

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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Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	ALBIN 3-20
Doc ID	1572352

Tops

Name	Top	Datum
Base Anhydrite	2181	+548
Heebner	3955	-1226
Lansing	3994	-1265
Muncie Creek	4150	-1421
Stark Shale	4243	-1514
Hushpuckney	4280	-1551
Marmaton	4351	-1622
Pawnee	4404	-1675
L. Cherokee Shale	4523	-1794
Johnson	4564	-1835
Mississippian	4596	-1867

Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	ALBIN 3-20
Doc ID	1572352

Perforations

Shots Per Foot	Perforation Top	Perforation Bottom	BridgePlugType	BridgePlugSet At	Material Record
4	4365	4369			250 gal 15% PAD, 300 gal 15% MCA & 17 bbl 2% KCL water
4	4259	4261			100 gal 15% MCA, sqz 45 sx Class A
4	4152	4155			250 gal 15% MCA, sqz 45 sx Class A
4	4076	4090			500 gal 15% MCA & 13 bbl flush, 95 sx Class A
4	4069	4072			250 gal 15% MCA
4	4041	4043			100 gal 15% MCA, 50 sx Class A



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

20 16s 27w Lane, Ks

202 W Main St.
Salem, Il 62881

Job Ticket: 66817

DST#: 1

ATTN: Vern Schrag

Test Start: 2021.02.21 @ 19:30:00

GENERAL INFORMATION:

Formation: **LKC- D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:30:00

Time Test Ended: 02:42:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 78

Interval: 4038.00 ft (KB) To 4070.00 ft (KB) (TVD)

Reference Elevations: 2729.00 ft (KB)

Total Depth: 4070.00 ft (KB) (TVD)

2719.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8522

Inside

Press@RunDepth: 473.60 psig @ 4039.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.02.21

End Date:

2021.02.22

Last Calib.:

2021.02.22

Start Time: 19:30:05

End Time:

02:42:29

Time On Btm:

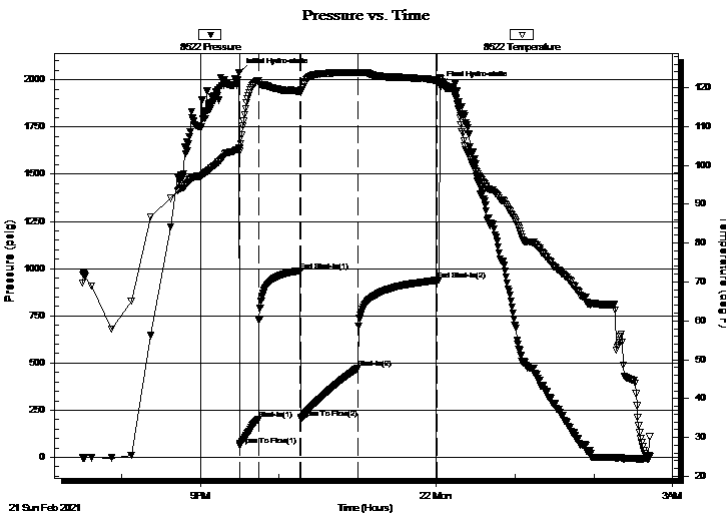
2021.02.21 @ 21:29:30

Time Off Btm:

2021.02.22 @ 00:02:45

TEST COMMENT: 15- IF: 42" blow .
30- IS: No return.
45- FF: 75" blow .
60- FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2039.61	104.43	Initial Hydro-static
1	64.28	104.21	Open To Flow (1)
15	203.77	121.83	Shut-In(1)
47	989.08	119.05	End Shut-In(1)
47	208.79	118.85	Open To Flow (2)
91	473.60	123.83	Shut-In(2)
152	941.17	121.97	End Shut-In(2)
154	1967.58	122.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
960.00	mcw 3m 97w (oil spots)	13.47

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

20 16s 27w Lane, Ks

202 W Main St.
Salem, Il 62881

Job Ticket: 66817

DST#: 1

ATTN: Vern Schrag

Test Start: 2021.02.21 @ 19:30:00

GENERAL INFORMATION:

Formation: **LKC- D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:30:00

Time Test Ended: 02:42:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 78

Interval: 4038.00 ft (KB) To 4070.00 ft (KB) (TVD)

Reference Elevations: 2729.00 ft (KB)

Total Depth: 4070.00 ft (KB) (TVD)

2719.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8319 Outside

Press@RunDepth: psig @ 4039.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.02.21

End Date:

2021.02.22

Last Calib.:

2021.02.22

Start Time: 19:30:05

End Time:

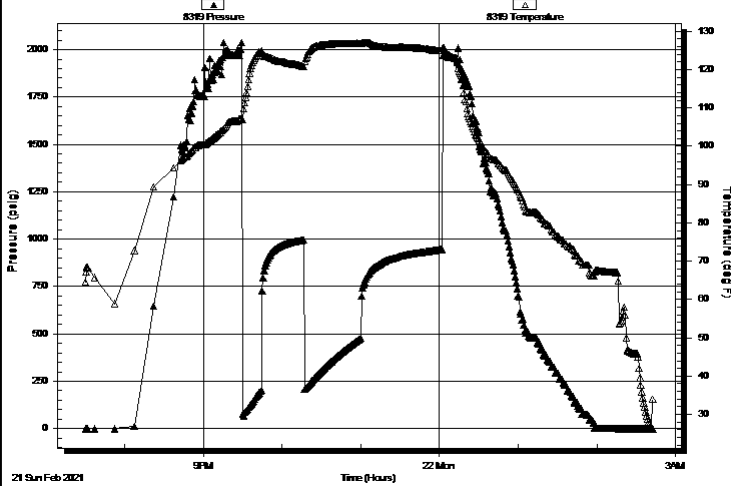
02:42:29

Time On Btm:

Time Off Btm:

TEST COMMENT: 15- IF: 42" blow .
30- IS: No return.
45- FF: 75" blow .
60- FS: No return.

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
960.00	mcw 3m 97w (oil spots)	13.47

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Shakespeare Oil Co, Inc.

20 16s 27w Lane, Ks

202 W Main St.
Salem, Il 62881

Job Ticket: 66817

DST#: 1

ATTN: Vern Schrag

Test Start: 2021.02.21 @ 19:30:00

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:

64000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
960.00	mcw 3m 97w (oil spots)	13.466

Total Length: 960.00 ft Total Volume: 13.466 bbl

Num Fluid Samples: 0

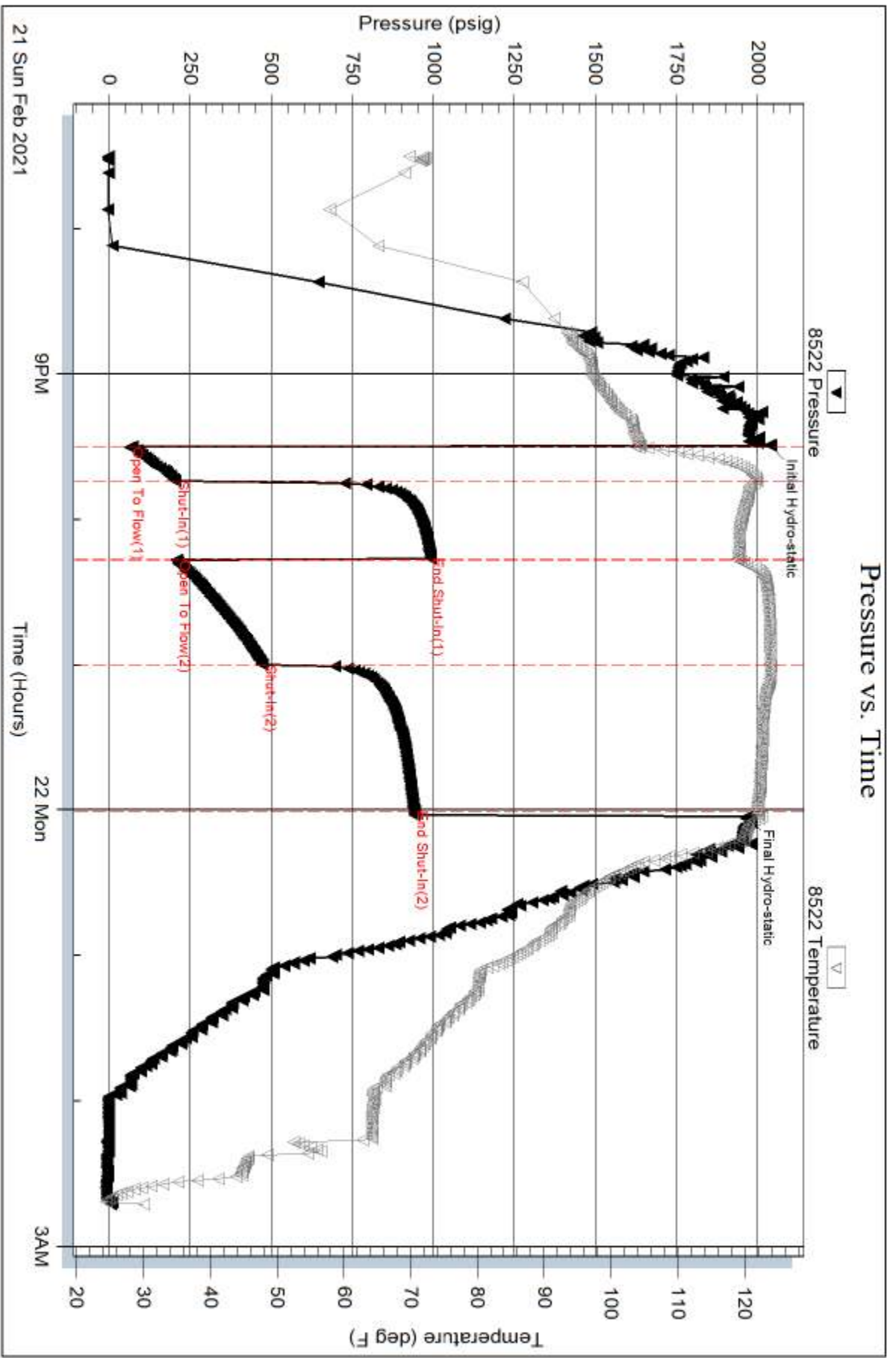
Num Gas Bombs: 0

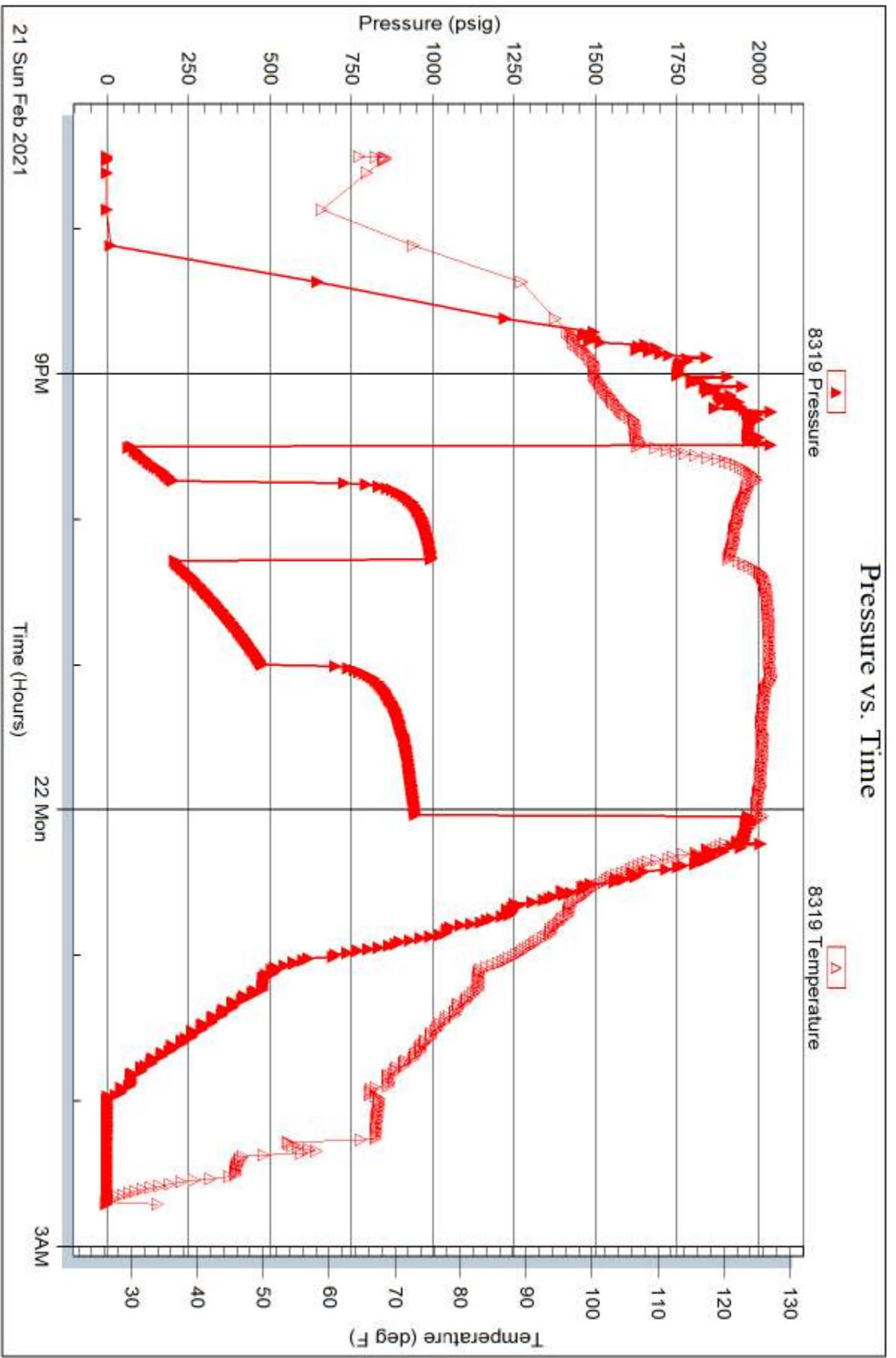
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .160 @ 51F = 64000ppm







TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

20 16s 27w Lane, Ks

202 W Main St.
Salem, Il 62881

Job Ticket: 66818

DST#: 2

ATTN: Vern Schrag

Test Start: 2021.02.22 @ 11:40:00

GENERAL INFORMATION:

Formation: **LKC E/F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:14:00

Time Test Ended: 18:11:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4071.00 ft (KB) To 4084.00 ft (KB) (TVD)

Reference Elevations: 2729.00 ft (KB)

Total Depth: 4084.00 ft (KB) (TVD)

2719.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8522 Inside

Press@RunDepth: 66.62 psig @ 4072.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.02.22 End Date: 2021.02.22

Last Calib.: 2021.02.22

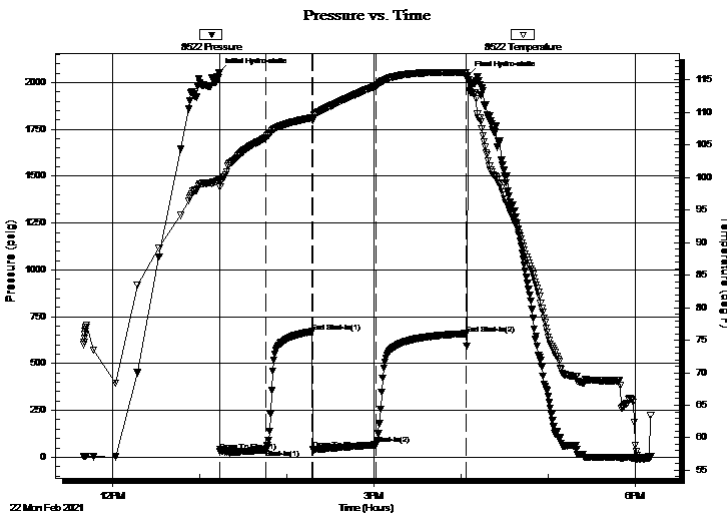
Start Time: 11:40:05 End Time: 18:10:59

Time On Btm: 2021.02.22 @ 13:13:00

Time Off Btm: 2021.02.22 @ 16:04:30

TEST COMMENT: 30- IF: 19" blow .
30- IS: No return.
45- FF: 26" blow .
60- FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2053.76	99.51	Initial Hydro-static
1	33.06	98.57	Open To Flow (1)
33	39.76	106.10	Shut-In(1)
65	670.22	109.20	End Shut-In(1)
65	42.32	108.79	Open To Flow (2)
109	66.62	114.10	Shut-In(2)
171	659.62	116.16	End Shut-In(2)
172	2038.07	115.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
140.00	gmco 15g 5m 80o	1.96

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Shakespeare Oil Co, Inc.

20 16s 27w Lane, Ks

202 W Main St.
Salem, Il 62881

Job Ticket: 66818

DST#: 2

ATTN: Vern Schrag

Test Start: 2021.02.22 @ 11:40:00

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:

0 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
140.00	gmco 15g 5m 80o	1.964

Total Length: 140.00 ft Total Volume: 1.964 bbl

Num Fluid Samples: 0

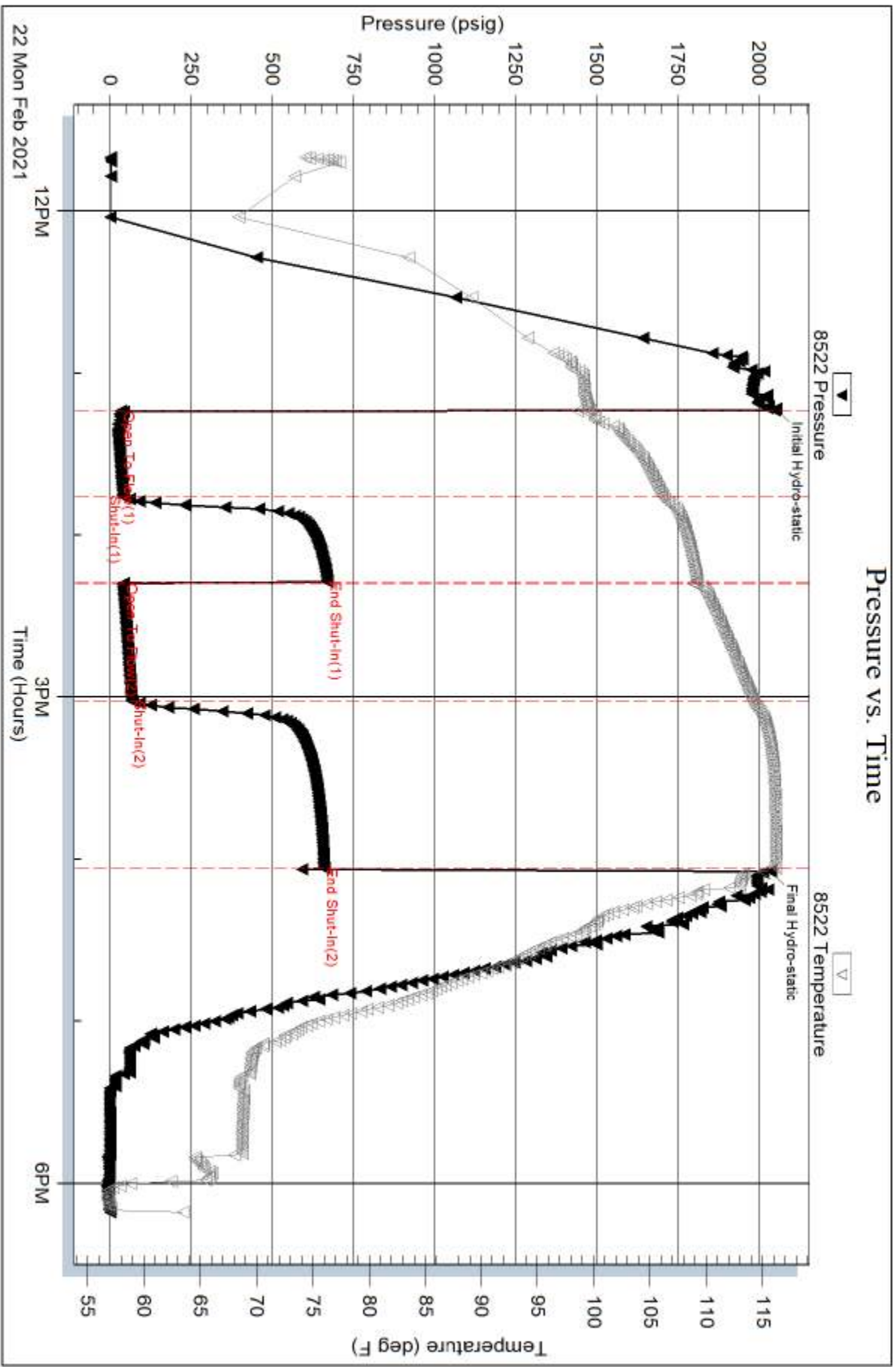
Num Gas Bombs: 0

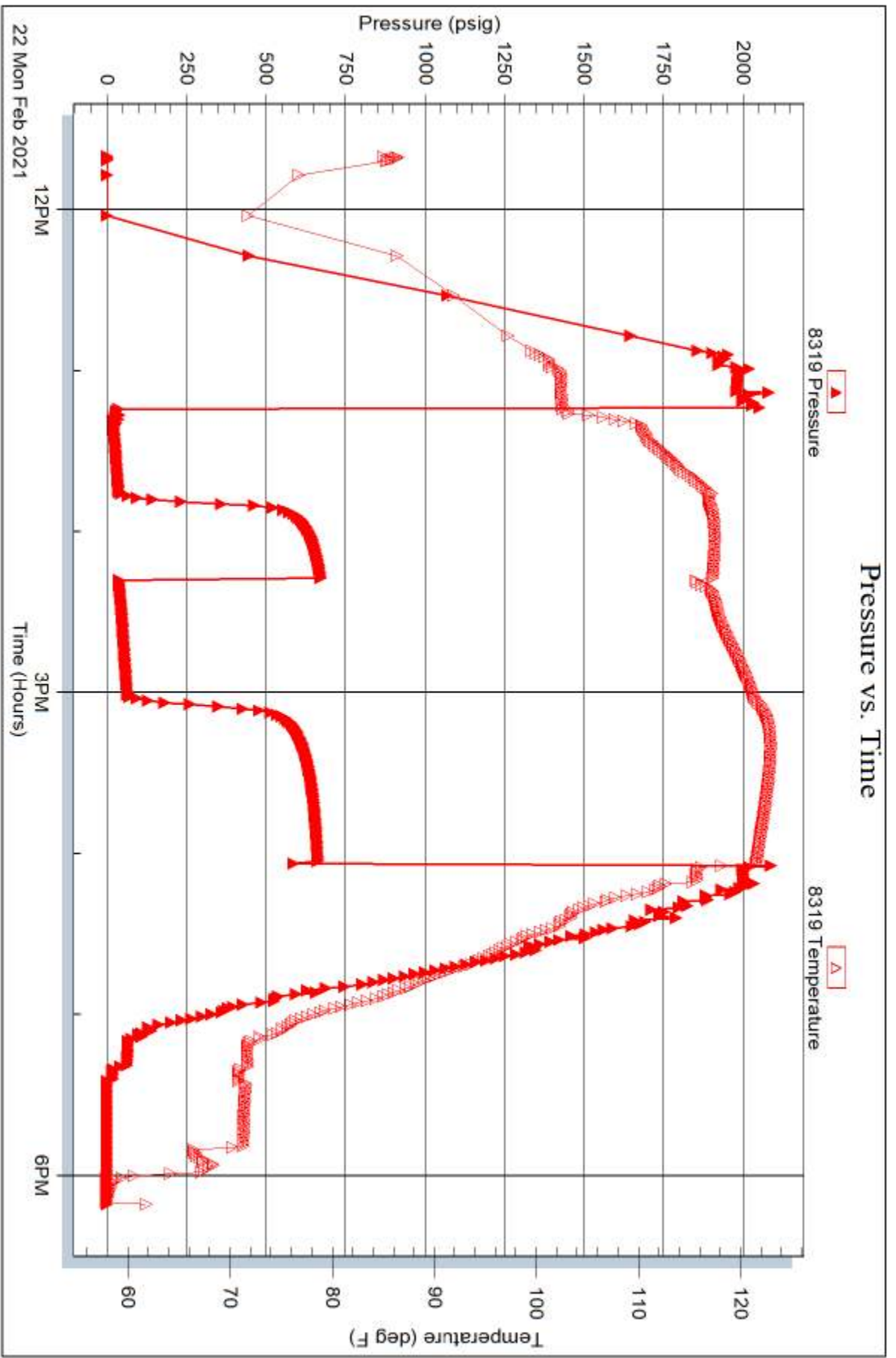
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

20 16s 27w Lane, Ks

202 W Main St.
Salem, Il 62881

Job Ticket: 66819

DST#: 3

ATTN: Vern Schrag

Test Start: 2021.02.23 @ 08:32:00

GENERAL INFORMATION:

Formation: **LKC- H**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:31:00

Time Test Ended: 15:23:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4150.00 ft (KB) To 4172.00 ft (KB) (TVD)

Reference Elevations: 2729.00 ft (KB)

Total Depth: 4172.00 ft (KB) (TVD)

2719.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8522

Inside

Press@RunDepth: 66.77 psig @ 4151.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.02.23

End Date:

2021.02.23

Last Calib.: 2021.02.23

Start Time: 08:32:05

End Time:

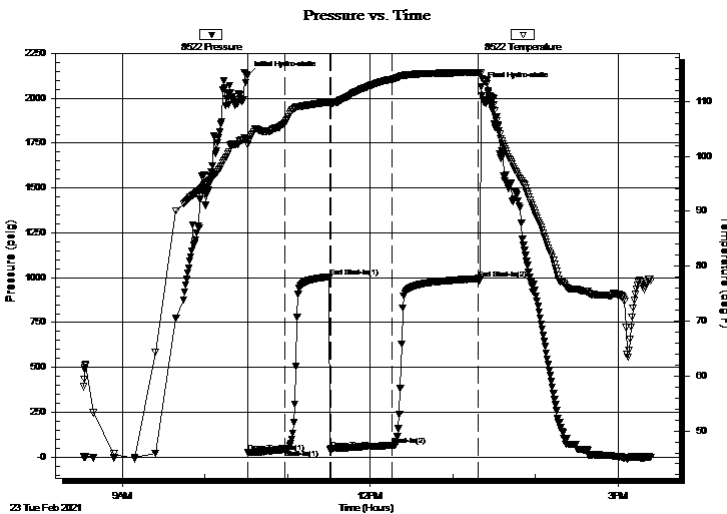
15:23:44

Time On Btm: 2021.02.23 @ 10:30:45

Time Off Btm: 2021.02.23 @ 13:20:30

TEST COMMENT: 30- IF: 11" blow .
30- IS: No return.
45- FF: 22" blow .
60- FSI: 1/4" return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2126.23	103.23	Initial Hydro-static
1	24.61	102.12	Open To Flow (1)
28	44.91	106.06	Shut-In(1)
60	1005.23	109.85	End Shut-In(1)
61	41.38	109.54	Open To Flow (2)
106	66.77	113.99	Shut-In(2)
168	995.00	115.24	End Shut-In(2)
170	2062.74	115.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
100.00	gw mco 20g 20w 15m 45o	1.40
25.00	oil 100o	0.35
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

FLUID SUMMARY

Shakespeare Oil Co, Inc.

20 16s 27w Lane, Ks

202 W Main St.
Salem, Il 62881

Job Ticket: 66819

DST#: 3

ATTN: Vern Schrag

Test Start: 2021.02.23 @ 08:32:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

41000 ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
100.00	gw mco 20g 20w 15m 45o	1.403
25.00	oil 100o	0.351
0.00	120' GIP	0.000

Total Length: 125.00 ft Total Volume: 1.754 bbl

Num Fluid Samples: 0

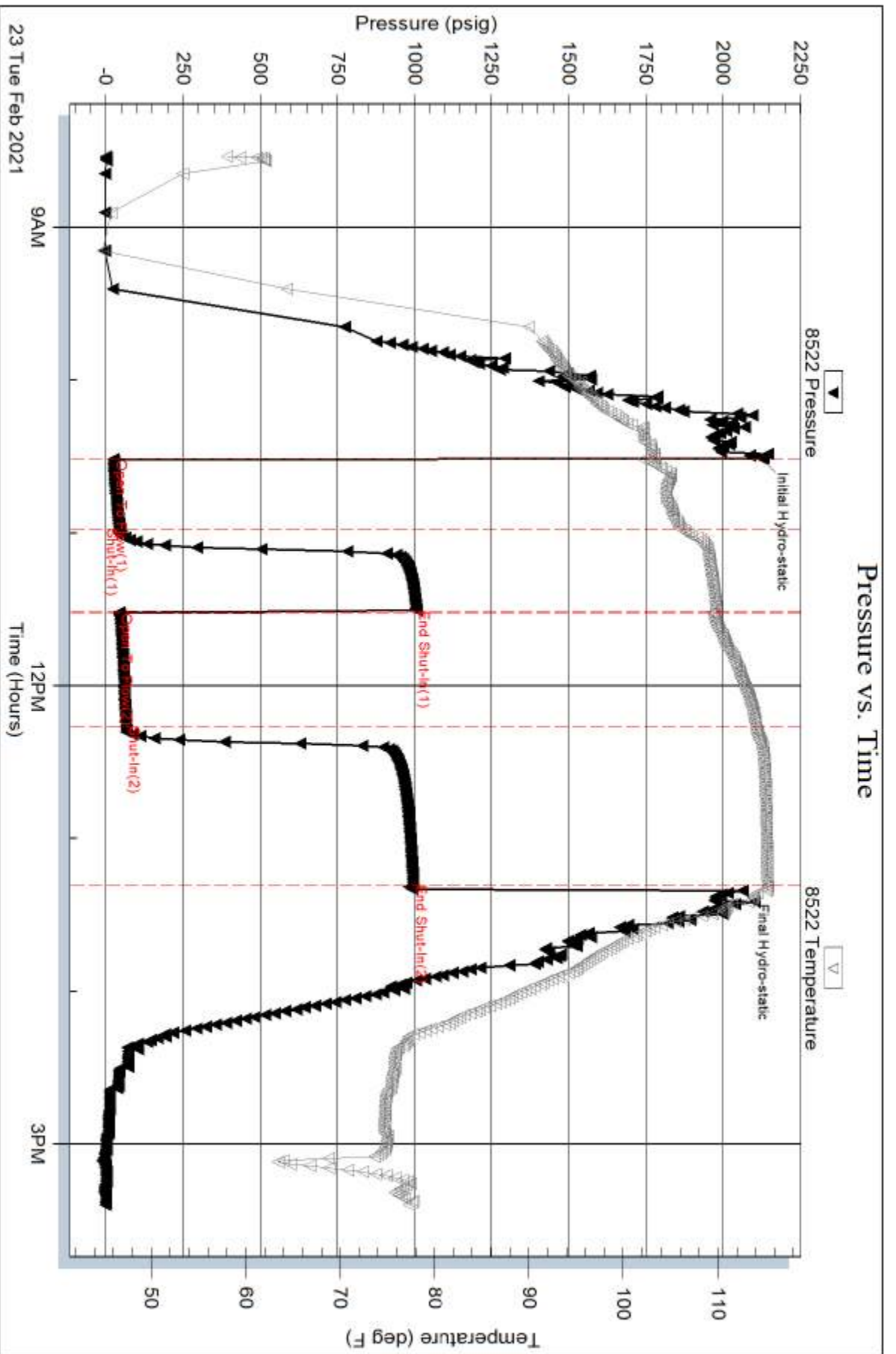
Num Gas Bombs: 0

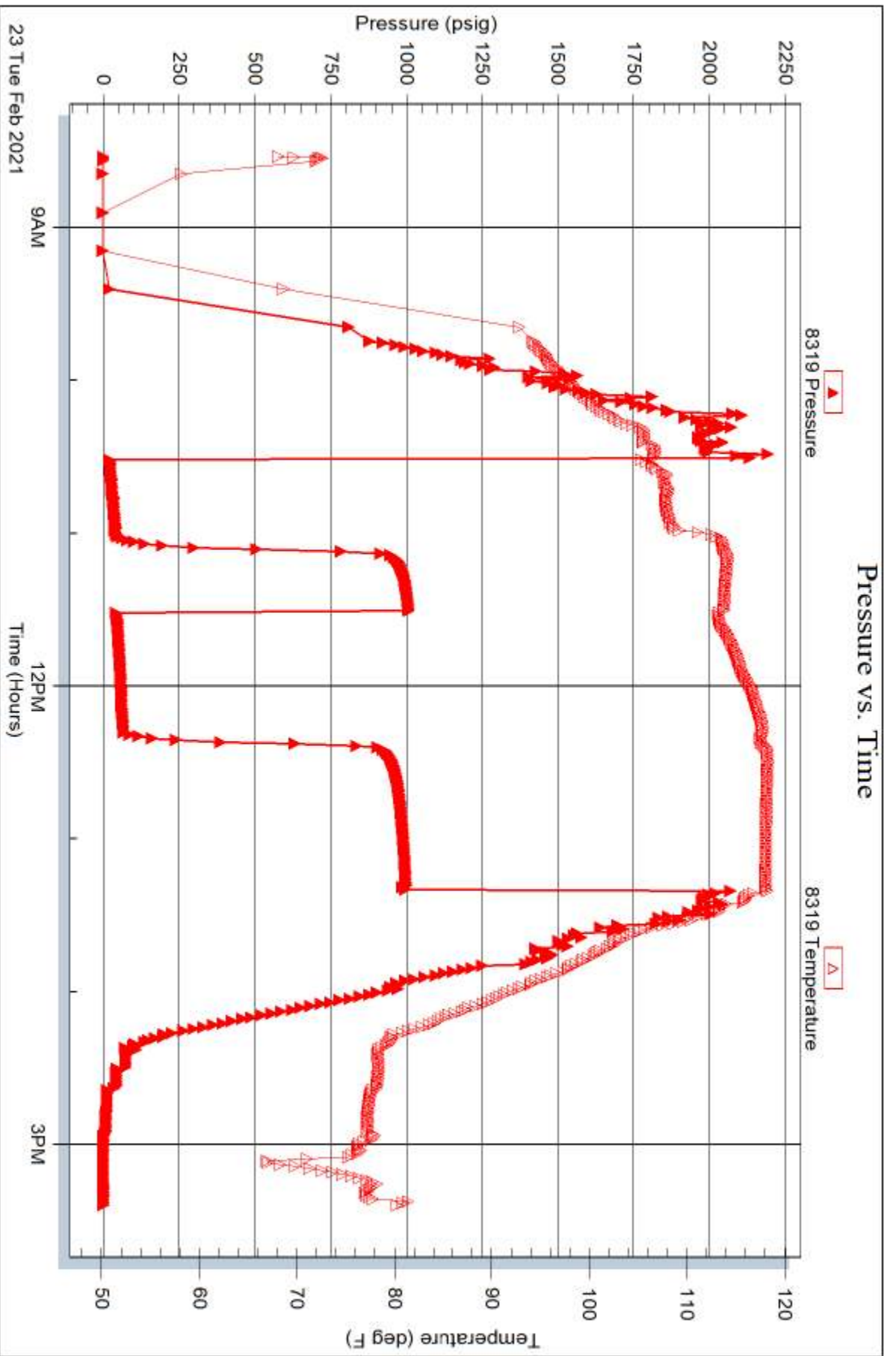
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .171 @ 71f = 41000ppm







TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

20 16s 27w Lane, Ks

202 W Main St.
Salem, Il 62881

Albin 3-20

Job Ticket: 66820

DST#: 4

ATTN: Vern Schrag

Test Start: 2021.02.24 @ 05:11:00

GENERAL INFORMATION:

Formation: **LKC- K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:22:45

Time Test Ended: 11:00:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4243.00 ft (KB) To 4259.00 ft (KB) (TVD)

Reference Elevations: 2729.00 ft (KB)

Total Depth: 4259.00 ft (KB) (TVD)

2719.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8522

Inside

Press@RunDepth: 23.75 psig @ 4244.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.02.24

End Date:

2021.02.24

Last Calib.:

2021.02.24

Start Time: 05:11:05

End Time:

11:00:44

Time On Btm:

2021.02.24 @ 07:22:30

Time Off Btm:

2021.02.24 @ 09:27:15

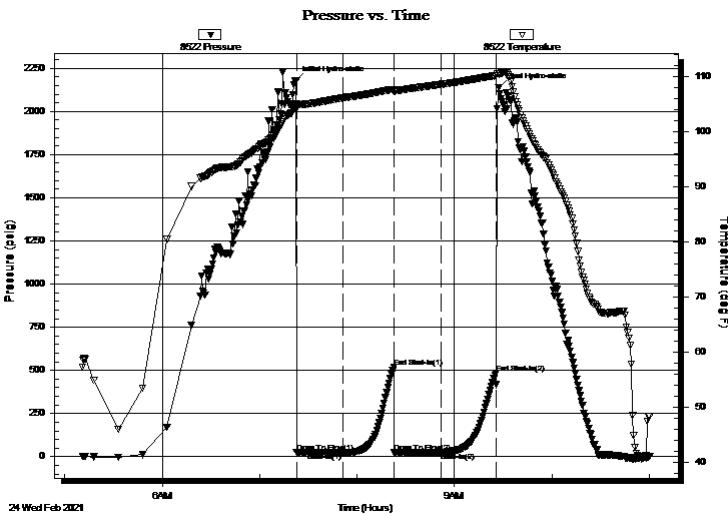
TEST COMMENT: 30- IF: 1" blow , receded.

30- IS: No return.

30- FF: No blow .

30- FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2177.29	105.06	Initial Hydro-static
1	24.08	104.25	Open To Flow (1)
29	23.48	106.15	Shut-In(1)
61	519.74	107.73	End Shut-In(1)
61	23.09	107.25	Open To Flow (2)
90	23.75	108.62	Shut-In(2)
123	485.24	110.19	End Shut-In(2)
125	2137.51	110.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
4.00	Mud 100m (oil spots)	0.06

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Shakespeare Oil Co, Inc.

20 16s 27w Lane, Ks

202 W Main St.
Salem, Il 62881

Albin 3-20

Job Ticket: 66820

DST#: 4

ATTN: Vern Schrag

Test Start: 2021.02.24 @ 05:11:00

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: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
4.00	Mud 100m (oil spots)	0.056

Total Length: 4.00 ft Total Volume: 0.056 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8522

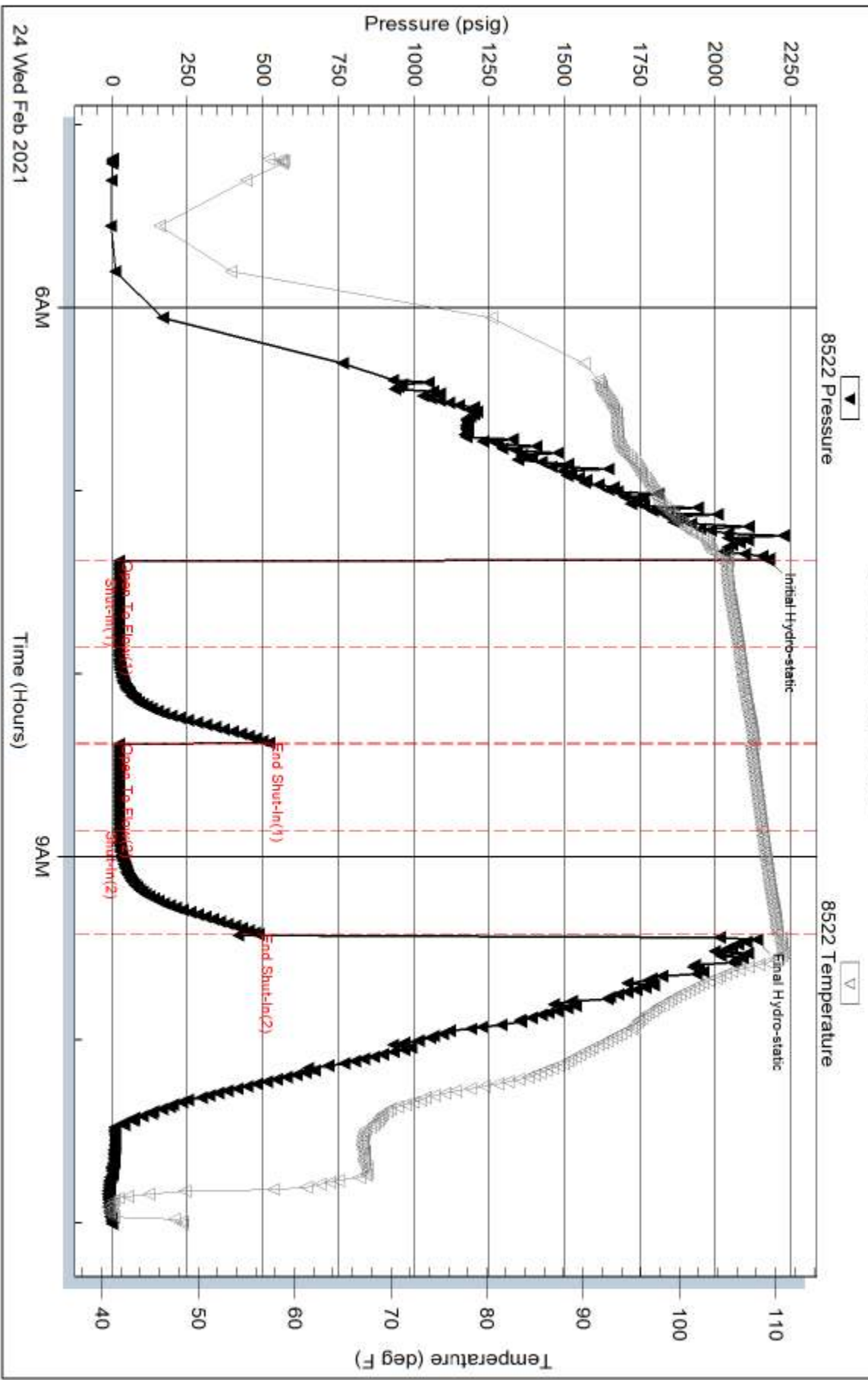
Inside

Shakespeare Oil Co. Inc.

Albin 3-20

DST Test Number: 4

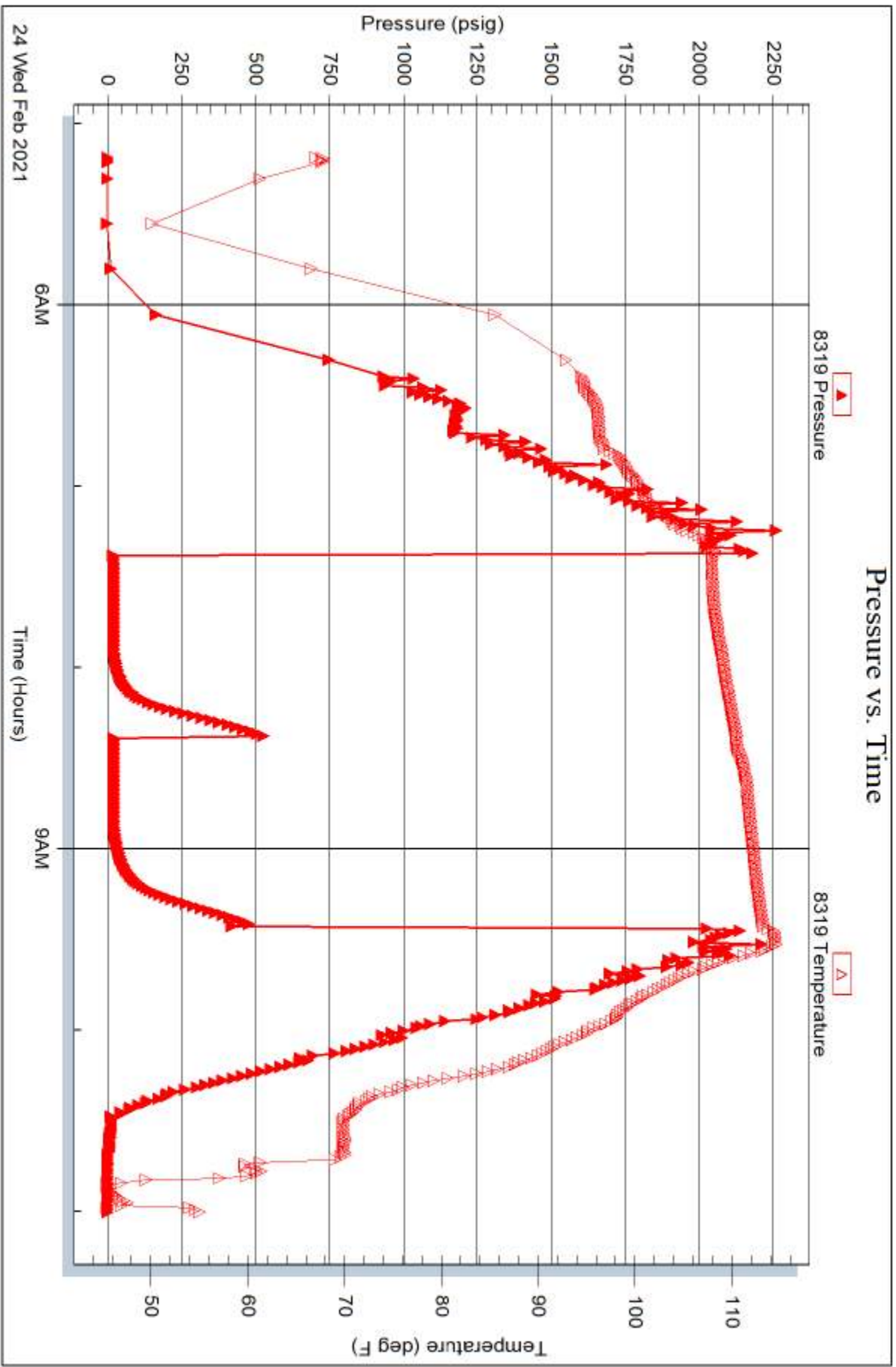
Pressure vs. Time



Trilobe Testing, Inc

Ref. No: 66820

Printed: 2021.02.24 @ 13:43:52





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

20 16s 27w Lane, Ks

202 W Main St.
Salem, Il 62881

Job Ticket: 66821

DST#: 5

ATTN: Vern Schrag

Test Start: 2021.02.25 @ 02:47:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:49:45

Time Test Ended: 10:18:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4345.00 ft (KB) To 4395.00 ft (KB) (TVD)

Reference Elevations: 2729.00 ft (KB)

Total Depth: 4395.00 ft (KB) (TVD)

2719.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8522 Inside

Press@RunDepth: 50.91 psig @ 4346.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.02.25 End Date: 2021.02.25

Last Calib.: 2021.02.25

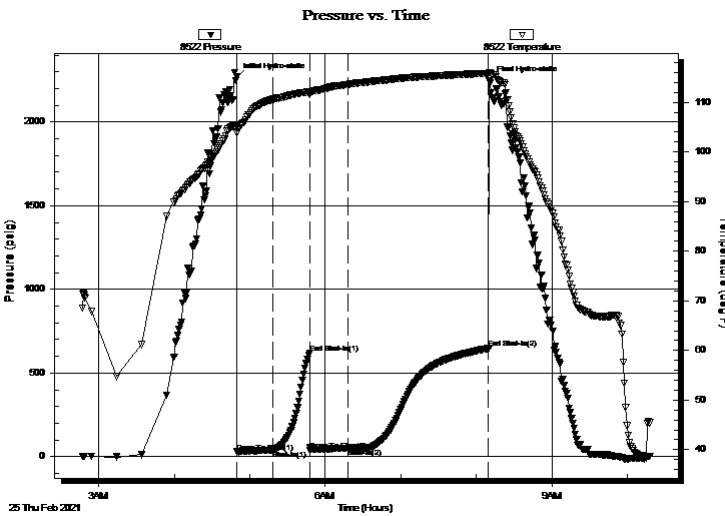
Start Time: 02:47:05 End Time: 10:18:14

Time On Btm: 2021.02.25 @ 04:49:30

Time Off Btm: 2021.02.25 @ 08:10:30

TEST COMMENT: 30- IF: 8" blow .
30- IS: No return.
45- FF: 11" blow .
90- FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2268.02	105.00	Initial Hydro-static
1	28.64	103.76	Open To Flow (1)
29	40.11	110.56	Shut-In(1)
58	619.85	112.04	End Shut-In(1)
59	39.26	111.70	Open To Flow (2)
89	50.91	113.61	Shut-In(2)
200	646.89	115.82	End Shut-In(2)
201	2249.19	116.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	gsocm 20g 2o 78m	0.98
0.00	110' GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Shakespeare Oil Co, Inc.

20 16s 27w Lane, Ks

202 W Main St.
Salem, Il 62881

Job Ticket: 66821

DST#: 5

ATTN: Vern Schrag

Test Start: 2021.02.25 @ 02:47:00

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: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
70.00	gsocm 20g 2o 78m	0.982
0.00	110' GIP	0.000

Total Length: 70.00 ft Total Volume: 0.982 bbf

Num Fluid Samples: 0

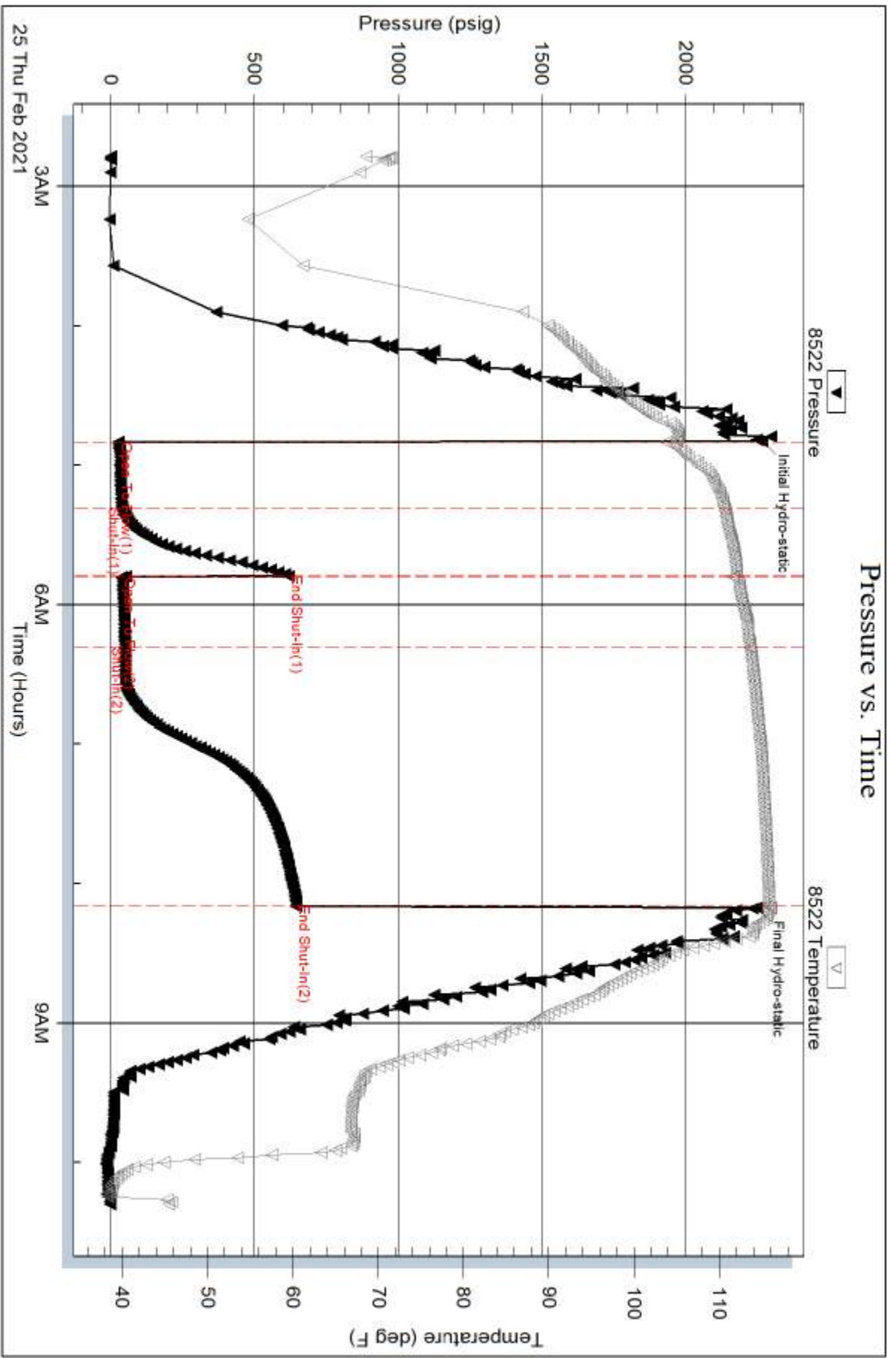
Num Gas Bombs: 0

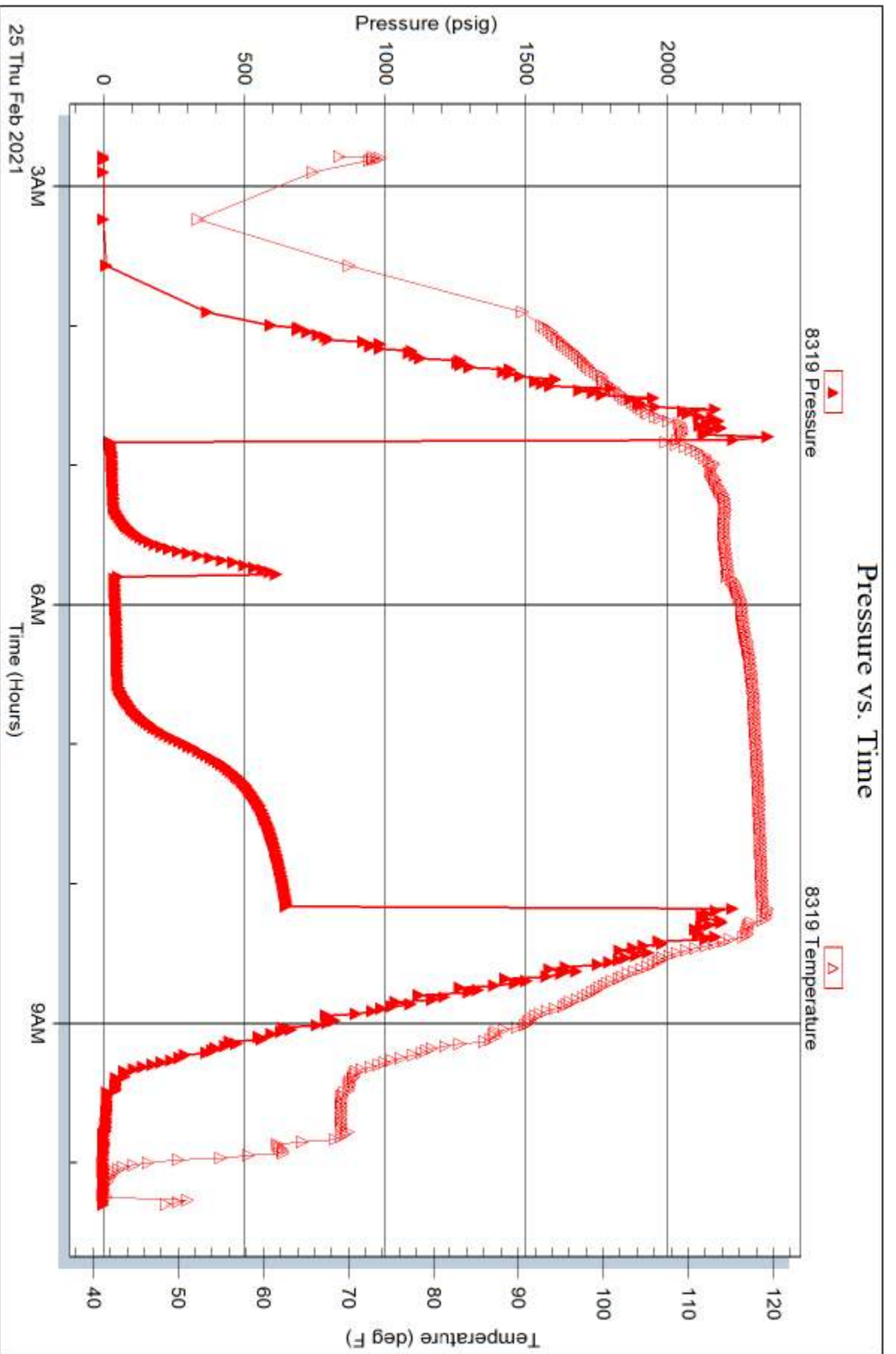
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

20 16s 27w Lane, Ks

202 W Main St.
Salem, Il 62881

Albin 3-20

Job Ticket: 66822

DST#: 6

ATTN: Vern Schrag

Test Start: 2021.02.26 @ 04:18:00

GENERAL INFORMATION:

Formation: **Ft Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:39:00

Time Test Ended: 10:35:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4476.00 ft (KB) To 4532.00 ft (KB) (TVD)

Reference Elevations: 2729.00 ft (KB)

Total Depth: 4532.00 ft (KB) (TVD)

2719.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8522 Inside

Press@RunDepth: 25.13 psig @ 4477.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.02.26

End Date: 2021.02.26

Last Calib.: 2021.02.26

Start Time: 04:18:05

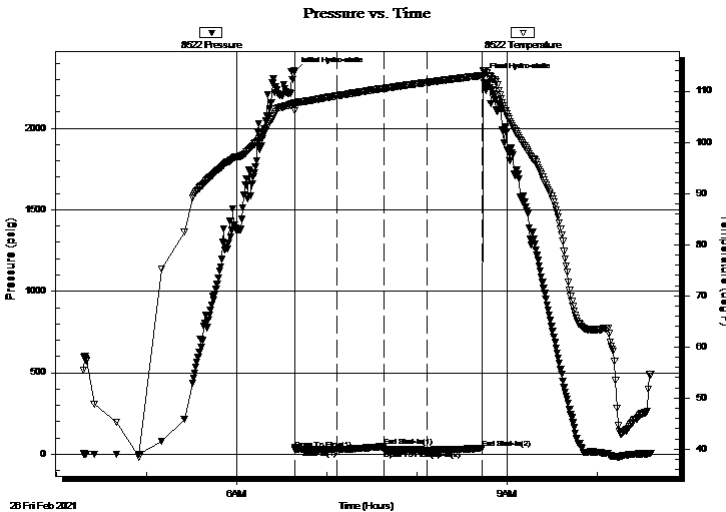
End Time: 10:35:44

Time On Btm: 2021.02.26 @ 06:38:30

Time Off Btm: 2021.02.26 @ 08:44:00

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

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2348.08	107.65	Initial Hydro-static
1	29.96	107.18	Open To Flow (1)
29	28.01	109.09	Shut-In(1)
60	46.42	110.55	End Shut-In(1)
60	26.92	110.53	Open To Flow (2)
89	25.13	111.71	Shut-In(2)
125	35.48	113.04	End Shut-In(2)
126	2311.19	114.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud 100m	0.04

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Shakespeare Oil Co, Inc.

20 16s 27w Lane, Ks

202 W Main St.
Salem, Il 62881

Albin 3-20

Job Ticket: 66822

DST#: 6

ATTN: Vern Schrag

Test Start: 2021.02.26 @ 04:18:00

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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	Mud 100m	0.042

Total Length: 3.00 ft Total Volume: 0.042 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

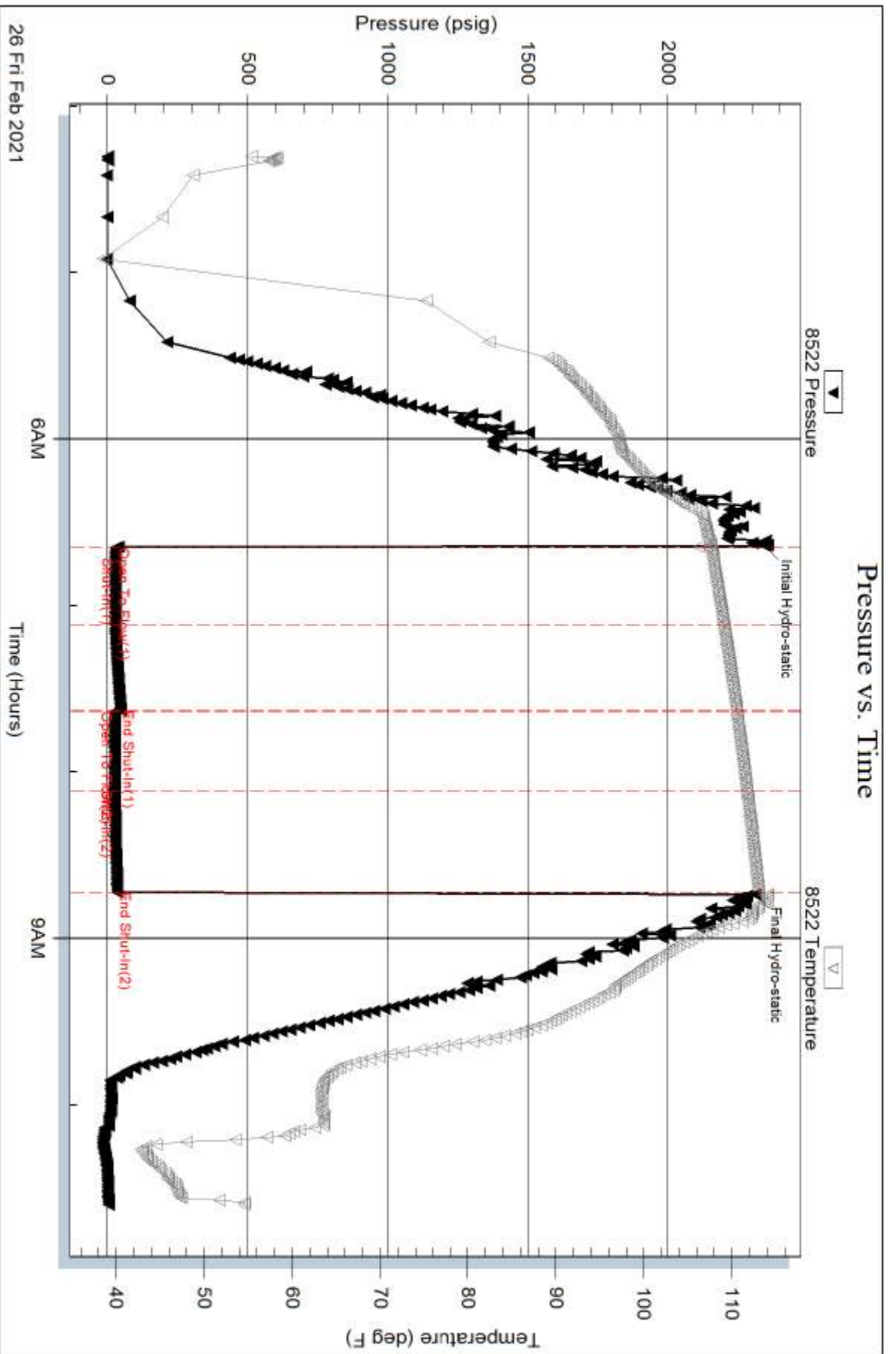
Serial #: 8522

Inside

Shakespeare Oil Co. Inc.

Albin 3-20

DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 66822

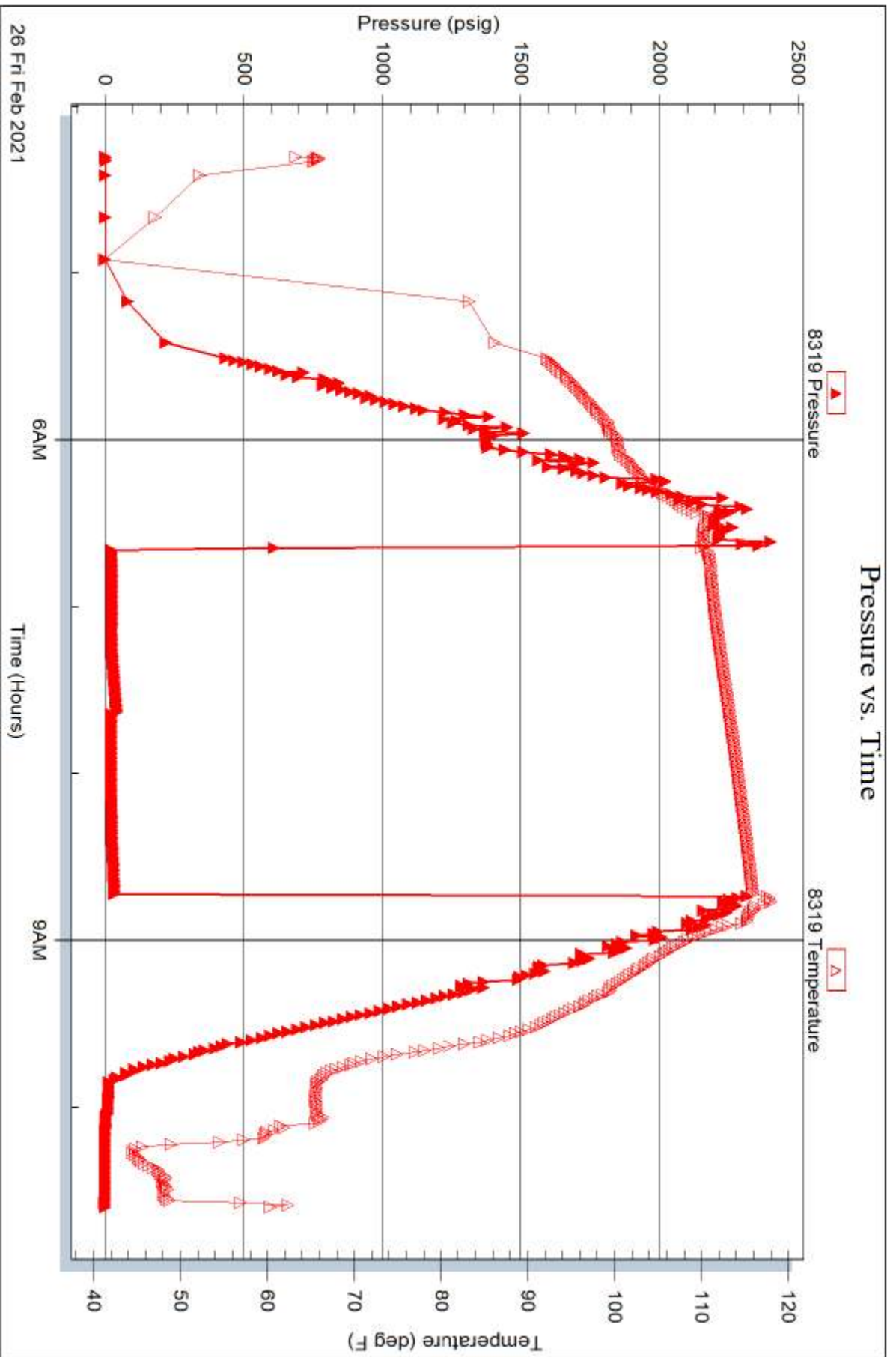
Printed: 2021.02.26 @ 11:07:11

Serial #: 8319

Outside Shakespeare Oil Co. Inc.

Albin 3-20

DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 66822

Printed: 2021.02.26 @ 11:07:11

SWIFT



P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



Invoice

DATE	INVOICE #
2/5/2021	33488

BILL TO
Shakespeare Oil Company, Inc 202 West Main Street Salem, IL 62881

RECEIVED
FEB 18 2021

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#3-20	Albin	Lane	Southwind Drilling	Oil	Development	8 5/8 Surface	Wayne
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				40	Miles	5.00	200.00
576D-S	Pump Charge - <u>Shallow Surface</u> (< 500 Ft.)				1	Job	925.00	925.00
325	Standard Cement				175	Sacks	13.50	2,362.50T
278	Calcium Chloride				8	Sack(s)	40.00	320.00T
279	Bentonite Gel				3	Sack(s)	30.00	90.00T
290	D-Air				3	Gallon(s)	42.00	126.00T
581D	Service Charge Cement				175	Sacks	1.85	323.75
583D	Drayage				343	Ton Miles	0.95	325.85
	Subtotal							4,673.10
Customer Disc...	Customer Discount Per Ted						-10.00%	-467.31
	Subtotal							4,205.79
	Sales Tax Lane County						7.50%	195.65
We Appreciate Your Business!							Total	\$4,401.44

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92

DW



TICKET 033488

CHARGE TO: **SHAKESPEARE OIL CO. TASC**
 ADDRESS
 CITY, STATE, ZIP CODE

PAGE 1 OF 1

WELL/PROJECT NO. **3-20** LEASE **ALBEN** COUNTY/PARISH **LANE** STATE **KS** CITY
 SERVICE SALES CONTRACTOR **SOUTHWESTERN DRILLING** RIG NAME/NO.
 WELL TYPE **OIL** WELL CATEGORY **DEVELOPMENT** JOB PURPOSE **8 5/8" SURFACE** WELL PERMIT NO.
 INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT							
575		1			40	MG			5.00	200.00
576S		1		MILEAGE # 111 PUMP CHARGE - SHALLOW SURFACE	1	JOB	265	FT	925.00	925.00
325		1		STANDARD CEMENT	175	SYS			13.50	2362.50
278		1		CALCIUM CHLORIDE	8	SYS			40.00	320.00
279		1		BENTONITE GEL	3	SYS			30.00	90.00
290		1		D-ADR	3	GAL			42.00	126.00
581		1		SERVICE CHARGE CEMENT	175	SYS			1.85	323.75
583		1		DRAYAGE	17150	lbs	343	TM	95	325.85

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 *Wayne Wilson* DATE SIGNED **2-5-2021** TIME SIGNED **2:00** P.M.

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

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 **4673.10**
 TAX **1016.00**
 TOTAL **4401.44**

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

SWIFT OPERATOR **Wayne Wilson** APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 2-5-2021 PAGE NO. 1

CUSTOMER		WELL NO.		LEASE		JOB TYPE		TICKET NO.	
SHAKESPEARE OIL CO. INC		3-20		ALBIN		8 5/8" SURFACE		033488	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL/GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
	2000								ON LOCATION
									TD-266 SET = 265 TP-265 8 5/8" # 23 15' CEMENT LEFT IN CASING
	2030								BREAK CIRCULATION
	2045	5	42 1/2		✓		200		MIX CEMENT - 175 SKS STANDARD 2% GEL, 3% CC
	2052	6	0		✓		300		DISPLACE CEMENT
	2055		16						CEMENT DISPLACED - SHUT IN
									CIRCULATED 20 SKS CEMENT TO PZT
									WASH TACK
	2130								JOB COMPLETE
									THANK YOU WAYNE, ZACH, KIRBY

SWIFT



Services, Inc.

P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



Invoice

DATE	INVOICE #
2/27/2021	33466

BILL TO
Shakespeare Oil Company, Inc 202 West Main Street Salem, IL 62881

RECEIVED
MAR 08 2021

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#3-20	Albin	Lane	Southwind Drilling	Oil	Development	4 1/2 Longstring	Blaine
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				40	Miles	5.00	200.00
578D-L	Pump Charge - Long String				1	Job	1,400.00	1,400.00
325	Standard Cement				225	Sacks	13.50	3,037.50T
284	Calseal				22	Sack(s)	40.00	880.00T
283	Salt				1,100	Lb(s)	0.25	275.00T
292	Halad 322				200	Lb(s)	8.50	1,700.00T
277	Gilsonite (Coal Seal)				1,125	Lb(s)	1.25	1,406.25T
276	Flocele				25	Lb(s)	3.00	75.00T
281	Mud Flush				500	Gallon(s)	1.50	750.00T
221	Liquid KCL (Clayfix)				2	Gallon(s)	25.00	50.00T
419-4	4 1/2" Rotating Head Rental				1	Each	250.00	250.00T
581D	Service Charge Cement				225	Sacks	1.85	416.25
583D	Drayage				494	Ton Miles	0.95	469.30
	Subtotal							10,909.30
Customer Disc...	Customer Discount Per Ted						-10.00%	-1,090.93
	Subtotal							9,818.37
	Sales Tax Lane County						7.50%	568.60
We Appreciate Your Business!							Total	\$10,386.97

502-5
gr

DW



TICKET 033466

CHARGE TO: Sharks page
 ADDRESS:
 CITY, STATE, ZIP CODE:

SERVICE LOCATIONS: Wichita KS
 WELL/PROJECT NO: 320 LEASE: Albin COUNTY/PARISH: Linne CITY: Pandemis DATE: 27 Feb 21 OWNER:
 CONTRACTOR: SWIFT WIND RIG NAME/NO.: 1901 DELIVERED TO: Location ORDER NO.:
 WELL TYPE: 011 WELL CATEGORY: 4 1/2 long string JOB PURPOSE: 4 1/2 long string WELL PERMIT NO.:
 WELL LOCATION:
 INVOICE INSTRUCTIONS:

PRICE REFERENCE	SECONDARY REFERENCE/PART NUMBER	ACCOUNTING		DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT							
575		1			4	mi			5.25	208.00
578		1		MILEAGE TRX 103	14	mi			14.00	196.00
325		1		Pump Charge	22.5	stk			13.50	3037.50
284		1		Staubach cements	1100	lb	20.5	20%	40.00	880.00
283		1		Culsech	1100	lb	10	10%	0.25	275.00
292		1		SALT	200	lb			8.50	1700.00
277		1		Head - 322	112.5	lb			1.25	1406.25
276		1		G-1 white	25	lb			3.00	75.00
				Flocele						

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: 2/27/21 TIME SIGNED: 4:44 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? 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? YES NO CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL: 8973.75
1935.55
10909.30
-1090.93
9818.37
508.00
10386.97

TAX TOTAL

SWIFT OPERATOR: Rgall APPROVAL: Rgall

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

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 27 Feb 21 PAGE NO. 1

CUSTOMER *Wafersville* WELL NO. *3-20* LEASE *Albin* JOB TYPE *Cement long string* TICKET NO. *33460*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								225 standard cement w/ Gilsrite 4 1/2" casing 113 jts CC & calced total pipe 4619' TD 4620' sheet 4075' Port collar #61 2116'
	1300							on loc 113
	1321							Drop ball - circulate - ROTATE
	1420		7					Plug RH - MH 30 sk 20 sk
	1428		12					Pump 500 gal mud flush
			20					Pump 20 bbl KCL flush
	1441	64	45				600	Mix STD cement 1755 sk @ 15.3 ppg
	1451							Drop latch down plug wash out pump & line
	1454	6 3/4					600	Displace plug
		6 3/4	52				800	catch pump
		5 1/2					850	
	1515		71				1500	Land plug
								Release pressure to truck - develop
	1520							walk truck hook up
	1545							job complete
								— Thanks — Blaine, Austin & Isaac



P. O. Box 466
 Ness City, KS 67560
 Off: 785-798-2300



Invoice

DATE	INVOICE #
3/8/2021	33673

BILL TO
Shakespeare Oil Company, Inc 202 West Main Street Salem, IL 62881

RECEIVED
 MAR 15 2021

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#3-20	Albin	Lane	Cheyenne	Oil	Development	Port Collar	Gideon
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				40	Miles	5.00	200.00
576D-D	Pump Charge - Deep Surface (> 500 Ft.) & Port Collars				1	Job	1,400.00	1,400.00
330	Swift Multi-Density Standard (MIDCON II)				210	Sacks	17.00	3,570.00T
275	Cotton Seed Hulls				1	Sack(s)	35.00	35.00T
276	Flocele				75	Lb(s)	3.00	225.00T
290	D-Air				3	Gallon(s)	42.00	126.00T
581D	Service Charge Cement				300	Sacks	1.85	555.00
583D	Drayage				598	Ton Miles	0.95	568.10
	Subtotal							6,679.10
Customer Disc...	Customer Discount Per Ted						-10.00%	-667.91
	Subtotal							6,011.19
	Sales Tax Lane County						7.50%	267.03
We Appreciate Your Business!							Total	\$6,278.22

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 DW



CHARGE TO: Shakespeare Oil & Gas
 ADDRESS _____
 CITY, STATE, ZIP CODE _____

TICKET **33673**

PAGE 1 OF 1

SERVICE LOCATIONS
 1. Ness City, KS
 2. _____
 3. _____
 4. _____

WELL/PROJECT NO. 3-20
 CONTRACTOR Wild West Cheyenne
 TICKET TYPE SALES SERVICE
 WELL TYPE Oil
 WELL CATEGORY Development
 WELL PERMIT NO. _____
 JOB PURPOSE Port Collar
 COUNTY/PARISH LANE
 RIG NAME/NO. _____
 STATE KS
 CITY Pendennis
 DELIVERED TO Location
 DATE 3-8-2021
 ORDER NO. _____
 WELL LOCATION Pendennis 14-N, F-1mk

PRICE REFERENCE	SECONDARY REFERENCE/PART NUMBER	ACCOUNTING		DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT							
575		1					40	Mi	5.00	200.00
576D		1					1	job	1400.00	1400.00
330		1					210	skt	17.00	3570.00
275		1					1	skt	35.00	35.00
276		1					75	lbs	3.00	225.00
290		1					3	gal	42.00	126.00
581		1					300	skt	1.85	555.00
583		1					598	TM	0.96	568.00

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 3-8-2021 TIME SIGNED 1:15
 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

AGREE _____ UNDECIDED _____ DISAGREE _____
 29855 lbs 598 TM

PAGE TOTAL 6679.10
1835
207103

TOTAL 6278.22

INVOICE INSTRUCTIONS _____

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

SWIFT OPERATOR Judson Fisher APPROVAL _____

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 3-8-2021 PAGE NO. 1
TICKET NO. 33673

CUSTOMER		WELL NO.		LEASE		JOB TYPE		TICKET NO.	
Shakespeare C.1		3-20		Albin		Port Collar		33673	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
	1100								ON LOCATION 2 3/8" x 4 1/2"
									PC: 2,117'
	1100	-	1/2		✓		1,000		Test BS to 1000 PSI * Hold - Release Pressure
	1105								Open PC
	1110	3	3		✓		500		Injection RATE
	1115	3	110		✓		500		Mix 210 sks of SMD 1/4" Fb @ 11.2 ppg - Circulate 15 sks to the Pit -
		3	7 1/4		✓		500		Displace CMT
	1200								Close PC
	1210	-	-		✓		1,000		Test P-Test to 1000 PSI * Hold Run 5 Joints
	1220	3	25		✓		500		Reverse Clean
	1240								Wash up Trk #115
	1300								Job Complete
									210 sks of SMD Cement used * 15 sks to the Pit *
									Thanks!
									Dudman, Kerly, Dewsty

SWIFT



P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



Invoice

DATE	INVOICE #
4/1/2021	33561

BILL TO
Shakespeare Oil Company, Inc 202 West Main Street Salem, IL 62881

RECEIVED
APR 12 2021

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#3-20	Albin	Lane	Wild West	Oil	Workover	Squeeze Perfs	Gideon

PRICE REF.	DESCRIPTION	QTY	UM	UNIT PRICE	AMOUNT
575W	Mileage - 1 Way	45	Miles	5.00	225.00T
578W-D	Pump Charge - Deep Squeeze (> 1500 Ft.)	1	Job	1,400.00	1,400.00T
325	Standard Cement	50	Sacks	13.50	675.00T
286	Halad-1 (Halad 9)	20	Lb(s)	8.00	160.00T
290	D-Air	1	Gallon(s)	42.00	42.00T
288	Sand (20/40 Brady)	1	Sack(s)	22.00	22.00T
581W	Service Charge Cement	50	Sacks	1.85	92.50T
582D	Minimum Drayage Charge	1	Each	250.00	250.00
	Subtotal				2,866.50
	Sales Tax Lane County			7.50%	196.24

INT

502-5
R

We Appreciate Your Business!

Total

\$3,062.74

DW



TICKET 33561

CHARGE TO: *Shakespeare Oil + Gas*
 ADDRESS
 CITY, STATE, ZIP CODE

PAGE 1 OF 1

SERVICE LOCATIONS
 1. *Ness City, KS*
 2. *Wild West*
 3. *Oil*
 4. *Workover*

WELL/PROJECT NO. *3-20*
 CONTRACTOR *Wild West*
 WELL TYPE *Oil*
 INVOICE INSTRUCTIONS

LEASE *Albin* COUNTY/PARISH *LANE* STATE *KS* CITY *Pendennis* DATE *4-1-2021* OWNER
 RIG NAME/NO. *LOCATION* SHIPPED VIA *GA* DELIVERED TO
 WELL CATEGORY *Workover* WELL PERMIT NO. *Pendennis 1/2 E 1-N* WELL LOCATION *E-1-N*
 JOB PURPOSE *Squeeze Porks*

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT							
575		1					45	mi	5.00	225.00
578		1					1	job	1400.00	1400.00
325		1					50	sk	13.50	675.00
286		1					20	lbs	8.00	160.00
290		1					1	gal	42.00	42.00
288		1					1	sk	22.00	22.00
581		1					50	sk	1.85	92.50
582		1					1	ea	250.00	250.00

CMT Service Charge
Min Drayage Charge

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?

AGREE YES NO
 UNDECIDED DISAGREE

PAGE TOTAL 2866.50

TOTAL 3062.74

DATE SIGNED *4-1-2021* TIME SIGNED *1:30* A.M. P.M.
 SWIFT OPERATOR *Gideon Fushy* APPROVAL

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

CUSTOMER *Shakespeare Oil & Gas 3-20* WELL NO. *3-20* LEASE *Albin* JOB TYPE *Perf Squeeze* TICKET NO. *33601*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0900							ON LOCATION 2 3/8" x 4 1/2" RBP: 4298' Perfs: 4259'-61' PKR: 4167'
	0915	3	14.7	✓		1500		Test Plug @ 4271' * Hold * - etc - Pump 30 bbl down BS to unset PKR - Tag Fluid ~ 600'
	1000	2	12	✓				Spot Sand - Let fall
	1030							Pull hb to 4167'
	1040	1	4		✓	500		Load + PTest BS to 500 * Hold * - Release
	1045	1	4	✓		1,000		Injection RATE 1BPM @ 1000 PSI
	1050	1	10.5	✓		700		Mix 50 sks of Standard CMT @ 15.5 sps w/ HALAD in first 15 sks
	1100							- Wash Pump + Lines
	1105	1 1/3	0	✓		650		Begin Displacement
		1 1/3	7	✓		700		CMT to Perfs
		1 1/3	10	✓		900		
		1 1/3	12	✓		1,000		
		1	14	✓		1,000		
		3/4	15	✓		1,000		
		1/2	16	✓		1,000		
		1/2	17	✓		1200		
	1125	-	17	✓		600		KO Pump - Pressure dropped to 600 + hold
	1130							Wash up Trk #112
	1145	Ø	-	✓		900		Stage * Hold 900 PSI *
	1200	2	65		✓	500		Wash through Squeeze + get SAND off Plug
	1245							Pull 4 JTs + Pressure up well to 500 PSI * Shut in *
	1300							Job Complete 50 sks used Approx. 45 sks in Perfs Thanks! <i>Anderson, Purley, Rusty</i>



P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



Invoice

DATE	INVOICE #
4/6/2021	33565

BILL TO

Shakespeare Oil Company, Inc
202 West Main Street
Salem, IL 62881

RECEIVED
APR 13 2021

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#3-20	Albin	Lane	Wild West	Oil	Workover	Squeeze Perfs	Gideon

PRICE REF.	DESCRIPTION	QTY	UM	UNIT PRICE	AMOUNT
575W	Mileage - 1 Way	45	Miles	5.00	225.00T
578W-D	Pump Charge - Deep Squeeze (> 1500 Ft.)	1	Job	1,400.00	1,400.00T
325	Standard Cement	50	Sacks	13.50	675.00T
286	Halad-1 (Halad 9)	20	Lb(s)	8.00	160.00T
290	D-Air	1	Gallon(s)	42.00	42.00T
288	Sand (20/40 Brady)	1	Sack(s)	22.00	22.00T
581W	Service Charge Cement	50	Sacks	1.85	92.50T
582W	Minimum Drayage Charge	1	Each	250.00	250.00T
	Subtotal				2,866.50
	Sales Tax Lane County			7.50%	214.99

INT

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9m

We Appreciate Your Business!

Total

\$3,081.49

DW

JOB LOG

SWIFT Services, Inc.

DATE 4-6-2021 PAGE NO. 1

CUSTOMER Shakespeare Oil & Gas WELL NO. 3-20 LEASE Albin JOB TYPE Perf Squeeze TICKET NO. 3356's

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1200							DN Location 2 3/8" x 4 1/2" Perfs: 4152'-56' RBP: 4176' PKR: 4,046'
	1220	2	7.5	✓		1500		Test Plug @ 4162' *Hold*
	1230	2	8	✓		300		Spot SAND - Let fall Pull Hb to 4,046'
	1310				✓	500		Load + P. Test BS to 5000 PSI *Hold*
	1330	1 1/4	3	✓		900		Injection RATE
	1335	1 1/2	10.5	✓		550		Mix 50sks of Standard CMT @ 16.5 ppq w/ HALAD in first 15sks
	1345							- Wash P+L
	1350	2	0	✓		0		Begin Displacement
		1 3/4	2.5	✓		500		
		1 3/4	7	✓		500		CMT to Perfs
		1 3/4	10	✓		800		
		1 1/4	12	✓		900		
		1	14	✓		1000		
		3/4	15	✓		1,000		
		1/2	16	✓		1250		MAX PSI 1250 PSI
	1405	-	16.25	✓		1200		KD Pump - ISIP: 1200 PSI *Shut in + Wash up Trk #12*
	1430	∅		✓		500 750 1000		Stage
	1510							Release Pressure *Dry up*
	1515							Wash through Squeeze
	1600							- Pull 4 JTs + Pressure well to 500 PSI + Shut in *
	1615	∅		✓		500		Job Complete Approx 45sks in Perfs
								Thanks! Sudson Kurling Duvsty



P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



Invoice

DATE	INVOICE #
4/13/2021	33590

BILL TO
Shakespeare Oil Company, Inc 202 West Main Street Salem, IL 62881

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#3-20	Albin	Lane	Wild West Well	Oil	Development	Squeeze Perfs	Wayne
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				40	Miles	5.00	200.00
578D-D	Pump Charge - Deep Squeeze (> 1500 Ft.)				1	Job	1,400.00	1,400.00
288	Sand (20/40 Brady)				1	Sack(s)	22.00	22.00T
325	Standard Cement				50	Sacks	13.50	675.00T
290	D-Air				1	Gallon(s)	42.00	42.00T
581D	Service Charge Cement				50	Sacks	1.85	92.50
582D	Minimum Drayage Charge				1	Each	250.00	250.00
	Subtotal							2,681.50
	Sales Tax Lane County						7.50%	55.43

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92

RECEIVED
APR 20 2021

We Appreciate Your Business!

Total

\$2,736.93

DW



CHARGE TO: **SHAKESPEARE OIL CO. INC.**
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET **33590**

PAGE **1** OF **1**

SERVICE LOCATIONS
 1. **NESS CAY, KS**
 2.
 3.
 4.

WELL/PROJECT NO. **3-20**
 LEASE **ALBIN**
 COUNTY/PARISH **LANE**
 STATE **KS**
 CITY
 DATE **4-13-2021**
 OWNER **SAME**

TICKET TYPE
 SERVICE
 SALES
 CONTRACTOR **WILD WEST WELL SERVICE**
 RIG NAME/NO.
 JOB PURPOSE **SQUEEZE PERFS**

WELL TYPE **OIL**
 WELL CATEGORY **DEVELOPMENT**
 DELIVERED TO **LOCATION**
 WELL PERMIT NO.
 WELL LOCATION **E/ PENNELLWYS, KS**

INVOICE INSTRUCTIONS
 REFERRAL LOCATION

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT							
575		1			MILEAGE # 112		40	MI	5.00	200.00
578		1			PUMP CHARGE - DEEP SQUEEZE		1	JOB	1400.00	1400.00
288		1			SACK SAND		1	SKS	22.00	22.00
325		1			STANDARD CEMENT		50	SKS	13.50	675.00
286		1			HARDT		20	1BS	8.00	160.00
290		1			D-AZER		1	GAL	42.00	42.00
581		1			SERVICE CHARGE CEMENT		50	SKS	1.85	92.50
582		1			MAINTENANCE DRAINAGE CHARGE		94	TM	250.00	2350.00

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 **4-13-2021** TIME SIGNED **1:30** 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 **2681.50**
~~2811.50~~

TOTAL **2736.93**
5543

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

SWIFT OPERATOR **WAVE WILSON** APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 4-13-2021 PAGE NO. 1

CUSTOMER SHAKESPEARE OIL Co. Inc. WELL NO. 3-20 LEASE ALBIN JOB TYPE SQUEEZE PERFORATIONS TICKET NO. 33590

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1330							ON LOCATION
								2 ³ / ₈ " x 4 ¹ / ₂ " 11.6 #
								RBP = 4118
								PERFS = 4076-90
								PKR = 3946'
	1350		10 ¹ / ₂	✓		1500		TEST TOOLS RBP = 4118', PKR = 4098'
	1410		7 ¹ / ₂	✓				SPOT SAND 1-SACK LET FALL FL = 1600'
	1450		16		✓	500		SET PKR = 3946' - LOAD ANNULUS - HELD
	1505	2	9	✓		800		INJ RATE (VAC 2 MIN)
	1510	2	10 ¹ / ₂	✓		800		MAX CEMENT - 50 SKS (11000 + 15* 20 SKS)
	1515							WASH OUT PUMP - LINES
	1520	2	0	✓		0		DISPLACE CEMENT
		2	6	✓		300		"
		2	7	✓		400		" CEMENT = PERFS
		2	12	✓		1400		"
		1	13	✓		1250		"
		3/4	15 ¹ / ₂	✓		1800		" PACKER CLEAR
	1530	1/2	16 ¹ / ₂	✓		2000		" SHUT DOWN
	1535					1800		SHUT IN - WASH TRUCK
	1545					1000/2000		STAGE
	1555							RELEASE PSZ - HELD
	1605	2 ¹ / ₂	65	✓		400		WASH THROUGH SQUEEZE (5 JTS)
		2 ¹ / ₂	25			400		WASH SAND OFF RBP
								PULL PKR ABOVE SQUEEZE
	1700				✓	500		PSZ WELL (PKR SWING) HELD - SHUT IN
								45 SKS CEMENT IN PERFS
	1730							JOB COMPLETE

THANK YOU
WAYNE, KERBY, DUSTY



P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



Invoice

DATE	INVOICE #
4/19/2021	33526

BILL TO
Shakespeare Oil Company, Inc 202 West Main Street Salem, IL 62881

RECEIVED

APR 27 2021

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#3-20	Albin Unit	Lane	Wild West	Oil	Development	Acid/perf squeeze	Blaine
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
102	Service Retrievable Bridge Plug Rental				1	Each	1,150.00	1,150.00T
101	Service Packer Rental				1	Each	1,250.00	1,250.00T
193	Wash Down Through Squeeze With Swift Packer				1	Job	300.00	300.00T
	Subtotal							2,700.00
Customer Disc...	Customer Discount Per Ted						-10.00%	-270.00
	Subtotal							2,430.00
500D	Mileage - 1 Way 4/19/2021				40	Miles	5.00	200.00
501D	Acid Pump Charge				1	Job	700.00	700.00
300 - 15%	Regular Acid				100	Gallons	2.00	200.00
235	INH.1 ESA-28				1	Gallon(s)	40.00	40.00
288	Sand (20/40 Brady)				1	Sack(s)	22.00	22.00T
500D	Mileage - 1 Way 4/20/21				40	Miles	5.00	200.00
578D-D	Pump Charge - Deep Squeeze (> 1500 Ft.)				1	Job	1,400.00	1,400.00
325	Standard Cement				50	Sacks	13.50	675.00T
286	Halad-1 (Halad 9)				1	Lb(s)	8.00	8.00T
290	D-Air				1	Gallon(s)	42.00	42.00T
581D	Service Charge Cement				50	Sacks	1.85	92.50
582D	Minimum Drayage Charge				1	Each	250.00	250.00
	Subtotal							3,829.50
	Sales Tax Lane County						7.50%	238.28
We Appreciate Your Business!							Total	\$6,497.78

INT

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gm

DW



CHARGE TO: Shakespeare
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET **33526**

PAGE 1 OF 1

SERVICE LOCATIONS
 1. How KS
 2. Ness City KS
 3.
 4.

WELL/PROJECT NO. 3-20 LEASE Alba Unit COUNTY/PARISH LAW STATE OK CITY Pennington DATE 19 APR 21 OWNER
 CONTRACTOR
 TICKET TYPE SERVICE SALES
 WELL TYPE 0.1 WELL CATEGORY Development JOB PURPOSE analyze / pub squeeze RIG NAME/NO. location SHIPPED DELIVERED TO
 WELL PERMIT NO. location WELL LOCATION

INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT							
500		1			40	mi			5.00	200.00
501		1		TRK 113	1 ea				700.00	700.00
300		1		Pump Charge	15	9%	100 gal		2.00	200.00
235		1		Red Acid	1	gal			40.00	40.00
				inhib-1						
				APR 20						
288		1		SAND	1	sk			22.00	22.00
500		1		TRK 113 mileage	40	mi			5.00	200.00
576		1		Pump Charge Deep Squeeze	1	ea			1400.00	1400.00
102		2		Service Retrieval Bridge Pk Rental	4 1/2	in	1 ea		1750.00	1750.00
101		2		Service Proker Rental	4 1/2	in	1 ea		1250.00	1250.00
193		2		WASH THROUGH SQUEEZE - SWIFT PER	1	JOB			300.00	300.00

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. 1920

SWIFT OPERATOR [Signature] APPROVAL

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

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
 54621.00
~~106750~~
~~5000.00~~
~~67577.00~~
 6529.50
 2700.00
 6259.50
 238.28
 6497.18

TAX

TOTAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 19 APR 21 PAGE NO. 1

CUSTOMER *Shalespine* WELL NO. 3-20 LEASE *Alvin unit* JOB TYPE *acidize / perf squeeze* TICKET NO. 33526

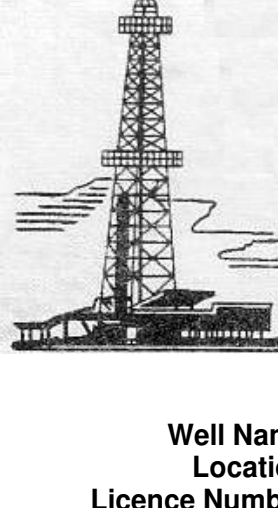
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								100 gal Reg acid 150/6 50 sk STD cement perfs to squeeze 4041-43 2 3/8 x 4 1/2 RBP 4062 Packer squeeze 3914' treat 4011' spot acid 4045'
	13:45							on loc TRK 113 tag fluid 3200'
	14:05		4 3/4 17				500	spot 4 3/4 bbl (Acid + H ₂ O) catch pressure inj rate 2 bpm @ 500 psi bleeds off to ϕ
	15:00	2						test tools to 1500 - wait test - move tools $\uparrow \downarrow \downarrow \uparrow$ no tests at any depth
	16:30						1500	drop standing valve tubing holding 1500 psi kick up -
	16:30							pulling tools - plan to run in new set this Apr 22
	16:40							job complete for today

JOB LOG

SWIFT Services, Inc.

DATE 20 APR 21 PAGE NO. 2
TICKET NO. 33526

CUSTOMER		WELL NO.		LEASE		JOB TYPE		DESCRIPTION OF OPERATION AND MATERIALS	
Shakespeare		3-20		Albin Unit		Pup squeeze			
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)			
				T	C	TUBING	CASING		
									Apr 20 second day Run in new sets of 4 1/2' tools 2 3/4"
	1030								on loc TRK 113 testing tools
	1130					200			- unable to get a good test drop standing valve, tubing joint - 200 psi pull up 10 more joints - test again
	1220								- no test - call for replacement swift tools
	1500					1500	1500		test tools - holding 1500 psi
	1520		9						spot 1 SACK SAND let sand fall
	1555		8 1/2				500		Pressure BS - shot in injection rate 2 1/2 bpm @ 550 psi
	1610	2 1/2	11			600			MIX STD cement w/ lwt @ 15 lb ppf 500
	1620								work on Pump Line
	1625	2							Displace cement
		2	10			600			- catch pump -
		2	15 1/4			1000			packer clear
		1	16 1/4			1200			Kidney - shot in 2 3/8
	1636					70			work truck
						1000			holding 1000 psi
	1655								Release pressure to truck - dried up
	1710								WASH TROUGH SOURCE & clean sand for RBP
									pull 4 joints
	1810					500	500		packer swinging - 500 psi - shot in
	1825								Reck up job complete
									Tempers Austin, Blair, Dister & Wayne



WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG
CONSULTANT GEOLOGIST



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

Well Name: **ALBIN #3-20**
Location: **SE SW NW SE SEC. 20-16S-27W**
Licence Number: **API: 15-101-22646**
Spud Date: **February 5, 2021**
Surface Coordinates: **1402' FSL, 2046' FEL**

Region: **Lane Co., KS**
Drilling Completed: **February 26, 2021**

Bottom Hole Coordinates:
Ground Elevation (ft): **2719'**
Logged Interval (ft): **3650'**
Formation: **Mississippi**
Type of Drilling Fluid: **Chemical Premix (Displaced)**

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

OPERATOR:

Company: **Shakespeare Oil Co., Inc.**
Address: **202 West Main Street
Salem, IL 62881**

DRILLING CONTRACTOR:

Southwind Drilling Co., Rig #8:

DP 4.5" XH (16.6#); DC 6-1/4" x 2-3/8", 411.58"; Kelly 40.00', Tool Joint 5.5"; Bit: 7-7/8", JZ-HA23X, 3/14s; rpm 80, WOB 35k; Kelly Bushing 10' above ground level; Frank Rome (tool pusher).

CASING:

Ran 6 jts new MPW LS 8 5/8", 23# csg., tally 253.85', set @ 265.85'.

CIRCULATION SYSTEM:

Continental EMSCO D-375, duplex, 6 x 14, 58 spm, Chemical, premix, earth pits, MudCo/Service Mud, Inc., Gary Schmidtberger.

GAS DETECTION SYSTEM:

None.

DRILL STEM TESTS:

Trilobite Testing, Inc., Scott City, KS, Bradley "Walt" Walter.

OPEN HOLE LOGS:

DN, DI (SP), ML, No Sonic; 5" detail LTD-3800; 2" DI to surface casing; Midwest Wireline, Hays, KS, J. Henrickson.

LTD (4619') was one foot short to RTD (4620').

ROP (min/ft)	DST	Lithology	Geological Descriptions	Total Gas
15				0
15				100
3629			LS: grayish-brown; mic-vf xtal, dense, fos, no visible porosity; N.S., w/greenish calc. shales.	
3650			LS: dk grayish-brown, shaley; peletal; micritic in part; fos; no visible porosity; N.S.	
3700			Shale: greenish to gray, calcareous;	
3750			LS: mostly dk grayish brown; mic-vf xtal; fos; dense; mixed w/dk gray to brown calc. shale; N.S.	
3800			LS: lt-dk grayish brown; mic-vf xtal; dense; mixed w/fos, calc. shales; N.S.	
3850			LS: md-dk grayish brown; mic-vf xtal; granular in part; sli. fos; dense; no visible porosity; N.S.	
3900			LS: dk grayish brown; mic-vf xtal; dense; peletal in part; sli. fos; shaley in part; no visible porosity; N.S.	
3950			LS: lt-dk grayish brown; mic-vf xtal; granular; no visible porosity; N.S., mixed w/greenish shales;	
4000			LS: as above.	
4050			LS: lt-md grayish brown; mic-vf xtal; chalky in part; no visible porosity; N.S.	
4100			LS: lt-md grayish brown; mic-vf xtal; granular; sli. peletal; tight inter grain & very fine oomoldic porosity; only dull floor; N.S., 3770.	
4150			LS: lt-md brown; mic-vf xtal; dense; no visible porosity; N.S.	
4200			LS: lt-md grayish brown as above but sli. peletal; no visible porosity; N.S.	
4250			LS: lt grayish brown; vf-xtal; finely granular; no visible porosity; N.S.	
4300			LS: md brown; mic-vf xtal; medium granular; fos-frag; tight int grain porosity; N.S., 3810.	
4350			LS: lt brown; mic-vf xtal; finely granular; fos-frag; tight int grain porosity; N.S.	
4400			LS: white to lt brown; mic-vf xtal; chalky in part; finely granular in part; poor porosity; N.S., 3830.	
4450			LS: chalky as above.	
4500			LS: lt-md grayish brown; mic-vf xtal; argill., poor porosity; N.S.	
4550			LS: lt brown; mic-vf xtal; fine granular in part; very fine oomoldic and fos-moldic porosity; dull floor; N.S., 3880.	
4600			LS: oomoldic as above.	
4650			LS: lt brown; vf-xtal; granular in part; trc opa, chert; mostly dense; no visible porosity; N.S.	
4700			LS: lt brown; mic-vf xtal; dense to chalky in part; no visible porosity; N.S.	
4750			LS: lt brown; mic-vf xtal; rough textured; chalky in part; scattered fine vug porosity; N.S.	
4800			LS: lt-md grayish brown; mic-vf xtal; sli fos; rough textured; trc opa chert; poor porosity; N.S.	
4850			LS: lt grayish brown; mic-vf xtal; rough textured; sli fos; fine oomoldic porosity; N.S.	
4900			LS: as above.	
4950			LS: grayish brown; mic-vf xtal; chalky in part; poor porosity; N.S.	
5000			HEEBNER 3958 (-1229) Lignitic shale not found. Much dk gray shale. LS: dense; indistinct. Shale: greenish gray, marly in part; sli silty;	
5050			LS: white to lt brown; mic-vf xtal; dense to sli chalky in part; trc white, opa, chert; distinctive mineral floor 50%; no visible porosity; N.S., 4000.	
5100			LANSING 3997 (-1268) LS: white to lt brown; mic-vf xtal; dense; minor white, sli fos, opa, chert; no grains; no visible porosity; N.S.	
5150			Shale: dk gray to black; indistinct; Shale: green to gray;	
5200			LS: lt brown; vf-xtal; sli oolitic & fos; trc chert; mostly dense; trc vf glauc, only dull floor; no visible porosity; N.S., 4040, 4040-20m.	
5250			LS: md grayish brown; mic-vf xtal; dense, platy; no visible porosity; N.S.	
5300			LS: lt brown; vf-xtal; mostly dense; sli granular; crinoidal; trc vug porosity w/VSSO, dull floor; trc spotted dry stain; <1% 4470, 4470-20, 40 min.	
5350			LS: lt grayish brown; vf-xtal; granular, sli oil; fair vug por, trc drusy, w/spotted wet stain & SSO, dull floor; spotted dry stains, 1-2% 4484-20, 40 min; soft chalk 60 min.	
5400			LS: white to lt gray; mic-vf xtal; chalky in part; sli granular; poor porosity at best; N.S.	
5450			LS: md brown; vf-xtal; good md ~ coarse oomoldic porosity; only dull floor; N.S.	
5500			LS: white to lt gray; mic-xtal; chalky; no visible porosity; dull floor; N.S.	
5550			LS: lt gray; mic-vf xtal; dense; no visible porosity; N.S.	
5600			LS: lt-md gray; mic-vf xtal; dense to chalky in part; no visible porosity; N.S.	
5650			MUNCIE CRK 4152 (-1423) Shale: black; carbon; only trc 4160. LS: md-dk brown; vf-xtal; granular to fos-frag; tight int grain porosity bleeds SSO, yellow floor; trace dry stain; 4170 stop. LS: lt-md brown; vf-xtal; sli, granular; trc vug porosity w/wet stain & VSSO, trc spotted dry stain; odor at the trap; 4172-20, 40, 60 min.	
5700			LS: off-white to lt grayish brown; mic-vf xtal; dense, platy; no visible porosity; N.S.	
5750			Shale: dk gray to black; indistinct. LS: lt gray to brown; mic-vf xtal; oolitic in part; trc fine vug & int-grain por w/spotted dry stain; no visible oil or floor; looks very tight; <<1% 4210.	
5800			LS: lt gray to brown; mic-vf xtal; oolitic in part; tight int ool porosity w/spotted wet & dry stains; dull floor; no visible oil; 4221-20, 40 min.	
5850			LS: lt gray to brown; mic-vf xtal; platy; w/considerable gray to green shales.	
5900			LS: lt gray to brown; mic-vf xtal; dense; no visible porosity; N.S.	
5950			STARK SH 4245 (-1516) Shale: black; carbonaceous; few chips 4259. LS: dk brn; vf-xtal; dense, platy; N.S. LS: lt-md grayish-brn; vf-xtal; mostly dense; 2-5% activated chalk; odor at trap in 40 min; no visible oil stains; 4259-20/40/60.	
6000			LS: white to lt gray; mic-vf xtal; chalky; sli granular & oolitic; no visible porosity; N.S.	
6050			HUSHPUCKNEY 4282 (-1553) Shale: black; carbonaceous; 4290. LS: gray-brn; vf-xtal; dense; cherty; no visible porosity; N.S. LS: lt-md gray; vf-xtal; white to gray oolites; trc tight vf vug porosity w/spotted stain & floor, <<1% 4310.	
6100			LS: lt grayish brown; mic-vf xtal; dense; chalky in part; sli granular, trc peletal; rough textured; poor porosity; N.S.	
6150			Shale: black. Shale: dk brn; vf-xtal; sli, gran; dense; N.S. Shale: green; silty; calcareous; 4340-20m.	
6200			LS: lt-md grayish brown; mic-vf xtal; mostly dense; trc bright floor; no visible stain or oil;	
6250			Shale: green, gray	
6300			LS: dk brown; vf-xtal; dense, blocky; trc w/green sh contact; no visible porosity; N.S.	
6350			Maroon shale & white chalky lime.	
6400			LS: lt brown, maroon sh contacts, crinoidal, mostly dense; N.S.	
6450			LS: brown; vf-xtal; md granular; poor to fair int gran porosity; weak speckled floor; 1 chip 4395 stop bleeds dk brn oil; few more at 20 min., may be re-xtalized ?	
6500			LS: lt grayish brown; mic-vf xtal; minor white chalk; no visible porosity; N.S.	
6550			Shale: maroon.	
6600			LS: off white to lt grayish brown; mic-vf xtal; dense to chalky in part; no visible porosity; N.S.	
6650			LS: lt-md grayish brown; mic-vf xtal; dense; no grains; no visible porosity; N.S.	
6700			LS: white to grayish brown; mic-vf xtal; chalky in part; no visible porosity; N.S.	
6750			Shale: black; trace 4460. LS: dk brown; vf-xtal; dense; no visible por.; N.S.	
6800			LS: gray to brown; mic-vf xtal; shaley in part; poor porosity; N.S.	
6850			LS: as above.	
6900			Shale: black; 4500. LS: lt-dk grayish brown; vf-xtal; dense; no visible porosity; N.S.	
6950			Shale: black; carbonaceous; many chips 4510. FT. SCOTT 4499 (-1770) LS: lt-md brown; vf w/m-xtal portions which fluor yellow; 1-2% wet spid stn w/ SSO, only trace spotted dry stains; 4510, 4520.	
7000			LS: lt-md brown; vf xtal; trace fine vug porosity w/spotted yel floor & wet stain; 4530.	
7050			CHER. SH 4523 (-1794) LS: md-dk brown; vf-xtal; oolitic; dense; N.S. LS: lt-md grayish brown; vf-xtal; dense; peletal in part; no visible porosity; dull floor; much green to gray shale.	
7100			LS: lt-md grayish brown; vf-xtal; dense; poor porosity; trc bright floor but no visible stains or oil; much green to gray shale;	
7150			LS: as above but only dull floor.	
7200			LS: lt brown; mic-vf xtal; dense; trc chert; trc fine glauc; trc bright floor; no visible porosity or show.	
7250			B/JOHNSON 4574 (-1845) Shale: dk green to gray; Sand: white; vf-grain; trc fine glauc; mod to well cam, very tight; N.S., only few chips 4600. Shale: green, gray, trc oxidized chert, coarse sulfides; may be conglomeritic, 4610. LS: milk white; mic-xtal; very chalky; sli granular, possible remnant oolites, very poor porosity; dull floor; N.S., 4610.	
7300			VERY POOR RETURNS AT 4620-20, 40, 60 & 80 MN COLLECTIONS. ONLY CONGLOMERITIC MATERIAL, NO VISIBLE DOLOMITE.	
7350			ROTARY TOTAL DEPTH 4620 (-1891)	