



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Bickle Energies, LLC

36 11s 33w Logan KS

PO Box 816
Hays, Ks 67601

Willie Z #1

Job Ticket: 64643

DST#: 1

ATTN: Garet Dinkel/ Eii Ho

Test Start: 2016.05.01 @ 17:04:00

GENERAL INFORMATION:

Formation: **LKC E**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:54:00

Time Test Ended: 03:08:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 69

Interval: 4140.00 ft (KB) To 4165.00 ft (KB) (TVD)

Reference Elevations: 3090.00 ft (KB)

Total Depth: 4165.00 ft (KB) (TVD)

3080.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8365

Inside

Press @ Run Depth: 709.96 psig @ 4141.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.05.01

End Date:

2016.05.02

Last Calib.:

2016.05.02

Start Time: 17:04:05

End Time:

03:08:30

Time On Btm:

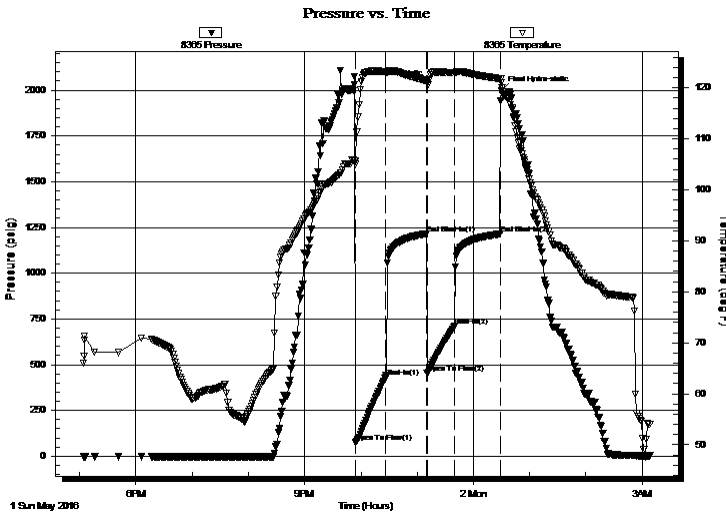
2016.05.01 @ 21:53:15

Time Off Btm:

2016.05.02 @ 00:29:30

TEST COMMENT: IF: BOB @ 3 min.
IS: No return.
FF: BOB @ 4 min.
FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2030.69	105.52	Initial Hydro-static
1	78.04	105.02	Open To Flow (1)
34	432.95	123.16	Shut-In(1)
77	1216.66	121.40	End Shut-In(1)
78	452.68	120.93	Open To Flow (2)
107	709.96	122.90	Shut-In(2)
155	1214.43	121.74	End Shut-In(2)
157	1998.16	120.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1480.00	smcw 5m 95w (oil spots on top / in tool)	20.76

Gas Rates

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



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DST#: 1

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Test Start: 2016.05.01 @ 17:04:00

GENERAL INFORMATION:

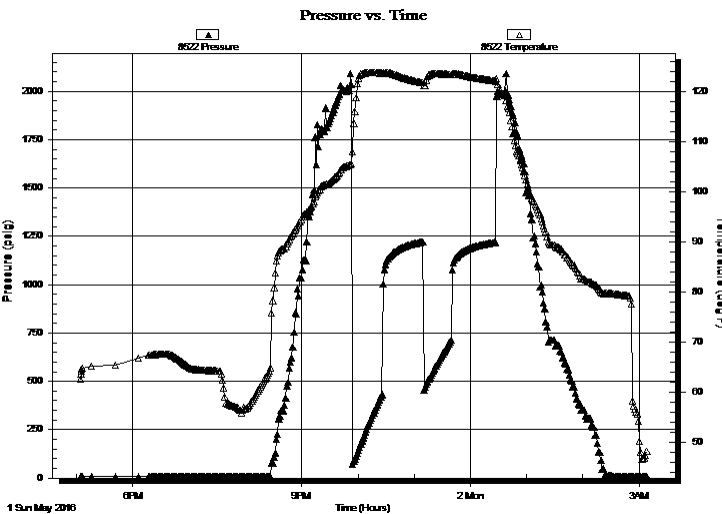
Formation: **LKC E**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 21:54:00 Tester: Bradley Walter
 Time Test Ended: 03:08:30 Unit No: 69
 Interval: **4140.00 ft (KB) To 4165.00 ft (KB) (TVD)** Reference Elevations: 3090.00 ft (KB)
 Total Depth: 4165.00 ft (KB) (TVD) 3080.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

Serial #: 8522

Outside

Press @ Run Depth: psig @ 4141.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.05.01 End Date: 2016.05.02 Last Calib.: 2016.05.02
 Start Time: 17:04:05 End Time: 03:08:00 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: BOB @ 3 min.
 IS: No return.
 FF: BOB @ 4 min.
 FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1480.00	smcw 5m 95w (oil spots on top / in tool)	20.76

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Bickle Energies, LLC

36 11s 33w Logan KS

PO Box 816
Hays, Ks 67601

Willie Z #1

Job Ticket: 64643

DST#: 1

ATTN: Garet Dinkel/ Eii Ho

Test Start: 2016.05.01 @ 17:04:00

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:

72000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 4.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1480.00	smcw 5m 95w (oil spots on top / in tool)	20.761

Total Length: 1480.00 ft Total Volume: 20.761 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .190 @ 41 = 72000ppm

Serial #: 8365

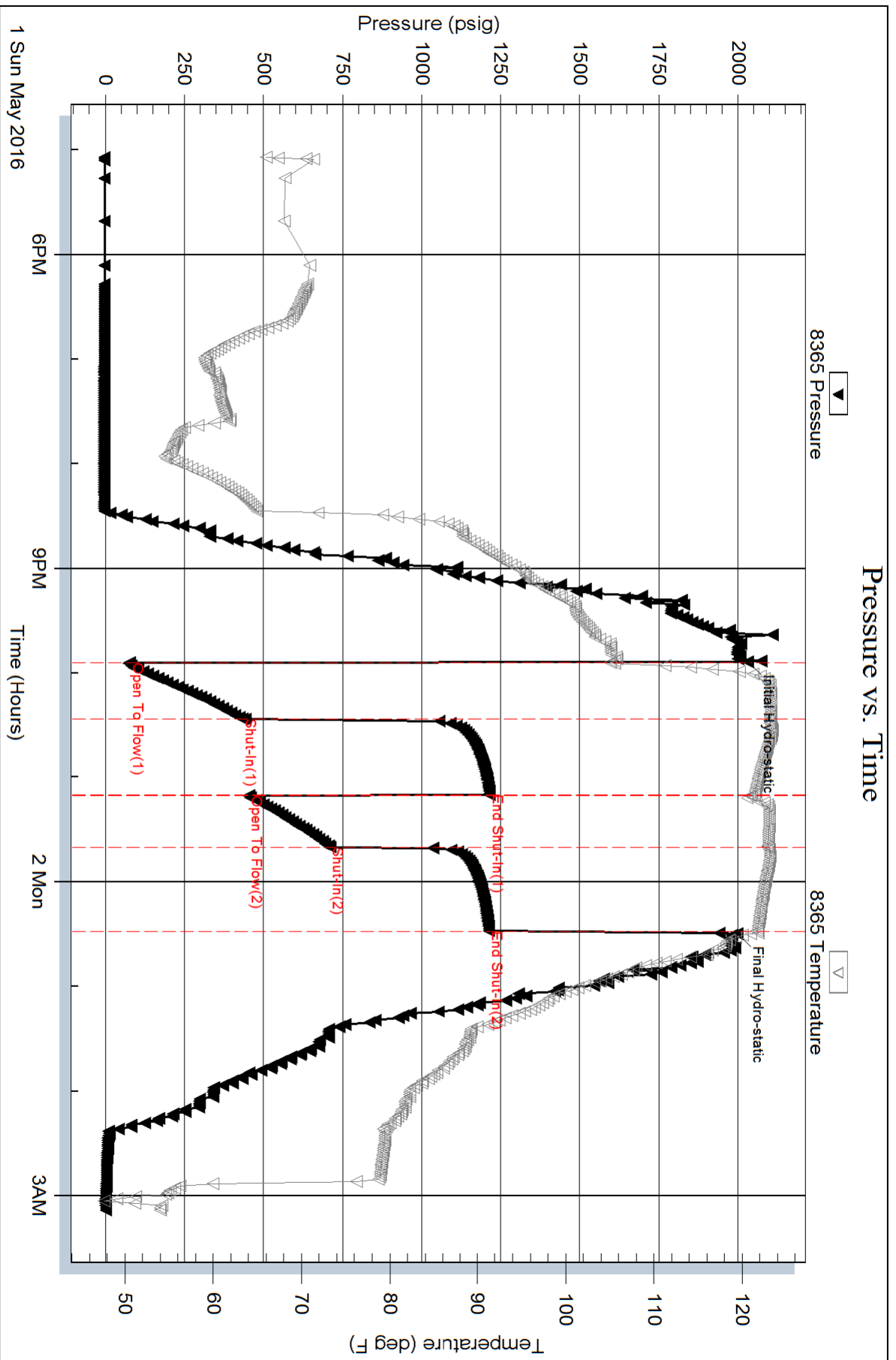
Inside

Bickle Energies, LLC

Wellie Z #1

DST Test Number: 1

Pressure vs. Time



Serial #: 8522

Outside Bickle Energies, LLC

Willie Z #1

DST Test Number: 1

