



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Blackhawk k Production Company

3-14S-17W Ellis, KS

1607 Oakmont
Hays, KS 67601

Braun #1

Job Ticket: 54019

DST#: 1

ATTN: Herb Deines

Test Start: 2014.03.19 @ 07:25:42

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:36:42

Time Test Ended: 15:40:12

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan L

Unit No: 48

Interval: 3510.00 ft (KB) To 3549.00 ft (KB) (TVD)

Reference Elevations: 2000.00 ft (KB)

Total Depth: 3549.00 ft (KB) (TVD)

1992.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8372 Inside

Press@RunDepth: 38.07 psig @ 3545.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.03.19

End Date:

2014.03.19

Last Calib.:

2014.03.19

Start Time:

07:25:43

End Time:

15:40:12

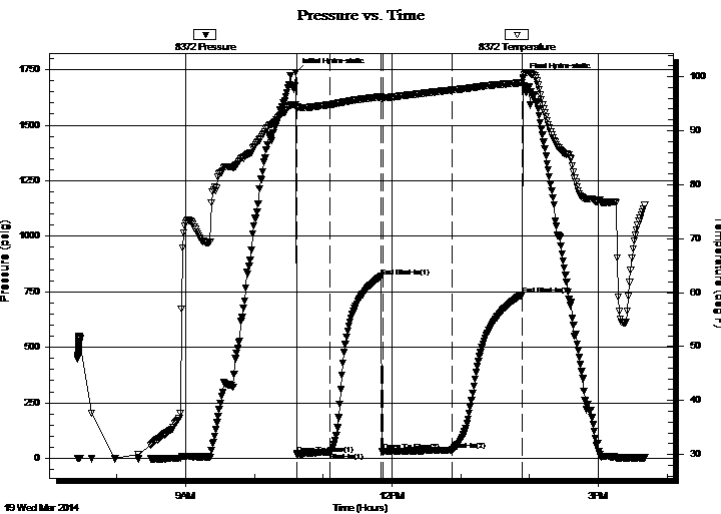
Time On Btm:

2014.03.19 @ 10:36:12

Time Off Btm:

2014.03.19 @ 13:54:12

TEST COMMENT: 30- IF- Slow ly built to 2.5"
45- IS- No blow
60- FF- Built very slow ly to 2"
60- FS- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1737.87	94.80	Initial Hydro-static
1	18.45	94.10	Open To Flow (1)
30	28.25	94.83	Shut-In(1)
74	819.03	96.29	End Shut-In(1)
76	31.45	96.09	Open To Flow (2)
136	38.07	97.54	Shut-In(2)
197	736.36	98.91	End Shut-In(2)
198	1712.55	99.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
55.00	OCM, 40%O 60%M	0.48
0.00	10' GIP	0.00

Gas Rates

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



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FLUID SUMMARY

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Braun #1

Job Ticket: 54019

DST#: 1

ATTN: Herb Deines

Test Start: 2014.03.19 @ 07:25:42

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
55.00	OCM, 40%O 60%M	0.480
0.00	10' GIP	0.000

Total Length: 55.00 ft Total Volume: 0.480 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8372

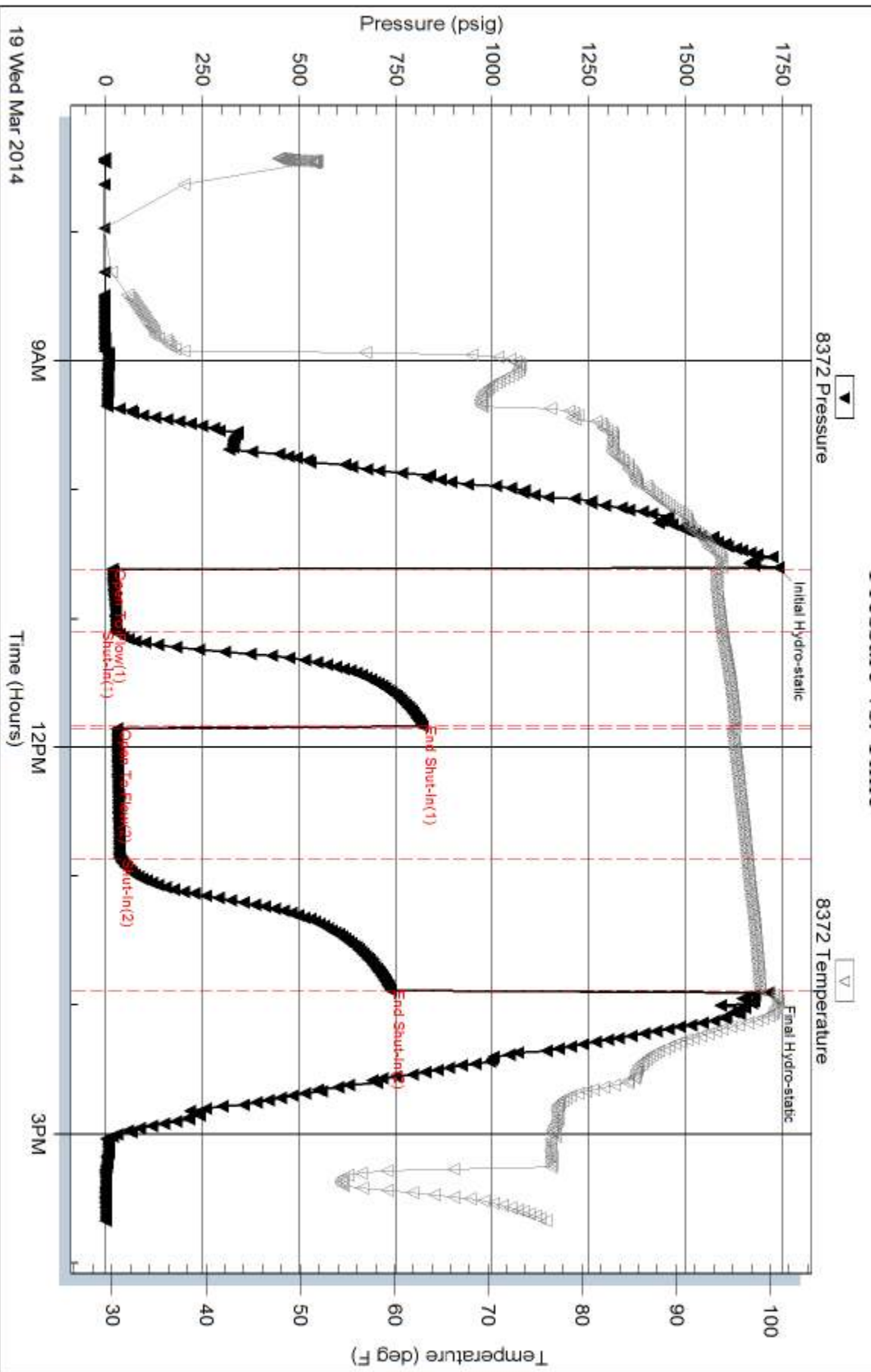
Inside

Blackhawk Production Company

Braun #1

DST Test Number: 1

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 54019

Printed: 2014.03.19 @ 15:54:26