

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

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

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

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

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

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

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

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

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

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

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

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

TUBING RECORD:	Size:	Set At:	Packer At:	
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DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Kent Matson

Rodie #4

7-15s-36w Gove,KS

Start Date: 2023.05.02 @ 02:42:00

End Date: 2023.05.02 @ 12:00:45

Job Ticket #: 70269 DST #: 1

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

Printed: 2023.05.12 @ 15:46:31



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70269

DST#: 1

ATTN: Kent Matson

Test Start: 2023.05.02 @ 02:42:00

GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:45:00

Time Test Ended: 12:00:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 78

Interval: 3980.00 ft (KB) To 4015.00 ft (KB) (TVD)

Reference Elevations: 2982.00 ft (KB)

Total Depth: 4015.00 ft (KB) (TVD)

2973.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8845 Outside

Press@RunDepth: 104.31 psig @ 3981.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.05.02 End Date: 2023.05.02

Last Calib.: 2023.05.02

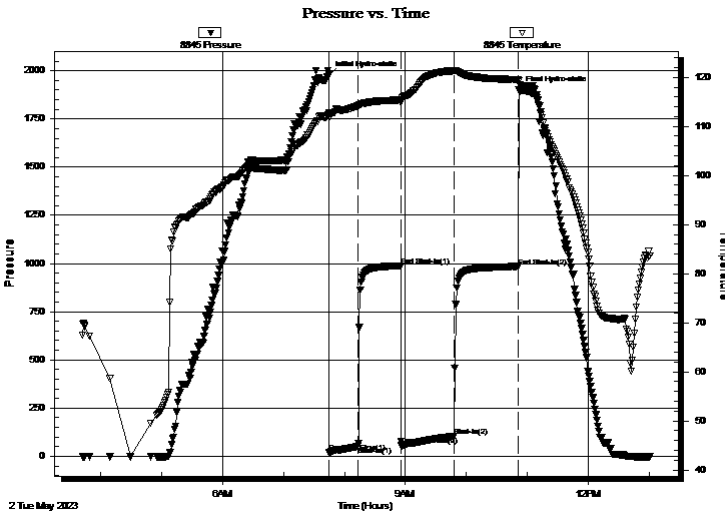
Start Time: 03:42:05 End Time: 13:00:45

Time On Btm: 2023.05.02 @ 07:44:30

Time Off Btm: 2023.05.02 @ 10:51:45

TEST COMMENT: IF: 8 1/2" blow .
IS: No return.
FF: 10" blow .
FS: No return. 30-45-45-60

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1976.78	112.85	Initial Hydro-static
1	21.14	111.88	Open To Flow (1)
29	50.89	114.14	Shut-In(1)
71	987.50	115.41	End Shut-In(1)
72	55.46	115.19	Open To Flow (2)
124	104.31	121.31	Shut-In(2)
187	984.17	119.50	End Shut-In(2)
188	1898.71	119.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	mcw 50w 50m (oil spots)	2.52
1.00	Oil 100o	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70269

DST#: 1

ATTN: Kent Matson

Test Start: 2023.05.02 @ 02:42:00

Tool Information

Drill Pipe:	Length: 3965.00 ft	Diameter: 3.80 inches	Volume: 55.62 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 55.62 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3980.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	65.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3951.00	
Shut In Tool	5.00			3956.00	
Hydraulic tool	5.00			3961.00	
Jars	5.00			3966.00	
EM Tool	3.00			3969.00	
Safety Joint	2.00			3971.00	
Packer	5.00			3976.00	30.00 Bottom Of Top Packer
Packer	4.00			3980.00	
Stubb	1.00			3981.00	
Recorder	0.00	8319	Inside	3981.00	
Recorder	0.00	8845	Outside	3981.00	
Perforations	31.00			4012.00	
Bullnose	3.00			4015.00	35.00 Bottom Packers & Anchor

Total Tool Length: 65.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70269

DST#: 1

ATTN: Kent Matson

Test Start: 2023.05.02 @ 02:42:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

37000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	mcw 50w 50m (oil spots)	2.525
1.00	Oil 100o	0.014

Total Length: 181.00 ft Total Volume: 2.539 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

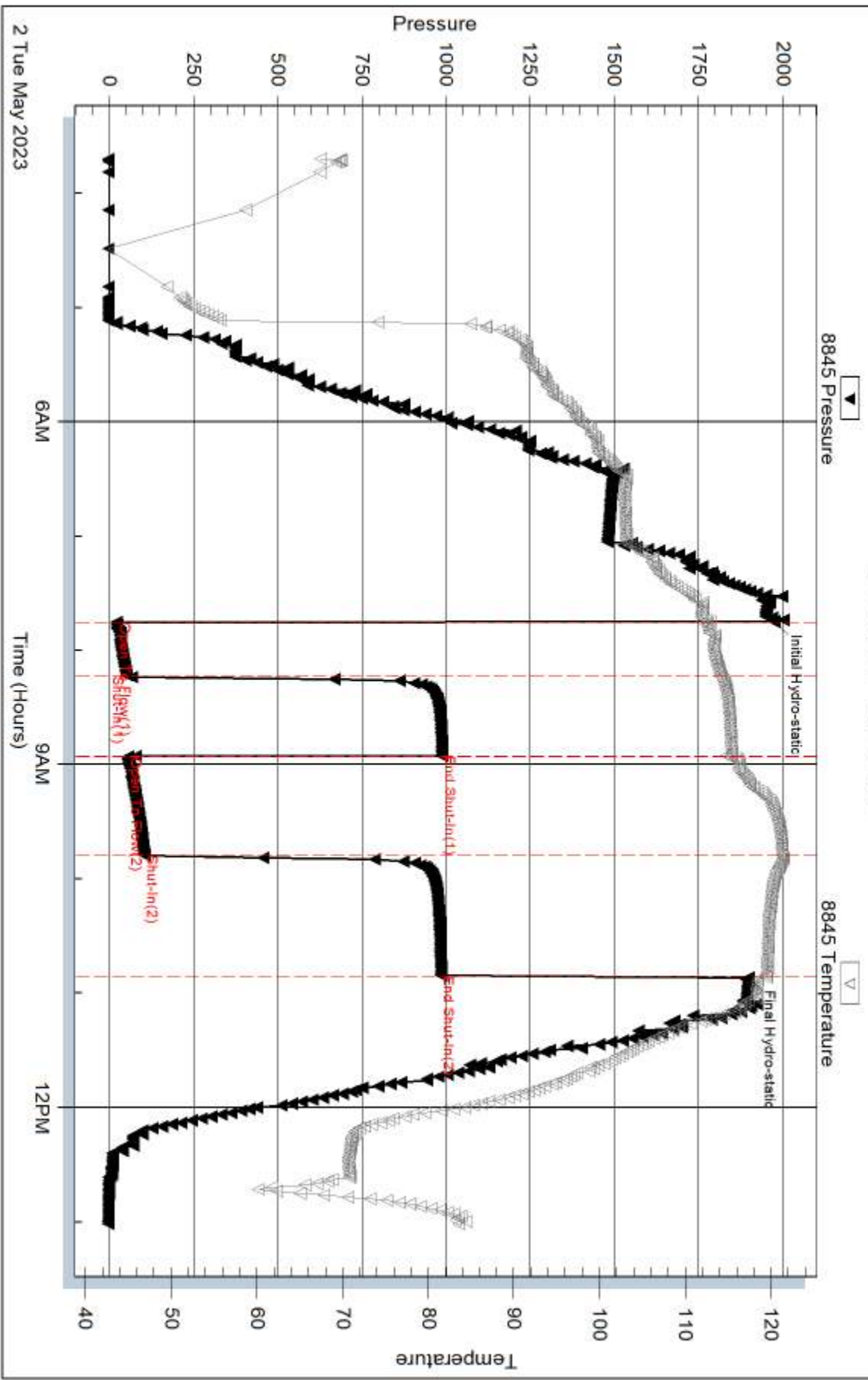
Serial #:

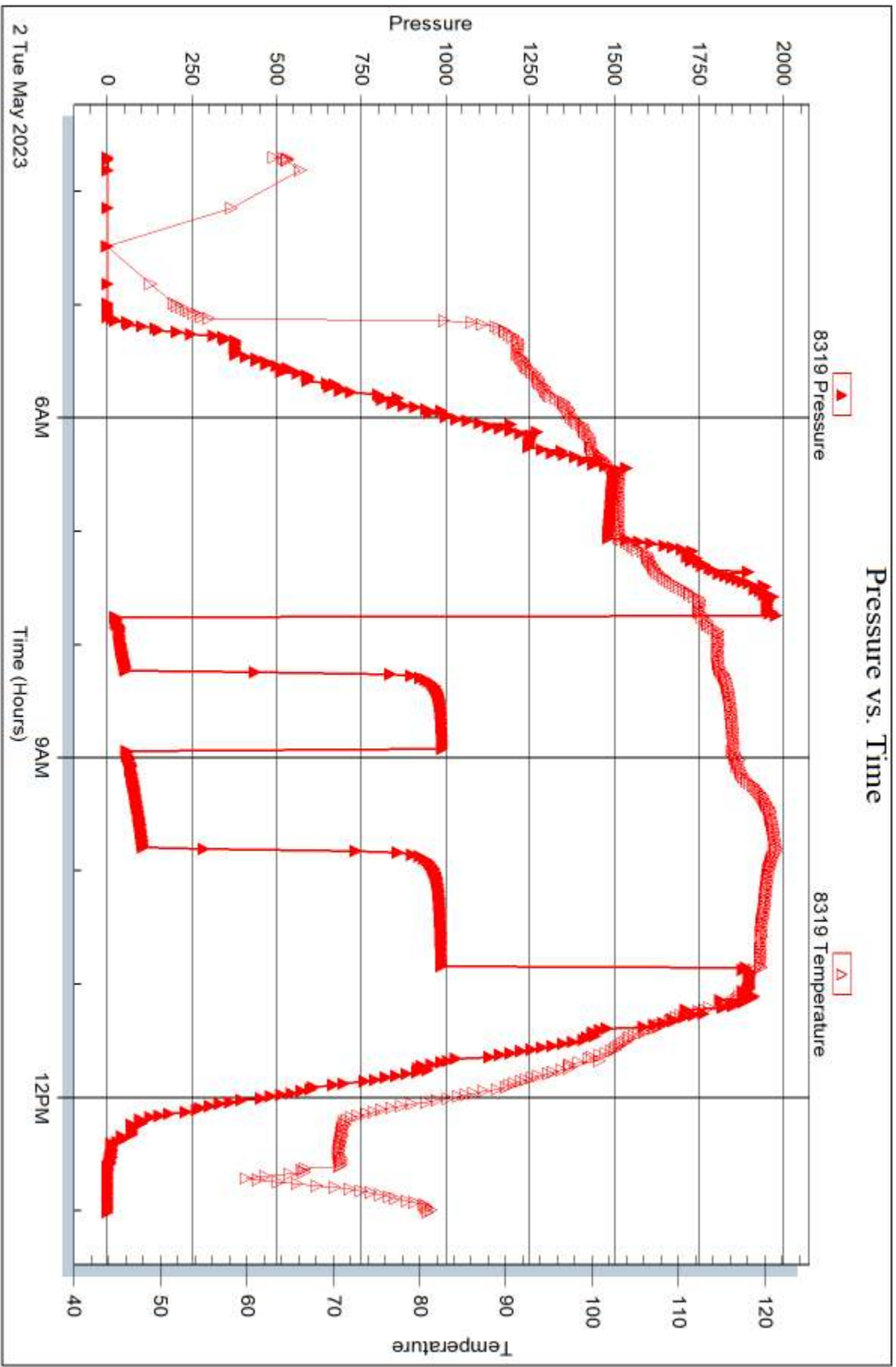
Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .190 @ 71f = 37000ppm

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Kent Matson

Rodie #4

7-15s-36w Gove,KS

Start Date: 2023.05.03 @ 00:15:00

End Date: 2023.05.03 @ 08:26:30

Job Ticket #: 70270 DST #: 2

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

Printed: 2023.05.12 @ 15:46:07



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70270

DST#: 2

ATTN: Kent Matson

Test Start: 2023.05.03 @ 00:15:00

GENERAL INFORMATION:

Formation: **Lansing C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:17:15

Time Test Ended: 08:26:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4038.00 ft (KB) To 4060.00 ft (KB) (TVD)

Total Depth: 4060.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2982.00 ft (KB)

2973.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 8845 Outside

Press@RunDepth: 288.17 psig @ 4039.00 ft (KB)

Start Date: 2023.05.03

End Date:

2023.05.03

Start Time: 00:15:05

End Time:

08:26:29

Capacity: 8000.00 psig

Last Calib.: 2023.05.03

Time On Btm: 2023.05.03 @ 02:16:45

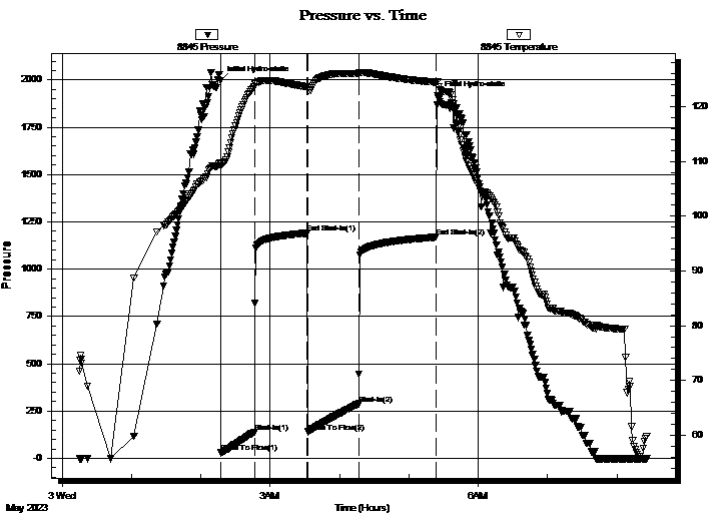
Time Off Btm: 2023.05.03 @ 05:25:00

TEST COMMENT: IF: BOB @ 7 1/2 min- 26.5"

IS: 1 1/4" return.

FF: BOB @ 11 min- 30 1/2"

FS: 2 3/4" return. 30-45-45-60



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1997.13	109.68	Initial Hydro-static
1	29.21	109.25	Open To Flow (1)
30	138.43	123.68	Shut-In(1)
76	1190.22	123.58	End Shut-In(1)
76	140.18	123.13	Open To Flow (2)
120	288.17	126.05	Shut-In(2)
187	1169.11	124.44	End Shut-In(2)
189	1915.04	124.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
390.00	mcw smcw 2m 98w (oil spots)	5.47
90.00	gomcw 15g 5o 30m 50w	1.26
150.00	go 15g 85o	2.10
0.00	120' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70270

DST#: 2

ATTN: Kent Matson

Test Start: 2023.05.03 @ 00:15:00

Tool Information

Drill Pipe:	Length: 4028.00 ft	Diameter: 3.80 inches	Volume: 56.50 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	75000.00 lb
			<u>Total Volume: 56.50 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	4038.00 ft			Final	59000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	22.00 ft				
Tool Length:	52.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4009.00	
Shut In Tool	5.00			4014.00	
Hydraulic tool	5.00			4019.00	
Jars	5.00			4024.00	
EM Tool	3.00			4027.00	
Safety Joint	2.00			4029.00	
Packer	5.00			4034.00	30.00 Bottom Of Top Packer
Packer	4.00			4038.00	
Stubb	1.00			4039.00	
Recorder	0.00	8319	Inside	4039.00	
Recorder	0.00	8845	Outside	4039.00	
Perforations	18.00			4057.00	
Bullnose	3.00			4060.00	22.00 Bottom Packers & Anchor

Total Tool Length: 52.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70270

DST#: 2

ATTN: Kent Matson

Test Start: 2023.05.03 @ 00:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

33 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

49000 ppm

Viscosity: 66.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
390.00	mcw smcw 2m 98w (oil spots)	5.471
90.00	gomcw 15g 5o 30m 50w	1.262
150.00	go 15g 85o	2.104
0.00	120' GIP	0.000

Total Length: 630.00 ft Total Volume: 8.837 bbl

Num Fluid Samples: 0

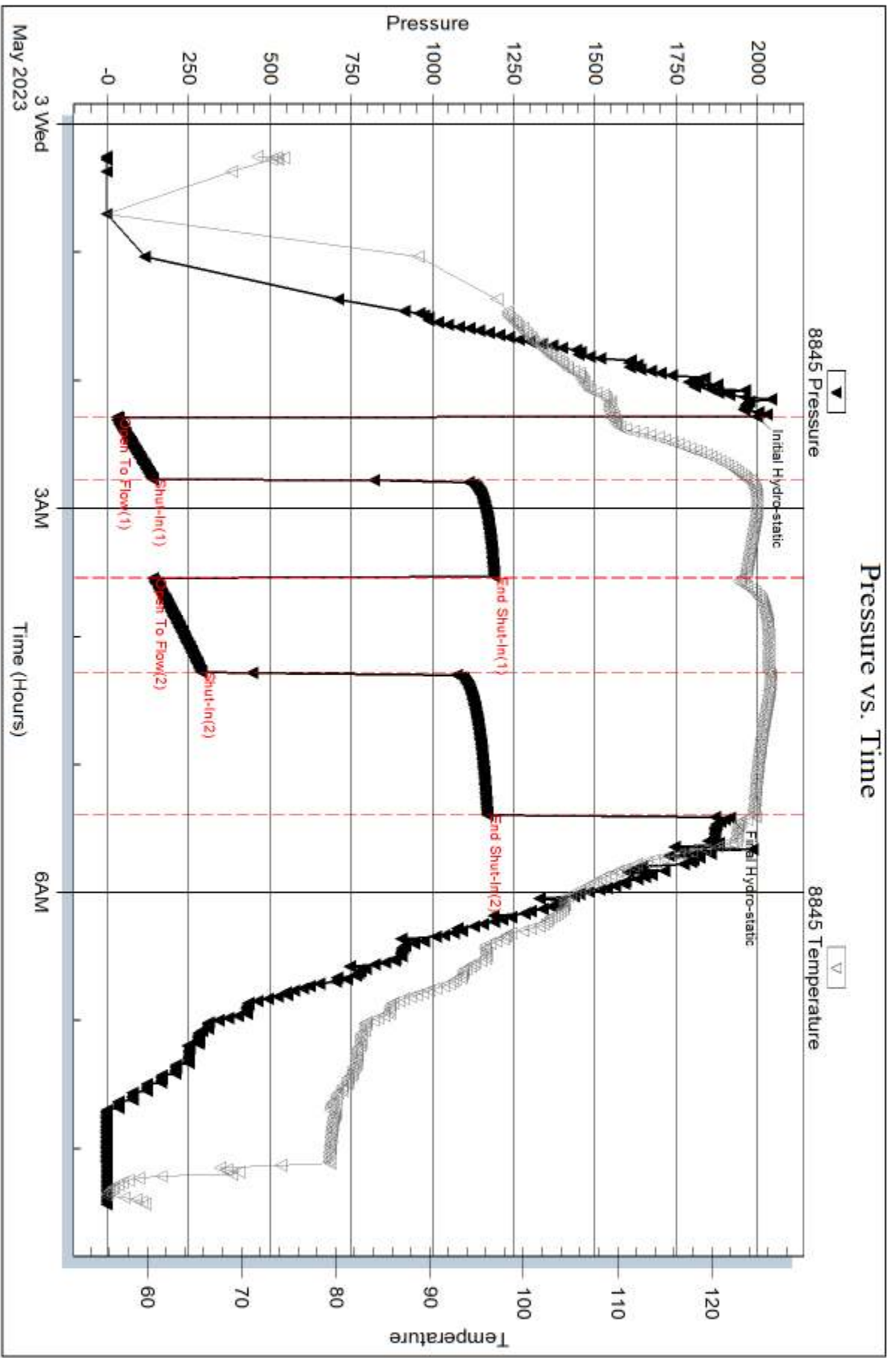
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .171 @ 60f = 49,000ppm



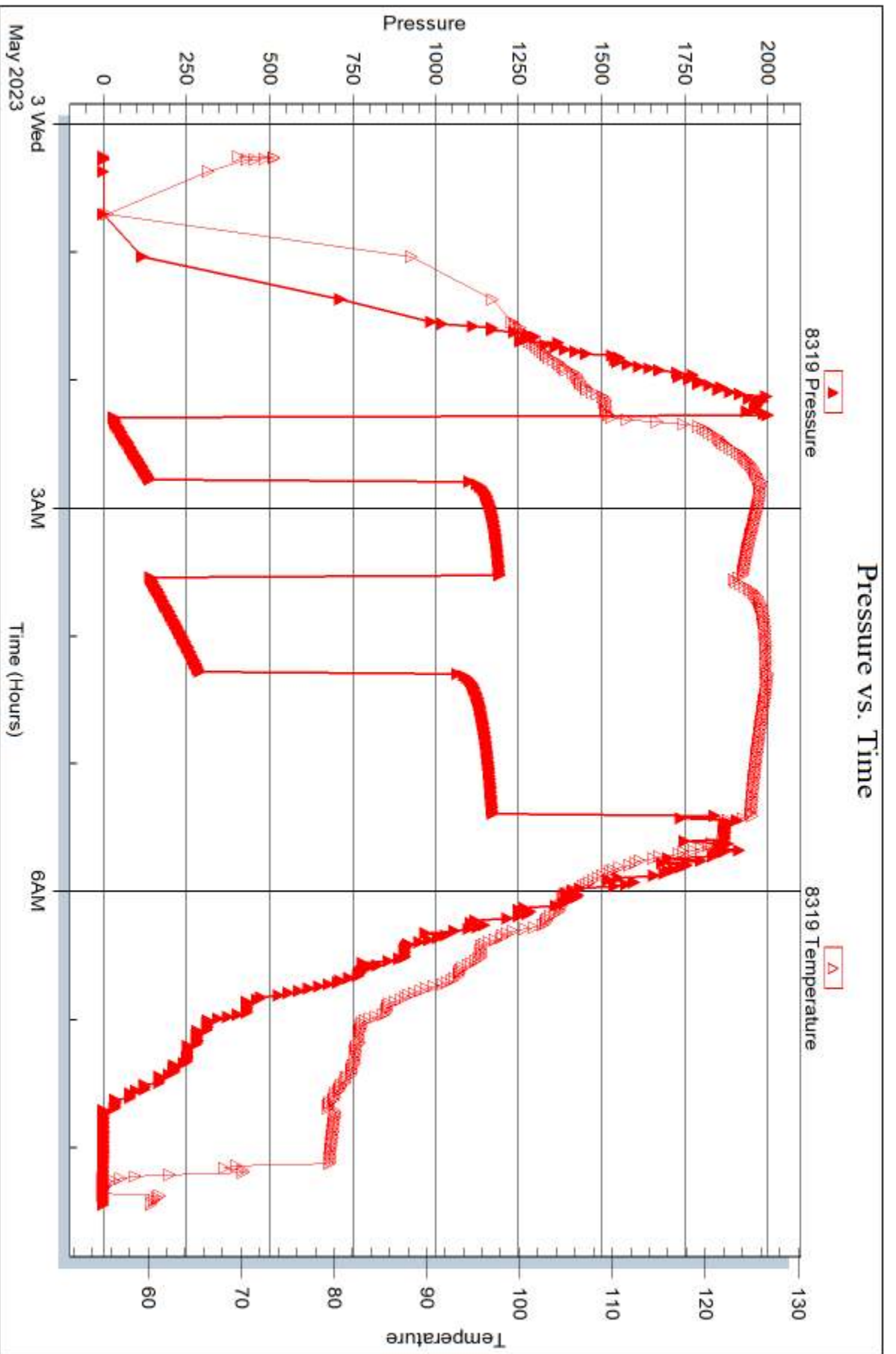
Serial #: 8319

Inside

Ritchie Exploration

Rodie #4

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 702270

Printed: 2023.05.12 @ 15:46:08



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Kent Matson

Rodie #4

7-15s-36w Gove,KS

Start Date: 2023.05.03 @ 20:20:00

End Date: 2023.05.04 @ 04:33:30

Job Ticket #: 70271 DST #: 3

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

Printed: 2023.05.12 @ 15:45:42



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70271

DST#: 3

ATTN: Kent Matson

Test Start: 2023.05.03 @ 20:20:00

GENERAL INFORMATION:

Formation: **LKC E-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:21:00

Time Test Ended: 04:33:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4084.00 ft (KB) To 4110.00 ft (KB) (TVD)

Reference Elevations: 2982.00 ft (KB)

Total Depth: 4110.00 ft (KB) (TVD)

2973.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8845 Outside

Press@RunDepth: 463.08 psig @ 4085.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.05.03

End Date:

2023.05.04

Last Calib.:

2023.05.04

Start Time: 20:20:05

End Time:

04:33:29

Time On Btm:

2023.05.03 @ 22:20:30

Time Off Btm:

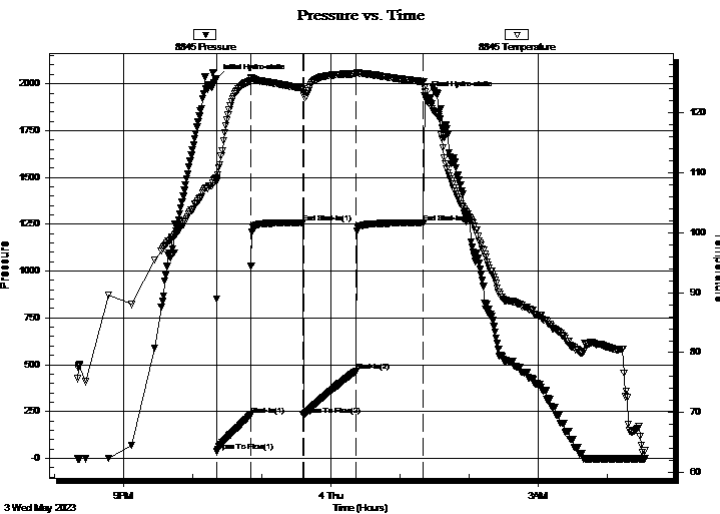
2023.05.04 @ 01:21:30

TEST COMMENT: IF: BOB 3 1/2 min- 71"

IS: 9" return.

FF: BOB @ 5 min.- 75"

FS: 2" return. 30-45-45-60



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2027.12	109.07	Initial Hydro-static
1	37.36	108.51	Open To Flow (1)
30	232.63	125.35	Shut-In(1)
75	1258.25	124.05	End Shut-In(1)
76	229.94	123.34	Open To Flow (2)
122	463.08	126.48	Shut-In(2)
180	1257.81	125.18	End Shut-In(2)
181	1938.05	124.17	Final Hydro-static

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
350.00	smcw 2m 98w (oil spots)	4.91
180.00	gmw co 20g 30w 10m 40o	2.52
560.00	go 25g 75o	7.86
0.00	400' GIP	0.00

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70271

DST#: 3

ATTN: Kent Matson

Test Start: 2023.05.03 @ 20:20:00

Tool Information

Drill Pipe:	Length: 4059.00 ft	Diameter: 3.80 inches	Volume: 56.94 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 56.94 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4084.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4055.00	
Shut In Tool	5.00			4060.00	
Hydraulic tool	5.00			4065.00	
Jars	5.00			4070.00	
EM Tool	3.00			4073.00	
Safety Joint	2.00			4075.00	
Packer	5.00			4080.00	30.00 Bottom Of Top Packer
Packer	4.00			4084.00	
Stubb	1.00			4085.00	
Recorder	0.00	8319	Inside	4085.00	
Recorder	0.00	8845	Outside	4085.00	
Perforations	22.00			4107.00	
Bullnose	3.00			4110.00	26.00 Bottom Packers & Anchor

Total Tool Length: 56.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70271

DST#: 3

ATTN: Kent Matson

Test Start: 2023.05.03 @ 20:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

44000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 71.75 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
350.00	smcw 2m 98w (oil spots)	4.910
180.00	gmw co 20g 30w 10m 40o	2.525
560.00	go 25g 75o	7.855
0.00	400' GIP	0.000

Total Length: 1090.00 ft Total Volume: 15.290 bbl

Num Fluid Samples: 0

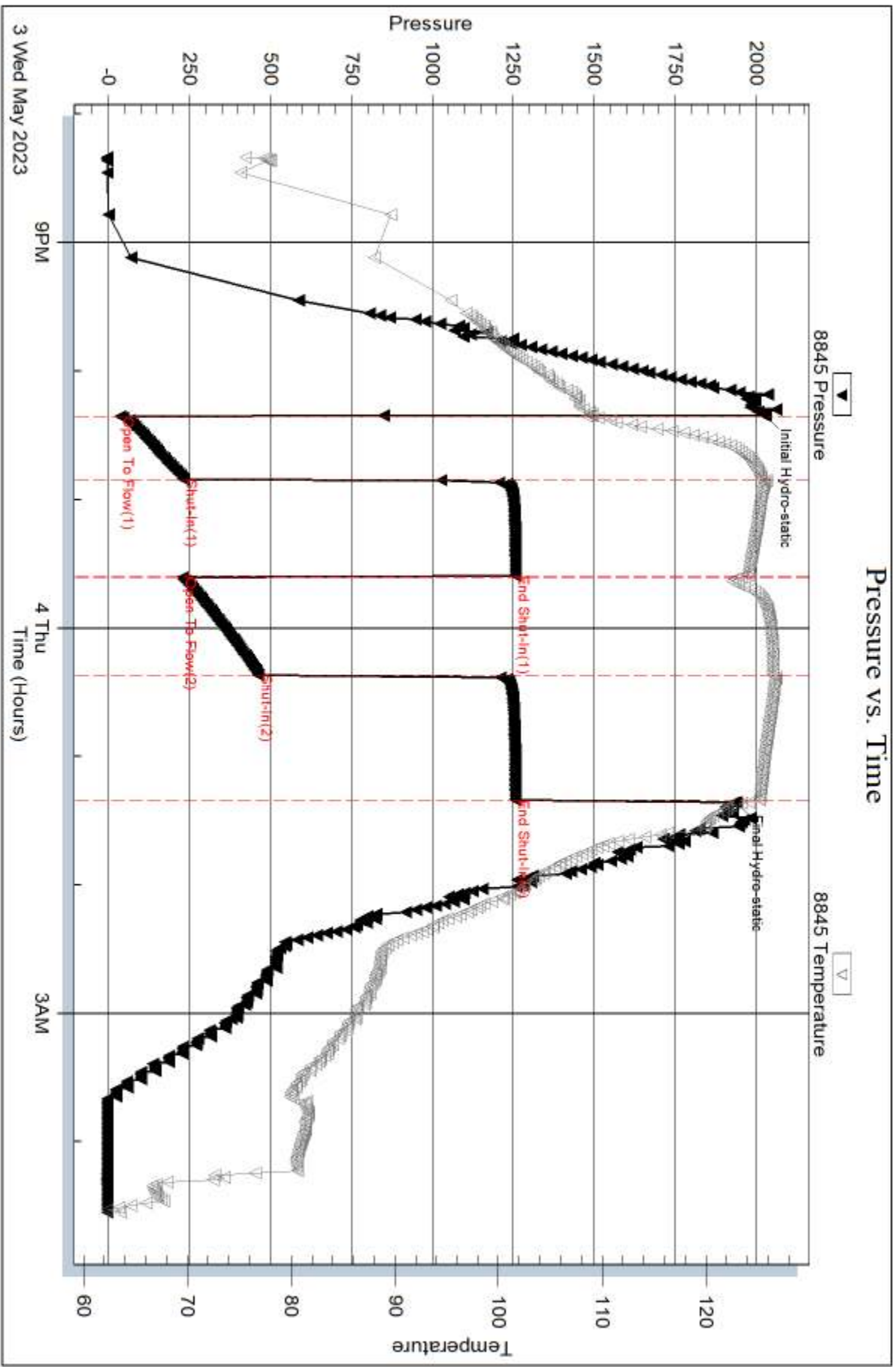
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is ,186 @ 62F= 44,000ppm





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Kent Matson

Rodie #4

7-15s-36w Gove,KS

Start Date: 2023.05.04 @ 18:15:00

End Date: 2023.05.05 @ 01:35:15

Job Ticket #: 70272 DST #: 4

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

Printed: 2023.05.12 @ 15:45:15



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70272

DST#: 4

ATTN: Kent Matson

Test Start: 2023.05.04 @ 18:15:00

GENERAL INFORMATION:

Formation: **Lansing Gp -H**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:21:45

Time Test Ended: 01:35:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4145.00 ft (KB) To 4175.00 ft (KB) (TVD)

Reference Elevations: 2982.00 ft (KB)

Total Depth: 4175.00 ft (KB) (TVD)

2973.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8845 Outside

Press@RunDepth: 95.89 psig @ 4146.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.05.04

End Date:

2023.05.05

Last Calib.:

2023.05.05

Start Time: 18:15:05

End Time:

01:35:14

Time On Btm:

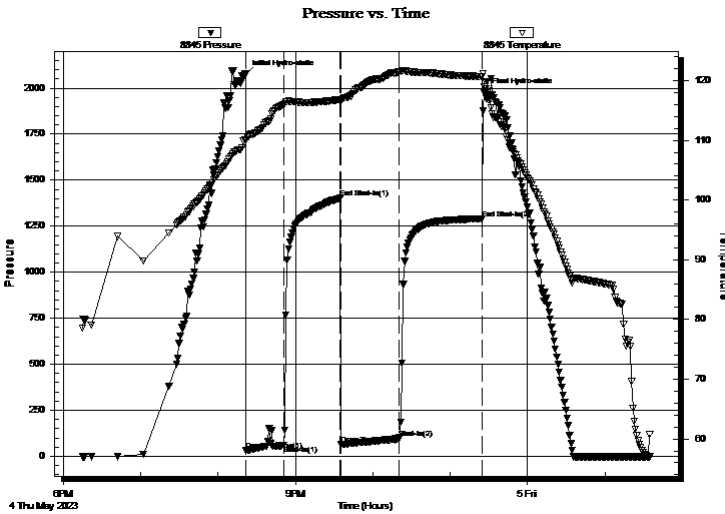
2023.05.04 @ 20:21:15

Time Off Btm:

2023.05.04 @ 23:26:45

TEST COMMENT: IF: 7" blow.
IS: No return.
FF: 6" blow,
FS: No return 30-45-45-60

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2076.30	110.11	Initial Hydro-static
1	30.03	110.02	Open To Flow (1)
30	59.81	116.02	Shut-In(1)
74	1404.46	116.79	End Shut-In(1)
74	64.73	116.51	Open To Flow (2)
120	95.89	121.42	Shut-In(2)
184	1290.16	120.68	End Shut-In(2)
186	1974.58	118.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
160.00	socm 3o97m	2.24
5.00	oil 100o	0.07

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70272

DST#: 4

ATTN: Kent Matson

Test Start: 2023.05.04 @ 18:15:00

Tool Information

Drill Pipe:	Length: 4121.00 ft	Diameter: 3.80 inches	Volume: 57.81 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 57.81 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4145.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	60.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			4116.00	
Shut In Tool	5.00			4121.00	
Hydraulic tool	5.00			4126.00	
Jars	5.00			4131.00	
EM Tool	3.00			4134.00	
Safety Joint	2.00			4136.00	
Packer	5.00			4141.00	30.00 Bottom Of Top Packer
Packer	4.00			4145.00	
Stubb	1.00			4146.00	
Recorder	0.00	8319	Inside	4146.00	
Recorder	0.00	8845	Outside	4146.00	
Perforations	26.00			4172.00	
Bullnose	3.00			4175.00	30.00 Bottom Packers & Anchor

Total Tool Length: 60.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70272

DST#: 4

ATTN: Kent Matson

Test Start: 2023.05.04 @ 18:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
160.00	socm 3o97m	2.244
5.00	oil 100o	0.070

Total Length: 165.00 ft

Total Volume: 2.314 bbl

Num Fluid Samples: 0

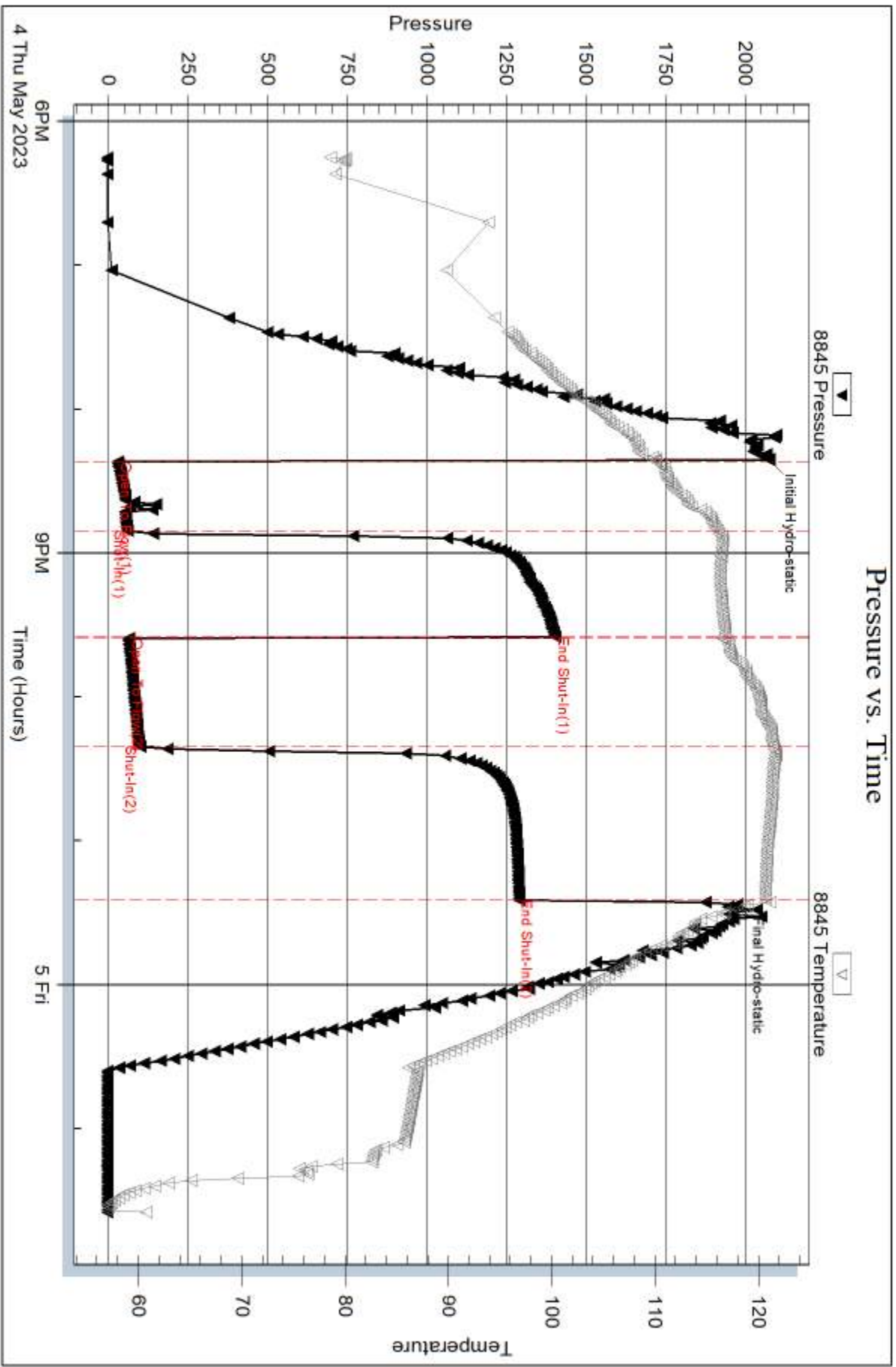
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



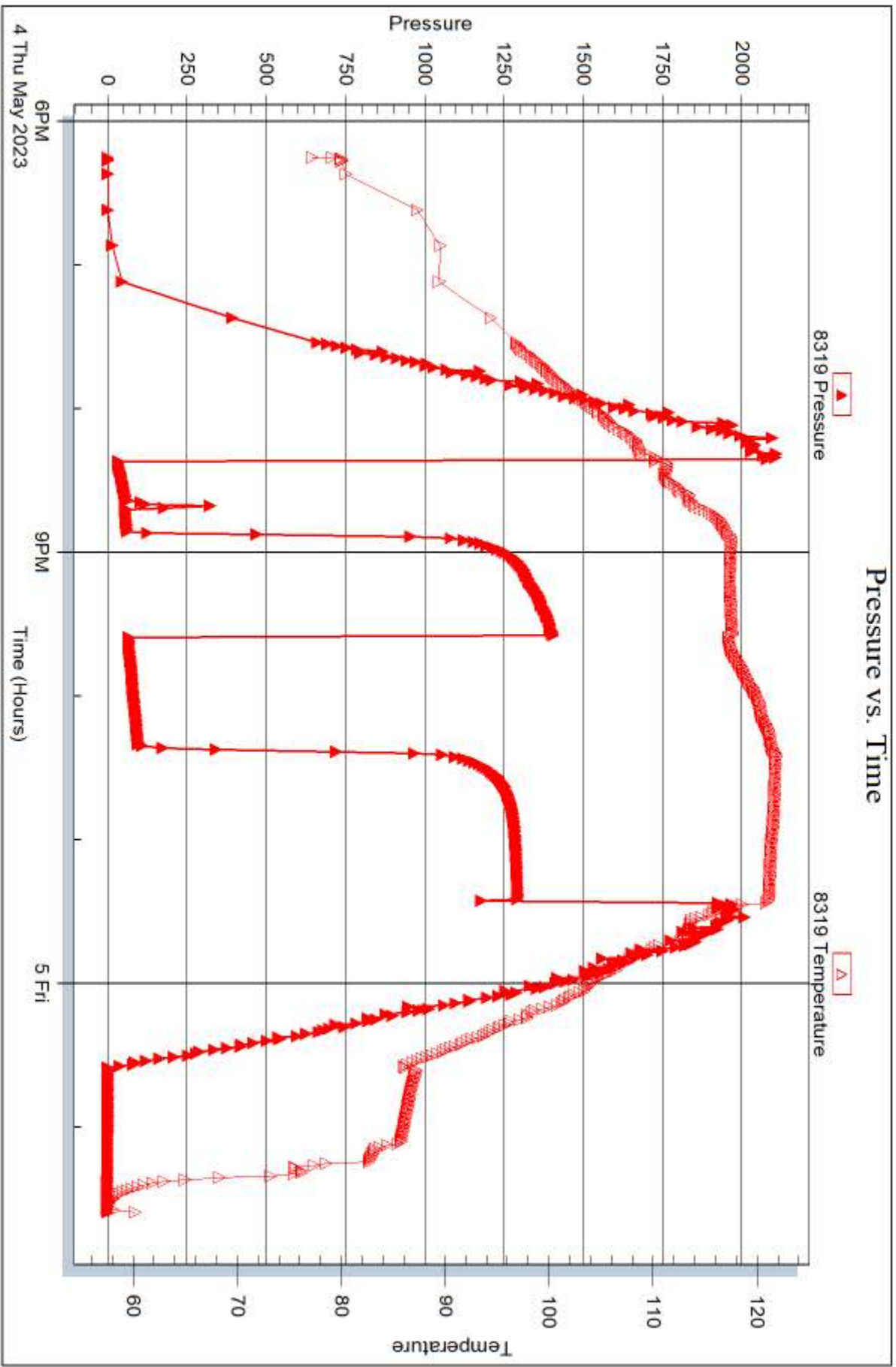
Serial #: 8319

Inside

Ritchie Exploration

Rodie #4

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 70272

Printed: 2023.05.12 @ 15:45:16



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Kent Matson

Rodie #4

7-15s-36w Gove,KS

Start Date: 2023.05.05 @ 12:51:00

End Date: 2023.05.05 @ 18:50:45

Job Ticket #: 70226 DST #: 5

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

Printed: 2023.05.12 @ 14:59:26



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70226

DST#: 5

ATTN: Kent Matson

Test Start: 2023.05.05 @ 12:51:00

GENERAL INFORMATION:

Formation: **Lansing I-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:46:15

Time Test Ended: 18:50:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4182.00 ft (KB) To 4230.00 ft (KB) (TVD)

Reference Elevations: 2982.00 ft (KB)

Total Depth: 4230.00 ft (KB) (TVD)

2973.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8845 Outside

Press@RunDepth: 26.23 psig @ 4183.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.05.05

End Date:

2023.05.05

Last Calib.:

2023.05.05

Start Time: 12:51:05

End Time:

18:50:44

Time On Btm:

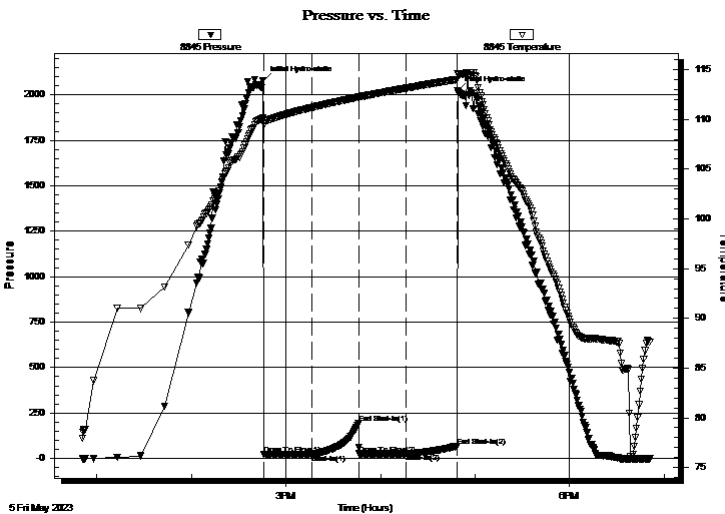
2023.05.05 @ 14:45:45

Time Off Btm:

2023.05.05 @ 16:49:00

TEST COMMENT: IF: 1/4" blow .
IS: No return,
FF: No blow .
FS: No return. 30-30-30-30

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2077.27	110.16	Initial Hydro-static
1	23.12	109.50	Open To Flow (1)
31	23.64	111.18	Shut-In(1)
61	191.65	112.24	End Shut-In(1)
61	25.05	112.22	Open To Flow (2)
91	26.23	113.13	Shut-In(2)
123	65.82	114.01	End Shut-In(2)
124	2020.81	114.58	Final Hydro-static

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
10.00	mud 100m (oil spots)	0.14

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70226

DST#: 5

ATTN: Kent Matson

Test Start: 2023.05.05 @ 12:51:00

Tool Information

Drill Pipe:	Length: 4183.00 ft	Diameter: 3.80 inches	Volume: 58.68 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 58.68 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	4182.00 ft			Final	55000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	48.00 ft				
Tool Length:	78.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			4153.00	
Shut In Tool	5.00			4158.00	
Hydraulic tool	5.00			4163.00	
Jars	5.00			4168.00	
EM Tool	3.00			4171.00	
Safety Joint	2.00			4173.00	
Packer	5.00			4178.00	30.00 Bottom Of Top Packer
Packer	4.00			4182.00	
Stubb	1.00			4183.00	
Recorder	0.00	8319	Inside	4183.00	
Recorder	0.00	8845	Outside	4183.00	
Perforations	11.00			4194.00	
Change Over Sub	1.00			4195.00	
Drill Pipe	31.00			4226.00	
Change Over Sub	1.00			4227.00	
Bullnose	3.00			4230.00	48.00 Bottom Packers & Anchor
Total Tool Length:	78.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70226

DST#: 5

ATTN: Kent Matson

Test Start: 2023.05.05 @ 12:51:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud 100m (oil spots)	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

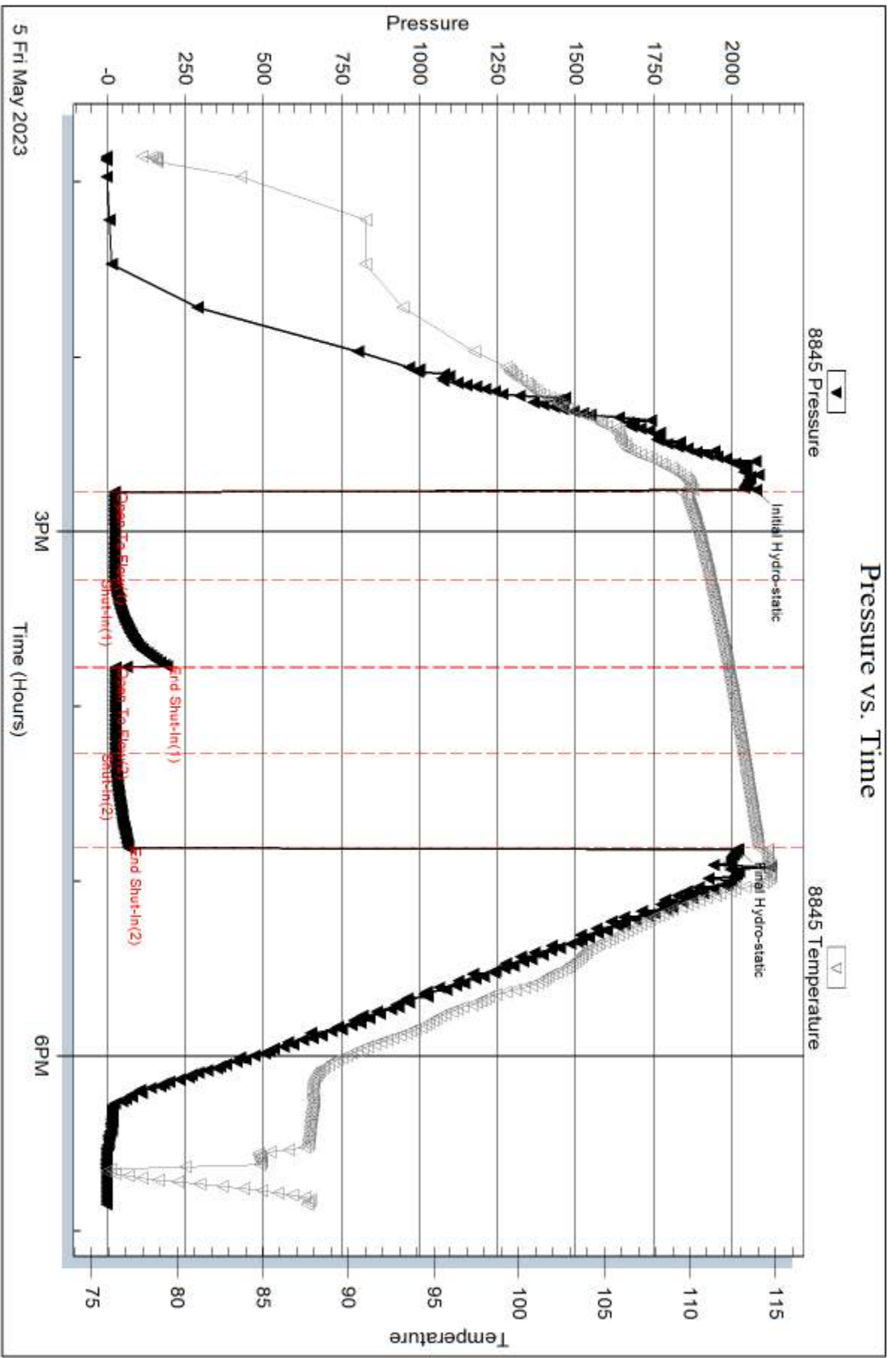
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



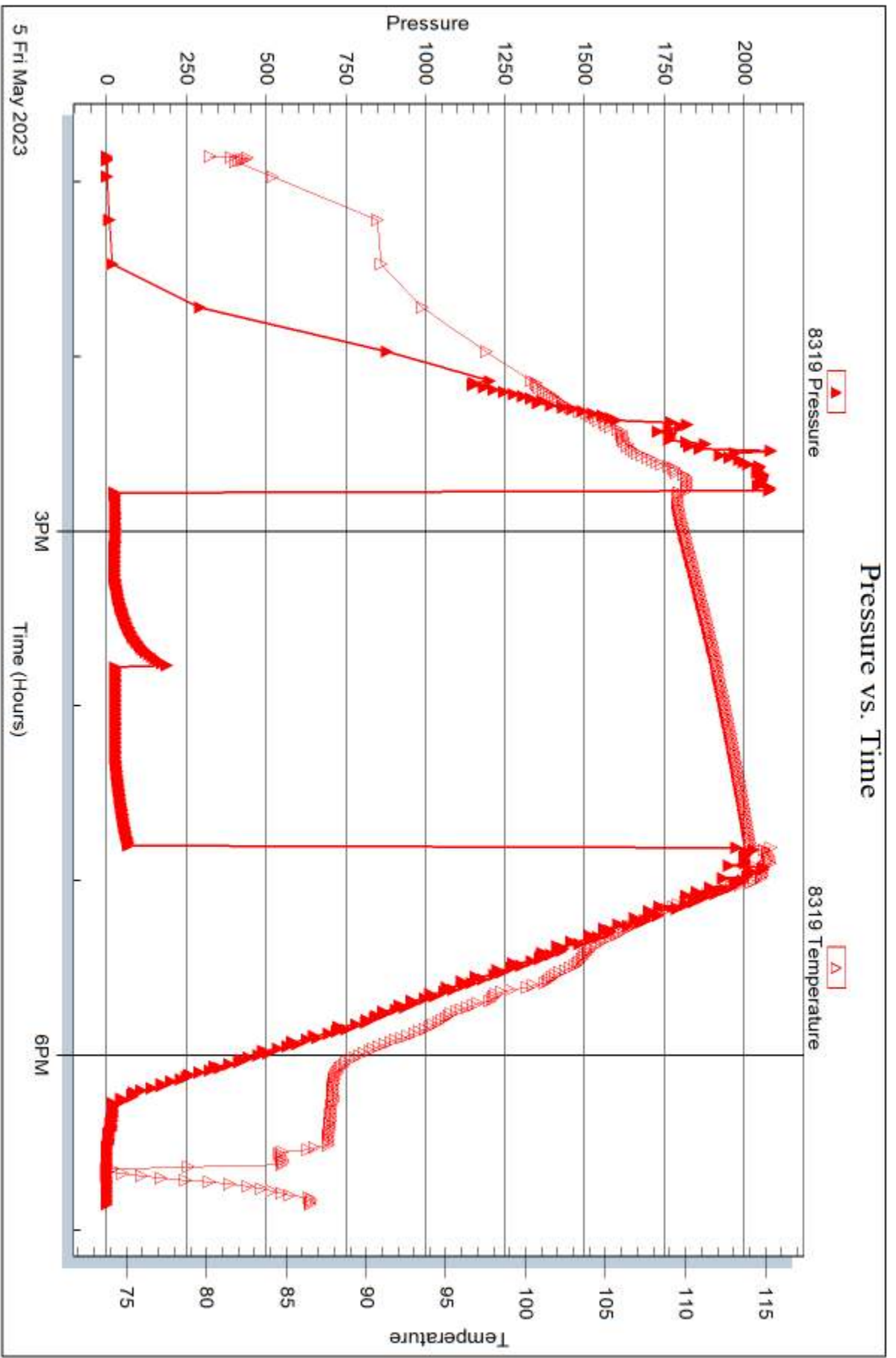
Serial #: 8319

Inside

Richie Exploration

Rodie #4

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 70226

Printed: 2023.05.12 @ 14:59:26



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Kent Matson

Rodie #4

7-15s-36w Gove,KS

Start Date: 2023.05.06 @ 06:31:00

End Date: 2023.05.06 @ 13:47:45

Job Ticket #: 70227 DST #: 6

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

Printed: 2023.05.12 @ 14:58:58



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70227

DST#: 6

ATTN: Kent Matson

Test Start: 2023.05.06 @ 06:31:00

GENERAL INFORMATION:

Formation: **LKC K-L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:33:15

Time Test Ended: 13:47:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4234.00 ft (KB) To 4291.00 ft (KB) (TVD)

Reference Elevations: 2982.00 ft (KB)

Total Depth: 4291.00 ft (KB) (TVD)

2973.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8845 Outside

Press@RunDepth: 64.35 psig @ 4235.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.05.06

End Date:

2023.05.06

Last Calib.:

2023.05.06

Start Time: 06:31:05

End Time:

13:47:44

Time On Btm:

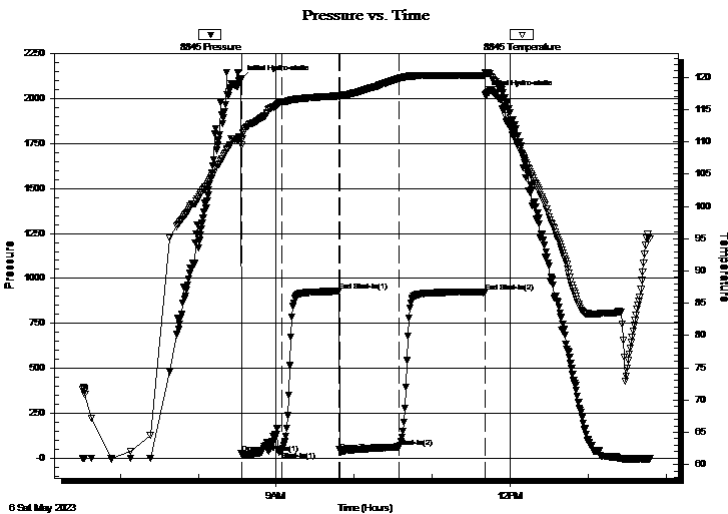
2023.05.06 @ 08:33:00

Time Off Btm:

2023.05.06 @ 11:41:00

TEST COMMENT: IF: BOB @ 24 min. 14 3/4" blow .
IS: No return.
FF: BOB @ 9 min. 18 1/2" blow .
FS: No return. 30-45-45-60

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2106.58	110.48	Initial Hydro-static
1	26.33	109.48	Open To Flow (1)
32	41.28	116.21	Shut-In(1)
76	928.87	117.14	End Shut-In(1)
76	41.99	117.08	Open To Flow (2)
122	64.35	119.86	Shut-In(2)
188	924.83	120.31	End Shut-In(2)
188	2021.29	120.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	gocm 25g 30o 45m	0.98
30.00	oil 100o	0.42
0.00	380' GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70227

DST#: 6

ATTN: Kent Matson

Test Start: 2023.05.06 @ 06:31:00

Tool Information

Drill Pipe:	Length: 4214.00 ft	Diameter: 3.80 inches	Volume: 59.11 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 59.11 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	4234.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.00 ft			
Tool Length:	87.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4205.00	
Shut In Tool	5.00			4210.00	
Hydraulic tool	5.00			4215.00	
Jars	5.00			4220.00	
EM Tool	3.00			4223.00	
Safety Joint	2.00			4225.00	
Packer	5.00			4230.00	30.00 Bottom Of Top Packer
Packer	4.00			4234.00	
Stubb	1.00			4235.00	
Recorder	0.00	8319	Inside	4235.00	
Recorder	0.00	8845	Outside	4235.00	
Perforations	20.00			4255.00	
Change Over Sub	1.00			4256.00	
Drill Pipe	31.00			4287.00	
Change Over Sub	1.00			4288.00	
Bullnose	3.00			4291.00	57.00 Bottom Packers & Anchor
Total Tool Length:	87.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70227

DST#: 6

ATTN: Kent Matson

Test Start: 2023.05.06 @ 06:31:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

39 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	gocm 25g 30o 45m	0.982
30.00	oil 100o	0.421
0.00	380' GIP	0.000

Total Length: 100.00 ft

Total Volume: 1.403 bbl

Num Fluid Samples: 0

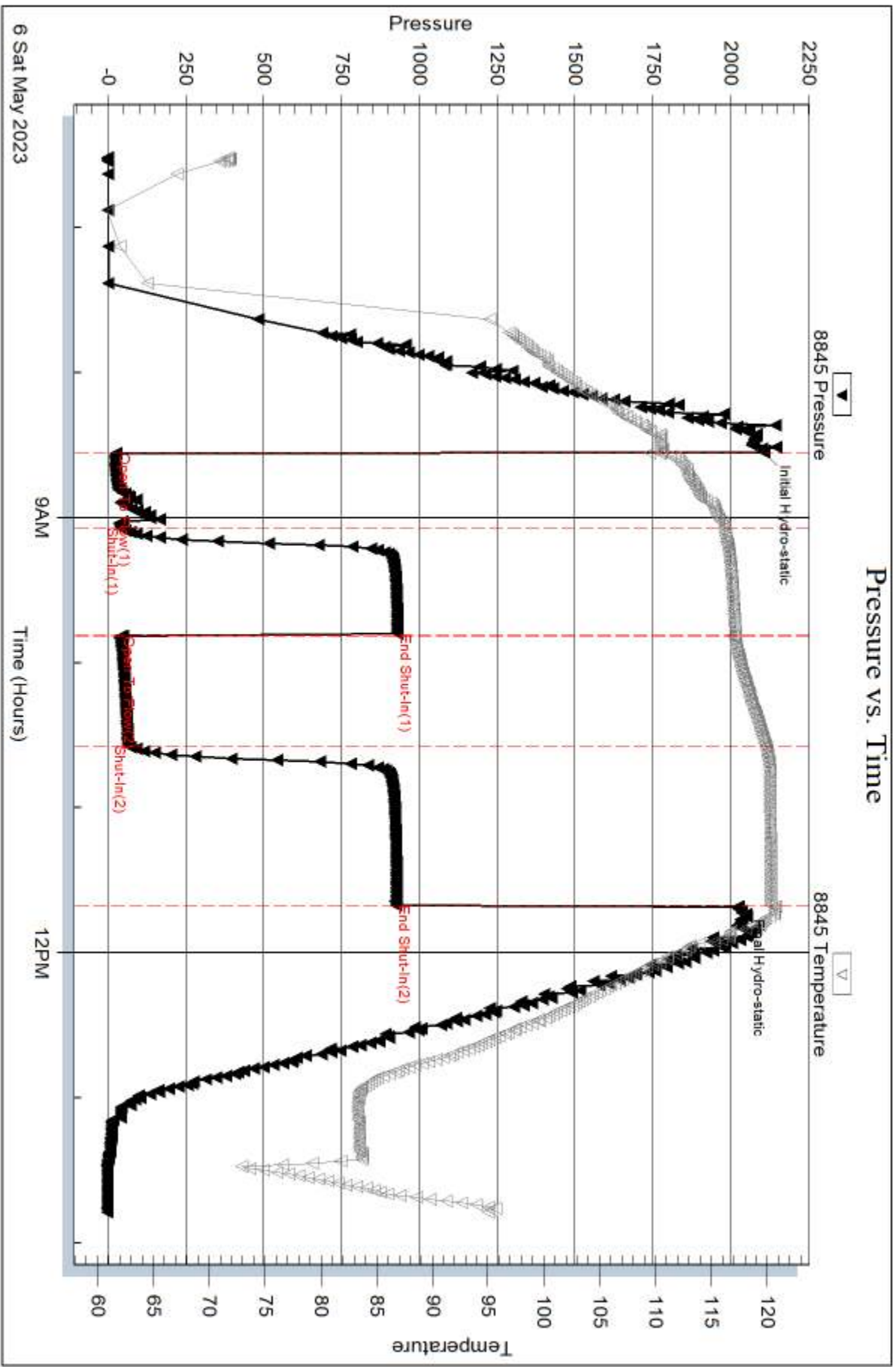
Num Gas Bombs: 0

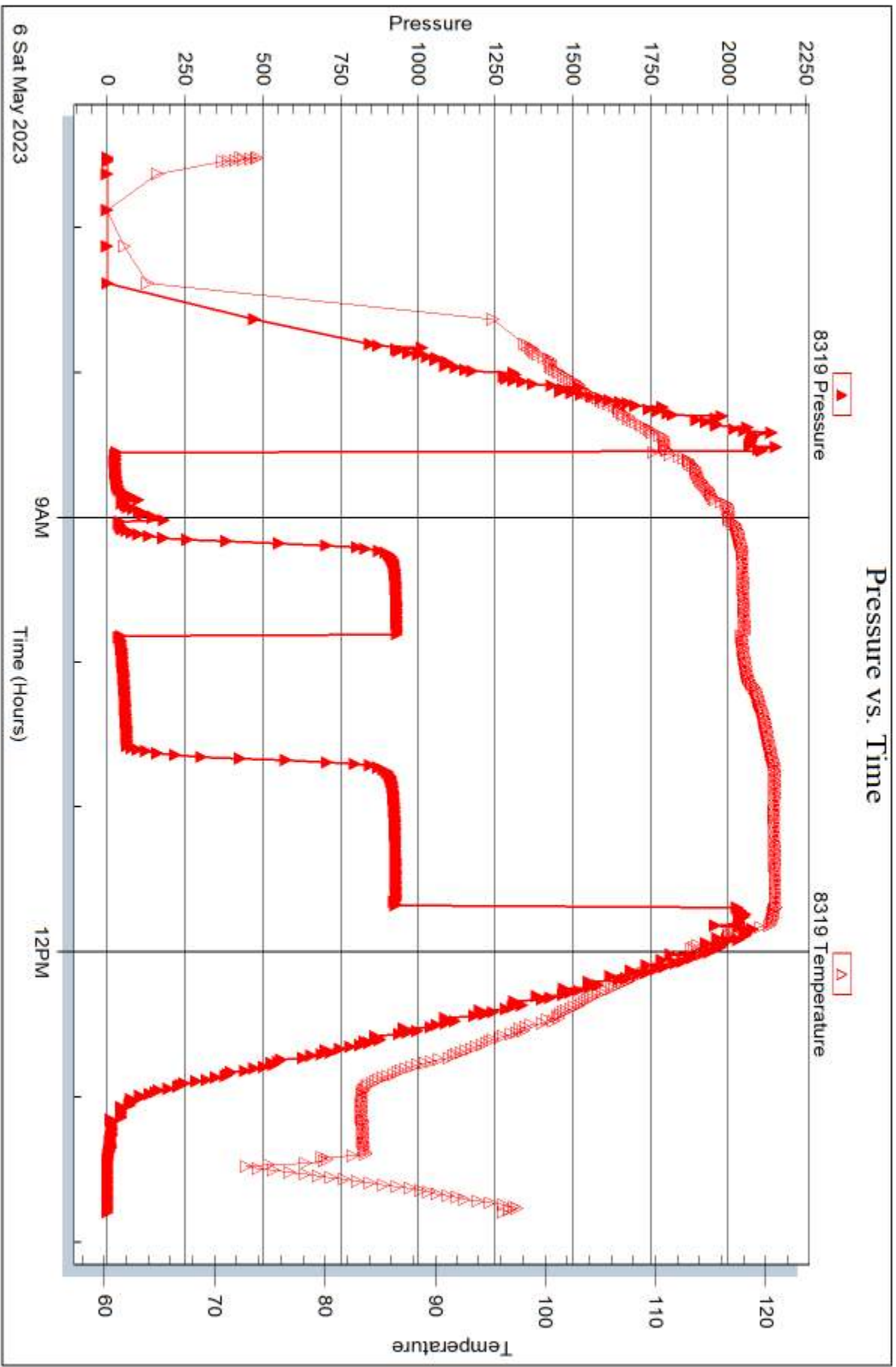
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Kent Matson

Rodie #4

7-15s-36w Gove,KS

Start Date: 2023.05.06 @ 23:25:00

End Date: 2023.05.07 @ 07:00:00

Job Ticket #: 70228 DST #: 7

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

Printed: 2023.05.12 @ 14:58:31



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70228

DST#: 7

ATTN: Kent Matson

Test Start: 2023.05.06 @ 23:25:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:32:00

Time Test Ended: 07:00:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4296.00 ft (KB) To 4336.00 ft (KB) (TVD)

Reference Elevations: 2982.00 ft (KB)

Total Depth: 4336.00 ft (KB) (TVD)

2973.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8319 Inside

Press@RunDepth: 33.98 psig @ 4297.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.05.06 End Date: 2023.05.07

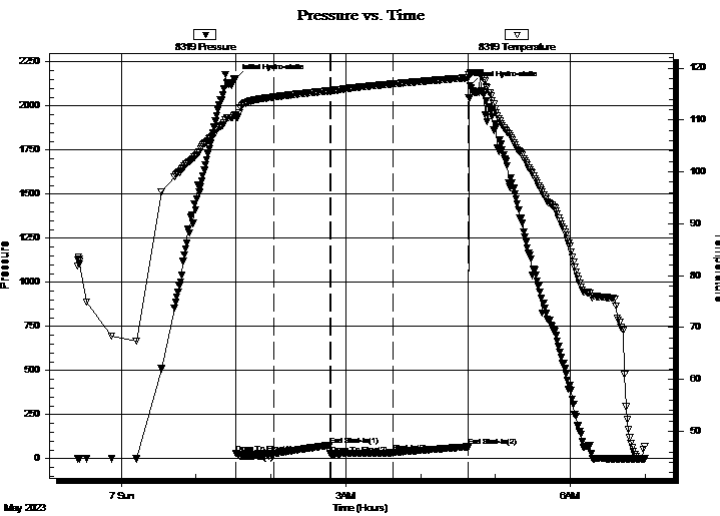
Last Calib.: 2023.05.07

Start Time: 23:25:05 End Time: 06:59:59

Time On Btm: 2023.05.07 @ 01:31:30

Time Off Btm: 2023.05.07 @ 04:39:45

TEST COMMENT: IF: 8 1/4" blow .
IS: No return.
FF: 3" blow .
FS: No return. 30-45-45-60



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2156.84	110.97	Initial Hydro-static
1	30.19	110.52	Open To Flow (1)
31	28.14	114.42	Shut-In(1)
76	76.42	115.62	End Shut-In(1)
77	24.17	115.63	Open To Flow (2)
126	33.98	116.94	Shut-In(2)
187	67.78	118.14	End Shut-In(2)
189	2115.14	118.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	ocm 10o 90m	0.42
0.00	150' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70228

DST#: 7

ATTN: Kent Matson

Test Start: 2023.05.06 @ 23:25:00

Tool Information

Drill Pipe:	Length: 4276.00 ft	Diameter: 3.80 inches	Volume: 59.98 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	65000.00 lb
			<u>Total Volume: 59.98 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	4296.00 ft			Final	55000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	40.00 ft				
Tool Length:	70.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4267.00	
Shut In Tool	5.00			4272.00	
Hydraulic tool	5.00			4277.00	
Jars	5.00			4282.00	
EM Tool	3.00			4285.00	
Safety Joint	2.00			4287.00	
Packer	5.00			4292.00	30.00 Bottom Of Top Packer
Packer	4.00			4296.00	
Stubb	1.00			4297.00	
Recorder	0.00	8319	Inside	4297.00	
Recorder	0.00	8845	Outside	4297.00	
Perforations	36.00			4333.00	
Bullnose	3.00			4336.00	40.00 Bottom Packers & Anchor

Total Tool Length: 70.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70228

DST#: 7

ATTN: Kent Matson

Test Start: 2023.05.06 @ 23:25:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	ocm 10o 90m	0.421
0.00	150' GIP	0.000

Total Length: 30.00 ft Total Volume: 0.421 bbl

Num Fluid Samples: 0

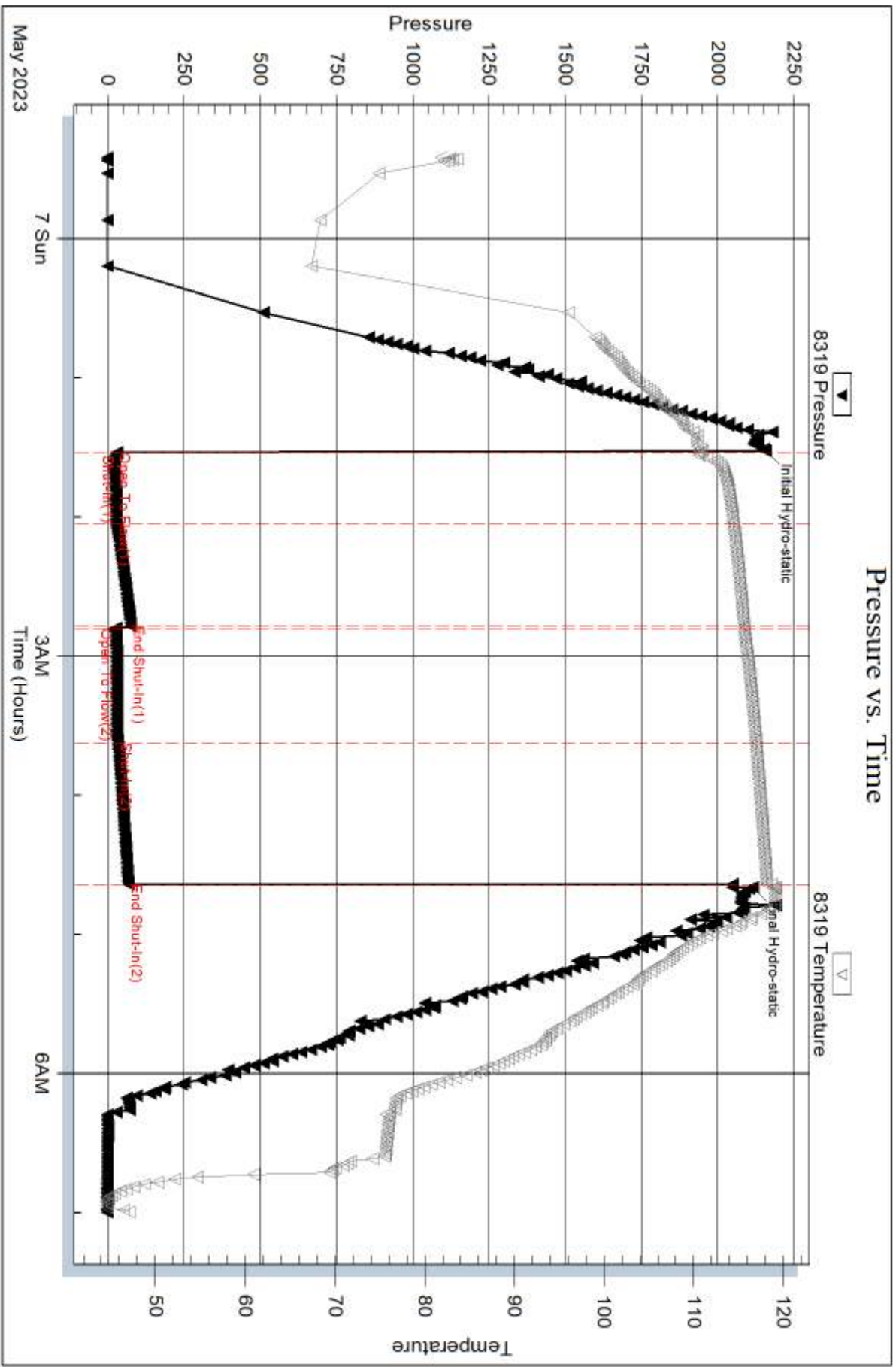
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

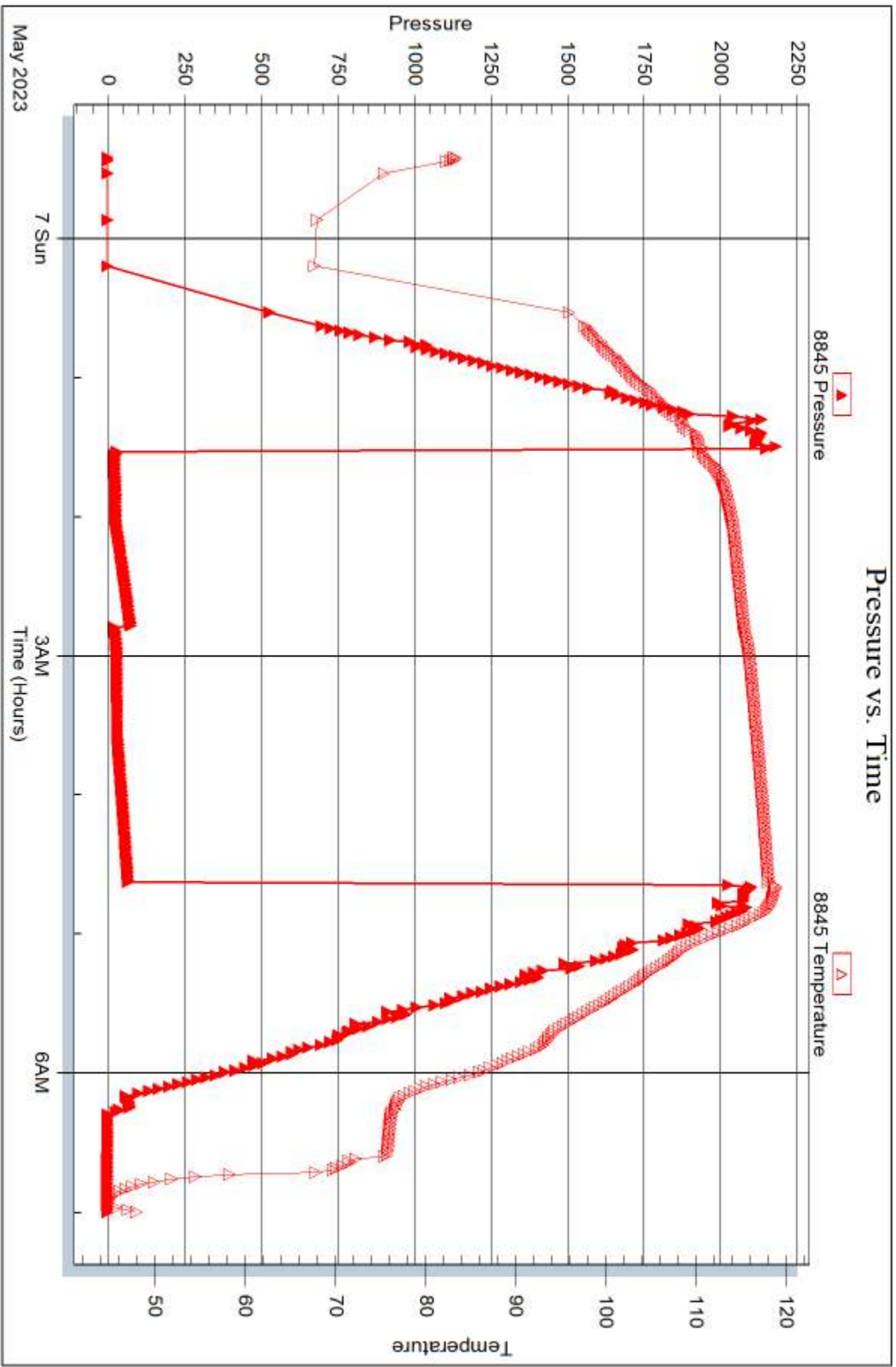


Serial #: 8845

Outside Ritchie Exploration

Rodie #4

DST Test Number: 7





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Kent Matson

Rodie #4

7-15s-36w Gove,KS

Start Date: 2023.05.08 @ 09:00:00

End Date: 2023.05.08 @ 14:00:30

Job Ticket #: 70229 DST #: 8

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

Printed: 2023.05.12 @ 14:57:17



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70229

DST#: 8

ATTN: Kent Matson

Test Start: 2023.05.08 @ 09:00:00

GENERAL INFORMATION:

Formation: **Myric Station**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:11:30

Time Test Ended: 14:00:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4444.00 ft (KB) To 4470.00 ft (KB) (TVD)

Reference Elevations: 2982.00 ft (KB)

Total Depth: 4470.00 ft (KB) (TVD)

2973.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8319 Inside

Press@RunDepth: psig @ 4445.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.05.08

End Date:

2023.05.08

Last Calib.:

2023.05.08

Start Time: 09:00:05

End Time:

14:00:29

Time On Btm:

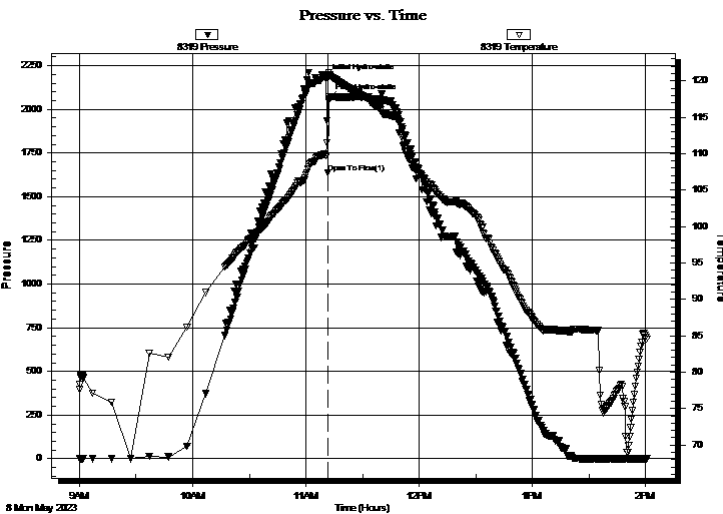
2023.05.08 @ 11:10:45

Time Off Btm:

2023.05.08 @ 11:12:15

TEST COMMENT: Packer failed to seat.
Misrun

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2175.43	109.70	Initial Hydro-static
1	1637.80	120.28	Open To Flow (1)
2	2062.22	120.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
250.00	Mud 100m	3.51

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70229

DST#: 8

ATTN: Kent Matson

Test Start: 2023.05.08 @ 09:00:00

Tool Information

Drill Pipe:	Length: 4430.00 ft	Diameter: 3.80 inches	Volume: 62.14 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 62.14 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4444.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			4415.00	
Shut In Tool	5.00			4420.00	
Hydraulic tool	5.00			4425.00	
Jars	5.00			4430.00	
EM Tool	3.00			4433.00	
Safety Joint	2.00			4435.00	
Packer	5.00			4440.00	30.00 Bottom Of Top Packer
Packer	4.00			4444.00	
Stubb	1.00			4445.00	
Recorder	0.00	8319	Inside	4445.00	
Recorder	0.00	8845	Outside	4445.00	
Perforations	22.00			4467.00	
Bullnose	3.00			4470.00	26.00 Bottom Packers & Anchor

Total Tool Length: 56.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70229

DST#: 8

ATTN: Kent Matson

Test Start: 2023.05.08 @ 09:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.49 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
250.00	Mud 100m	3.507

Total Length: 250.00 ft Total Volume: 3.507 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

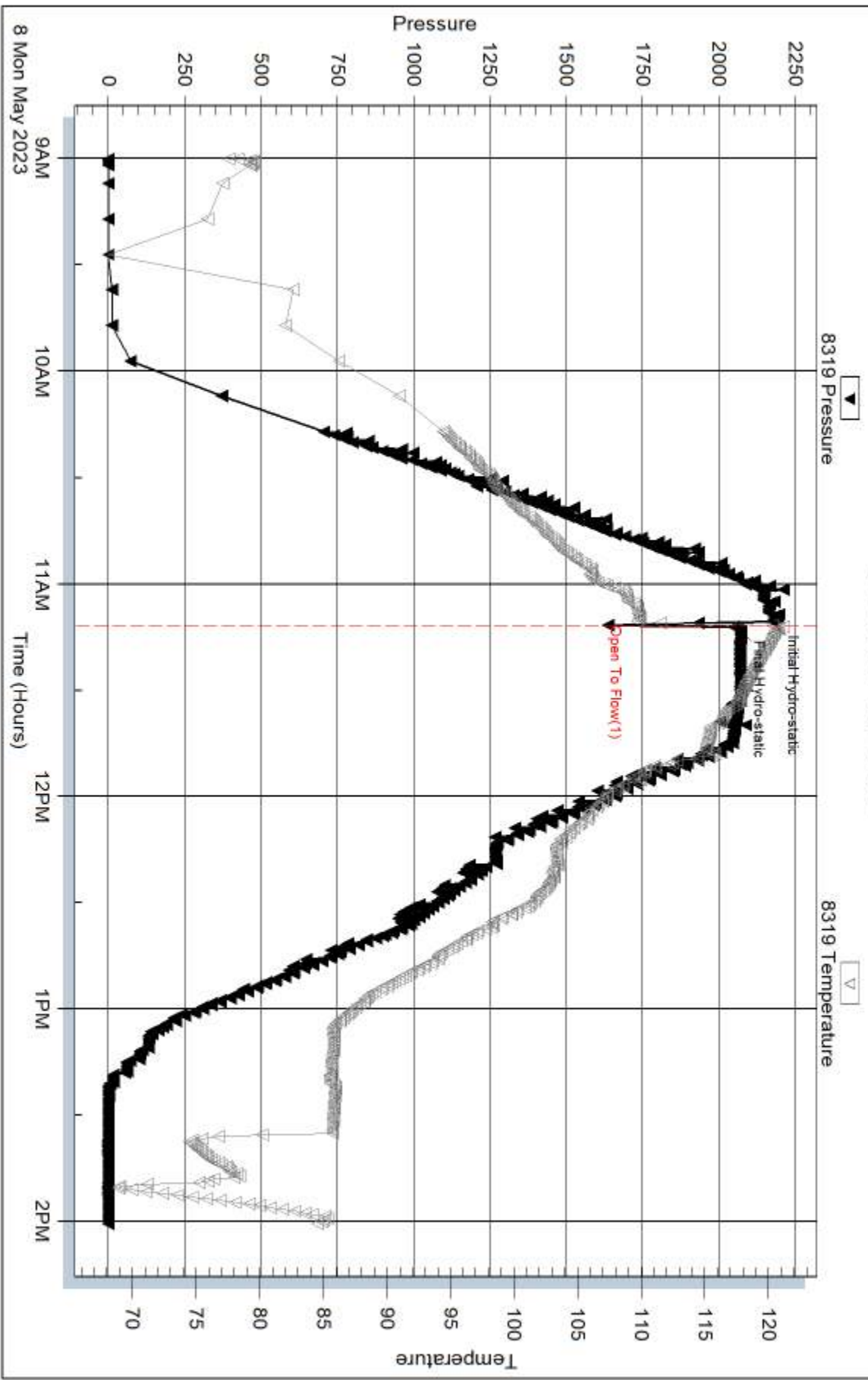
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Misrun

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Kent Matson

Rodie #4

7-15s-36w Gove,KS

Start Date: 2023.05.08 @ 14:30:00

End Date: 2023.05.08 @ 19:06:45

Job Ticket #: 70230 DST #: 9

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

Printed: 2023.05.12 @ 14:56:51



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70230

DST#: 9

ATTN: Kent Matson

Test Start: 2023.05.08 @ 14:30:00

GENERAL INFORMATION:

Formation: **Myric Station**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:19:30

Time Test Ended: 19:06:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4430.00 ft (KB) To 4470.00 ft (KB) (TVD)

Reference Elevations: 2982.00 ft (KB)

Total Depth: 4470.00 ft (KB) (TVD)

2973.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8845 Outside

Press@RunDepth: psig @ 4431.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.05.08

End Date: 2023.05.08

Last Calib.: 2023.05.08

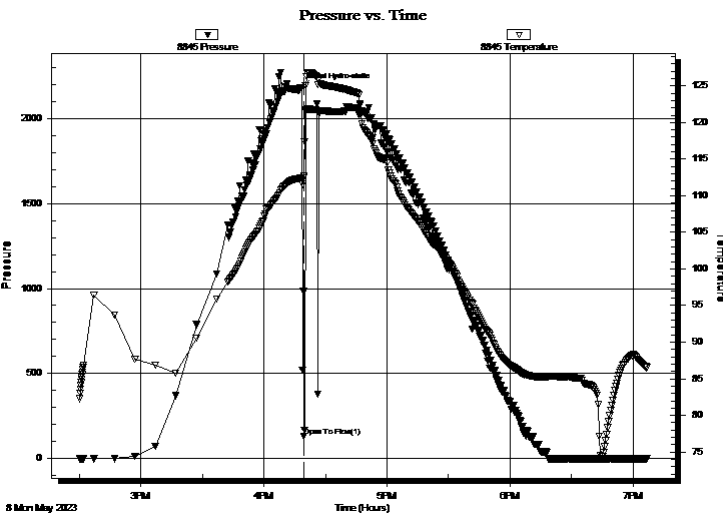
Start Time: 14:30:05

End Time: 19:06:44

Time On Btm: 2023.05.08 @ 16:18:30

Time Off Btm:

TEST COMMENT: Packer failure
Misrun



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2181.80	112.48	Initial Hydro-static
1	129.37	112.65	Open To Flow (1)

Recovery

Length (ft)	Description	Volume (bbl)
250.00	mud 100m	3.51

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70230

DST#: 9

ATTN: Kent Matson

Test Start: 2023.05.08 @ 14:30:00

Tool Information

Drill Pipe:	Length: 4430.00 ft	Diameter: 3.80 inches	Volume: 62.14 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 62.14 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	4430.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	40.00 ft				
Tool Length:	70.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4401.00	
Shut In Tool	5.00			4406.00	
Hydraulic tool	5.00			4411.00	
Jars	5.00			4416.00	
EM Tool	3.00			4419.00	
Safety Joint	2.00			4421.00	
Packer	5.00			4426.00	30.00 Bottom Of Top Packer
Packer	4.00			4430.00	
Stubb	1.00			4431.00	
Recorder	0.00	8319	Inside	4431.00	
Recorder	0.00	8845	Outside	4431.00	
Perforations	36.00			4467.00	
Bullnose	3.00			4470.00	40.00 Bottom Packers & Anchor

Total Tool Length: 70.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70230

DST#: 9

ATTN: Kent Matson

Test Start: 2023.05.08 @ 14:30:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
250.00	mud 100m	3.507

Total Length: 250.00 ft

Total Volume: 3.507 bbl

Num Fluid Samples: 0

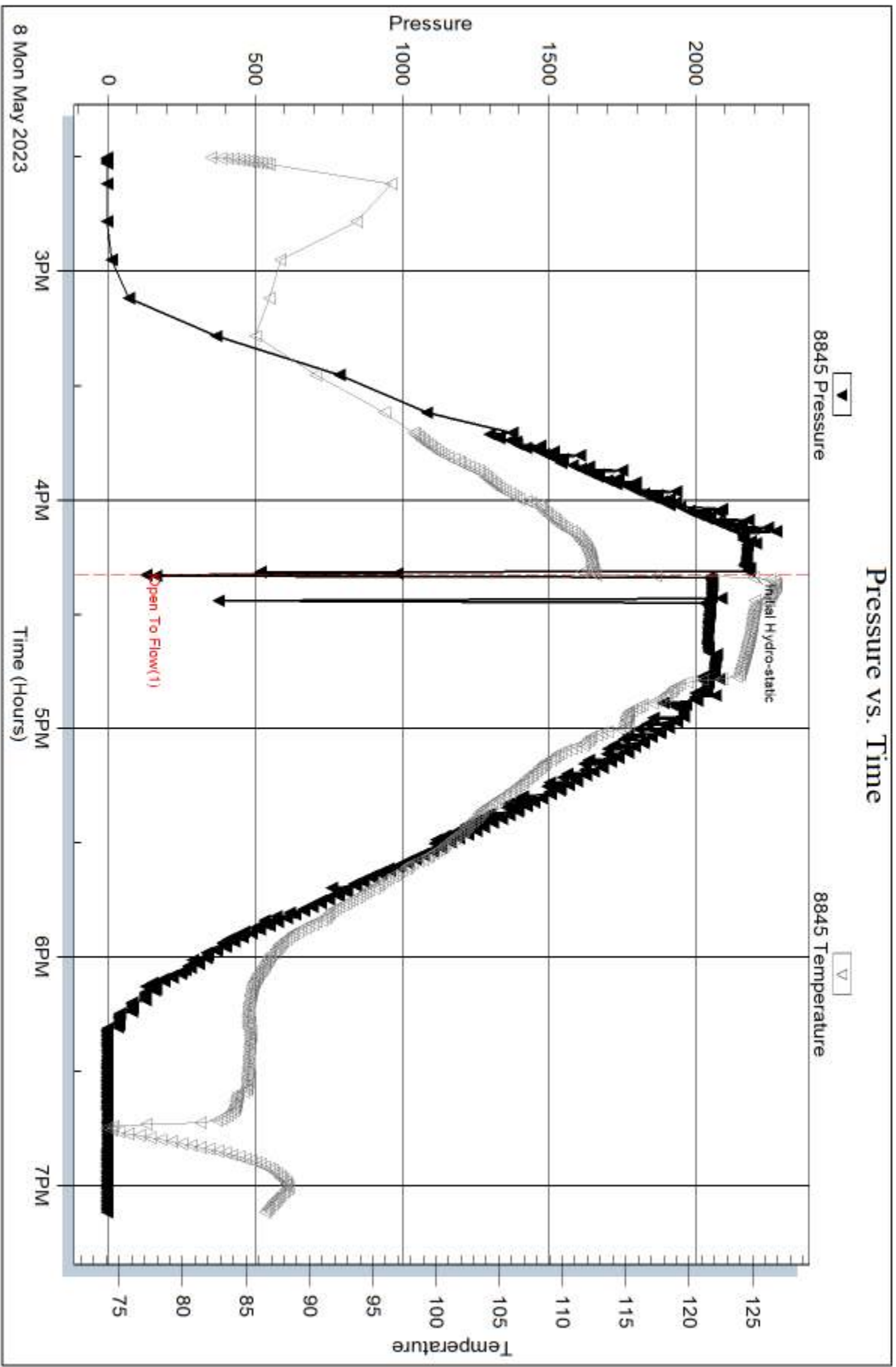
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Misrun



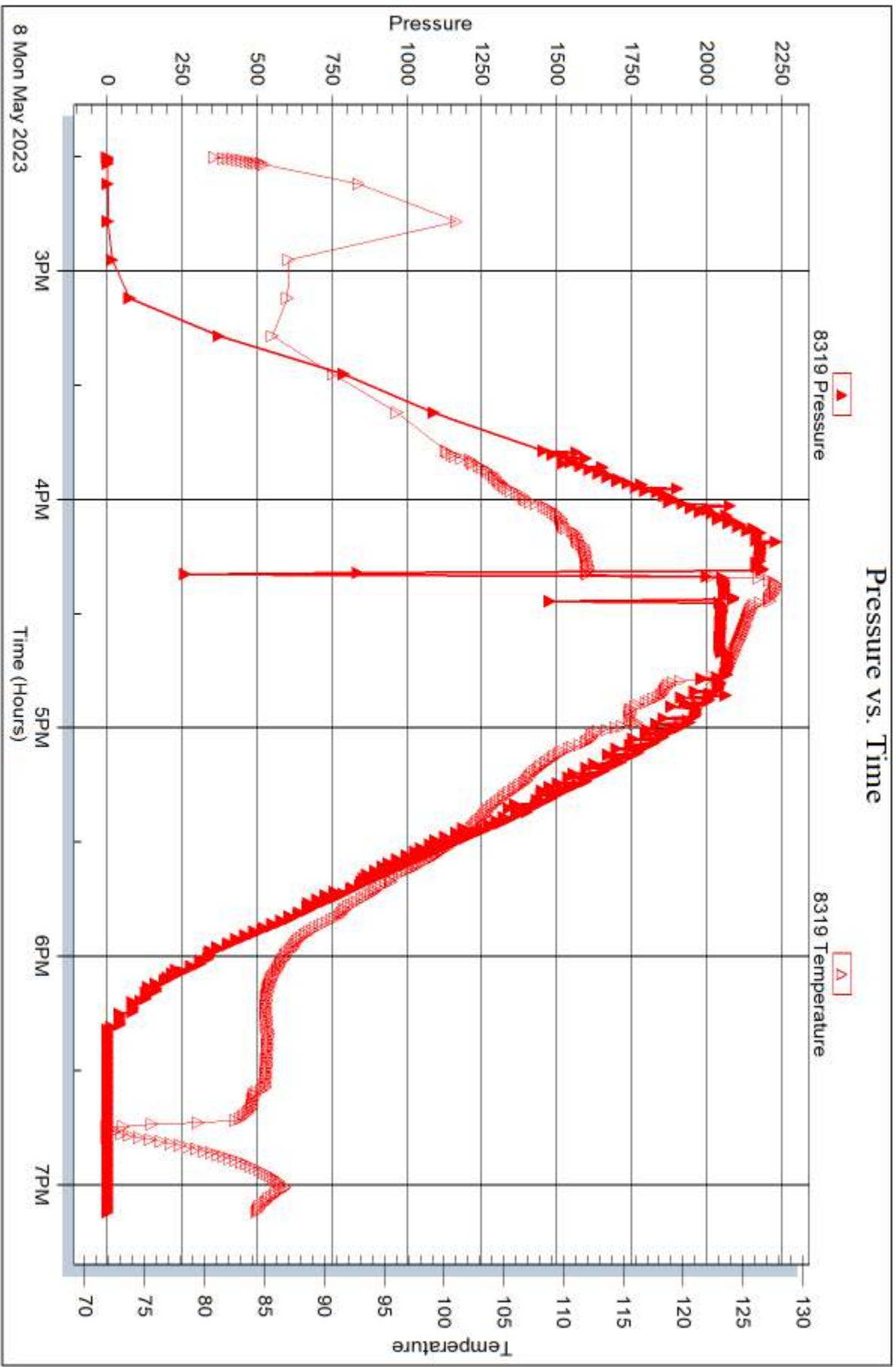
Serial #: 8319

Inside

Richie Exploration

Rodie #4

DST Test Number: 9





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Kent Matson

Rodie #4

7-15s-36w Gove,KS

Start Date: 2023.05.09 @ 04:31:00

End Date: 2023.05.09 @ 13:22:45

Job Ticket #: 70231 DST #: 10

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

Printed: 2023.05.12 @ 14:56:15



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration

7-15s-36w Gove, KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70231

DST#: 10

ATTN: Kent Matson

Test Start: 2023.05.09 @ 04:31:00

GENERAL INFORMATION:

Formation: **Bottom Myrick- Ft Sc**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:30:30

Time Test Ended: 13:22:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4476.00 ft (KB) To 4500.00 ft (KB) (TVD)

Reference Elevations: 2982.00 ft (KB)

Total Depth: 4500.00 ft (KB) (TVD)

2973.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8845 Outside

Press@RunDepth: 738.72 psig @ 4477.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.05.09

End Date:

2023.05.09

Last Calib.:

2023.05.09

Start Time:

04:31:05

End Time:

13:22:45

Time On Btm:

2023.05.09 @ 07:29:45

Time Off Btm:

2023.05.09 @ 10:45:15

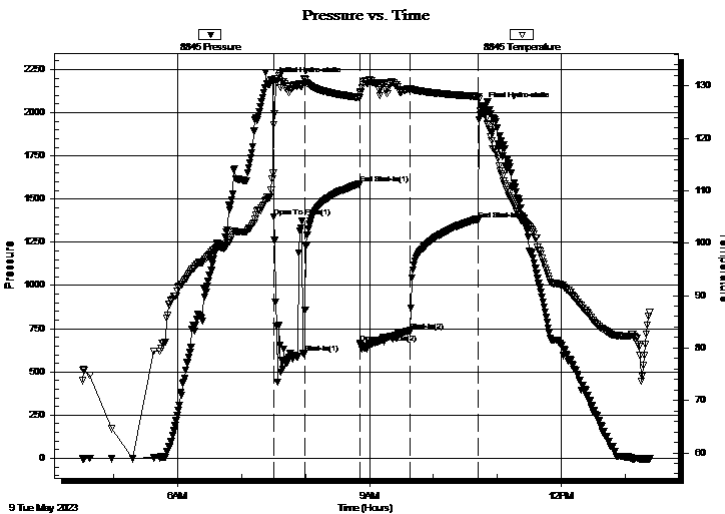
TEST COMMENT: IF: BOB @ 15 sec- 115"

IS: No return.

FF: BOB @ 7 min- 29"

FS: No return. 30-45-45-60

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2179.38	113.34	Initial Hydro-static
1	1398.49	122.55	Open To Flow (1)
30	607.47	131.38	Shut-In(1)
81	1588.11	127.78	End Shut-In(1)
82	664.68	128.60	Open To Flow (2)
129	738.72	129.43	Shut-In(2)
193	1383.03	127.99	End Shut-In(2)
196	2037.80	124.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1480.00	Mud 100m	20.76

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70231

DST#: 10

ATTN: Kent Matson

Test Start: 2023.05.09 @ 04:31:00

Tool Information

Drill Pipe:	Length: 4461.00 ft	Diameter: 3.80 inches	Volume: 62.58 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 62.58 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	4476.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	54.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4447.00	
Shut In Tool	5.00			4452.00	
Hydraulic tool	5.00			4457.00	
Jars	5.00			4462.00	
EM Tool	3.00			4465.00	
Safety Joint	2.00			4467.00	
Packer	5.00			4472.00	30.00 Bottom Of Top Packer
Packer	4.00			4476.00	
Stubb	1.00			4477.00	
Recorder	0.00	8319	Inside	4477.00	
Recorder	0.00	8845	Outside	4477.00	
Perforations	20.00			4497.00	
Bullnose	3.00			4500.00	24.00 Bottom Packers & Anchor

Total Tool Length: 54.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

7-15s-36w Gove,KS

PO Box 783188
Wichita, KS 67278

Rodie #4

Job Ticket: 70231

DST#: 10

ATTN: Kent Matson

Test Start: 2023.05.09 @ 04:31:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 66.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1480.00	Mud 100m	20.761

Total Length: 1480.00 ft Total Volume: 20.761 bbl

Num Fluid Samples: 0

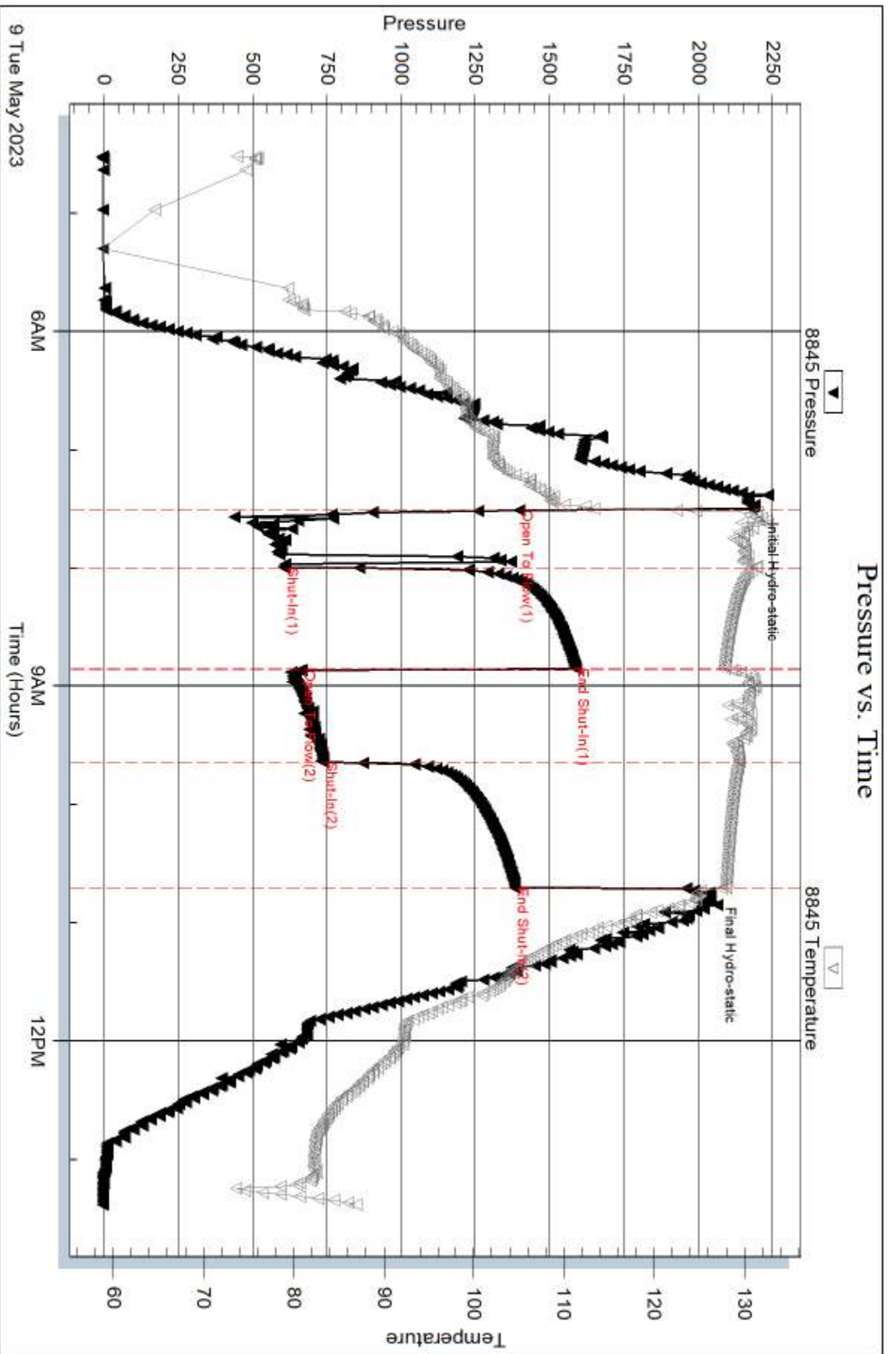
Num Gas Bombs: 0

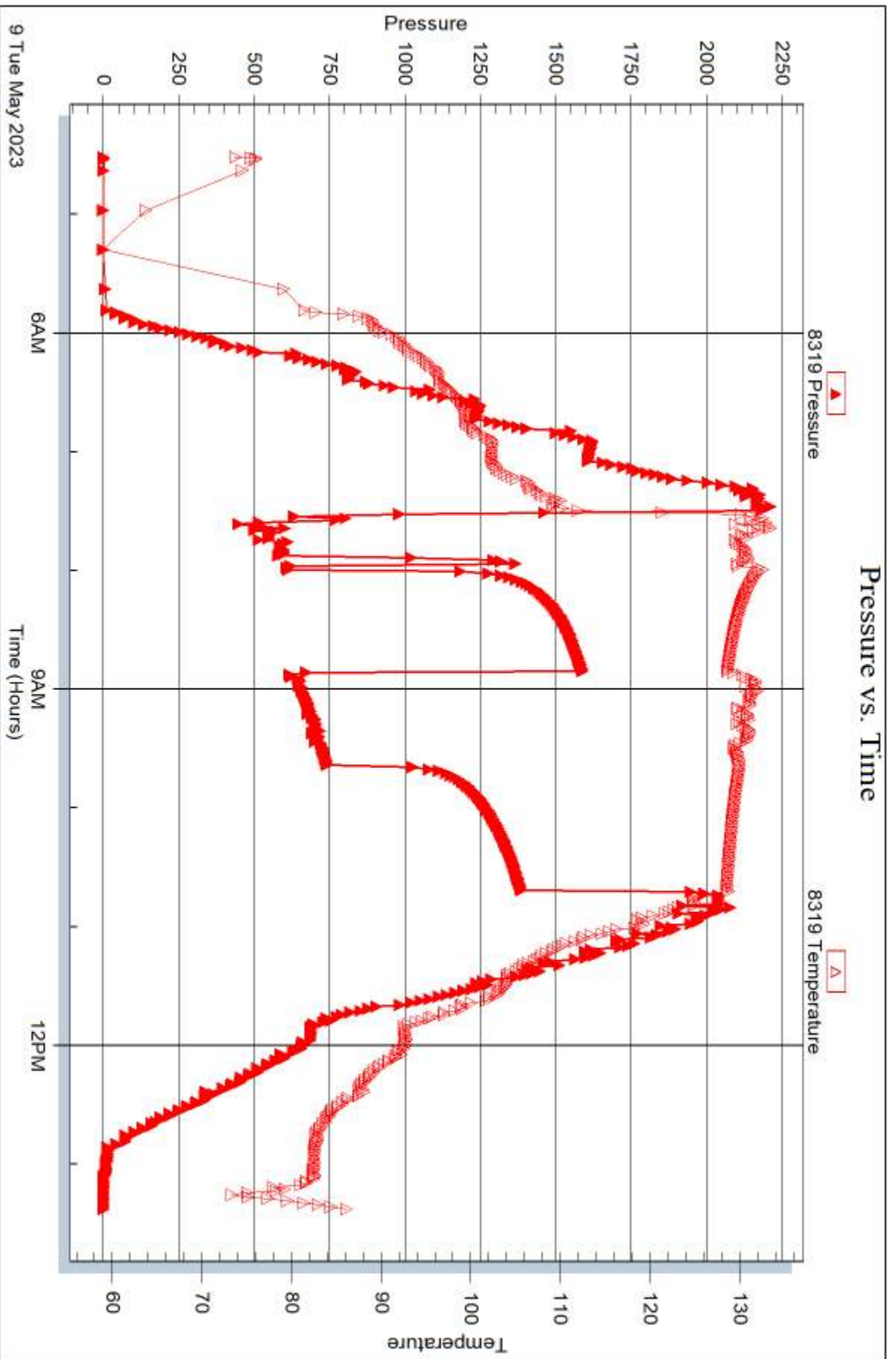
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70269

Well Name & No. Rodie #4 Test No. 1 Date 05/02/2023
 Company Ritchie Exploration Elevation 2982 KB 2973 GL
 Address PO Box 283188 Wichita, Ks 67278
 Co. Rep / Geo Kent Matson Rig Duke #4
 Location: Sec. 15 Twp 11s Rge. 3W Co. Gore State Ks

Interval Tested 3980 - 4015 Zone Tested Toroata
 Anchor Length 35' Drill Pipe Run 3965 Mud Wt. 9.1
 Top Packer Depth 3975 Drill Collars Run - Vis 58
 Bottom Packer Depth 3980 Wt. Pipe Run - WL 6.4
 Total Depth 4015 Chlorides 1500 ppm System LCM 4*
 Blow Description IF 9.5" blow
ISI No return.
FF 10" blow
FSI No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Oil</u>	<u>100</u>			
<u>180</u>	<u>MCW</u>		<u>50</u>	<u>50</u>	

Rec Total 181 BHT 120 Gravity - API RW .190 @ 71 °F Chlorides 37000 ppm
 Initial Hydrostatic 1976 Test 1950 Ruined Shale Packer
 Initial Flow 21 to 50 Jars 300 Ruined Packer
 Initial Shut-In 987 Circ Sub Hotel
 Final Flow 55 to 104 Hourly Standby EM Tool Successful
 Final Shut-In 984 Mileage 110 AT ^{192.50} Accessibility
 Final Hydrostatic 1899 Sampler Gas Sample
 T- On Location 0200 Straddle Sub Total 0
 Initial Flow 30 T-Started 0342 Shale Packer Total 2442.50
 Initial Shut-In 45 T-Open 0745 Extra Packer Tool Loaded @
 Final Flow 45 T-Pulled 1045 Extra Recorder MP/DST Disc't
 Final Shut-In 60 T-Out 1301 Day Standby

Comments _____

Approved By _____ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damage of any kind of property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70270

Well Name & No. Rodie #4 Test No. 2 Date 05/03/2023
 Company Ritchie Exploration Elevation 2982 KB 2973 GL
 Address Wichita, Ks
 Co. Rep / Geo Kent Matson Rig Duke 4
 Location: Sec. 15 Twp 11S Rge. 31W Co. Gove State Ks

Interval Tested 4038 - 4060 Zone Tested Lansing C
 Anchor Length 22' Drill Pipe Run 4028 Mud Wt. 9.1
 Top Packer Depth 4033 Drill Collars Run — Vis 66
 Bottom Packer Depth 4038 Wt. Pipe Run — WL 6.4
 Total Depth 4060 Chlorides 2,000 ppm System LCM 4#

Blow Description IF: BOB @ 7 1/2 min - 26 1/2" blow
ISI: 1 1/4" return.
FF: BOB @ 11 min. - 30 1/2" return.
FST: 2 3/4" return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>150</u>	<u>60</u>	<u>15</u>	<u>85</u>		
<u>90</u>	<u>60 MCW</u>	<u>15</u>	<u>5</u>	<u>50</u>	<u>30</u>
<u>390</u>	<u>SMCW</u>			<u>98</u>	<u>2</u>
	<u>120' GIP</u>				

Rec Total 630 BHT 125 Gravity 33 API RW 171 @ 60 °F Chlorides 49,000 ppm
 Initial Hydrostatic 1997 Test 1950 Ruined Shale Packer
 Initial Flow 29 to 138 Jars 300 Ruined Packer 460
 Initial Shut-In 1190 Circ Sub Hotel
 Final Flow 140 to 288 Hourly Standby EM Tool Successful
 Final Shut-In 1169 Mileage 192.50 Accessibility
 Final Hydrostatic 1915 Sampler Gas Sample
 T-On Location 2330 ^{05/02} Straddle Sub Total 460
 Initial Flow 30 T-Started 0015 Shale Packer Total 2902.50
 Initial Shut-In 45 T-Open 0220 Extra Packer Tool Loaded @
 Final Flow 45 T-Pulled 0520 Extra Recorder MP/DST Disc't
 Final Shut-In 60 T-Out 0826 Day Standby

Comments _____

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70271

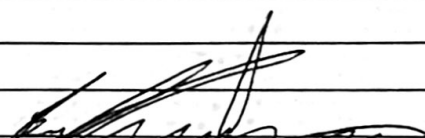
Well Name & No. Rodie #4 Test No. 3 Date 05/04/2023
 Company Ritchie Exploration Elevation 2982 KB 2973 GL
 Address Wichita, ks
 Co. Rep / Geo Leat Matson Rig Duke #4
 Location: Sec. 15 Twp 11S Rge. 3W Co. Gove State KS

Interval Tested 4094-4110 Zone Tested Lansing E-F
 Anchor Length 26 Drill Pipe Run 4054 Mud Wt. 9.2
 Top Packer Depth 4079 Drill Collars Run - Vis 58
 Bottom Packer Depth 4084 Wt. Pipe Run - WL 7.2
 Total Depth 4110 Chlorides 3300 ppm System LCM 4P

Blow Description IF BOB @ 3 1/2 min. 71"
ISI 9' return.
FF BOB @ 5 min. 75"
FSI 2" return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>560</u>	<u>60</u>	<u>25</u>	<u>75</u>		
<u>190</u>	<u>GMWCO</u>	<u>20</u>	<u>40</u>	<u>30</u>	<u>10</u>
<u>350</u>	<u>SMCW (oil spots)</u>			<u>99</u>	<u>2</u>
	<u>400' GIP</u>				

Rec Total 1090 BHT 125 Gravity 36 API RW .186 @ 62 °F Chlorides 44,000 ppm
 Initial Hydrostatic 2027 Test 1950 Ruined Shale Packer
 Initial Flow 37 to 232 Jars 300 Ruined Packer
 Initial Shut-In 1258 Circ Sub Hotel
 Final Flow 229 to 463 Hourly Standby EM Tool Successful
 Final Shut-In 1257 Mileage 192.50 Accessibility
 Final Hydrostatic 1938 Sampler Gas Sample
 T- On Location 2000 Straddle Sub Total 0
 Initial Flow 30 T-Started 2020 Shale Packer Total 2442.50
 Initial Shut-In 45 T-Open 2220 Extra Packer Tool Loaded @
 Final Flow 45 T-Pulled 0120 Extra Recorder MP/DST Disc't
 Final Shut-In 60 T-Out 0433 Day Standby

Comments _____
 Approved By _____ Our Representative 

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70272

Well Name & No. Rodie #4 Test No. 4 Date 05/04/2023
 Company Ritchie Exploration Elevation 2982 KB 2973 GL
 Address Wichita, Ks
 Co. Rep / Geo Kent Matson Rig Duke #4
 Location: Sec. 15 Twp 11s Rge. 31w Co. Gore State _____

Interval Tested 4145 - 4175 Zone Tested LKC GPH
 Anchor Length 30' Drill Pipe Run 4121 Mud Wt. 8.9
 Top Packer Depth 4440 Drill Collars Run — Vis 56
 Bottom Packer Depth 4145 Wt. Pipe Run — WL 6.4
 Total Depth 4175 Chlorides 1200 ppm System LCM 4#
 Blow Description IF: 7" blow
IST: No return.
FF: 6" blow
FSI: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>oil</u>	<u>100</u>			
<u>160</u>	<u>50cm</u>	<u>3</u>		<u>97</u>	
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Rec Total 165 BHT 120 Gravity — API RW — @ — °F Chlorides — ppm
 Initial Hydrostatic 2076 Test 1950 Ruined Shale Packer _____
 Initial Flow 30 to 59 Jars 300 Ruined Packer _____
 Initial Shut-In 1404 Circ Sub _____ Hotel _____
 Final Flow 64 to 95 Hourly Standby _____ EM Tool Successful _____
 Final Shut-In 1290 Mileage 192.50 Accessibility _____
 Final Hydrostatic 1974 Sampler _____ Gas Sample _____
 T- On Location 1730 Straddle _____ Sub Total 0
 Initial Flow 30 T-Started 1815 Shale Packer _____ Total 2442.50
 Initial Shut-In 45 T-Open 2017 Extra Packer _____ Tool Loaded _____ @ _____
 Final Flow 45 T-Pulled 2317 Extra Recorder _____ MP/DST Disc't _____
 Final Shut-In 60 T-Out 0135 05105 Day Standby _____

Comments _____

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70226

Well Name & No. Rodie #4 Test No. 5 Date 05/05/2023
 Company Ritchie Exploration Elevation 2982 KB 2975 GL
 Address Wichita, Ks
 Co. Rep / Geo Kent Matson Rig Duke 4
 Location: Sec. 15 Twp 16 Rge. 31W Co. Gore State Ks


Interval Tested 4192-4230 Zone Tested Lansing I-J
 Anchor Length 48' Drill Pipe Run 4183 Mud Wt. 9.2
 Top Packer Depth 4177 Drill Collars Run - Vis 56
 Bottom Packer Depth 4182 Wt. Pipe Run - WL 6.4
 Total Depth 4230 Chlorides 1200 ppm System LCM 4#

Blow Description IF 1/4" blow
ISF No return.
FF No blow
FSI No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mod</u>			<u>100</u>	
	<u>oil spots</u>				

Rec Total 10 BHT 115 Gravity - API RW - @ - *F Chlorides - ppm
 Initial Hydrostatic 2077 Test 1950 Ruined Shale Packer
 Initial Flow 23 to 23 Jars 300 Ruined Packer
 Initial Shut-In 191 23 Circ Sub Hotel
 Final Flow 25 to 26 191 Hourly Standby EM Tool Successful
 Final Shut-In 65 Mileage 192.50 Accessibility
 Final Hydrostatic 2020 Sampler Gas Sample
 T-On Location 1200 Straddle Sub Total 0
 Initial Flow 30 T-Started 1251 Shale Packer Total 2442.50
 Initial Shut-In 30 T-Open 1446 Extra Packer Tool Loaded @
 Final Flow 30 T-Pulled 1646 Extra Recorder MP/DST Disc't
 Final Shut-In 30 T-Out 1751 Day Standby

Comments _____

Approved By _____ Our Representative 

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70227

Well Name & No. Rodie #4 Test No. 6 Date 05/06/2023
 Company Ritchie Exploration Elevation 2982 KB 2973 GL
 Address Wichita, KS
 Co. Rep / Geo Kent Matson Rig Rodie #4
 Location: Sec. 15 Twp 11s Rge. 31w Co. Govl State Ks


Interval Tested 4234-4291 Zone Tested LKC X-2
 Anchor Length 57' Drill Pipe Run 4214 Mud Wt. 9.2
 Top Packer Depth 4229 Drill Collars Run - Vis 52
 Bottom Packer Depth 4234 Wt. Pipe Run - WL 8.0
 Total Depth 4291 Chlorides 4000 ppm System LCM 3#

Blow Description IT BOB @ 24 min 14 3/4" blow
ISI No return.
EF BOB @ 9 min 18 1/2" blow
FSL No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>Oil</u>	<u>100</u>			
<u>70</u>	<u>600m</u>	<u>25</u>	<u>30</u>	<u>45</u>	
	<u>380' GIP</u>				

Rec Total 100 BHT 120 Gravity 39 API RW - @ - *F Chlorides - ppm
 Initial Hydrostatic 2106 Test 1950 Ruined Shale Packer
 Initial Flow 26 to 41 Bars 300 Ruined Packer
 Initial Shut-In 928 Circ Sub Hotel
 Final Flow 41 to 64 Hourly Standby TEM Tool Successful
 Final Shut-In 924 Mileage 192.50 Accessibility
 Final Hydrostatic 2021 Sampler Gas Sample
 T- On Location 0530 Straddle Sub Total 0
 Initial Flow 30 T-Started 0631 Shale Packer Total 2442.50
 Initial Shut-In 49 T-Open 0834 Extra Packer Tool Loaded @
 Final Flow 45 T-Pulled 1134 Extra Recorder MP/DST Disc't
 Final Shut-In 60 T-Out Day Standby

Comments _____

Approved By _____ Our Representative 

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70228

Well Name & No. Rodie #4 Test No. 7 Date 05/07/2023
 Company Ritchie Exploration Elevation 2982 KB 2973 GL
 Address Wichita Ks
 Co. Rep / Geo Kent Matson Rig Duke #4
 Location: Sec. 15 Twp 11s Rge. 31w Co. Govt State Ks

Interval Tested 4296-4336 Zone Tested Marmaton
 Anchor Length 20' Drill Pipe Run 4276 Mud Wt. 9.1
 Top Packer Depth 4291 Drill Collars Run — Vis 56
 Bottom Packer Depth 4296 Wt. Pipe Run — WL 8.0
 Total Depth 4336 Chlorides 4000 ppm System LCM 3#

Blow Description IF: 8 1/4" blow
ISI: No return.
FF: 3" blow
FSI: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>OCM</u>	<u>10</u>		<u>90</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30 BHT 119 Gravity — API RW — @ — *F Chlorides — ppm
 Initial Hydrostatic 2156 Test 1950 Ruined Shale Packer
 Initial Flow 30 to 28 Jars 300 Ruined Packer
 Initial Shut-In 76 Circ Sub Hotel
 Final Flow 24 to 33 Hourly Standby EM Tool Successful
 Final Shut-In 67 Mileage 192.50 Accessibility
 Final Hydrostatic 2115 Sampler Gas Sample
 T- On Location 2300 Straddle Sub Total 0
 Initial Flow 30 T-Started 2323 Shale Packer Total 2442.50
 Initial Shut-In 45 T-Open 0132 Extra Packer Tool Loaded @
 Final Flow 45 T-Pulled 0432 Extra Recorder MP/DST Disc't
 Final Shut-In 60 T-Out Day Standby

Comments _____

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70229

Well Name & No. Rodie #4 Test No. 8 Date 05/08/2023
 Company Ritchie Exploration Elevation 2982 KB 2973 GL
 Address Wichita, KS
 Co. Rep / Geo Kent Matson Rig Dolke #4
 Location: Sec. 15 Twp 16s Rge. 31w Co. Gore State KS

Interval Tested ~~4444-4470~~ A 4234-4291 Zone Tested Myrick Station
 Anchor Length 26 Drill Pipe Run 4430 Mud Wt. 9.4
 Top Packer Depth 4229 4439 Drill Collars Run — Vis 63
 Bottom Packer Depth 4444 Wt. Pipe Run — WL 9.6
 Total Depth 4470 Chlorides 4100 ppm System LCM 3#
 Blow Description Packer Failure

Misrun

Rec	Feet of	%gas	%oil	%water	%mud
<u>250</u>	<u>MUD</u>			<u>100</u>	
	<u>Misrun</u>				

Rec Total 250 BHT — Gravity — API RW — @ — °F Chlorides — ppm

Initial Hydrostatic ~~_____~~ Test 1500 Ruined Shale Packer _____
 Initial Flow ~~_____ to _____~~ Jars 300 Ruined Packer _____
 Initial Shut-In ~~_____~~ Circ Sub _____ Hotel _____
 Final Flow ~~_____ to _____~~ Hourly Standby _____ EM Tool Successful -350
 Final Shut-In ~~_____~~ Mileage 192.50 Accessibility _____
 Final Hydrostatic ~~_____~~ Sampler _____ Gas Sample _____
 T-On Location 0830 Straddle _____ Sub Total -350
 Initial Flow ~~_____~~ T-Started 0900 Shale Packer _____ Total 1642.50
 Initial Shut-In ~~_____~~ T-Open 1109 Extra Packer _____ Tool Loaded _____ @ _____
 Final Flow ~~_____~~ T-Pulled 1112 Extra Recorder _____ MP/DST Disc't _____
 Final Shut-In ~~_____~~ T-Out _____ Day Standby _____

Comments _____

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70230

Well Name & No. Rodie #4 Test No. 9 Date 05/08/2022
 Company Rodie Exploration Elevation 2982 KB 2973 GL
 Address Wichita, KS
 Co. Rep / Geo Kent Matson Rig Duke 4
 Location: Sec. 15 Twp 16s Rge. 31W Co. Gove State KS

Interval Tested 4430 - 4470 Zone Tested Myrick Station
 Anchor Length 26' 40' Drill Pipe Run 4430 Mud Wt. 9.1
 Top Packer Depth 4425 Drill Collars Run — Vis 63
 Bottom Packer Depth 4430 Wt. Pipe Run — WL 9.6
 Total Depth 4470 Chlorides 4400 ppm System LCM 3#

Blow Description IF
ISI
FF
PSI
Misrun

Rec	Feet of	%gas	%oil	%water	%mud
<u>250</u>	<u>MUD</u>				
	<u>Misrun</u>				

Rec Total _____ BHT — Gravity — API RW — @ — *F Chlorides _____ ppm

Initial Hydrostatic _____ Test 1500 Ruined Shale Packer _____
 Initial Flow _____ to _____ Jars 300 Ruined Packer _____
 Initial Shut-In _____ Circ Sub _____ Hotel Stayed @ Rig
 Final Flow _____ to _____ Hourly Standby _____ EM Tool Successful -350
 Final Shut-In _____ Mileage NO Accessibility _____
 Final Hydrostatic _____ Sampler _____ Gas Sample _____
 T-On Location 1400 Straddle _____ Sub Total -350
 Initial Flow _____ T-Started 1430 Shale Packer 250 Total 2150
 Initial Shut-In _____ T-Open 1622 Extra Packer _____ Tool Loaded _____ @ _____
 Final Flow _____ T-Pulled 1645 Extra Recorder _____ MP/DST Disc't _____
 Final Shut-In _____ T-Out 1900 Day Standby _____

Comments _____

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70231

Well Name & No. Rode #4 Test No. 10 Date 05/09/2023
 Company Ritchie Exploration Elevation 2982 KB 2973 GL
 Address Wichita Ks
 Co. Rep / Geo. Kent Matson Rig Duke #4
 Location: Sec. 15 Twp 16S Rge. 3W Co. Gove State Ks

Interval Tested 4476-4500 Zone Tested Bottom Myric - Ft Scott
 Anchor Length 24' Drill Pipe Run 4461 Mud Wt. 9.1
 Top Packer Depth 4471 Drill Collars Run — Vis 63
 Bottom Packer Depth 4476 Wt. Pipe Run — WL 9.6
 Total Depth 4500 Chlorides 4500 ppm System LCM 8#

Blow Description IF BOB @ 15 sec. 115"
ISI No return.
FF BOB @ 7 min - 23"
FST No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>1480</u>	<u>MUD</u>			<u>100</u>	

Rec Total 1480 BHT 125 Gravity — API RW — @ — °F Chlorides — ppm
 Initial Hydrostatic 2179 Test 1950 Ruined Shale Packer
 Initial Flow 1398 to 607 Jars 300 Ruined Packer
 Initial Shut-In 1588 Circ Sub Hotel
 Final Flow 664 to 738 Hourly Standby EM Tool Successful -175
 Final Shut-In 1383 Mileage 192.50 + 192.50 Accessibility
 Final Hydrostatic 2037 Sampler Gas Sample
 T- On Location 0500 Straddle Sub Total 800 - 175
 Initial Flow 30 T-Started 0550 Shale Packer 250 Total 3510
 Initial Shut-In 45 T-Open 0731 Extra Packer Tool Loaded 5/10 @ 18:00
 Final Flow 45 T-Pulled 1035 Extra Recorder 1d 4.75h MP/DST Disc't
 Final Shut-In 60 T-Out 1323 Day Standby

Comments _____

Approved By _____ Our Representative [Signature]

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

Well Name: RODIE
Well Id: #4
Location: 1507' FSL, 1731' FWL, SW/4 Sec 15-T11S-R31W, Gove County, Kansas
License Number: API: 15-063-22429 **Region:** Gove County
Spud Date: 04/27/2023 **Drilling Completed:** 05/10/2023
Surface Coordinates: NAD83
Lat: 39.0948707, **Long:** -100.7510187
Bottom Hole Vertical hole
Coordinates:
Ground Elevation (ft): 2973' **K.B. Elevation (ft):** 2982'
Logged Interval (ft): 3750' **To:** RTD **Total Depth (ft):** 4660'
Formation: Mississippian at RTD
Type of Drilling Fluid: Chemical

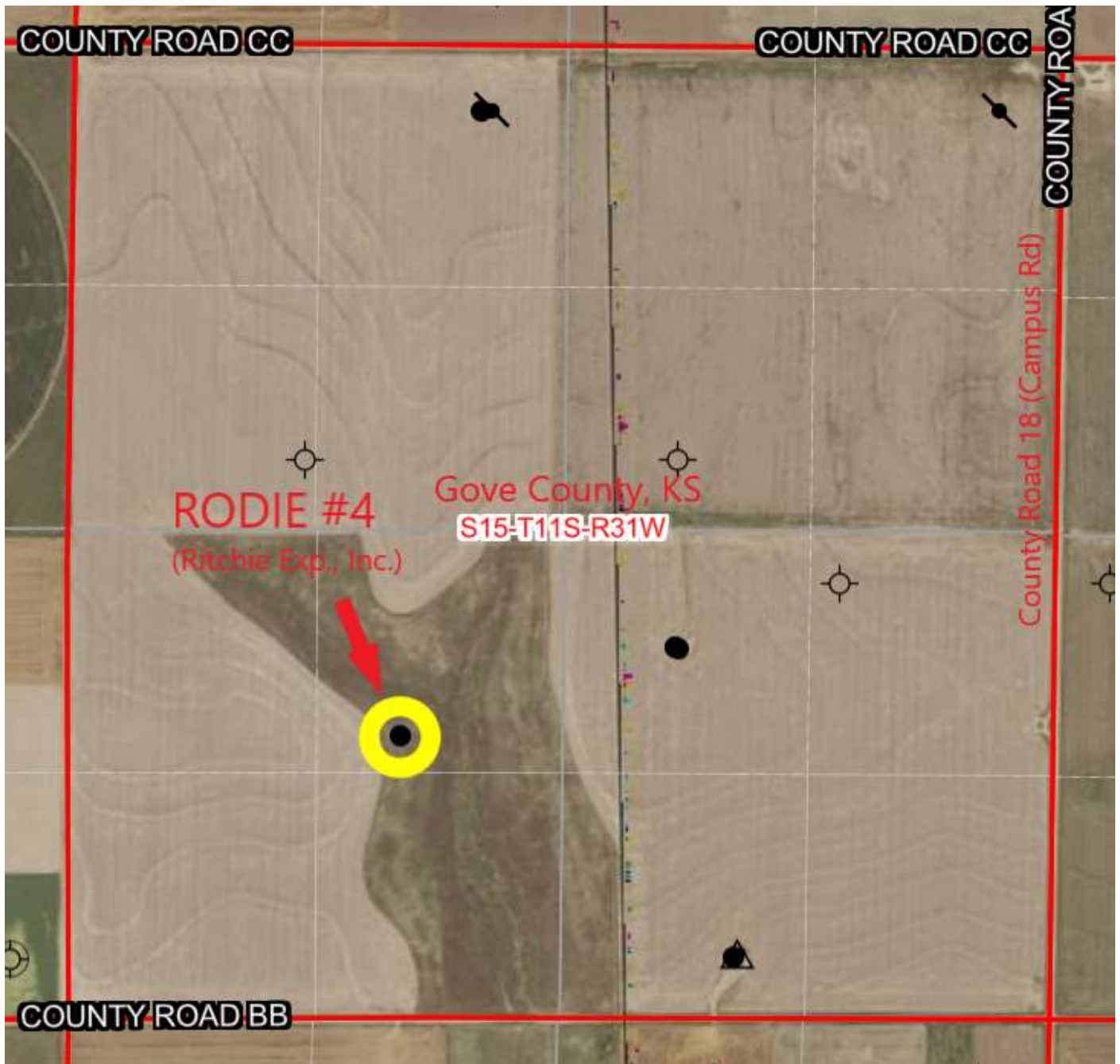
Printed by MudLog from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: RITCHIE EXPLORATION, INC.
Address: 8100 E. 22nd Street N., Bldg 700
Wichita, KS 67226
316-691-9500

WELLSITE GEOLOGIST

Name: Kent R. Matson
Company: Matson Geological Services, LLC
Address: 33300 W. 15th Street S.
Garden Plain, Kansas 67050
316-644-1975; kent4m@hotmail.com



COMMENTS

Ritchie Exploration Company Geologist: John Goldsmith, 316-640-0236 (cell).

Contractor: Duke Drilling Company, Inc.: Rig #4.

Tool Pusher: Hector Torres, 620-682-3927 (cell).

Surface Casing: 8 5/8" set at 223' (KB) w/165sx cement.

Production Casing: Based on field observations of drill cuttings, DST results and electric log evaluation, 5.5" production casing was installed.

Mud by: Mud-Co/Service Mud, Inc., Reid Atkins, 785-694-3741 (cell).

DST's by: Trilobite Testing, Bradley Walter (Walt), 785-623-1407 (cell).

Logs by: ELI Wireline (DI w/GR, CND, Micro), Cole Robben, 785-735-7112 (office).

RTD= 4660'

LTD= 4661'

FORMATION TOPS

FORMATION	SAMPLE TOPS		LOG TOPS	
	Depth	Datum	Depth	Datum
Oread	3933'	-951	3934'	-952
Heebner Shale	3982'	-1000	3982'	-1000
Lansing	4023'	-1041	4022'	-1040
Muncie Creek Shale	4152'	-1170	4154'	-1172
Stark Shale	4238'	-1256	4240'	-1258
Hushpuckney Shale	4272'	-1290	4273'	-1291
Base of KC	4298'	-1316	4298'	-1316
Marmaton	4324'	-1342	4326'	-1344
Pawnee	4422'	-1440	4422'	-1440
Myrick Station	4463'	-1481	4464'	-1482
Fort Scott	4488'	-1506	4488'	-1506
Cherokee Shale	4516'	-1534	4517'	-1535
Johnson	4560'	-1578	4563'	-1581
Mississippian	4574'	-1592	4577'	-1595
RTD	4680'	-1702		
LTD			4681'	-1703

ROCK TYPES

LITHOLOGY

	Anhy
	Cht
	Coal
	Congl
	Dol
	Gyp
	Lmst
	Salt
	Shale
	Shcol
	Shgy
	Sltst
	Ss
	Carb sh
	Dol
	Dtd
	Gry sh
	Sandy lms
	Shale
	Sltstn
	Shlyslts

	Sitysh
	Sdy dolo
	Silty dolo
	Shy dolo
	Shaly ls

FOSSIL

	Algae
	Amph
	Belm
	Bioclst
	Brach
	Bryozoa
	Cephal
	Coral
	Crin
	Echin
	Fish
	Foram
	Fossil
	Gastro
	Oolite

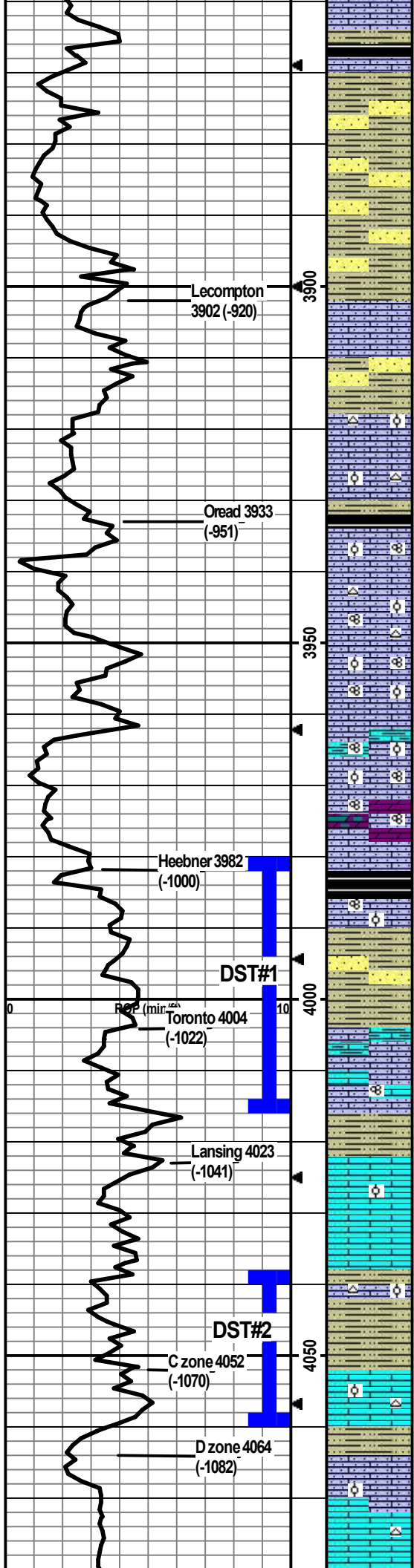
MINERAL

	Anhy
	Arggrn
	Arg
	Bent
	Bit
	Brecfrag
	Calc
	Carb
	Chtdk
	Chtlit
	Dol
	Feldspar

	Ostra
	Pelec
	Pellet
	Pisolite
	Plant
	Strom
	Fuss
	Oomold

	Ferrpel
	Ferr
	Glau
	Gyp
	Hvymn
	Kaol
	Marl
	Minxl
	Nodule
	Phos
	Pyr
	Salt
	Sandy
	Silt
	Sil
	Sulphur
	Tuff
	Chlorite
	Dol
	Sand
	Sity

Rate of Penetration (ROP) ROP (min/ft)	DEPTH	Lithology	CFS Point	Oil Shows	Geological Descriptions	Remarks
	<p>34</p> <p>3500</p> <p>3550</p> <p>3600</p>				<p>Morning Report Depth/Activity (7:00 am) 04/27/2023: MIRU. Spud @ 5pm, surface casing @ 223' KB. 04/28: WOC @ 223'. 04/29: Drilling @ 1993'. 04/30: Drilling @ 3330'. 05/01: Drilling @ 3807'. 05/02: TIH w/tool for DST #1 @ 4015'. 05/03: TOH w/tool for DST #2 @ 4060'. 05/04: TIH w/bit after DST #3 @ 4110'. 05/05: CFS @ 4202'. 05/06: TIH w/tool for DST #6 @ 4291'. 05/07: Laying Down Test Tool after DST #7 @ 4336'. 05/08: TOH w/bit for DST #8 @ 4470'. 05/09: TIH w/tool for DST #10 @ 4500'. 05/10: CFS @ 4640'. At 8:30am TD @ 4660'. Electric logged.</p> <p>Anhydrite: Drill Time (ROP) Top @ 2508' (+474), Base @ 2535' (+447). E-Log Top @ 2502' (+480), Base @ 2528' (+454).</p> <p>ROP Data begins @ 3500' on 04/30/2023. Recorded from drillers geolograph record, and geologist's auto-reader switch on geolograph.</p> <p>Geologist on location @ 3587', 04/30/2023.</p>	<p>Mud-Co/Service Mud Inc. Check #1 @ 0' 04/27/23, predrilling instructions.</p> <p>Mud-Co/Service Mud Inc. Check #2 @ 2005' 04/29/23 09:10am wt vis pH chl 8.7 27 7 130 Filt LCM n/c 0</p> <p>Mud-Co/Service Mud Inc. Check #3 @ 3380' 04/30/23 08:10am wt vis pH chl 9.8 31 7.0 19000 Filt LCM n/c 2</p> <p>Displaced drilling mud @ 3438'.</p> <p>Bit Trip @ 3587' conn; replaced PDC bit with Tricone Button bit.</p> <p>Pipe strap TOH for Bit Trip @ 3587' was 7.39' short to board.</p> <p>Mud-Co/Service Mud Inc. Check #4 @ 3756' 05/01/23 05:00am wt vis pH chl 8.9 58 11.5 1500 Filt LCM 6.4 4</p> <p>Mud-Co/Service Mud Inc. Check #5 @ 4015' 05/02/23 09:00am wt vis pH chl 9.1 47 11.0 2000 Filt LCM 6.8 4</p> <p>Mud-Co/Service Mud Inc. Check #6 @ 4060' 05/03/23 09:00am wt vis pH chl 9.2 58 10.5 3300 Filt LCM 7.2 4</p> <p>Mud-Co/Service Mud Inc. Check #7 @ 4129' 05/04/23 10:00am wt vis pH chl 9.2 68 10.0 4100 Filt LCM 8.8 3</p> <p>Mud-Co/Service Mud Inc. Check #8 @ 4181' 05/05/23 05:00am wt vis pH chl 9.0 58 10.5 4400 Filt LCM 7.2 3</p> <p>Mud-Co/Service Mud Inc. Check #9 @ 4291' 05/06/23 06:20am wt vis pH chl 9.0 75 10.5 400</p>



SH: lt-dk gry/blk, some silty, carb, soft-firm

LS: cm/lt bm/lt gry, vf-m xtal, chalky, silty/sndy/arg, no vis por, no odor, ns.

SH: lt-dk gry/dk green, vry silty/sndy, carb, soft-firm. SS: lt gry, vf-f, pred qtz, arg, carb, friable, no odor, ns.

SH: lt-dk gry/blk, some vry silty/sndy, carb, soft-firm. SS: lt-m gry/lt red-bm, vf-f, pred qtz, arg, carb, friable, no odor, ns.

SH: lt-dk gry/dk red-bm, vry silty/sndy, carb, soft-firm. SS: as above, no odor, ns.

LS: cm/lt bm/lt gry, vf-m xtal, some chalky, silty/sndy, foss frags, ppt-f in-xtal por, no odor, ns.

SH: lt-dk gry/lt-m red-bm, silty/sndy, carb, soft-firm. min SS: red-bm/gry, vf-f, pred qtz, arg, carb, friable, no odor, ns.

LS: cm/min lt gry, vf-m, vry silty/sndy, vry chalky, min wht/cm tripolitic chert, foss frags/some fn ool, min ppt-f in-xtal por, no odor, ns.

SH: lt-dk gry, some silty, slit carb, soft-firm.

LS: cm/lt-m bm, micro-m xtal, some silty/sndy, foss frags/min fusln/min fn ool, min vf-m in-xtal por, no odor, ns.

LS: cm/lt bm, vf-m xtal, some vry silty/sndy, some chalky, min cm/lt bm chert, foss frags/fusln/ool, vf-f in-xtal por w/f-m oo-castic por, no odor, ns.

LS: wht/cm/lt-m bm/lt gry, vf-m xtal, some silty/sndy, chalky, foss frags/fusln/ool, vf-f in-xtal por, no odor, ns.

LS: wht/cm/lt-m bm/lt gry, vf-m xtal, silty/sndy/arg, chalky, foss frags/fusln/ool/grainy, vf-f in-xtal por, no odor, ns.

LS: cm/lt bm/lt gry, micro-m xtal, some chalky, some silty/sndy, some dolomitic, sucrosic, foss frags/fusln/grainy, vf-m in-xtal por, no odor, ns.

SH: lt-dk gry/blk, silty, carb, soft-firm, fissile.

LS: cm/lt bm/lt gry, micro-m xtal, chalky, some silty/sndy, foss frags/min fusln/min ool, 8 pcs w/sfo, some blk tar, ppt-f in-xtal/frac por, dul yel fluor, no odor, sfo.

SH: lt-dk gry/blk/lt green-gry, some vry silty, carb, soft-firm. SS: lt gry, vf-f, pred qtz, carb, no odor, ns.

LS: cm/lt-m bm/lt-m gry, micro-m xtal, some chalky, some silty/sndy/arg, foss frags, some vf-m in-xtal por, no odor, ns.

LS: cm/min lt gry, micro-m xtal, some chalky, some silty/sndy, foss frags/fusln, 23 pcs w/sfo, f-crs in-xtal por, brit yel fluor, slit odor, sfo.

SH: lt-dk gry/red-bm/dk gry-green, silty, carb, soft-firm.

LS: wht/cm/lt gry, mostly micro w/min fn xtal, min chalky, min foss frags/min dense ool, no vis por, no odor, ns.

LS: wht/cm, micro-f xtal, min chalky, no vis por, no odor, ns.

LS: cm/lt bm/lt gry, micro-m xtal, some chalky, min silty, cm/gry/bm chert, foss frags/ool, 11 pcs w/sfo, f-crs in-xtal, brite yel fluor, gd odor, sfo.

LS: cm/min lt bm, micro-m xtal, some chalky, min wht/lt gry chert, min foss frags/min ool, 22 pcs w/sfo, vf-m in-xtal por, brite yel fluor, slit odor, sfo.

SH: m-dk gry/red-bm/gry-green, some vry silty, carb, soft-firm.

LS: cm/lt bm/lt gry, micro-m xtal, smpl vry chalky, some silty, min crm chert, foss frags/min dense ool, no vis por, no odor, ns.

CFS @ 3930'
Stop/30"/60"

CFS @ 3950'
Stop/30"/60"

CFS @ 3980'
Stop/30"/60"

DST1) 3980-4015 Toronto

30/45/45/60
1st Blow built to 8.5"; No BB.
2nd Blow built to 10"; No BB.
IFP 21-51#
ISIP 988#
FFP 55-104#
FSIP 984#
HP 1977-1899#
Recvd: 1' Oil (100%O), 180' MW (50%M, 50%W),

CFS @ 4015'
Stop/30"/60"

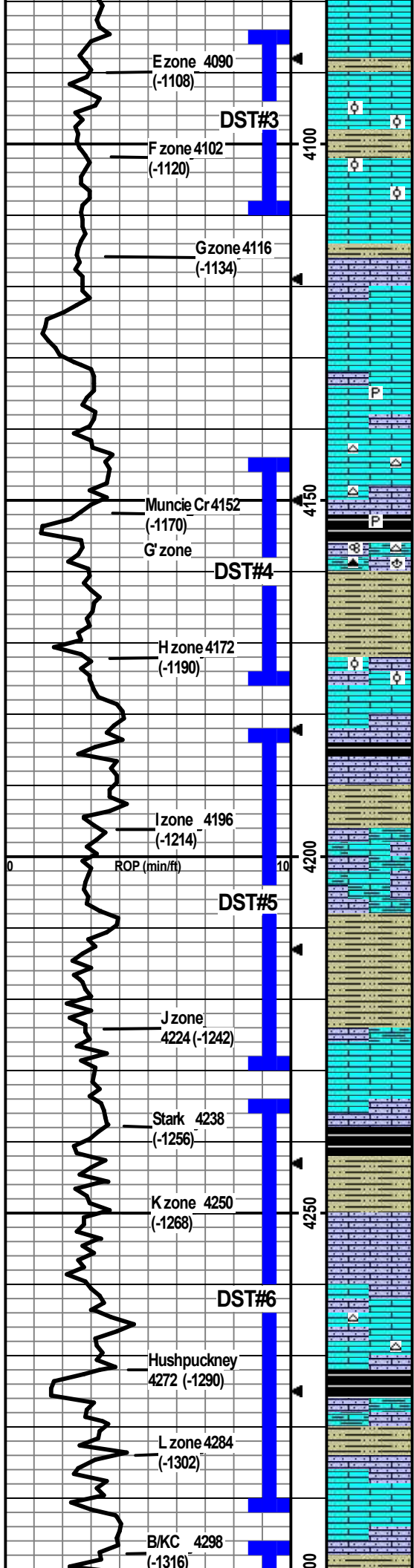
Pipe strap TOH for DST #1 @ 4015' was 0.81' short to board.

CFS @ 4040'
Stop/30"/60"

CFS @ 4060'
Stop/30"/60"

DST2) 4038-4060 Lansing C-zone

30/45/45/60
1st BOB @ 7.5min; 1.25" BB.
2nd BOB @ 11min; 2.75" BB.
IFP 29-138#
ISIP 1190#
FFP 140-288#
FSIP 1169#
HP 1997-1915#



Recvd: 120' GIP, 150' GO (15%G, 85%O), 90' GOMW (15%G, 5%O, 30%M, 50%W), 390' MMW (2%M, 98%W, w/oil spots).

DST#3

LS: cm/lt bm/min lt gry, micro-m xtal, some chalky, foss frags/some ool, 44 pcs w/sfo, ppt-crs/vug in-xtal/in-ool por, dul yel fluor, gd odor, sfo.

LS: cm/lt bm, micro-m xtal, some chalky, foss frags/some ool, 15-20% of smpl w/sfo, vf-crs/vug in-xtal/in-ool por, dul yel fluor, stg odor, sfo.

LS: wht/cm/lt bm, micro-m xtal, chalky, min foss frags, 38 pcs w/sfo, vf-m in-xtal por, dul yel fluor, gd odor, sfo.

LS: wht/cm, micro-m xtal, some chalky, some silty, min foss frags, 18 pcs w/wedge staining/sfo, ppt-m in-xtal por, no fluor, no odor, ns.

LS: wht/cm/lt gry/min lt bm, micro-m xtal, vry chalky, some silty/sndy, min pyrite, min foss frags, no vis por, no odor, ns. (2 pcs w/sfo assume from above.)

LS: cm/lt bm/lt gry, micro-m xtal, some chalky, some silty, gd amt wht/lt gry/lt bm chert, min foss frags, no vis por, no odor, ns.

SH: blk, some silty, min pyrite, carb, firm, fissile.

LS: cm/lt-m bm/gry mottling, micro-m xtal, chalky, some vry silty/arg, wht/lt-dk bm chert, foss frags/fusln/brac, 10 pcs w/staining/sfo, ppt-crs in-xtal por, brite yel fluor, gd odor, sfo.

SH: lt-dk gry/blk/lt gry-green/red-brn, silty, carb, soft-firm.

LS: wht/cm/lt bm/lt gry, micro-m xtal, some chalky, some silty, foss frags/ool, 5-10% of smpl w/sfo, oil bm-blk, ppt-m w/min crs in-xtal/in-ool por, dul yel fluor, gd odor, sfo.

LS: wht/cm/lt gry, micro-m xtal, some chalky, some silty/sndy, foss frags, no vis por, no odor, ns.

SH: lt-dk gry/blk/dk maroon, silty, carb, soft-firm.

LS: crm/lt-m brn/lt gry, micro-m xtal, some chalky, some silty/arg, min foss frags, no vis por, no odor, ns. (1 pce w/show assume from above.)

SH: lt-dk gry/dk maroon, silty, carb, soft-firm.

LS: cm/lt-m bm, micro-f xtal, chalky, some silty/arg, min foss frags, 21 pcs w/sfo, mostly ppt-vf w/some f-med in-xtal por, dul yel fluor, yel cut, slit odor, sfo.

LS: same as above w/14 pcs of show, no odor.

SH: lt-dk gry/blk/red-brn/maroon/lt gry-green, some silty, carb, soft-firm.

LS: cm/lt gry/lt brn-gry, micro-m xtal, min silty/arg, some chalky, min foss frags, no vis por, no odor, ns.

LS: cm/lt gry, micro-f xtal, some silty, chalky, min foss frags, no vis por, no odor, ns.

SH: lt-dk gry/blk/red-brn/dk maroon, some vry silty, carb, soft-firm.

LS: cm/lt bm/lt gry, vf-m xtal, silty/sndy, vry chalky, foss frags/grainy, 17 pcs w/staining/sfo, lt bm oil, ppt-m in-xtal por, brite yel fluor, slit odor, sfo.

LS: cm/min lt gry, micro-m xtal, chalky, min silty, crm chert, foss frags, no vis por, no odor, ns.

SH: dk gry/blk, some silty, slit carb, firm.

SH: lt-m gry/min red-brn, some vry silty, carb, soft-firm.

LS: cm/lt-m gry-brn/lt gry, micro-m xtal, some silty, chalky, min foss frags, no vis por, no odor, ns. 3 pcs in 60min smpl w/sfo, ppt-m in-xtal por, brite yel fluor, no odor, slit sfo.

LS: cm/lt gry/lt brn, micro-m xtal, some silty/sndy, some chalky, foss frags, no vis por, no odor, ns.

SH: dk gry/blk, some silty, slit carb, firm.

SH: lt-m gry/min red-brn, some vry silty, carb, soft-firm.

LS: cm/lt gry/lt brn, micro-m xtal, some silty/sndy, some chalky, foss frags, no vis por, no odor, ns.

SH: dk gry/blk, some silty, slit carb, firm.

CFS @ 4088'
Stop/30"/60"

CFS @ 4100'
Stop/30"/60"

CFS @ 4110'
Stop/30"/60"

**DST3) 4084-4110
Lansing E & F-zones**

30/45/45/60
1st BOB @ 3.5min; 9" BB.
2nd BOB @ 5min; 2" BB.
IFP 37-233#
ISIP 1258#
FFP 230-463#
FSIP 1258#
HP 2027-1938#
Recvd: 400' GIP, 560' GO (25%G, 75%O), 180' GMWO (20%G, 10%M, 30%W, 40%O), 350' MMW (2%M, 98%W).

CFS @ 4162'
Stop/30"/60"

CFS @ 4175'
Stop/30"/60"

**DST4) 4145-4175
Lansing G' & H-zones**

30/45/45/60
1st Blow built to 7"; No BB.
2nd Blow built to 6"; No BB.
IFP 30-60#
ISIP 1404#
FFP 65-96#
FSIP 1290#
HP 2076-1975#
Recvd: 5' Oil (100%O), 160' OCM (3%O, 97%M).

CFS @ 4202'
Stop/30"/60"

CFS @ 4230'
Stop/30"/60"

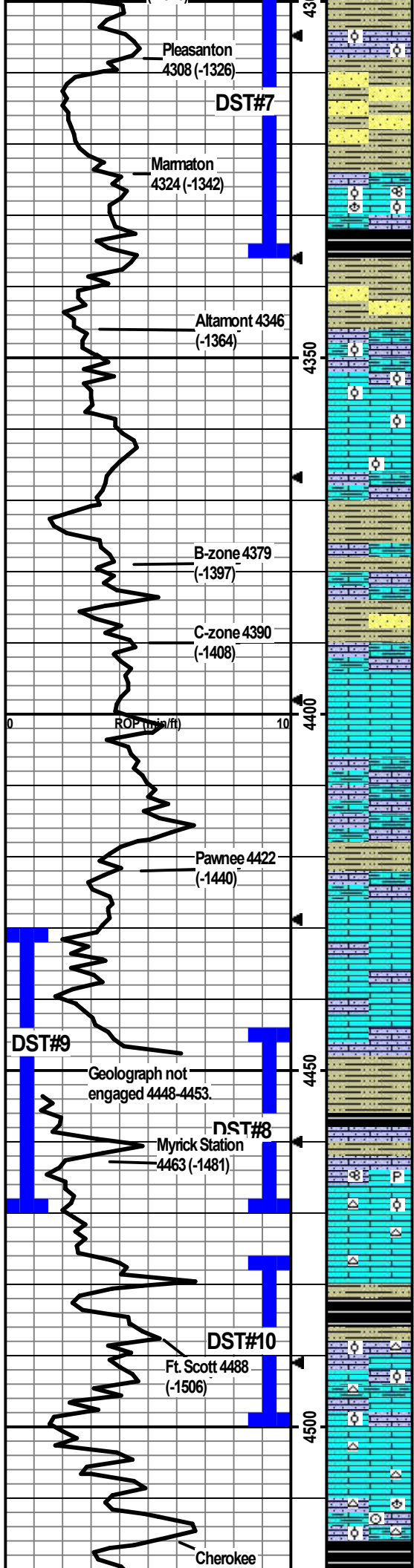
**DST5) 4182-4230
Lansing I & J-zones**

30/30/30/30
1st Blow built to 1/4"; No BB.
2nd No Blow; No BB.
IFP 23-24#
ISIP 192#
FFP 25-26#
FSIP 66#
HP 2077-2021#
Recvd: 10' M (100%M) w/oil spots.

CFS @ 4260'
Stop/30"/60"

CFS @ 4291'
Stop/30"/60"

**DST6) 4234-4291
Lansing K & L-zones**



LS: lt-dk gry/blk, some vry silty, carb, soft-nim.

SH: m-dk gry/red-bm, vry silty/sndy, carb, soft-firm. SS: wht/lt gry/lt green-gry/red-bm, vf-f, sr-wr, arg, carb, soft, friable, no odor, ns.

LS: cm/lt-m bm, micro-m xtal, chalky, some silty/sndy/arg, foss frags/dense ool/brac/fusln, 32 pcs w/sfo, f-crs in-xtal por, brite yel fluor, gd odor, sfo.

SH: lt-dk gry/blk/red-bm/lt gry-green/dk maroon, some vry silty/sndy, carb, soft-firm. Min SS: lt-m red-bm, vf-f, pred qtz, arg, slit carb, friable, no odor, ns.

LS: cm/lt-m bm/lt yel/wht w/red-bm mottling, micro-m xtal, some silty/sndy/arg, some chalky, foss frags/abund dense ool, no odor, ns.

LS: cm/lt-m bm/lt gry/lt yel/red-bm mottling, micro-m xtal, some silty/arg, chalky, foss frags/min ool, no vis por, no odor, ns.

SH: lt-dk gry/maroon, silty, carb, soft-firm.

LS: wht/cm/lt-m bm/lt gry/lt maroon/lt gry-green mottling, micro-m xtal, some chalky, some silty/arg, foss frags, no vis por, no odor, ns

SH: lt-dk gry/red-bm/mustard yel/maroon, some vry silty/sndy, carb, soft-firm. Min SS: lt gry, vf-f, sr-wr, pred qtz, arg, carb, hard/sit friable, no odor, ns.

LS: cm/lt gry, micro-m xtal, some chalky, lt gry-vry silty, foss frags, no vis por, no odor, ns.

LS: wht/cm/lt gry/lt gry-bm, micro-m xtal, chalky, some vry silty/arg, foss frags/some grainy, no vis por, no odor, ns.

SH: lt-dk gry/gry-bm/dk bm, some laminated, some vry silty, carb, soft-firm.

LS: cm/lt bm/lt gry, micro-m xtal, some silty/arg, chalky, foss frags/fusln/min dense ool, no vis por, no odor, ns.

LS: cm/min lt gry, micro-m xtal/some 2ndary xtls, some chalky, min silty, foss frags, no vis por, no odor, ns.

LS: cm/min lt bm/min lt gry, micro-m xtal, some silty, chalky, foss frags/min grainy, no vis por, no odor, ns.

SH: m-dk gry/blk, some silty, carb, soft-firm, fissile.

LS: cm/lt bm, micro-m xtal, some chalky, some silty, min lt gry chert, min pyritic, foss frags/fusln/few dense ool, 26 pcs w/sfo, f-crs in-xtal por, brite yel fluor, stg odor, gd sfo.

LS: cm/lt bm, micro-m xtal, some chalky, some silty, cm/lt gry chert, foss frags, 25 pcs w/sfo, f-vug in-xtal por, brite yel fluor, stg odor, gd sfo.

SH: lt-dk gry/blk, some silty/sndy, carb, soft-firm, fissile.

LS: wht/cm/lt-m bm, micro-m xtal, some silty, some chalky, some wht chert, foss frags/abund ool, 25 pcs w/sfo, f-vug in-xtal por, brite yel fluor, stg odor, sfo.

LS: as above, 14 pcs w/sfo, f-vug in-xtal por, brite yel fluor, stg odor, sfo.

LS: cm/lt-m bm, micro-m xtal, min chalky, lt gry/lt bm chert, foss frags, 3 pcs with staining/sfo, ppt-f in-xtal por, dul yel fluor, no odor, slit sfo.

LS: cm/lt-m bm/lt-m gry-bm, micro-m xtal, min chalky, some silty/sndy/arg, lt bm chert, foss frags/brac/crin/ool, no vis por, no odor, ns.

SH: dk gry/blk/bm mottling, silty, carb/carb nod, firm, fissile.

30/45/45/60
1st BOB @ 24min; No BB.
2nd BOB @ 9min; No BB.
IFP 26-41#
ISIP 929#
FFP 42-64#
FSIP 925#
HP 2107-2021#
Recvd: 380' GIP, 30'Oil (100%O),
70'GOCM (25%G, 30%O, 45%M).

CFS @ 4336'
Stop/30"/60"

DST7) 4296-4336 Marmaton

30/45/45/60
1st Blow built to 8.25"; No BB.
2nd Blow built to 3"; No BB.
IFP 30-26#
ISIP 76#
FFP 24-34#
FSIP 68#
HP 2157-2115#
Recvd: 150' GIP, 30'OCM (10%O, 90%M).

CFS @ 4360'
Stop/30"/60"

CFS @ 4384'
Stop/30"/60"

CFS @ 4400'
Stop/30"/60"

CFS @ 4429'
Stop/30"/60"

Lost approx 80 bbls @ 4445. Stopped drilling and mixed and ran in tank of mud.

CFS @ 4470'
Stop/30"/60"

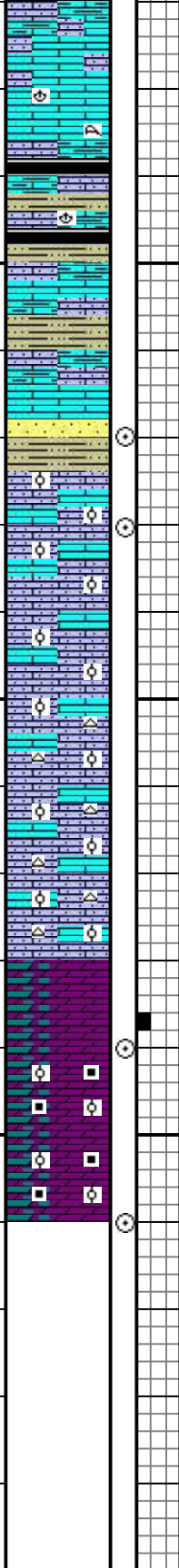
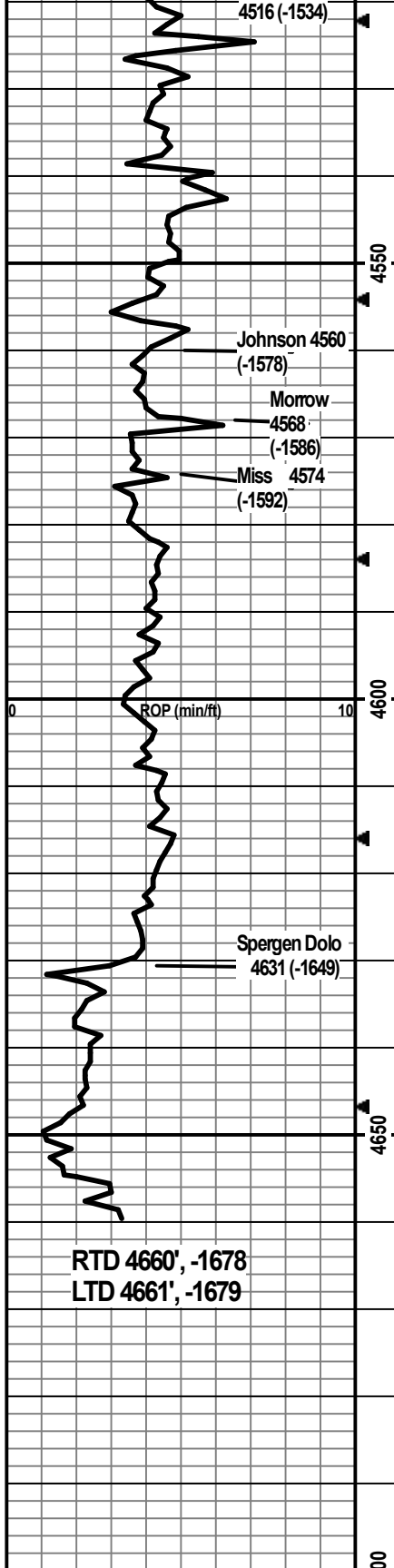
DST8) 4444-4470 Myrick Station (Miss Run - Packer Failure.)

DST9) 4430-4470 Myrick Station
NOTE: used shale packer.

(Miss Run - Packer Failure.)

CFS @ 4500'
Stop/30"/60"

NOTE: LCM @ 8lbs, spotted 80bbl pill w/lower lcm @ 4500' prior to TOH w/bit for DST #10.



LS: wht/cm/lt-m bm, micro-m xtal/some 2ndry xtals, some silty/arg, chalky, foss frags, min vf-m in-xtal por, no odor, ns.

LS: cm/lt-m bm/lt gry, micro-m xtal, chalky, min silty/sndy/arg, foss frags/brac/columnar coral, no vis por, no odor, ns.

SH: lt-dk gry/blk/lt bm/lt gry-green, silty, carb, soft-firm.

LS: cm/lt-m bm/lt-m gry, micro-m xtal, chalky, some silty/arg, foss frags/brac, no vis por, no odor, ns.

LS: cm/lt-m bm, micro-m xtal/2ndry xtals, some chalky, some silty/arg, foss frags, no vis por, no odor, ns.

SH: lt-dk gry/lt gry-green/lt bm/min mustard yel, silty, carb, soft-firm.

LS: cm/lt-m bm, micro-m xtal, some chalky, some silty/arg, foss frags, no vis por, no odor, ns. Few SS clusters: wht/lt gry, f-m, sr-wr, carb matrix, no vis por, ns.

Min SH: lt-dk gry/blk/gry-green/maroon/mustard yel/dk red-bm, some vry silty/sndy, carb, soft-firm.

LS: wht/cm/lt bm/lt yel/red-bm mottling, micro-m xtal, some vry sndy, some vry chalky, dense oolites, no vis por, no odor, ns. (Weathered Miss)

LS: wht/cm/lt bm/lt yel/lt pink, micro-m xtal, chalky, some sndy, dense ool, no vis por, no odor, ns.

LS: wht/cm/lt bm/lt yel/lt pink/mustard yel, micro-m xtal, chalky, some sndy, dense ool, no vis por, no odor, ns.

LS: wht/cm/lt yel/mustard yel, micro-m xtal, micro-m xtal, sndy, chalky, wht/lt orange chert, oolitic, no vis por, no odor, ns.

LS: wht/cm/lt yel/lt gry, micro-m xtal, some sndy, chalky, wht/cm chert, oolitic, no vis por, no odor, ns.

LS: wht/cm, vf-m xtal, some sndy, chalky, wht/lt orange chert, ool, no vis por, no odor, ns.

Dolo: lt bm, vf-f xtal, sucrosic, sndy, vf-crs in-xtal por, no odor, ns.

60min Smpl: Dolo as above w/3 pcs w/sfo, f-crs in-xtal por, no fluor, yel cut, no odor, slt sfo.

Dolo: cm/lt-m bm/gry mottling, vf-f xtal, sucrosic, sndy, some ool, some LS inclus, f-crs in-xtal por, no odor, ns.

TD @4660'

DST10) 4476-4500
Ft Scott

30/45/45/60
 1st) BOB @ 15sec; No BB.
 2nd) BOB @ 7min; No BB.
 IFP 1398-607#
 ISIP 1588#
 FFP 665-739#
 FSIP 1383#
 HP 2179-2038#
 Recvd: 1480' M (100%M).

CFS @ 4570'
 Stop/30"/60

CFS @ 4580'
 Stop/30"/60

CFS @ 4640'
 Stop/30"/60

CFS @ 4660'
 Stop/30"/60"
 Did 5 std wiper trip, then CTCH
 1.5 hr, then TOH for logging.

RTD 4660', -1678
 LTD 4661', -1679



RITCHIE

EXPLORATION, INC.
Wichita, Kansas

#4 Rodie

1,507' FSL & 1,731' FWL

143' S & 81' E of SW NE SW Section 15-11S-31W

Gove County, Kansas

API# 15-063-22429-0000

Elevation: GL: 2,973', KB: 2,982'

Sample Tops			Ref. Well
Anhydrite	2508	+474	+1
B/Anhydrite	2535	+447	+1
Stotler	3639	-657	+4
Heebner	3982	-1000	+10
Toronto	4004	-1022	+13
Lansing	4023	-1041	+10
Muncie	4152	-1170	+11
Stark	4238	-1256	+11
Hushpuckney	4272	-1290	+11
BKC	4298	-1316	+11
Marmaton	4324	-1342	+15
Altamont	4346	-1364	+17
Pawnee	4418	-1436	+15
Myrick	4463	-1481	+10
Ft Scott	4488	-1506	+11
Cherokee	4516	-1534	+9
Johnson	4560	-1578	+9
Morrow	4568	-1568	+11
Mississippian	4582	-1600	+9
RTD	4660	-1678	



CHARGE TO: Richie Exploration
 ADDRESS _____
 CITY, STATE, ZIP CODE _____

TICKET 35997

PAGE 1 OF 2

SERVICE LOCATIONS		WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. <u>Hays, KS</u>		<u>#24</u>	<u>Roobie</u>	<u>Grode</u>	<u>KS</u>		<u>05/11/23</u>	<u>Same</u>
2. <u>Ness City, KS</u>		TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR <u>Duke Drilling</u>	RIG NAME/NO.	SHIPPED VIA	DELIVERED TO	ORDER NO.	
3.		WELL TYPE <u>8 1/2</u>	WELL CATEGORY <u>Development</u>	<u>#4</u>	<u>CT</u>	<u>Location</u>		
4.		INVOICE INSTRUCTIONS	JOB PURPOSE <u>Cement long string</u>		WELL PERMIT NO.	WELL LOCATION		
REFERRAL LOCATION		INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY. U/M			UNIT PRICE	AMOUNT
		LOC	ACCT	DF			QTY.	U/M	QTY.		
575						<u>#110</u>	<u>88</u>	<u>mi</u>		<u>8.00</u>	<u>640.00</u>
578					<u>Pump Charge - long string</u>		<u>1</u>	<u>EA</u>		<u>1700.00</u>	<u>1700.00</u>
240					<u>D-Air</u>		<u>2</u>	<u>gal</u>		<u>42.00</u>	<u>84.00</u>
281					<u>MudPlush</u>		<u>500</u>	<u>gal</u>		<u>2.50</u>	<u>1250.00</u>
221					<u>Liquid KCl</u>		<u>2</u>	<u>gal</u>		<u>25.00</u>	<u>50.00</u>
403					<u>Cement Basket 5 1/2"</u>		<u>4</u>	<u>EA</u>		<u>350.00</u>	<u>1400.00</u>
484					<u>Art Collar 5 1/2"</u>		<u>1</u>	<u>EA</u>		<u>2600.00</u>	<u>2600.00</u>
406					<u>Latex Down Plug & Baffle 5 1/2"</u>		<u>1</u>	<u>EA</u>		<u>300.00</u>	<u>300.00</u>
487					<u>Insert float shoe w/ Anchor 11 5 1/2"</u>		<u>1</u>	<u>EA</u>		<u>400.00</u>	<u>400.00</u>
489					<u>Turbolizer 5 1/2"</u>		<u>8</u>	<u>EA</u>		<u>110.00</u>	<u>880.00</u>

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS.
 X
 DATE SIGNED _____ TIME SIGNED _____
 A.M. P.M.

REMIT PAYMENT TO:
 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	AGREE	UNDECIDED	DISAGREE
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND			

Page 1	9304.00
Page 2	7776.76
Sub total	16,780.76
GST	1120.73
TOTAL	17901.49

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.
 SWIFT OPERATOR [Signature] APPROVAL [Signature]
 Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 05/11/23 PAGE NO. 1

CUSTOMER		WELL NO.		LEASE		JOB TYPE		TICKET NO.	
Ritchie Exploration		#4		Redie		Long String		35997	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
	2345								On location w/Flat Equipment
									TD - 4660' ^{PHD 4591 - 69'} TP - 4656' of 5 1/2" x 15" # 110 JTS Shoe JT - 21' Baffle Plate - 4635 Port Collar - Top of 50 @ 2502' Turbos - 35, 3, 5, 10, 12, 14, 49, 51 Baskets - Bmat 8, 50, 68, 82
	0315								Start casing w/FE
	0530								Break circulation on Bottom
	0625								Hook up to Swift
		2	8						Plug Rathole w/30 SKS
		4	12			400			Pump Mudflush
		4	20			400			Pump KCL spacer
	0645	4				400			Start Cement
		4	45			Var			Finish Cement
						Var			Drop Plug - Wash out Pump & Lines
	0705	6							Start Displacement
		5	85			300			Catch Pressure
		6	109			900			Lift PSI
	0730	6	110			1500			Land Plug
	0735								Release Truck, Dry
									Washup
									Rack up
	0745								Job Complete

Thanks,
 Jon, Joe + Brett



Services, Inc.

CHARGE TO: Rishiri Exploration

ADDRESS
CITY, STATE, ZIP CODE

TICKET 36208

PAGE 1 OF 1

1. <u>Hays, KS</u>	WELL/PROJECT NO. # <u>24</u>	LEASE <u>Rodie</u>	COUNTY/PARISH <u>Osage</u>	STATE <u>KS</u>	CITY	DATE <u>05/24/24</u>	OWNER <u>Sunc</u>
2. <u>Ness City, KS</u>	TICKET TYPE <input checked="" type="checkbox"/> SERVICE	CONTRACTOR <u>Express Well Service</u>	RIG NAME/NO.	SHIPPED VIA <u>CT</u>	DELIVERED TO <u>Location</u>	ORDER NO.	
3.	WELL TYPE <input checked="" type="checkbox"/> SALES	WELL CATEGORY <u>Development</u>	JOB PURPOSE <u>Cement Part Collar</u>	WELL PERMIT NO.		WELL LOCATION	
4.	REFERRAL LOCATION INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	DF								
575		1			MILEAGE # <u>116</u>	70	mi				8.00	560.00
576.D		1			<u>Pump Charge - Part Collar</u>	1	EA				1700.00	1700.00
246		1			<u>D-Air</u>	3	gal				42.00	126.00
275		1			<u>Cotton seed Hulls</u>	3	Sks				40.00	120.00
329-8		2			<u>60/40 Azomix (50% Gel)</u>	4	Sks				14.00	56.00
276		2			<u>Flocele</u>	113	lbs				4.00	452.00
581		2			<u>Service Charge Cement</u>	4	Sks				2.00	8.00
583		2			<u>Drayage</u>	1,372.71	TM				1.00	1372.71
LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.					REMIT PAYMENT TO:							

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS.

DATE SIGNED _____ TIME SIGNED _____ A.M. P.M.

SWIFT OPERATOR [Signature] APPROVAL [Signature]

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT SERVICES, INC.
P.O. BOX 466
NESS CITY, KS 67560
785-798-2300

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	AGREE	UNDECIDED	DISAGREE
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	

PAGE TOTAL 14,530.71

TOTAL 12,185.84

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE

05/24/23

PAGE NO.

1

CUSTOMER		WELL NO.		LEASE		JOB TYPE		TICKET NO.	
Ritchie Exploration		#4		Rodie		Port Collar		36208	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
	1300								On location, rig running tubing. set up trucks.
									2 7/8 x 5 1/2" P.C. - 2505
	1405	1/2	1/2				1200		Test P.C. - Held
		3	3			400			Open P.C. - Test - open. Hook up to tubing
	1425	3 1/2				400			Start Cement
		3 1/2	5			400			Fluid Circulating
		1/2	75			0			Lost Circulation, slow rate.
	1500		100						Shut Down, wait 15 mins.
	1515	3				200			Start Cement again
		3	120			400			Fluid Circulating
		3	150			600			Finish Cement, Start Displ.
		3	110 1100			600			Cement Circulating to Surface
		3	103 3/4			600			Finish Displacement, Shut Down.
									Close P.C.
							1200		Test P.C. - Held.
									Release truck
									Run 5 JTs
	1600	3 1/2	27				300		Reverse Out, 2 Flags + Clean
									Wash up
									Rack up
	1630								Job Complete
									Thanks
									Jon, Joe & Brett
									450 sacks Total
									10 sacks to pit