



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Culbreath Oil & Gas Company Inc.

**5-15S-34W Logan, KS**

3501 S. Yale Ave.  
Tulsa, OK 74135

**Sowers #1-5**

Job Ticket: 65617

**DST#: 3**

ATTN: Richard Bell

Test Start: 2016.10.08 @ 19:08:15

## GENERAL INFORMATION:

Formation: **Altamont A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:48:00

Time Test Ended: 02:34:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

**Interval: 4195.00 ft (KB) To 4228.00 ft (KB) (TVD)**

Reference Elevations: 2922.00 ft (KB)

Total Depth: 4228.00 ft (KB) (TVD)

2912.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

**Serial #: 6751 Outside**

Press@RunDepth: 190.11 psig @ 4223.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.08

End Date:

2016.10.09

Last Calib.:

2016.10.09

Start Time: 19:08:15

End Time:

02:34:45

Time On Btm:

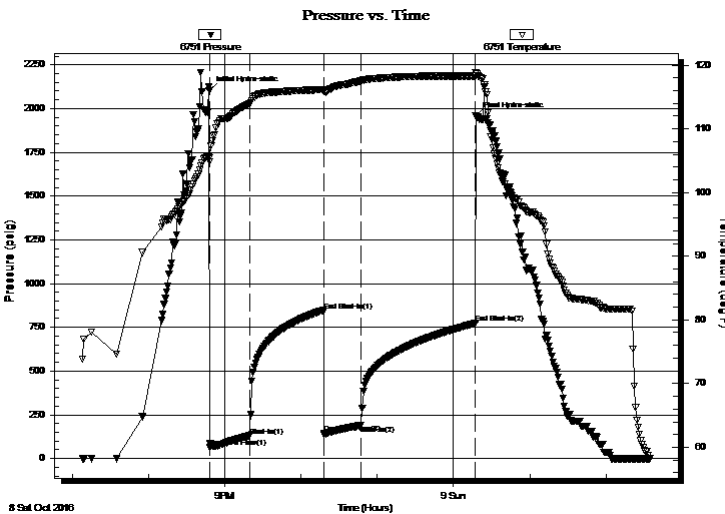
2016.10.08 @ 20:47:45

Time Off Btm:

2016.10.09 @ 00:17:30

TEST COMMENT: IF:BOB in 4 min.  
IS:Return blow built to 3"  
FF:BOB in 5 min.  
FS:Return blow built to 3"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2103.85	105.82	Initial Hydro-static
1	66.15	104.83	Open To Flow (1)
32	129.57	113.99	Shut-In(1)
90	843.27	116.15	End Shut-In(1)
91	142.94	115.87	Open To Flow (2)
120	190.11	117.51	Shut-In(2)
210	773.22	118.29	End Shut-In(2)
210	1956.45	118.86	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	GIP= 496 feet	0.00
231.00	free oil 100%o	3.27
62.00	mcgo 5%m 15%g 85%o	0.88
186.00	mcgo 20%m 30%g 50%o	2.64

\* Recovery from multiple tests

## Gas Rates

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



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**Sowers #1-5**

Job Ticket: 65617

**DST#: 3**

ATTN: Richard Bell

Test Start: 2016.10.08 @ 19:08:15

## GENERAL INFORMATION:

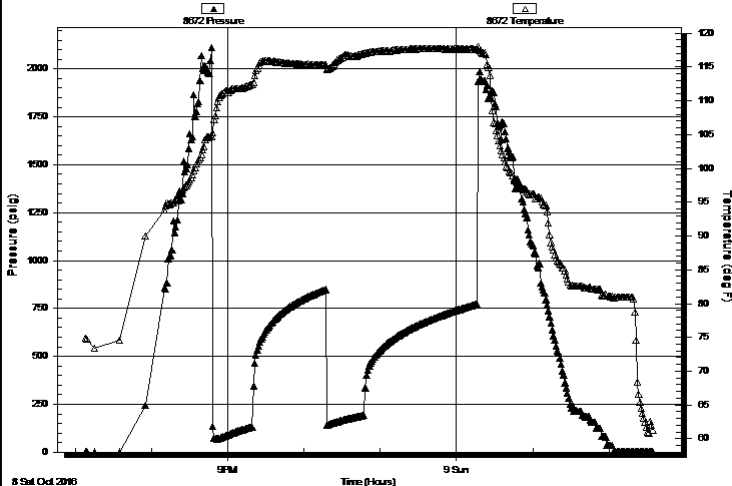
Formation: **Altamont A**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 20:48:00  
 Time Test Ended: 02:34:45  
**Interval: 4195.00 ft (KB) To 4228.00 ft (KB) (TVD)**  
 Total Depth: 4228.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Mike Roberts  
 Unit No: 81  
 Reference Elevations: 2922.00 ft (KB)  
 2912.00 ft (CF)  
 KB to GR/CF: 10.00 ft

## Serial #: 8672 Inside

Press@RunDepth: psig @ 4223.00 ft (KB)  
 Start Date: 2016.10.08 End Date: 2016.10.09  
 Start Time: 19:08:15 End Time: 02:34:30  
 Capacity: 8000.00 psig  
 Last Calib.: 2016.10.09  
 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF:BOB in 4 min.  
 IS:Return blow built to 3"  
 FF:BOB in 5 min.  
 FS:Return blow built to 3"

### Pressure vs. Time



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
0.00	GIP= 496 feet	0.00
231.00	free oil 100%	3.27
62.00	mco 5% m 15% g 85%	0.88
186.00	mco 20% m 30% g 50%	2.64

### Gas Rates

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

\* Recovery from multiple tests



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Culbreath Oil & Gas Company Inc.

**5-15S-34W Logan, KS**

3501 S. Yale Ave.  
Tulsa, OK 74135

**Sowers #1-5**

Job Ticket: 65617

**DST#: 3**

ATTN: Richard Bell

Test Start: 2016.10.08 @ 19:08:15

## 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:

0 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 24000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	GIP= 496 feet	0.000
231.00	free oil 100%o	3.275
62.00	mcgo 5%m 15%g 85%o	0.879
186.00	mcgo 20%m 30%g 50%o	2.637

Total Length: 479.00 ft      Total Volume: 6.791 bbl

Num Fluid Samples: 0

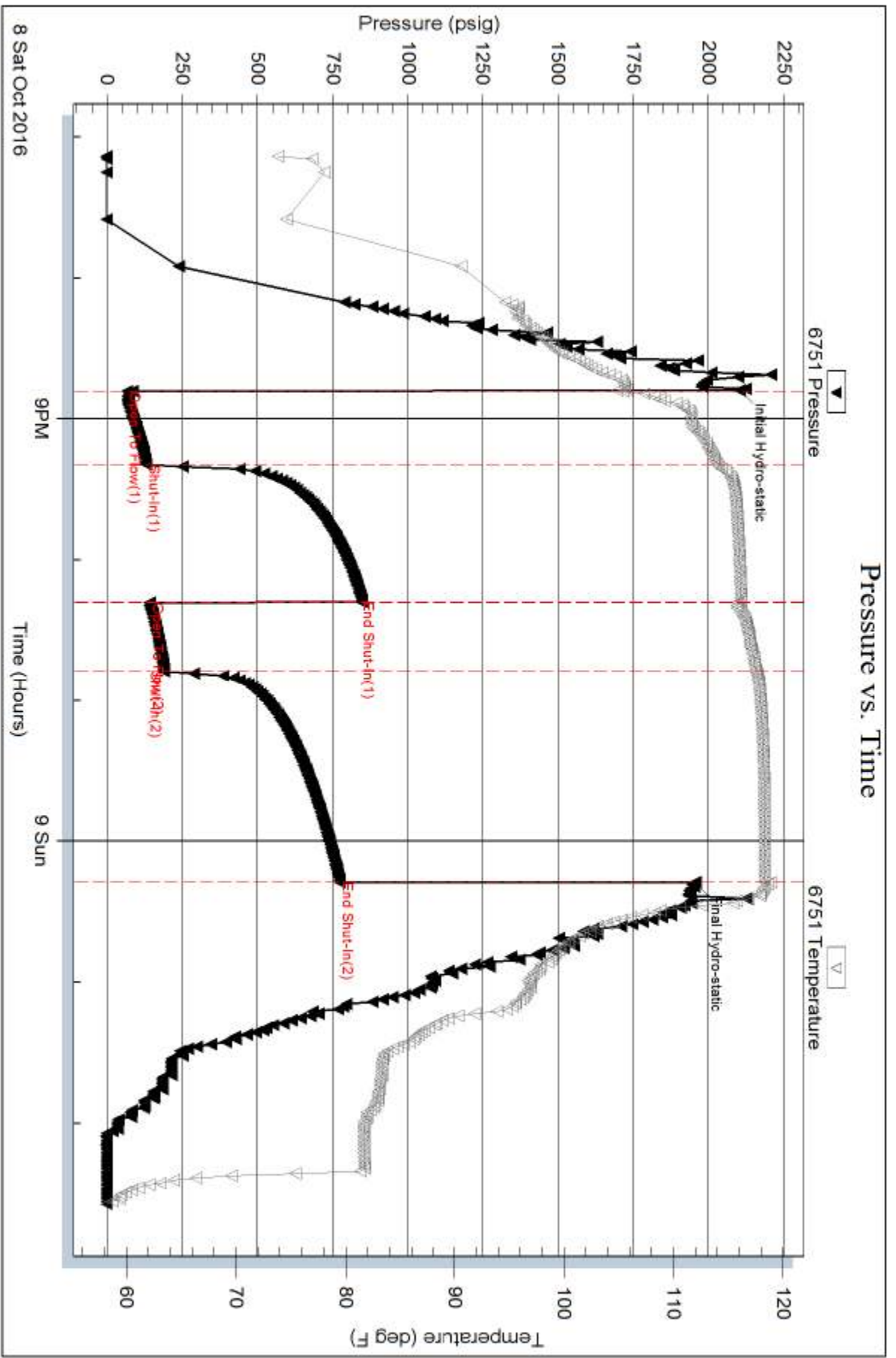
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API= 34 @ 60 corrected to 34



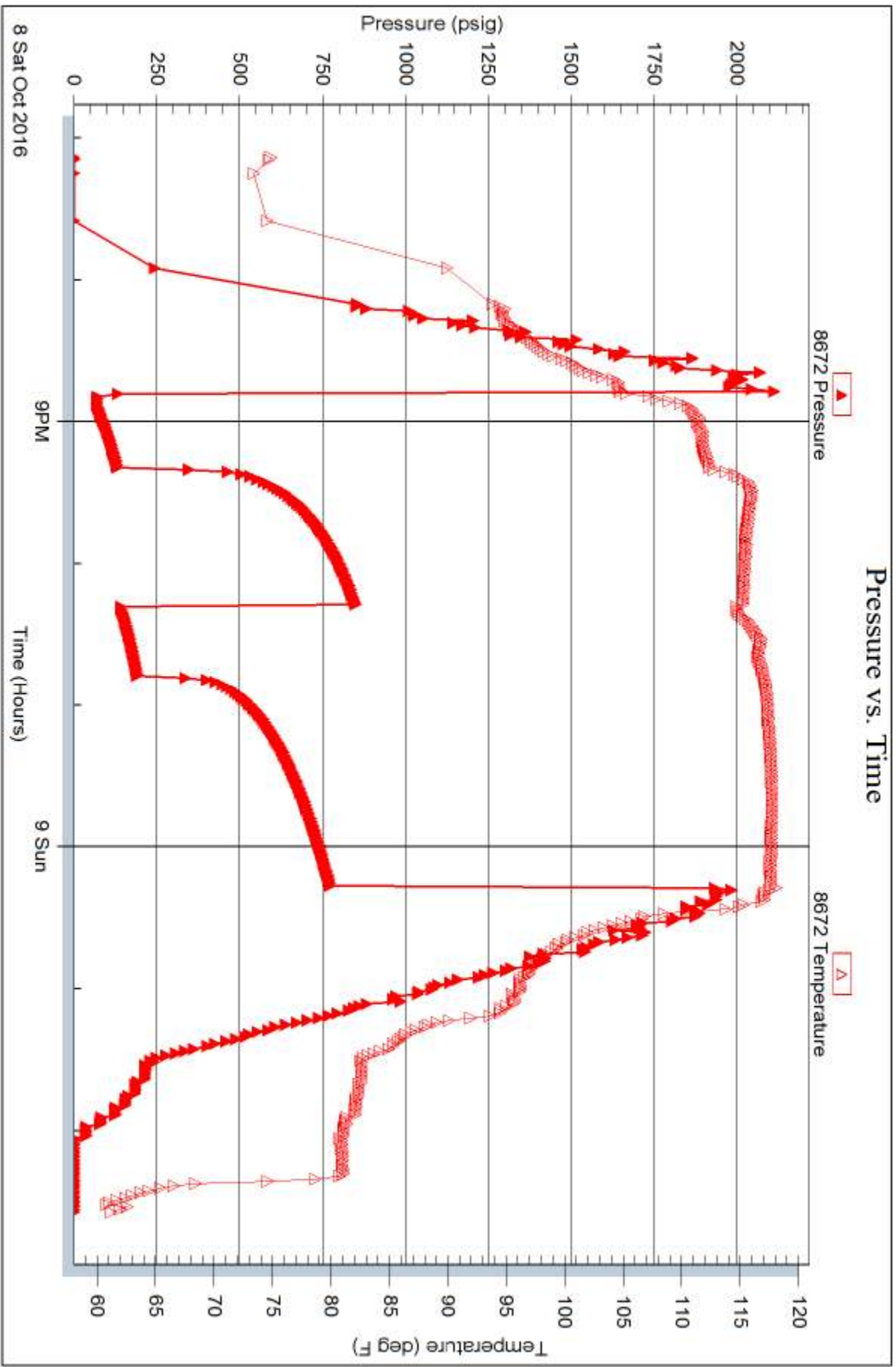
Serial #: 8672

Inside

Culbreath Oil & Gas Company Inc.

Sowers #1-5

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 65617

Printed: 2016, 10:09 @ 07:58:28