

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) (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 Inc**

8100 E 22nd ST N #700
Wichita KS 67278+3188

ATTN: Kent Matson

Frusher 9D #3

9-21s-23w Hodgeman,KS

Start Date: 2021.06.10 @ 12:07:01

End Date: 2021.06.10 @ 19:42:47

Job Ticket #: 67353 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.06.14 @ 11:20:22



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration Inc
8100 E 22nd ST N #700
Wichita KS 67278+3188
ATTN: Kent Matson

9-21s-23w Hodgeman, KS

Frusher 9D #3

Job Ticket: 67353

DST#: 1

Test Start: 2021.06.10 @ 12:07:01

GENERAL INFORMATION:

Formation: **Ft Scott**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 14:38:52
 Tester: Spencer J Staab
 Time Test Ended: 19:42:47
 Unit No: 84
 Interval: **4395.00 ft (KB) To 4410.00 ft (KB) (TVD)**
 Reference Elevations: 2321.00 ft (KB)
 Total Depth: 4410.00 ft (KB) (TVD)
 2316.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

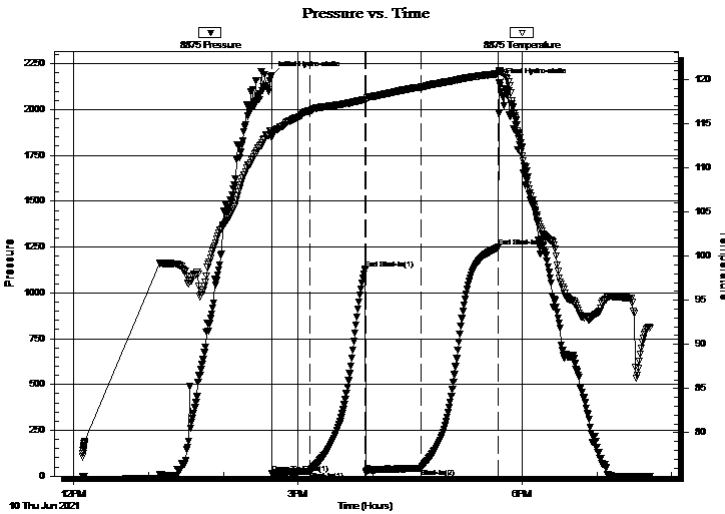
Serial #: 8875

Outside

Press@RunDepth: 44.17 psig @ 4396.00 ft (KB) Capacity: psig
 Start Date: 2021.06.10 End Date: 2021.06.10 Last Calib.: 2021.06.10
 Start Time: 12:07:01 End Time: 19:42:47 Time On Btm: 2021.06.10 @ 14:38:42
 Time Off Btm: 2021.06.10 @ 17:41:37

TEST COMMENT: 30-IF-Surface to 9"
 45-ISI-No Return
 45-FF-BOB 30 secs Built to 26 3/4"
 60-FSI-No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2185.88	114.14	Initial Hydro-static
1	14.84	113.43	Open To Flow (1)
31	27.16	116.43	Shut-In(1)
76	1130.80	117.71	End Shut-In(1)
76	20.22	117.65	Open To Flow (2)
120	44.17	119.11	Shut-In(2)
183	1248.99	120.66	End Shut-In(2)
183	2146.00	121.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	GMCO 55%G 15%M 30%O	0.20
30.00	HOCM 30%O 70%M	0.15
0.00	620' GIP 100%G	0.00

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

Ritchie Exploration Inc

9-21s-23w Hodgeman,KS

8100 E22nd ST N#700
Wichita KS 67278+3188

Frusher 9D #3

Job Ticket: 67353

DST#: 1

ATTN: Kent Matson

Test Start: 2021.06.10 @ 12:07:01

GENERAL INFORMATION:

Formation: **Ft Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:38:52

Time Test Ended: 19:42:47

Test Type: Conventional Bottom Hole (Initial)

Tester: Spencer J Staab

Unit No: 84

Interval: 4395.00 ft (KB) To 4410.00 ft (KB) (TVD)

Reference Elevations: 2321.00 ft (KB)

Total Depth: 4410.00 ft (KB) (TVD)

2316.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6838 Inside

Press@RunDepth: psig @ 4396.00 ft (KB)

Capacity: psig

Start Date: 2021.06.10

End Date:

2021.06.10

Last Calib.:

2021.06.10

Start Time: 12:07:01

End Time:

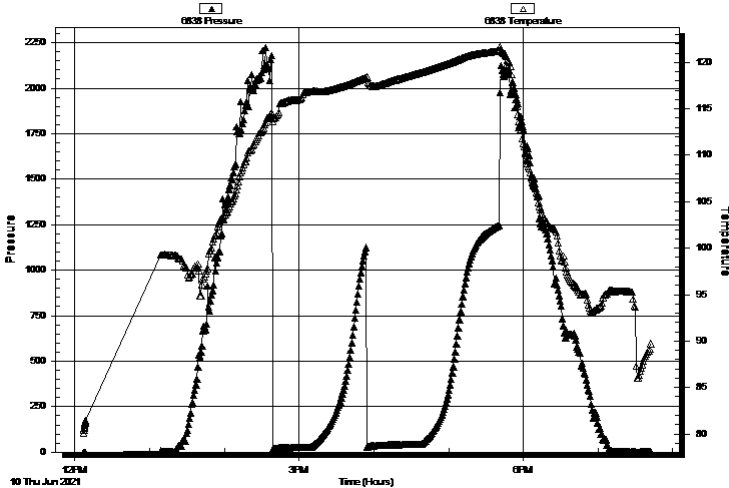
19:42:07

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IF-Surface to 9"
45-ISI-No Return
45-FF-BOB 30 secs Built to 26 3/4"
60-FSI-No Return

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
40.00	GMCO 55%G 15%M 30%O	0.20
30.00	HOCM 30%O 70%M	0.15
0.00	620' GIP 100%G	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc

9-21s-23w Hodgeman,KS

8100 E 22nd ST N #700
Wichita KS 67278+3188

Frusher 9D #3

Job Ticket: 67353

DST#: 1

ATTN: Kent Matson

Test Start: 2021.06.10 @ 12:07:01

Tool Information

Drill Pipe:	Length: 4267.00 ft	Diameter: 3.82 inches	Volume: 60.49 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 116.00 ft	Diameter: 2.25 inches	Volume: 0.57 bbl	Weight to Pull Loose:	61000.00 lb
			<u>Total Volume:</u>	Tool Chased	ft
			- bbl	String Weight: Initial	53000.00 lb
Drill Pipe Above KB:	17.00 ft			Final	54000.00 lb
Depth to Top Packer:	4395.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	15.00 ft				
Tool Length:	44.00 ft				
Number of Packers:	1	Diameter:	6.75 inches		
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4367.00	
Change Over Sub	1.00			4368.00	
Shut In Tool	5.00			4373.00	
Hydraulic tool	5.00		Fluid	4378.00	
Jars	5.00			4383.00	
Safety Joint	3.00			4386.00	
Packer	5.00			4391.00	29.00 Bottom Of Top Packer
Packer	4.00			4395.00	
Stubb	1.00			4396.00	
Recorder	0.00	6838	Inside	4396.00	
Recorder	0.00	8875	Outside	4396.00	
Perforations	11.00			4407.00	
Bullnose	3.00			4410.00	15.00 Bottom Packers & Anchor

Total Tool Length: 44.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc

9-21s-23w Hodgeman,KS

8100 E 22nd ST N #700
Wichita KS 67278+3188

Frusher 9D #3

Job Ticket: 67353

DST#: 1

ATTN: Kent Matson

Test Start: 2021.06.10 @ 12:07:01

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

44 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	GMCO 55%G 15%M 30%O	0.197
30.00	HOCM 30%O 70%M	0.148
0.00	620' GIP 100%G	0.000

Total Length: 70.00 ft

Total Volume: 0.345 bbl

Num Fluid Samples: 0

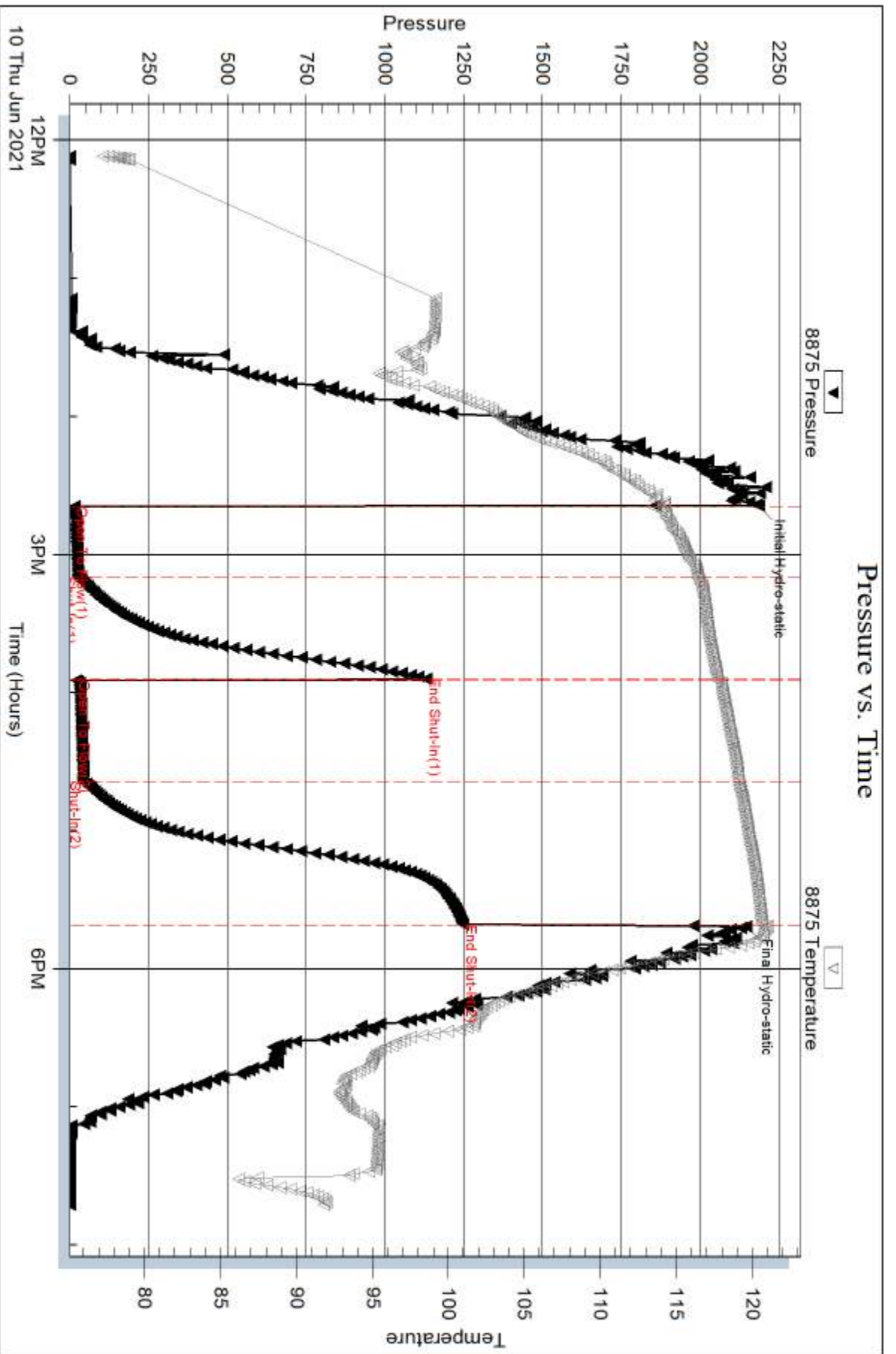
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1#LCM



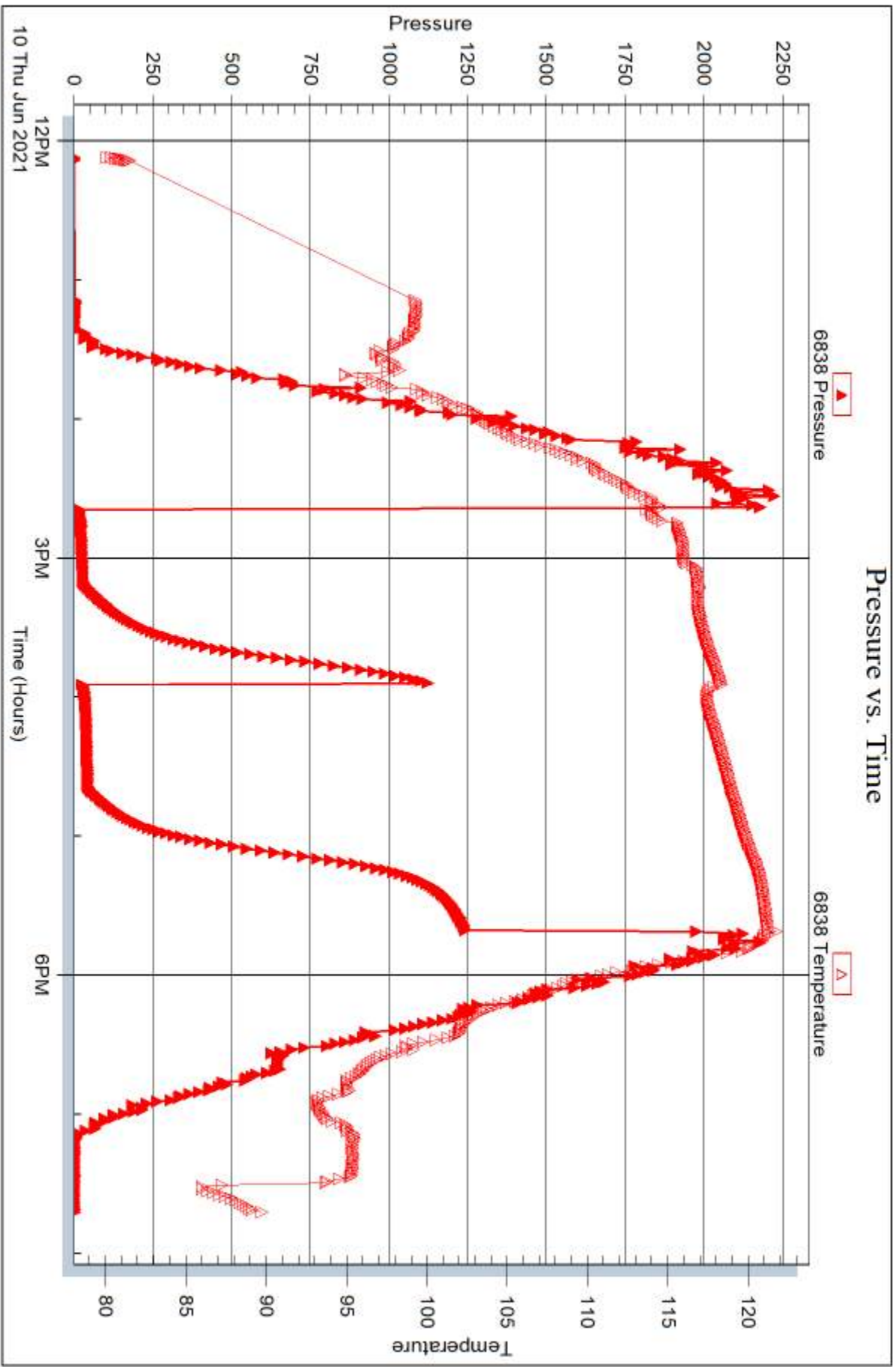
Serial #: 6838

Inside

Richie Exploration Inc

Frustrer 9D#3

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 67353

Printed: 2021.06.14 @ 11:20:23



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

8100 E 22nd ST N #700
Wichita KS 67278+3188

ATTN: Kent Matson

Frusher 9D #3

9-21s-23w Hodgeman,KS

Start Date: 2021.06.11 @ 05:57:00

End Date: 2021.06.11 @ 13:49:26

Job Ticket #: 67354 DST #: 2

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

Printed: 2021.06.14 @ 11:19:55



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration Inc
 8100 E 22nd ST N #700
 Wichita KS 67278+3188
 ATTN: Kent Matson

9-21s-23w Hodgeman, KS
Frusher 9D #3
 Job Ticket: 67354 **DST#: 2**
 Test Start: 2021.06.11 @ 05:57:00

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:01:07
 Time Test Ended: 13:49:26
 Interval: **4450.00 ft (KB) To 4477.00 ft (KB) (TVD)**
 Total Depth: 4477.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Spencer J Staab
 Unit No: 84
 Reference Elevations: 2321.00 ft (KB)
 2316.00 ft (CF)
 KB to GR/CF: 5.00 ft

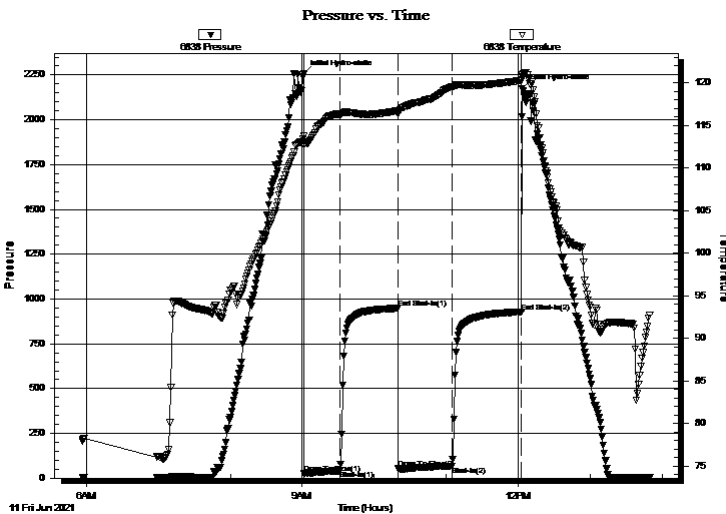
Serial #: 6838

Inside

Press@RunDepth: 67.41 psig @ 4451.00 ft (KB) Capacity: psig
 Start Date: 2021.06.11 End Date: 2021.06.11 Last Calib.: 2021.06.11
 Start Time: 05:57:01 End Time: 13:49:26 Time On Btm: 2021.06.11 @ 09:01:02
 Time Off Btm: 2021.06.11 @ 12:03:22

TEST COMMENT: 30-IF-Surface to 3"
 45-ISI-No Return
 45-FF-Surface to 4"
 60-FSI-No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2254.90	113.74	Initial Hydro-static
1	27.46	112.66	Open To Flow (1)
30	41.58	116.25	Shut-In(1)
79	948.05	116.73	End Shut-In(1)
80	53.65	116.38	Open To Flow (2)
124	67.41	119.51	Shut-In(2)
182	928.18	120.31	End Shut-In(2)
183	2173.42	120.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GSOCM 10%G 10%O 80%M	0.30
90.00	GO 50%G 50%O	0.76
0.00	90 GIP 100%G	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration Inc
8100 E 22nd ST N #700
Wichita KS 67278+3188
ATTN: Kent Matson

9-21s-23w Hodgeman,KS
Frusher 9D #3
Job Ticket: 67354 **DST#: 2**
Test Start: 2021.06.11 @ 05:57:00

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:01:07
Time Test Ended: 13:49:26
Interval: **4450.00 ft (KB) To 4477.00 ft (KB) (TVD)**
Total Depth: 4477.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Spencer J Staab
Unit No: 84
Reference Elevations: 2321.00 ft (KB)
2316.00 ft (CF)
KB to GR/CF: 5.00 ft

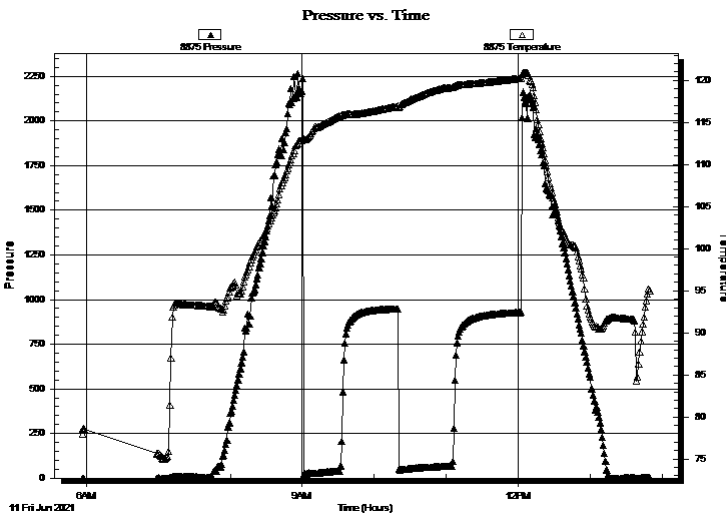
Serial #: 8875

Outside

Press@RunDepth: psig @ 4451.00 ft (KB) Capacity: psig
Start Date: 2021.06.11 End Date: 2021.06.11 Last Calib.: 2021.06.11
Start Time: 05:57:01 End Time: 13:49:26 Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IF-Surface to 3"
45-ISI-No Return
45-FF-Surface to 4"
60-FSI-No Return

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GSOCM 10%G 10%O 80%M	0.30
90.00	GO 50%G 50%O	0.76
0.00	90 GIP 100%G	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 Inc

9-21s-23w Hodgeman,KS

8100 E 22nd ST N #700
Wichita KS 67278+3188

Frusher 9D #3

Job Ticket: 67354

DST#: 2

ATTN: Kent Matson

Test Start: 2021.06.11 @ 05:57:00

Tool Information

Drill Pipe:	Length: 4330.00 ft	Diameter: 3.82 inches	Volume: 61.38 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 116.00 ft	Diameter: 2.25 inches	Volume: 0.57 bbl	Weight to Pull Loose:	58000.00 lb
			<u>Total Volume:</u>	Tool Chased	ft
			- bbl	String Weight: Initial	53000.00 lb
Drill Pipe Above KB:	25.00 ft			Final	54000.00 lb
Depth to Top Packer:	4450.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	27.00 ft				
Tool Length:	56.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4422.00	
Change Over Sub	1.00			4423.00	
Shut In Tool	5.00			4428.00	
Hydraulic tool	5.00		Fluid	4433.00	
Jars	5.00			4438.00	
Safety Joint	3.00			4441.00	
Packer	5.00			4446.00	29.00 Bottom Of Top Packer
Packer	4.00			4450.00	
Stubb	1.00			4451.00	
Recorder	0.00	6838	Inside	4451.00	
Recorder	0.00	8875	Outside	4451.00	
Perforations	23.00			4474.00	
Bullnose	3.00			4477.00	27.00 Bottom Packers & Anchor

Total Tool Length: 56.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc

9-21s-23w Hodgeman,KS

8100 E 22nd ST N #700
Wichita KS 67278+3188

Frusher 9D #3

Job Ticket: 67354

DST#: 2

ATTN: Kent Matson

Test Start: 2021.06.11 @ 05:57:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 11.17 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	GSOCM 10%G 10%O 80%M	0.295
90.00	GO 50%G 50%O	0.757
0.00	90 GIP 100%G	0.000

Total Length: 150.00 ft Total Volume: 1.052 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1 1/2#LCM

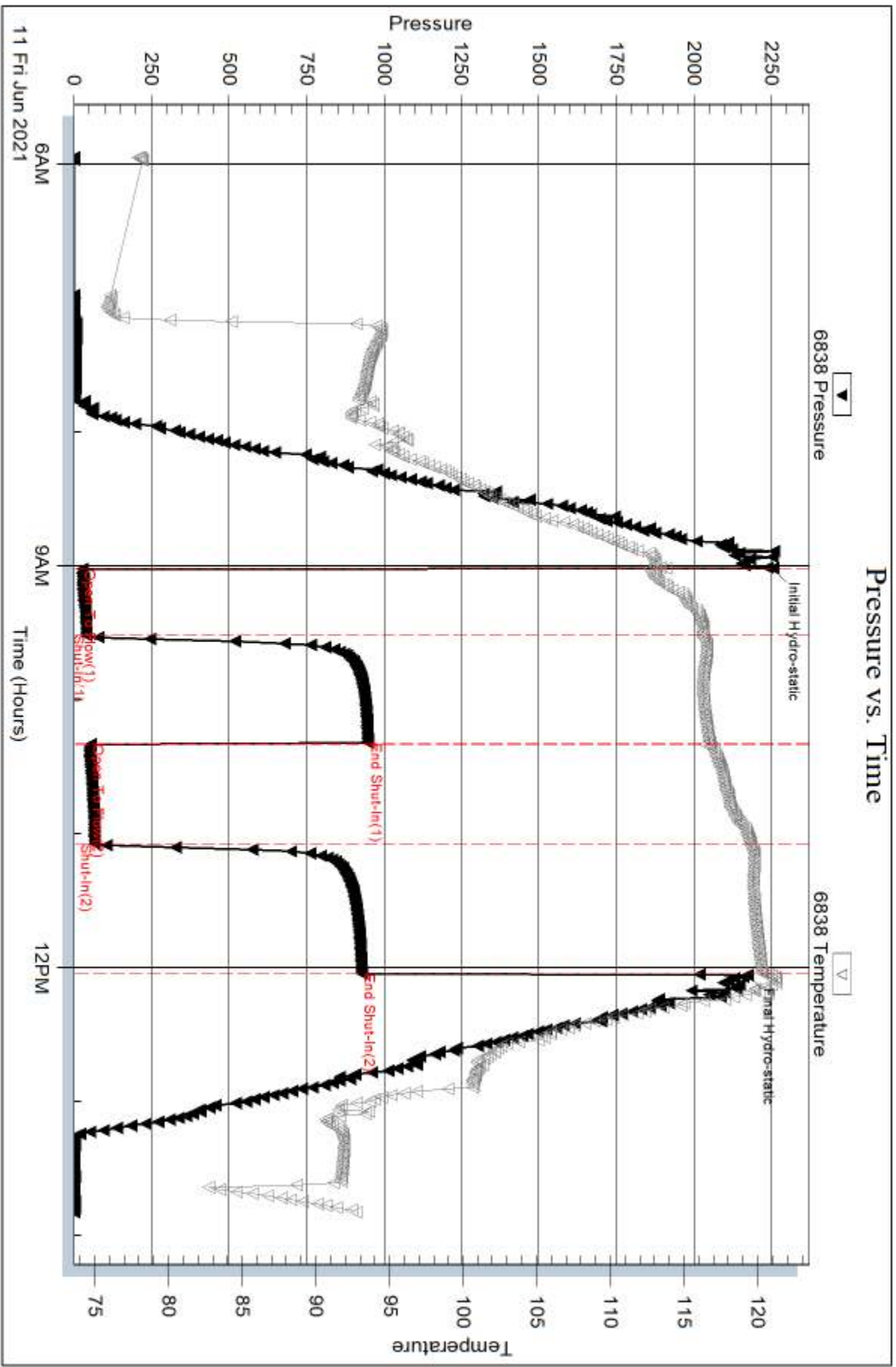
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Inside

Richie Exploration Inc

Frusher 9D#3

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 67354

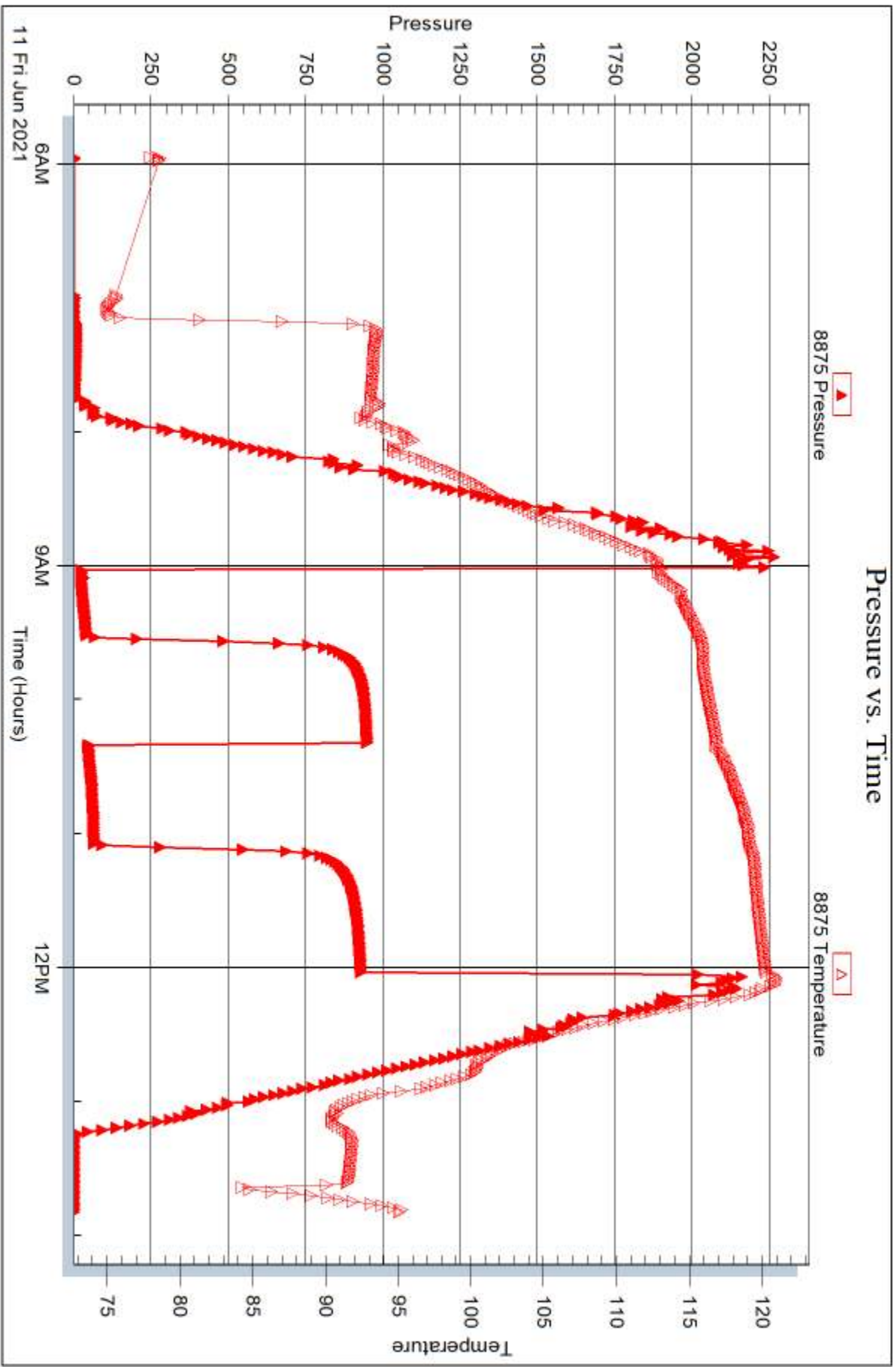
Printed: 2021.06.14 @ 11:19:57

Serial #: 8875

Outside Ritchie Exploration Inc

Frustrer 9D#3

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 67354

Printed: 2021.06.14 @ 11:19:57



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

8100 E 22nd ST N #700
Wichita KS 67278+3188

ATTN: Kent Matson

Frusher 9D #3

9-21s-23w Hodgeman,KS

Start Date: 2021.06.11 @ 19:35:00

End Date: 2021.06.12 @ 03:55:21

Job Ticket #: 67355 DST #: 3

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

Printed: 2021.06.14 @ 11:19:27

Ritchie Exploration Inc
9-21s-23w Hodgeman,KS
Frusher 9D #3
DST # 3
Mississippi
2021.06.11



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Ritchie Exploration Inc
 8100 E 22nd ST N #700
 Wichita KS 67278+3188
 ATTN: Kent Matson

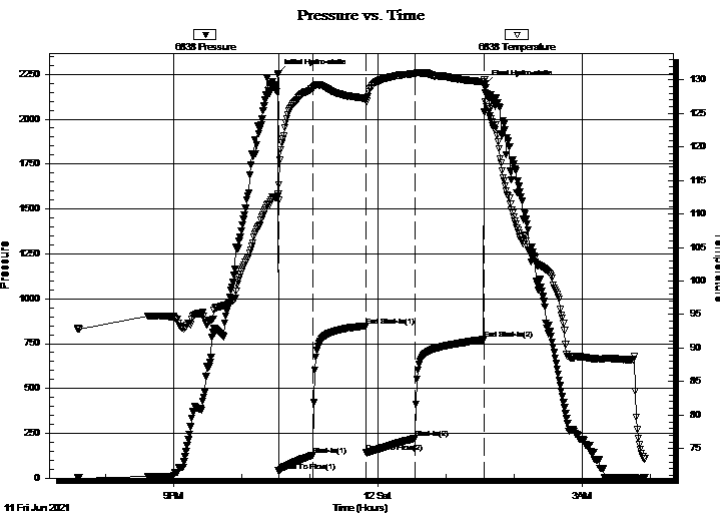
9-21s-23w Hodgeman, KS
Frusher 9D #3
 Job Ticket: 67355 **DST#: 3**
 Test Start: 2021.06.11 @ 19:35:00

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 22:32:02 Tester: Spencer J Staab
 Time Test Ended: 03:55:21 Unit No: 84
 Interval: **4479.00 ft (KB) To 4495.00 ft (KB) (TVD)** Reference Elevations: 2321.00 ft (KB)
 Total Depth: 4495.00 ft (KB) (TVD) 2316.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 6838 Inside
 Press@RunDepth: 222.91 psig @ 4480.00 ft (KB) Capacity: psig
 Start Date: 2021.06.11 End Date: 2021.06.12 Last Calib.: 2021.06.12
 Start Time: 19:35:01 End Time: 03:55:22 Time On Btm: 2021.06.11 @ 22:31:52
 Time Off Btm: 2021.06.12 @ 01:34:22

TEST COMMENT: 30-IF-Surface to 10 1/2"
 45-ISI-Surface to 3/4" Died @ 40 mins
 45-FF-Surface to 6"
 60-FSI-Surface to 1/4" Died @ 10 mins



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2255.70	112.93	Initial Hydro-static
1	39.97	112.05	Open To Flow (1)
31	128.93	128.78	Shut-In(1)
78	848.68	127.24	End Shut-In(1)
78	145.14	126.95	Open To Flow (2)
121	222.91	130.93	Shut-In(2)
182	772.62	129.76	End Shut-In(2)
183	2195.12	128.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	GOCM 20%G 25%O 55%M	0.15
570.00	GO 65%G 35%O	7.28
0.00	350 GIP 100%G	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration Inc
 8100 E 22nd ST N #700
 Wichita KS 67278+3188
 ATTN: Kent Matson

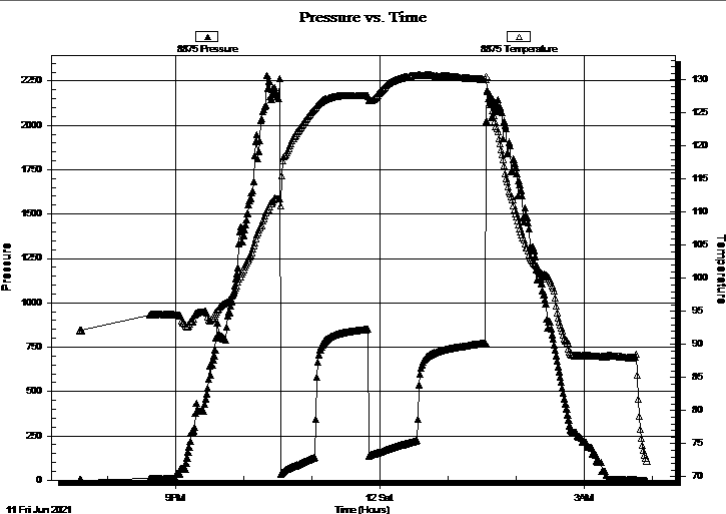
9-21s-23w Hodgeman, KS
Frusher 9D #3
 Job Ticket: 67355 **DST#: 3**
 Test Start: 2021.06.11 @ 19:35:00

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 22:32:02 Tester: Spencer J Staab
 Time Test Ended: 03:55:21 Unit No: 84
Interval: 4479.00 ft (KB) To 4495.00 ft (KB) (TVD)
 Reference Elevations: 2321.00 ft (KB)
 Total Depth: 4495.00 ft (KB) (TVD) 2316.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 8875 Outside
 Press@RunDepth: psig @ 4480.00 ft (KB) Capacity: psig
 Start Date: 2021.06.11 End Date: 2021.06.12 Last Calib.: 2021.06.12
 Start Time: 19:35:01 End Time: 03:55:22 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30-IF-Surface to 10 1/2"
 45-ISI-Surface to 3/4" Died @ 40 mins
 45-FF-Surface to 6"
 60-FSI-Surface to 1/4" Died @ 10 mins



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
30.00	GOCM 20%G 25%O 55%M	0.15
570.00	GO 65%G 35%O	7.28
0.00	350 GIP 100%G	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 Inc

9-21s-23w Hodgeman,KS

8100 E 22nd ST N #700
Wichita KS 67278+3188

Frusher 9D #3

Job Ticket: 67355

DST#: 3

ATTN: Kent Matson

Test Start: 2021.06.11 @ 19:35:00

Tool Information

Drill Pipe:	Length: 4361.00 ft	Diameter: 3.82 inches	Volume: 61.82 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 116.00 ft	Diameter: 2.25 inches	Volume: 0.57 bbl	Weight to Pull Loose:	61000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial	51000.00 lb
Depth to Top Packer:	4479.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	16.00 ft				
Tool Length:	45.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4451.00	
Change Over Sub	1.00			4452.00	
Shut In Tool	5.00			4457.00	
Hydraulic tool	5.00		Fluid	4462.00	
Jars	5.00			4467.00	
Safety Joint	3.00			4470.00	
Packer	5.00			4475.00	29.00 Bottom Of Top Packer
Packer	4.00			4479.00	
Stubb	1.00			4480.00	
Recorder	0.00	6838	Inside	4480.00	
Recorder	0.00	8875	Outside	4480.00	
Perforations	12.00			4492.00	
Bullnose	3.00			4495.00	16.00 Bottom Packers & Anchor

Total Tool Length: 45.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc
8100 E 22nd ST N #700
Wichita KS 67278+3188
ATTN: Kent Matson

9-21s-23w Hodgeman,KS
Frusher 9D #3
Job Ticket: 67355 **DST#: 3**
Test Start: 2021.06.11 @ 19:35:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 38 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 49.00 sec/qt	Cushion Volume: bbl	
Water Loss: 11.18 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 6900.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

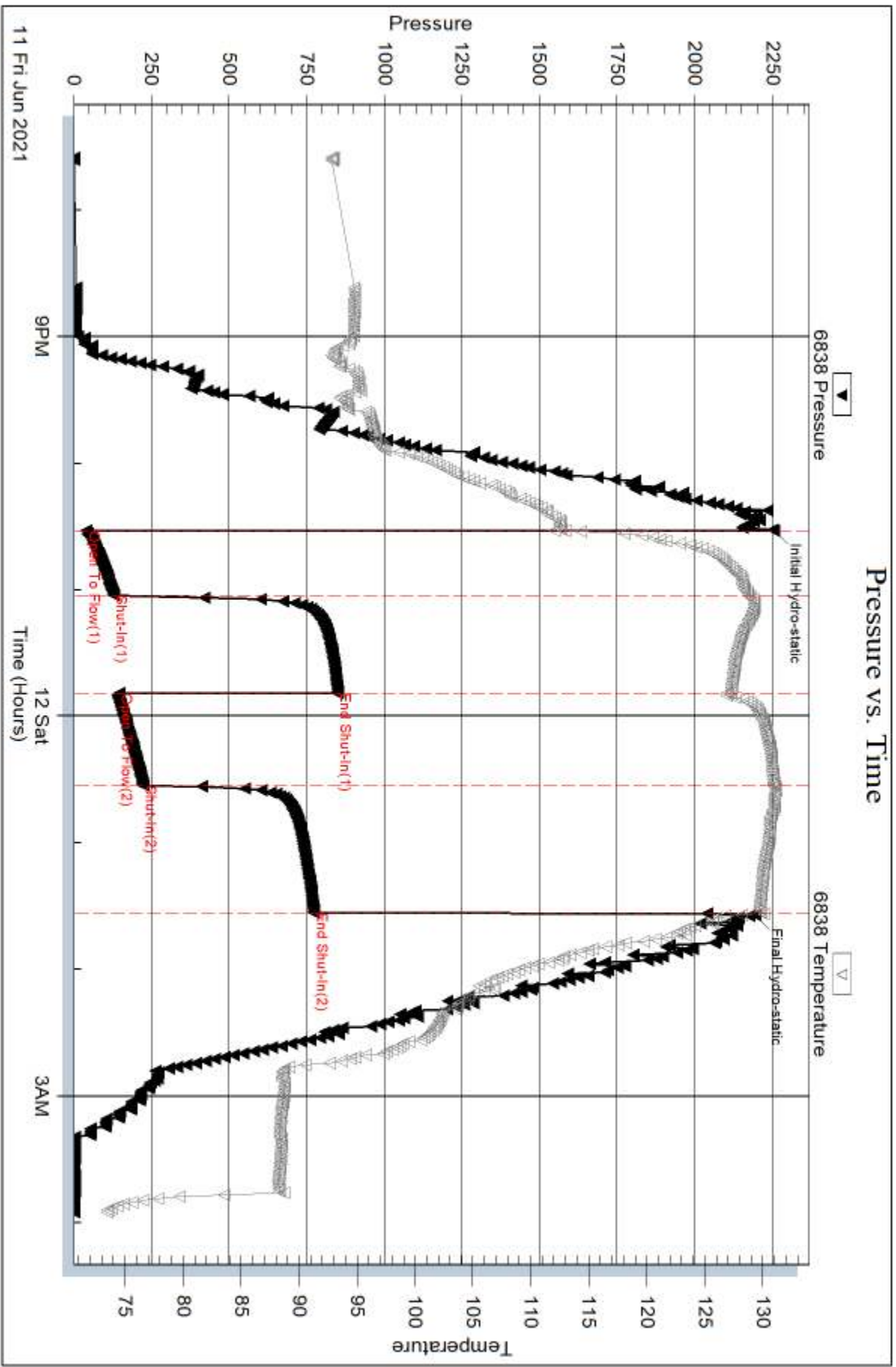
Length ft	Description	Volume bbl
30.00	GOCM 20%G 25%O 55%M	0.148
570.00	GO 65%G 35%O	7.284
0.00	350 GIP 100%G	0.000

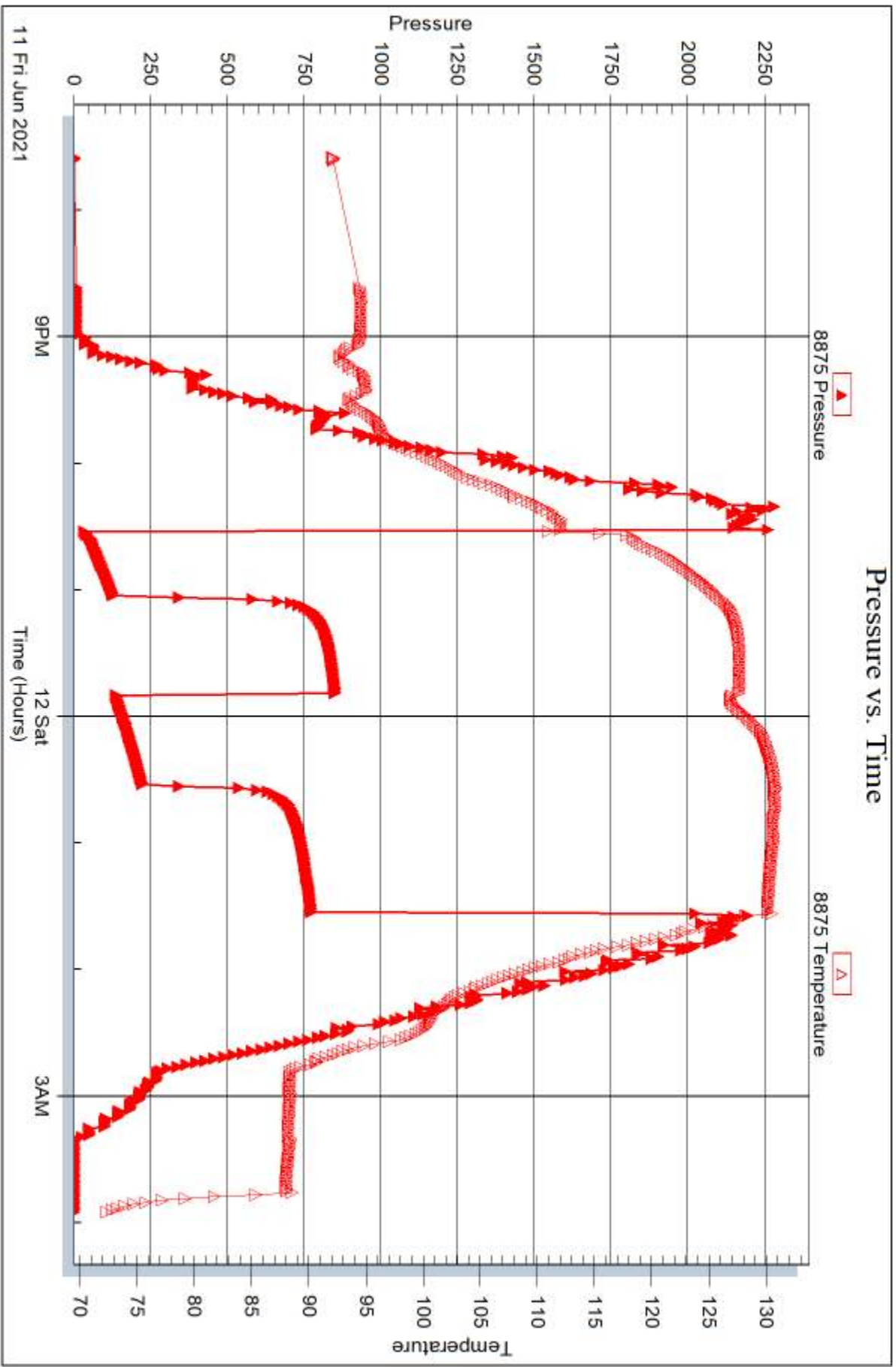
Total Length: 600.00 ft Total Volume: 7.432 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: 1 1/2#LCM







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

8100 E 22nd ST N #700
Wichita KS 67278+3188

ATTN: Kent Matson

Frusher 9D #3

9-21s-23w Hodgeman,KS

Start Date: 2021.06.12 @ 11:58:00

End Date: 2021.06.12 @ 19:16:26

Job Ticket #: 67356 DST #: 4

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

Printed: 2021.06.14 @ 11:18:18

Ritchie Exploration Inc
9-21s-23w Hodgeman,KS
Frusher 9D #3
DST # 4
Mississippi
2021.06.12



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration Inc
8100 E 22nd ST N #700
Wichita KS 67278+3188
ATTN: Kent Matson

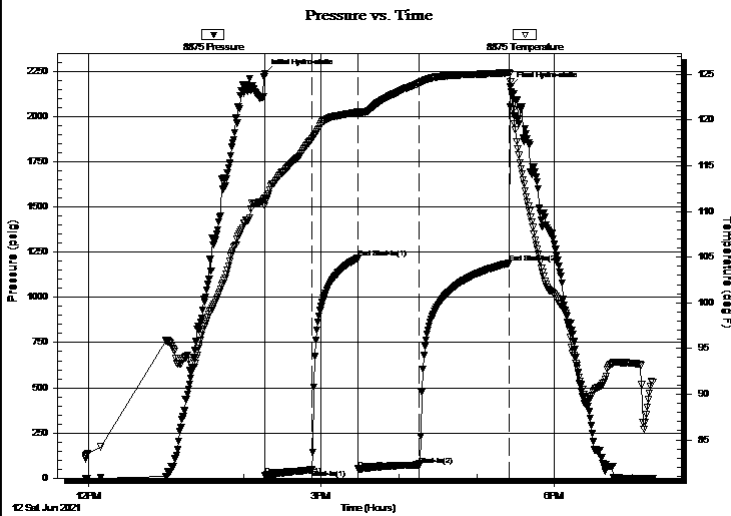
9-21s-23w Hodgeman, KS
Frusher 9D #3
Job Ticket: 67356 **DST#: 4**
Test Start: 2021.06.12 @ 11:58:00

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:16:22
Time Test Ended: 19:16:26
Interval: **4503.00 ft (KB) To 4524.00 ft (KB) (TVD)**
Total Depth: 4524.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Spencer J Staab
Unit No: 84
Reference Elevations: 2321.00 ft (KB)
2316.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8875 Outside
Press@RunDepth: 73.71 psig @ 4504.00 ft (KB) Capacity: psig
Start Date: 2021.06.12 End Date: 2021.06.12 Last Calib.: 2021.06.12
Start Time: 11:58:01 End Time: 19:16:26 Time On Btm: 2021.06.12 @ 14:16:17
Time Off Btm: 2021.06.12 @ 17:26:02

TEST COMMENT: 30-IF-Surface to 1"
45-ISI-No Return
45-FF-Surface to 1"
60-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2239.06	111.46	Initial Hydro-static
1	16.27	110.58	Open To Flow (1)
37	46.69	117.95	Shut-In(1)
72	1217.21	120.86	End Shut-In(1)
73	50.94	120.58	Open To Flow (2)
120	73.71	124.04	Shut-In(2)
189	1189.05	125.22	End Shut-In(2)
190	2165.74	124.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
150.00	MW 30%M 70%W	1.05

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Ritchie Exploration Inc
8100 E 22nd ST N #700
Wichita KS 67278+3188
ATTN: Kent Matson

9-21s-23w Hodgeman, KS
Frusher 9D #3
Job Ticket: 67356 **DST#: 4**
Test Start: 2021.06.12 @ 11:58:00

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 14:16:22 Tester: Spencer J Staab
Time Test Ended: 19:16:26 Unit No: 84

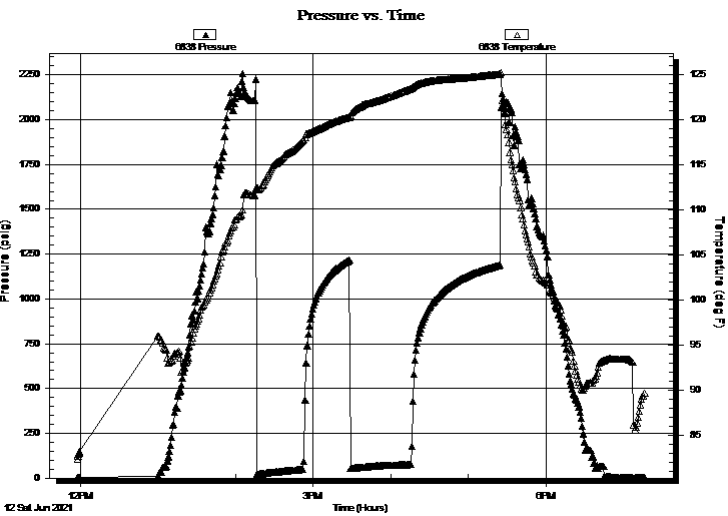
Interval: **4503.00 ft (KB) To 4524.00 ft (KB) (TVD)** Reference Elevations: 2321.00 ft (KB)
Total Depth: 4524.00 ft (KB) (TVD) 2316.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 6838

Inside

Press@RunDepth: psig @ 4504.00 ft (KB) Capacity: psig
Start Date: 2021.06.12 End Date: 2021.06.12 Last Calib.: 2021.06.12
Start Time: 11:58:01 End Time: 19:16:26 Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IF-Surface to 1"
45-ISI-No Return
45-FF-Surface to 1"
60-FSI-No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
150.00	MW 30%M 70%W	1.05

* 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 Inc

9-21s-23w Hodgeman,KS

8100 E 22nd ST N #700
Wichita KS 67278+3188

Frusher 9D #3

Job Ticket: 67356

DST#: 4

ATTN: Kent Matson

Test Start: 2021.06.12 @ 11:58:00

Tool Information

Drill Pipe:	Length: 4392.00 ft	Diameter: 3.82 inches	Volume: 62.26 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 116.00 ft	Diameter: 2.25 inches	Volume: 0.57 bbl	Weight to Pull Loose:	62000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	34.00 ft			String Weight: Initial	53000.00 lb
Depth to Top Packer:	4503.00 ft			Final	53000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	21.00 ft				
Tool Length:	50.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4475.00	
Change Over Sub	1.00			4476.00	
Shut In Tool	5.00			4481.00	
Hydraulic tool	5.00		Fluid	4486.00	
Jars	5.00			4491.00	
Safety Joint	3.00			4494.00	
Packer	5.00			4499.00	29.00 Bottom Of Top Packer
Packer	4.00			4503.00	
Stubb	1.00			4504.00	
Recorder	0.00	6838	Inside	4504.00	
Recorder	0.00	8875	Outside	4504.00	
Perforations	17.00			4521.00	
Bullnose	3.00			4524.00	21.00 Bottom Packers & Anchor

Total Tool Length: 50.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc

9-21s-23w Hodgeman,KS

8100 E 22nd ST N #700
Wichita KS 67278+3188

Frusher 9D #3

Job Ticket: 67356

DST#: 4

ATTN: Kent Matson

Test Start: 2021.06.12 @ 11:58:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

39000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 12.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
150.00	MW 30%M 70%W	1.052

Total Length: 150.00 ft Total Volume: 1.052 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1#LCM

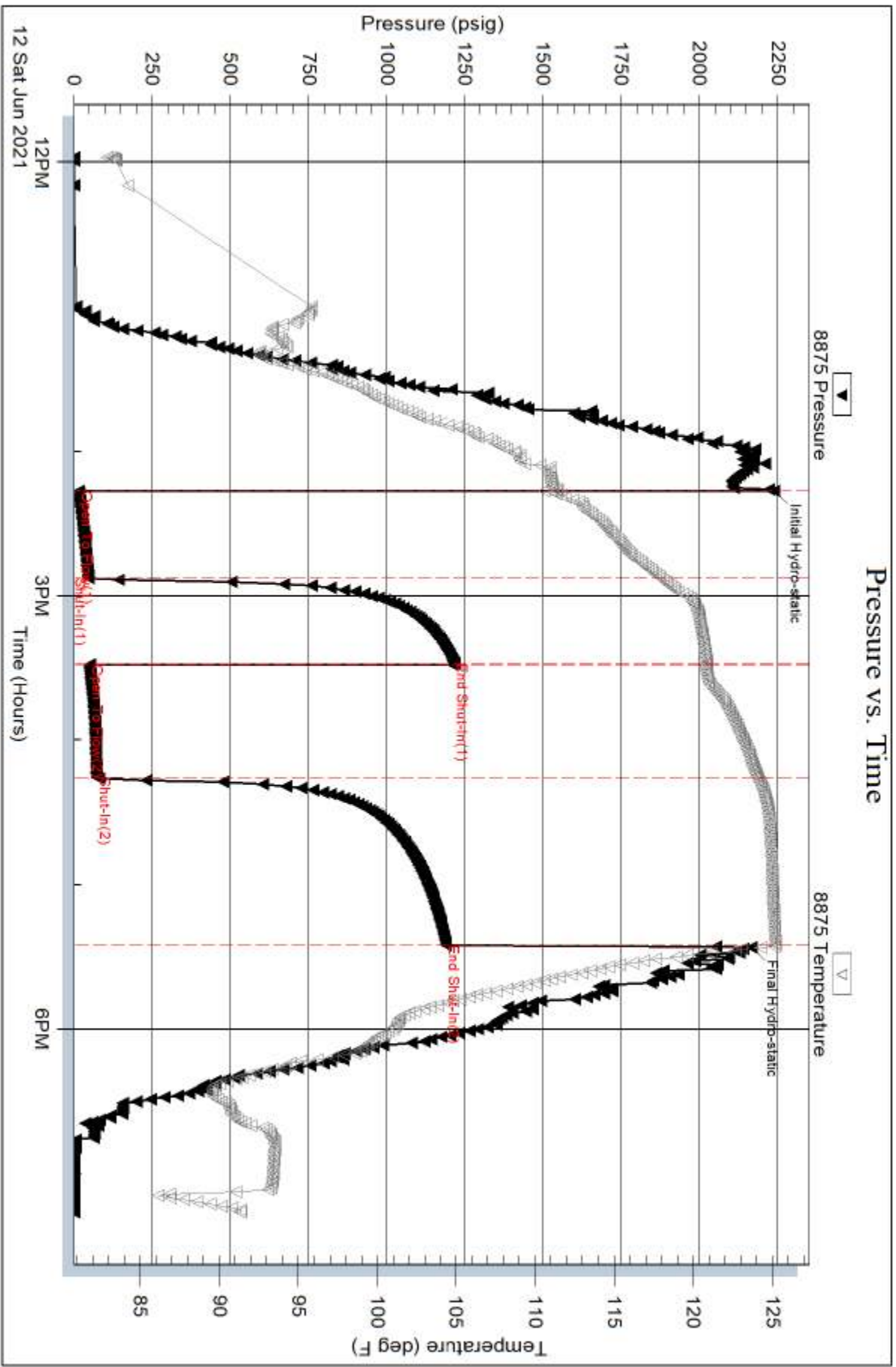
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Serial #: 8875

Outside Ritchie Exploration Inc

Frustrer 9D#3

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 67356

Printed: 2021.06.14 @ 11:18:19

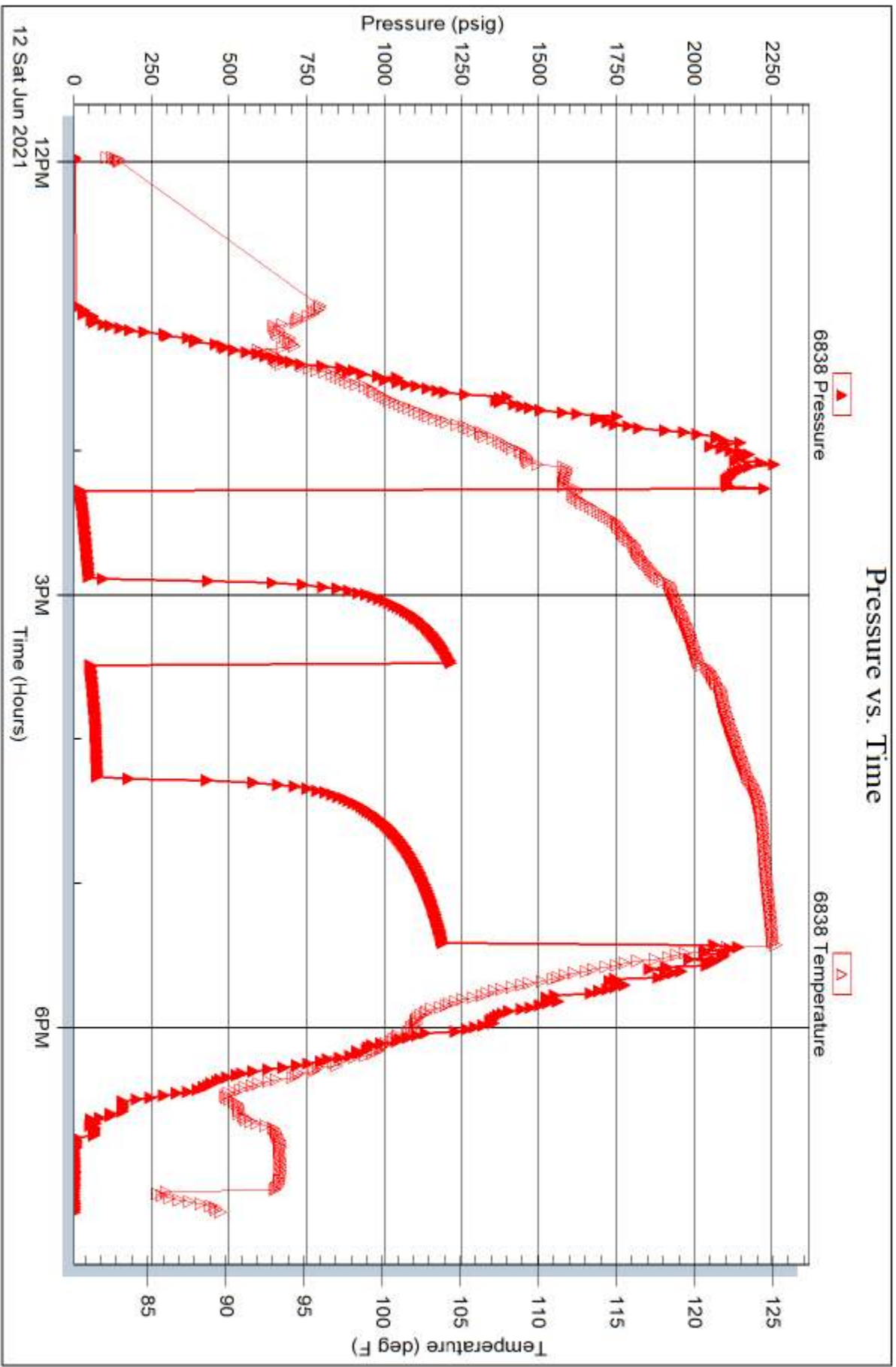
Serial #: 6838

Inside

Ritchie Exploration Inc

Frustrer 9D#3

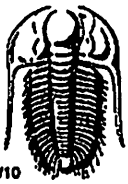
DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 67356

Printed: 2021.06.14 @ 11:18:19



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 67353

Well Name & No. Furber 9D #3 Test No. 1 Date 06/10/2021
 Company Ritchie Exploration Inc Elevation 2321 KB 2316 GL
 Address 8100 E 22nd ST 92 #700 Wichita KS 67278+388
 Co. Rep / Geo. Kent Watson Rig Murphy #102
 Location: Sec. 9 Twp 21s Rge. BW Co. Hodgeman State KS

Interval Tested 4395'-4410' Zone Tested 7d Scott
 Anchor Length 15' Drill Pipe Run 4267' Mud Wt. 9.25
 Top Packer Depth 4390' Drill Collars Run 116' Vis 57
 Bottom Packer Depth 4395' Wt. Pipe Run - WL 8.4
 Total Depth 4410' Chlorides 4900 ppm System LCM 1#

Blow Description 17 Surface to 9"
1st No Return
97- BOB 3D sec; Built to 26 3/4"
98- No Return

Rec	Feet of	%gas	%oil	%water	%mud
40	GMCB	55	30	15	
30	HOCM		30	70	
	620' GIP	100			

Rec Total 70' BHT 120° Gravity 44° API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 2185
 (B) First Initial Flow 14
 (C) First Final Flow 27
 (D) Initial Shut-In 1130
 (E) Second Initial Flow 20
 (F) Second Final Flow 44
 (G) Final Shut-In 1248
 (H) Final Hydrostatic 2146

Test 1300
 Jars 250
 Safety Joint 75
 Circ Sub _____
 Hourly Standby _____
 Mileage 17627 220
 Sampler _____
 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1845

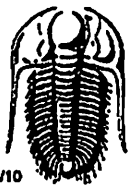
T-On Location 11:56
 T-Started 12:07
 T-Open 14:36
 T-Pulled 17:36
 T-Out 19:41

Comments _____
 EM Tool _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1845
 MP/DST Disc't _____

Initial Open 30
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 60

Approved By _____ Our Representative James Michael Parks
 Triobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its
 ent, 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.

785-259-0058



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 67354

Well Name & No. Trusher 9B #3 Test No. 2 Date 06/11/2021
 Company Ritchie Exploration Inc Elevation 2321 KB 2316 GL
 Address 8100 E 22nd St R #700 Wichita Ks 67278 + 3188
 Co. Rep / Geo. Kent Matson Rig Murfin #102
 Location: Sec. 9 Twp 21N Rge. 23W Co. Hodgeman State Ks

Interval Tested 4450' - 4477' Zone Tested Mississippi
 Anchor Length 27' Drill Pipe Run 4330' Mud Wt. 9.2
 Top Packer Depth 4445' Drill Collars Run 116' Vis 49
 Bottom Packer Depth 4450' Wt. Pipe Run - WL 11.2
 Total Depth 4477' Chlorides 6900 ppm System LCM 1 1/2#

Blow Description 77 - Surface to 3"
78 - No Return
77 - Surface to 4"
78 - No Return

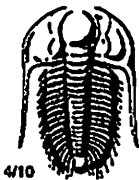
Rec	Feet of	%gas	%oil	%water	%mud
60'	G50CM	10	10	80	
90'	G0	50	50		
	90' GIP	100			

Rec Total 150' BHT 120° Gravity 38° API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>2254</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>05:25</u>
(B) First Initial Flow <u>27</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>05:57</u>
(C) First Final Flow <u>41</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>08:58</u>
(D) Initial Shut-In <u>948</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>11:58</u>
(E) Second Initial Flow <u>53</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>13:47</u>
(F) Second Final Flow <u>67</u>	<input checked="" type="checkbox"/> Mileage <u>220</u>	Comments
(G) Final Shut-In <u>928</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2173</u>	<input type="checkbox"/> Straddle	
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> EM Tool
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Shale Packer
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Ruined Packer
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Accessibility	Sub Total <u>0</u>
	Sub Total <u>2095</u>	Total <u>2095</u>

Approved By _____ Our Representative Spencer J. Neal Thanks!
 Triobite Testing Inc. shall not be liable for damaged or any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

785-259-0056



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 67355

Well Name & No. Frusher 9D #3 Test No. 3 Date 06/11/2021
 Company Ritchie Exploration Inc Elevation 2321 KB 2316 GL
 Address 8100 E 22nd St N #700 Wichita, KS 67278+3188
 Co. Rep / Geo. Kent Matson Rig Murfin #102
 Location: Sec. 9 Twp 21s Rge. 23w Co. Hodgeman State KS

Interval Tested 4479' - 4495' Zone Tested Mississippi
 Anchor Length 16' Drill Pipe Run 4361' Mud Wt. 9.2
 Top Packer Depth 4474' Drill Collars Run 116' Vis 49
 Bottom Packer Depth 4479' Wt. Pipe Run - WL 11.2
 Total Depth 4495' Chlorides 6900 ppm System LCM 1 1/2#

Blow Description 17-Surface to 10 1/2"
1st - Surface to 3/4"; Died back @ 40mins
77-Surface to 6"
78-Surface to 1/4"; Died @ 10mins

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>60 CM</u>	<u>20</u>	<u>25</u>	<u>55</u>	<u></u>
<u>570</u>	<u>60</u>	<u>65</u>	<u>35</u>	<u></u>	<u></u>
<u></u>	<u>350' GIP</u>	<u>100</u>	<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>

Rec Total 600' BHT 129° Gravity 38° API RW - @ - °F Chlorides - ppm

- (A) Initial Hydrostatic 2255
- (B) First Initial Flow 39
- (C) First Final Flow 128
- (D) Initial Shut-In 848
- (E) Second Initial Flow 145
- (F) Second Final Flow 222
- (G) Final Shut-In 772
- (H) Final Hydrostatic 2195

Initial Open 30
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 60

- Test 1300
- Jars 250
- Safety Joint 75
- Circ Sub
- Hourly Standby
- Mileage 220
- Sampler
- Straddle
- Shale Packer 250
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 2095

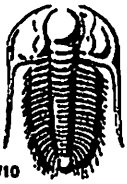
T-On Location 19:11
 T-Started 19:35
 T-Open 22:30
 T-Pulled 01:30 06/12/2021
 T-Out 03:53

Comments
 EM Tool
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 2095
 MP/DST Disc't

Approved By Our Representative Spencer J. Stead, Thanks!

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

785-259-0056



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 67356

Well Name & No. Frusher 929 #3 Test No. 4 Date 06/12/2021
 Company Ritchie Exploration Inc Elevation 2321 KB 2316 GL
 Address 8100 E 22nd ST N # 700 Wichita, KS 67278+3188
 Co. Rep / Geo. Kend Watson Rig Murfin #102
 Location: Sec. 9 Twp 21A Rge. 23W Co. Hodgeman State KS

Interval Tested 4503' - 4524' Zone Tested Mississippi
 Anchor Length 21' Drill Pipe Run 4392' Mud Wt. 9.05
 Top Packer Depth 4498' Drill Collars Run 116 Vis 55
 Bottom Packer Depth 4503' Wt. Pipe Run - WL 12.4
 Total Depth 4524' Chlorides 9200 ppm System LCM 177

Blow Description 77-Surface to 1"
78- No Return
77-Surface to 1"
78- No Return

Rec	Feet of	%gas	%oil	%water	%mud
150'	MW		70	30	

Rec Total 150' BHT 125° Gravity - API RW 141 @ 88 °F Chlorides 39,000 ppm

- (A) Initial Hydrostatic 2239
- (B) First Initial Flow 16
- (C) First Final Flow 46
- (D) Initial Shut-In 1217
- (E) Second Initial Flow 50
- (F) Second Final Flow 73
- (G) Final Shut-In 1189
- (H) Final Hydrostatic 2165

- Test 1300
- Jars 250
- Safety Joint 75
- Circ Sub
- Hourly Standby
- Mileage 220
- Sampler
- Straddle
- Shale Packer 250
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 2095

T-On Location 11:25
 T-Started 11:58
 T-Open 14:13
 T-Pulled 17:13
 T-Out 19:15

Comments _____
 EM Tool _____
 Ruined Shale Packer _____
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Approved By _____

Our Representative Spencer J. Frush Thanks!

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785-259-0056



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

Well Name: FRUSHER 9D
Well Id: #3
Location: 948' FSL, 1062' FEL, Sec 09-T21S-R23W, Hodgeman County, Kansas
License Number: API: 15-083-21988 **Region:** Hodgeman County
Spud Date: 06/04/2021 **Drilling Completed:** 06/13/2021
Surface Coordinates: Lat: 38.235572540
Long: -99.848723164
Bottom Hole Vertical hole
Coordinates:
Ground Elevation (ft): 2316' **K.B. Elevation (ft):** 2321'
Logged Interval (ft): 3700' **To:** RTD **Total Depth (ft):** 4600'
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: Murfin Drilling Company Inc., Rig #102.

Tool Pusher: John Nicodemus, 785-743-8420 (cell).

Surface Casing: 8 5/8" set at 252' (KB) w/150sx cement.

Production Casing: Based on field observations of drill cuttings, DST results and electric log evaluation, 5 1/2" production casing was installed.

Mud by: Mud-Co/Service Mud, Inc., Justin Whiting, 620-214-3630 (cell).

DST's by: Trilobite Testing, Spencer Staab, 785-259-0056 (cell).

Logs by: Midwest Wireline (DI w/GR, CND, Micro, and Sonic), Tim Martin, 785-625-3858 (office).

RTD= 4600'

LTD= 4602'

FORMATION TOPS

FORMATION	SAMPLE TOPS		LOG TOPS	
	Depth	Datum	Depth	Datum
Heebner Shale	3820'	-1499	3821'	-1500
Lansing	3869'	-1548	3870'	-1549
Muncie Creek Shale	4038'	-1717	4037'	-1716
Stark Shale	4133'	-1812	4132'	-1811
Hushpuckney Shale	4170'	-1849	4170'	-1849
Base of KC	4207'	-1886	4205'	-1884
Marmaton	4225'	-1904	4224'	-1903
Altamont	4256'	-1935	4256'	-1935
Pawnee	4320'	-1999	4320'	-1999
Fort Scott	4388'	-2067	4387'	-2066
Cherokee	4412'	-2091	4413'	-2092
Mississippian	4469'	-2148	4469	-2148
RTD	4600'	-2279		
LTD			4602'	-2281

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

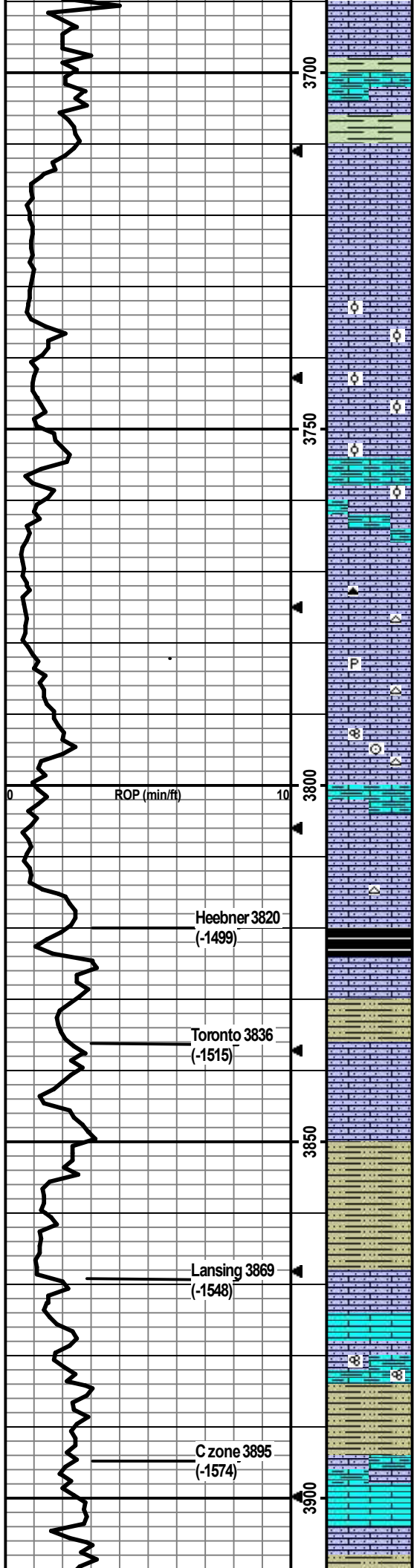
MINERAL

	Ostra
	Pelec
	Pellet
	Pisolite
	Plant
	Strom
	Fuss
	Oomold
	Anhy
	Arggrn
	Arg
	Bent
	Bit
	Brecfrag
	Calc
	Carb
	Chtdk
	Chtlt
	Dol
	Feldspar

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

Rate of Penetration (ROP) ROP (min/ft)	DEPTH	Lithology	CFS Point	Oil Shows	Geological Descriptions	Remarks
	3500				<p>Morning Report Depth/Activity (7:00 am)</p> <p>06/04/2021, Finished MIRU/Spud; set surface casing @258'KB. 06/05, WOC @ 252'. 06/06, drilling @ 1865'. 06/07, drilling @ 2505'. 06/08, drilling @ 3320'. 06/09, drilling @ 3970'. 06/10, CFS @ 4410'. 06/11, MUTT for DST#2 @ 4477'. 06/12, CTCH after DST#3 @ 4495'. 06/13, TD @ 4910'; Electric logged.</p> <p>Anhydrite: Top @ 1528' (+793), Base @ 1566' (+755) (based on drill time).</p> <p>A bit trip was made at 2267' to switch from a PDC bit to a tricone bit.</p> <p>Oil Shows indicator: Left Block 0-10 tray pcs w/show, Middle Block 10-20 tray pcs w/show, Right Block 20+ tray pcs w/show</p> <p>ROP Data begins @ 3600' on 06/08/2021. Recorded from drillers geolograph record and geologist's auto-reader switch on geolograph.</p>	<p>Mud-Co/Service Mud Inc. Check #1 @ 0' predrilling instructions.</p> <p>Mud-Co/Service Mud Inc. Check #2 @ 252' 06/05/21 09:15am wt vis pH chl 8.3 27 7 400 Filt LCM n/c 0</p> <p>Mud-Co/Service Mud Inc. Check #3 @ 1862' 06/06/21 07:10am wt vis pH chl 9.1 28 7 3400 Filt LCM n/c 0</p> <p>Mud-Co/Service Mud Inc. Check #4 @ 2662' 06/07/21 10:00am wt vis pH chl 9.7 28 7 78200 Filt LCM n/c tr</p> <p>Mud-Co/Service Mud Inc. Check #5 @ 3390' 06/08/21 09:40am wt vis pH chl 9.6 28 7 56300 Filt LCM n/c tr</p> <p>Displaced drilling mud @ 3554' -3586'; 900 bbls.</p>
	3600				<p>Geologist on location @ 3662', 06/08/2021.</p> <p>Formation tops and lithologies have been adjusted to correlate to the electric log.</p> <p>Drill cutting samples at 10' intervals start at 3700'.</p>	<p>Mud-Co/Service Mud Inc. Check #6 @ 4050' 06/09/21 10:00am wt vis pH chl 8.9 47 11.5 3500 Filt LCM 8.8 1</p> <p>Mud-Co/Service Mud Inc. Check #7 @ 4410' 06/10/21 07:35am wt vis pH chl 9.25 51 11 4900 Filt LCM 8.4 1</p> <p>Mud-Co/Service Mud Inc. Check #8 @ 4477' 06/11/21 09:45am wt vis pH chl 9.2 49 10 6900 Filt LCM 11.2 1.5</p> <p>Mud-Co/Service Mud Inc. Check #9 @ 4524' 06/12/21 09:50am wt vis pH chl 9.1 55 10 9200 Filt LCM 12.4 1</p> <p>Mud-Co/Service Mud Inc. Check #10 @ 4600' 06/13/21 07:55am wt vis pH chl 9.2 47 11 9600 Filt LCM 10.4 2</p>

Survey Record
 Deg @ Ft
 0.5 @ 252'
 0.75 @ 2267'
 0.75 @ 4410'
 0.75 @ 4600'



LS: cm/lt bm/min gry mottling, micro-f xtal, vry silty/sndy, foss frags, some vf-f in-xtal por, no odor, ns.
 SH: m-dk gry, slt carb, firm, fissile, no odor, ns.

LS: cm/med bm/lt gry, micro-med xtal, vry silty/sndy, some chalky, arg, foss frags, ppt-f in-xtal por, no odor, ns.
 SH: lt-dk gry, slt carb, soft-firm, no odor, ns.

LS: cm/lt gry, micro-m xtal, vry silty/sndy, min chalky, abund foss frags/grainy, ppt-f in-xtal por, no odor, ns.

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

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

LS: lt gry/lt-m bm, micro-med xtal, vry silty/sndy, some chalky, foss frags/min dense ool, no vis por, no odor, ns

LS: lt-m bm/lt gry, micro-med xtal, vry silty/sndy, chalky, arg, foss frags/grainy/dense ool, no vis por, no odor, ns.

LS: cm/lt-m bm, micro-med xtal, silty/sndy, min chalky, arg, abund foss frags/grainy, min ppt-f in-xtal por, no odor, ns.

LS: lt gry/lt bm, micro-m w/some crs xtal, vry silty/sndy, some chalky, min bm/gry chert, foss frags, min ppt-f in-xtal por, no odor, ns.

LS: lt bm/lt-m gry, micro-m xtal, vry silty/sndy, some chalky, min pyritic, min wht chert, foss frags, min ppt-f in-xtal por, no odor, ns.

LS: lt bm/lt gry, micro-m xtal, vry silty/sndy, some chalky, min wht chert, foss frags/fusln/crin, min ppt-f in-xtal por, no odor, ns.

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

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

SH: dk gry/dk brn-gry/blk, some silty, slt carb, firm, no odor, ns.
 LS: cm/lt bm, micro-m xtal, silty/sndy, chalky, foss frags, some vf-f in-xtal por, no odor, ns.
 SH: lt-dk gry/blk, some silty, slt carb, soft-firm, no odor, ns.

LS: cm/lt bm, micro-med xtal, vry silty/sndy, chalky, min foss frags, some ppt-f in-xtal por, no odor, ns.

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

SH: lt-dk gry/lt green-gry/blk, some silty, carb, soft-firm, no odor, ns.

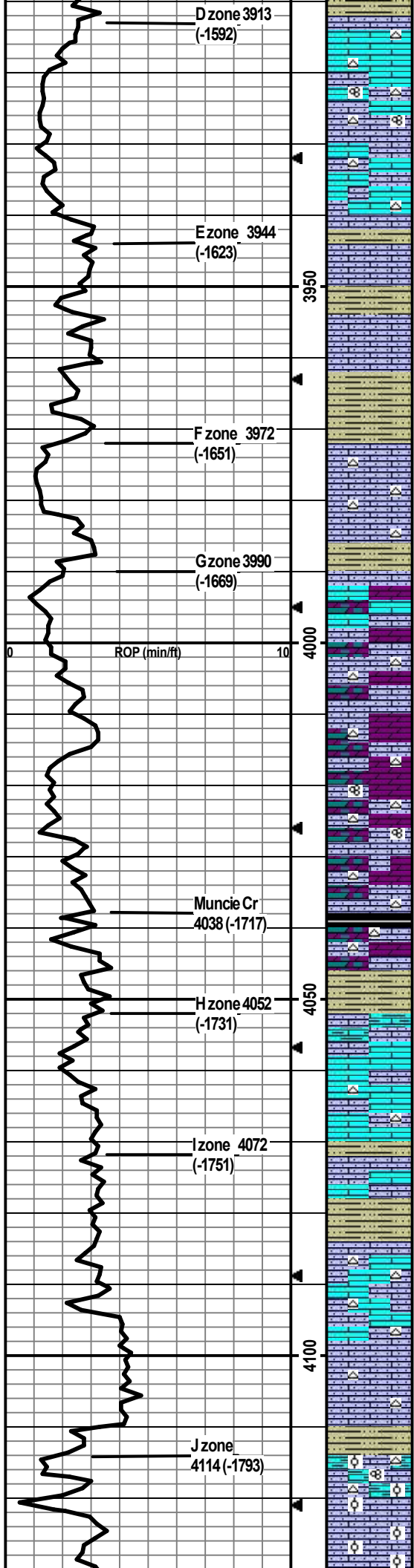
LS: cm/lt-m bm, micro-m xtal, some silty/sndy, some chalky, foss frags, some ppt-f in-xtal por, no odor, ns.

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

SH: lt-dk gry/lt green-gry/maroon/blk, some vry silty, slt carb, soft-firm, no odor, ns.

LS: cm/lt bm, micro-f xtal, some silty/sndy, some chalky, some arg, foss frags, min fn-med in-xtal por, no odor, ns.

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



SH: lt-dk gry/green-gry/bm, silty, soft-firm, no odor, ns.

LS: cm/lt bm, micro-m xtal, some silty/sndy, some chalky, wht/crm chert, foss frags, min ppt-f in-xtal por, no odor, ns.

LS: cm/lt bm/lt gry-bm, micro-m xtal, some silty/sndy, some chalky, wht chert, foss frags/fush, min ppt-fn in-xtal por, no odor, ns.

LS: cm/lt bm, micro-f xtal, some vry silty/sndy, some vry chalky, min crm chert, foss frags, some ppt-med in-xtal por, no odor, ns.

SH: m-dk gry/lt green-gry/brn, slt carb, firm, fissile, no odor, ns.

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

SH: dk gry/dk brn/blk, slt carb, silty, soft-firm, no odor, ns.

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

SH: m-dk gry, some vry silty/sndy, slt carb, soft-firm, no odor, ns.

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

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

SH: m-dk gry/lt green-gry, some silty, carb, soft-firm, no odor, ns.

LS: cm/lt bm/lt gry, micro-med xtal, some silty/sandy, some chalky, some dolomitic, foss frags, no vis por, no odor, ns.

LS: cm/lt bm, micro-m xtal, some vry sndy, some vry chalky, some lt bm chert, abund dolomitic, min foss frags, some vf-f in-xtal por, no odor, ns.

LS: cm/lt bm/lt gry, micro-med xtal, some silty/sndy, some chalky, abund dolomitic, wht/crm chert, min foss frags, some ppt-f in-xtal por, no odor, ns.

LS: cm/lt bm, micro-med xtal, silty/sndy, some chalky, dolomitic, wht/crm chert, min foss frags/fush, some f-m in-xtal por, no odor, ns.

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

SH: dk gry/blk, slt silty, slt carb, firm, fissile, no odor, ns.

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

SH: m-dk gry/blk/brn, some vry silty, carb, soft-firm, no odor, ns.

LS: lt-m bm/dk gry, micro-m xtal, some vry sndy, some chalky/arg, min foss frags no vis por, no odor, ns.

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

LS: wht/crm/lt-m bm, micro-m xtal, some silty, some chalky, wht/lt gry chert, min foss frags, min ppt-vf in-xtal por, no odor, ns.

SH: m-dk gry/green-gry/dk brn, silty, carb, soft-firm, no odor, ns.

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

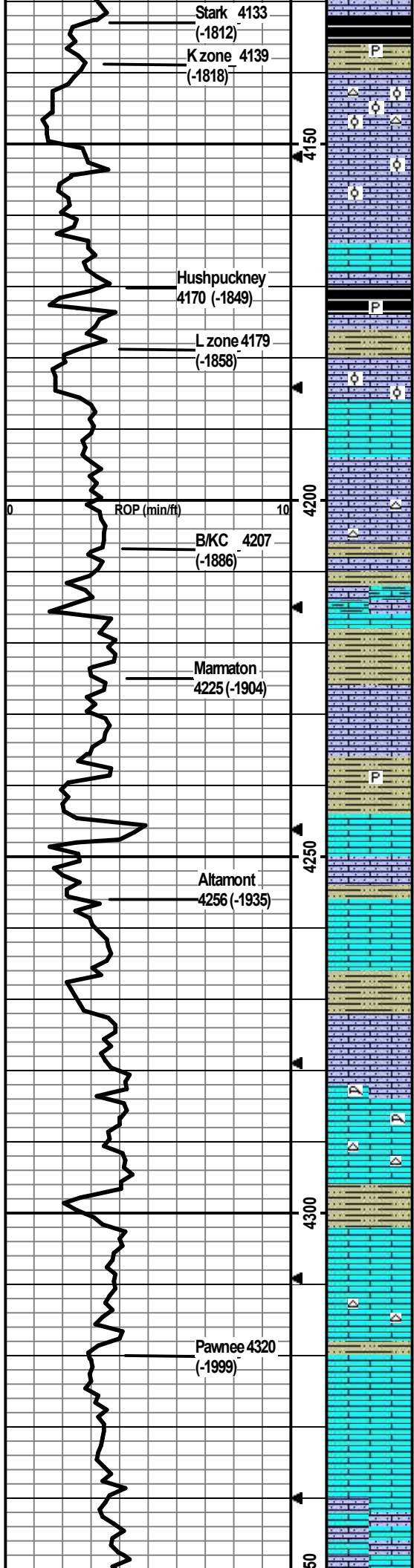
LS: cm/lt gry/lt bm, micro-m xtal, some silty, some chalky, min wht/lt gry chert, min foss frags, no vis por, no odor, ns.

LS: cm/lt bm, vf-med xtal, silty/sndy, some chalky, wht/lt gry chert, foss frags, no vis por, no odor, ns.

SH: lt-dk gry/brn/green-gry, some vry silty, slt carb, soft-firm, fissile.

LS: lt-m bm, micro-m xtal, silty/sndy, some chalky, arg, wht chert, foss frags/fush/dense ool, no vis por, no odor, ns.

LS: cm/lt bm, f-m xtal, silty/sndy, some chalky, abund ool, some dense ool, m-crs oo-castic por, no odor, ns.



SH: m-dk gry/blk/green-gry, silty, silt pyritic, silt carb, firm, fissile.

LS: cm/lt bm, micro-m xtal, silty/sndy, some chalky, wht/lt gry chert, abund ool, m-crs oo-castic por, no odor, ns.

LS: cm/lt bm, micro-m xtal, silty/sndy, chalky, abund fn ool, some vf-f in-xtal por, no odor, ns.

LS: cm/lt bm, micro-f xtal w/some med 2ndary, some silty/sndy, some chalky, foss frags, min ppt-f in-xtal por, no odor, ns.

SH: m-dk gry/blk, vry silty, silt pyritic, silt carb, soft-firm.

LS: cm/lt-dk bm, micro-med w/some 2ndary xtal, some silty/sndy, some chalky, min foss frags/min ool, some m-crs oo-castic por, no odor, ns.

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

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

SH: m-dk gry/bm, vry silty, silt carb, firm, fissile.

LS: cm/lt-dk bm, micro-med xtal, some silty/chalky/arg, min foss frags, no vis por, no odor, ns.

SH: lt-dk gry/blk/bm, silty, silt carb, soft-firm, fissile, no odor.

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

SH: lt-dk gry, silty, silt pyritic, silt carb, soft-firm.

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

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

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

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

SH: lt-dk gry/lt green-gry, some vry silty, carb, soft-firm, no odor, ns.

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

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

LS: cm/lt bm, micro-m xtal, chalky, min wht/lt orange chert, min foss frags, no vis por, no odor, ns.

SH: lt-m gry, silty, silt carb, soft-firm, fissile.

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

LS: cm/lt bm, micro-med xtal, chalky, lt bm chert, min foss frags, no vis por, no odor, ns.

SH: m-dk gry/lt green-gry, some silty, carb, soft-firm.

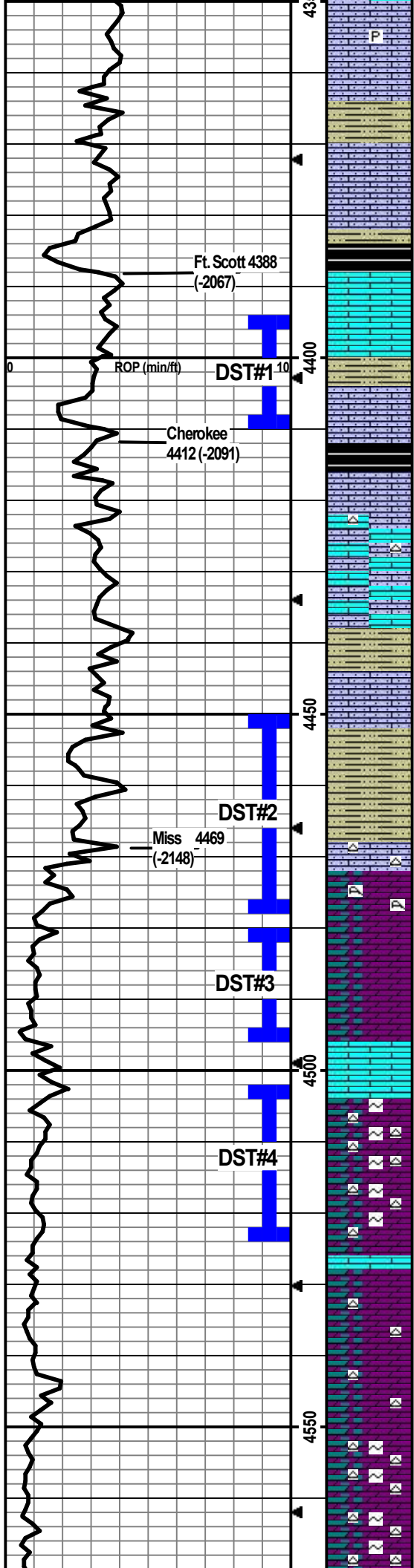
LS: cm/lt bm/lt gry-bm, micro-f xtal, min chalky, no vis por, no odor, ns.

LS: cm/lt-m bm/lt gry, micro-f xtal, min chalky, no vis por, no odor, ns.

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

**DST1) 4395-4410 Ft
Scott**

30/45/45/60
1st SB built to 9"; no BB.



LS: med bm-gry, micro-f xtal, silty, slit pyritic, no vis por, no odor, ns.

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

LS: cm/m gry-bm, micro-f xtal, some vry silty, no vis por, no odor.

SH: m-dk gry/blk, some silty, carb, fissile, no odor, ns.

LS: lt bm/lt gry-bm, micro-m xtal, foss frags, no vis por, no odor, ns.

SH: m-dk gry/brn, vry silty/sndy, carb, firm.

LS: cm/lt-m brn/lt gry brn, micro-m xtal, some silty, min foss frags, 30min smpl: 2 pcs w/staining and sfo on break, ppt in-xtal por, yel fluor/cut, no odor, sfo; 60 min: 14 pcs w/staining sfo on break, ppt-f w/min med in-xtal por, yel fluor/cut, gd odor, gsfo.

SH: lt-dk gry/lt-m brn/blk/green-gry, vry silty, carb, firm.

LS: cm/lt-m bm, micro-f xtal, some vry silty/sndy, some chalky, no vis por, no odor (sour mud), ns.

LS: cm/lt-m bm, micro-f xtal, some silty, some chalky, min wht chert, min foss frags, no vis por, no odor (sour mud), ns.

LS: cm/lt-m bm, micro-f xtal, some silty, some chalky, min wht chert, min foss frags, 3 bm pcs w/sfo w/ppt-m in-xtal por, yel fluor/cut, no odor (sour mud), sfo.

SH: lt-dk gry/lt green-gry, vry silty, carb, pyritic, soft-firm, fissile.

LS: cm/lt-m bm/lt gry, micro-f xtal, some vry silty, some chalky, min foss frags, 5 bm pcs w/sfo w/ppt-f in-xtal por, slit odor (sour mud), yel fluor/cut, sfo.

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

SH: lt-dk gry/lt green gry, vry silty, carb, firm.

30min Smpl: LS: cm/lt bm, micro-m, some silty, some chalky, wht chert, foss frags, no vis por, no odor, ns.

Dolo: wht/cm/lt bm, micro-f xtal, some silty/sndy, lattice coral, 10-15% of smpl w/sfo w/f-crs/vug in-xtal por, gd yel fluor, gd odor, gsfo.

Flood of multi color SH. Dolo: cm/lt bm, micro-f xtal, some silty, 14 pcs w/sfo, f-crs/vug por, gd yel fluor, gd odor, gsfo.

Dolo: cm/lt bm, micro-f xtal, some silty, 10-15% w/sfo, f-crs/vug por, gd yel fluor, gd odor, gsfo.

LS: cm/lt bm/lt gry, micro-m xtal, no foss, no vis por, ns in LS. Smpl has odor, flood of SH and Dolo w/show from above.

Dolo: cm/lt bm, micro-f xtal, silty, wht/lt gry chert, some glauc, 20-25% of smpl w/sfo, f-crs/vug por, yel fluor, gd odor, gd sfo. Lots SH, less than above.

Dolo: cm/lt brn, vf-f xtal, silty/sndy, wht chert, some glauc, 20-25% of smpl w/sfo, ppt-crs/vug por, yel fluor, gd odor, gd sfo.

Flood of SH. LS: wht/lt brn, micro-f xtal, no vis por, smpl has odor. Dolo: wht/lt brn, vf-f, silty/sndy, ppt-vf por, 24 pcs w/brn staining, fo on brk, yel fluor, odor, sfo.

Dolo: cm/lt bm, vf-f xtal, silty/sndy, wht chert, ppt-vf por, ~10% of smpl w/bm staining w/sfo on brk, yel fluor, odor, sfo. Smpl has flood of SH.

Dolo: cm/lt bm/lt gry, vf-f xtal, silty/sndy, wht chert, ppt-f por, 10-15% of smpl w/bm staining w/sfo on brk, yel fluor, odor, sfo. Smpl is still flood of SH.

Dolo: as above, 10-15% of smpl w/bm staining, no fo, yel fluor/cut, increase in wht chert, some glauc, slit odor. Cont SH flood but less than above.

Dolo: cm/lt bm, vf-f xtal, silty/sndy, wht chert, some glauc, ppt-f por, ~25% of smpl w/bm staining, no fo but yel fluor/cut, slit odor.

2nd) BOB in 30sec; no BB.
IFP 15-27#
ISIP 1131#
FFP 20-44#
FSIP 1249#
HP 2186-2146#
Recvd: 620' GIP, 40' GMCO (55%G, 30%O, 15%M), 30' OCM (70%M, 30%O).

Made 35 std wiper trip prior to DST#1.

Pipe strap TOH for DST #1 at 4410' was 0.55' long to the board.

CFS @ 4410'
Stop/30'/60"

DST2) 4450-4477

Miss

30/45/45/60
1st) SB built to 3"; no BB.
2nd) SB built to 4"; no BB.
IFP 27-42#
ISIP 948#
FFP 55-67#
FSIP 928#
HP 2255-2173#
Recvd: 90' GIP, 90' GO (50%O, 50%G), 60' GOCM (10%G, 10%O, 80%M).

At 4477', down 30min to tighten belts on mud pump.

CFS @ 4477'
Stop/30'/60"

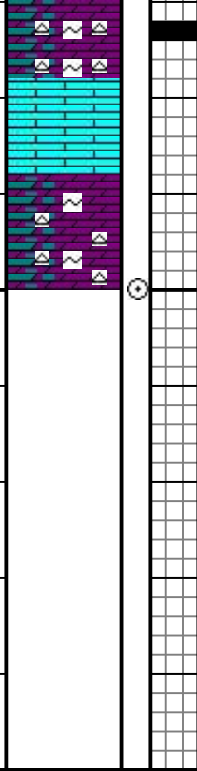
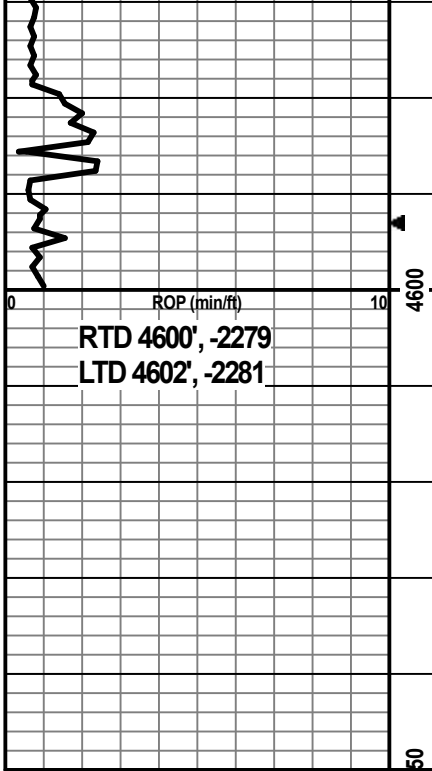
CFS @ 4495'
Stop/30'/60"

CFS @ 4524'
Stop/30'/60"

DST3) 4479-4495

Miss-2

30/45/45/60
1st) SB built to 10.5"; SBB built to 3/4"; died at 40min.
2nd) SB built to 6"; SBB built to 1/4"; died at 10min.
IFP 40-129#
ISIP 849#
FFP 145-223#
FSIP 773#
HP 2256-2195#
Recvd: 350' GIP, 570' GO (35%O, 65%G), 30' GOCM (20%G, 25%O, 55%M).



Dolo: as above, ~25% of smpl w/bm staining, no fo but yel fluor/cut, slit odor.

LS: lt bm, micro-m xtal, foss frags, no vis por, Dolo w/show and odor assume from above.

Dolo: cm, vf-f xtal, silty, ppt-vf in-xtal por. Some w/staining and fluor w/slt odor assume from above.

TD @4600'

DST4) 4503-4524
Miss-3
 30/45/45/60
 1st) SB built to 1"; no BB.
 2nd) SB built to 1"; no BB.
 IFP 16-47#
 ISIP 1217#
 FFP 51-74#
 FSIP 1189#
 HP 2239-2166#
 Recvd: 150' MW (30%M, 70%W).

CFS @4600'
 Stop/30"/60"
 Did 10 Std short trip, CTCH 1.5 hr, TOH for logging.



#3 Frusher 9D

948' FSL & 1,062' FEL

42' S & 72' W of NW SE SE Section 9-21S-23W

Hodgeman County, Kansas

API# 15-083-21988-0000

Elevation: GL: 2,316', KB: 2,321'

Sample Tops

Anhydrite	1,528	+793
B/Anhydrite	1,566	+755
Heebner Shale	3,820	-1499
Toronto	3,832	-1511
Lansing	3,869	-1548
Muncie Creek	4,038	-1717
Stark Shale	4,133	-1812
Hushpuckney	4,170	-1849
BKC	4,207	-1886
Marmaton	4,230	-1909
Altamont	4,251	-1930
Pawnee	4,320	-1999
Ft Scott	4,388	-2067
Cherokee	4,412	-2091
Mississippian	4,469	-2148
RTD	4,600	-2279



CHARGE TO: Richie Exploration

ADDRESS

CITY, STATE, ZIP CODE

TICKET 33543

PAGE 1 OF 1

SERVICE LOCATIONS: Wm City, KS

1. WELL/PROJECT NO. #3 LEASE FRUSTER 9D COUNTY/PARISH Haskell CITY Jetmore DATE 4 Jun 21 OWNER

2. TICKET TYPE SERVICE SALES CONTRACTOR

3. WELL TYPE 0.1 WELL CATEGORY Development JOB PURPOSE Cement surface pipe SHIPPED VIA CT DELIVERED TO location WELL LOCATION 9-21-23

4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/PART NUMBER	ACCOUNTING		DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT							
575		1		MILEAGE	25	mi			5.00	125.00
576.5		1		Pump Charge (surface pipe)	1	ea			925.00	925.00
325		1		Standard cement	150	sk			13.50	2025.00
279		1		Bentonite gel	3	sk			30.00	90.00
278		1		Calcium Chloride	7	sk			40.00	280.00
581		1		Service charge	150	sk			1.85	277.50
587		1		Drayage (mi)	14750	lb		1 ea	250.00	250.00

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? YES NO

WE UNDERSTOOD AND MET YOUR NEEDS? YES NO

OUR SERVICE WAS PERFORMED WITHOUT DELAY? YES NO

WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? YES NO

ARE YOU SATISFIED WITH OUR SERVICE? YES NO

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL 3972.50

TOTAL 4155.72

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

SWIFT OPERATOR: _____ APPROVAL: _____

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 4 Jun 21	PAGE NO. 1
TICKET NO. 33453	

CUSTOMER		WELL NO.		LEASE		JOB TYPE		DESCRIPTION OF OPERATION AND MATERIALS
Kiddie Exploration		#3		FRISHER 9D		concrete surface pipe		
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		
				T	C	TUBING	CASING	
								150 sk standard cement 2% gr 3% CC 8 5/8" 24" casing 6 joints 252'
	1100							on loc TRK 113
5 JUN	0310							start 8 5/8" 24" casing in well
	0350							circulate well
	0400	5				200		mix STD 2% 3% 150 sk @ 147 → cement to surface
		5	38			200		kickout
	0412							shots in 8 5/8"
	0425							wash truck Rack up [150 sk to Pit]
	0500							job complete Thanks Austin, Blair, & ISAAC



CHARGE TO: Ritchie Exploration

TICKET 33820

ADDRESS

CITY, STATE, ZIP CODE

PAGE 1 OF 1

SERVICE LOCATIONS
 1. Ness City, KS WELL/PROJECT NO. #3 LEASE Fruiter 9-D COUNTY/PARISH Hadgeman STATE KS CITY Ness City DATE 6-18-2021 OWNER
 2. Oil CONTRACTOR H-D RIG NAME/NO. 15-S 4-6 SHIPPED VIA CT DELIVERED TO LOCATION ORDER NO.
 3. WELL TYPE Oil WELL CATEGORY Development JOB PURPOSE Port Collar WELL PERMIT NO. 15-S 4-6 WELL LOCATION Ness City, 15-S 4-6
 4. REFERRAL LOCATION 1-S 1/2-6 N.W. into

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC ACCT DF	DESCRIPTION	QTY.	U/M	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
575	1		MILEAGE	25	mi			25	mi	5.00	125.00
576D	1		Pump Charge - Port Collar	1	job			1	job	1400.00	1400.00
329-8	1		60/40 Poz mix 8% gel	265	sbs			265	sbs	11.50	3047.50
275	1		Cotton Seed Hulls	1	sk			1	sk	35.00	35.00
290	1		D-Air	4	gal			4	gal	42.00	168.00
581	1		CMT Service Charge							1.85	555.00
583	1		Drayage	30400	lbs			300	sbs	0.95	313.50

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

DATE SIGNED 6-18-2021 TIME SIGNED 12:00 A.M. P.M.

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

SURVEY PERFORMED WITHOUT BREAKDOWN? AGREE DISAGREE

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? 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? YES NO CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL 1

TOTAL 5892.66

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

SWIFT OPERATOR Judson Fuchs APPROVAL [Signature]

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 6-18-2021	PAGE NO. 1
TICKET NO. 33820	

CUSTOMER		WELL NO.		LEASE		JOB TYPE		DESCRIPTION OF OPERATION AND MATERIALS	
Ritchie Exploration		#3		Frusher 9-D		Port Collins			
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)			
				T	C	TUBING	CASING		
	0930								ON LOCATION 2 7/8" x 5 1/2"
									PC: 1483'
	1005	∅			✓		1200		P Test to 1200 PSI
	1015								Open PC
	1020	3 1/2	4		✓		600		Injection RATE
	1025	3	87		✓		450		Mix 265 sks of 60/40 Pozmix 8% gel @ 12.24 ppg 100lbs of Cotton Seed Hulls in first 50sks *Circulate 20sks to Pit*
	1055	4	4.75		✓		500		Displace CMT P Test to 1200 PSI
	1100	∅			✓		1200		Close PC - P Test to 1,200 PSI
	1115								Run 5 JEs
	1125	3 1/2	20		✓		900		Reverse Clean
	1140								Wash up Trk #112 TOH
	1245	1/2	3		✓		500		*Pressure up 5 1/2 Csg + Shut in*
									Job Complete 265 sks of 60/40 Pozmix 8% gel + 100lbs of Cotton Seed Hulls used
									THANKS!
									Budson, Kelly Isaac



TICKET 33814

CHARGE TO: Ritchie Exploration
 ADDRESS
 CITY, STATE, ZIP CODE

PAGE 1 OF 2

SERVICE LOCATIONS
 1. Ness City, KS
 2. Mess City, KS
 3. Martin
 4. Oil

WELL/PROJECT NO. #3
 LEASE Foster 9D
 COUNTY/PARISH Hodgeman
 RIG NAME/NO.

TICKET TYPE
 SERVICE SALES
 CONTRACTOR

WELL TYPE Oil
 WELL CATEGORY Development
 JOB PURPOSE Long String 5 1/2"

WELL LOCATION
Ness City 15-S-4-E
1-S 1 1/2-W NW-INTC

DATE 6-13-2021
 ORDER NO.
 OWNER

STATE KS
 CITY
 SHIPPED VIA CF
 DELIVERED TO LOCATION
 WELL PERMIT NO.

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT							
575		1							5.00	125.00
575		1		MILEAGE Trk #112	25	MI			1400.00	1400.00
404		1		Pump Charge - Longstring						
		1		Port Collar	5 1/2	IN	1	EA	2500.00	2500.00
403		1		CMT Baskets	5 1/2	IN	3	EA	275.00	825.00
406		1		LATCH DOWN Plug + Baffle	5 1/2	IN	1	EA	250.00	250.00
407		1		INERT Float Shoe w/ Auto fill	5 1/2	IN	1	EA	325.00	325.00
409		1		Turbolizers	5 1/2	IN	7	EA	90.00	630.00

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

X

DATE SIGNED 6-14-2021 TIME SIGNED 12:15 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?
 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?
 YES NO
 CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL 1 6055.00
 2 7953.42
 Total 14008.42

TOTAL 897.61
 TOTAL 4900.01

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

SWIFT OPERATOR Guborn Fuchs APPROVAL GF

Thank You!



PO Box 466
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 33814

DATE 6-13-2021 PAGE 2 OF 2

WELL Frusher 9D #3

CUSTOMER Ritchie Exploration

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		TIME	DESCRIPTION	QTY	U/M	QTY	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT								
325		1			STANDARD CMT	240	sks			13	3240.00
379		1			BENTONITE Gel	5	sks			30.00	150.00
383		1			SALT	1300	lbs			0.33	325.00
392		1			HALAD-322	135	lbs			8.50	1062.50
377		1			COAL SEAL	1200	lbs			1.33	1500.00
381		1			Mud Flush	500	gal			1.50	750.00
381		1			Liquid BCL	2	gal			25.00	50.00
390		1			D-Air	5	gal			42.00	126.00
581		1			SERVICE CHARGE						
585		1			MILEAGE CHARGE						
						CUBIC FEET		240			
						TON MILES		322			
						LOADED MILES		25			
						TOTAL WEIGHT		25685			
						CHARGE					
						1.58					444.00
						0.92					305.90

CONTINUATION TOTAL 17953.40

JOB LOG

SWIFT Services, Inc.

DATE 6-13-2021 PAGE NO. 1

CUSTOMER		WELL NO.		LEASE		JOB TYPE		TICKET NO.	
Ritchie Explorations		#3		Frusher 9D		Long String		33814	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
613	2000								ON LOCATION 5 1/2" 15.5lb/ft RTD: 4600' LTD: 4602' TP: 4597.4' 110JCS SJ: 21 Turbos: 1, 2, 4, 7, 13, 74, 76 Baskets: 12, 75, 95 PC: 1485' #175
	2130 2345								Start 5 1/2" 15lb Csg in well Drop Ball - Circulate
614	1255	6 1/2	12				250		Pump 500gal Muc/Flush
		6 1/2	20				250		Pump 20 bbl KCL Spacer
	0105	2	75				75		Plug RH, 111 [32, 32]
	0115	3	52				100		Mix 210 sks @ 14.9ppg
	0140								Wash Pump + Lines Drop Latch Down Plug
	0150	6 1/2	0				250		Start Displacement
		6 1/2	75				300		- Lift Pressure
		6 1/2	108				850		- MAX Lift Pressure
	0215	5 1/2	109				1600		LAND Latch down Plug - Release Pressure * Hold *
	0225 0255								Wash up Trk #112 Job Complete
									240sks of Standard CMT w/ 2% gel, 10% salt, 1/2% Halal-322, 5# Coal Seal/sk @ @ 14.9 ppg used * Plug down @ 2:15 AM Thanks! 6-14-2021/A Gedera, Kirby, Dusty