

**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dan Haffner
RR 2 Box 49
Hoxie KS 67740-9524
ATTN: Richard Bell

18-9s-27w Sheridan,KS

Haffner #4-18

Job Ticket: 54782

DST#: 2

Test Start: 2014.01.15 @ 22:35:27

GENERAL INFORMATION:

Formation: **LKC-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:52:57

Time Test Ended: 06:20:57

Test Type: Conventional Bottom Hole (F)

Tester: Jeff Brown

Unit No: 67

Interval: **3914.00 ft (KB) To 3934.00 ft (KB) (TVD)**

Total Depth: 3934.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2774.00 ft

2766.00 ft

KB to GR/CF: 8.00 ft

Serial #: 6625

Outside

Press@RunDepth: 100.68 psig @ 3915.00 ft (KB)

Start Date: 2014.01.15

End Date:

2014.01.16

Start Time: 22:35:28

End Time:

06:17:57

Capacity: 8000.00 ps

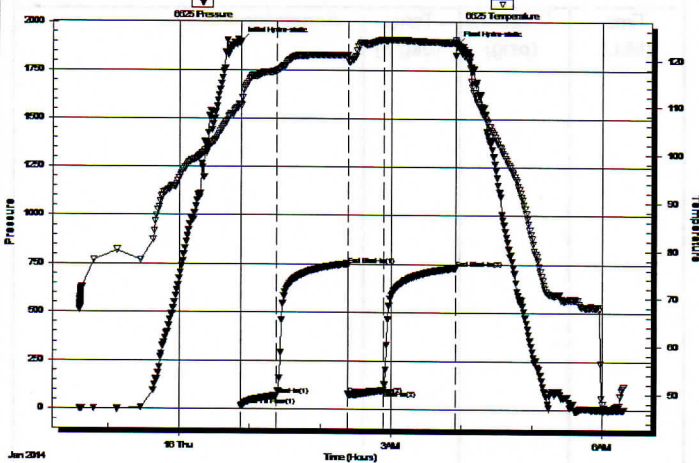
Last Calib.: 2014.01.16

Time On Btm: 2014.01.16 @ 00:52:27

Time Off Btm: 2014.01.16 @ 03:55:27

TEST COMMENT: IFP=Good blow BOB in 13 3/4 min
IS=Weak blow back built to 1 in died back to 1/4"
FFP=Good blow BOB in 13 1/2 min
FSI=Weak blow back built to 3 in died back to 1 3/4"

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1898.14	110.53	Initial Hydro-static
1	15.13	110.20	Open To Flow (1)
31	69.63	117.66	Shut-In(1)
91	744.73	120.90	End Shut-In(1)
91	76.85	120.16	Open To Flow (2)
121	100.68	124.18	Shut-In(2)
182	731.81	123.63	End Shut-In(2)
183	1885.11	123.78	Final Hydro-static

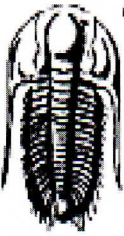
Recovery

Length (ft)	Description	Volume (bbl)
90.00	HOCM 25%O 75%M	0.44
110.00	Gassy Oil 20%G 80%O	1.27
0.00	363-GIP	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate
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DRILL STEM TEST REPORT

Dan Haffner
RR 2 Box 49
Hoxie KS 67740-9524
ATTN: Richard Bell

18-9s-27w Sheridan,KS

Haffner #4-18

Job Ticket: 54783

DST#: 3

Test Start: 2014.01.16 @ 21:25:39

GENERAL INFORMATION:

Formation: **LKC-E-F**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:36:39
Time Test Ended: 07:10:39

Test Type: Conventional Bottom Hole
Tester: Jeff Brown
Unit No: 67

Interval: **3953.00 ft (KB) To 3977.00 ft (KB) (TVD)**
Total Depth: 3977.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2774.00 ft
2766.00 ft
KB to GR/CF: 8.00 ft

Serial #: 6625

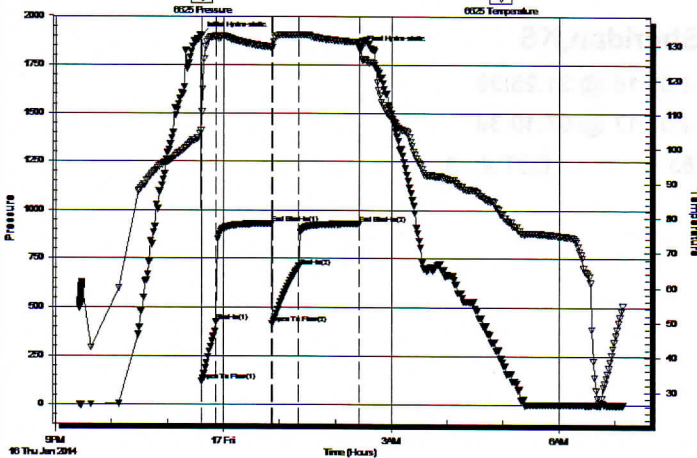
Outside

Press@RunDepth: 709.04 psig @ 3954.00 ft (KB)
Start Date: 2014.01.16 End Date: 2014.01.17
Start Time: 21:25:40 End Time: 07:09:39

Capacity: 8000.00 ps
Last Calib.: 2014.01.17
Time On Btm: 2014.01.16 @ 23:35:39
Time Off Btm: 2014.01.17 @ 02:25:39

TEST COMMENT: IFP=Strong blow BOB in 45 sec
IS=Weak surface blow back built to 1 1/2"
FFP=Strong blow BOB in 1 1/4 min
FS=Fair blow back built to 7 1/4"

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1897.08	105.16	Initial Hydro-static
1	118.60	110.63	Open To Flow (1)
17	426.22	132.60	Shut-In(1)
76	930.76	129.37	End Shut-In(1)
77	416.63	129.24	Open To Flow (2)
105	709.04	132.93	Shut-In(2)
170	929.79	130.80	End Shut-In(2)
170	1827.74	131.07	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
940.00	VSOCMV 2%O 5%M 93%W	12.09
441.00	OCGMV 10%G 10%M 20%O 60%W	6.19
111.00	HOCGWM 20%G 10%W 25%O 45%M	1.56
83.00	Gassy Oil 5%G 95%O	1.16

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas R.