KOLAR Document ID: 1786126

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 # 31000
Name: Prater Oil & Gas Operations, Inc.
Address 1: 10356 BLUESTEM BLVD
Address 2:
City: PRATT State: KS Zip: 67124 + 6712
Contact Person: Ronald Prater
Phone: (620) 672-7600
CONTRACTOR: License # 5142
Name: Sterling Drilling Company
Wellsite Geologist: Scott Alberg
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 #:

6/27/2024 Spud Date or Recompletion Date
7/06/2024 Date Reached TD
7/06/2024 Completion Date or Recompletion Date

API No.: 15-151-22595-00-00
Spot Description:
SE - NE - SW - SW Sec. 2 Twp. 29 S. R. 14 ☐ East ☑ West
895 Feet from ☐ North / ☑ South Line of Section
1200 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: Pratt
Lease Name: HOWELL UNIT Well #: 1-2
Field Name:
Producing Formation: na
Elevation: Ground: 2009 Kelly Bushing: 2016
Total Vertical Depth: 4726 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 433 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: 6000 ppm Fluid volume: 940 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: Prater Oil & Gas
Lease Name: Mason A1 License #: 31000
Quarter NW Sec. 14 Twp. 29 S. R. 13 ☐ East ☑ West
County: Pratt Permit #: 15-151-20275-00-02

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: 07/12/2024
☐ **Confidential Release Date:** 07/12/2026
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Kelsey Cox **Date:** 07/16/2024

Operator Name: Prater Oil & Gas Operations, Inc. Lease Name: HOWELL UNIT Well #: 1-2

Sec. 2 Twp. 29 S. R. 14 ☐ East ☑ West County: Pratt

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 *(Attach Additional Sheets)*	☑ Yes	☐ No	
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: Attached

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

Name: Attached Top: Attached Datum: 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	433	H-325 Common	350	2% Gel, 3% CC, and 1/4# CF.

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

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	Prater Oil & Gas Operations, Inc.
Well Name	HOWELL UNIT 1-2
Doc ID	1786126

All Electric Logs Run

Sonic Log
Micro Log
Dual Induction Log
Compensated Density/ Neutron PE Log

Form	ACO1 - Well Completion
Operator	Prater Oil & Gas Operations, Inc.
Well Name	HOWELL UNIT 1-2
Doc ID	1786126

Tops

Name	Top	Datum
Anhydrite	834	+1182
Herrington	2222	-206
Council Grove	2550	-334
Wabaunsee	3024	-1008
Tarkio	3216	-1200
Topeka	3469	-1453
Heebner	3817	-1801
Toronto	3837	-1821
Douglas Sh	3866	-1850
Br. Lime	3994	-1978
Lansing	4007	-1991
Swope	4300	-2284
Hertha	4339	-2323
BKC	4374	-2358
Marmaton	4388	-2372
Conglomerate	4470	-2454
Viola Chert	4512	-2496
Simpson Shale	4580	-2564
Simpson Sand	4582	-2566
Arbuckle	4676	-2660

Form	ACO1 - Well Completion
Operator	Prater Oil & Gas Operations, Inc.
Well Name	HOWELL UNIT 1-2
Doc ID	1786126

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	433	H-325 Common	350	2% Gel, 3% CC, and 1/4# CF.

DRILL STEM TEST REPORT

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71413 **DST#: 1**

Test Start: 2024.07.01 @ 13:14:00

GENERAL INFORMATION:

Formation: **Lansing "B"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:14:32
Time Test Ended: 20:34:02

Test Type: Conventional Bottom Hole (Initial)
Tester: Leal Cason
Unit No: 72

Interval: 4024.00 ft (KB) To 4063.00 ft (KB) (TVD)
Total Depth: 4063.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

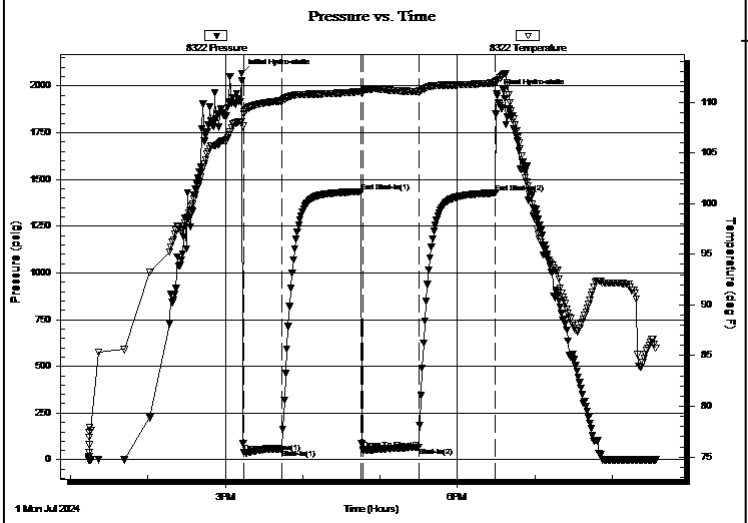
Reference Elevations: 2016.00 ft (KB)
2009.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8322 **Inside**

Press@RunDepth: 67.47 psig @ 4030.00 ft (KB)
Start Date: 2024.07.01 End Date: 2024.07.01
Start Time: 13:14:01 End Time: 20:34:02

Capacity: psig
Last Calib.: 2024.07.01
Time On Btm: 2024.07.01 @ 15:12:32
Time Off Btm: 2024.07.01 @ 18:30:32

TEST COMMENT: IF: Strong Blow , BOB in 45 seconds, GTS in 25 minutes, Gauged Gas
ISI: No Blow Back
FF: Strong Blow , BOB & GTS Immediate, Gauged & Sampled
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2066.90	108.06	Initial Hydro-static
2	38.88	108.89	Open To Flow (1)
32	56.80	110.15	Shut-In(1)
93	1433.84	111.04	End Shut-In(1)
94	53.99	110.97	Open To Flow (2)
138	67.47	111.06	Shut-In(2)
197	1427.86	111.95	End Shut-In(2)
198	1959.91	112.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	3936' GIP	0.00
70.00	GSOCM 6%G 4%O 90%M	0.34

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	6.96	31.47
Last Gas Rate	0.25	20.78	51.83
Max. Gas Rate	0.25	20.78	51.83

DRILL STEM TEST REPORT

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71413 **DST#: 1**

Test Start: 2024.07.01 @ 13:14:00

GENERAL INFORMATION:

Formation: **Lansing "B"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:14:32
Time Test Ended: 20:34:02

Test Type: Conventional Bottom Hole (Initial)
Tester: Leal Cason
Unit No: 72

Interval: 4024.00 ft (KB) To 4063.00 ft (KB) (TVD)
Total Depth: 4063.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

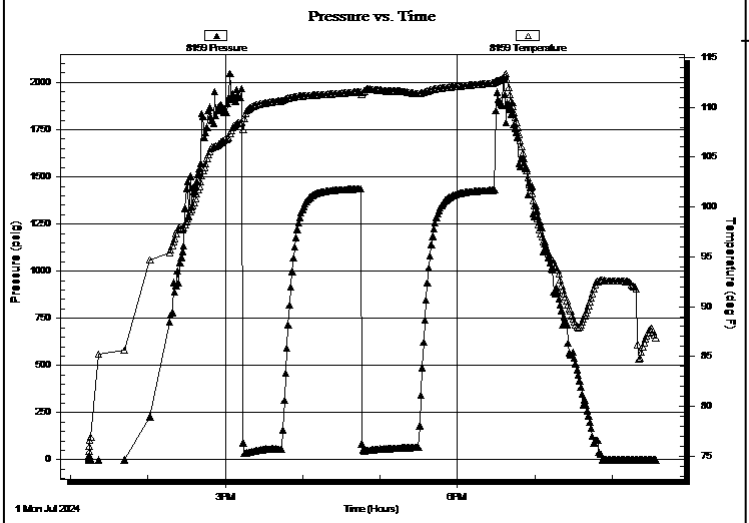
Reference Elevations: 2016.00 ft (KB)
2009.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8159 **Outside**

Press@RunDepth: psig @ 4030.00 ft (KB)
Start Date: 2024.07.01 End Date: 2024.07.01
Start Time: 13:14:01 End Time: 20:34:02

Capacity: psig
Last Calib.: 2024.07.01
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Strong Blow , BOB in 45 seconds, GTS in 25 minutes, Gauged Gas
ISI: No Blow Back
FF: Strong Blow , BOB & GTS Immediate, Gauged & Sampled
FSI: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	3936' GIP	0.00
70.00	GSOCM 6%G 4%O 90%M	0.34

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	6.96	31.47
Last Gas Rate	0.25	20.78	51.83
Max. Gas Rate	0.25	20.78	51.83

DRILL STEM TEST REPORT

FLUID SUMMARY

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71413 **DST#: 1**

Test Start: 2024.07.01 @ 13:14:00

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:	56.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5000.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	3936' GIP	0.000
70.00	GSOCM 6%G 4%O 90%M	0.344

Total Length: 70.00 ft Total Volume: 0.344 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

DRILL STEM TEST REPORT

GAS RATES

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71413 **DST#: 1**

Test Start: 2024.07.01 @ 13:14:00

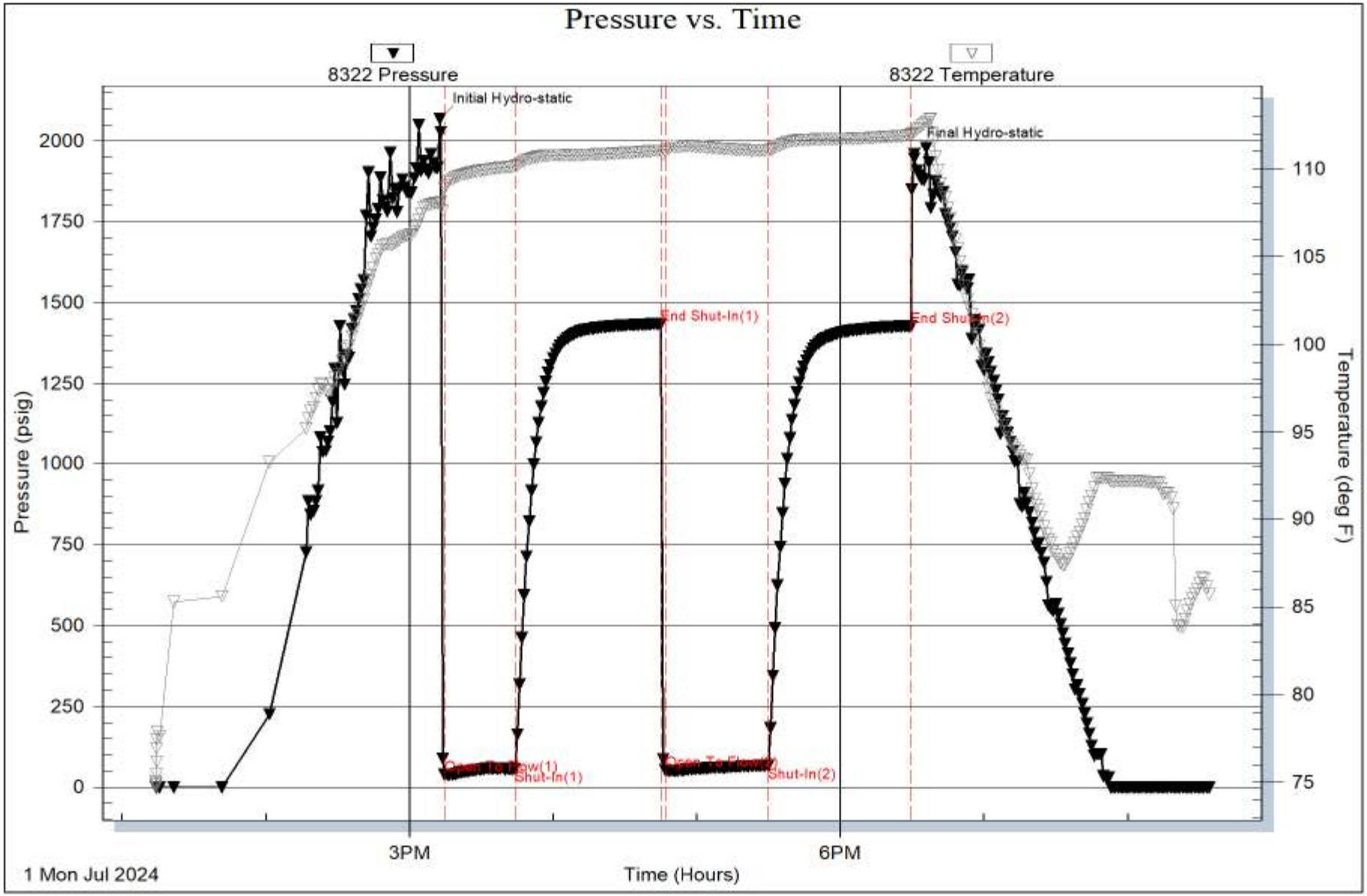
Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.67
Z Factor: 0.9

Gas Rates Table

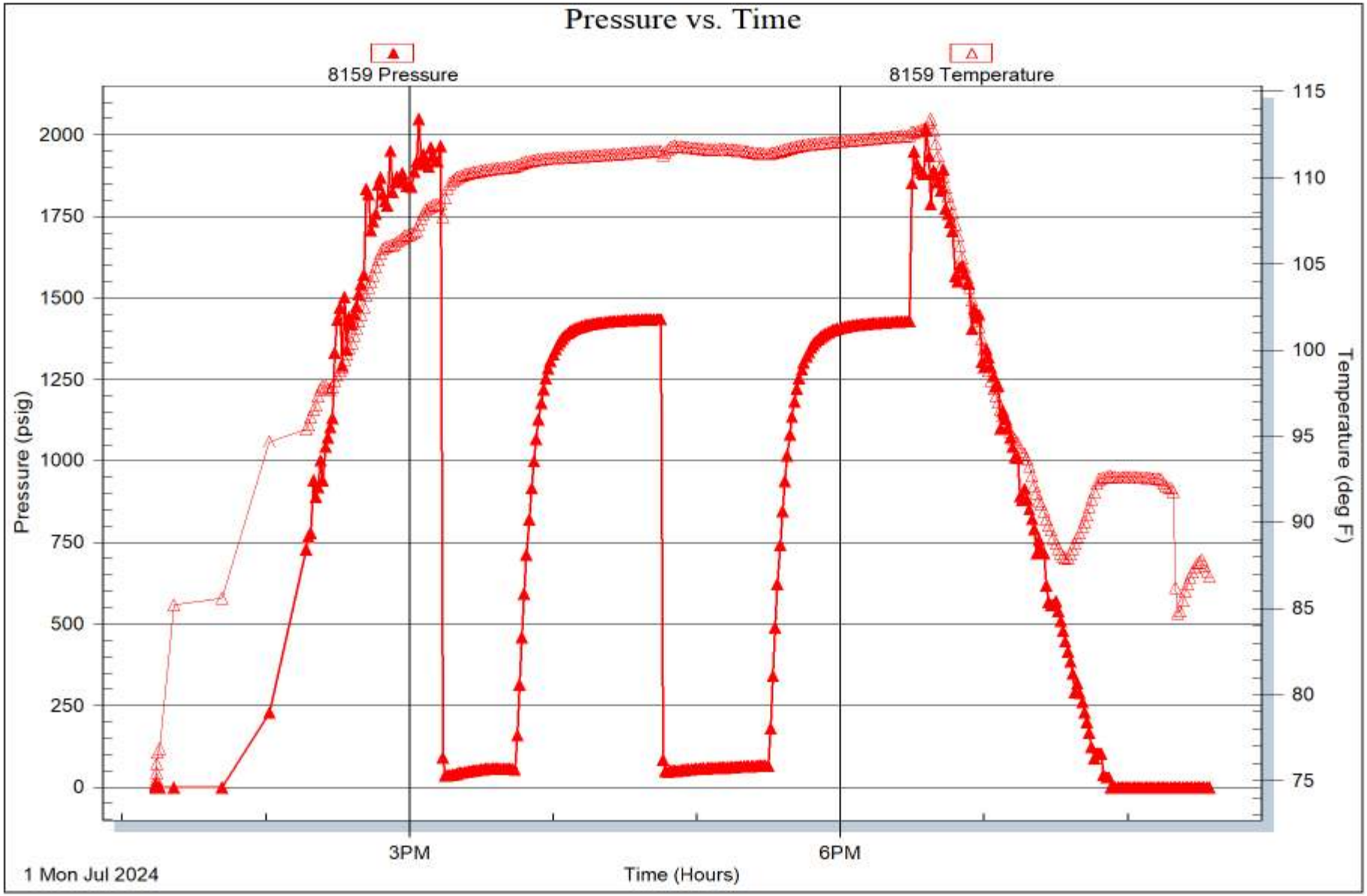
Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
1	30	0.25	6.96	31.47
2	10	0.25	13.29	40.79
2	20	0.25	16.00	44.79
2	30	0.25	17.90	47.58
2	40	0.25	19.77	50.34
2	45	0.25	20.78	51.83

Serial #: 8322 **Inside** Prater Oil & Gas How ell Unit 1-2 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 71413 Printed: 2024.07.01 @ 20:58:44

Serial #: 8159 **Outside** Prater Oil & Gas How ell Unit 1-2 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 71413 Printed: 2024.07.01 @ 20:58:44

DRILL STEM TEST REPORT

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71414 **DST#: 2**

Test Start: 2024.07.02 @ 07:30:00

GENERAL INFORMATION:

Formation: **Lansing "H"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:12:17
Time Test Ended: 13:24:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 72

Interval: 4164.00 ft (KB) To 4185.00 ft (KB) (TVD)
Total Depth: 4185.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

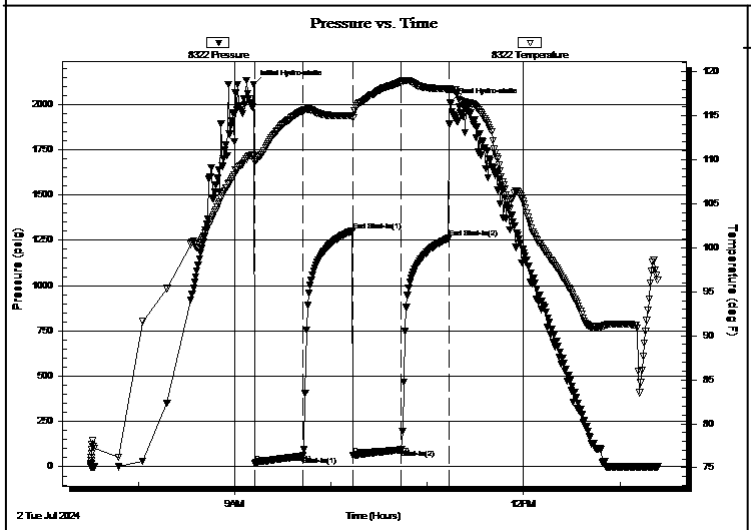
Reference Elevations: 2016.00 ft (KB)
2009.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8322 **Inside**

Press@RunDepth: 94.34 psig @ 4170.00 ft (KB)
Start Date: 2024.07.02 End Date: 2024.07.02
Start Time: 07:30:01 End Time: 13:24:02

Capacity: psig
Last Calib.: 2024.07.02
Time On Btm: 2024.07.02 @ 09:11:32
Time Off Btm: 2024.07.02 @ 11:14:02

TEST COMMENT: IF: Weak 2.4" Blow
ISI: No Blow Back
FF: Weak 1" Blow
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2109.02	110.48	Initial Hydro-static
1	20.46	109.78	Open To Flow (1)
31	59.97	115.61	Shut-In(1)
62	1302.66	114.99	End Shut-In(1)
63	63.68	114.73	Open To Flow (2)
93	94.34	118.84	Shut-In(2)
122	1261.69	118.03	End Shut-In(2)
123	2010.50	118.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
125.00	MCW 12%M 88%W	0.61

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71414 **DST#: 2**

Test Start: 2024.07.02 @ 07:30:00

GENERAL INFORMATION:

Formation: **Lansing "H"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:12:17
Time Test Ended: 13:24:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 72

Interval: 4164.00 ft (KB) To 4185.00 ft (KB) (TVD)
Total Depth: 4185.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

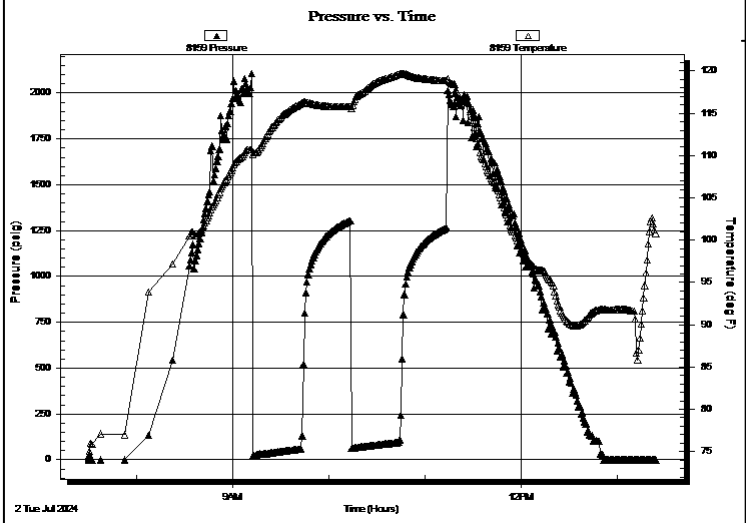
Reference Elevations: 2016.00 ft (KB)
2009.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8159 **Outside**

Press@RunDepth: psig @ 4170.00 ft (KB)
Start Date: 2024.07.02 End Date: 2024.07.02
Start Time: 07:30:01 End Time: 13:24:02

Capacity: psig
Last Calib.: 2024.07.02
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Weak 2.4" Blow
ISI: No Blow Back
FF: Weak 1" Blow
FSI: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
125.00	MCW 12%M 88%W	0.61

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71414 **DST#: 2**

Test Start: 2024.07.02 @ 07:30:00

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:	67000 ppm
Viscosity:	56.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5000.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
125.00	MCW 12%M 88%W	0.615

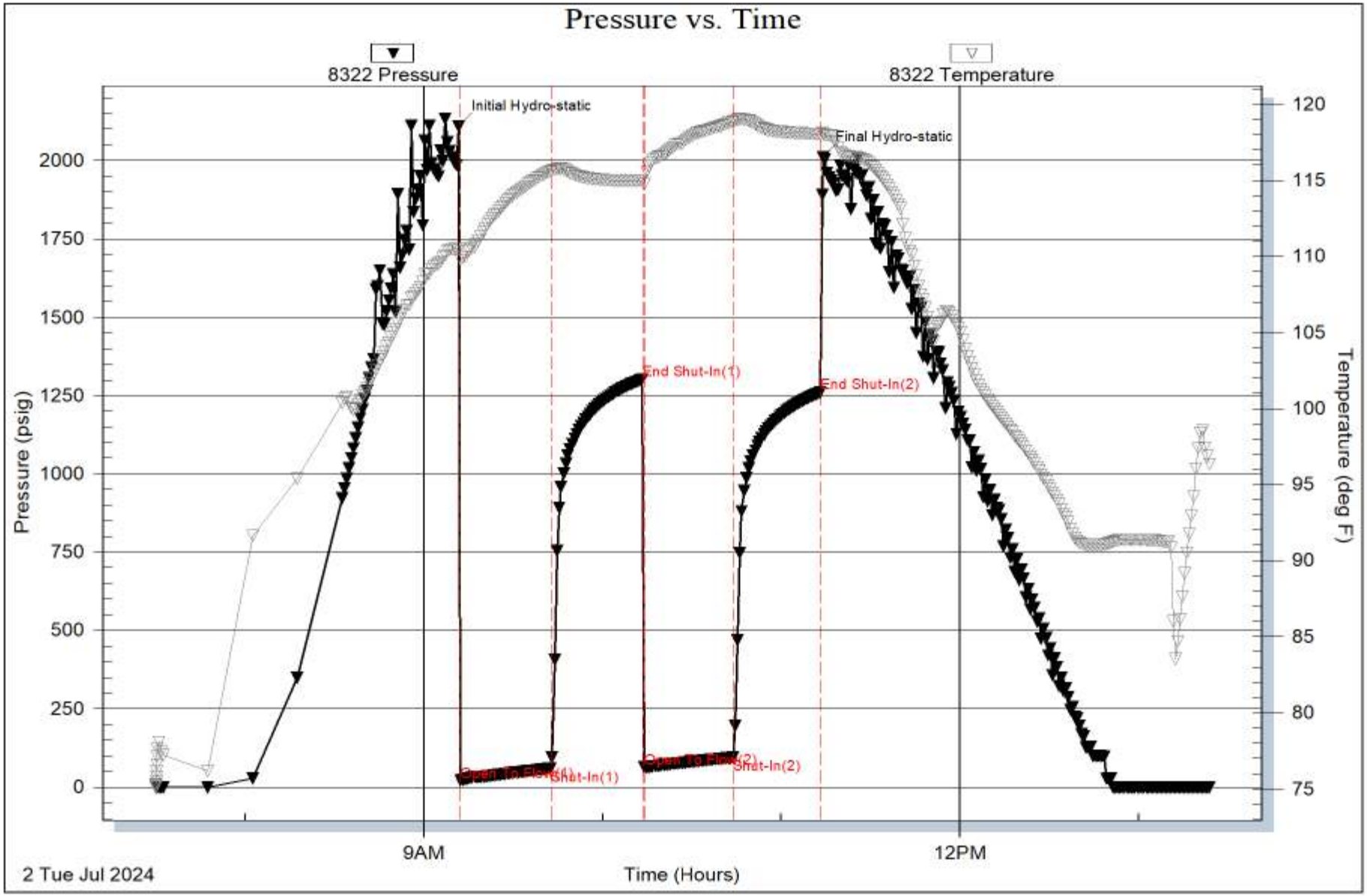
Total Length: 125.00 ft Total Volume: 0.615 bbl

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

Laboratory Name: Laboratory Location:

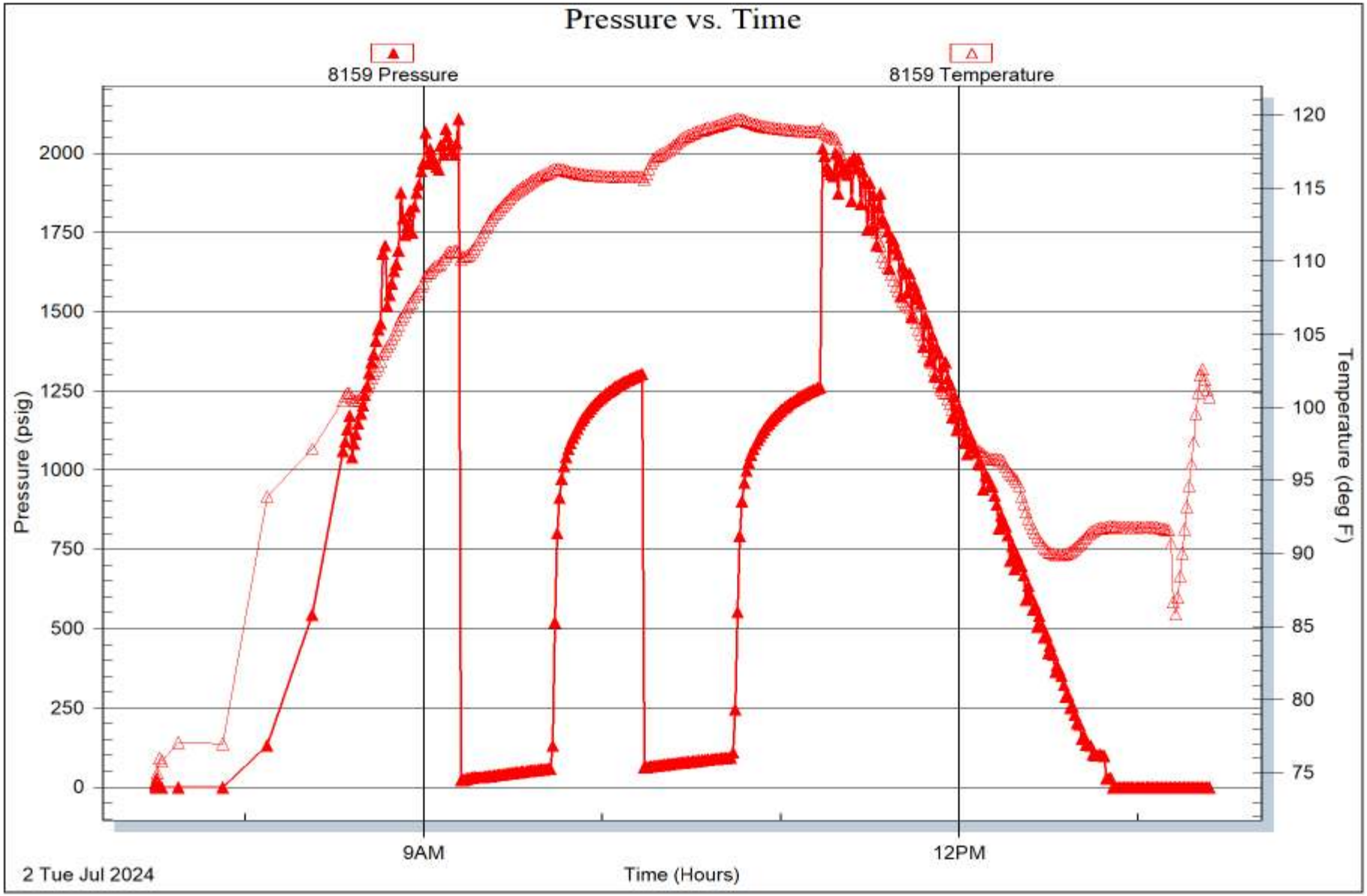
Recovery Comments: RW was .09 @ 88 degrees

Serial #: 8322 **Inside** Prater Oil & Gas How ell Unit 1-2 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 71414 Printed: 2024.07.02 @ 17:19:39

Serial #: 8159 **Outside** Prater Oil & Gas How ell Unit 1-2 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 71414 Printed: 2024.07.02 @ 17:19:39

DRILL STEM TEST REPORT

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71415 **DST#: 3**

Test Start: 2024.07.03 @ 00:40:00

GENERAL INFORMATION:

Formation: **Lansing "J & K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:19:47
Time Test Ended: 07:44:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 72

Interval: 4201.00 ft (KB) To 4280.00 ft (KB) (TVD)
Total Depth: 4280.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

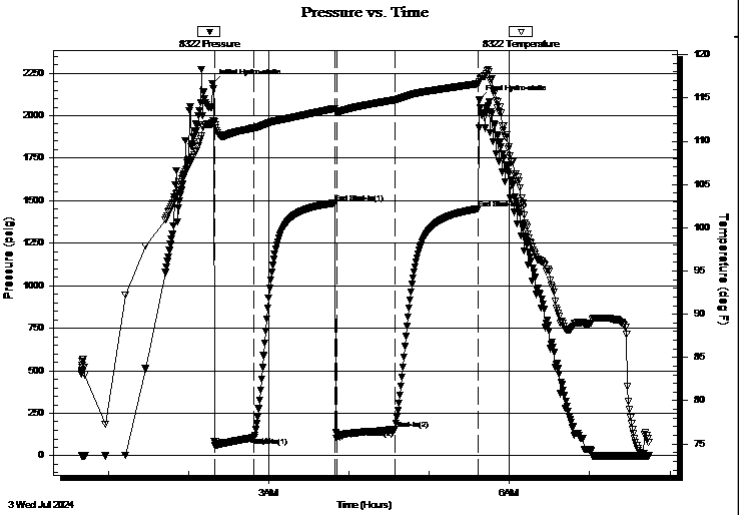
Reference Elevations: 2016.00 ft (KB)
2009.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8322 **Inside**

Press@RunDepth: 156.37 psig @ 4277.00 ft (KB)
Start Date: 2024.07.03 End Date: 2024.07.03
Start Time: 00:40:01 End Time: 07:44:02

Capacity: psig
Last Calib.: 2024.07.03
Time On Btm: 2024.07.03 @ 02:17:47
Time Off Btm: 2024.07.03 @ 05:37:32

TEST COMMENT: IF: Strong Blow , BOB in 3 minutes, Built to 60.63"
ISI: No Blow Back
FF: Strong Blow , BOB in 3 minutes, Built to 80.57"
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2186.70	112.08	Initial Hydro-static
2	59.51	111.92	Open To Flow (1)
32	108.91	111.52	Shut-In(1)
92	1486.30	113.75	End Shut-In(1)
93	101.08	113.41	Open To Flow (2)
137	156.37	114.78	Shut-In(2)
199	1452.80	116.66	End Shut-In(2)
200	2091.67	116.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	845' GIP	0.00
225.00	GCM 6%G 94%M	1.21

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71415 **DST#: 3**

Test Start: 2024.07.03 @ 00:40:00

GENERAL INFORMATION:

Formation: **Lansing "J & K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:19:47
Time Test Ended: 07:44:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 72

Interval: 4201.00 ft (KB) To 4280.00 ft (KB) (TVD)
Total Depth: 4280.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

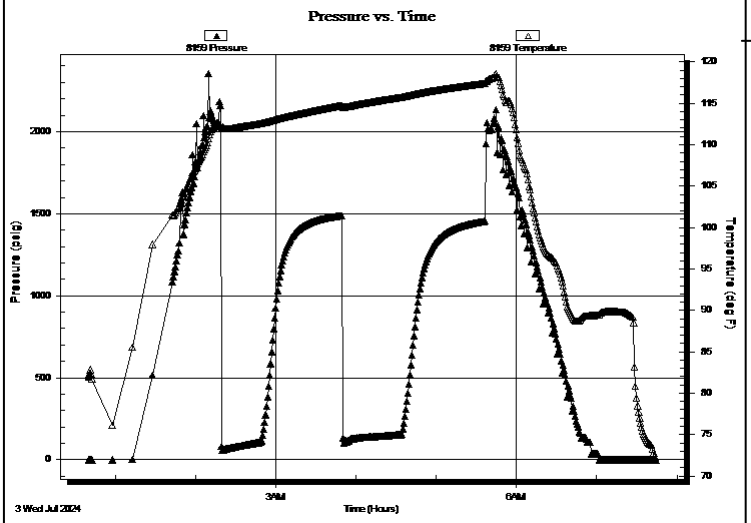
Reference Elevations: 2016.00 ft (KB)
2009.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8159 **Outside**

Press@RunDepth: psig @ 4277.00 ft (KB)
Start Date: 2024.07.03 End Date: 2024.07.03
Start Time: 00:40:01 End Time: 07:44:02

Capacity: psig
Last Calib.: 2024.07.03
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Strong Blow , BOB in 3 minutes, Built to 60.63"
ISI: No Blow Back
FF: Strong Blow , BOB in 3 minutes, Built to 80.57"
FSI: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	845' GIP	0.00
225.00	GCM 6%G 94%M	1.21

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71415 **DST#: 3**

Test Start: 2024.07.03 @ 00:40:00

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:	55.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5000.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	845' GIP	0.000
225.00	GCM 6%G 94%M	1.207

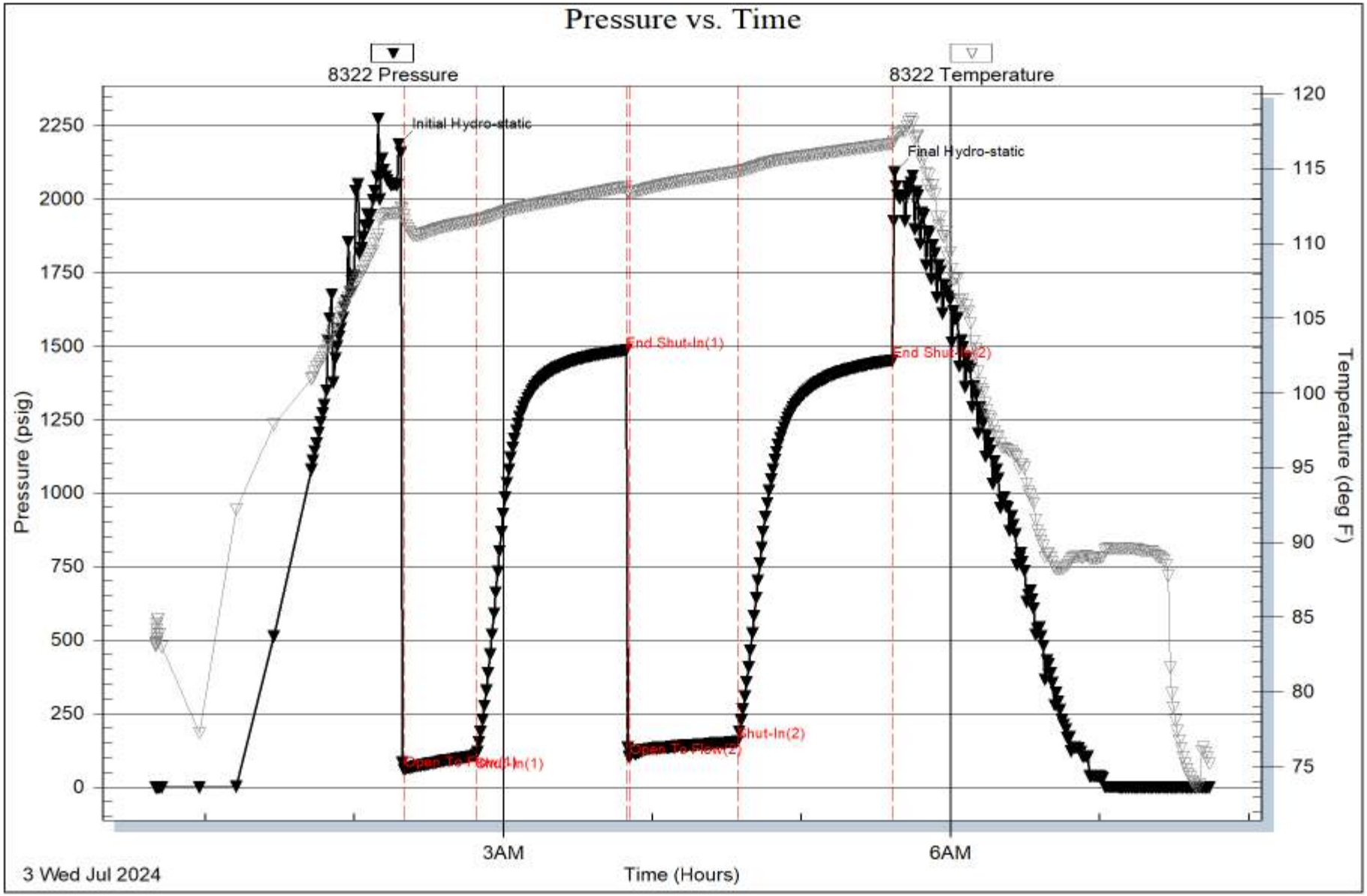
Total Length: 225.00 ft Total Volume: 1.207 bbl

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

Laboratory Name: Laboratory Location:

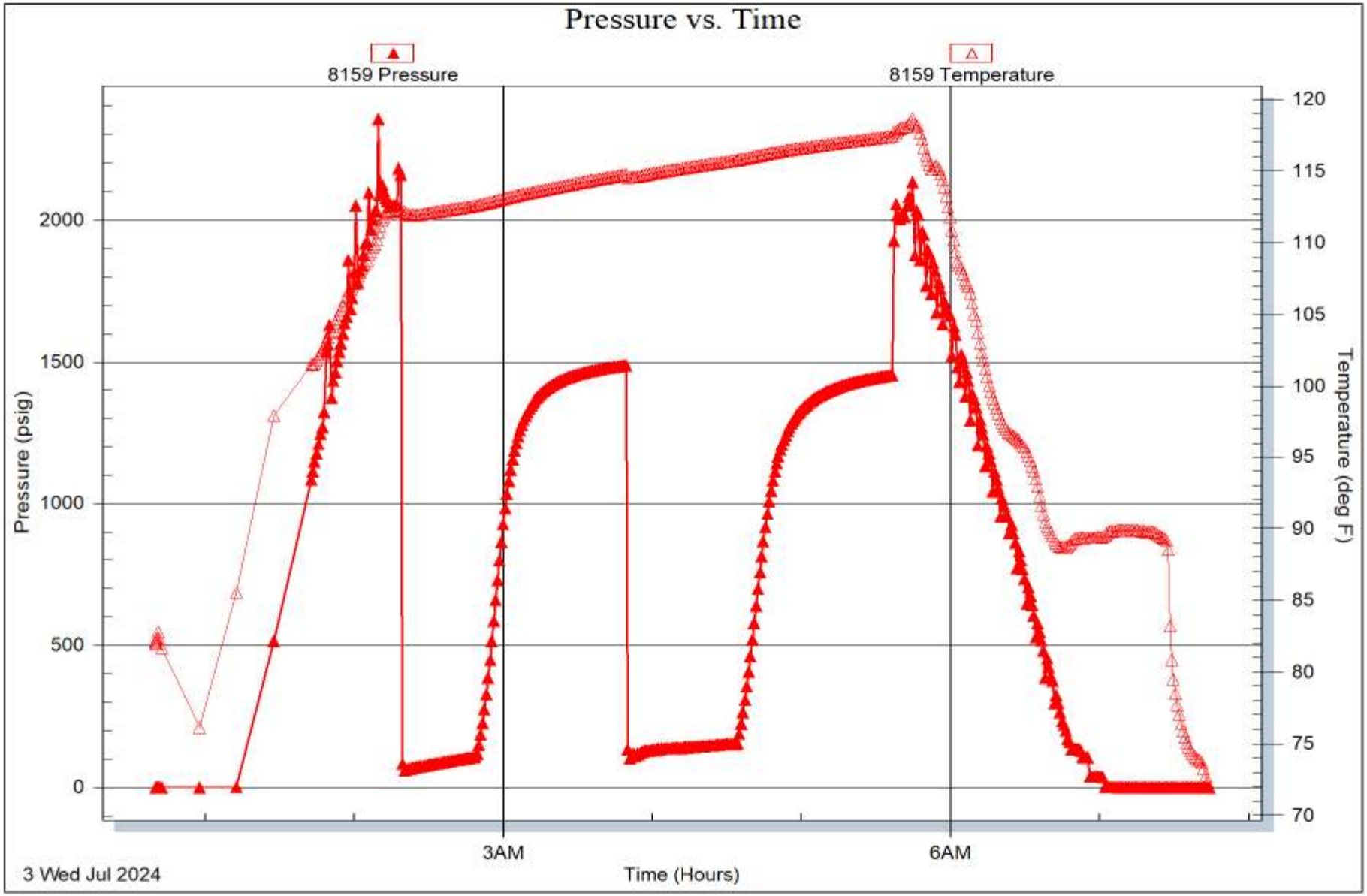
Recovery Comments:

Serial #: 8322 **Inside** Prater Oil & Gas How ell Unit 1-2 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 71415 Printed: 2024.07.03 @ 08:32:55

Serial #: 8159 **Outside** Prater Oil & Gas How ell Unit 1-2 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 71415 Printed: 2024.07.03 @ 08:32:55

DRILL STEM TEST REPORT

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71416 **DST#: 4**

Test Start: 2024.07.03 @ 18:30:00

GENERAL INFORMATION:

Formation: **Swope & Hertha**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:34:47
Time Test Ended: 00:38:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 72

Interval: 4296.00 ft (KB) To 4372.00 ft (KB) (TVD)
Total Depth: 4372.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

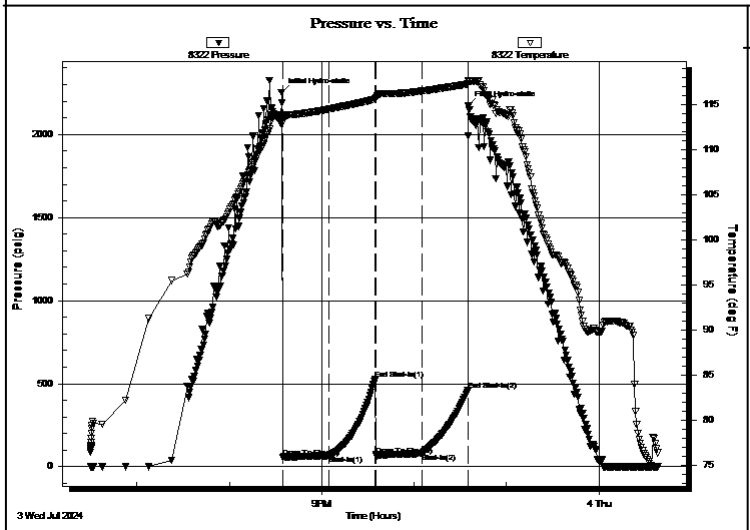
Reference Elevations: 2016.00 ft (KB)
2009.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8322 **Inside**

Press@RunDepth: 81.63 psig @ 4369.00 ft (KB)
Start Date: 2024.07.03 End Date: 2024.07.04
Start Time: 18:30:01 End Time: 00:38:02

Capacity: psig
Last Calib.: 2024.07.04
Time On Btm: 2024.07.03 @ 20:33:47
Time Off Btm: 2024.07.03 @ 22:35:17

TEST COMMENT: IF: Weak Blow , Built to 5.31"
ISI: No Blow Back
FF: Fair Blow , Built to 8.4"
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2252.61	113.89	Initial Hydro-static
1	58.63	112.98	Open To Flow (1)
31	68.16	114.47	Shut-In(1)
61	525.77	115.59	End Shut-In(1)
62	67.05	115.75	Open To Flow (2)
92	81.63	116.47	Shut-In(2)
121	458.41	117.30	End Shut-In(2)
122	2174.95	117.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	SOSM 2%O 98%M	0.30

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71416 **DST#: 4**

Test Start: 2024.07.03 @ 18:30:00

GENERAL INFORMATION:

Formation: **Swope & Hertha**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:34:47
Time Test Ended: 00:38:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 72

Interval: 4296.00 ft (KB) To 4372.00 ft (KB) (TVD)
Total Depth: 4372.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

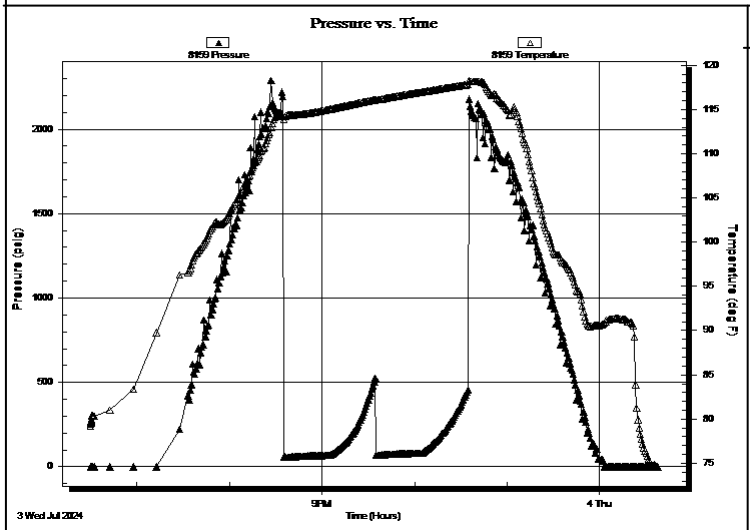
Reference Elevations: 2016.00 ft (KB)
2009.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8159 **Outside**

Press@RunDepth: psig @ 4369.00 ft (KB)
Start Date: 2024.07.03 End Date: 2024.07.04
Start Time: 18:30:01 End Time: 00:38:02

Capacity: psig
Last Calib.: 2024.07.04
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Weak Blow , Built to 5.31"
ISI: No Blow Back
FF: Fair Blow , Built to 8.4"
FSI: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	SOSM 2%O 98%M	0.30

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71416 **DST#: 4**

Test Start: 2024.07.03 @ 18:30:00

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:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	8000.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

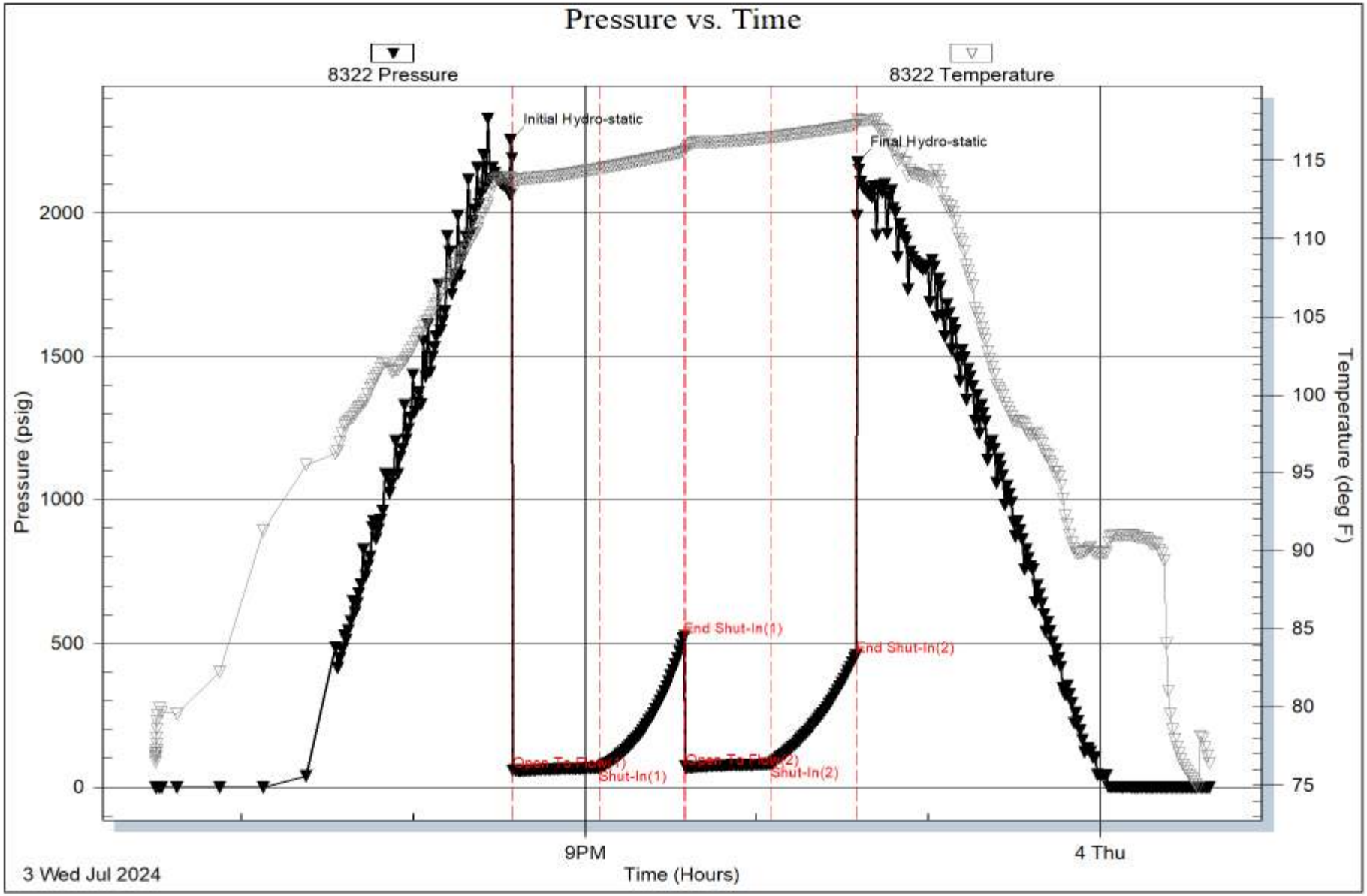
Recovery Table

Length ft	Description	Volume bbl
60.00	SOSM 2%O 98%M	0.295

Total Length: 60.00 ft Total Volume: 0.295 bbl

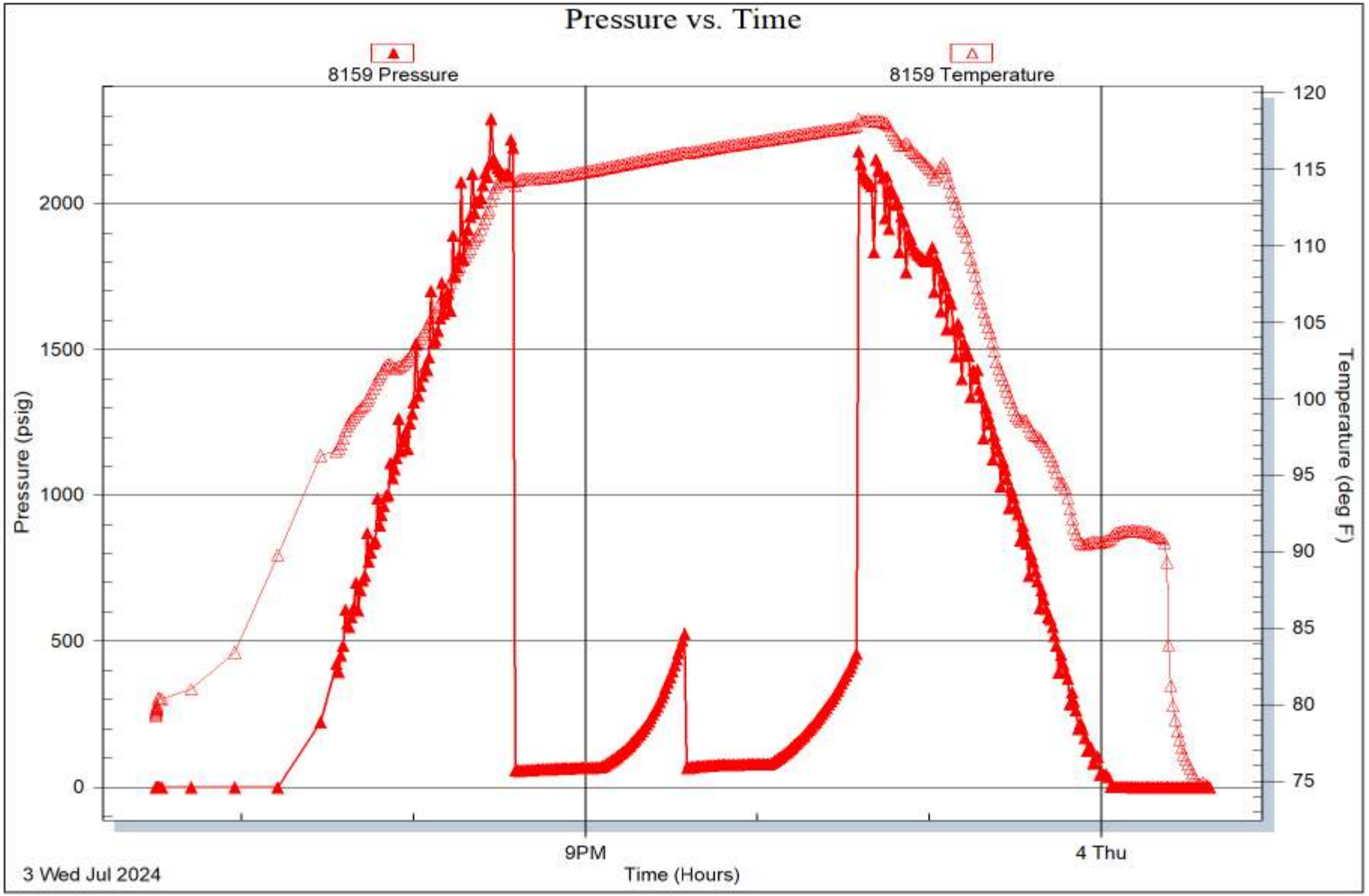
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8322 **Inside** Prater Oil & Gas How ell Unit 1-2 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 71416 Printed: 2024.07.04 @ 08:29:01

Serial #: 8159 **Outside** Prater Oil & Gas How ell Unit 1-2 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 71416 Printed: 2024.07.04 @ 08:29:02

DRILL STEM TEST REPORT

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71417 **DST#: 5**

Test Start: 2024.07.04 @ 18:30:00

GENERAL INFORMATION:

Formation: **Simpson**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:38:47
Time Test Ended: 00:44:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 72

Interval: 4536.00 ft (KB) To 4585.00 ft (KB) (TVD)
Total Depth: 4585.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

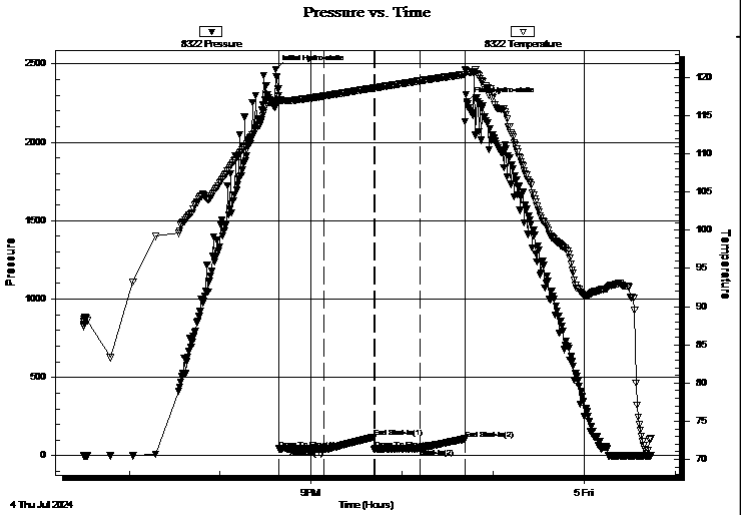
Reference Elevations: 2016.00 ft (KB)
2009.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8322 **Inside**

Press@RunDepth: 47.33 psig @ 4582.00 ft (KB)
Start Date: 2024.07.04 End Date: 2024.07.05
Start Time: 18:30:01 End Time: 00:44:02

Capacity: psig
Last Calib.: 2024.07.05
Time On Btm: 2024.07.04 @ 20:36:47
Time Off Btm: 2024.07.04 @ 22:42:47

TEST COMMENT: IF: No Blow
ISI: No Blow Back
FF: Weak Blow , Built to 2.56"
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2465.56	116.80	Initial Hydro-static
2	44.08	116.76	Open To Flow (1)
32	43.87	117.56	Shut-In(1)
65	118.73	118.61	End Shut-In(1)
65	40.57	118.63	Open To Flow (2)
95	47.33	119.55	Shut-In(2)
125	107.89	120.42	End Shut-In(2)
126	2259.04	120.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71417 **DST#: 5**

Test Start: 2024.07.04 @ 18:30:00

GENERAL INFORMATION:

Formation: **Simpson**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:38:47
Time Test Ended: 00:44:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 72

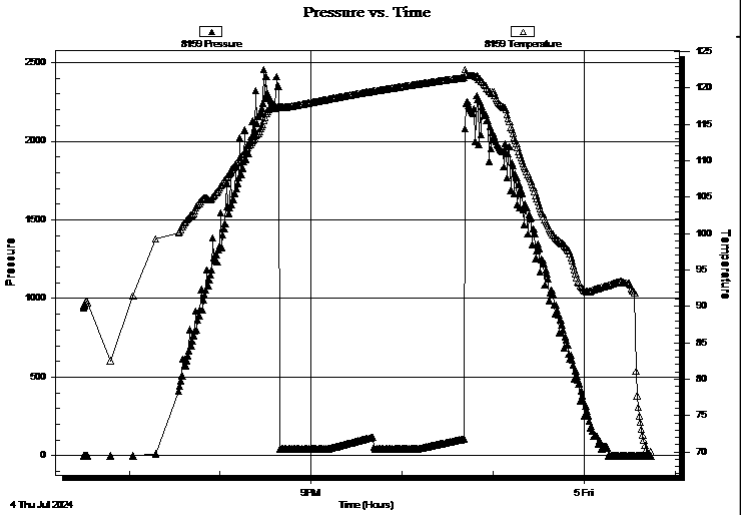
Interval: 4536.00 ft (KB) To 4585.00 ft (KB) (TVD)
Total Depth: 4585.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2016.00 ft (KB)
2009.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8159 **Outside**
Press@RunDepth: psig @ 4582.00 ft (KB)
Start Date: 2024.07.04 End Date: 2024.07.05
Start Time: 18:30:01 End Time: 00:44:02

Capacity: psig
Last Calib.: 2024.07.05
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: No Blow
ISI: No Blow Back
FF: Weak Blow , Built to 2.56"
FSI: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71417 **DST#: 5**

Test Start: 2024.07.04 @ 18:30:00

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:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	8000.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

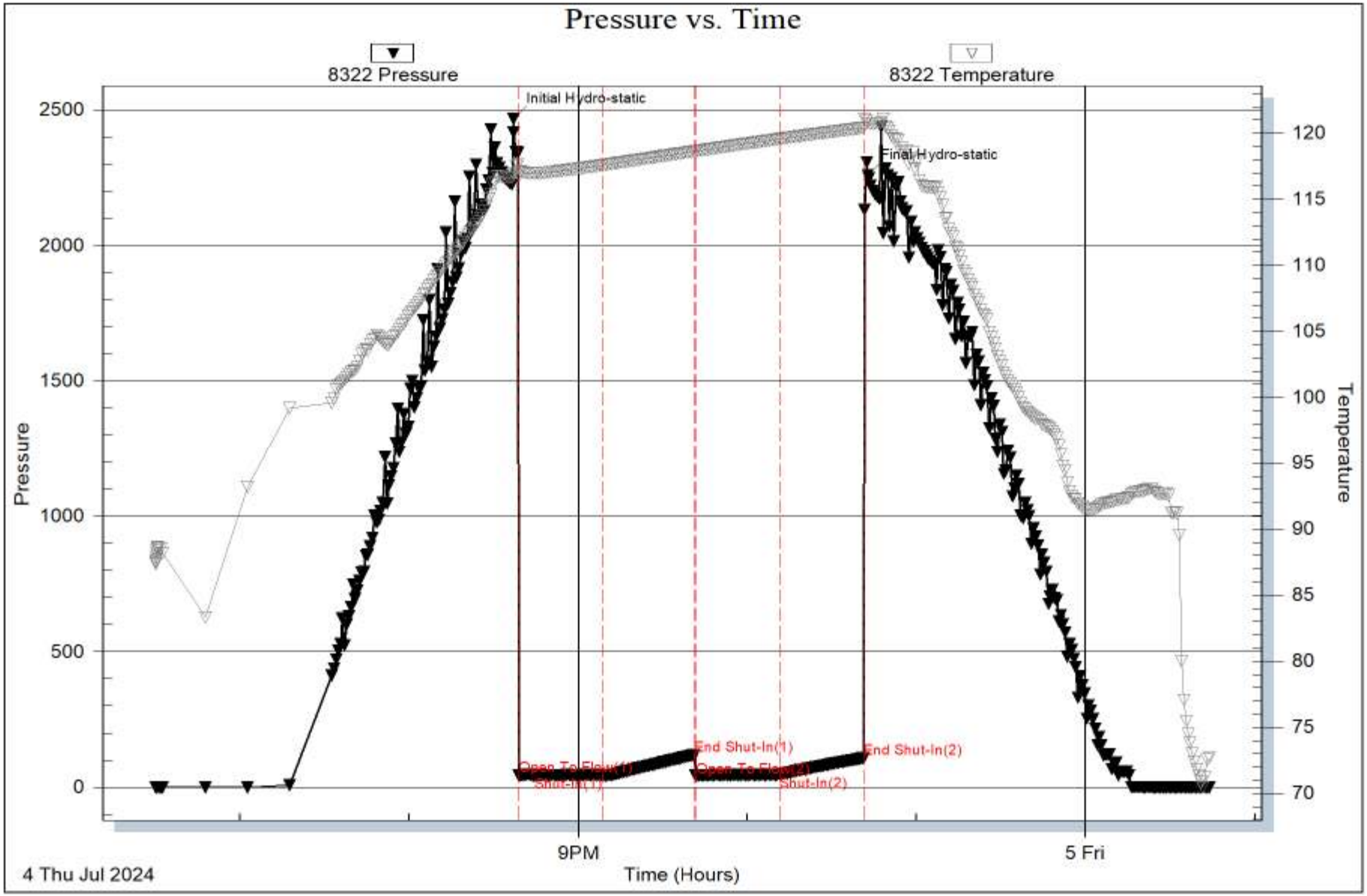
Recovery Table

Length ft	Description	Volume bbl
5.00	Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

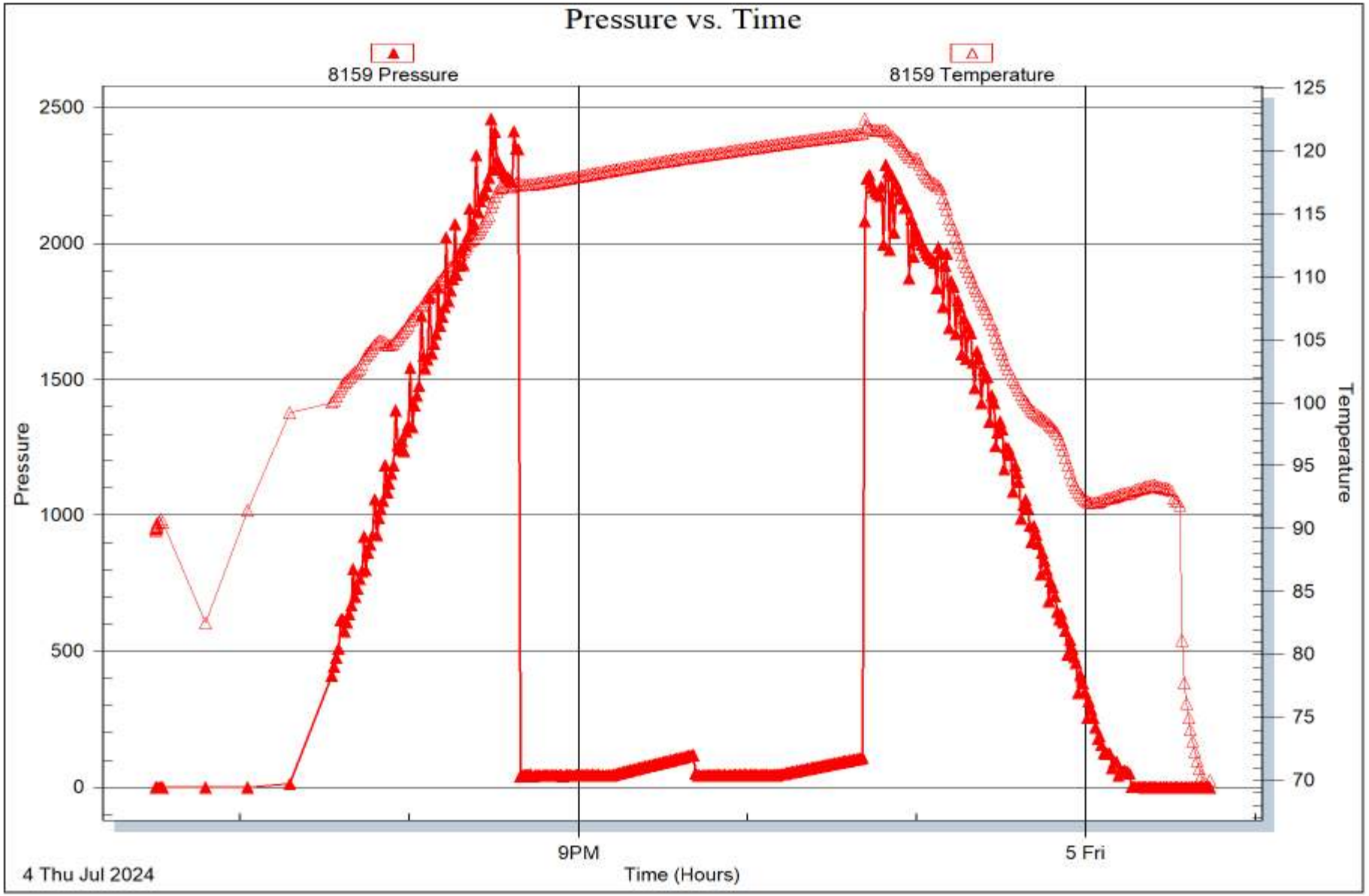
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8322 **Inside** Prater Oil & Gas How ell Unit 1-2 DST Test Number: 5



Trilobite Testing, Inc Ref. No: 71417 Printed: 2024.07.05 @ 07:35:31

Serial #: 8159 **Outside** Prater Oil & Gas How ell Unit 1-2 DST Test Number: 5



Trilobite Testing, Inc Ref. No: 71417 Printed: 2024.07.05 @ 07:35:31

DRILL STEM TEST REPORT

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71418 **DST#: 6**

Test Start: 2024.07.05 @ 06:52:00

GENERAL INFORMATION:

Formation: **Simpson**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:42:17
Time Test Ended: 13:50:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 72

Interval: 4536.00 ft (KB) To 4594.00 ft (KB) (TVD)
Total Depth: 4594.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

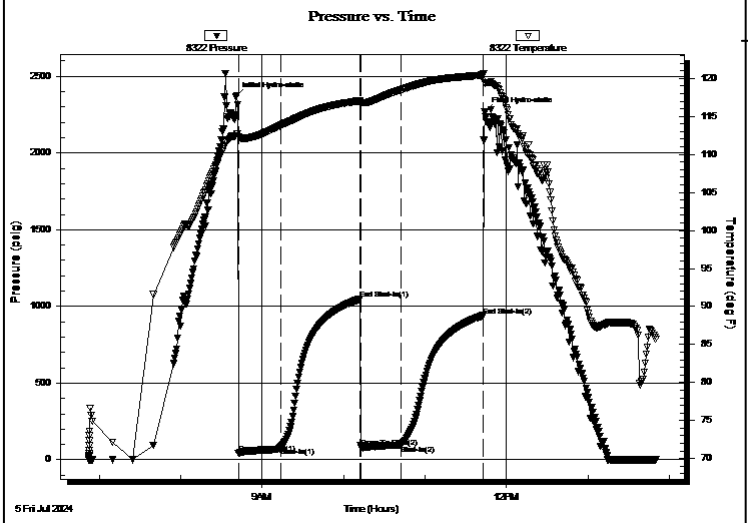
Reference Elevations: 2016.00 ft (KB)
2009.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8322 **Inside**

Press@RunDepth: 97.72 psig @ 4582.00 ft (KB)
Start Date: 2024.07.05 End Date: 2024.07.05
Start Time: 06:52:01 End Time: 13:50:02

Capacity: psig
Last Calib.: 2024.07.05
Time On Btm: 2024.07.05 @ 08:40:32
Time Off Btm: 2024.07.05 @ 11:44:02

TEST COMMENT: IF: Weak Blow , Built to 2.76"
ISI: No Blow Back
FF: Weak Blow , Built to 1.85"
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2364.77	112.47	Initial Hydro-static
2	43.02	112.34	Open To Flow (1)
33	79.33	113.81	Shut-In(1)
92	1047.54	117.01	End Shut-In(1)
93	82.05	116.83	Open To Flow (2)
122	97.72	118.49	Shut-In(2)
182	940.10	120.42	End Shut-In(2)
184	2267.72	119.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	150' GIP	0.00
90.00	SWOCM 2%W 4%O 94%M	0.44

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71418 **DST#: 6**

Test Start: 2024.07.05 @ 06:52:00

GENERAL INFORMATION:

Formation: **Simpson**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:42:17
Time Test Ended: 13:50:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 72

Interval: 4536.00 ft (KB) To 4594.00 ft (KB) (TVD)
Total Depth: 4594.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

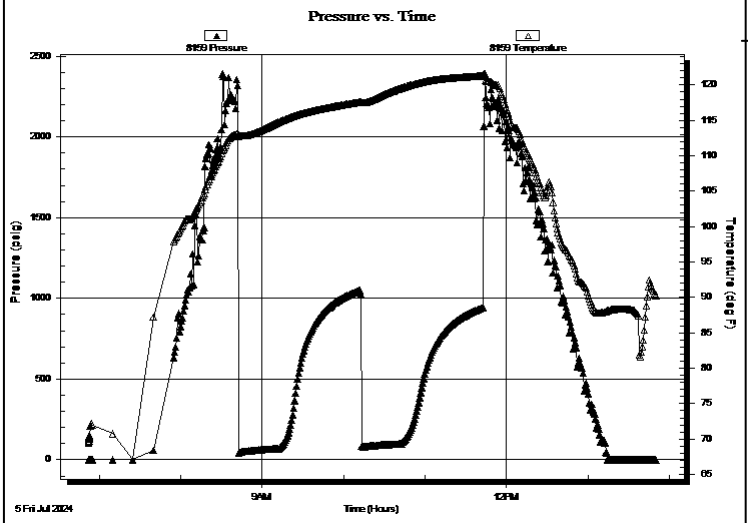
Reference Elevations: 2016.00 ft (KB)
2009.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8159 **Outside**

Press@RunDepth: psig @ 4582.00 ft (KB)
Start Date: 2024.07.05 End Date: 2024.07.05
Start Time: 06:52:01 End Time: 13:50:02

Capacity: psig
Last Calib.: 2024.07.05
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Weak Blow , Built to 2.76"
ISI: No Blow Back
FF: Weak Blow , Built to 1.85"
FSI: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	150' GIP	0.00
90.00	SWOCM 2%W 4%O 94%M	0.44

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Prater Oil & Gas

10356 Bluestem Blvd
Pratt, KS 67124

ATTN: Scot Alberg

2-29S-14W Pratt

Howell Unit 1-2

Job Ticket: 71418 **DST#: 6**

Test Start: 2024.07.05 @ 06:52:00

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:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	8000.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

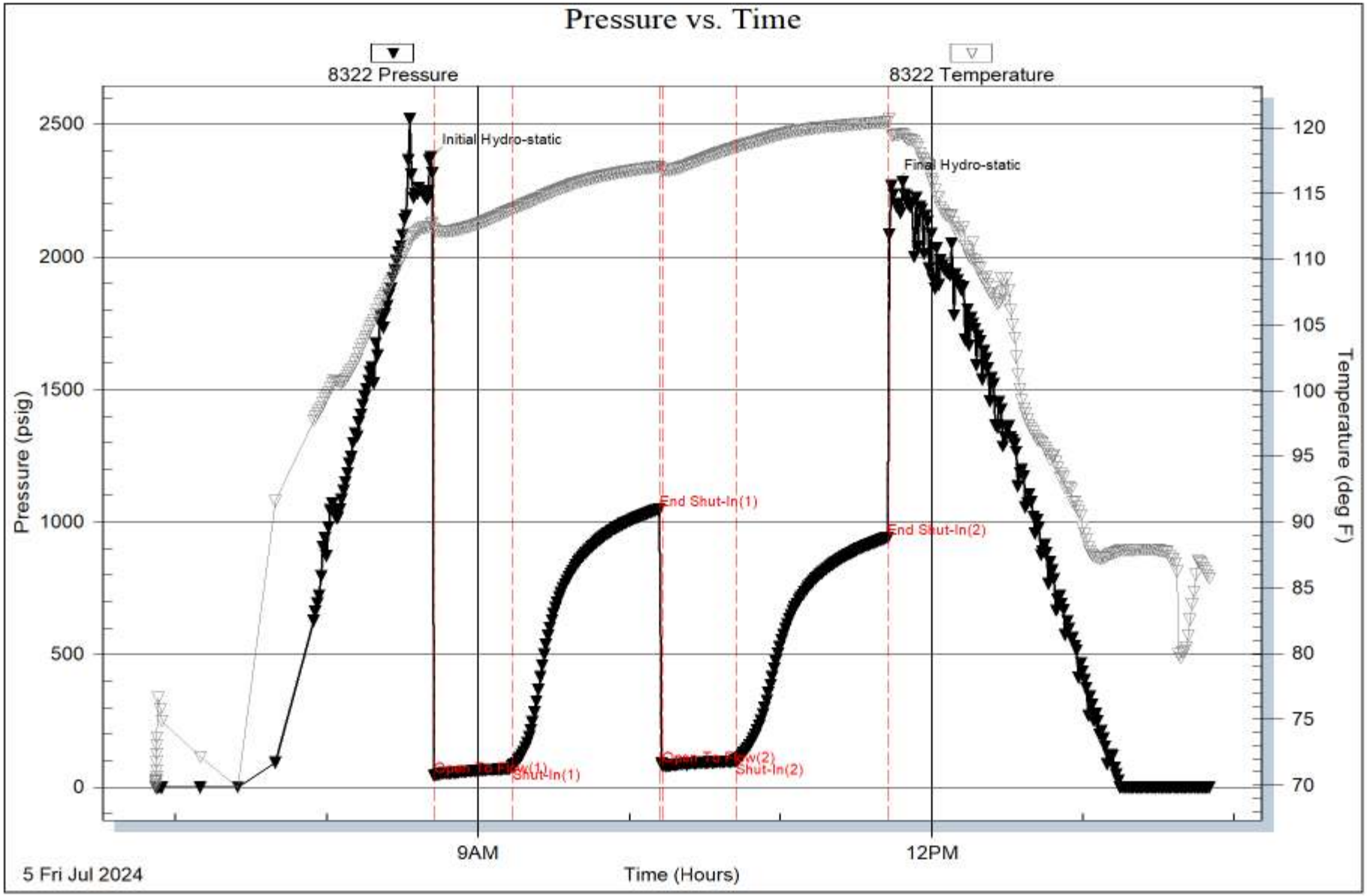
Recovery Table

Length ft	Description	Volume bbl
0.00	150' GIP	0.000
90.00	SWOCM 2%W 4%O 94%M	0.443

Total Length: 90.00 ft Total Volume: 0.443 bbl

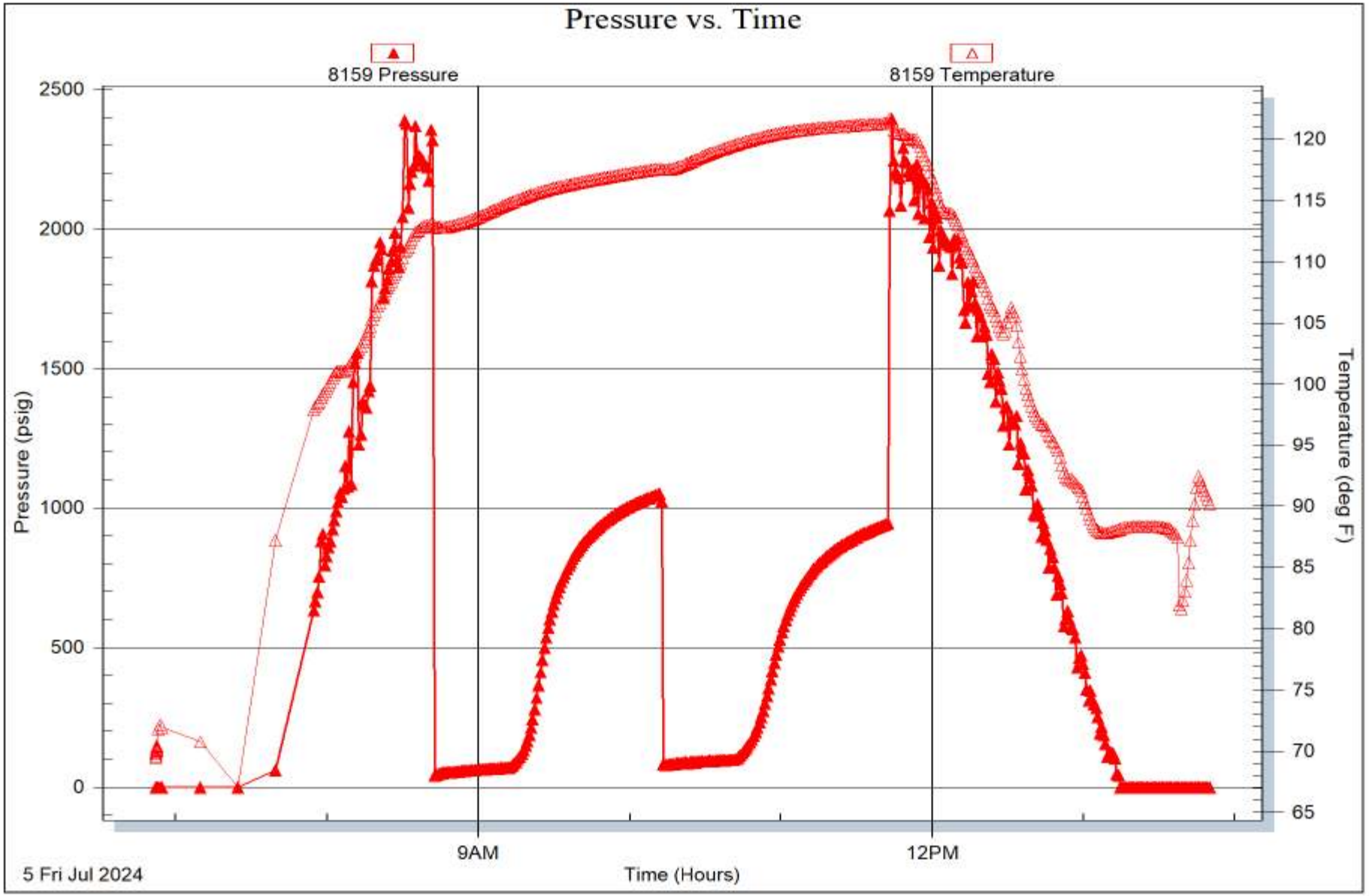
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8322 **Inside** Prater Oil & Gas How ell Unit 1-2 DST Test Number: 6



Trilobite Testing, Inc Ref. No: 71418 Printed: 2024.07.05 @ 14:34:34

Serial #: 8159 **Outside** Prater Oil & Gas How ell Unit 1-2 DST Test Number: 6



Trilobite Testing, Inc Ref. No: 71418 Printed: 2024.07.05 @ 14:34:35

Hurricane Services, Inc.
250 N. Water St., Suite #200
Wichita, KS 67202

Customer	PRATER OIL&GAS	Lease & Well #	HOWELL 1-2			Date	6/28/2024
Service District	PRATT	County & State	PRATT KS	Legals S/T/R	2-29S-14W	Job #	
Job Type	SURFACE	☑ PROD ☐ INJ ☐ SWD		New Well?	☑ YES ☐ No	Ticket #	WP5525

Equipment #	Driver
955	MATTAL
539/521	CLIFTON
529/256	E MCGRAW

Job Safety Analysis - A Discussion of Hazards & Safety Procedures

☑ Hard hat	☑ Gloves	☐ Lockout/Tagout	☐ Warning Signs & Flagging
☑ H2S Monitor	☑ Eye Protection	☐ Required Permits	☐ Fall Protection
☑ Safety Footwear	☐ Respiratory Protection	☐ Slip/Trip/Fall Hazards	☐ Specific Job Sequence/Expectations
☑ FRC/Protective Clothing	☐ Additional Chemical/Acid PPE	☐ Overhead Hazards	☐ Muster Point/Medical Locations
☐ Hearing Protection	☐ Fire Extinguisher	☐ Additional concerns or issues noted below	

Comments

Product/ Service Code	Description	Unit of Measure	Quantity			Net Amount
CP015	H-325	sack	350.00			$7,875.00
FE285	8 5/8" Rubber Plug	ea	1.00			$175.00
M015	Light Equipment Mileage	mi	10.00			$20.00
M010	Heavy Equipment Mileage	mi	20.00			$80.00
M025	Ton Mileage - Minimum	each	1.00			$300.00
C060	Cement Blending & Mixing Service	sack	350.00			$490.00
D010	Depth Charge: 0'-500'	job	1.00			$1,000.00
C035	Cement Data Acquisition	job	1.00			$250.00
C050	Cement Plug Container	job	1.00			$250.00
R061	Service Supervisor	day	1.00			$275.00

Customer Section: On the following scale how would you rate Hurricane Services Inc.?

Based on this job, how likely is it you would recommend HSI to a colleague?

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Unlikely 1 2 3 4 5 6 7 8 9 10 Extremely Likely

				Net:	$10,715.00
Total Taxable	$ -	Tax Rate:			
State tax laws deem certain products and services used on new wells to be sales tax exempt. Hurricane Services relies on the customer provided well information above to make a determination if services and/or products are tax exempt.				Sale Tax:	$ -
				Total:	$ 10,715.00

HSI Representative: *Mike Mattal*

TERMS: Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts shall pay interest on the balance past due at the rate of 1 ½% per month or the maximum allowable by applicable state or federal laws. In the event it is necessary to employ an agency and/or attorney to affect the collection, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with HSI becomes delinquent, HSI has the right to revoke any discounts previously applied in arriving at net invoice price. Upon revocation, the full invoice price without discount is immediately due and subject to collection. Prices quoted are estimates only and are good for 30 days from the date of issue. Pricing does not include federal, state, or local taxes, or royalties and stated price adjustments. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Any discount is based on 30 days net payment terms or cash. **DISCLAIMER NOTICE:** Technical data is presented in good faith, but no warranty is stated or implied. HSI assumes no liability for advice or recommendations made concerning the results fom the use of any product or service. The information presented is a best estimate of the actual results that may be achieved and should be used for comparison purposes and HSI makes no guarantee of future production performance. Customer represents and warrants that well and all associated equipment in acceptable condition to receive services by HSI. Likewise, the customer guarantees proper operational care of all customer owned equipment and property while HSI is on location performing services. The authorization below acknowledges the receipt and acceptance of all terms/conditions stated above, and Hurricane has been provided accurate well informaiton in determining taxable services.

X_____ **CUSTOMER AUTHORIZATION SIGNATURE**

ftv: 7-2020/11/30
mplv: 453-2024/05/20

CEMENT TREATMENT REPORT

Customer:	PRATER OIL&GAS	Well:	HOWELL 1-2	Ticket:	WP5525
City, State:	COATS KS	County:	PRATT KS	Date:	6/28/2024
Field Rep:	RON PRATER	S-T-R:	2-29S-14W	Service:	SURFACE

Downhole Information	
Hole Size:	12 1/4 in
Hole Depth:	436 ft
Casing Size:	8 5/8 in
Casing Depth:	433 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	26.0 bbls

Calculated Slurry - Lead	
Blend:	H-325
Weight:	14.8 ppg
Water / Sx:	6.4 gal / sx
Yield:	1.38 ft^3 / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0.0 bbls
Excess:	
Total Slurry:	86.0 bbls
Total Sacks:	350 sx

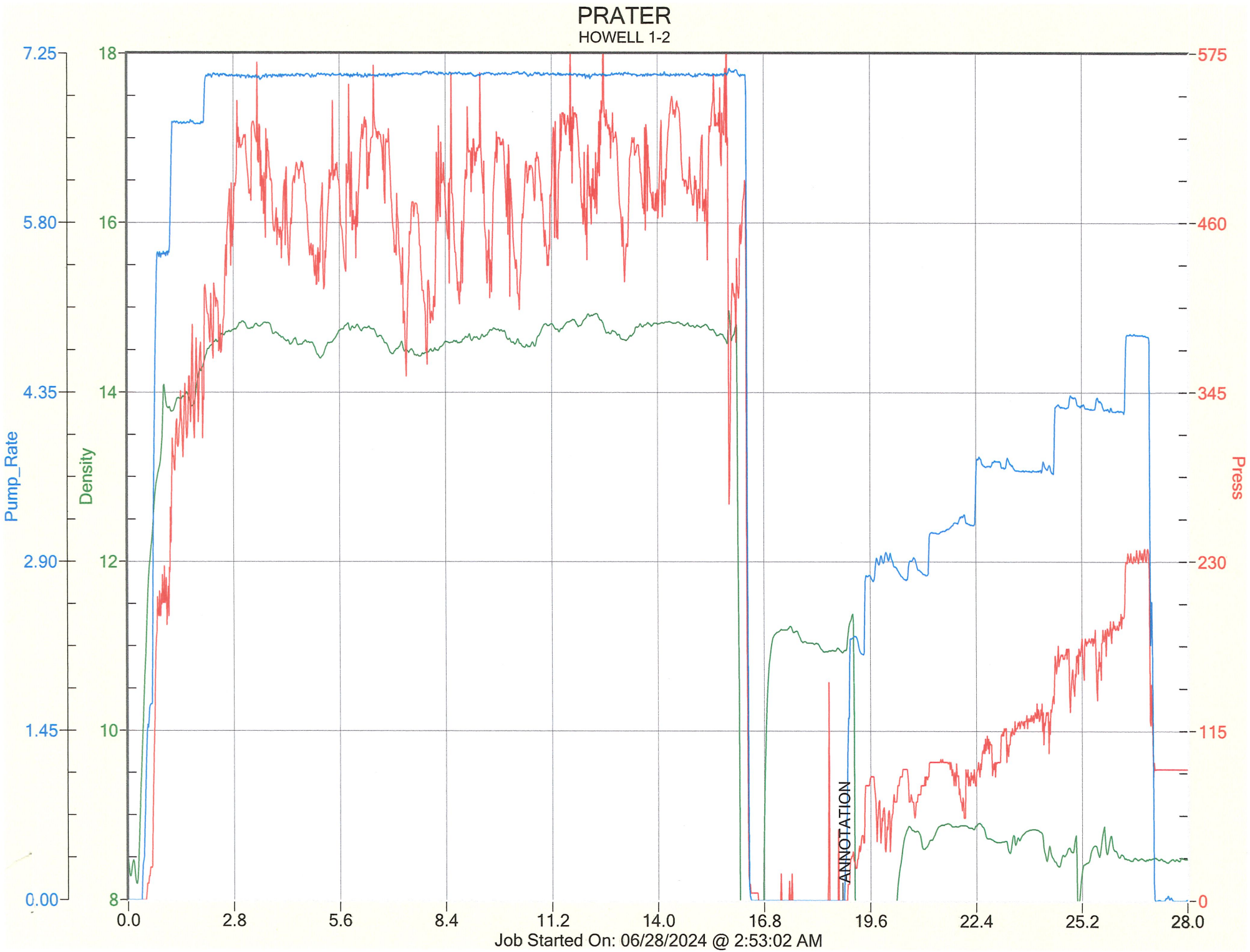
Calculated Slurry - Tail	
Blend:	
Weight:	ppg
Water / Sx:	gal / sx
Yield:	ft^3 / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	0.0 bbls
Total Sacks:	#DIV/0! sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
2:10 AM			-	-	ON LOCATION
2:45 AM				-	RUN 8 5/8 23# CASINGC
3:50 AM				-	CASING ON BOTTOM
3:55 AM				-	HOOK TO CASING/BREAK CIRCULATION WITH RIG
4:05 AM	6.7	300.0	86.0	86.0	MIX 350 SKS H-325
4:19 AM				86.0	DROP PLUG
4:22 AM	4.0	150.0		86.0	START DISPLACEMENT
4:40 AM		150.0	26.0	112.0	PLUG DOWN, SHUT IN WELL
					CEMENT TO SURFACE
				-	
				-	
				-	
				-	
				-	
				-	
				-	
				-	
				-	
				-	
				-	
				-	
				-	
				-	
				-	JOB COMPLETE, THANK YOU!
				-	MIKE MATTAL
				-	AUSTIN&EJ
				-	

	CREW	UNIT
Cementer:	MATTAL	955
Pump Operator:	CLIFTON	539/521
Bulk #1:	E MCGRAW	529/256
Bulk #2:		

SUMMARY		
Average Rate	Average Pressure	Total Fluid
5.4 bpm	200 psi	112 bbls

ftv: 7-2020/11/30
mplv: 453-2024/05/20


PRATER
HOWELL 1-2
Pump_Rate
Density
Press
7.25
5.80
4.35
2.90
1.45
0.00
18
16
14
12
10
8
575
460
345
230
115
0
0.0
2.8
5.6
8.4
11.2
14.0
16.8
19.6
22.4
25.2
28.0
ANNOTATION
Job Started On: 06/28/2024 @ 2:53:02 AM

Hurricane Services, Inc.
250 N. Water St., Suite #200
Wichita, KS 67202

Customer	PRATER OIL&GAS	Lease & Well #	HOWELL 1-2			Date	7/6/2024
Service District	PRATT	County & State	PRATT KS	Legals S/T/R	2-29S-14W	Job #	
Job Type	PTA	☑ PROD ☐ INJ ☐ SWD		New Well?	☑ YES ☐ No	Ticket #	WP5538

Equipment #	Driver
955	MATTAL
271	LESLY
181/534	JULIAN

Job Safety Analysis - A Discussion of Hazards & Safety Procedures

☑ Hard hat	☑ Gloves	☐ Lockout/Tagout	☐ Warning Signs & Flagging
☑ H2S Monitor	☑ Eye Protection	☐ Required Permits	☐ Fall Protection
☑ Safety Footwear	☐ Respiratory Protection	☐ Slip/Trip/Fall Hazards	☐ Specific Job Sequence/Expectations
☑ FRC/Protective Clothing	☐ Additional Chemical/Acid PPE	☐ Overhead Hazards	☐ Muster Point/Medical Locations
☐ Hearing Protection	☐ Fire Extinguisher	☐ Additional concerns or issues noted below	

Comments

Product/ Service Code	Description	Unit of Measure	Quantity			Net Amount
CP055	H-Plug A	sack	220.00			$3,520.00
M015	Light Equipment Mileage	mi	10.00			$20.00
M010	Heavy Equipment Mileage	mi	20.00			$80.00
M025	Ton Mileage - Minimum	each	1.00			$300.00
C060	Cement Blending & Mixing Service	sack	220.00			$308.00
D015	Depth Charge: 4001'-5000'	job	1.00			$2,500.00
C035	Cement Data Acquisition	job	1.00			$250.00
R061	Service Supervisor	day	1.00			$275.00
C025	Cement Pump - Hourly Service	hr	1.00			$250.00

Customer Section: On the following scale how would you rate Hurricane Services Inc.?

Based on this job, how likely is it you would recommend HSI to a colleague?

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Unlikely 1 2 3 4 5 6 7 8 9 10 Extremely Likely

			Net:	$7,503.00
Total Taxable	$ -	Tax Rate:		
State tax laws deem certain products and services used on new wells to be sales tax exempt. Hurricane Services relies on the customer provided well information above to make a determination if services and/or products are tax exempt.			Sale Tax:	$ -
			Total:	$ 7,503.00

HSI Representative: *Mike Mattal*

TERMS: Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts shall pay interest on the balance past due at the rate of 1 ½% per month or the maximum allowable by applicable state or federal laws. In the event it is necessary to employ an agency and/or attorney to affect the collection, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with HSI becomes delinquent, HSI has the right to revoke any discounts previously applied in arriving at net invoice price. Upon revocation, the full invoice price without discount is immediately due and subject to collection. Prices quoted are estimates only and are good for 30 days from the date of issue. Pricing does not include federal, state, or local taxes, or royalties and stated price adjustments. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Any discount is based on 30 days net payment terms or cash. **DISCLAIMER NOTICE:** Technical data is presented in good faith, but no warranty is stated or implied. HSI assumes no liability for advice or recommendations made concerning the results fom the use of any product or service. The information presented is a best estimate of the actual results that may be achieved and should be used for comparison purposes and HSI makes no guarantee of future production performance. Customer represents and warrants that well and all associated equipment in acceptable condition to receive services by HSI. Likewise, the customer guarantees proper operational care of all customer owned equipment and property while HSI is on location performing services. The authorization below acknowledges the receipt and acceptance of all terms/conditions stated above, and Hurricane has been provided accurate well informaiton in determining taxable services.

X_____ **CUSTOMER AUTHORIZATION SIGNATURE**

ftv: 7-2020/11/30
mplv: 453-2024/05/20

CEMENT TREATMENT REPORT

Customer:	PRATER OIL&GAS	Well:	HOWELL 1-2	Ticket:	WP5538
City, State:	COATS KS	County:	PRATT KS	Date:	7/6/2024
Field Rep:		S-T-R:	2-29S-14W	Service:	PTA

Downhole Information	
Hole Size:	in
Hole Depth:	ft
Casing Size:	in
Casing Depth:	ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	bbls

Calculated Slurry - Lead	
Blend:	H-PLUG A
Weight:	13.8 ppg
Water / Sx:	6.9 gal / sx
Yield:	1.43 ft^3 / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0.0 bbls
Excess:	
Total Slurry:	56.0 bbls
Total Sacks:	220 sx

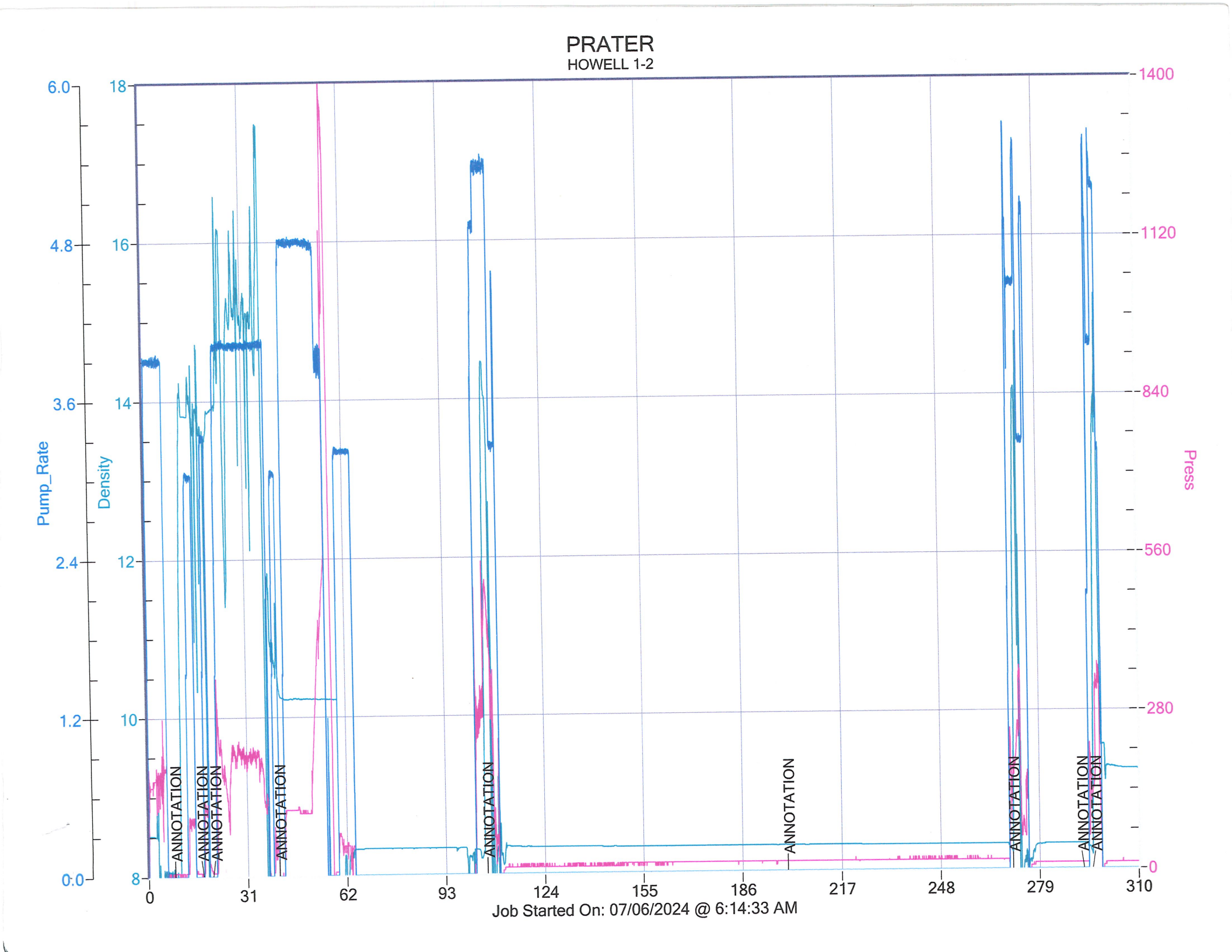
Calculated Slurry - Tail	
Blend:	
Weight:	ppg
Water / Sx:	gal / sx
Yield:	ft^3 / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	0.0 bbls
Total Sacks:	#DIV/0! sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
12:30 PM			-	-	ON LOCATION
				-	1ST PLUG AT 4675
2:59 PM	4.2	250.0	15.0	15.0	PUMP WATER
3:03 PM	4.0	225.0	12.7	27.7	MIX 50 SKS H-PLUG
3:07 PM	4.0	100.0	5.0	32.7	START DISPLACEMENT
3:09 PM	8.0	250.0	55.0	87.7	MUD DISPLACEMENT
				87.7	2ND PLUG AT 900'
5:45 PM	4.7	190.0	5.0	92.7	PUMP WATER
5:47 PM	4.5	150.0	12.7	105.4	MIX 50 SKS H-PLUG
5:51 PM	4.5	100.0	9.0	114.4	START DISPLACEMENT
				114.4	3RD PLUG AT 480"
6:12 PM	5.4	200.0	3.0	117.4	PUMP WATER
6:14 PM	4.0	150.0	12.7	130.1	MIX 50 SKS H-PLUG
6:17 PM	4.0	100.0	2.5	132.6	START DISPLACEMENT
				132.6	4TH PLUG AT 60"
6:33 PM	3.0	75.0	5.0	137.6	MIX 20 SKS H-PLUG
				137.6	CEMENT TO SURFACE
7:01 PM	2.0	25.0	7.0	144.6	MIX 30 SKS H-PLUG FOR RAT HOLE
7:07 PM	2.0	25.0	5.0	149.6	MIX 20 SKS H-PLUG FOR MOUSE HOLE
				-	
				-	
				-	
				-	JOB COMPLETE, THANK YOU!
				-	MIKE MATTAL
				-	KEEVEN&KENNY
				-	

	CREW	UNIT
Cementer:	MATTAL	955
Pump Operator:	LESLY	271
Bulk #1:	JULIAN	181/534
Bulk #2:		

SUMMARY		
Average Rate	Average Pressure	Total Fluid
4.2 bpm	142 psi	150 bbls

ftv: 7-2020/11/30
mplv: 453-2024/05/20


PRATER
HOWELL 1-2
Pump_Rate
Density
Press
6.0
4.8
3.6
2.4
1.2
0.0
18
16
14
12
10
8
1400
1120
840
560
280
0
0
31
62
93
124
155
186
217
248
279
310
ANNOTATION
ANNOTATION
ANNOTATION
ANNOTATION
ANNOTATION
ANNOTATION
ANNOTATION
ANNOTATION
ANNOTATION
Job Started On: 07/06/2024 @ 6:14:33 AM

MUD LOG

WellSight Systems

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

Well Name: HOWELL UNIT # 1-2
API: 15-151-22,595-00-00
Location: SE NE SW SW
License Number: 31000 **Region:** Pratt County, Kansas
Spud Date: June 27, 2024 **Drilling Completed:** July 6, 2024
Surface Coordinates: 895' FSL & 1200' FWL Section 2-T29S-R14W

Bottom Hole Coordinates: Verticle Hole
Ground Elevation (ft): 2005' **K.B. Elevation (ft):** 2016'
Logged Interval (ft): 2100' **To:** RTD **Total Depth (ft):** 4725'
Formation: Arbuckle
Type of Drilling Fluid: Chemical Mud/Native Mud

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

OPERATOR

Company: Prater Oil & Gas Operations, Inc
Address: 10356 Bluestem Blvd
Pratt, Kansas 67124

GEOLOGIST

Name: Scott Alberg
Company: Alberg Petroleum, LLC
Address: 609 Meadowlark Lane
Pratt, Kansas 67124

Log Tops

LOG TOPS

Anhydrite	834 (+1182)
Herrington	2222 (- 206)
Council Grove	2550 (- 334)
Wabaunsee	3024 (- 1008)
Tarkio	3216 (- 1200)
Topeka	3469 (- 1453)
Heebner	3817 (- 1801)
Toronto	3837 (- 1821)
Douglas Sh	3866 (- 1850)
Br. Lime	3994 (- 1978)
Lansing	4007 (- 1991)
Swope	4300 (- 2284)
Hertha	4339 (- 2323)
BKC	4374 (- 2358)
Marmaton	4388 (- 2372)
Conglomerate	4470 (- 2454)
Viola Chert	4512 (- 2496)
Simpson Shale	4580 (- 2564)
Simpson Sand	4582 (- 2566)
Arbuckle	4676 (- 2660)

DSTs

DST # 1 4024-4063' Times 30-60-45-60 Lansing 'B' Zone
1st Opening - Strong Blow-BOB 45 Seconds, GTS 25 Min.
Initial Shut In - No Blow Back
2nd Opening-BOB & GTS immediately.
Final Shut In - No Blow Back.
Recovery: 3936' GIP, 70' GSOCM(6% Gas, 4% Oil, 90% Mud)
GTS 25 min 1st opening:
25 min 31.4 MCF/D
2nd Opening:
10 min 40.7 MCF
20 Min 44.7 MCF
30 Min 47.5 MCF
40 Min 50.33 MCF
45 Min 51.8 MCF
IHP 2067# FHP 1960#
IFP 39-57# FFP 54-67#
ISIP 1438# FSIP 1428#

DST #2 4164-4185' Lansing 'H' Zone Times 30-30-30-30
1st Opening - Weak Blow 2.4"
ISIP - No Blow Back
2nd Opening - Weak Blow 1"
FSIP - No Blow Back
Rec. 125' MCW (88% W, 12% M)
IHP 2109# FHP 2010#
IFP 20-60# FFP 64-94#
ISIP 1303# FSIP 1262#

DST #3 4201 to 4280'. J & K Zones Times 30-60-45-60
1st Opening Strong Blow, BOB 3 min.
ISIP - No Blow Back
2nd Opening - Strong Blow, BOB 3 minutes
FSIP - No Blow Back.
Rec. 845' GIP, 225' GCM (6% G, 94% Mud)
IHP 2186# FHP 2091#
IFP 59-109# FFP 101-156#
ISIP 1486# FSIP 1453#

DST'S

DST #4 4296 - 4372' Swope & Hertha Times 30-30-30-30
1st Opening - Weak Blow. Built to 5.31" ISIP - No Blow Back
2nd Opening -8"Blow
FSIP - No Blow Back
Rec. 60' SOCM (2% O, 98% M)
IHP 2252# FHP 2175#
IFP 59-68# FFP 67-82#
ISIP 526# FSIP 458#

DST #5 4536 - 4585' Times 30-30-30-30 Viola-Simpson
1st opening - No Blow
ISIP - No Blow Back
2nd Opening - Weak 2.56"
FSIP - No Blow Back
Rec. 5' Mud
IHP 2465# FHP 2259#
IFP 44-43# FFP 40-47#
ISIP 119# FSIP 108#

DST #6 4536 - 4594' Times 30-60-30-60 Viola-Simpson
1st opening - Weak -2.7" Blow
ISIP - No Blow Back
2nd Opening - Weak - 1.8" Blow
FSIP - No Blow Back
Rec. 150' GIP, 90' SOWCM (4% O, 2% W, 94% M)
IHP 2364# FHP 2268#

IFP 43-79# FFP 82-98#
ISIP 1047# FSIP 940#

Comments

Surface Casing: Set 8 5/8" Casing at 433' with 350 sks of H-325 Common, 2% Gel, 3% CC, 1/4# CF. Plug Down at 4:30 am on 6/28/2024. Cement did Circulate to surface.
Production: None
Deviation Surveys: .25 - 436'; Teledrift ran on well, See other surveys in comments, Survey at TD - .5 degrees.
Pipe Strap: .34" Short to Board at 4063'.
Contractor Bit Record: Surface: 1- HTC GTX 12 1/4" out at 436'.
2 - 7 7/8" Hole - #1 - STC FDS Out at 501'. (Clear Cement)
3 - 7 7/8" - Klear Bit 616 - PDC - Out at 4372'.
4 - 7 7/8" - Klear Bit 616 - PDC - Out at 4725'.

Mud Company: Mud Co/Service Mud
Brad Bortz/Justin Whiting - Representitives
Drill with Native Mud and Premix to 3428' and Displace System with Chemical Mud.

CREWS

Sterling Drilling Rig #4
Tool Pusher- Lannie Solaga/ Juan Chavez
Days - Ivan Chavez
Evening - Jose Munoz
Morning - Jorge Gutierrez

RECOMMENDATIONS

After review of samples, DST results, and Electric Log analysis, it was recommended by all parties this test well be Plugged and Abandoned.

Respectfully, Scott Alberg

ROCK TYPES

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

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Sltstrg
- Ssstrg

TEXTURE

- Boundst
- Chalky
- CryxIn
- Earthy
- FinexIn
- Grainst
- Lithogr
- MicroxIn
- Mudst
- Packst
- Wackest

Glau Oolite Mrst

OTHER SYMBOLS

POROSITY
- E Earthy
- ▣ Fenest
- F Fracture
- ☒ Inter
- Moldic
- Organic
- P Pinpoint
- V Vuggy

SORTING
- W Well
- M Moderate
- P Poor

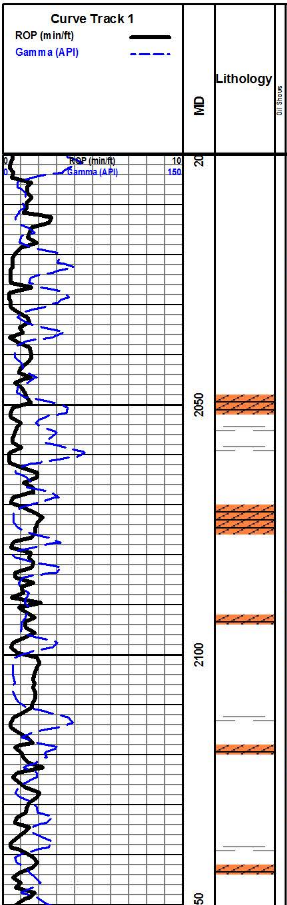
ROUNDING
- R Rounded
- r Subrnd
- a Subang
- A Angular

OIL SHOW
- ● Even
- Gas show
- ◑ Spotted
- ○ Ques
- D Dead

INTERVAL
- ■ Core
- ■ Dst pkr

- Dst

EVENT
- ▷ Rft
- ▶ Sidewall



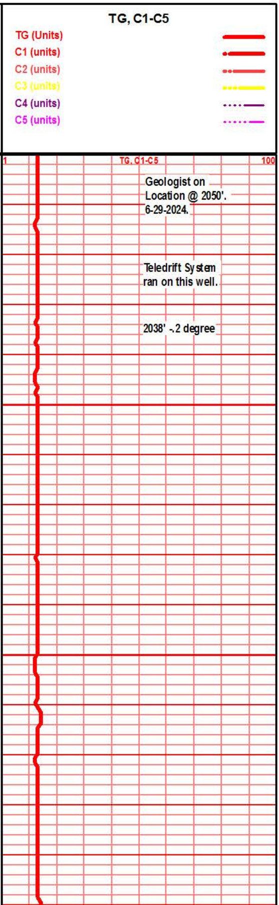
Geological Descriptions

Anhydrilte Pick: Top 838', Bottom 860'

Daily Drilling Report
Move In Sterling Drilling - 6-27-2024
June 28, 2024 - 436' WOC
June 29, 2024 - 1484' @ 7:00 am - Drlg Ahead
June 30, 2024 - 3013' @ 7:00 am Drlg Ahead
July 1, 2024 - 4034' @ 7:00 am - Drlg Ahead
July 2, 2024 - 4185' @ 7:00 am DST #2
July 3, 2024 - 4280' @ 7:00 am DST #3
July 4, 2024 - 4454' @ 7:00 am CFS
July 5, 2024 - 4594' @ 7:00 am DST #6
July 6, 2024 - 4725' @ 7:00 am Logging

LOG TOPS

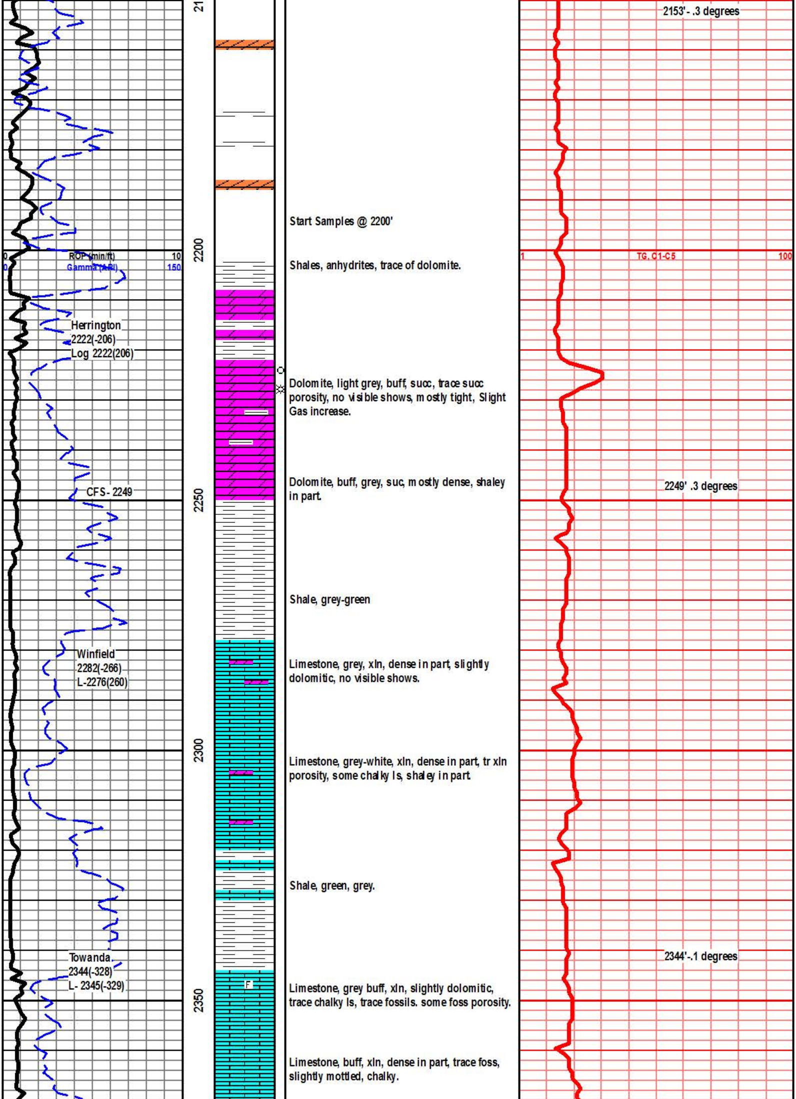
Anhydrite	834 (+1182)
Herrington	2222 (- 206)
Council Grove	2550 (- 334)
Wabaunsee	3024 (- 1008)
Tarkio	3216 (- 1200)
Topeka	3469 (- 1453)
Heebner	3817 (- 1801)
Toronto	3837 (- 1821)
Douglas Sh	3866 (- 1850)
Br. Lime	3994 (- 1978)
Lansing	4007 (- 1991)
Swope	4300 (- 2284)
Hertha	4339 (- 2323)
BKC	4374 (- 2358)
Marmaton	4388 (- 2372)
Conglomerate	4470 (- 2454)
Viola Chert	4512 (- 2496)
Simpson Shale	4580 (- 2564)
Simpson Sand	4582 (- 2566)
Arbuckle	4676 (- 2660)



Geologist on Location @ 2050'. 6-29-2024.

Teledrift System ran on this well.

2038' -.2 degree



Start Samples @ 2200'

Shales, anhydrites, trace of dolomite.

Dolomite, light grey, buff, succ, trace succ porosity, no visible shows, mostly tight, Slight Gas increase.

Dolomite, buff, grey, suc, mostly dense, shaley in part.

Shale, grey-green

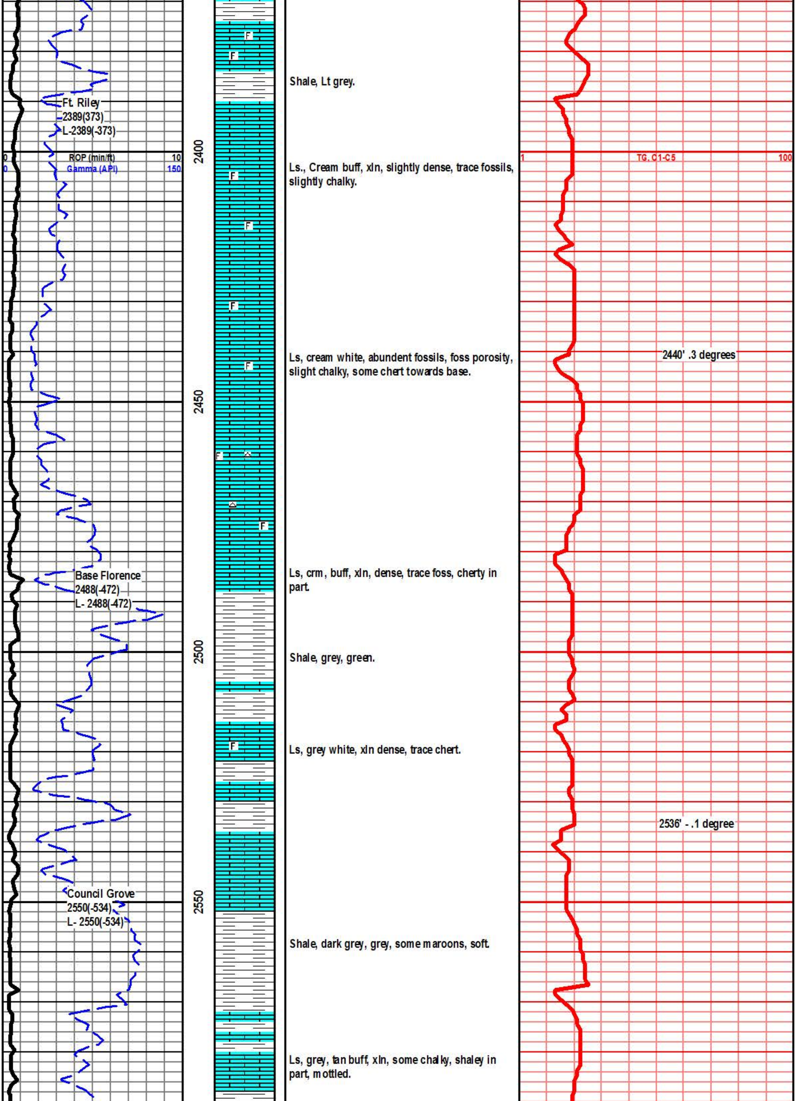
Limestone, grey, xln, dense in part, slightly dolomitic, no visible shows.

Limestone, grey-white, xln, dense in part, tr xln porosity, some chalky ls, shaley in part.

Shale, green, grey.

Limestone, grey buff, xln, slightly dolomitic, trace chalky ls, trace fossils. some foss porosity.

Limestone, buff, xln, dense in part, trace foss, slightly mottled, chalky.



Shale, Lt grey.

Ls., Cream buff, xln, slightly dense, trace fossils, slightly chalky.

Ls, cream white, abundent fossils, foss porosity, slight chalky, some chert towards base.

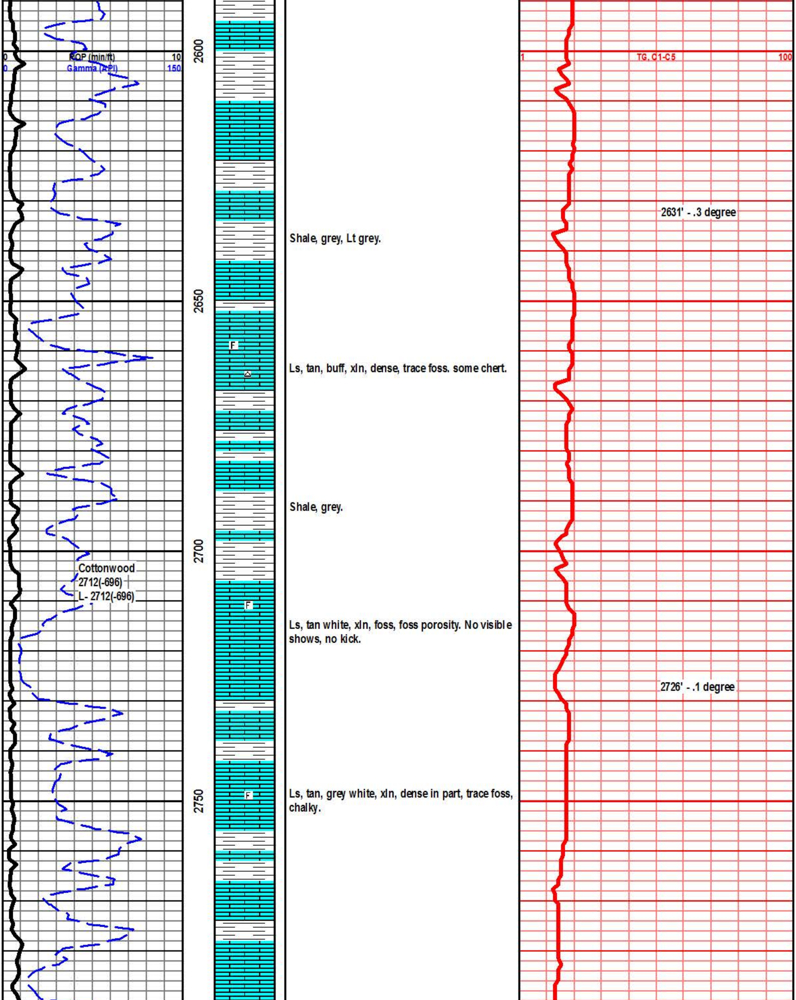
Ls, crm, buff, xln, dense, trace foss, cherty in part.

Shale, grey, green.

Ls, grey white, xln dense, trace chert.

Shale, dark grey, grey, some maroons, soft.

Ls, grey, tan buff, xln, some chalky, shaley in part, mottled.



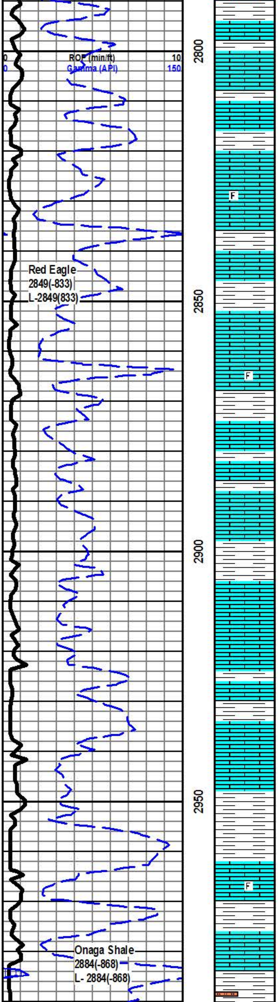
Shale, grey, Lt grey.

Ls, tan, buff, xln, dense, trace foss. some chert.

Shale, grey.

Ls, tan white, xln, foss, foss porosity. No visible shows, no kick.

Ls, tan, grey white, xln, dense in part, trace foss, chalky.



Red Eagle
2849(-833)
L-2849(833)

Onaga Shale
2884(-868)
L- 2884(-868)

Shale, grey, light grey.

Ls, grey, buff white, xln, foss., foss porosity.

Shale, grey, silty.

Ls., grey white, xln, dense. foss, foss porosity.
No visible shows.

Ls, grey white, xln, partly dense, shaley.

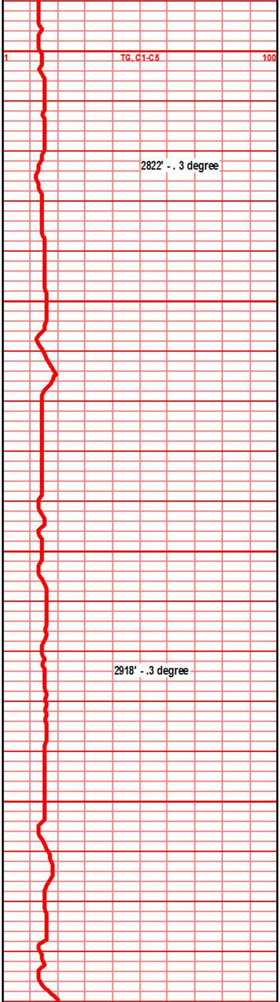
Ls., grey white, xln, partly dense, shaley in part.

Ls, buff, tan white, xln, dense.

Shale, light grey, grey.

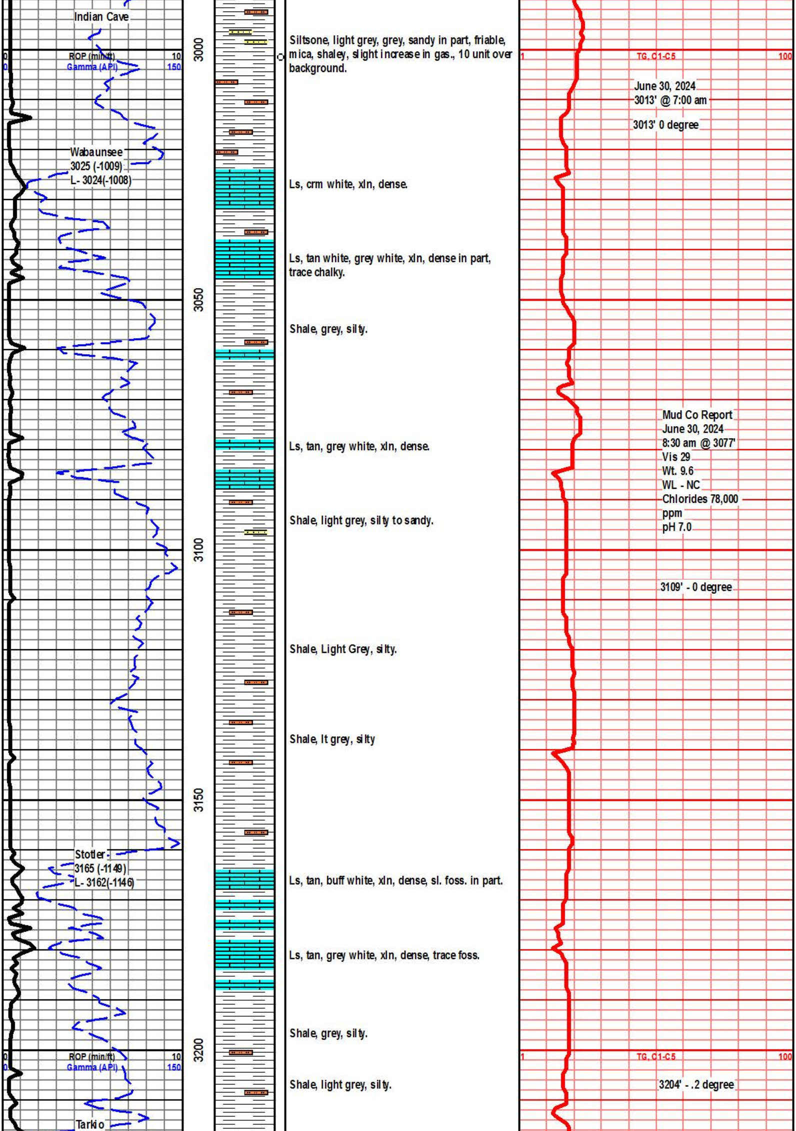
Ls, tan, white, xln, dense., trace fossils.

Shale, light grey, silty.



2822' - . 3 degree

2918' - .3 degree



Indian Cave

Wabaunsee
3025 (-1009)
L- 3024(-1008)

Stotler
3165 (-1149)
L- 3162(-1146)

Tarkio

Siltsone, light grey, grey, sandy in part, friable, mica, shaley, slight increase in gas., 10 unit over background.

Ls, crm white, xln, dense.

Ls, tan white, grey white, xln, dense in part, trace chalky.

Shale, grey, silty.

Ls, tan, grey white, xln, dense.

Shale, light grey, silty to sandy.

Shale, Light Grey, silty.

Shale, lt grey, silty

Ls, tan, buff white, xln, dense, sl. foss. in part.

Ls, tan, grey white, xln, dense, trace foss.

Shale, grey, silty.

Shale, light grey, silty.

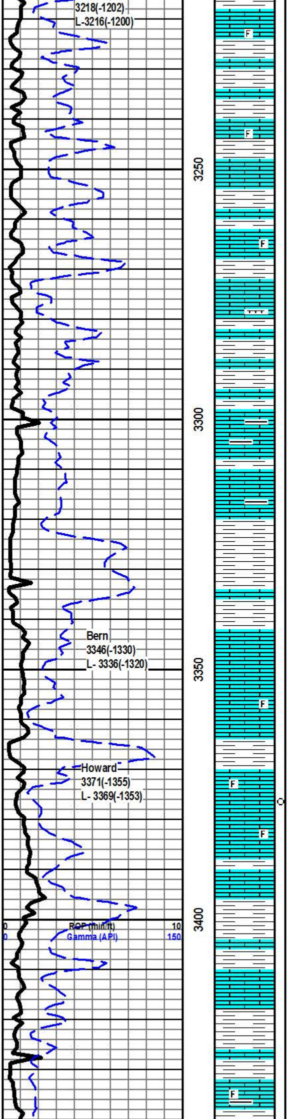
June 30, 2024
3013' @ 7:00 am

3013' 0 degree

Mud Co Report
June 30, 2024
8:30 am @ 3077'
Vis 29
Wt. 9.6
WL - NC
Chlorides 78,000
ppm
pH 7.0

3109' - 0 degree

3204' - .2 degree



Ls, crm white, tan, dense, tr foss.

Shale, light grey.

Ls, crm white, xln, dense in part, foss.

Shale, grey

Ls., buff white, xln, ptly dense, foss.

Shale, grey.

Ls, tan, xln, dense, mottled.

Shale, grey.

Ls, grey white, fn xln, soft. Shaley in part.

Ls, Grey white, shaley.

Shale, Grey-lt green, silty.

Ls., cream white, foss, slight dense, trace xln porosity, no visible shows, no kick.

Shale, light grey, grey.

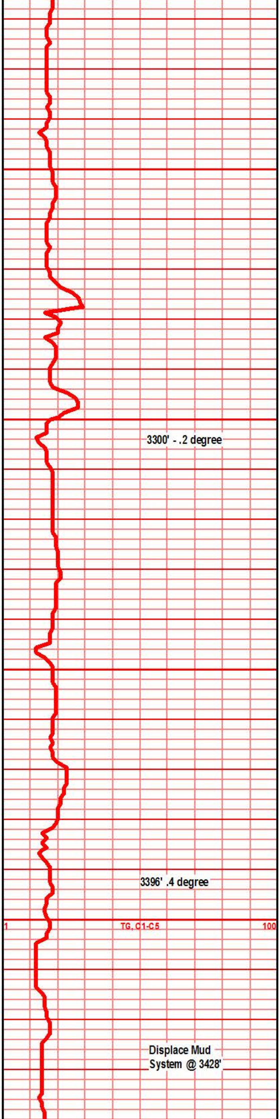
Ls, crm, tan white, xln, slightly mottled, trace stain, no odor, no kick, no flourence. Questionable show.

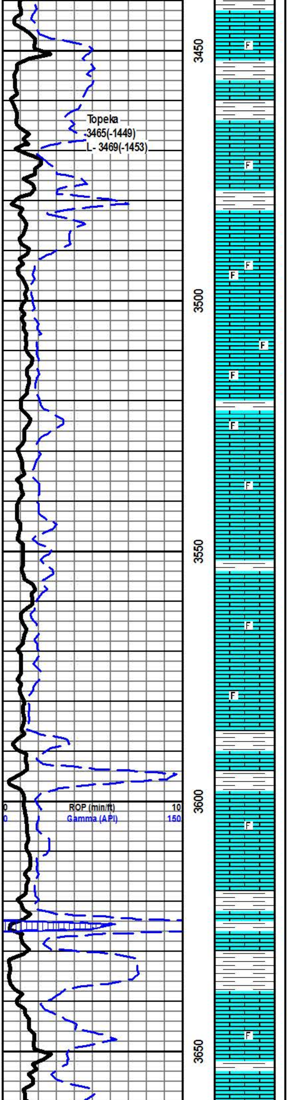
Shale, grey.

Ls, crm, tan buff white, xln, dense in part, no vis shows, slightly chalky.

Shale. grey.

Ls, grey white, xln, dense, mottled. Trace foss.





Ls, tan, brwn white, xln, dense in part, trace fossils, slightly chalky.

Shale, grey, grey green.

Ls, crm, buff white, xln, partly dense, trace fossils.

Shale, grey.

Ls, crm-white, buff, fxln, partly dense. foss porosity, foss.. Trace chalky, some dense sharp chert. No vis shows.

Ls, buff white, xln, foss, foss porosity, no shows.

Ls., cream, tan white, buff, xln, dense, foss in part. no visible shows.

Ls, crm, grey white, buff, xln, dense, foss. some foss porosity, slightly chalky, some mottled.

Shale, light grey.

Ls, tan, buff white, xln, dense, dense, foss. no shows.

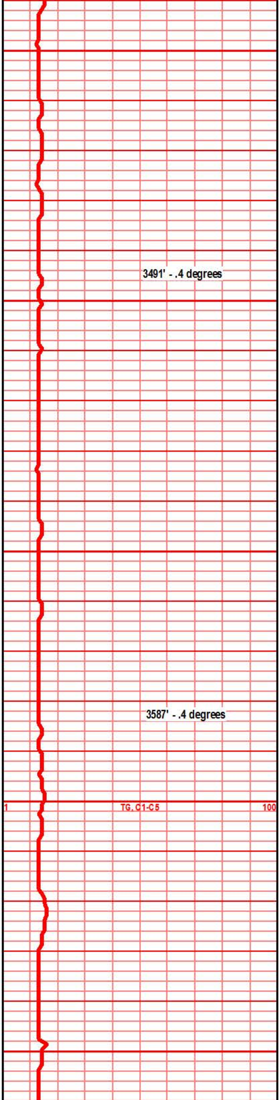
Shale, grey.

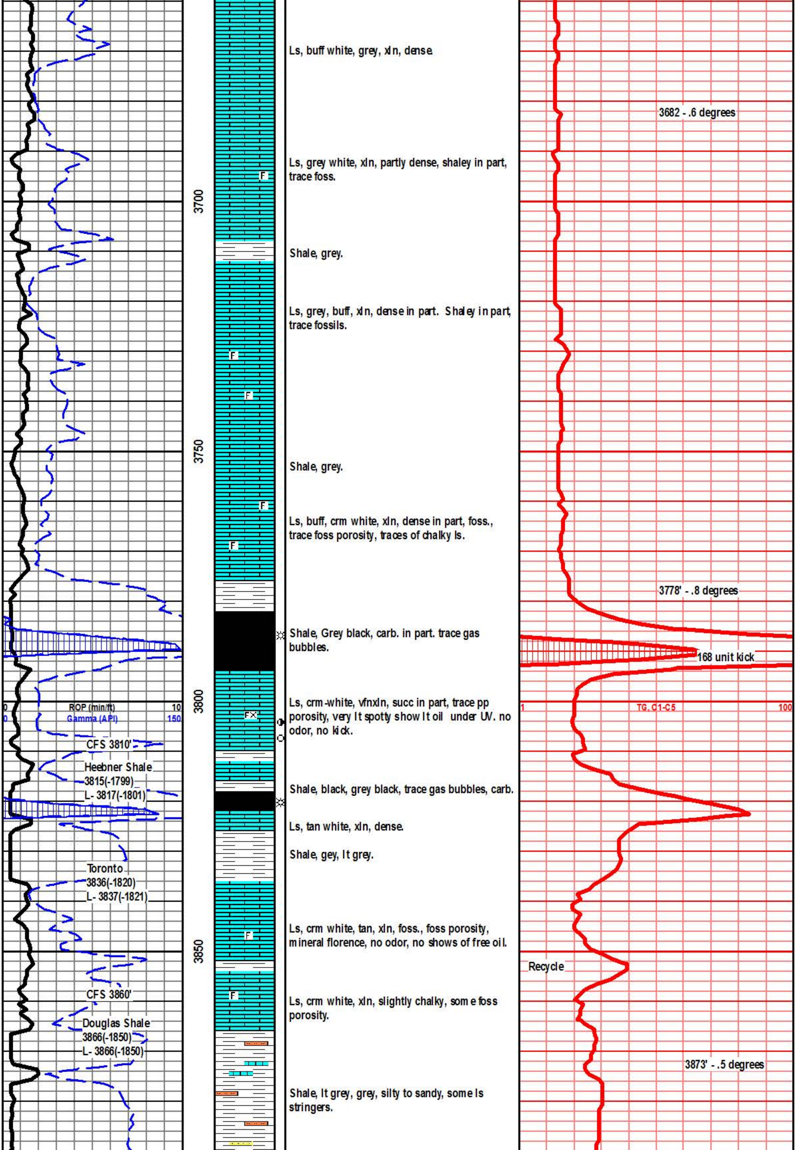
Ls, buff, tan white, xln, dense.

Shale, dk grey.

Ls, crm white, buff, fxln, dense, trace foss.

Shale, grey





Ls, buff white, grey, xln, dense.

Ls, grey white, xln, partly dense, shaley in part, trace foss.

Shale, grey.

Ls, grey, buff, xln, dense in part. Shaley in part, trace fossils.

Shale, grey.

Ls, buff, crm white, xln, dense in part, foss., trace foss porosity, traces of chalky ls.

Shale, Grey black, carb. in part. trace gas bubbles.

Ls, crm-white, vfnxln, succ in part, trace pp porosity, very lt spotty show lt oil under UV. no odor, no kick.

Shale, black, grey black, trace gas bubbles, carb.

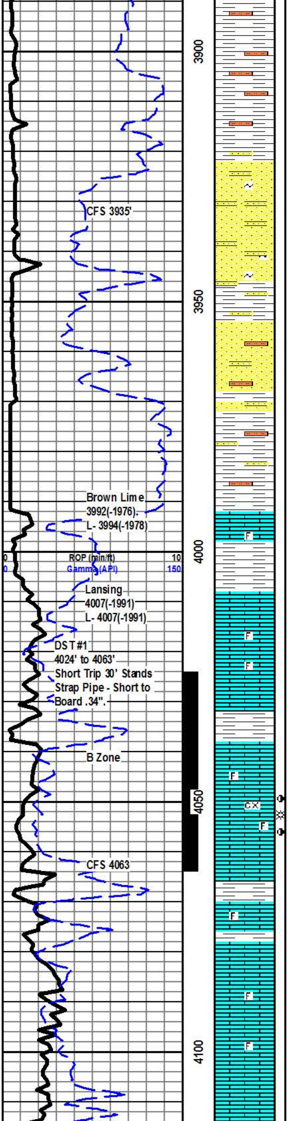
Ls, tan white, xln, dense.

Shale, gey, lt grey.

Ls, crm white, tan, xln, foss., foss porosity, mineral florence, no odor, no shows of free oil.

Ls, crm white, xln, slightly chalky, some foss porosity.

Shale, lt grey, grey, silty to sandy, some ls stringers.



DST#1
4024' to 4063'
Short Trip 30' Stands
Strap Pipe - Short to
Board .34".

Shale, lt grey, pale green, silty.

Sandstone, grey, lt grey, some lt grey friable sandstone, galuc., mica., some lt green shales as well, no visible shows, no flouorence, no odor.

Shale, green, sandy to silty.

Sandstone, grey, lt grey, some pale green, silty in part, friable in part, mica, no visible shows, no fluorence.

Shale, grey, soft, silty. some sand clusters.

Ls, tan,bwn. xln, dense, trac foss.

Shale, grey.

Ls, crm, buff, tan white, xln, partly dense, foss, foss porosity, mottled, chalky in part. no visible shows, no odor, no kick.

Shale, grey.

Ls, crm. tan white, xln, slightly mottled, trace xln porosity, foss porosity, light show of oil with faint odor, 30 unit gas kick. Dull spotty fluorence.

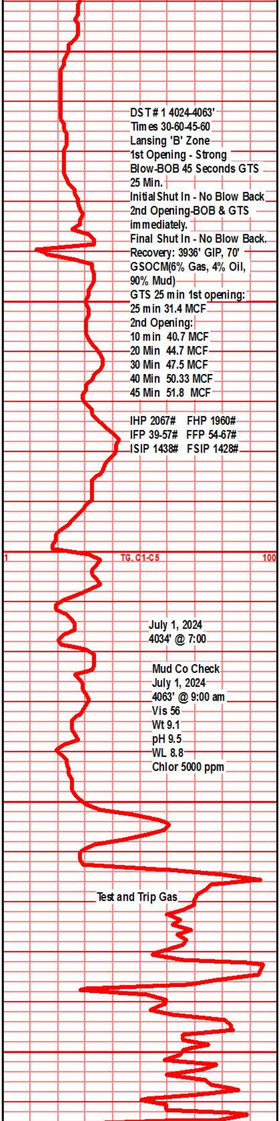
Shale, grey.

Ls, Grey-white, xln, dense, trace foss.

Shale, grey.

Ls, grey, buff-white, xln, partly dense, tracce foss, mottled in part.

Ls, tan, buff, crm, xln, dense, mottled, slightly chalky, tr. foss., trace white chert.

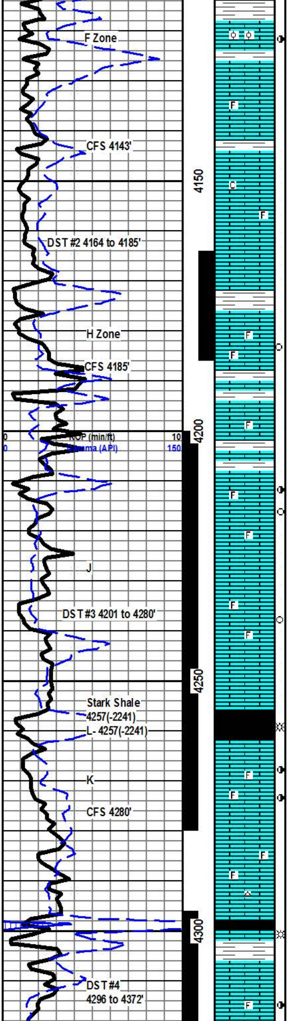


DST # 1 4024-4063'
Times 30-60-45-60
Lansing 'B' Zone
1st Opening - Strong
Blow-BOB 45 Seconds GTS
25 Min.
Initial Shut In - No Blow Back
2nd Opening-BOB & GTS
immediately.
Final Shut In - No Blow Back.
Recovery: 3936' GIP, 70'
GSOCM(6% Gas, 4% Oil,
90% Mud)
GTS 25 min 1st opening:
25 min 31.4 MCF
2nd Opening:
10 min 40.7 MCF
20 Min 44.7 MCF
30 Min 47.5 MCF
40 Min 50.33 MCF
45 Min 51.8 MCF

IHP 2067# FHP 1960#
IFP 39-57# FFP 54-67#
ISIP 1438# FSIP 1428#

July 1, 2024
4034' @ 7:00

Mud Co Check
July 1, 2024
4063' @ 9:00 am
Vis 56
Wt 9.1
pH 9.5
WL 8.8
Chlor 5000 ppm



Shale, grey, light grey.

Ls, tan, xln, oolitic, ool. porosity, firm, inter cst porosity, show oil, lt brwn staining, good odor, dull spotty fluorence. Kick?

Ls, grey-white, xln, chalky, soft in part, trace foss.

Ls, buff, crm-white, xln, prtly dense, very chalky, tr foss, no show. Tr chert towards base.

Shale, grey.

Ls, tan white, buff, xln, foss porosity, tr oolites, very faint odor, slight lt stain, 38 unit kick over background.

Shale, grey.

Ls, tan white, buff, xln, mostly dense, tr foss, no vis shows.

Shale, grey.

Ls, tn white, buff, xln, partly dense, tr foss porosity, tr, lt st, ft odor on break, very faint show free oil.

Ls, crm white, xln, partly dense, chalky, foss in part.

Ls, tan, crm -white, xln, xln porosity, succ in part, tr foss, faint odor, v ft spotted fluorence.

Ls, tan-white, xln, dense, tr tan chert.

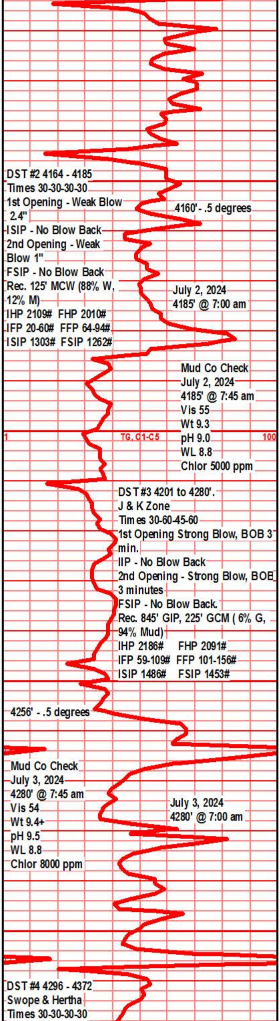
Shale, grey black, sl carb.

Ls, crm, tan, buff, xln, xln porosity, trace scattered vugs, some foss porosity, fair odor, spotty bright fluorence, fair show of free oil when broken, light oil.

Ls, crm, tan white, xln, dense, tr chert, sl. foss.

Shale, grey black, carb.

Ls, Crm-white, xln, partly dense, trace xln porosity, very light staining, slight odor. very faint fluor.



DST #2 4164 - 4185
Times 30-30-30-30
1st Opening - Weak Blow 2.4"
ISIP - No Blow Back
2nd Opening - Weak Blow 1"
FSIP - No Blow Back
Rec. 125' MCW (88% W, 12% M)
IHP 2109# FHP 2010#
IFP 20-60# FFP 64-94#
ISIP 1303# FSIP 1262#

4160' - .5 degrees

July 2, 2024
4185' @ 7:00 am

Mud Co Check
July 2, 2024
4185' @ 7:45 am
Vis 55
Wt 9.3
pH 9.0
WL 8.8
Chlor 5000 ppm

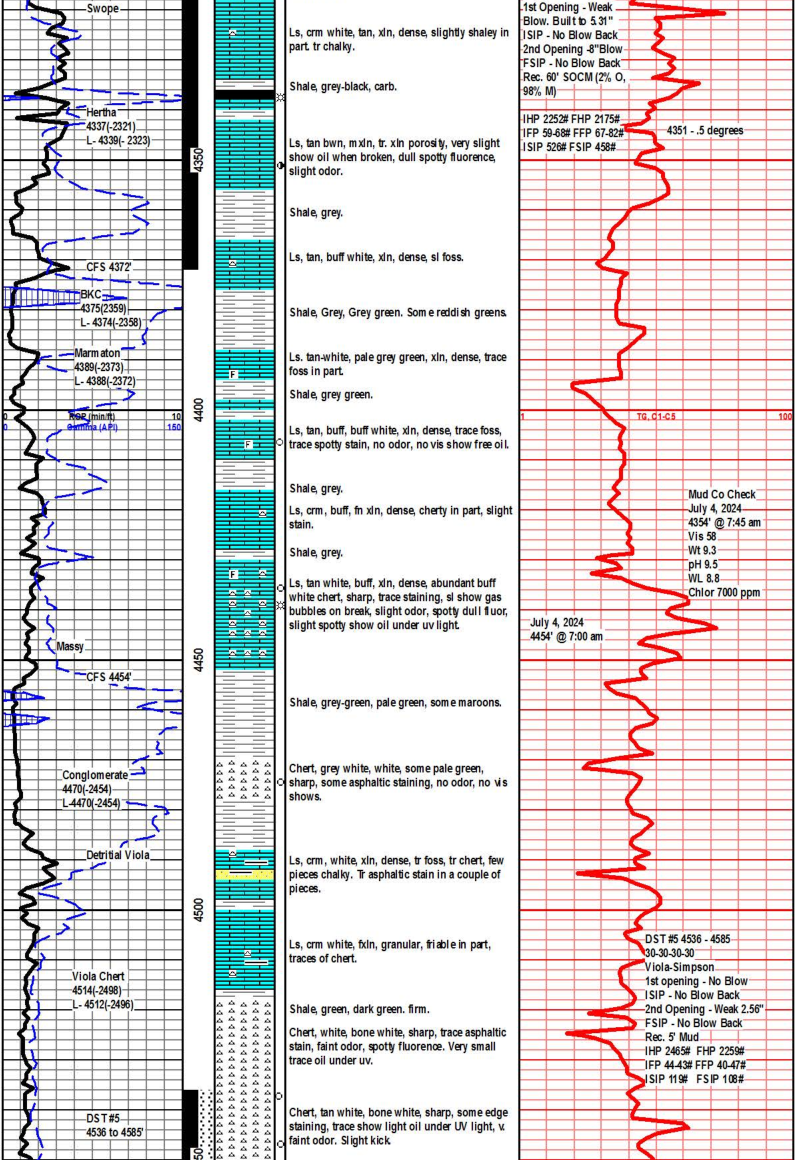
DST #3 4201 to 4280'.
J & K Zone
Times 30-60-45-60
1st Opening Strong Blow, BOB 3 min.
IIP - No Blow Back
2nd Opening - Strong Blow, BOB 3 minutes
FSIP - No Blow Back.
Rec. 845' GIP, 225' GCM (6% G, 94% Mud)
IHP 2186# FHP 2091#
IFP 59-109# FFP 101-156#
ISIP 1486# FSIP 1453#

4256' - .5 degrees

Mud Co Check
July 3, 2024
4280' @ 7:45 am
Vis 54
Wt 9.4+
pH 9.5
WL 8.8
Chlor 8000 ppm

July 3, 2024
4280' @ 7:00 am

DST #4 4296 - 4372
Swope & Hertha
Times 30-30-30-30



Ls, crm white, tan, xln, dense, slightly shaley in part. tr chalky.

Shale, grey-black, carb.

Ls, tan bwn, m xln, tr. xln porosity, very slight show oil when broken, dull spotty fluorence, slight odor.

Shale, grey.

Ls, tan, buff white, xln, dense, sl foss.

Shale, Grey, Grey green. Som e reddish greens.

Ls. tan-white, pale grey green, xln, dense, trace foss in part.

Shale, grey green.

Ls, tan, buff, buff white, xln, dense, trace foss, trace spotty stain, no odor, no vis show free oil.

Shale, grey.

Ls, crm, buff, fn xln, dense, cherty in part, slight stain.

Shale, grey.

Ls, tan white, buff, xln, dense, abundant buff white chert, sharp, trace staining, sl show gas bubbles on break, slight odor, spotty dull fluor, slight spotty show oil under uv light.

Shale, grey-green, pale green, som e maroons.

Chert, grey white, white, some pale green, sharp, some asphaltic staining, no odor, no vis shows.

Ls, crm, white, xln, dense, tr foss, tr chert, few pieces chalky. Tr asphaltic stain in a couple of pieces.

Ls, crm white, fxln, granular, friable in part, traces of chert.

Shale, green, dark green. firm.

Chert, white, bone white, sharp, trace asphaltic stain, faint odor, spotty fluorence. Very small trace oil under uv.

Chert, tan white, bone white, sharp, some edge staining, trace show light oil under UV light, v. faint odor. Slight kick.

1st Opening - Weak
Blow. Built to 5.31"
ISIP - No Blow Back
2nd Opening -8"Blow
FSIP - No Blow Back
Rec. 60' SOCM (2% O,
98% M)

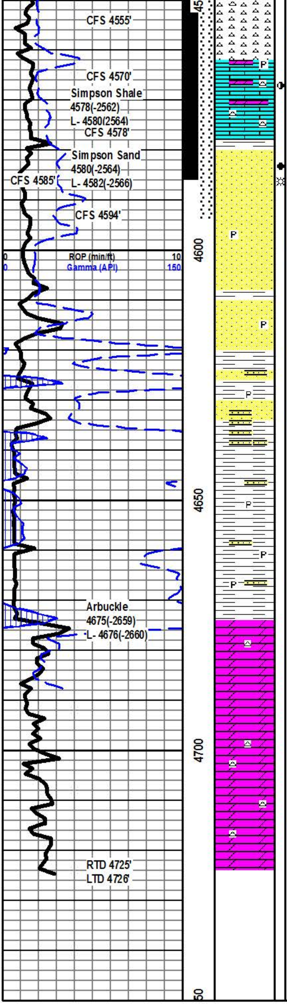
IHP 2252# FHP 2175#
IFP 59-68# FFP 67-82#
ISIP 526# FSIP 458#

4351 - .5 degrees

Mud Co Check
July 4, 2024
4354' @ 7:45 am
Vis 58
Wt 9.3
pH 9.5
WL 8.8
Chlor 7000 ppm

July 4, 2024
4454' @ 7:00 am

DST #5 4536 - 4585
30-30-30-30
Viola-Simpson
1st opening - No Blow
ISIP - No Blow Back
2nd Opening - Weak 2.56"
FSIP - No Blow Back
Rec. 5' Mud
IHP 2465# FHP 2259#
IFP 44-43# FFP 40-47#
ISIP 119# FSIP 108#



Ls, crm, tan white, fn xln, dense,cherty, dolomitic in part, succ to sandy.

One piece hard, cherty sand looking piece.angular, dolomitic, well cemented, show of balck asphaltic oil, very dull fluorence. Trace odor.

Shale, dark green, pale green, traces of pyrtie.

Sandstone. clear to frosted subrounded, grains, fair odor, good fluorence, good gas kick, friable in part. Fair show saturated pieces, some bleeding gas.

Sandstone, clear to tan frosted subangular grains, some saturated, fair odor, spotty good fluor, kick, some traces of pyrite?

Shale, dark grey, dark greena, traces of pyrite.

Sandstone, clear to frosted, slightly friable, subangular, asphaltic staining, slight show of oil, slight odor, traces of pyrite. Shales, grey green.

Shale, dark green, grey, firm, pyritic.

Sandstone, clear to frosted grey, subangular, trace shows of asphaltic oil, slight show free oil, spotty fluor.

Shale, grey green, firm, dark grey, trace pyrite. Some firm pale green shale.

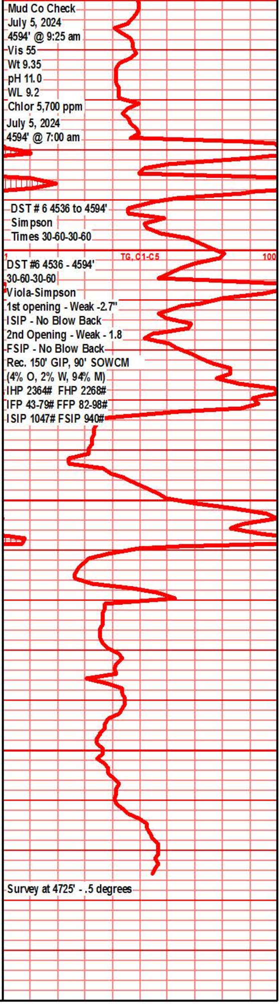
Shale, pale green grey, firm, pyritc in part. Some sand stringers. Very firm.

Shale, light grey-green, firm waxey, pyrite, sand grains in shale.

Dolomite, crm to tan, sandy texture, dense, dull flour, no visible show, no odor.

Dolomite, tan, crm white, succ texture, mostly dense, trace tan chert, dull fluor, no visible show, no odor.

Dolomite, tan, crm, tan cherts, sharp, dull fluor, no odor, no shows of free oil, no odor.



Mud Co Check
July 5, 2024
4594' @ 9:25 am
Vis 55
Wt 9.35
pH 11.0
WL 9.2
Chlor 5,700 ppm
July 5, 2024
4594' @ 7:00 am

DST # 6 4536 to 4594'
Simpson
Times 30-60-30-60

DST #6 4536 - 4594'
30-60-30-60
Viola-Simpson
1st opening - Weak -2.7"
ISIP - No Blow Back
2nd Opening - Weak - 1.8
FSIP - No Blow Back
Rec. 150' GIP, 90' SOWCM
(4% O, 2% W, 94% M)
IHP 2364# FHP 2268#
IFP 43-79# FFP 82-98#
ISIP 1047# FSIP 940#

Survey at 4725' - .5 degrees