



**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: 64546

DST#: 2

Test Start: 2016.05.25 @ 13:55:02

GENERAL INFORMATION:

Formation: **Lansing C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:17:02

Time Test Ended: 19:58:02

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4076.00 ft (KB) To 4100.00 ft (KB) (TVD)

Total Depth: 4100.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3311.00 ft (KB)

3306.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8166 Outside

Press@RunDepth: 89.85 psig @ 4077.00 ft (KB)

Start Date: 2016.05.25

End Date:

2016.05.25

Start Time: 13:55:07

End Time:

19:58:01

Capacity: 8000.00 psig

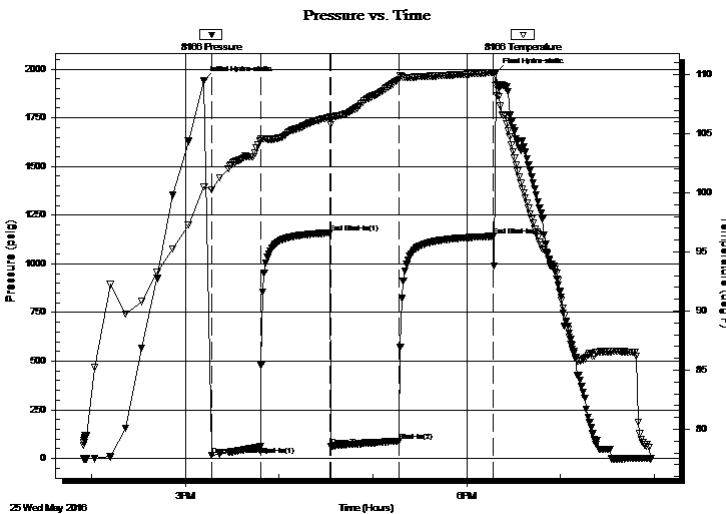
Last Calib.: 2016.05.25

Time On Btm: 2016.05.25 @ 15:12:02

Time Off Btm: 2016.05.25 @ 18:18:32

TEST COMMENT: IF: 1/4 blow built to 4 in 30 min.
IS: No return.
FF: Surface blow built to 5 in 45 min.
FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1940.21	100.49	Initial Hydro-static
5	15.98	100.25	Open To Flow (1)
36	60.71	104.41	Shut-In(1)
81	1158.93	106.39	End Shut-In(1)
81	62.33	105.76	Open To Flow (2)
125	89.85	109.61	Shut-In(2)
185	1141.40	110.20	End Shut-In(2)
187	1983.34	109.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
118.00	mcw oil spots 70%w 30%m	0.58
50.00	w cm oil spots 10%w 90%m	0.70
1.00	free oil 100%o	0.01

Gas Rates

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

* Recovery from multiple tests



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: 64546

DST#: 2

Test Start: 2016.05.25 @ 13:55:02

GENERAL INFORMATION:

Formation:	Lansing C			
Deviated:	No Whipstock:	ft (KB)	Test Type:	Conventional Bottom Hole (Reset)
Time Tool Opened:	15:17:02		Tester:	Brandon Turley
Time Test Ended:	19:58:02		Unit No:	79
Interval:	4076.00 ft (KB) To 4100.00 ft (KB) (TVD)		Reference Elevations:	3311.00 ft (KB)
Total Depth:	4100.00 ft (KB) (TVD)			3306.00 ft (CF)
Hole Diameter:	7.88 inches	Hole Condition: Good	KB to GR/CF:	5.00 ft

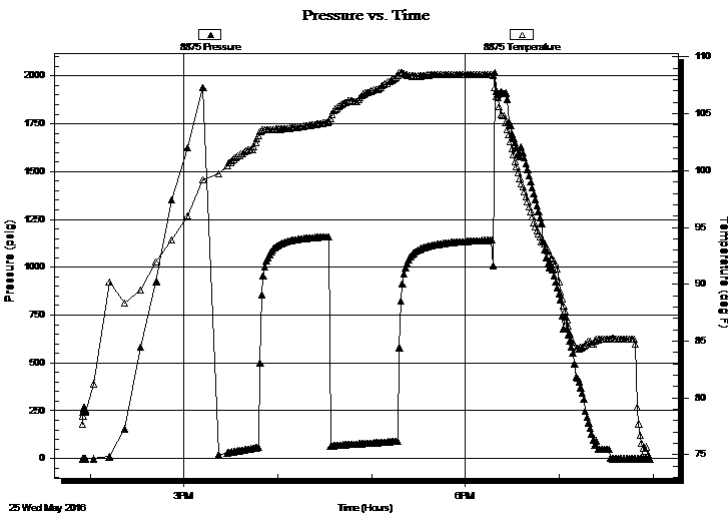
Serial #: 8875

Inside

Press@RunDepth:	psig @ 4077.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2016.05.25	End Date:	2016.05.25
Start Time:	13:55:16	End Time:	19:58:10
		Time On Btm:	
		Time Off Btm:	

TEST COMMENT: IF: 1/4 blow built to 4 in 30 min.
IS: No return.
FF: Surface blow built to 5 in 45 min.
FS: No return.

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
118.00	mcw oil spots 70%w 30%m	0.58
50.00	w cm oil spots 10%w 90%m	0.70
1.00	free oil 100%o	0.01

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

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: 64546 **DST#: 2**
Test Start: 2016.05.25 @ 13:55:02

Mud and Cushion Information

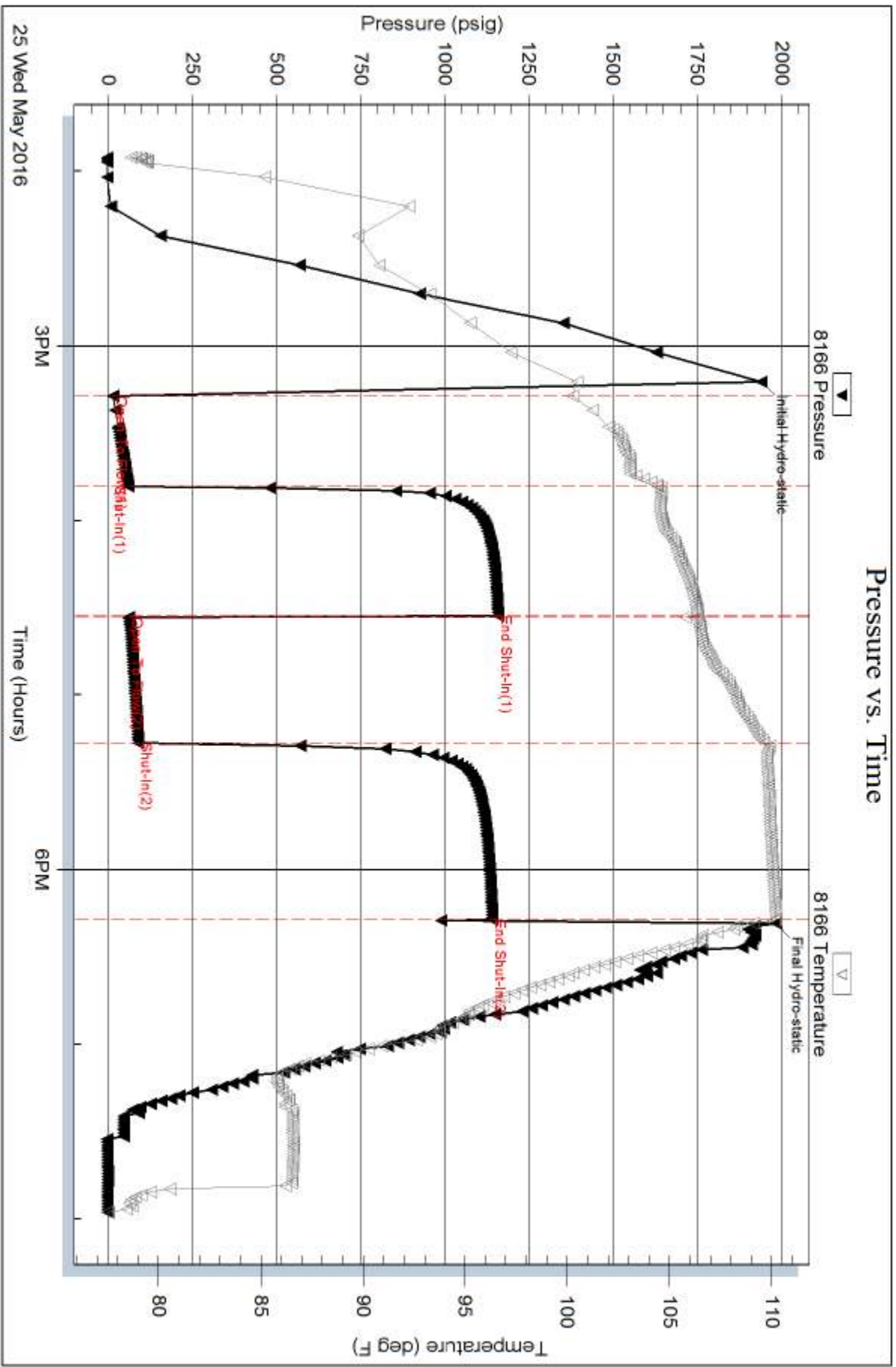
Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 18000 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.99 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 6000.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
118.00	mcw oil spots 70%w 30%m	0.580
50.00	w cm oil spots 10%w 90%m	0.701
1.00	free oil 100%o	0.014

Total Length: 169.00 ft Total Volume: 1.295 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: .33@82=18000



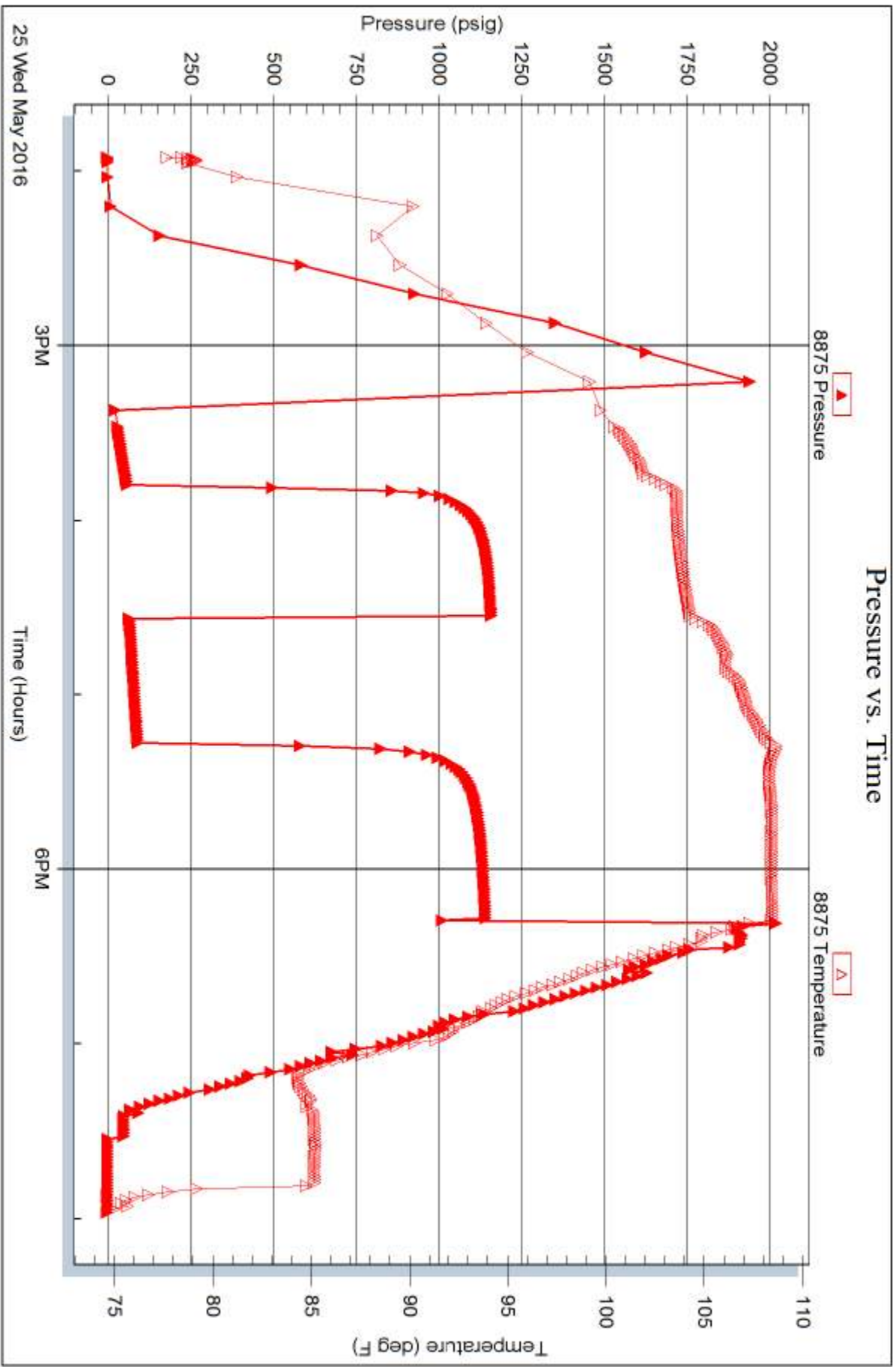
Serial #: 8875

Inside

Richie Exploration Inc

Miller Trust #1

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 64546

Printed: 2016.05.25 @ 22:52:36