



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Richland Oil Investments
 608 E 1st
 Palco, Ks 67657
 ATTN: Steve Murphy

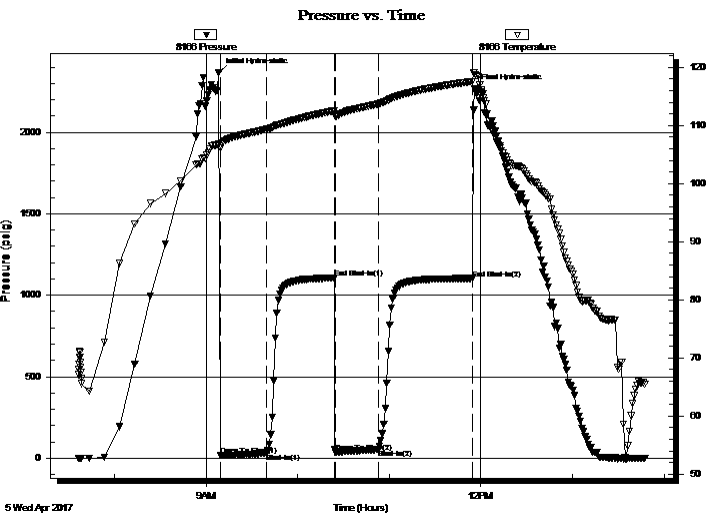
22-12-33 Logan, KS
Moore 22-2
 Job Ticket: 63784 **DST#: 5**
 Test Start: 2017.04.05 @ 07:36:16

GENERAL INFORMATION:

Formation: **Johnson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:09:16
 Time Test Ended: 13:47:16
 Interval: **4610.00 ft (KB) To 4650.00 ft (KB) (TVD)**
 Total Depth: 4650.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brandon Turley
 Unit No: 79
 Reference Elevations: 3114.00 ft (KB)
 3104.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8166 Outside
 Press@RunDepth: 52.92 psig @ 4611.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.04.05 End Date: 2017.04.05 Last Calib.: 2017.04.05
 Start Time: 07:36:21 End Time: 13:47:15 Time On Btm: 2017.04.05 @ 09:08:16
 Time Off Btm: 2017.04.05 @ 11:55:46

TEST COMMENT: IF: BOB in 6 min.
 IS: Surface blow built to 1/4. Died in 30 min.
 FF: BOB in 4 min.
 FS: Surface blow built to 1.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2367.58	106.88	Initial Hydro-static
1	17.95	106.08	Open To Flow (1)
32	30.84	109.37	Shut-In(1)
76	1105.08	112.56	End Shut-In(1)
77	37.74	111.55	Open To Flow (2)
105	52.92	113.72	Shut-In(2)
166	1102.71	117.57	End Shut-In(2)
168	2268.79	119.13	Final Hydro-static

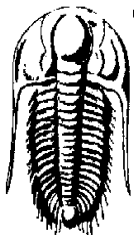
Recovery

Length (ft)	Description	Volume (bbl)
62.00	mcgo 40%g 40%o 20%m	0.87
58.00	mcgo 20%g 50%o 30%m	0.81
0.00	996 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



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Job Ticket: 63784

DST#: 5

ATTN: Steve Murphy

Test Start: 2017.04.05 @ 07:36:16

GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:09:16

Time Test Ended: 13:47:16

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4610.00 ft (KB) To 4650.00 ft (KB) (TVD)

Total Depth: 4650.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3114.00 ft (KB)

3104.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8875 Inside

Press@RunDepth: psig @ 4611.00 ft (KB)

Start Date: 2017.04.05 End Date: 2017.04.05

Start Time: 07:36:38 End Time: 13:47:32

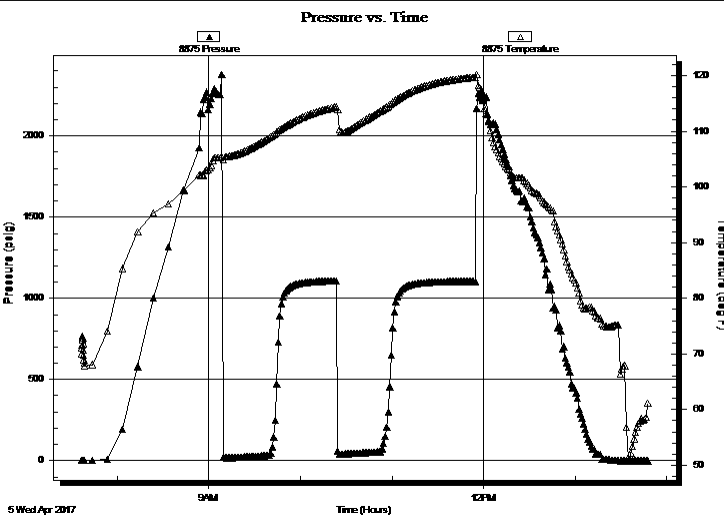
Capacity: 8000.00 psig

Last Calib.: 2017.04.05

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: BOB in 6 min.
IS: Surface blow built to 1/4. Died in 30 min.
FF: BOB in 4 min.
FS: Surface blow built to 1.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	mco 40%g 40%o 20%m	0.87
58.00	mco 20%g 50%o 30%m	0.81
0.00	996 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



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DRILL STEM TEST REPORT

FLUID SUMMARY

Richland Oil Investments

22-12-33 Logan, KS

608 E 1st
Palco, Ks 67657

Moore 22-2

Job Ticket: 63784

DST#: 5

ATTN: Steve Murphy

Test Start: 2017.04.05 @ 07:36:16

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: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	mcgo 40%g 40%o 20%m	0.870
58.00	mcgo 20%g 50%o 30%m	0.814
0.00	996 GIP	0.000

Total Length: 120.00 ft

Total Volume: 1.684 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

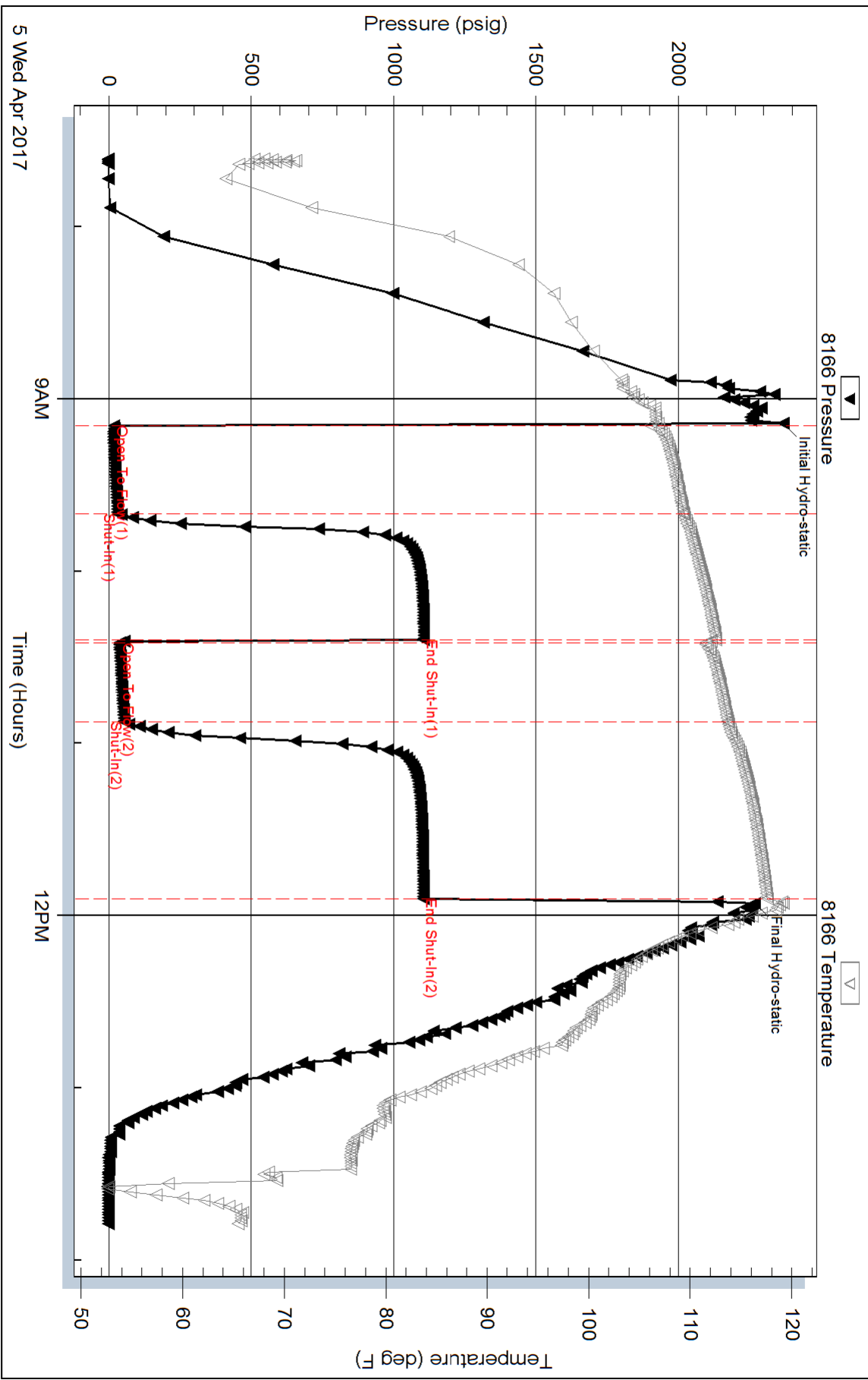
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 34@60=34

Pressure vs. Time



Serial #: 8875

Inside

Richland Oil Investments

Moore 22-2

DST Test Number: 5

