

DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy, Inc.**

6121 S 58th ST, STE B
Lincoln, NE 68516

ATTN: Richard Bell

Applegate #1-30

30-2s-23w Norton,KS

Start Date: 2014.09.01 @ 05:43:00

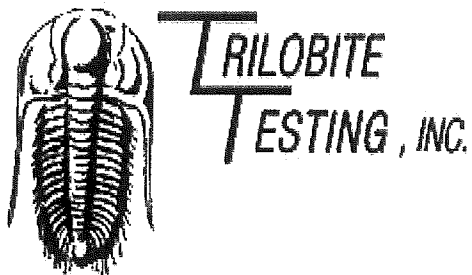
End Date: 2014.09.01 @ 13:58:15

Job Ticket #: 60136 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.09.05 @ 08:44:37

Great Plains Energy, Inc. 30-2s-23w Norton,KS Applegate #1-30 DST # 1 LKC "C" 2014.09.01



DRILL STEM TEST REPORT

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6121 S 58th ST, STE B
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ATTN: Richard Bell

Applegate #1-30

30-2s-23w Norton,KS

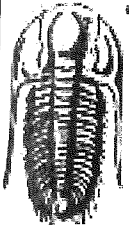
Start Date: 2014.09.01 @ 20:06:00

End Date: 2014.09.02 @ 02:20:30

Job Ticket #: 60137 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.09.05 @ 08:43:23



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Great Plains Energy, Inc.

30-2s-23w Norton,KS

6121 S 58th ST, STE B
Lincoln, NE 68516

Applegate #1-30

Job Ticket: 60137

DST#: 2

ATTN: Richard Bell

Test Start: 2014.09.01 @ 20:06:00

GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:59:45

Time Test Ended: 02:20:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Donovan Baumann

Unit No: 54

Interval: **3494.00 ft (KB) To 3515.00 ft (KB) (TVD)**

Total Depth: 3515.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2437.00 ft (KB)

2427.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6753

Inside

Press@RunDepth: 19.08 psig @ 3495.00 ft (KB)

Start Date: 2014.09.01

End Date:

2014.09.02

Capacity: 8000.00 psig

Last Calib.: 2014.09.02

Start Time: 20:06:05

End Time:

02:20:29

Time On Btm: 2014.09.01 @ 21:59:30

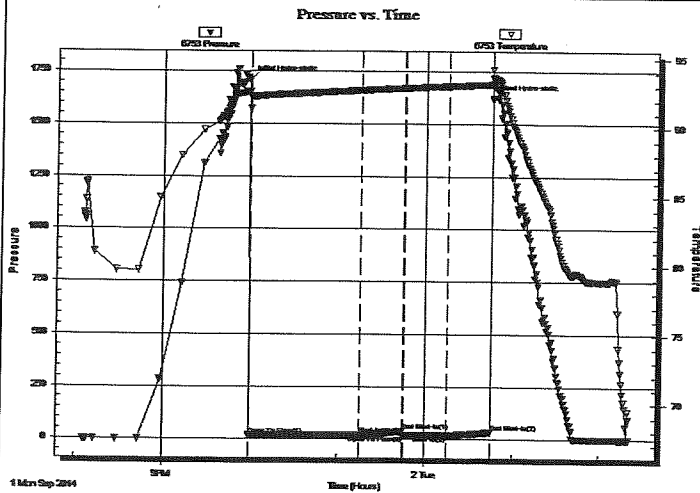
Time Off Btm: 2014.09.02 @ 00:45:15

TEST COMMENT: 75 - IF - Weak surface blow dead in 27 min.

30 - ISI - No return

30 - FF - No surface blow

30 - FSI - No return



PRESSURE SUMMARY

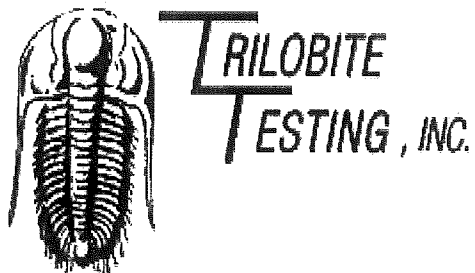
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1708.59	92.64	Initial Hydro-static
1	16.77	91.44	Open To Flow (1)
76	18.13	92.74	Shut-In(1)
106	37.75	92.91	End Shut-In(1)
106	18.36	92.91	Open To Flow (2)
136	19.08	93.06	Shut-In(2)
166	31.90	93.19	End Shut-In(2)
166	1621.34	93.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	MCO - 50M - 50o	0.01

Gas Rates

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



DRILL STEM TEST REPORT

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6121 S 58th ST, STE B
Lincoln, NE 68516

ATTN: Richard Bell

Applegate #1-30

30-2s-23w Norton,KS

Start Date: 2014.09.02 @ 14:20:00

End Date: 2014.09.02 @ 21:36:00

Job Ticket #: 60111 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.09.05 @ 08:43:09

Great Plains Energy, Inc.

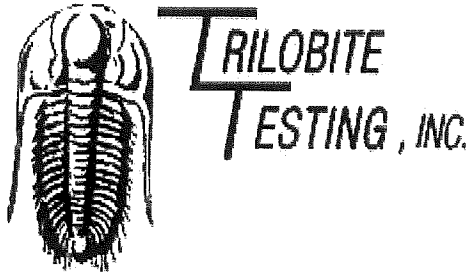
30-2s-23w Norton,KS

Applegate #1-30

DST # 3

LKC - 'H & J'

2014.09.02



DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy, Inc.**

6121 S 58th ST, STE B
Lincoln, NE 68516

ATTN: Richard Bell

Applegate #1-30

30-2s-23w Norton,KS

Start Date: 2014.09.03 @ 08:20:00

End Date: 2014.09.03 @ 16:11:30

Job Ticket #: 60112 DST #: 4

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.09.05 @ 08:42:53



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Great Plains Energy, Inc.

30-2s-23w Norton, KS

6121 S 58th ST, STE B
Lincoln, NE 68516

Applegate #1-30

Job Ticket: 60112

DST#: 4

ATTN: Richard Bell

Test Start: 2014.09.03 @ 08:20:00

GENERAL INFORMATION:

Formation: **Granite Wash**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:19:00

Time Test Ended: 16:11:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: #54

Interval: **3685.00 ft (KB) To 3696.00 ft (KB) (TVD)**

Total Depth: 3696.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2437.00 ft (KB)

2427.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6753 Inside

Press@RunDepth: 86.59 psig @ 3686.00 ft (KB)

Start Date: 2014.09.03

End Date: 2014.09.03

Capacity: 8000.00 psig

Last Calib.: 2014.09.03

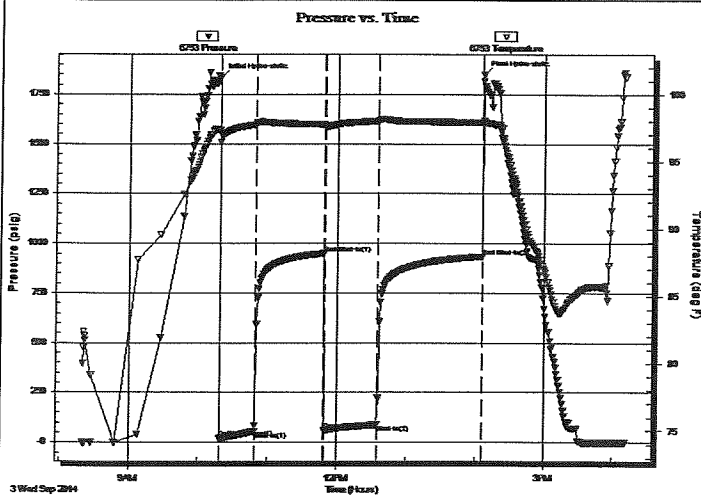
Start Time: 08:20:05

End Time: 16:11:29

Time On Btm: 2014.09.03 @ 10:18:45

Time Off Btm: 2014.09.03 @ 14:06:30

TEST COMMENT: 30 - IF - Surface blow built to 3"
60 - IS - No Return
45 - FF - Surface blow built to 3 3/4"
90 - FSI - No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1835.54	97.33	Initial Hydro-static
1	18.53	96.44	Open To Flow (1)
31	55.18	97.74	Shut-In(1)
90	950.42	97.75	End Shut-In(1)
91	57.23	97.47	Open To Flow (2)
137	86.59	98.00	Shut-In(2)
228	935.31	97.90	End Shut-In(2)
228	1849.33	98.08	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
150.00	MW - 8M - 92W	1.00

Gas Rates

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