

15-137-20458

Great Plains Energy Inc.

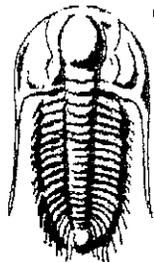
Hill # 1

20 4S 22W Norton KS

DST # 1

Top-L.Kc-A & B

2006.08.23



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy Inc.**
429 Linden
PO Box 292
Wahoo Neb 68066

ATTN: Dan Blankenau

20 4S 22W Norton KS

Hill # 1

Start Date: 2006.08.23 @ 02:45:32
End Date: 2006.08.23 @ 09:49:02
Job Ticket #: 25154 DST #: 1

15-137-20458
NE NW NW
375 FNL 1070 FWL

RECEIVED
KANSAS CORPORATION COMMISSION

JAN 10 2008

CONSERVATION DIVISION
WICHITA, KS

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Great Plains Energy Inc.

Hill # 1

429 Linden
 PO Box 292
 Wahoo Neb 68066
 ATTN: Dan Blankenau

20 4S 22W Norton KS

Job Ticket: 25154

DST#: 1

Test Start: 2006.08.23 @ 02:45:32

GENERAL INFORMATION:

Formation: **Tor.-L.Kc.-A & B**
 Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:23:32

Time Test Ended: 09:49:02

Test Type: Conventional Bottom Hole

Tester: John Schmidt

Unit No: 31

Interval: **3432.00 ft (KB) To 3517.00 ft (KB) (TVD)**

Total Depth: 3517.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2296.00 ft (KB)

2291.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: **8018**

Inside

Press@RunDepth: 159.27 psig @ 3435.00 ft (KB)

Start Date: 2006.08.23

End Date:

2006.08.23

Capacity: 7000.00 psig

Start Time: 02:45:37

End Time:

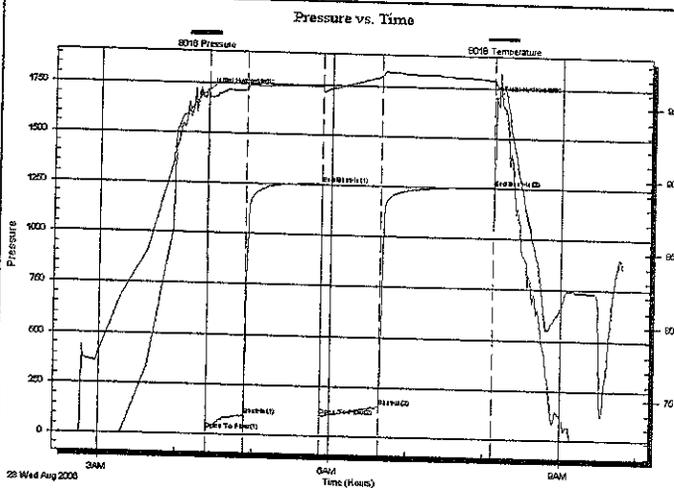
09:49:01

Last Calib.: 2006.08.23

Time On Btm: 2006.08.23 @ 04:23:02

Time Off Btm: 2006.08.23 @ 08:08:32

TEST COMMENT: IF Weak built 4 1/2 "
 ISI Dead
 FF Weak built 5 "
 FSI Dead



PRESSURE SUMMARY

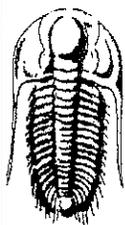
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1708.33	95.84	Initial Hydro-static
1	21.24	95.42	Open To Flow (1)
31	98.74	95.89	Shut-In(1)
90	1253.83	96.25	End Shut-In(1)
90	103.92	95.92	Open To Flow (2)
136	159.27	97.02	Shut-In(2)
224	1251.37	96.93	End Shut-In(2)
226	1698.89	96.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
300.00	MSW 30%M 70%SW	3.12

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Great Plains Energy Inc.

Hill # 1

429 Linden
PO Box 292
Wahoo Neb 68066
ATTN: Dan Blankenau

20 4S 22W Norton KS

Job Ticket: 25154 DST#: 1

Test Start: 2006.08.23 @ 02:45:32

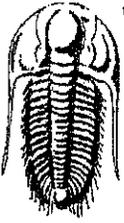
Tool Information

Drill Pipe:	Length: 3307.00 ft	Diameter: 3.80 inches	Volume: 46.39 bbl	Tool Weight: 2600.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 40000.00 lb
			Total Volume: 46.98 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 32000.00 lb
Depth to Top Packer:	3432.00 ft			Final 32000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	85.00 ft			
Tool Length:	113.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3405.00	
Shut In Tool	5.00			3410.00	
Hydraulic tool	5.00			3415.00	
Jars	5.00			3420.00	
Safety Joint	3.00			3423.00	
Packer	4.00			3427.00	28.00 Bottom Of Top Packer
Packer	5.00			3432.00	
Stubb	1.00			3433.00	
Perforations	2.00			3435.00	
Recorder	0.00	8018	Inside	3435.00	
Change Over Sub	1.00			3436.00	
Blank Spacing	62.00			3498.00	
Change Over Sub	1.00			3499.00	
Perforations	15.00			3514.00	
Recorder	0.00	13308	Outside	3514.00	
Bullnose	3.00			3517.00	85.00 Bottom Packers & Anchor
Total Tool Length:	113.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Great Plains Energy Inc.
429 Linden
PO Box 292
Wahoo Neb 68066
ATTN: Dan Blankenau

Hill # 1
20 4S 22W Norton KS
Job Ticket: 25154 DST#: 1
Test Start: 2006.08.23 @ 02:45:32

Mud and Cushion Information

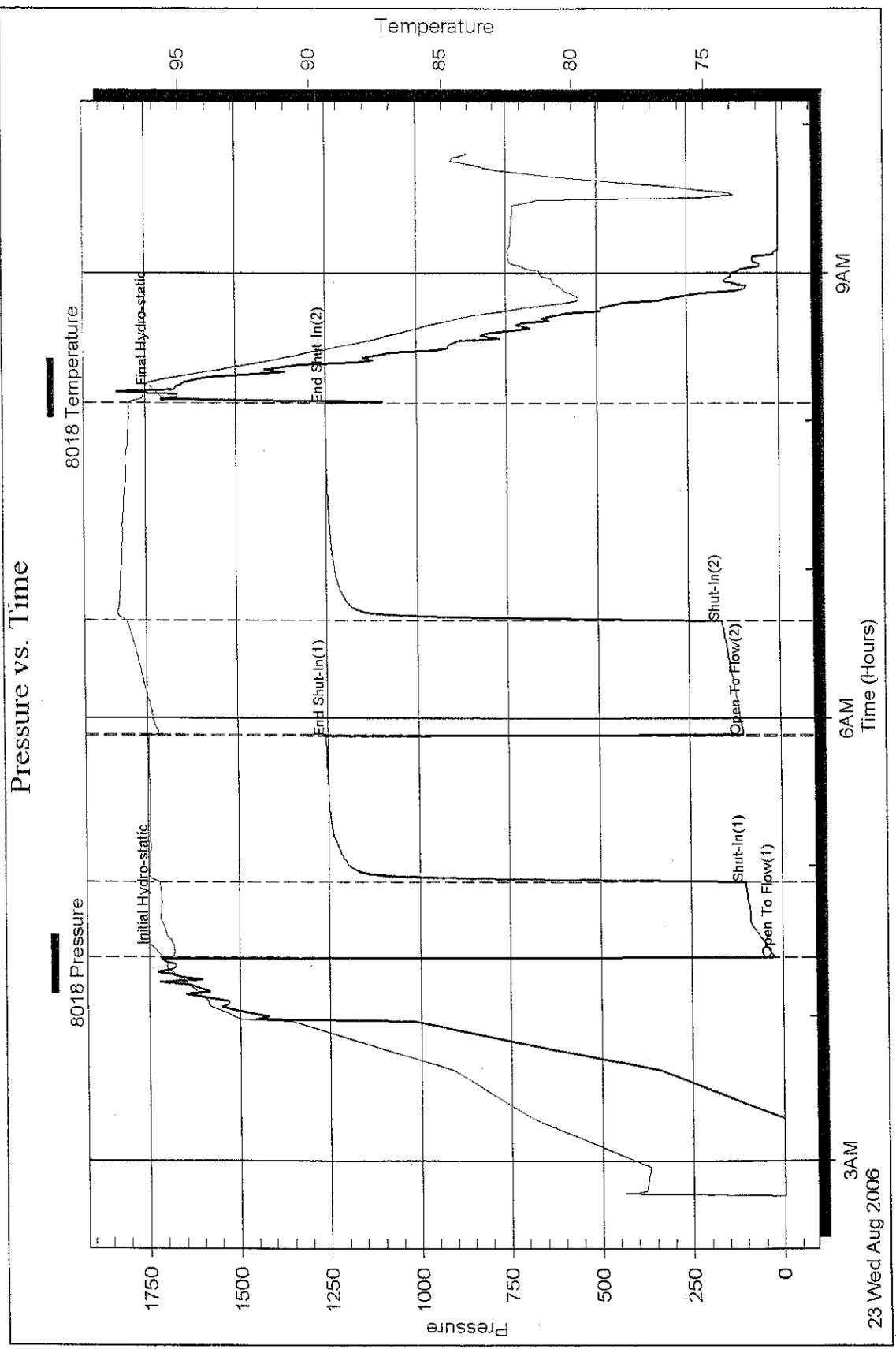
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 48000 ppm	
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.99 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: ppm			
Filter Cake: inches			

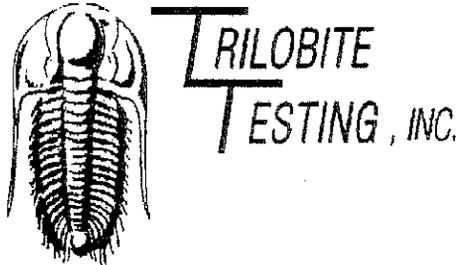
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
300.00	MSW 30%M 70%SW	3.115

Total Length: 300.00 ft Total Volume: 3.115 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:





DRILL STEM TEST REPORT

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

429 Linden
PO Box 292
Wahoo Neb 68066

ATTN: Dan Blankenau

20 4S 22W Norton KS

Hill # 1

Start Date: 2006.08.23 @ 23:48:16

End Date: 2006.08.24 @ 06:54:46

Job Ticket #: 25155

DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Great Plains Energy Inc.

Hill # 1

20 4S 22W Norton KS

DST # 2

L.Kc-H.I.J

2006.08.23



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Great Plains Energy Inc.
 429 Linden
 PO Box 292
 Wahoo Neb 68066
 ATTN: Dan Blankenau

Hill # 1

20 4S 22W Norton KS

Job Ticket: 25155 DST#: 2

Test Start: 2006.08.23 @ 23:48:16

GENERAL INFORMATION:

Formation: **L.Kc.-H,I,J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:21:16
 Time Test Ended: 06:54:46

Test Type: Conventional Bottom Hole

Tester: John Schridt

Unit No: 31

Interval: **3568.00 ft (KB) To 3630.00 ft (KB) (TVD)**
 Total Depth: 3630.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2296.00 ft (KB)
 2291.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: **8018**

Inside

Press@RunDepth: 92.25 psig @ 3571.00 ft (KB)
 Start Date: 2006.08.23 End Date: 2006.08.24
 Start Time: 23:48:21 End Time: 06:54:45

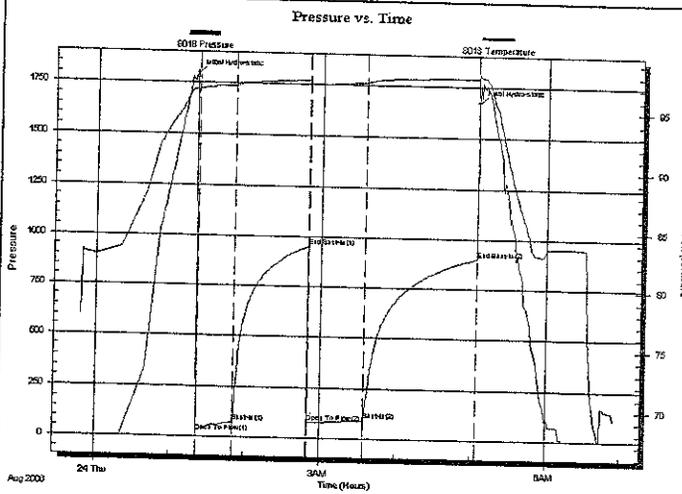
Capacity: 7000.00 psig

Last Calib.: 2006.08.24

Time On Btm: 2006.08.24 @ 01:20:16

Time Off Btm: 2006.08.24 @ 05:05:15

TEST COMMENT: IF Weak built 2" & decrease to 1"
 ISI Dead
 FF Weak Surface
 FSI Dead



PRESSURE SUMMARY

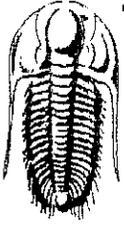
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1794.48	96.78	Initial Hydro-static
1	25.52	96.59	Open To Flow (1)
31	75.72	96.96	Shut-In(1)
90	949.31	97.49	End Shut-In(1)
91	78.92	97.23	Open To Flow (2)
135	92.25	97.37	Shut-In(2)
225	899.15	97.83	End Shut-In(2)
225	1672.25	98.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
160.00	MSW 20%M 80%W	1.15

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Great Plains Energy Inc.

Hill # 1

429 Linden
PO Box 292
Wahoo Neb 68066
ATTN: Dan Blankenau

20 4S 22W Norton KS
Job Ticket: 25155 DST#: 2
Test Start: 2006.08.23 @ 23:48:16

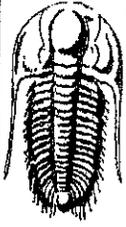
Tool Information

Drill Pipe:	Length: 3432.00 ft	Diameter: 3.80 inches	Volume: 48.14 bbl	Tool Weight: 2600.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 48.73 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	3568.00 ft			Final 35000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	90.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3541.00	
Shut In Tool	5.00			3546.00	
Hydraulic tool	5.00			3551.00	
Jars	5.00			3556.00	
Safety Joint	3.00			3559.00	
Packer	4.00			3563.00	28.00 Bottom Of Top Packer
Packer	5.00			3568.00	
Stubb	1.00			3569.00	
Perforations	2.00			3571.00	
Recorder	0.00	8018	Inside	3571.00	
Change Over Sub	1.00			3572.00	
Blank Spacing	31.00			3603.00	
Change Over Sub	1.00			3604.00	
Recorder	0.00	11084	Outside	3604.00	
Perforations	23.00			3627.00	
Bullnose	3.00			3630.00	62.00 Bottom Packers & Anchor
Total Tool Length:	90.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Great Plains Energy Inc.

Hill # 1

429 Linden
PO Box 292
Wahoo Neb 68066
ATTN: Dan Blankenau

20 4S 22W Norton KS

Job Ticket: 25155

DST#: 2

Test Start: 2006.08.23 @ 23:48:16

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 59.00 sec/qt

Water Loss: 6.39 in³

Resistivity: ohm.m

Salinity: ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbbl

psig

Oil API:

Water Salinity:

deg API

50000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
160.00	MSW 20%M 80%W	1.151

Total Length: 160.00 ft

Total Volume: 1.151 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

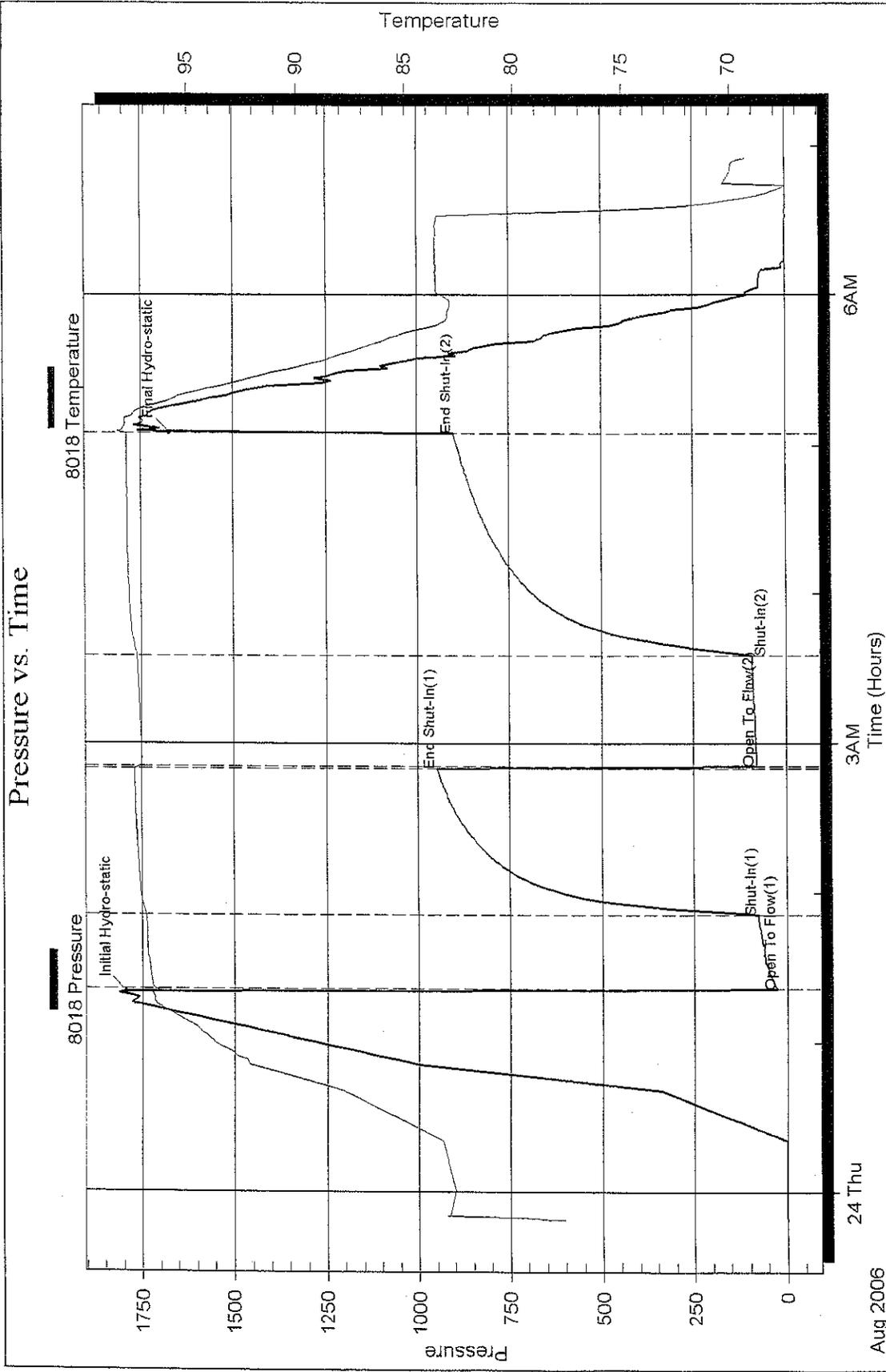
Serial #:

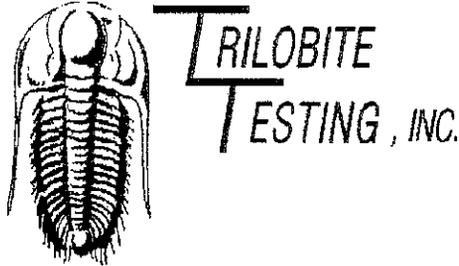
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

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

429 Linden
PO Box 292
Wahoo Neb 68066

ATTN: Dan Blankenau

20 4S 22W Norton KS

Hill # 1

Start Date: 2006.08.24 @ 19:24:41

End Date: 2006.08.25 @ 01:26:11

Job Ticket #: 25156 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Great Plains Energy Inc.

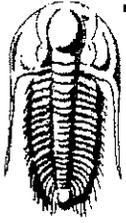
Hill # 1

20 4S 22W Norton KS

DST # 3

Regan Sand

2006.08.24



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Great Plains Energy Inc.

Hill # 1

429 Linden
PO Box 292
Wahoo Neb 68066
ATTN: Dan Blankenau

20 4S 22W Norton KS

Job Ticket: 25156 **DST#: 3**
Test Start: 2006.08.24 @ 19:24:41

Tool Information

Drill Pipe:	Length: 3587.00 ft	Diameter: 3.80 inches	Volume: 50.32 bbl	Tool Weight: 2600.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 50.91 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	3707.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	86.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3680.00	
Shut In Tool	5.00			3685.00	
Hydraulic tool	5.00			3690.00	
Jars	5.00			3695.00	
Safety Joint	3.00			3698.00	
Packer	4.00			3702.00	28.00 Bottom Of Top Packer
Packer	5.00			3707.00	
Stubb	1.00			3708.00	
Perforations	2.00			3710.00	
Recorder	0.00	8018	Inside	3710.00	
Change Over Sub	1.00			3711.00	
Blank Spacing	30.00			3741.00	
Change Over Sub	1.00			3742.00	
Recorder	0.00	11084	Outside	3742.00	
Perforations	20.00			3762.00	
Bullnose	3.00			3765.00	58.00 Bottom Packers & Anchor
Total Tool Length:	86.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Great Plains Energy Inc.

Hill # 1

429 Linden
PO Box 292
Wahoo Neb 68066
ATTN: Dan Blankenau

20 4S 22W Norton KS

Job Ticket: 25156

DST#: 3

Test Start: 2006.08.24 @ 19:24:41

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:	45000 ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.80 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
780.00	MSW 20%M 80%SW	9.848

Total Length: 780.00 ft Total Volume: 9.848 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

