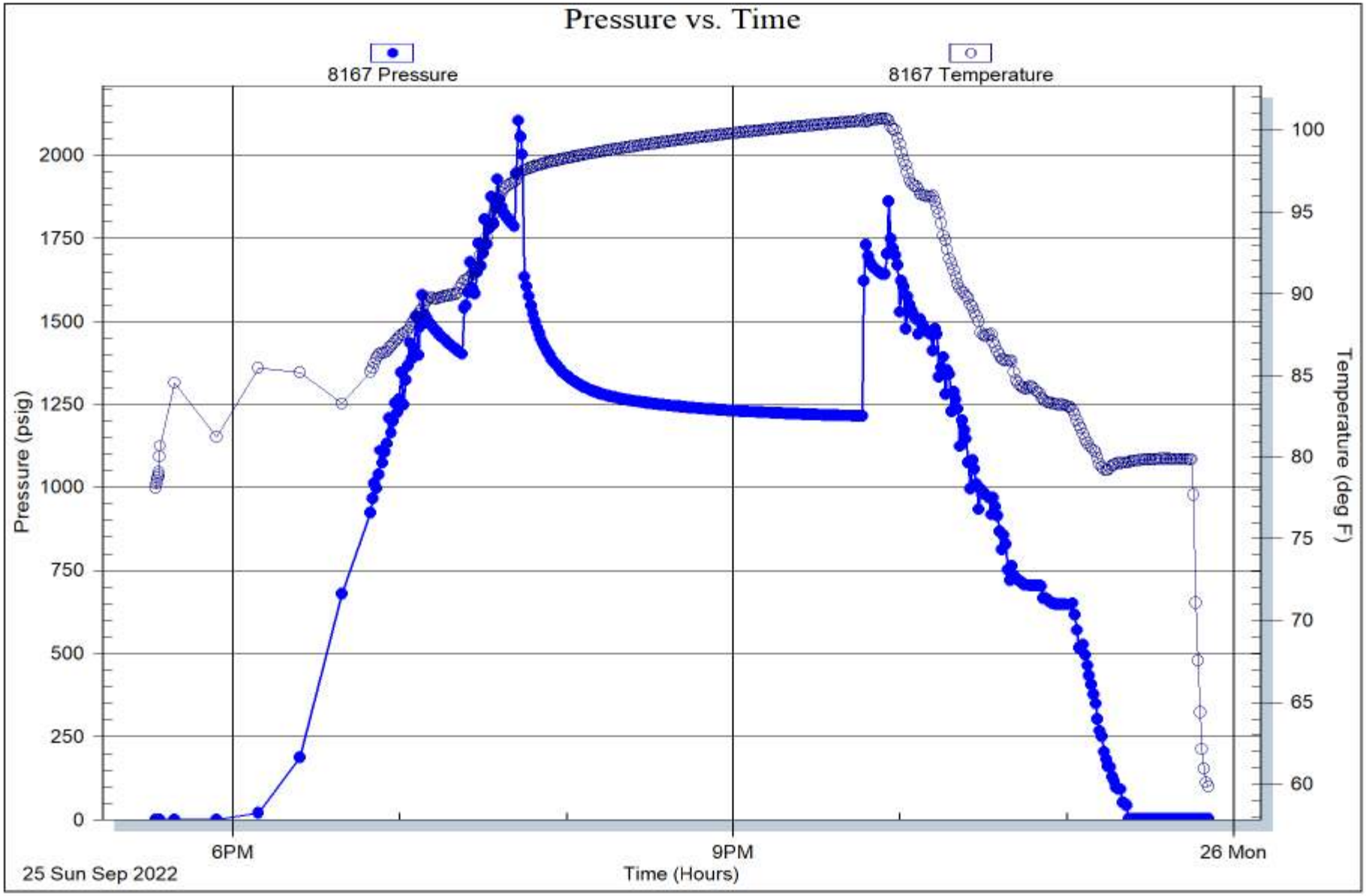
Recovery Comments: 2# LCM


Pressure vs. Time
8652 Pressure
8652 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Pressure (psig)
Temperature (deg F)
2000
1750
1500
1250
1000
750
500
250
0
100
95
90
85
80
75
70
65
60
6PM
9PM
26 Mon
25 Sun Sep 2022
Time (Hours)

Serial #: 6625 **Inside** John O. Farmer, Inc 36-11S-17W Ellis, KS DST Test Number: 3



Trilobite Testing, Inc Ref. No: 69832 Printed: 2022.09.26 @ 07:11:45


Pressure vs. Time
8167 Pressure
8167 Temperature
Pressure (psig)
2000
1750
1500
1250
1000
750
500
250
0
Temperature (deg F)
100
95
90
85
80
75
70
65
60
6PM
9PM
26 Mon
25 Sun Sep 2022
Time (Hours)

DRILL STEM TEST REPORT

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69833 **DST#: 4**

Test Start: 2022.09.26 @ 00:55:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:40:00
Time Test Ended: 07:51:30

Test Type: Conventional Straddle (Reset)
Tester: Dustin Day
Unit No: 70

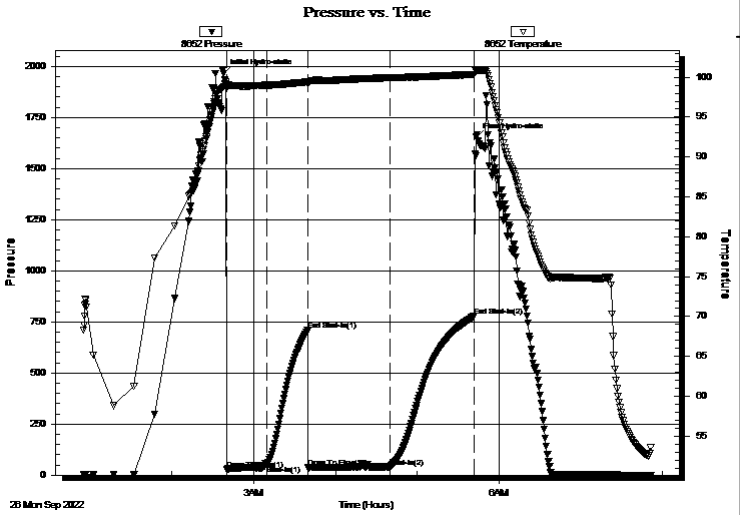
Interval: 3583.00 ft (KB) To 3624.00 ft (KB) (TVD)
Total Depth: 3700.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2118.00 ft (KB)
2110.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8652 **Outside**

Press@RunDepth:	39.79 psig @	3584.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2022.09.26	End Date:	2022.09.26	Last Calib.:	2022.09.26
Start Time:	00:55:05	End Time:	07:51:29	Time On Btm:	2022.09.26 @ 02:37:45
				Time Off Btm:	2022.09.26 @ 05:43:15

TEST COMMENT:
IF-30- Built to 1 1/4"
SI1-30- No return
FF-60- Built to 1"
SI2-60- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1964.10	98.83	Initial Hydro-static
3	28.60	98.55	Open To Flow (1)
32	46.51	99.00	Shut-In(1)
62	710.59	99.39	End Shut-In(1)
62	37.31	99.14	Open To Flow (2)
122	39.79	99.94	Shut-In(2)
184	777.91	100.34	End Shut-In(2)
186	1653.17	100.81	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	VSOCM 2%oil 98%mud	0.22

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69833 **DST#: 4**

Test Start: 2022.09.26 @ 00:55:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:40:00
Time Test Ended: 07:51:30

Test Type: Conventional Straddle (Reset)
Tester: Dustin Day
Unit No: 70

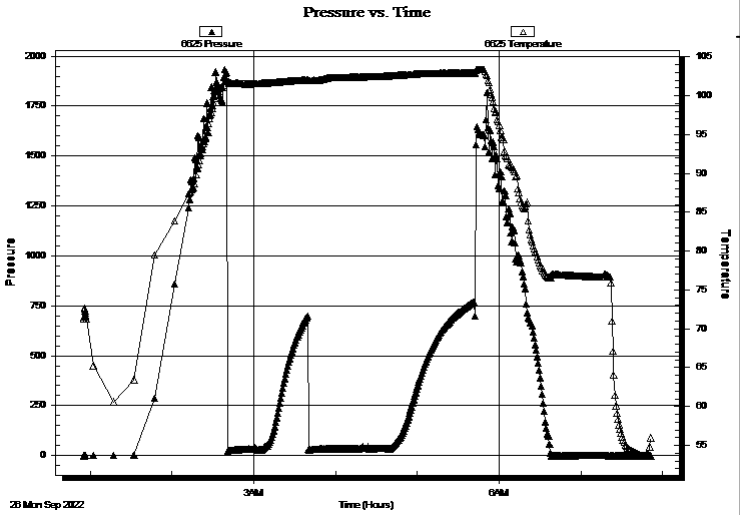
Interval: 3583.00 ft (KB) To 3624.00 ft (KB) (TVD)
Total Depth: 3700.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2118.00 ft (KB)
2110.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Inside**

Press@RunDepth:	psig @	3584.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2022.09.26	End Date:	2022.09.26	Last Calib.:	2022.09.26
Start Time:	00:55:05	End Time:	07:51:44	Time On Btm:	
				Time Off Btm:	

TEST COMMENT:
IF-30- Built to 1 1/4"
SI1-30- No return
FF-60- Built to 1"
SI2-60- No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
35.00	VSOCM 2%oil 98%mud	0.22

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69833 **DST#: 4**

Test Start: 2022.09.26 @ 00:55:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:40:00
Time Test Ended: 07:51:30

Test Type: Conventional Straddle (Reset)
Tester: Dustin Day
Unit No: 70

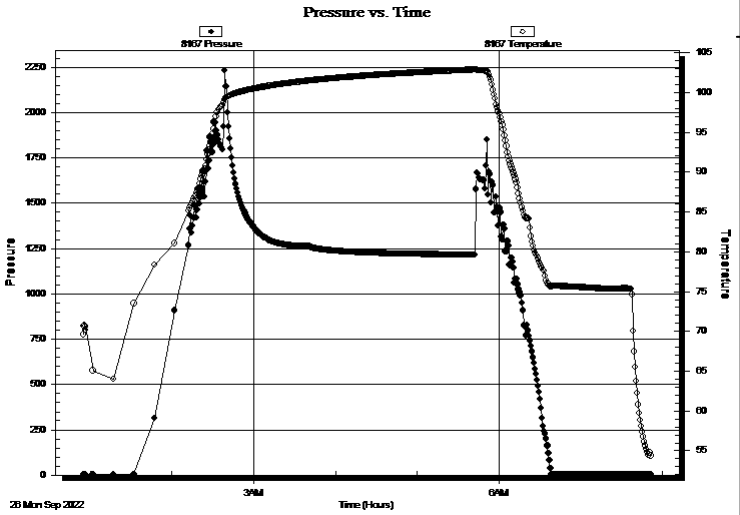
Interval: 3583.00 ft (KB) To 3624.00 ft (KB) (TVD)
Total Depth: 3700.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2118.00 ft (KB)
2110.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8167 **Below (Straddle)**

Press@RunDepth:	psig @	3632.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2022.09.26	End Date:	2022.09.26	Last Calib.:	2022.09.26
Start Time:	00:55:05	End Time:	07:51:44	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: IF-30- Built to 1 1/4"
SI1-30- No return
FF-60- Built to 1"
SI2-60- No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
35.00	VSOCM 2%oil 98%mud	0.22

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69833 **DST#: 4**

Test Start: 2022.09.26 @ 00:55:00

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:	60.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.80 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	6100.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

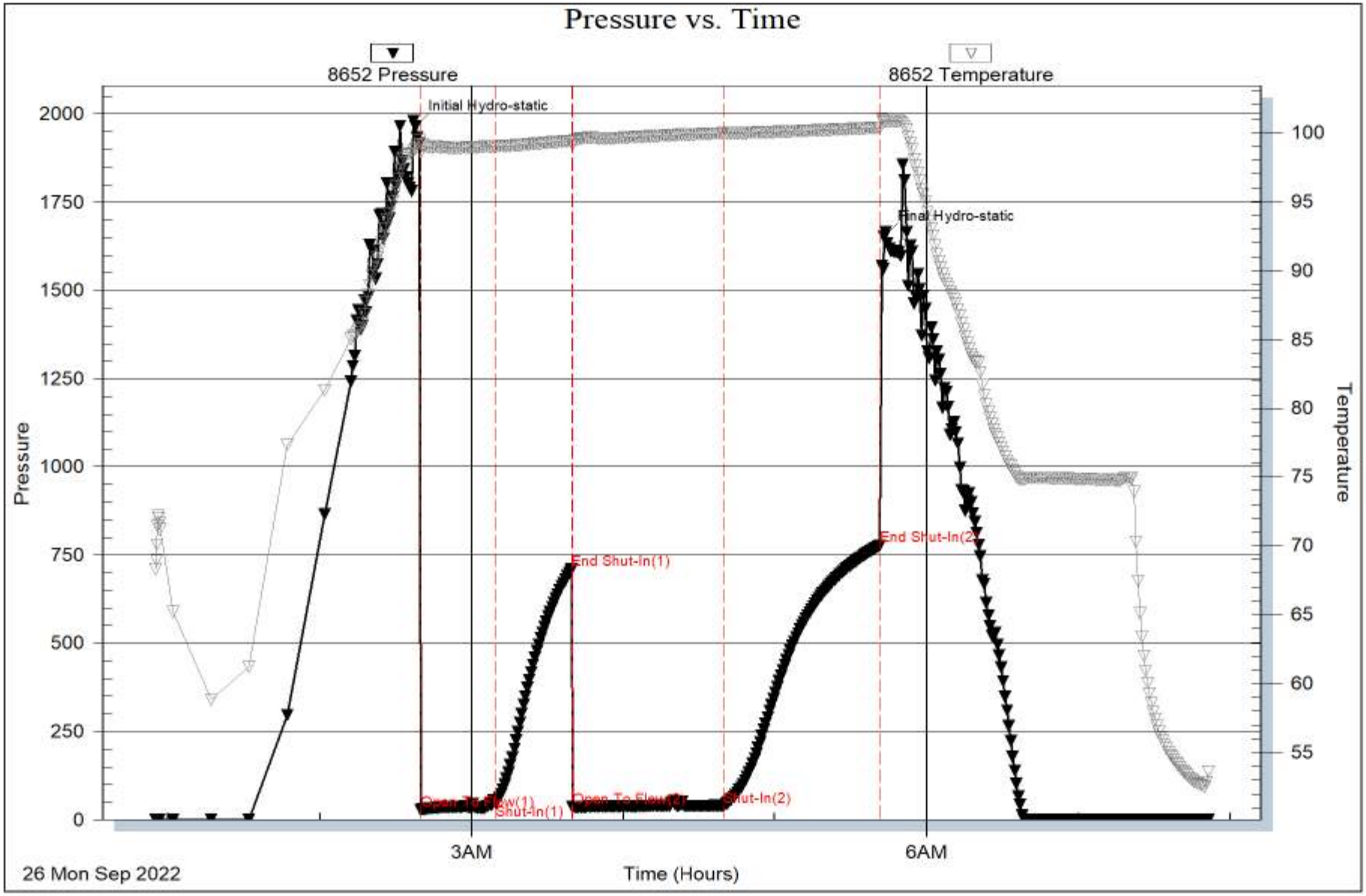
Length ft	Description	Volume bbl
35.00	VSOCM 2%oil 98%mud	0.218

Total Length: 35.00 ft Total Volume: 0.218 bbl

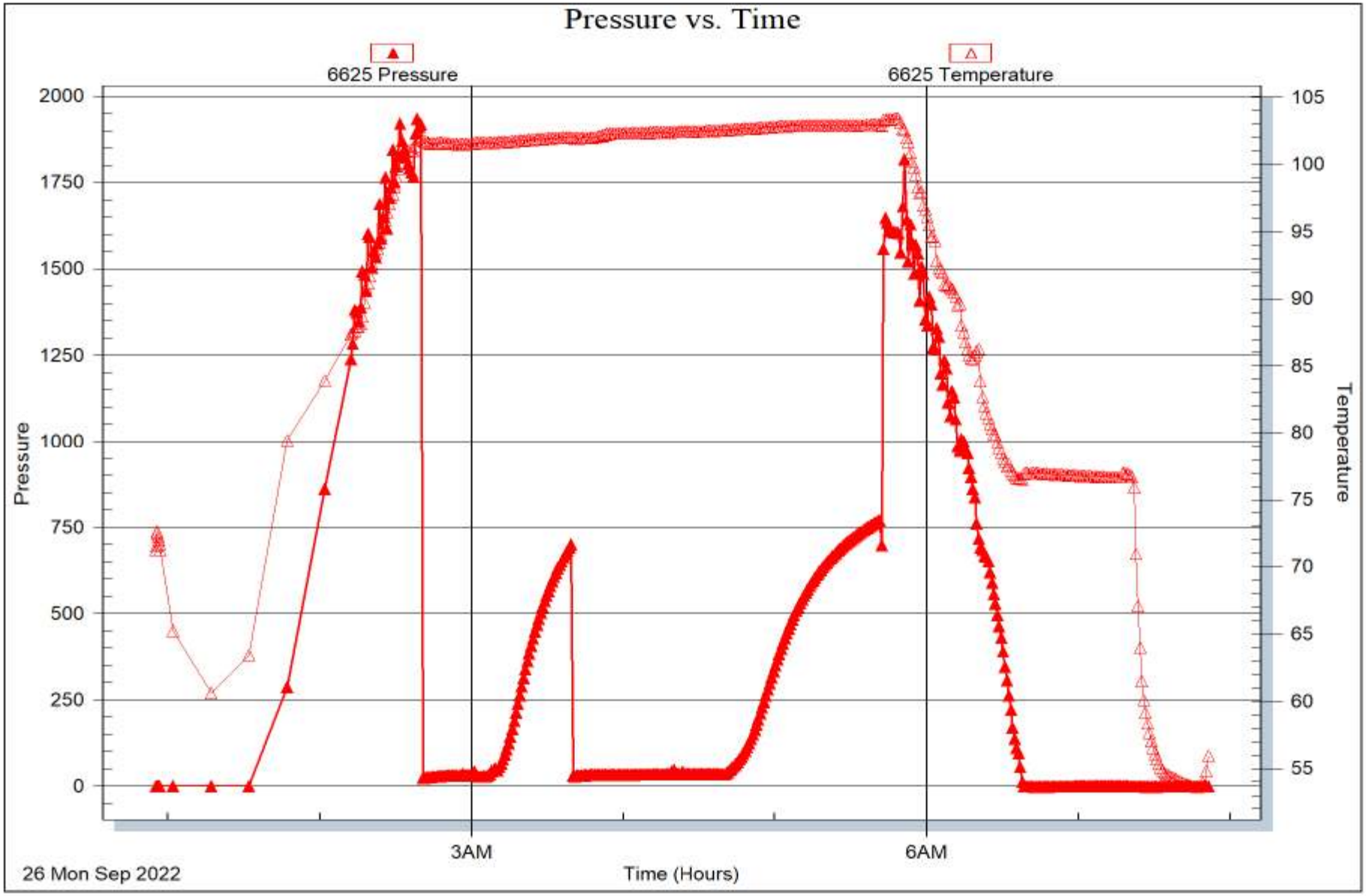
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

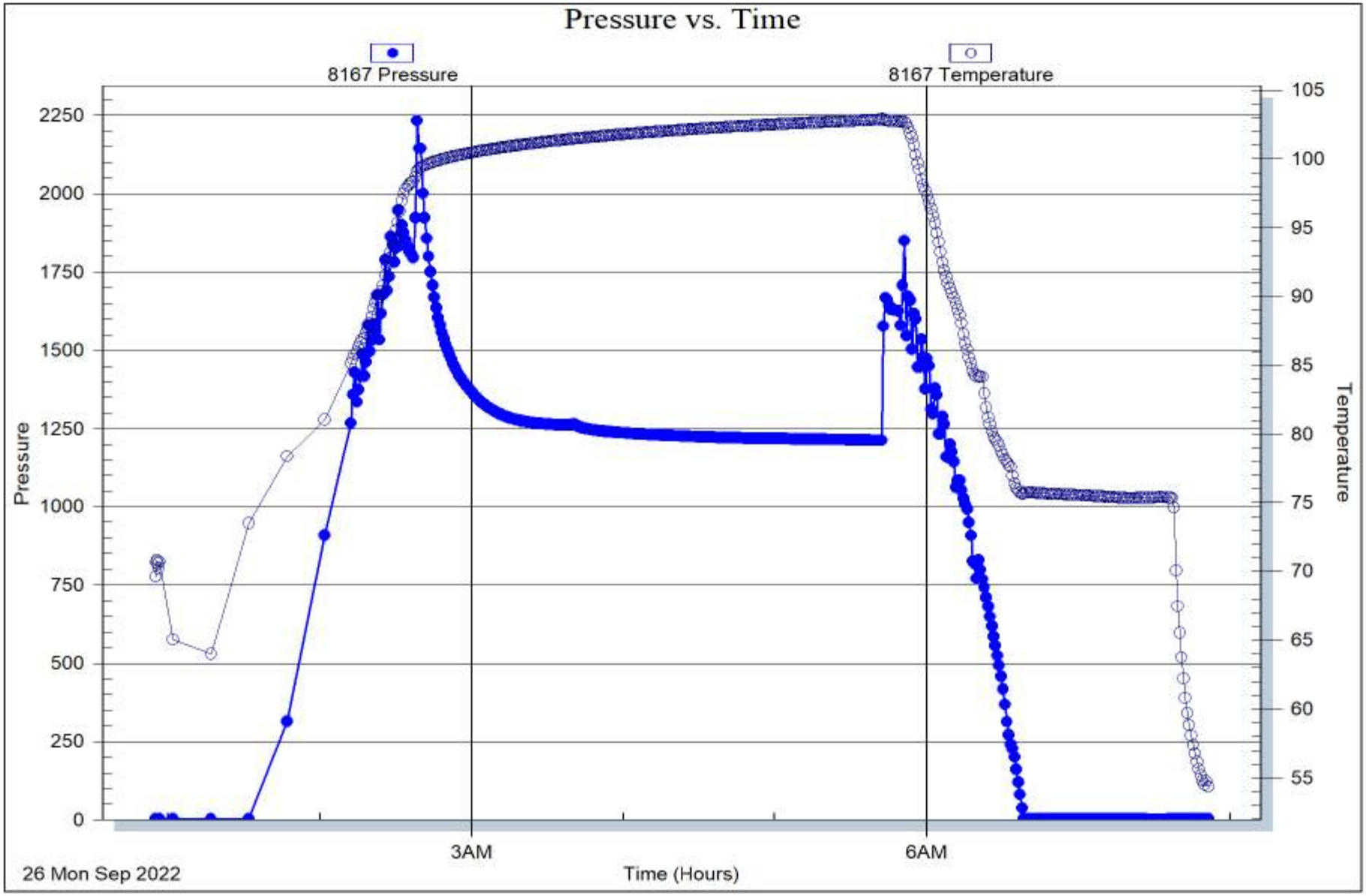
Recovery Comments: 2# LCM


Pressure vs. Time
8652 Pressure
8652 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
2000
1750
1500
1250
1000
750
500
250
0
100
95
90
85
80
75
70
65
60
55
3AM
6AM
Time (Hours)
26 Mon Sep 2022

Serial #: 6625 **Inside** John O. Farmer, Inc 36-11S-17W Ellis, KS DST Test Number: 4



Trilobite Testing, Inc Ref. No: 69833 Printed: 2022.09.26 @ 08:09:34


Pressure vs. Time
8167 Pressure
8167 Temperature
Pressure
Temperature
2250
2000
1750
1500
1250
1000
750
500
250
0
105
100
95
90
85
80
75
70
65
60
55
3AM
6AM
Time (Hours)
26 Mon Sep 2022

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69834 **DST#: 5**

Test Start: 2022.09.26 @ 09:47:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:57:30
Time Test Ended: 15:55:45

Test Type: Conventional Straddle (Reset)
Tester: Dustin Day
Unit No: 70

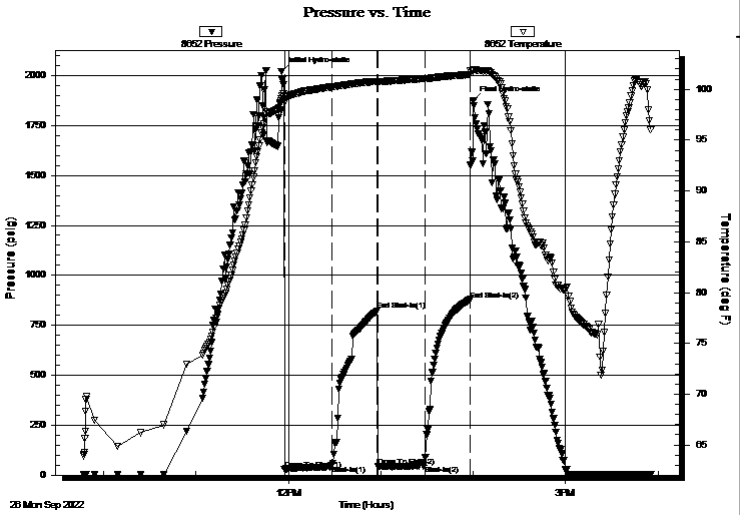
Interval: 3605.00 ft (KB) To 3650.00 ft (KB) (TVD)
Total Depth: 3700.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2118.00 ft (KB)
2110.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8652 **Outside**

Press@RunDepth:	48.20 psig @	3606.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2022.09.26	End Date:	2022.09.26	Last Calib.:	2022.09.26
Start Time:	09:47:05	End Time:	15:55:44	Time On Btm:	2022.09.26 @ 11:55:30
				Time Off Btm:	2022.09.26 @ 14:00:15

TEST COMMENT:
IF-30- Built to 1/2"
SI1-30- No return
FF-30- Weak surface blow
SI2-30- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2020.21	99.07	Initial Hydro-static
2	29.91	98.70	Open To Flow (1)
33	48.51	100.25	Shut-In(1)
63	824.35	100.80	End Shut-In(1)
63	42.76	100.60	Open To Flow (2)
93	48.20	101.06	Shut-In(2)
123	879.01	101.45	End Shut-In(2)
125	1874.78	101.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	WCM 15% w ater 85%mud	0.22

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69834 **DST#: 5**

Test Start: 2022.09.26 @ 09:47:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:57:30
Time Test Ended: 15:55:45

Test Type: Conventional Straddle (Reset)
Tester: Dustin Day
Unit No: 70

Interval: 3605.00 ft (KB) To 3650.00 ft (KB) (TVD)
Total Depth: 3700.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

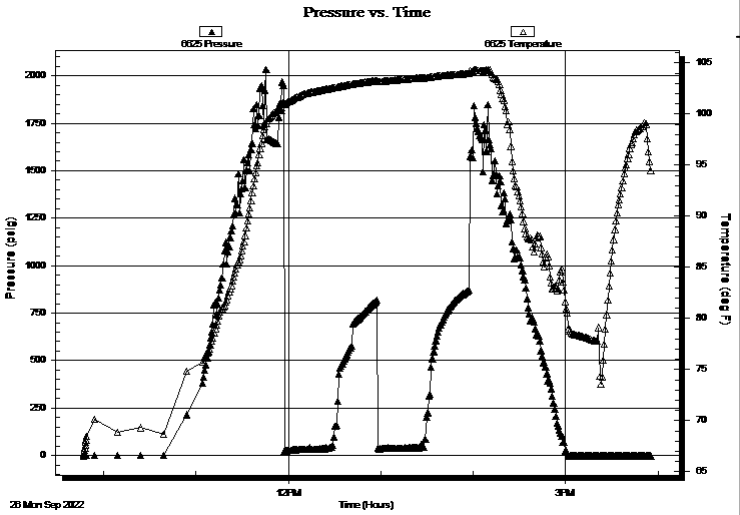
Reference Elevations: 2118.00 ft (KB)
2110.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Inside**

Press@RunDepth: psig @ 3606.00 ft (KB)
Start Date: 2022.09.26 End Date: 2022.09.26
Start Time: 09:47:05 End Time: 15:55:44

Capacity: 8000.00 psig
Last Calib.: 2022.09.26
Time On Btm:
Time Off Btm:

TEST COMMENT:
IF-30- Built to 1/2"
SI1-30- No return
FF-30- Weak surface blow
SI2-30- No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
35.00	WCM 15% w ater 85%mud	0.22

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69834 **DST#: 5**

Test Start: 2022.09.26 @ 09:47:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:57:30
Time Test Ended: 15:55:45

Test Type: Conventional Straddle (Reset)
Tester: Dustin Day
Unit No: 70

Interval: 3605.00 ft (KB) To 3650.00 ft (KB) (TVD)
Total Depth: 3700.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

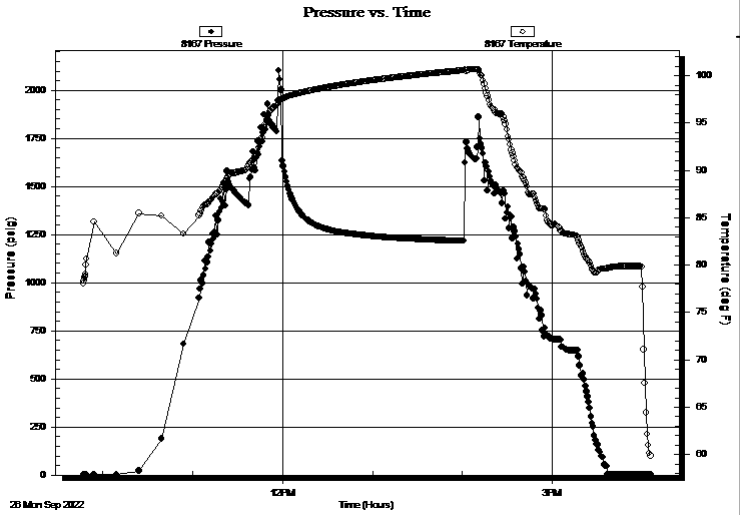
Reference Elevations: 2118.00 ft (KB)
2110.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8167 **Below (Straddle)**

Press@RunDepth: psig @ 3653.00 ft (KB)
Start Date: 2022.09.26 End Date: 2022.09.26
Start Time: 09:47:05 End Time: 16:05:59

Capacity: 8000.00 psig
Last Calib.: 2022.09.26
Time On Btm:
Time Off Btm:

TEST COMMENT:
IF-30- Built to 1/2"
SI1-30- No return
FF-30- Weak surface blow
SI2-30- No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
35.00	WCM 15% w ater 85%mud	0.22

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer, Inc

370 W. Wichita Ave.
P.O. Box 352
Russell, KS 67665
ATTN: Austin Klaus

36-11S-17W Ellis, KS

Job Ticket: 69834 **DST#: 5**

Test Start: 2022.09.26 @ 09:47:00

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:	52.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.00 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5900.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

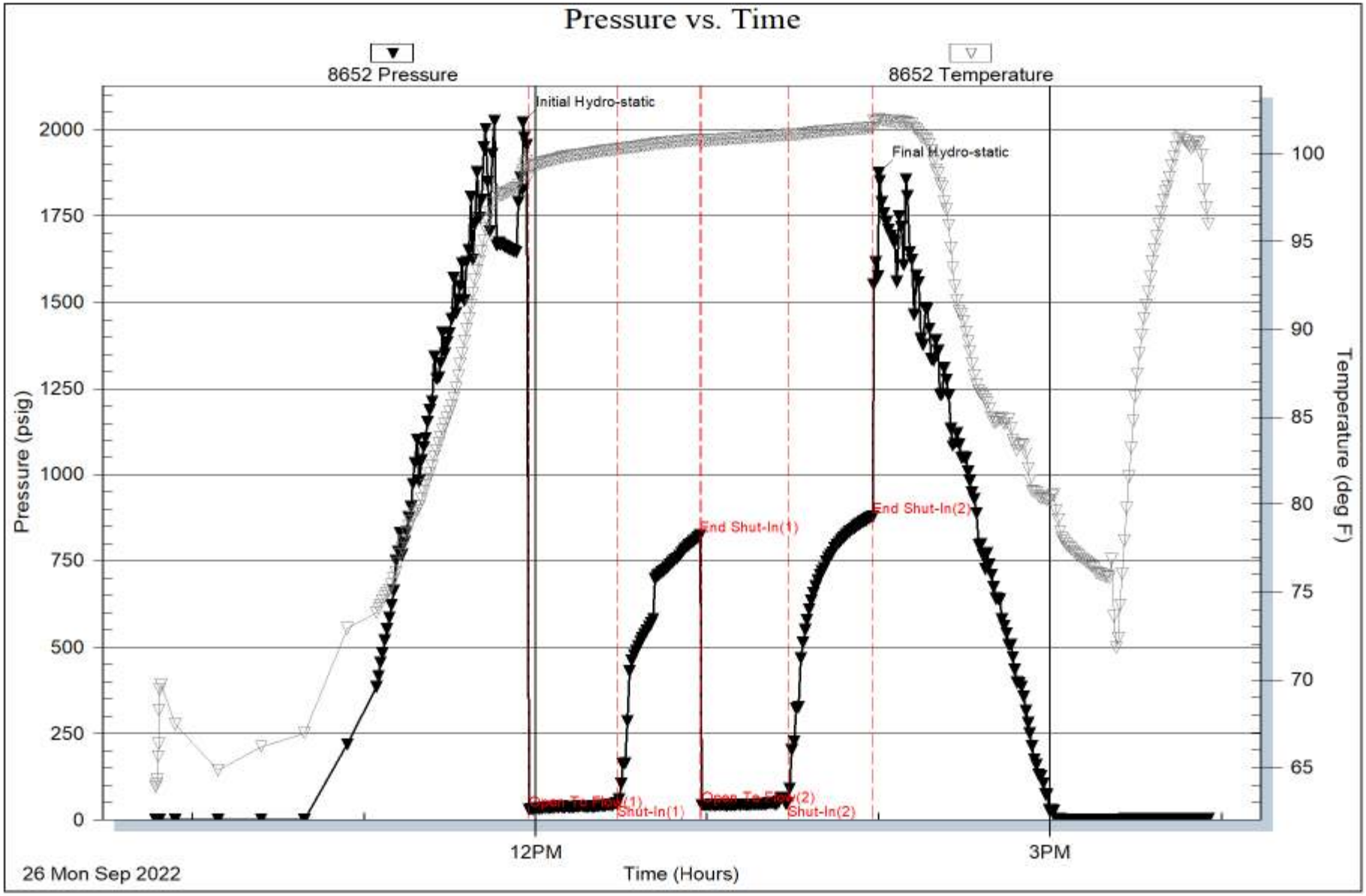
Length ft	Description	Volume bbl
35.00	WCM 15% w ater 85%mud	0.218

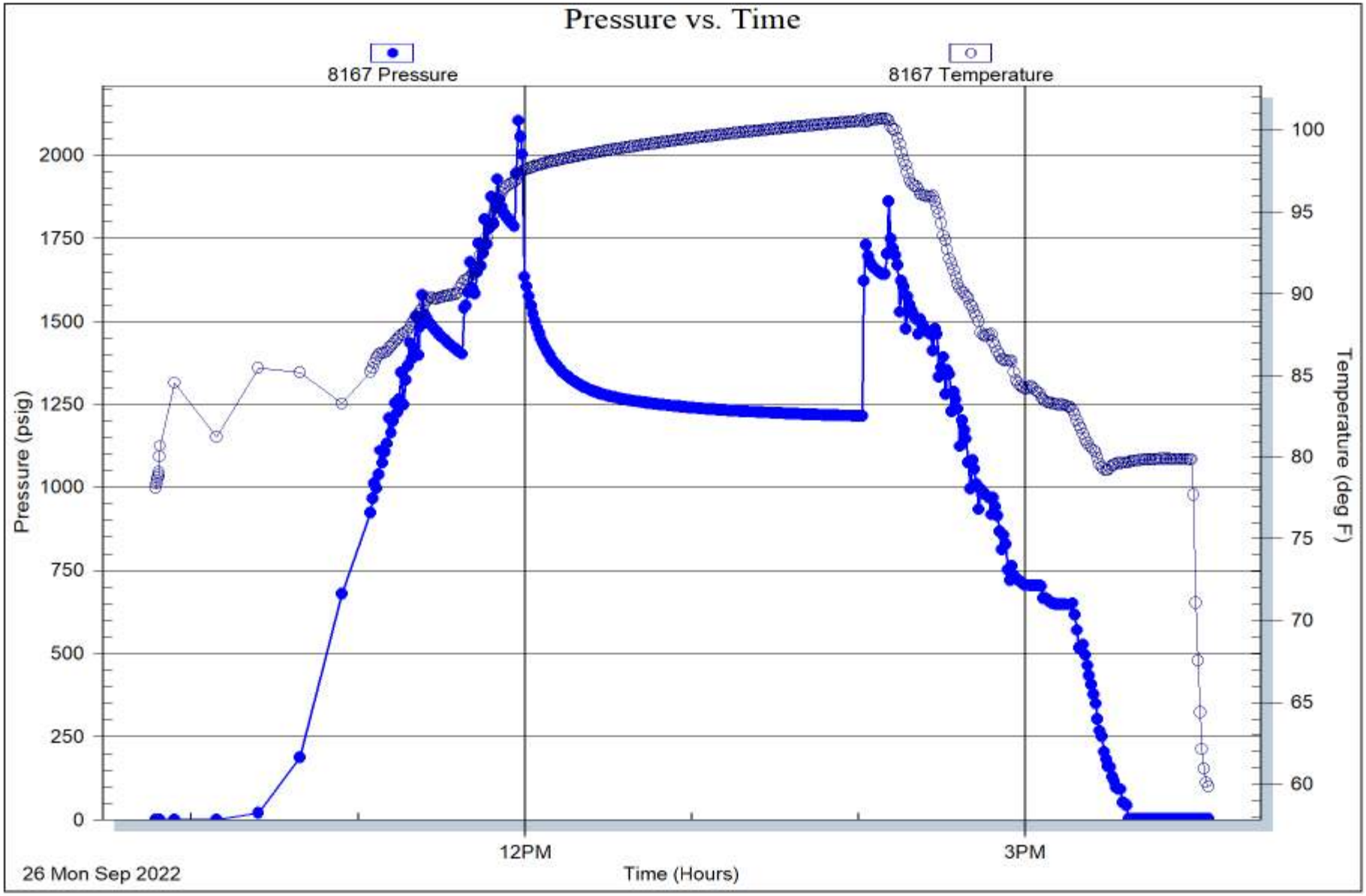
Total Length: 35.00 ft Total Volume: 0.218 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
8652 Pressure
8652 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Shut-In(2)
Pressure (psig)
Temperature (deg F)
2000
1750
1500
1250
1000
750
500
250
0
100
95
90
85
80
75
70
65
12PM
3PM
26 Mon Sep 2022
Time (Hours)


Pressure vs. Time
8167 Pressure
8167 Temperature
Pressure (psig)
2000
1750
1500
1250
1000
750
500
250
0
Temperature (deg F)
100
95
90
85
80
75
70
65
60
12PM
3PM
26 Mon Sep 2022
Time (Hours)