



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration Inc
8100 E 22nd St. N 700
Wichita, Ks 67278
ATTN: John Goldsmith

5-16s-36w Wichita, ks

Miller Trust #1

Job Ticket: 64548

DST#: 4

Test Start: 2016.05.28 @ 04:46:54

GENERAL INFORMATION:

Formation: **Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:40:54

Time Test Ended: 11:29:24

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4415.00 ft (KB) To 4524.00 ft (KB) (TVD)

Reference Elevations: 3311.00 ft (KB)

Total Depth: 4524.00 ft (KB) (TVD)

3306.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8166 Outside

Press@RunDepth: 452.28 psig @ 4416.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.05.28

End Date:

2016.05.28

Last Calib.:

2016.05.28

Start Time:

04:46:59

End Time:

11:29:23

Time On Btm:

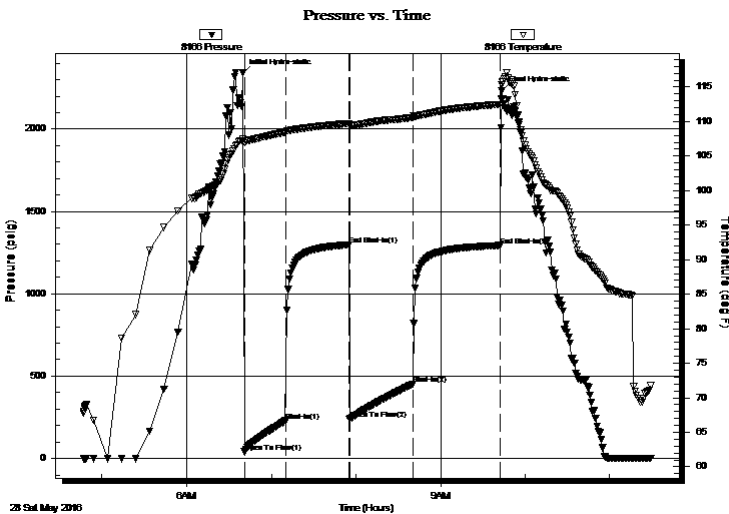
2016.05.28 @ 06:39:54

Time Off Btm:

2016.05.28 @ 09:43:24

TEST COMMENT: IF: 1/4 blow BOB in 6 1/2 min.
IS: Surface blow died in 10 min.
FF: 1/4 blow BOB in 7 min.
FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2339.70	107.47	Initial Hydro-static
1	40.26	106.91	Open To Flow (1)
30	228.43	108.45	Shut-In(1)
75	1297.30	109.75	End Shut-In(1)
76	239.59	109.41	Open To Flow (2)
121	452.28	110.61	Shut-In(2)
182	1293.08	112.50	End Shut-In(2)
184	2231.88	115.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
441.00	mcw 95%w 5%m	5.11
252.00	mcw 90%w 10%m	3.53
282.00	w m 50%w 50%m	3.96

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc

5-16s-36w Wichita, ks

8100 E 22nd St. N 700
Wichita, Ks 67278

Miller Trust #1

Job Ticket: 64548

DST#: 4

ATTN: John Goldsmith

Test Start: 2016.05.28 @ 04:46:54

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:

20000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
441.00	mcw 95%w 5%m	5.111
252.00	mcw 90%w 10%m	3.535
282.00	w m 50%w 50%m	3.956

Total Length: 975.00 ft Total Volume: 12.602 bbl

Num Fluid Samples: 0

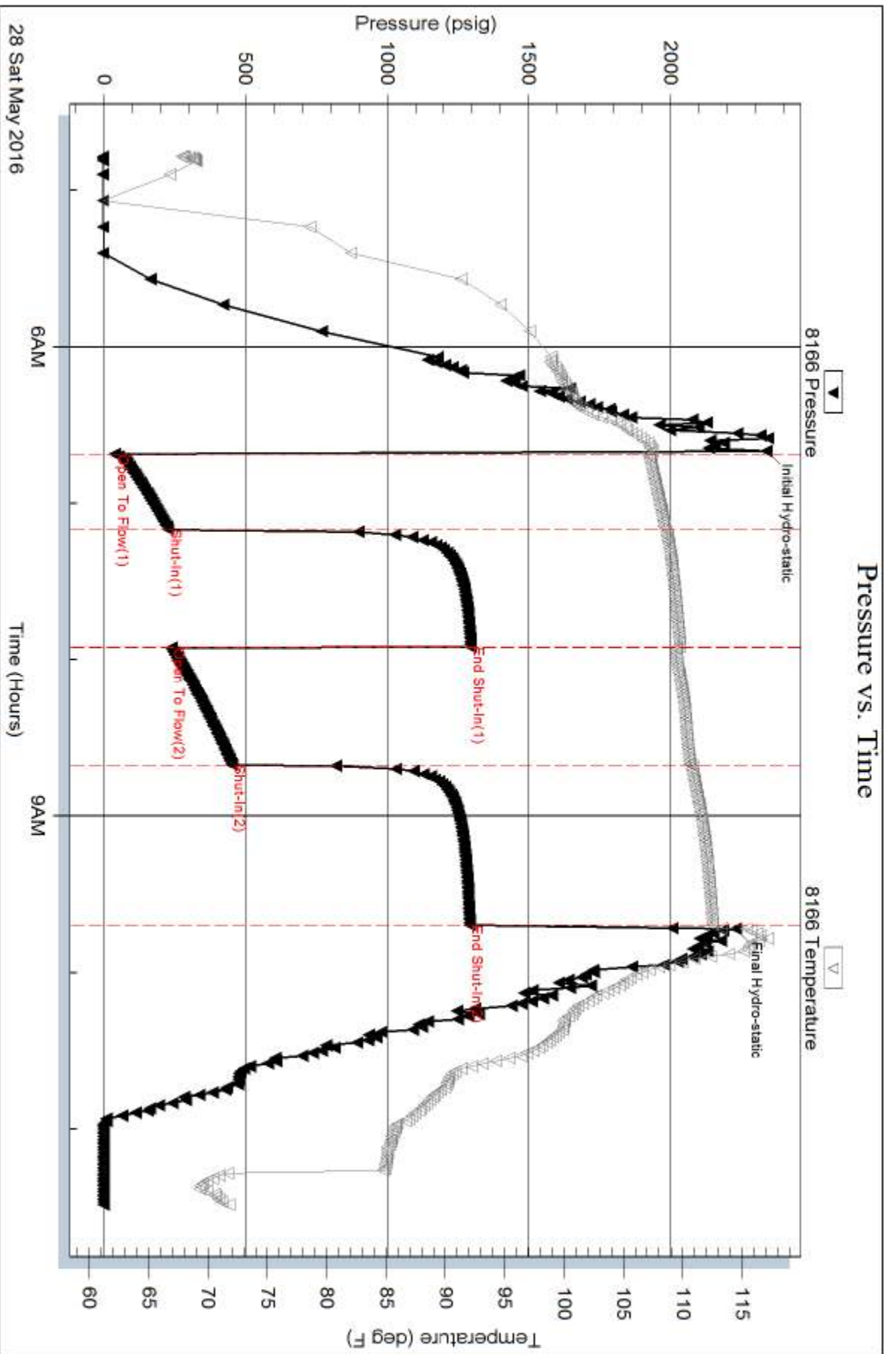
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .34@69=20000



Serial #: 8875

Inside

Ritchie Exploration Inc

Miller Trust #1

DST Test Number: 4

