



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: 54020

DST#: 2

ATTN: Herb Deines

Test Start: 2014.03.19 @ 22:37:01

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:00:01

Time Test Ended: 05:57:31

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan L

Unit No: 48

Interval: 3548.00 ft (KB) To 3567.00 ft (KB) (TVD)

Reference Elevations: 2000.00 ft (KB)

Total Depth: 3567.00 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: 47.81 psig @ 3564.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.03.19

End Date:

2014.03.20

Last Calib.:

2014.03.20

Start Time: 22:37:02

End Time:

05:57:31

Time On Btm:

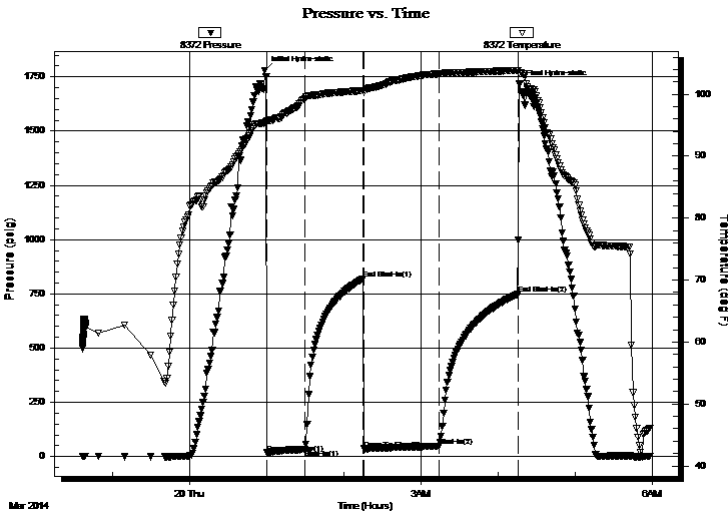
2014.03.20 @ 00:58:31

Time Off Btm:

2014.03.20 @ 04:16:31

TEST COMMENT: 30- IF- Slow ly built to 2.5"
45- IS- No blow
60- FF- Slow ly built to 3"
60- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1780.10	95.37	Initial Hydro-static
2	16.97	95.42	Open To Flow (1)
31	32.99	99.31	Shut-In(1)
76	818.25	100.59	End Shut-In(1)
77	35.54	100.37	Open To Flow (2)
135	47.81	103.31	Shut-In(2)
197	748.31	103.86	End Shut-In(2)
198	1716.58	103.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	MW, 35%M 65%W	0.82

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Blackhawk k Production Company

3-14S-17W Ellis, KS

1607 Oakmont
Hays, KS 67601

Braun #1

Job Ticket: 54020

DST#: 2

ATTN: Herb Deines

Test Start: 2014.03.19 @ 22:37:01

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:

35000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
80.00	MW, 35%M 65%W	0.822

Total Length: 80.00 ft Total Volume: 0.822 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

