

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 Recompletion Date \_\_\_\_\_ 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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**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Curts Oil Operations

**29-16s-12w Barton KS**

PO BOX 328  
Hoisington KS 67544

**5-H #1**

Job Ticket: 67853

**DST#: 1**

ATTN: Clayton Camozzi

Test Start: 2021.12.03 @ 08:35:00

## GENERAL INFORMATION:

Formation: **LKC A-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:34:37

Time Test Ended: 16:27:26

Test Type: Conventional Bottom Hole (Initial)

Tester: Spencer J Staab

Unit No: 84

**Interval: 3099.00 ft (KB) To 3147.00 ft (KB) (TVD)**

Reference Elevations: 1906.00 ft (KB)

Total Depth: 3147.00 ft (KB) (TVD)

1899.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 7.00 ft

**Serial #: 8875**

**Inside**

Press@RunDepth: 166.77 psig @ 3102.00 ft (KB)

Capacity: psig

Start Date: 2021.12.03

End Date:

2021.12.03

Last Calib.:

2021.12.03

Start Time: 08:35:01

End Time:

16:27:26

Time On Btm:

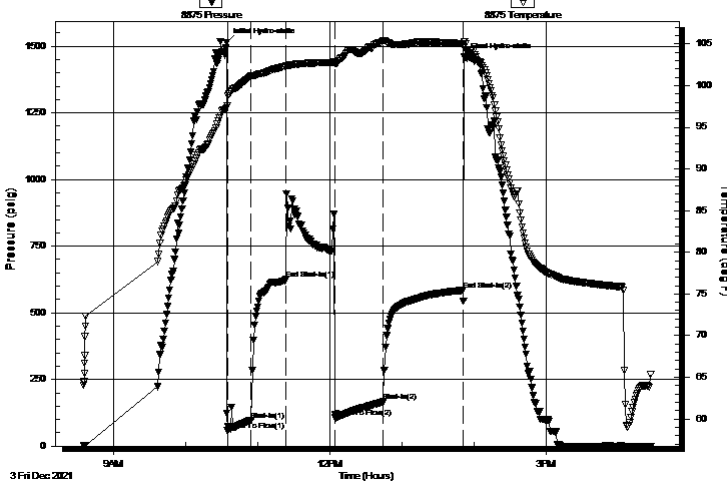
2021.12.03 @ 10:34:07

Time Off Btm:

2021.12.03 @ 13:51:56

**TEST COMMENT:** 20-IF-Slid 8' Bled off Surface to 8"  
60-ISI-Very Weak Surface Blow Tool slid and trapped hydrostatic pressure  
40-FF-Surface to 9"  
60-FSI-Very Weak Surface Blow

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1512.89	97.31	Initial Hydro-static
1	57.55	97.60	Open To Flow (1)
21	97.64	101.14	Shut-In(1)
50	627.85	102.34	End Shut-In(1)
91	108.07	102.70	Open To Flow (2)
131	166.77	105.41	Shut-In(2)
198	584.82	105.03	End Shut-In(2)
198	1459.00	105.25	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
230.00	Water 100%W	2.98
90.00	Mud w/oil spots	1.28
0.00	30' GIP	0.00

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Curts Oil Operations

**29-16s-12w Barton KS**

PO BOX 328  
Hoisington KS 67544

**5-H #1**

Job Ticket: 67853

**DST#: 1**

ATTN: Clayton Camozzi

Test Start: 2021.12.03 @ 08:35:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3900.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
230.00	Water 100%W	2.983
90.00	Mud w /oil spots	1.276
0.00	30' GIP	0.000

Total Length: 320.00 ft      Total Volume: 4.259 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1#LCM

Rw =.281@54F

Serial #: 8875

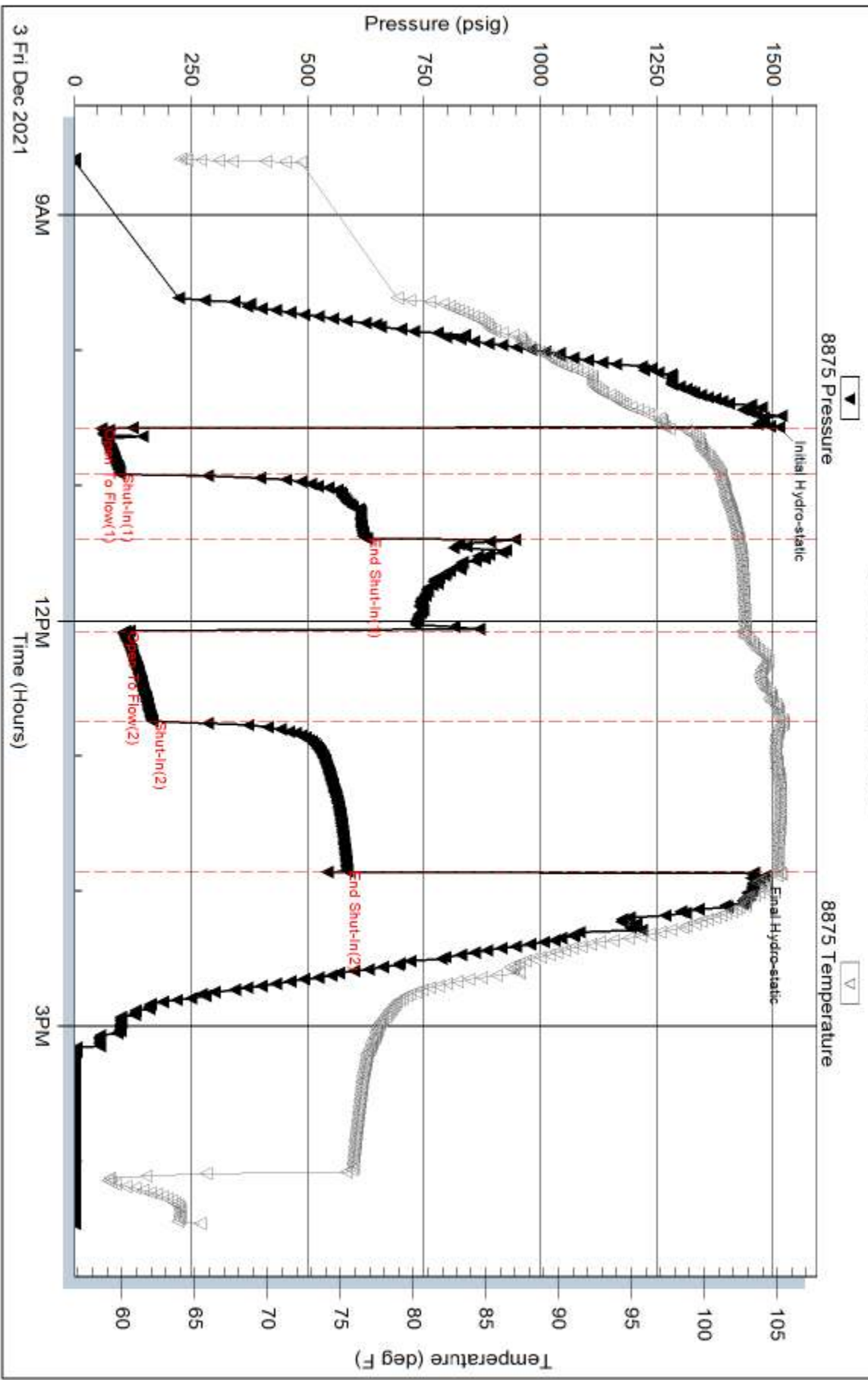
Inside

Curts Oil Operations

5-H#1

DST Test Number: 1

### Pressure vs. Time



Tribble Testing, Inc

Ref. No: 67853

Printed: 2021.12.04 @ 07:47:51

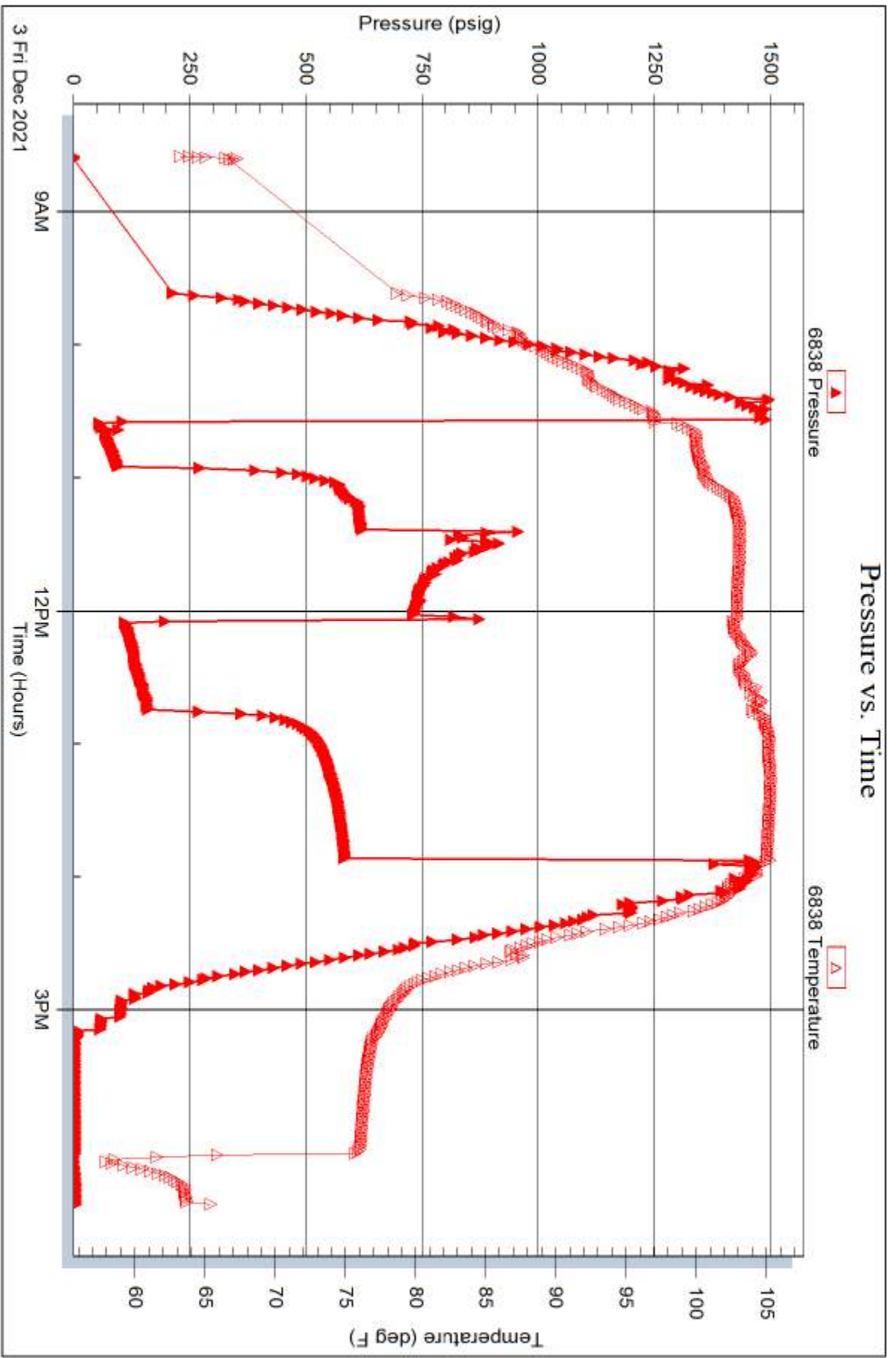
Serial #: 6838

Inside

Curts Oil Operations

5-H #1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 67853

Printed: 2021.12.04 @ 07:47:51





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Curts Oil Operations

**29-16s-12w Barton KS**

PO BOX 328  
Hoisington KS 67544

**5-H #1**

Job Ticket: 67854

**DST#: 2**

ATTN: Clayton Camozzi

Test Start: 2021.12.04 @ 02:21:00

## GENERAL INFORMATION:

Formation: **LKC D-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:10:57

Time Test Ended: 07:44:12

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 84

**Interval: 3153.00 ft (KB) To 3185.00 ft (KB) (TVD)**

Reference Elevations: 1906.00 ft (KB)

Total Depth: 3185.00 ft (KB) (TVD)

1899.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 7.00 ft

**Serial #: 8875 Outside**

Press@RunDepth: 41.32 psig @ 3154.00 ft (KB)

Capacity: psig

Start Date: 2021.12.04

End Date:

2021.12.04

Last Calib.: 2021.12.04

Start Time: 02:21:01

End Time:

07:44:12

Time On Btm: 2021.12.04 @ 04:10:32

Time Off Btm: 2021.12.04 @ 06:00:22

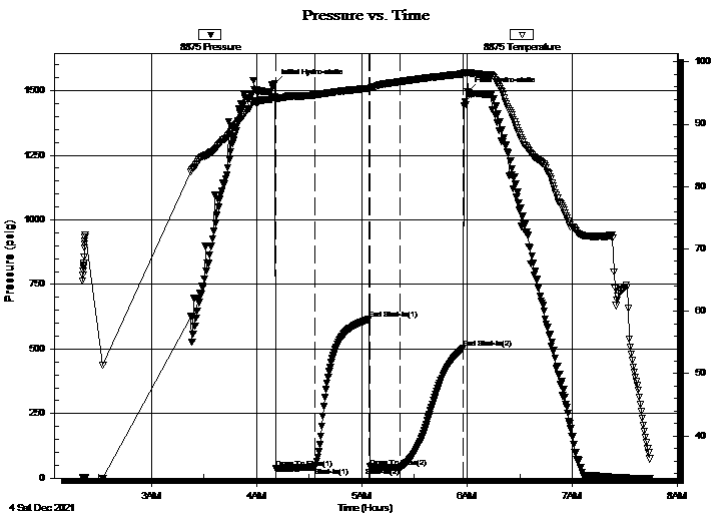
**TEST COMMENT:** 20-IF-Slid 6' Bled off Surface to 1/4"

30-ISI-No Return

15-FF-Surface Died

30-FSI-No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1526.99	94.34	Initial Hydro-static
1	38.42	94.11	Open To Flow (1)
23	41.23	94.70	Shut-In(1)
54	615.12	95.75	End Shut-In(1)
55	43.14	95.60	Open To Flow (2)
72	41.32	96.81	Shut-In(2)
108	503.20	98.08	End Shut-In(2)
110	1495.70	98.28	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
45.00	Mud 100%M	0.36

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Curts Oil Operations

**29-16s-12w Barton KS**

PO BOX 328  
Hoisington KS 67544

**5-H #1**

Job Ticket: 67854

**DST#: 2**

ATTN: Clayton Camozzi

Test Start: 2021.12.04 @ 02:21:00

## GENERAL INFORMATION:

Formation: **LKC D-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:10:57

Time Test Ended: 07:44:12

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 84

**Interval: 3153.00 ft (KB) To 3185.00 ft (KB) (TVD)**

Reference Elevations: 1906.00 ft (KB)

Total Depth: 3185.00 ft (KB) (TVD)

1899.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 7.00 ft

**Serial #: 6838**

**Inside**

Press@RunDepth: psig @ 3154.00 ft (KB)

Capacity: psig

Start Date: 2021.12.04

End Date:

2021.12.04

Last Calib.:

2021.12.04

Start Time: 02:21:01

End Time:

07:44:12

Time On Btm:

Time Off Btm:

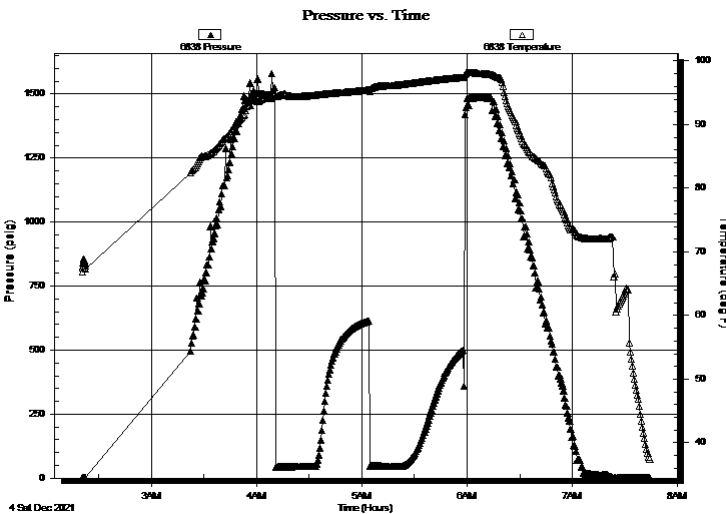
TEST COMMENT: 20-IF-Slid 6' Bled off Surface to 1/4"

30-ISI-No Return

15-FF-Surface Died

30-FSI-No Return

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
45.00	Mud 100%M	0.36

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Curts Oil Operations

**29-16s-12w Barton KS**

PO BOX 328  
Hoisington KS 67544

**5-H #1**

Job Ticket: 67854

**DST#: 2**

ATTN: Clayton Camozzi

Test Start: 2021.12.04 @ 02:21:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.20 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6700.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
45.00	Mud 100%M	0.360

Total Length: 45.00 ft      Total Volume: 0.360 bbl

Num Fluid Samples: 0

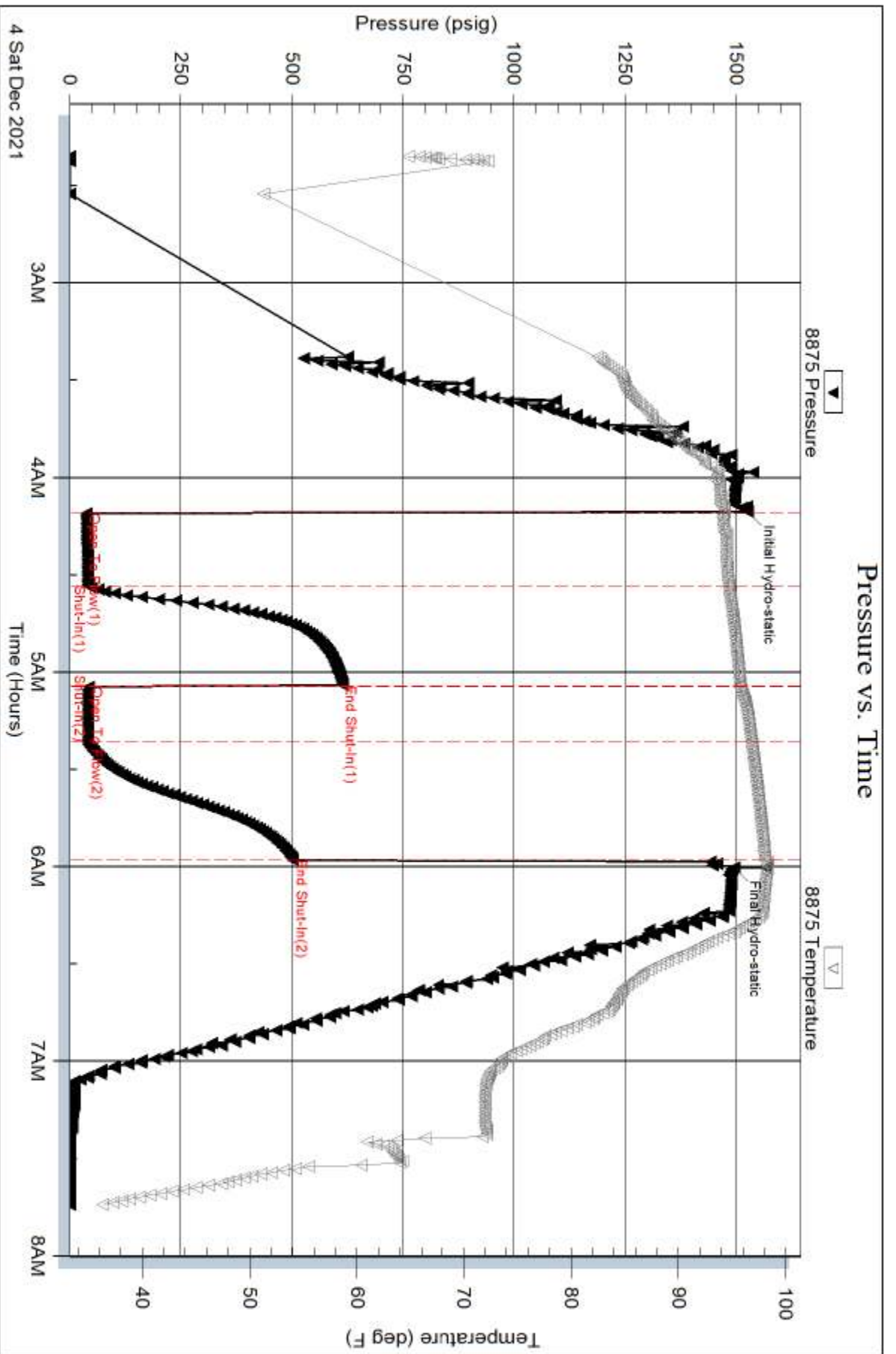
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1#LCM



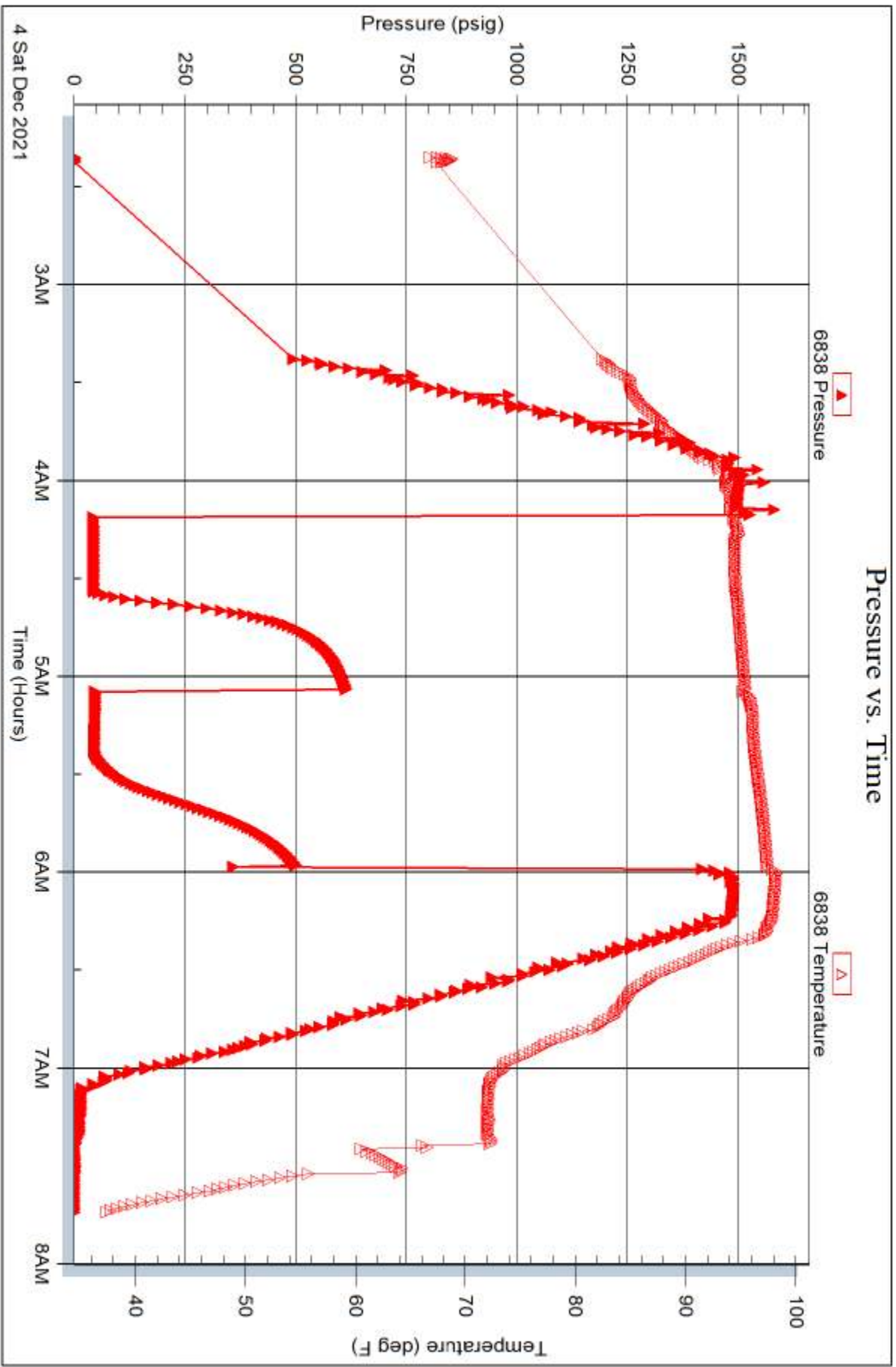
Serial #: 6838

Inside

Curts Oil Operations

5-H#1

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 67854

Printed: 2021.12.04 @ 08:00:16



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Curts Oil Operations

**29-16s-12w Barton KS**

PO BOX 328  
Hoisington KS 67544

**5-H #1**

Job Ticket: 67855

**DST#: 3**

ATTN: Clayton Camozzi

Test Start: 2021.12.05 @ 03:23:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:18:27

Time Test Ended: 08:49:32

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 84

**Interval: 3340.00 ft (KB) To 3368.00 ft (KB) (TVD)**

Reference Elevations: 1906.00 ft (KB)

Total Depth: 3368.00 ft (KB) (TVD)

1899.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 7.00 ft

**Serial #: 8875 Outside**

Press@RunDepth: 40.06 psig @ 3341.00 ft (KB)

Capacity: psig

Start Date: 2021.12.05

End Date:

2021.12.05

Last Calib.:

2021.12.05

Start Time: 03:23:01

End Time:

08:49:32

Time On Btm:

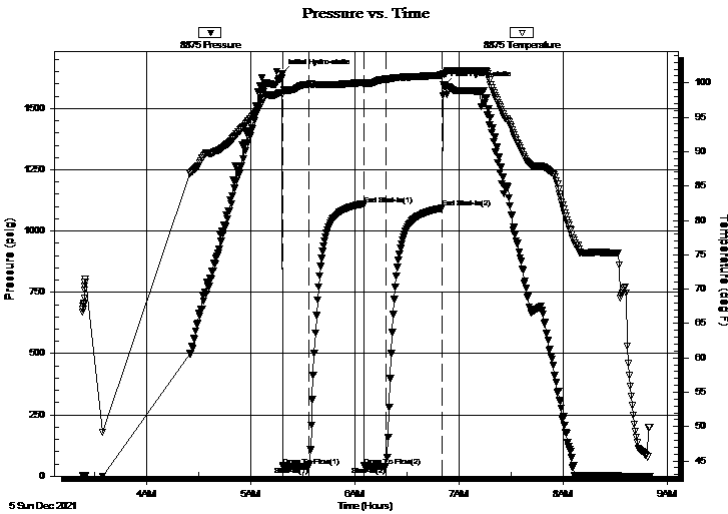
2021.12.05 @ 05:17:52

Time Off Btm:

2021.12.05 @ 06:50:57

**TEST COMMENT:** 15-IF-Slid 6' Bled off Surface to 1/4"  
30-ISI-No Return  
10-FF-Weak Surface Died  
30-FSI-No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1641.00	98.58	Initial Hydro-static
1	39.87	98.63	Open To Flow (1)
16	39.58	99.79	Shut-In(1)
47	1107.72	100.03	End Shut-In(1)
48	41.69	99.72	Open To Flow (2)
60	40.06	100.55	Shut-In(2)
93	1093.85	101.16	End Shut-In(2)
94	1595.26	101.30	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
50.00	OCM 10%o 90%M	0.43

## Gas Rates

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

\* Recovery from multiple tests



# DRILL STEM TEST REPORT

Curts Oil Operations

**29-16s-12w Barton KS**

PO BOX 328  
Hoisington KS 67544

**5-H #1**

Job Ticket: 67855

**DST#: 3**

ATTN: Clayton Camozzi

Test Start: 2021.12.05 @ 03:23:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:18:27

Time Test Ended: 08:49:32

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 84

**Interval: 3340.00 ft (KB) To 3368.00 ft (KB) (TVD)**

Reference Elevations: 1906.00 ft (KB)

Total Depth: 3368.00 ft (KB) (TVD)

1899.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 7.00 ft

**Serial #: 6838 Inside**

Press@RunDepth: psig @ 3341.00 ft (KB)

Capacity: psig

Start Date: 2021.12.05

End Date: 2021.12.05

Last Calib.: 2021.12.05

Start Time: 03:23:01

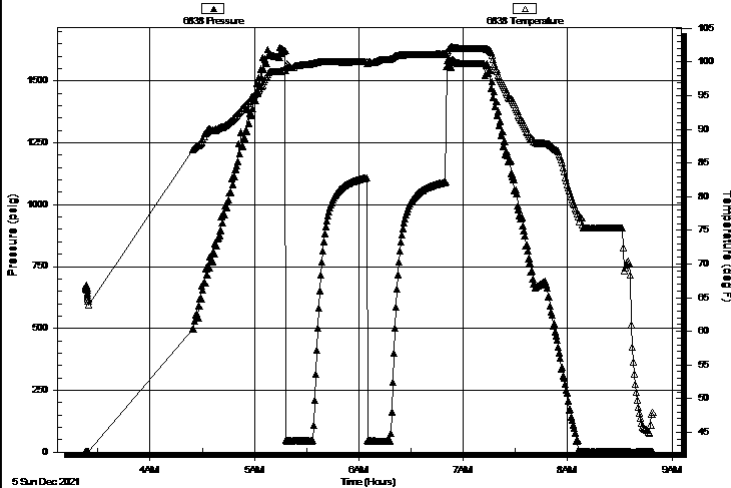
End Time: 08:48:52

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 15-IF-Slid 6' Bled off Surface to 1/4"  
30-ISI-No Return  
10-FF-Weak Surface Died  
30-FSI-No Return

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
50.00	OCM 10% o 90%M	0.43

Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Curts Oil Operations

**29-16s-12w Barton KS**

PO BOX 328  
Hoisington KS 67544

**5-H #1**

Job Ticket: 67855

**DST#: 3**

ATTN: Clayton Camozzi

Test Start: 2021.12.05 @ 03:23:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.80 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6300.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	OCM 10%o 90%M	0.431

Total Length: 50.00 ft      Total Volume: 0.431 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

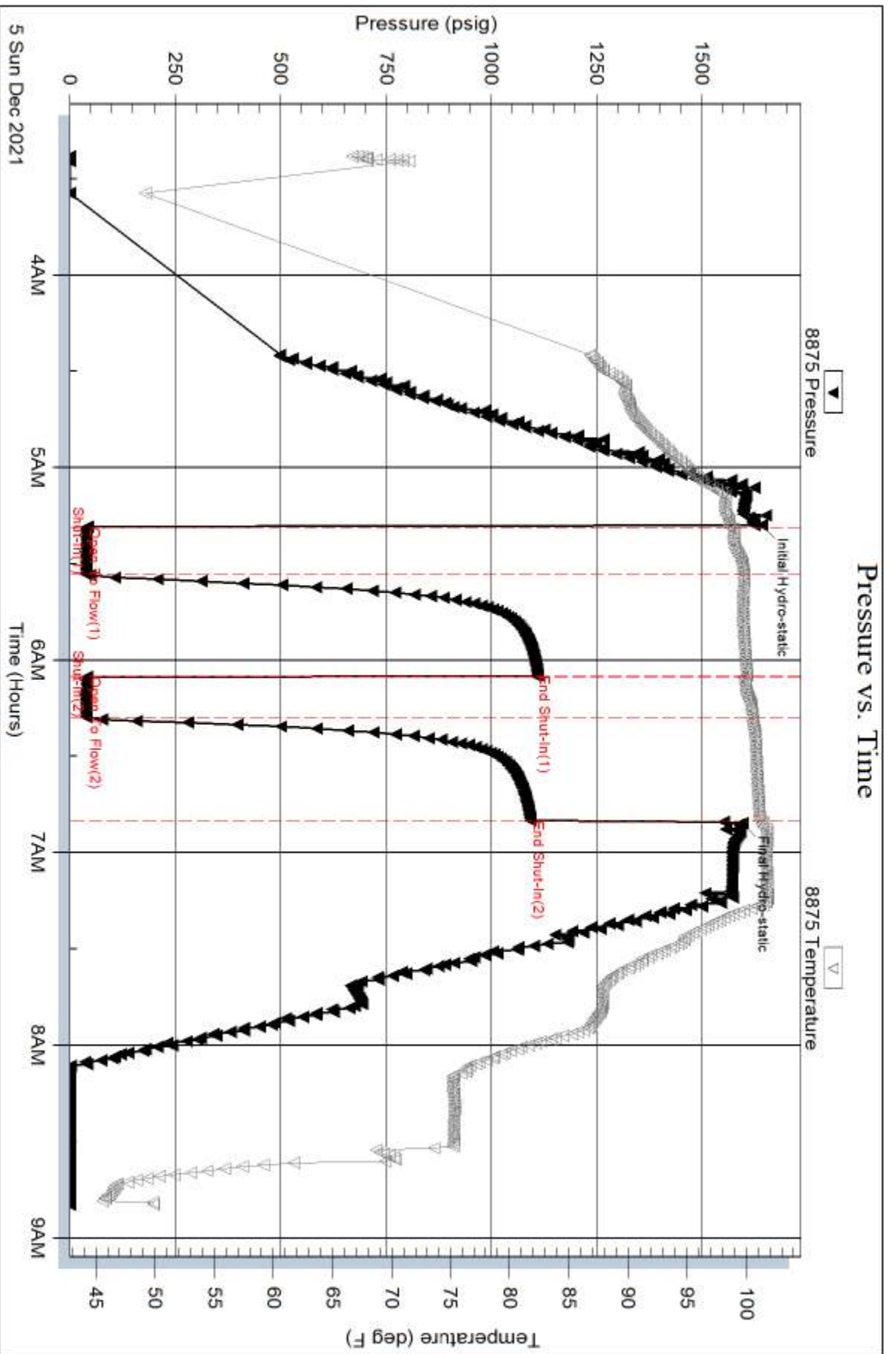
Serial #:

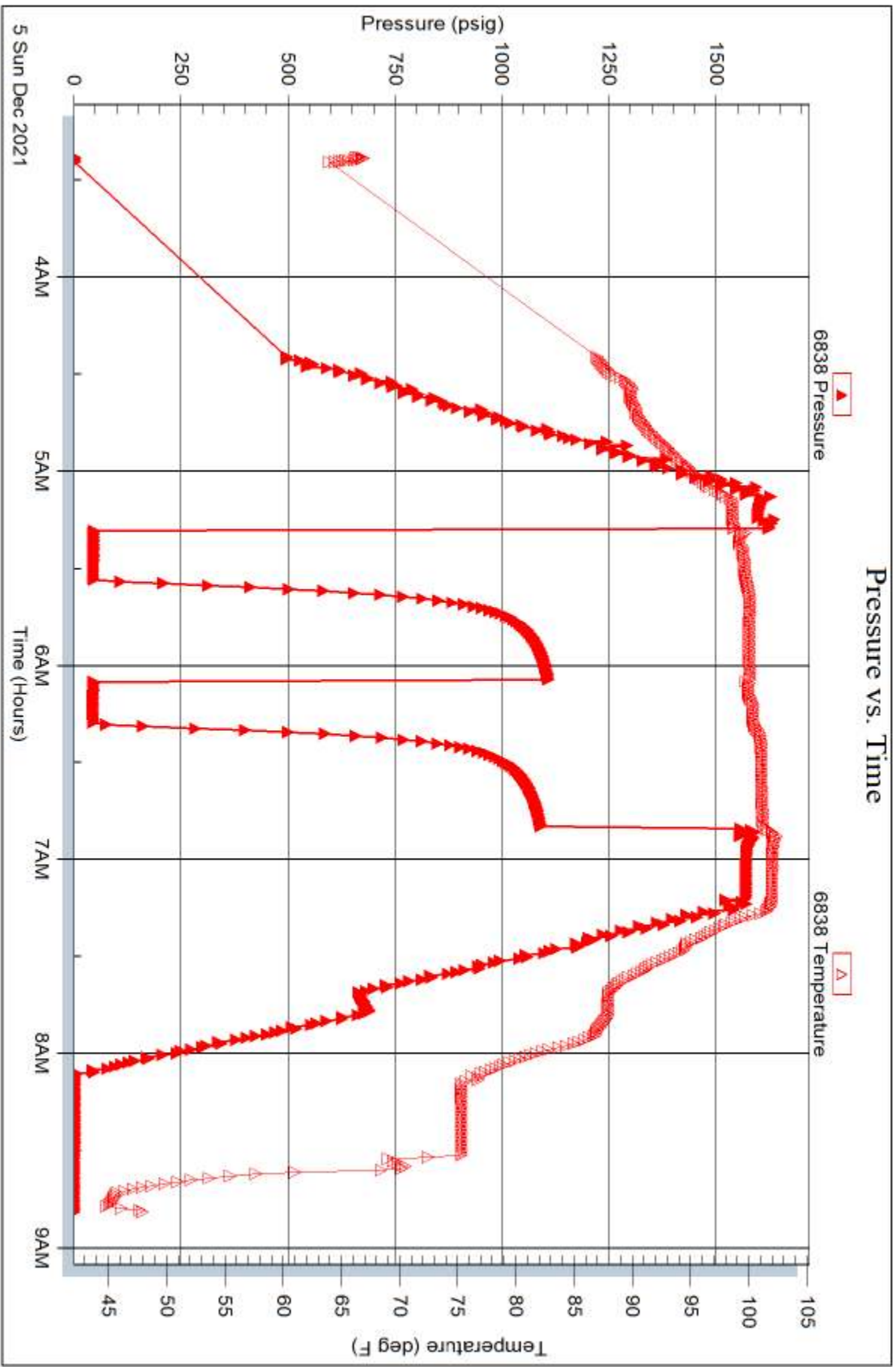
Laboratory Name:

Laboratory Location:

Recovery Comments: 1#LCM









**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Curts Oil Operations

**29-16s-12w Barton KS**

PO BOX 328  
Hoisington KS 67544

**5-H #1**

Job Ticket: 67856

**DST#: 4**

ATTN: Clayton Camozzi

Test Start: 2021.12.05 @ 17:30:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:02:37

Time Test Ended: 23:53:51

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 84

**Interval: 3342.00 ft (KB) To 3380.00 ft (KB) (TVD)**

Reference Elevations: 1906.00 ft (KB)

Total Depth: 3380.00 ft (KB) (TVD)

1899.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8875 Outside**

Press@RunDepth: 29.90 psig @ 3343.00 ft (KB)

Capacity: psig

Start Date: 2021.12.05 End Date: 2021.12.05

Last Calib.: 2021.12.05

Start Time: 17:30:01 End Time: 23:53:52

Time On Btm: 2021.12.05 @ 20:02:27

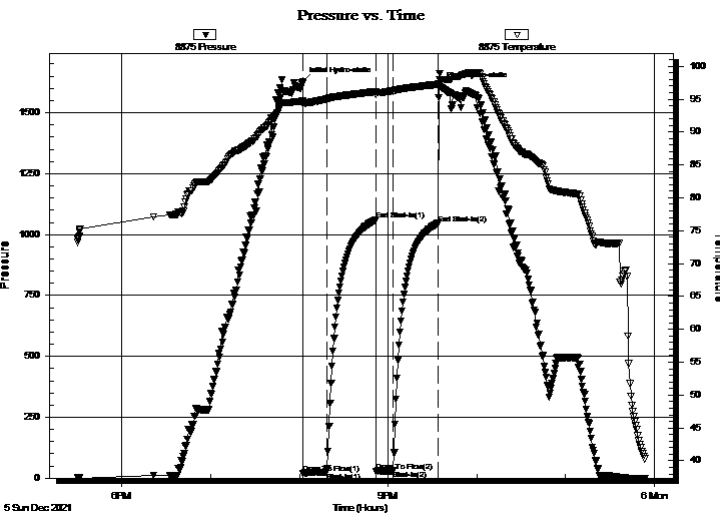
Time Off Btm: 2021.12.05 @ 21:34:51

TEST COMMENT: 15-IF-Surface to 1/4"

30-ISI-No Return

10-FF-No Blow

30-FSI-No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1627.79	94.66	Initial Hydro-static
1	19.93	94.32	Open To Flow (1)
16	25.64	95.03	Shut-In(1)
50	1059.73	96.13	End Shut-In(1)
50	29.06	95.73	Open To Flow (2)
61	29.90	96.29	Shut-In(2)
91	1045.28	97.26	End Shut-In(2)
93	1608.39	97.98	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	MCO 50%M 50%O	0.07

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Curts Oil Operations

**29-16s-12w Barton KS**

PO BOX 328  
Hoisington KS 67544

**5-H #1**

Job Ticket: 67856

**DST#: 4**

ATTN: Clayton Camozzi

Test Start: 2021.12.05 @ 17:30:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.80 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6300.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
15.00	MCO 50%M 50%O	0.074

Total Length: 15.00 ft      Total Volume: 0.074 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

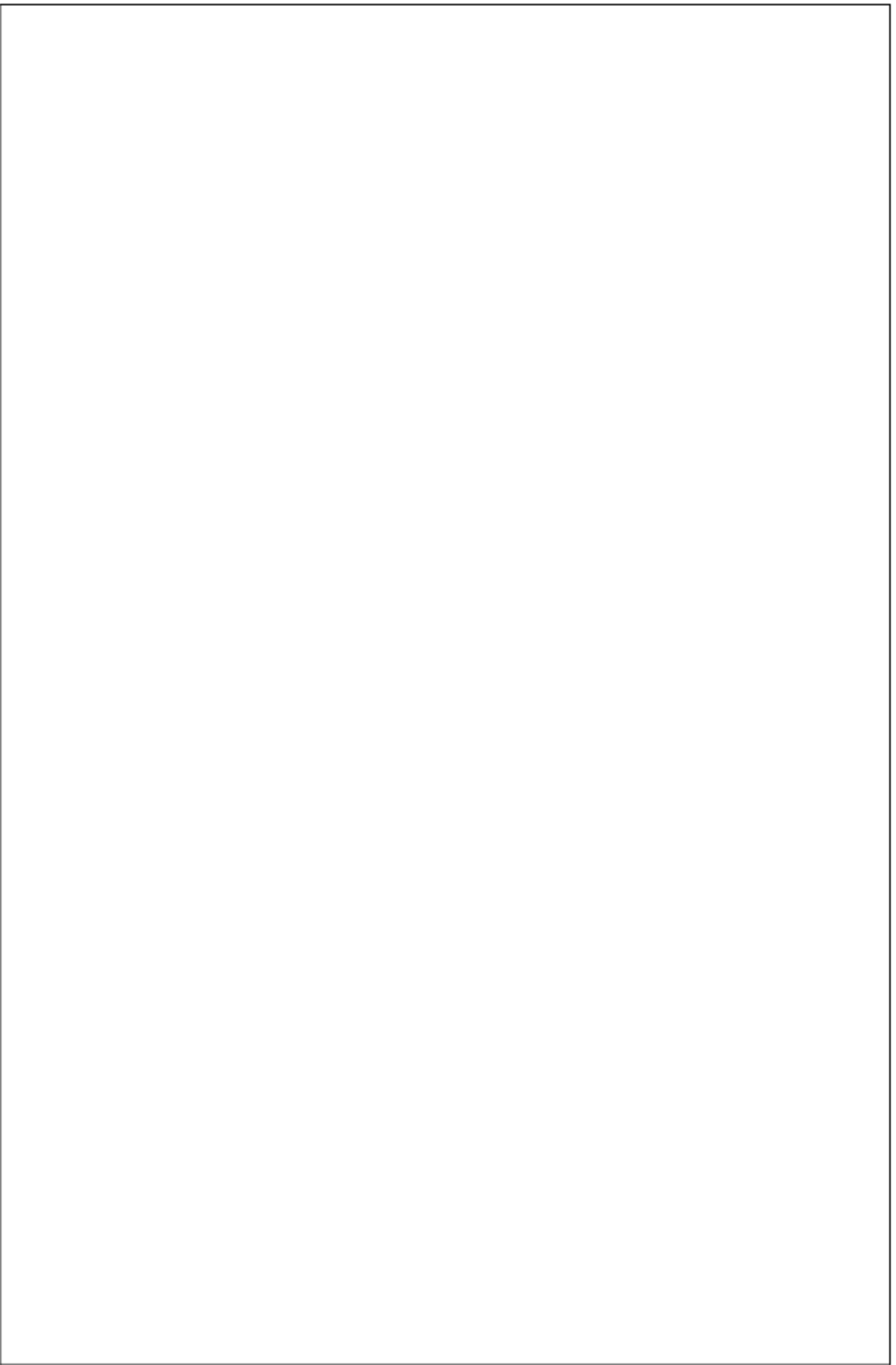
Recovery Comments: 1#LCM

Serial #: 8875

Outside Curts Oil Operations

5-H #1

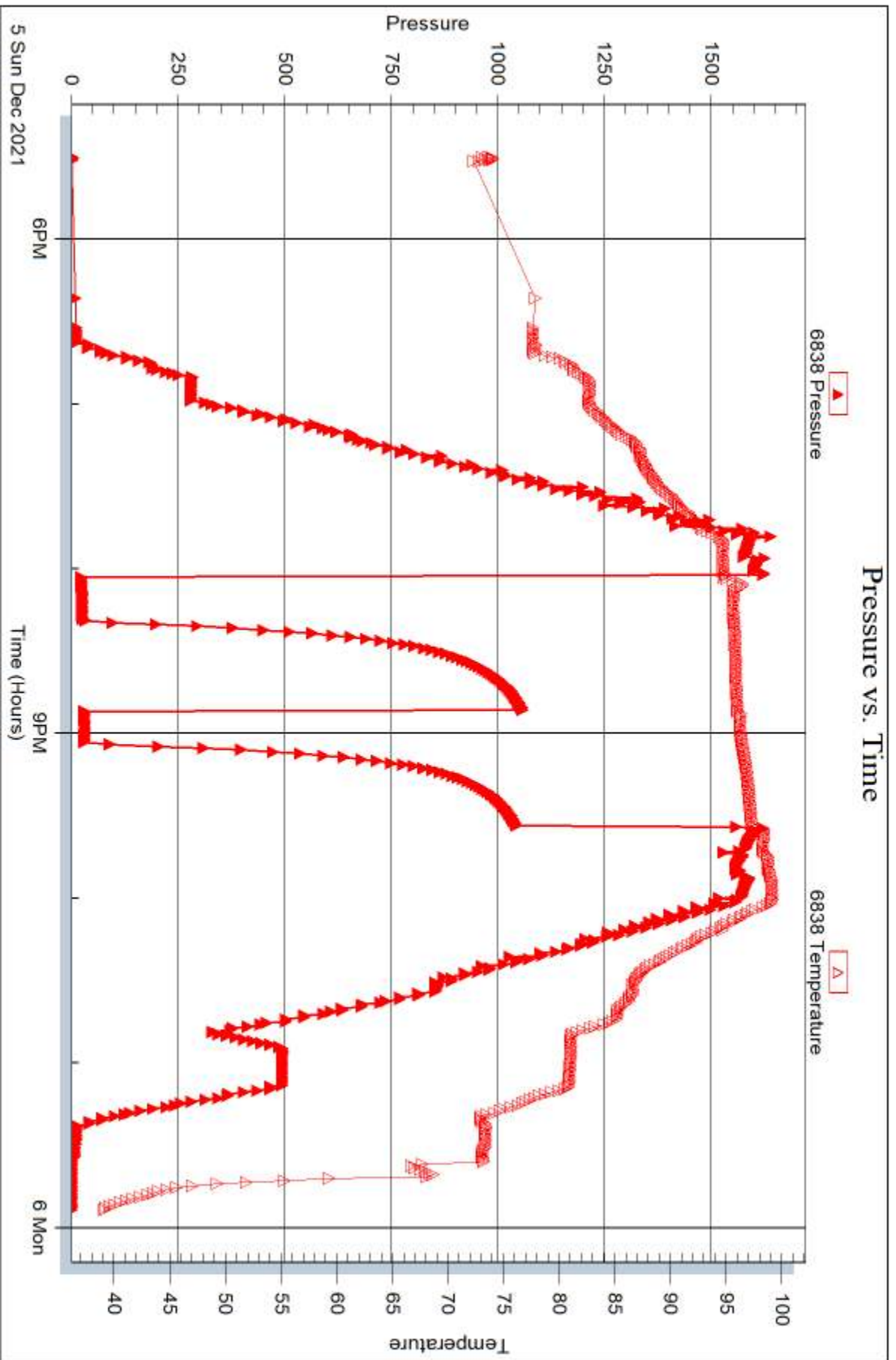
DST Test Number: 4



Tribble Testing, Inc

Ref. No: 67856

Printed: 2021.12.06 @ 06:49:50





CHARGE TO: **CURTS OIL OPERATIONS**

ADDRESS

CITY, STATE, ZIP CODE

TICKET 34091

PAGE 1 OF

1. SERVICE LOCATIONS <b>Hays Ks</b>	WELL/PROJECT NO. #	LEASE <b>S-H</b>	COUNTY/PARISH <b>BARTON</b>	STATE <b>Ks</b>	CITY	DATE <b>12/6/21</b>	OWNER
2. <b>Ness City Ks</b>	TICKET TYPE <input type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR <b>Discovery</b>	RIG NAME/NO. <b>Rig # 4</b>	SHIPPED VIA <b>CT</b>	DELIVERED TO <b>LOCATION</b>	ORDER NO.	
3.	WELL TYPE <b>oil</b>	WELL CATEGORY <b>ABANDONED</b>	JOB PURPOSE <b>Rotary PTA</b>	WELL PERMIT NO.	WELL LOCATION		
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE TRK # 111	60	mi			6.00	360.00
576 P		1			Pump Charge - PTA	1	EA			1000.00	1000.00
290		1			D-AIR	3	GAL			42.00	126.00
400		1			TOP PLUG	1	EA	8 5/8"		130.00	130.00
328-4		2			60/40 Pozmix 4% GEL	235	SK			11.50	2702.50
276		2			FLOCCLE	50	lbs			3.00	150.00
581		2			SERVICE CHARGE CMT	235	SK			2.00	470.00
583		2			DRAYAGE	569	TM			1.00	569.00

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	AGREE	UNDECIDED	DISAGREE	PAGE TOTAL	5507.50
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?					
WE UNDERSTOOD AND MET YOUR NEEDS?					
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				58	
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				TAX Barton	233.14
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES <input type="checkbox"/> NO			TOTAL	5740.64
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND					

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

SWIFT OPERATOR **DAVID EDGERTON** APPROVAL \_\_\_\_\_

Thank You!



JOB LOG

SWIFT Services, Inc.

DATE 12/6/21 PAGE NO.

CUSTOMER		WELL NO.		LEASE		JOB TYPE		TICKET NO.	
Curtis Oil		#1		S-H		PTA		34091	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
	2130								ON location
	1020	5	10						1st Plug @ 3340
		5	13						pump w/ TR SPACER
		5	7						pump CMT - 50 sx
									pump w/ TR SPACER
									Disp w/ MUD - 5.5 min
	1230	5	5						2nd Plug @ 820
		5	13						pump w/ TR SPACER
		5	3						pump CMT - 50 sx
									Disp w/ wtr
		5	2						3rd Plug @ 450
		5	20						pump w/ TR SPACER
		5	1						pump CMT - 75 sx
									Disp w/ wtr
		1	2			0			4th plug @ 40
									pump 10 sx CMT
		2	8			0			plug rat hole - 30 sx
		2	4			0			plug Mouse Hole - 20 sx
	230								JOB COMPLETE
									Thanks
									David, Seth & Mark



CHARGE TO: Curt's Oil  
 ADDRESS  
 CITY, STATE, ZIP CODE

TICKET 35307

PAGE 1 OF 1

1. SERVICE LOCATIONS <u>Hays, KS</u>	WELL/PROJECT NO. <u>#1</u>	LEASE <u>5-H</u>	COUNTY/PARISH <u>Barton</u>	STATE <u>KS</u>	CITY	DATE <u>11/29/21</u>	OWNER <u>Same</u>
2. <u>Ness City, KS</u>	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR <u>Discovery Drilling</u>	RIG NAME/NO. <u>#2</u>	SHIPPED VIA <u>CT</u>	DELIVERED TO <u>Location</u>	ORDER NO.	
3.	WELL TYPE <u>Oil</u>	WELL CATEGORY <u>Development</u>	JOB PURPOSE <u>Cement Surface Pipe</u>	WELL PERMIT NO.	WELL LOCATION		
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE #113	60		mi		6.00	360.00
5763		1			Pump Charge - Shallow Surface	1		EA		1000.00	1000.00
290		1			D - Air	4		gal		42.00	168.00
325		2			Standard Cement	275		SKS		14.50	3262.50
278		2			Calcium Chloride (3%)	10		SKS		40.00	400.00
279		2			Bentonite Cel (2%)	4		SKS		30.00	120.00
276		2			Flocele	50		lbs		3.00	150.00
581		2			Service Charge Cement	275		SKS		2.00	450.00
583		2			Drayage	663		TM		1.00	663.00

**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	AGREE	UNDECIDED	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?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND			

PAGE TOTAL	6573.50
TOTAL	6881.04

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

SWIFT OPERATOR [Signature]

APPROVAL \_\_\_\_\_

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 11/29/21 PAGE NO. 1

CUSTOMER Curt's Oil WELL NO. #1 LEASE S-H JOB TYPE SURFACE TICKET NO. 35387

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2030							On location, Rig tripping Drillpipe.
	2215							Rig Start Casing 8 5/8" x 20' # (1650) Fin Casing Start Circulation Finish Circulation Hook up to Swift
		4	5				200	Start water ahead
		4	0					Start Cmt
		4	54					Finish Cmt, Start Displacement
	0015	4	24				300	Finish Displacement Cmt Circulated. Shut in Release Truck Wash up, Back up Job Complete
	0030							Thanks Jon, Joe, Isaac

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

Well Name: 5-H #1  
Well Id:  
Location: Section 29 - 16S - 12W Barton Co, Kansas  
License Number: API # 15-009-26316-0000  
Spud Date: 11/29/2021  
Surface Coordinates: 1975 FNL & 1885 FEL  
Region: Beaver South  
Drilling Completed: 12/6/2021

Bottom Hole  
Coordinates:  
Ground Elevation (ft): 1898'      K.B. Elevation (ft): 1907'  
Logged Interval (ft): 2700      To: 3450      Total Depth (ft): 3450  
Formation: Arbuckle  
Type of Drilling Fluid: Chemical Gel/Polymer Fresh Water -Based

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

**OPERATOR**

Company: CURT'S OIL OPERATION, LLC  
Address: P. O. Box 328  
Hoisington, KS 67544

**GEOLOGIST**

Name: Clayton Camozzi  
Company:  
Address: 1474 S St Paul St  
Denver CO 80210  
Cell: 303.968.4999

**REMARKS**

After review of the open hole logs, DST data, and geological log data it was recommended to Plug and Abandon the 5H-#1 well. \*Note - Drill time, DST intervals, and sample tops are 1' lower/deeper to the E-logs. The sample will be delivered, processed, and available for review at the KGS Library located in Wichita, Kansas  
Respectfully, Clayton Camozzi

# Curt's Oil Operation, LLC

## WELL COMPARISON SHEET

Company: Curt's Oil Operation, LLC  
 PO Box 328  
 Hoisington, KS 67544  
 Contact: Francis Hitschmann (Cell) 785 550 2702

Well: 5-H #1  
 Location: 1975 FNL / 1885 FEL  
 29 - 16S - 12W  
 Barton Co., KS  
 Wellsite Geologist: Clayton Camozzi Cell: (303) 968-4999

Elevation: 1907' KB 1898' GL  
 Field: Beaver South  
 API No: 15-009-26316-0000  
 Surface Casing: 8 5/8" set @ 401' KB

Drilling Contractor: Discovery Rig #2 Rig Phone (785-635-1412), Tool Pusher Ryan Gashler (785-259-3263)

Formation	1907 KB			
	Sample	Sub-Sea	Log	Sub-Sea
STONE CORAL	819	1088	814	1093
BASE ROOT SHALE	2480	-573	2486	-579
TOPEKA	2726	-819	2728	-821
QUEEN HILL SH	2922	-1015	2921	-1014
HEEBNER	3006	-1099	3007	-1100
TORONTO	3024	-1117	3022	-1115
DOUGLAS SHALE	3034	-1127	3036	-1129
BROWN LIME	3093	-1186	3092	-1185
LANSING	3111	-1204	3110	-1203
LANSING "D" ZONE	3152	-1245	3152	-1245
LANSING "G" ZONE	3190	-1283	3188	-1281
LANSING "H" ZONE	3240	-1333	3242	-1335
BKC	3349	-1442	3347	-1440
ARBUCKLE	3358	-1451	3365	-1458
Total Depth	3470	-1563	3474	-1567

Formation	1908 KB			
	Log	Sub-Sea	Sample	Relationship
Log	815	1093	-5	0
2478	-570	-3	-9	-10
2724	-816	-3	-5	-10
2918	-1010	-5	-4	-7
3006	-1098	-1	-2	-7
3022	-1114	-3	-1	-8
3034	-1126	-1	-3	-10
3093	-1185	-1	0	-6
3112	-1204	0	1	-7
3154	-1246	1	1	-6
3192	-1284	1	3	-6
3242	-1334	1	-1	-10
3354	-1446	4	6	-6
3367	-1459	8	1	-3
3377	-1469			

Formation	1911 KB			
	Log	Sub-Sea	Sample	Relationship
Log	808	1103	-15	Log
2480	-569	-4	-10	-10
2722	-811	-8	-10	-10
2918	-1007	-8	-7	-7
3004	-1093	-6	-7	-7
3018	-1107	-10	-8	-8
3030	-1119	-8	-10	-10
3090	-1179	-7	-6	-6
3107	-1196	-8	-7	-7
3150	-1239	-6	-6	-6
3186	-1275	-8	-6	-6
3236	-1325	-8	-10	-10
3345	-1434	-8	-6	-6
3366	-1455	4	-3	-3
3456	-1545			

COMPARISON WELL  
 Peters 5  
 1980 FSL / 980 FEL 29 - 16S - 12W



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Curts Oil Operations

**29-16s-12w Barton KS**

PO BOX 328  
Hoisington KS 67544

**5-H #1**

Job Ticket: 67853

**DST#: 1**

ATTN: Clayton Camozzi

Test Start: 2021.12.03 @ 08:35:00

## GENERAL INFORMATION:

Formation: **LKC A-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:34:37

Time Test Ended: 16:27:26

Test Type: Conventional Bottom Hole (Initial)

Tester: Spencer J Staab

Unit No: 84

Interval: **3099.00 ft (KB) To 3147.00 ft (KB) (TVD)**

Reference Elevations: 1906.00 ft (KB)

Total Depth: 3147.00 ft (KB) (TVD)

1899.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 7.00 ft

**Serial #: 8875** Inside

Press@RunDepth: 166.77 psig @ 3102.00 ft (KB)

Capacity: psig

Start Date: 2021.12.03

End Date:

2021.12.03

Last Calib.:

2021.12.03

Start Time: 08:35:01

End Time:

16:27:26

Time On Btm:

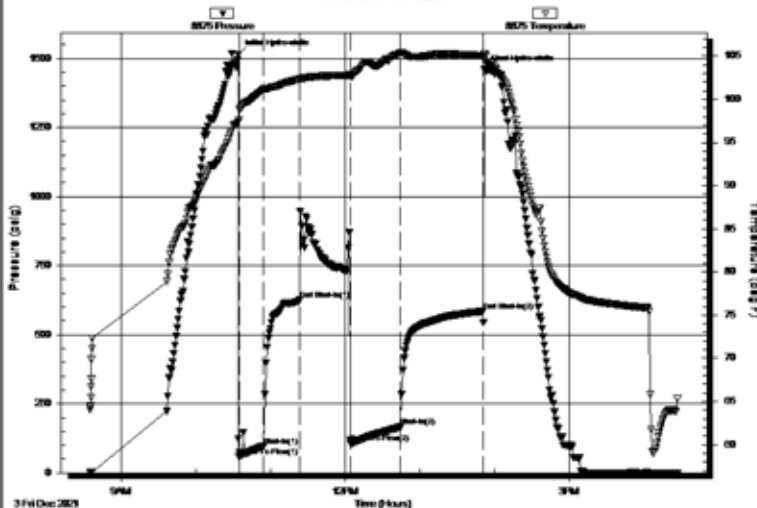
2021.12.03 @ 10:34:07

Time Off Btm:

2021.12.03 @ 13:51:56

**TEST COMMENT:** 20-IF-Slid 8" Bled off Surface to 8"  
60-ISI-Very Weak Surface Blow Tool slid and trapped hydrostatic pressure  
40-FF-Surface to 9"  
60-FSI-Very Weak Surface Blow

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1512.89	97.31	Initial Hydro-static
1	57.55	97.60	Open To Flow (1)
21	97.64	101.14	Shut-In(1)
50	627.85	102.34	End Shut-In(1)
91	108.07	102.70	Open To Flow (2)
131	166.77	105.41	Shut-In(2)
198	584.82	105.03	End Shut-In(2)
198	1459.00	105.25	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
230.00	Water 100%W	2.98
90.00	Mud w/oil spots	1.28
0.00	30' GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Curts Oil Operations

**29-16s-12w Barton KS**

PO BOX 328  
Hoisington KS 67544

**5-H #1**

Job Ticket: 67854

**DST#: 2**

ATTN: Clayton Camozzi

Test Start: 2021.12.04 @ 02:21:00

## GENERAL INFORMATION:

Formation: **LKC D-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:10:57

Time Test Ended: 07:44:12

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 84

Interval: **3153.00 ft (KB) To 3185.00 ft (KB) (TVD)**

Reference Elevations: 1906.00 ft (KB)

Total Depth: 3185.00 ft (KB) (TVD)

1899.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 7.00 ft

**Serial #: 8875**

**Outside**

Press@RunDepth: 41.32 psig @ 3154.00 ft (KB)

Capacity: psig

Start Date: 2021.12.04

End Date:

2021.12.04

Last Calib.:

2021.12.04

Start Time: 02:21:01

End Time:

07:44:12

Time On Btm:

2021.12.04 @ 04:10:32

Time Off Btm:

2021.12.04 @ 06:00:22

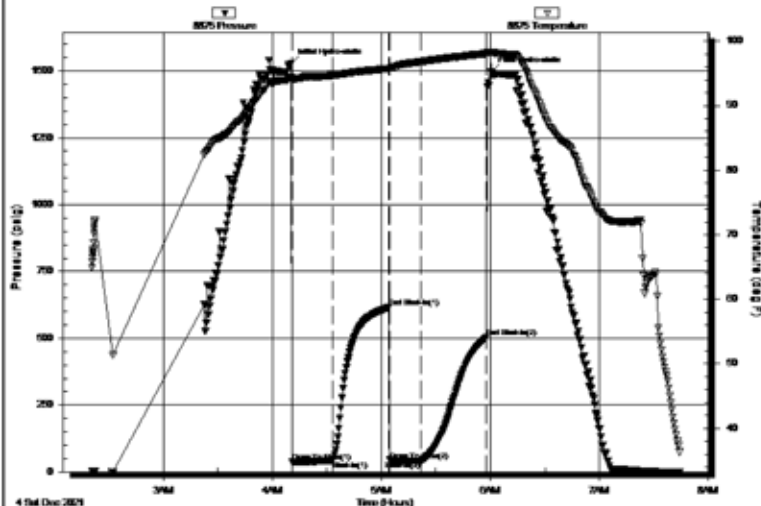
TEST COMMENT: 20-IF-Slid 6' Bled off Surface to 1/4"

30-ISI-No Return

15-FF-Surface Died

30-FSI-No Return

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1526.99	94.34	Initial Hydro-static
1	38.42	94.11	Open To Flow (1)
23	41.23	94.70	Shut-In(1)
54	615.12	95.75	End Shut-In(1)
55	43.14	95.60	Open To Flow (2)
72	41.32	96.81	Shut-In(2)
108	503.20	98.08	End Shut-In(2)
110	1495.70	98.28	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
45.00	Mud 100%M	0.36

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Curts Oil Operations

**29-16s-12w Barton KS**

PO BOX 328  
Hoisington KS 67544

**5-H #1**

Job Ticket: 67855

**DST#: 3**

ATTN: Clayton Camozzi

Test Start: 2021.12.05 @ 03:23:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 05:18:27  
 Time Test Ended: 08:49:32  
 Interval: **3340.00 ft (KB) To 3368.00 ft (KB) (TVD)**  
 Total Depth: 3368.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches  
 Hole Condition:  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Spencer J Staab  
 Unit No: 84  
 Reference Elevations: 1906.00 ft (KB)  
 1899.00 ft (CF)  
 KB to GR/CF: 7.00 ft

**Serial #: 8875**

**Outside**

Press@RunDepth: 40.06 psig @ 3341.00 ft (KB)

Capacity: psig

Start Date: 2021.12.05 End Date: 2021.12.05

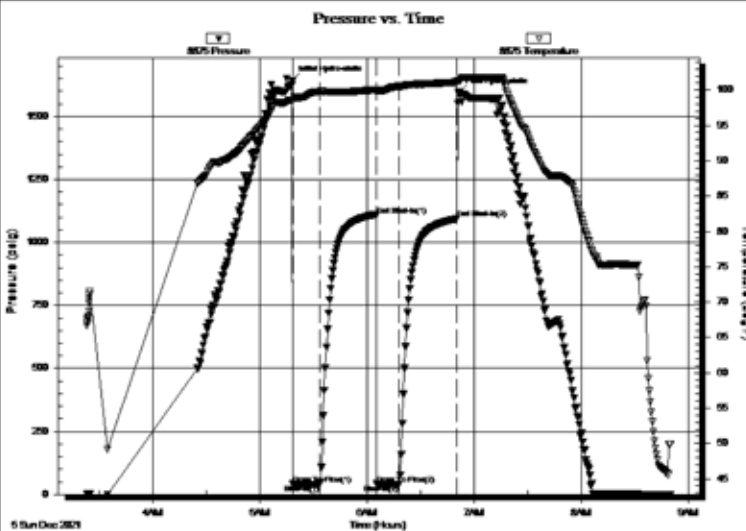
Last Calib.: 2021.12.05

Start Time: 03:23:01 End Time: 08:49:32

Time On Btm: 2021.12.05 @ 05:17:52

Time Off Btm: 2021.12.05 @ 06:50:57

TEST COMMENT: 15-IF-Slid 6' Bled off Surface to 1/4"  
 30-ISI-No Return  
 10-FF-Weak Surface Died  
 30-FSI-No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1641.00	98.58	Initial Hydro-static
1	39.87	98.63	Open To Flow (1)
16	39.58	99.79	Shut-In(1)
47	1107.72	100.03	End Shut-In(1)
48	41.69	99.72	Open To Flow (2)
60	40.06	100.55	Shut-In(2)
93	1093.85	101.16	End Shut-In(2)
94	1595.26	101.30	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
50.00	OCM 10% o 90%M	0.43

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Curts Oil Operations

**29-16s-12w Barton KS**

PO BOX 328  
Hoisington KS 67544

**5-H #1**

Job Ticket: 67856

**DST#: 4**

ATTN: Clayton Camozzi

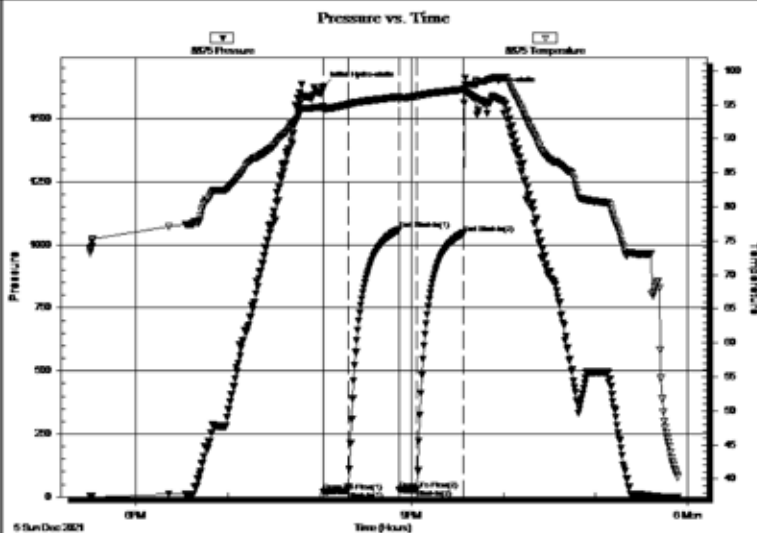
Test Start: 2021.12.05 @ 17:30:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 20:02:37  
 Time Test Ended: 23:53:51  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Spencer J Staab  
 Unit No: 84  
 Interval: **3342.00 ft (KB) To 3380.00 ft (KB) (TVD)**  
 Total Depth: 3380.00 ft (KB) (TVD)  
 Reference Elevations: 1906.00 ft (KB)  
 1899.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 KB to GR/CF: 7.00 ft

**Serial #: 8875** **Outside**  
 Press@RunDepth: 29.90 psig @ 3343.00 ft (KB) Capacity: psig  
 Start Date: 2021.12.05 End Date: 2021.12.05 Last Calib.: 2021.12.05  
 Start Time: 17:30:01 End Time: 23:53:52 Time On Btm: 2021.12.05 @ 20:02:27  
 Time Off Btm: 2021.12.05 @ 21:34:51

TEST COMMENT: 15-IF-Surface to 1/4"  
 30-ISI-No Return  
 10-FF-No Blow  
 30-FSI-No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1627.79	94.66	Initial Hydro-static
1	19.93	94.32	Open To Flow (1)
16	25.64	95.03	Shut-In(1)
50	1059.73	96.13	End Shut-In(1)
50	29.06	95.73	Open To Flow (2)
61	29.90	96.29	Shut-In(2)
91	1045.28	97.26	End Shut-In(2)
93	1608.39	97.98	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	MCO 50%M 50%O	0.07

## Gas Rates

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

# ROCK TYPES

## LITHOLOGY

	Anhy
	Bent
	Brec
	Cht
	Clyst
	Coal
	Congl
	Dol
	Gyp
	Igne
	Lmst
	Meta
	Mrlst
	Salt
	Shale
	Shcol
	Shgy
	Sltst
	Ss
	Till
	Sltstn
	Shale
	Sandylms
	Lms
	Gry sh
	Dtd
	Dol
	Carb sh
	pipesymbol
	unknown lith
	Red shale


## MINERAL


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

Sltstn
Silty
Sand
Dol
Chlorite
Anhy
Arggrn
Arg
Bent
Bit
Brecfrag
Calc
Carb
Chtdk
Chtlt
Dol

## STRINGER


Feldspar
Ferrpel
Ferr
Glau
Gyp
Hvymin
Kaol
Marl
Minxl
Nodule
Phos
Pyr
Salt
Sandy
Silt
Sil
Sulphur
Tuff

Sh
Sandylms
Lms
Gryslt
Grysh
Dol
Clystn
Carbsh
Anhy
Arg
Bent
Coal
Dol
Gyp
Ls
Mrst
Sltstrg



Ssstrg

## TEXTURE


Boundst
Chalky
Cryxln
Earthy
Finexln
Grainst
Lithogr
Microxln
Mudst
Packst
Wackest

## OIL SHOW


Gas show
Even
Spotted
Ques
Dead

## INTERVAL

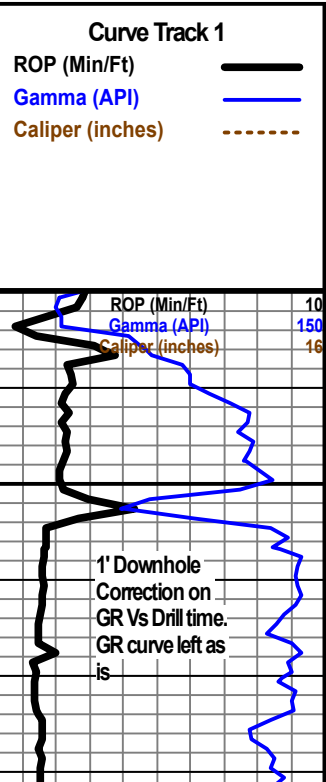

Dst
Core
Dst
Straddle test tail pipe

## EVENT


Rft
Sidewall
Dst
Open hole
Perforations

## FOSSIL

	Oomoldic
	Fuss
	Algae



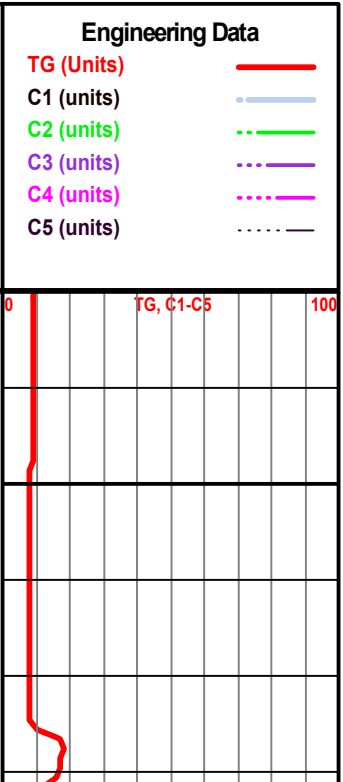
MD
Lithology
Oil Shows

Geological Descriptions

**Curt's Oil Operation, LLC**  
**5-H #1**  
**1975' FNL & 1885' FEL**  
**Sec. 29- 16S - 12W**  
**Barton Co, KS**

Drilling Company: Discovery Drilling  
Rig #2 785-635-1412 Tool Pusher: Terry Wickham 785-259-3263

Geologist, Clayton Camozzi on Location @ 2750'  
5:30am December 2, 2021



**Start Wet & Dry Samples @ 2700'**

2700  
 2750  
 2800  
 2850  
 2900



Limestone, brown to cream, very hard dense, cryptocrystalline with shale inclusions in matrix, no visible porosity, no show, trace scattered pyrite in part

Limestone, cream, hard dense, microcrystalline to cryptocrystalline matrix, abundant light gray shale inclusions, no visible porosity no odor no show

**Topeka 2726 (-819)**

Limestone, cream, hard dense, microcrystalline matrix throughout small trace fusulinids in part, no visible porosity no odor no show

Limestone, cream to gray, microcrystalline to cryptocrystalline, trace scattered shale inclusions, no visible porosity, no show

Limestone, gray to cream to light tan, hard dense, cryptocrystalline to scattered microcrystalline small trace fusulinids in matrix scattered shale inclusions, no visible porosity, no show

Limestone, gray, hard dense, cryptocrystalline throughout, no visible porosity, no show

Limestone, gray to cream, microcrystalline to scattered cryptocrystalline trace scattered shale inclusions, no visible porosity, no show

Limestone to Limy Shale, light gray to gray to cream, microcrystalline to scattered cryptocrystalline abundant shale inclusions throughout, no visible porosity no show

Limestone, cream to small trace light gray, microcrystalline to scattered cryptocrystalline, no visible porosity, no show

Limestone, cream to tan, microcrystalline to scattered cryptocrystalline, no visible porosity, no show

Limestone, cream to trace tan, hard to brittle, microcrystalline to scattered cryptocrystalline to scattered chalky matrix to imbedded fusulinids, no visible porosity, no show,

Limestone, cream, hard to brittle, microcrystalline to scattered cryptocrystalline, no visible porosity, no show,

Limestone as above

Shale, black, soft, carbonaceous, no fluorescence

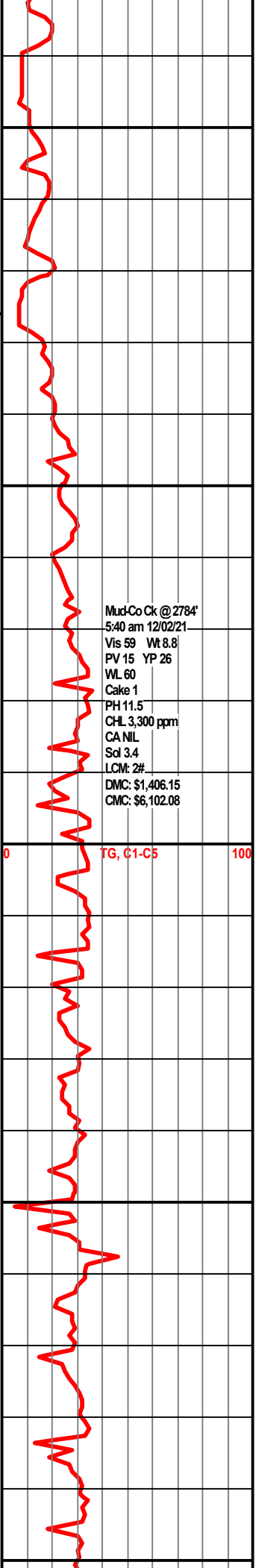
Limestone, cream to tan, microcrystalline to scattered cryptocrystalline, no visible porosity, no show

Shale to scattered silty shale, light gray to off white to trace scattered turquoise, soft to hard, blocky to splinty to scattered chalky, no fluorescence

Limestone, cream, hard dense, microcrystalline to cryptocrystalline matrix, no visible porosity, no show

Limestone, cream, hard dense, microcrystalline to cryptocrystalline matrix, no visible porosity, no show, trace scattered fusulinids scattered throughout

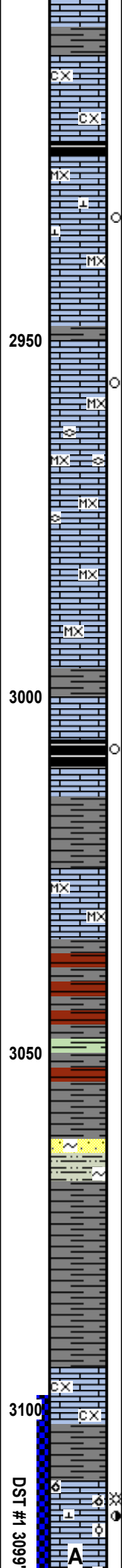
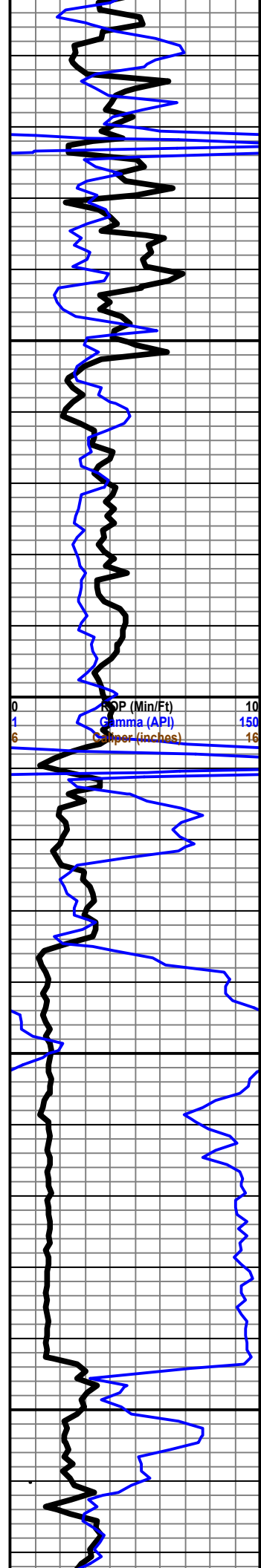
Limestone, cream to tan to scattered light gray, hard dense, microcrystalline matrix with abundant round shale inclusions. no visible porosity. no show



Mud-Co Ck @ 2784'  
 5:40 am 12/02/21  
 Vis 59 Wt 8.8  
 PV 15 YP 26  
 WL 60  
 Cake 1  
 PH 11.5  
 CHL 3,300 ppm  
 CA NIL  
 Sol 3.4  
 LCM: 2#  
 DMC: \$1,406.15  
 CMC: \$6,102.08

0 TG, C1-C5 100

ROP (Min/Ft) 10  
 Gamma (API) 150  
 Caliper (inches) 16



Shale, light gray, splintery to scattered blocky, micaceous in part, no fluorescence

Limestone, light gray, hard dense, cryptocrystalline matrix scattered throughout trace scattered shale inclusions, no visible porosity, no show

**Queen Hill Shale 2922 (-1015)**

Shale, black, soft, carbonaceous, no fluorescence

Limestone, cream to off white, microcrystalline matrix with scattered shale inclusions, trace scattered recrystalline matrix with dense calcite veins, very poor to no visible porosity, very small trace vugular porosity, no fluorescence, no odor, 1 piece had light brown spotty stain in 10%, excellent flush cut to good slow stream cut, sample very slowly bleeding light brown oil, poor show free oil, light brown stain on dish

Limestone, cream to tan, hard dense, microcrystalline to scattered cryptocrystalline, no visible porosity, no show

2950

Limestone cream to tan, hard to brittle in part, microcrystalline throughout to subchalky matrix, very poor to no visible porosity small trace scattered poor vugular porosity, scattered light brown spotty stain in 10%, faint oil odor, no fluorescence, no cuts, 1 sample slowly bleeding light brown oil, poor to no show free oil

Limestone, cream, hard dense, microcrystalline to scattered cryptocrystalline possible recrystalline matrix, very poor to no visible porosity, light brown spotted stain in 10%, faint oil odor, no fluorescence, no cuts, no show free oil, scattered fusulinids

Limestone, cream to tan, hard dense, microcrystalline to scattered cryptocrystalline, no visible porosity, no show

Limestone, as above

3000

Shale, light gray, splintery, micaceous throughout, no fluorescence

**Heebner 3006 (-1099)**

Shale, black, soft, blocky, carbonaceous, no fluorescence

Shale, very soft, gummy to chalky to scattered splintery, micaceous, no fluorescence

**Toronto 3024 (-1117)**

Limestone, cream, microcrystalline throughout to very small trace subsucrosic in 5%, very poor to no visible porosity, spotted light brown stain in 5%, faint oil odor, dull yellow fluorescence in 5%, no cuts, no show free oil

**Douglas Shale 3034 (-1127)**

Shale, gray to scattered red, very soft to hard, splintery, micaceous in part, trace scattered pyrite no fluorescence

Shale, light gray to gray to small trace scattered red and green, hard to soft, splintery to gummy, micaceous in part scattered chalk, no fluorescence

3050

Silstone to scattered silty sand, soft, very fine to fine sub angular quartz grains in a dense calcareous matrix, no stain, no fluorescence, no odor, no show free oil, glauconite in part

Shale, light gray to gray, soft brittle, splintery, micaceous, no fluorescence,

Shale, as above

**Brown Lime 3093 (-1186)**

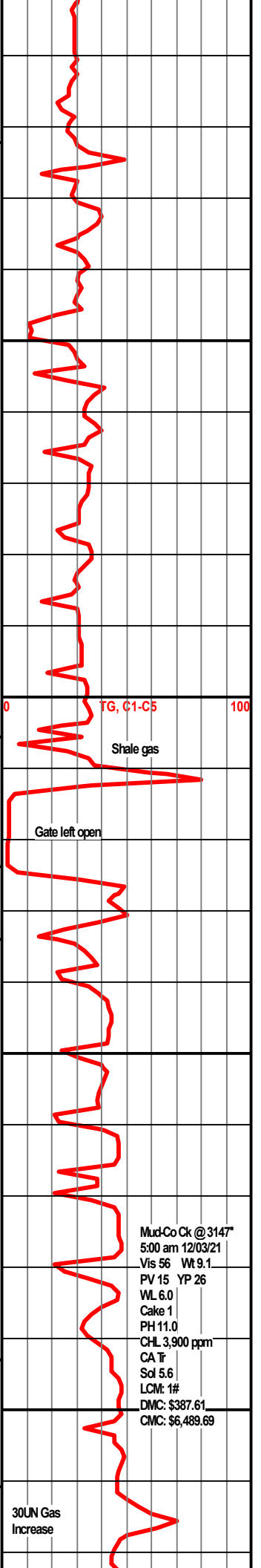
Limestone, brown to tan, cryptocrystalline to scattered microcrystalline small trace recrystalline matrix with dense calcite veins, no visible porosity, no show

3100

Shale, light gray to gray, splintery to scattered waxy, micaceous throughout, no fluorescence

**Lansing 3111 (-1204)**

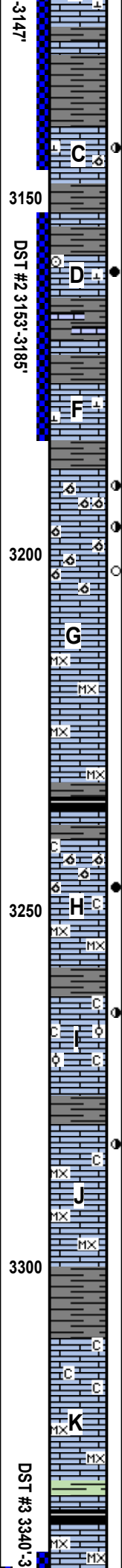
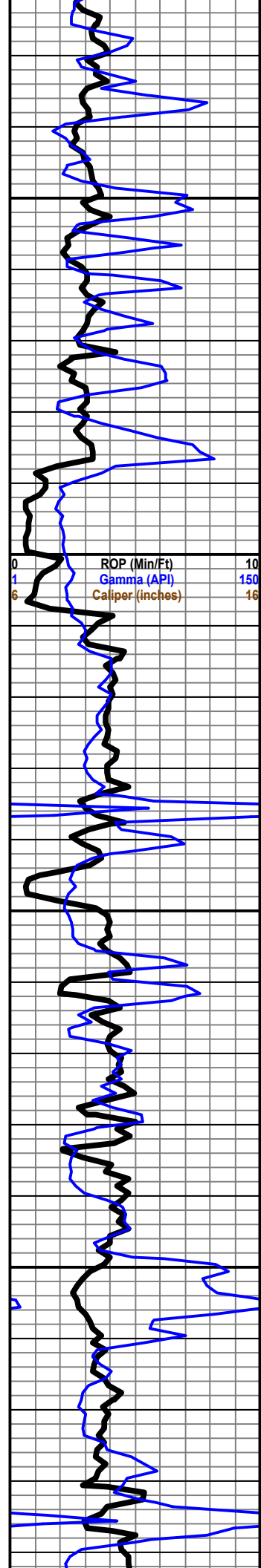
Limestone, white to cream, hard to brittle, oolitic to scattered oomoldic matrix in a dense calcareous recrystalline matrix scattered calcite crystals in matrix, fair interoolitic porosity to poor oomoldic porosity possible fracture porosity, light brown very scattered spotted stain in 10%, good oil odor, dull yellow fluorescence, poor flush cut to poor slow stream cut, few samples flowly bleeding gas poor show light brown flaky free oil



Mud-Co Ck @3147'  
 5:00 am 12/03/21  
 Vis 56 Wt 9.1  
 PV 15 YP 26  
 WL 6.0  
 Cake 1  
 PH 11.0  
 CHL 3,900 ppm  
 CA Tr  
 Sol 5.6  
 LCM: 1#  
 DMC: \$387.61  
 CMC: \$6,489.69

DST #1 3099

A



Shale, light gray to gray, soft, splintery, micaceous, scattered pyrite in part, no fluorescence

Limestone, cream to light tan, hard dense, fine crystalline to oolitic to small trace oomoldic to scattered fractures with secondary recrystallization matrix, light brown spotted stain in 20%, good oil odor, dull yellow fluorescence throughout, fair flush cut to good slow stream cut, samples slowly bleeding light brown oil, fair show light brown free oil in tray,

Shale, light gray, soft, splintery, micaceous, no fluorescence

Limestone, white to tan, hard to scattered brittle, subsucrosic recrystalline matrix with small to medium calcite crystals in matrix, poor intercrystalline porosity to fair vugular porosity to possible fracture porosity, light brown stain in 40%, fair oil odor, bright yellow fluorescence in 10% dull yellow throughout, good flush cut to good slow stream cut, good show light brown free oil in tray, scattered crinoids

Shale to limy shale, light gray, hard dense, no porosity, no show

Limestone, cream, hard dense, microcrystalline matrix throughout small trace calcite veins, poor to no visible intercrystalline porosity, scattered black dead oil stain in 10%, very faint oil odor, no fluorescence, no cuts, no show free oil

Limestone, cream, hard, oomoldic/subsucrosic matrix throughout, fair interoomoldic porosity, light brown stain in 20%, faint oil odor, no fluorescence, poor show light brown free oil in tray

Limestone, cream, hard, oomoldic/subsucrosic matrix, good interoomoldic porosity throughout, light brown stain in 10%, no fluorescence, faint oil odor, very poor show light brown free oil, scattered soft white chalk

Limestone, cream to light gray, very hard dense, microcrystalline matrix, no visible porosity, no stain, no fluorescence, no show free oil

Limestone, tan to light gray, very hard, dense, microcrystalline to scattered cryptocrystalline, no visible porosity, no stain, no odor, no fluorescence, no show free oil

Shale, black, soft, carbonaceous, no fluorescence

**Lansing "H" 3240 (-1333)**

Limestone, cream to light tan, hard to brittle, oomoldic/subsucrosic matrix, good interoomoldic porosity, light brown stain in 50%, very faint oil odor, dull yellow fluorescence throughout, good flush cut to good slow stream cut, samples slowly bleeding light brown free oil, abundant free oil in tray, scattered soft white chalk

Shale, gray, very soft brittle, scattered gummy, no fluorescence

Limestone, cream, hard dense, oolitic in a dense calcareous matrix abundant small calcite crystals in matrix to scattered calcite veins throughout, poor to trace fair intercrystalline porosity, light brown stain in 5%, faint oil odor, bright yellow spotted fluorescence in 10%, no flush cut, to poor slow stream cut, fair show light brown free oil in tray

Limestone, cream, tan, microcrystalline to small trace scattered sub sucrosic in a dense calcareous recrystalline matrix to scattered oomoldic scattered calcite crystals in matrix, poor to small trace fair intercrystalline porosity, light brown stain in 5%, faint oil odor, bright yellow fluorescence in 20%, no flush cut to very poor slow stream cut, fair show light brown free oil in tray,

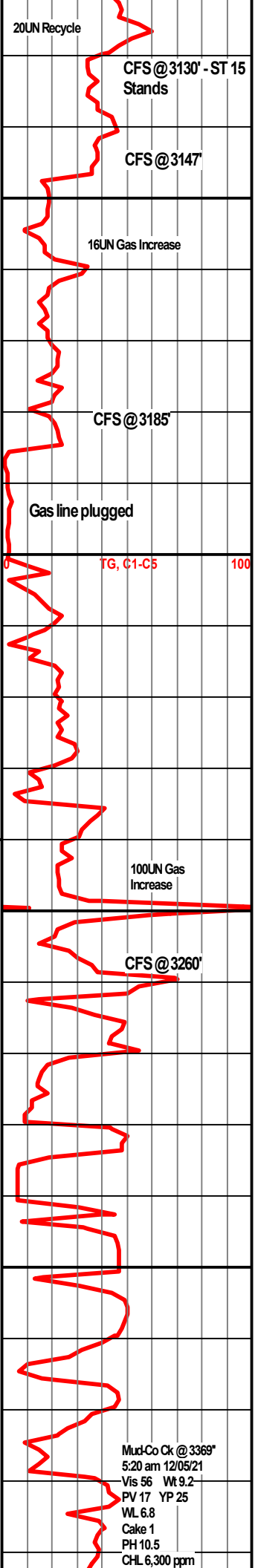
Limestone, light tan, hard dense microcrystalline matrix, no visible porosity, no stain, no fluorescence, no show free oil

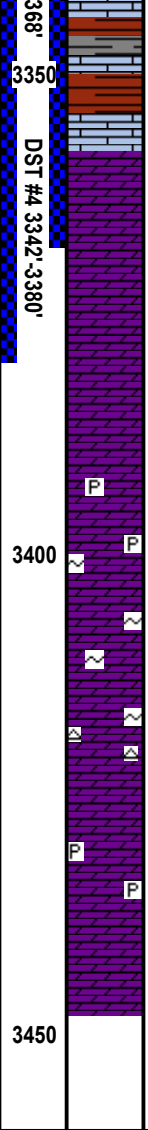
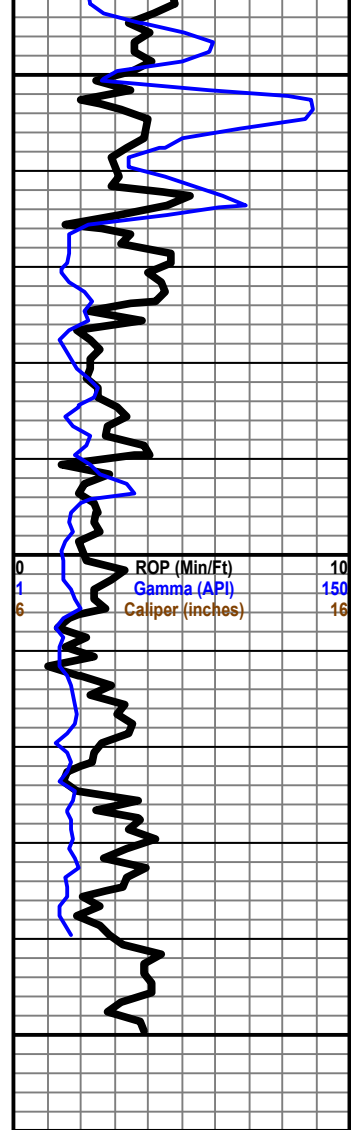
Shale, light gray to gray, very soft gummy to blocky, no fluorescence

Limestone, cream, hard dense, microcrystalline chalky matrix throughout, no visible porosity, no stain, no odor, no fluorescence, no show free oil, scattered soft white chalk

Limestone, as above

Shale, black to light green, very soft to gummy to splintery, carbonaceous





Shale, red to trace maroon, hard to very soft, blocky to chalky, no fluorescence

**BKC 3349 (-1442)**

Shale to Limy shale, cream to red to scattered maroon, hard dense, microcrystalline calcareous matrix with imbedded shale inclusions, no fluorescence, no show

**Arbuckle 3358 (-1451)**

- Dolomite, clear, soft brittle, subrhombic to rhombic matrix to scattered dense matrix, fair to good intercrystalline porosity, light brown stain in 60%, good oil odor, bright yellow fluorescence in 75%, poor flush cut to good slow stream cut, samples bleeding dark brown oil, good/abundant show free oil
- Dolomite cream to tan, hard to brittle, micro-subrhombic matrix in 30% to microcrystalline in 70%, no visible porosity to good intercrystalline porosity, spotted dark brown oil stain in 80%, good oil odor, bright yellow fluorescence throughout, good flush cut to good slow stream cut, sample bleeding oil, good show free oil
- Dolomite, 3376-80 cream, hard to scattered brittle, subrhombic matrix in 20% to microcrystalline in 80%, good intercrystalline porosity, spotted dark brown stain in 90%, good oil odor, bright yellow fluorescence throughout, samples bleeding oil, fair show free oil
- Dolomite, 3380-90 white, hard, rhombic to scattered subrhombic, good intercrystalline porosity, spotted black stain in 20%, good oil odor, dull yellow fluorescence throughout, poor flush cut to poor slow stream cut, poor show black/tarry free oil
- Dolomite, white, hard, rhombic to scattered subrhombic matrix, good intercrystalline porosity, black dead spotted oil stain in 15%, dull yellow fluorescence throughout, no cuts, faint oil odor, no show free oil, trace scattered pyrite
- Dolomite, white, hard, subrhombic matrix, fair to no intercrystalline porosity, no stain, dull yellow fluorescence throughout, no cuts, no odor, no show free oil, trace glauconite in part
- Dolomite, white, hard, subrhombic very chalky matrix, fair to good intercrystalline porosity, no stain, dull yellow fluorescence throughout, no cuts, no odor, no show free oil, trace glauconite in part
- Dolomite, white, hard, subrhombic to small trace rhombic, poor to small trace good intercrystalline porosity, no stain, dull yellow fluorescence throughout, no cuts, no odor, no show free oil, trace chert
- Dolomite, white, hard, subrhombic to rhombic chalky matrix, poor to good intercrystalline porosity, no stain, dull yellow fluorescence throughout, no cuts, no odor, no show free oil, trace pyrite scattered throughout

**TD 3450' at 9:00am CDT on 12/6/2021**

