

DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy Inc**

PO Box 292
Wahoo NE 68066

ATTN: Richard Bell

35 4 30 Decatur KS

Sauvage #3

Start Date: 2006.07.09 @ 14:04:01

End Date: 2006.07.09 @ 19:47:30

Job Ticket #: 24263 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Great Plains Energy Inc

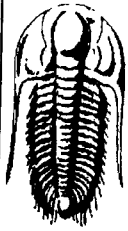
Sauvage #3

35 4 30 Decatur KS

DST # 1

KC "B"

2006.07.09



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Great Plains Energy Inc

PO Box 292
Wahoo NE 68066

ATTN: Richard Bell

Sauvage #3

35 4 30 Decatur KS

Job Ticket: 24263

DST#: 1

Test Start: 2006.07.09 @ 14:04:01

GENERAL INFORMATION:

Formation: **KC "B"**

Deviated: **No** Whipstock: ft (KB)

Time Tool Opened: 15:30:15

Time Test Ended: 19:47:30

Test Type: **Conventional Bottom Hole**

Tester: **Chuck Smith**

Unit No: **18**

Interval: **3946.00 ft (KB) To 3964.00 ft (KB) (TVD)**

Total Depth: **3964.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2852.00 ft (KB)**

2847.00 ft (CF)

KB to GR/CF: **5.00 ft**

Serial #: 8017

Inside

Press@RunDepth: **38.59 psig @ 3949.00 ft (KB)**

Start Date: **2006.07.09**

End Date: **2006.07.09**

Capacity: **7000.00 psig**

Last Calib.: **2006.07.09**

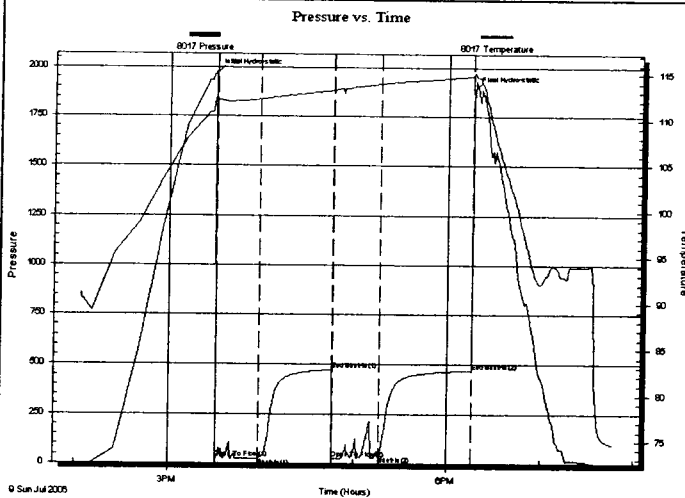
Start Time: **14:04:01**

End Time: **19:47:30**

Time On Btm: **2006.07.09 @ 15:30:00**

Time Off Btm: **2006.07.09 @ 18:16:30**

TEST COMMENT: IF Weak surface blow died @ 11 min
ISI No return
FF No blow flushed tool @ 5 min no blow
FSI No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1971.35	112.70	Initial Hydro-static
1	22.29	112.15	Open To Flow (1)
29	23.70	112.26	Shut-in(1)
76	472.61	113.22	End Shut-in(1)
77	24.86	113.15	Open To Flow (2)
107	38.59	113.94	Shut-in(2)
167	469.19	114.82	End Shut-in(2)
167	1887.98	115.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Drilling mud	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Great Plains Energy Inc

Sauvage #3

PO Box 292
Wahoo NE 68066

35 4 30 Decatur KS

Job Ticket: 24263

DST#: 1

ATTN: Richard Bell

Test Start: 2006.07.09 @ 14:04:01

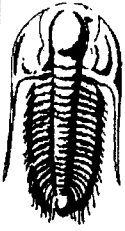
Tool Information

Drill Pipe:	Length: 3804.00 ft	Diameter: 3.80 inches	Volume: 53.36 bbl	Tool Weight: 1800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 27000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 53.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3946.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	46.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3919.00	
Shut In Tool	5.00			3924.00	
Hydraulic tool	5.00			3929.00	
Jars	5.00			3934.00	
Safety Joint	3.00			3937.00	
Packer	5.00			3942.00	28.00 Bottom Of Top Packer
Packer	4.00			3946.00	
Stubb	1.00			3947.00	
Perforations	2.00			3949.00	
Recorder	0.00	8017	Inside	3949.00	
Perforations	10.00			3959.00	
Recorder	0.00	13276	Inside	3959.00	
Bullnose	5.00			3964.00	18.00 Bottom Packers & Anchor

Total Tool Length: 46.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Great Plains Energy Inc

Sauvage #3

PO Box 292
Wahoo NE 68066

35 4 30 Decatur KS

ATTN: Richard Bell

Job Ticket: 24263

DST#: 1

Test Start: 2006.07.09 @ 14:04:01

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 56.00 sec/qt

Water Loss: 6.39 in³

Resistivity: 0.00 ohm.m

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

0 deg API

Water Salinity:

0 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Drilling mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

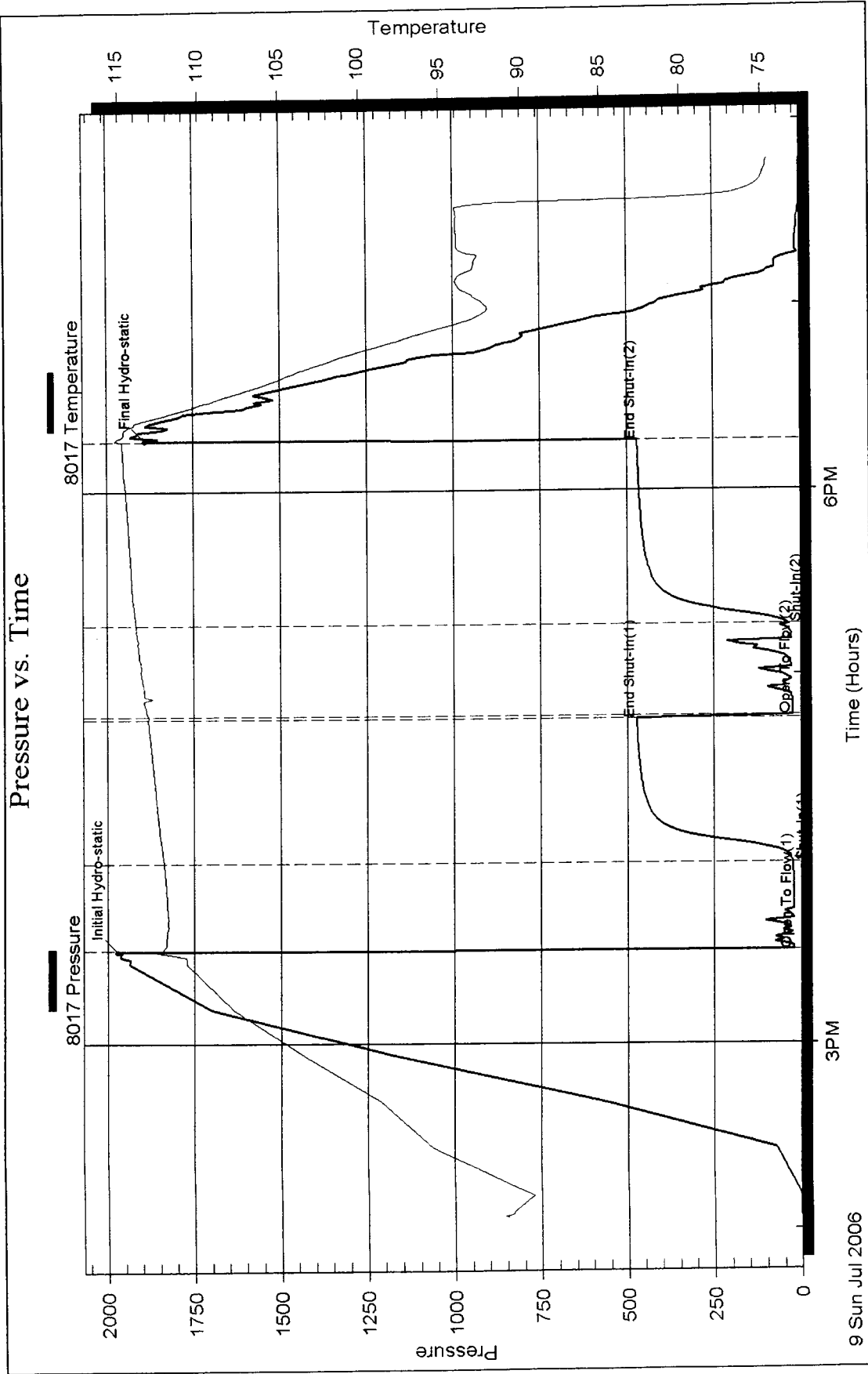
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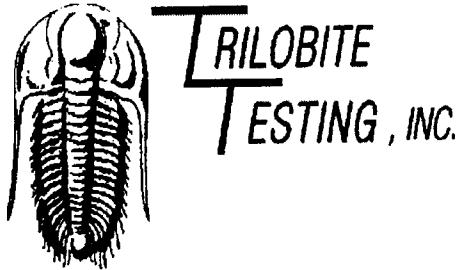
Inside

Great Plains Energy Inc

35 4 30 Decatur KS

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy Inc**

PO Box 292
Wahoo NE 68066

ATTN: Richard Bell

35 4 30 Decatur KS

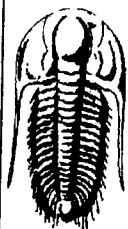
Sauvage #3

Start Date: 2006.07.10 @ 02:45:01

End Date: 2006.07.10 @ 10:04:00

Job Ticket #: 24264 DST #: 2

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

PO Box 292
Wahoo NE 68066

ATTN: Richard Bell

Sauvage #3

35 4 30 Decatur KS

Job Ticket: 24264

DST#: 2

Test Start: 2006.07.10 @ 02:45:01

GENERAL INFORMATION:

Formation: **L/KC "F"**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 04:33:15

Time Test Ended: 10:04:00

Test Type: **Conventional Bottom Hole**

Tester: **Chuck Smith**

Unit No: **18**

Interval: **3981.00 ft (KB) To 4007.00 ft (KB) (TVD)**

Total Depth: **4007.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2852.00 ft (KB)**

2847.00 ft (CF)

KB to GR/CF: **5.00 ft**

Serial #: 8017

Inside

Press@RunDepth: **95.34 psig @ 3984.00 ft (KB)**

Start Date: **2006.07.10**

End Date: **2006.07.10**

Capacity: **7000.00 psig**

Last Calib.: **2006.07.10**

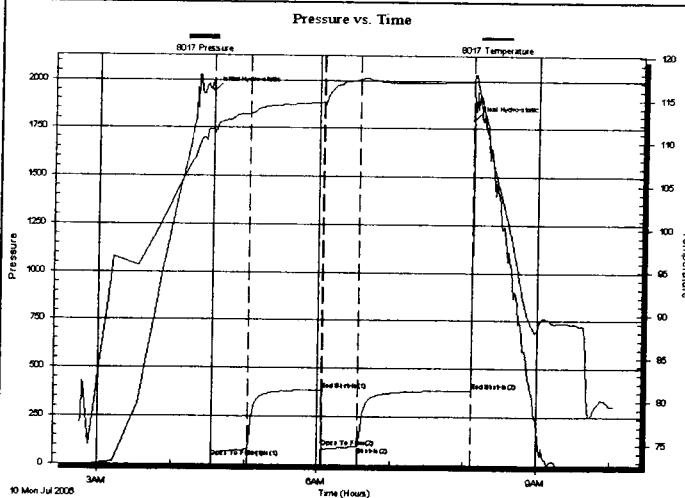
Start Time: **02:45:01**

End Time: **10:04:00**

Time On Btm: **2006.07.10 @ 04:33:00**

Time Off Btm: **2006.07.10 @ 08:06:45**

TEST COMMENT: IF Surface blow built to BOB @ 27 min
 IS1 Weak surface blow died @ 12 min
 FF Surface blow built to 7+ "
 FSI Surface blow built to 1/4 " died @ 46 min



PRESSURE SUMMARY

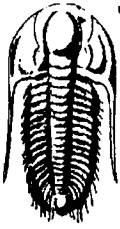
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1943.96	111.46	Initial Hydro-static
1	35.27	110.69	Open To Flow (1)
30	78.87	113.30	Shut-In (1)
90	387.88	114.69	End Shut-In (1)
91	87.66	114.57	Open To Flow (2)
121	95.34	117.28	Shut-In (2)
214	388.03	117.12	End Shut-In (2)
214	1795.12	118.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GMCO 10%G 40%M 50%O	0.59
40.00	GMCO 10%G 30%M 60%O	0.56
50.00	GMCO 5%G 40%M 55%O	0.70

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Great Plains Energy Inc

Sauvage #3

PO Box 292
Wahoo NE 68066

35 4 30 Decatur KS

Job Ticket: 24264

DST#: 2

ATTN: Richard Bell

Test Start: 2006.07.10 @ 02:45:01

Tool Information

Drill Pipe:	Length: 3866.00 ft	Diameter: 3.80 inches	Volume: 54.23 bbl	Tool Weight: 1800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 54.82 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3981.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	54.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3954.00	
Shut In Tool	5.00			3959.00	
Hydraulic tool	5.00			3964.00	
Jars	5.00			3969.00	
Safety Joint	3.00			3972.00	
Packer	5.00			3977.00	28.00 Bottom Of Top Packer
Packer	4.00			3981.00	
Stubb	1.00			3982.00	
Perforations	2.00			3984.00	
Recorder	0.00	8017	inside	3984.00	
Perforations	18.00			4002.00	
Recorder	0.00	13276	inside	4002.00	
Bullnose	5.00			4007.00	26.00 Bottom Packers & Anchor

Total Tool Length: 54.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Great Plains Energy Inc

Sauvage #3

PO Box 292
Wahoo NE 68066

35 4 30 Decatur KS

ATTN: Richard Bell

Job Ticket: 24264

DST#: 2

Test Start: 2006.07.10 @ 02:45:01

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 56.00 sec/qt

Water Loss: 6.39 in³

Resistivity: 0.00 ohm.m

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbf

psig

Oil API:

Water Salinity:

0 deg API

0 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
120.00	GMCO 10%G 40%M 50%O	0.590
40.00	GMCO 10%G 30%M 60%O	0.561
50.00	GMCO 5%G 40%M 55%O	0.701

Total Length: 210.00 ft Total Volume: 1.852 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 270 feet of gas in pipe.

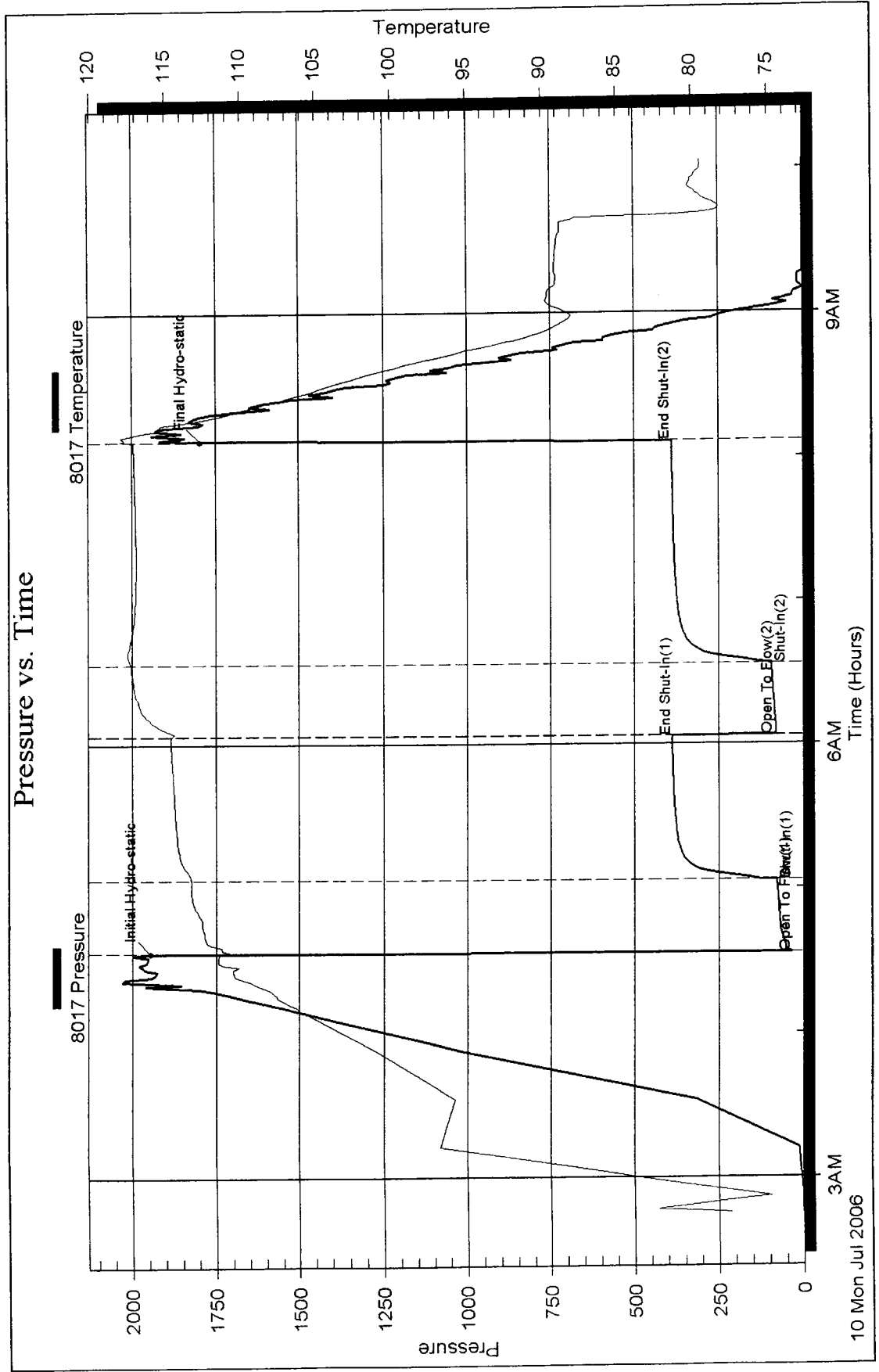
Serial #: 8017

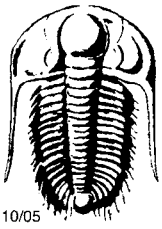
Inside

Great Plains Energy Inc

35 4 30 Decatur KS

DST Test Number: 2





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

4175

No 24263

Test Ticket

Well Name & No. Savage #3 Test No. 1 Date 7-9-06
 Company Great Plains Energy, Inc. Zone Tested KC "B"
 Address POB 292 Wahoo, NE 68066 Elevation 2852 KB 2847 GL
 Co. Rep / Geo. Richard Bell Rig WW #4
 Location: Sec. 35 Twp. 4s Rge. 30w Co. Decatur State KS
 Comment: _____ Release date / time: _____

Interval Tested 3946 to 3964 Initial Str Wt./Lbs. 45,000 Unseated Str Wt/Lbs. 45,000
 Anchor Length 18 Wt. Set Lbs. 27,000 Wt. Pulled Loose/Lbs. 70,000
 Top Packer Depth 3942 Tool Weight 1,800
 Bottom Packer Depth 3946 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 3964 Wt. Pipe Run 0 Drill Collar Run 120
 Mud Wt. 9.2 LCM 2 Vis. 56 WL 6.4 Drill Pipe Size 4 1/2 XH Ft. Run 3,804

Blow Description IF: Weak surface blow died @ 11 min.
ISI: No return.
FF: No blow, Flushed tool @ 5 min., no blow.
FSI: No return.

Recovery - Total Feet 5 GIP 0 Ft. in DC 5 Ft. in DP 0
 Rec. 5 Feet of Drilling mud %gas _____ %oil _____ %water 100 %mud _____
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud _____
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud _____
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud _____
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud _____
 BHT 115 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 800 ppm System

	AK-1	Alpine	PSI	Recorder No.	Test	Temp
(A) Initial Hydrostatic Mud		1,971		8017	X	1,000 ^{oo}
(B) First Initial Flow Pressure		22		(depth) 3949	X	250 ^{oo}
(C) First Final Flow Pressure		24		Recorder No. 13276	X	75 ^{oo}
(D) Initial Shut-In Pressure		473		(depth) 3959	X	N/K
(E) Second Initial Flow Pressure		25		Recorder No. _____		
(F) Second Final Flow Pressure		39		(depth) _____		
(G) Final Shut-In Pressure		469		Initial Opening 30		
(Q) Final Hydrostatic Mud		1,935		Initial Shut-In 45	X	200 ^{oo}

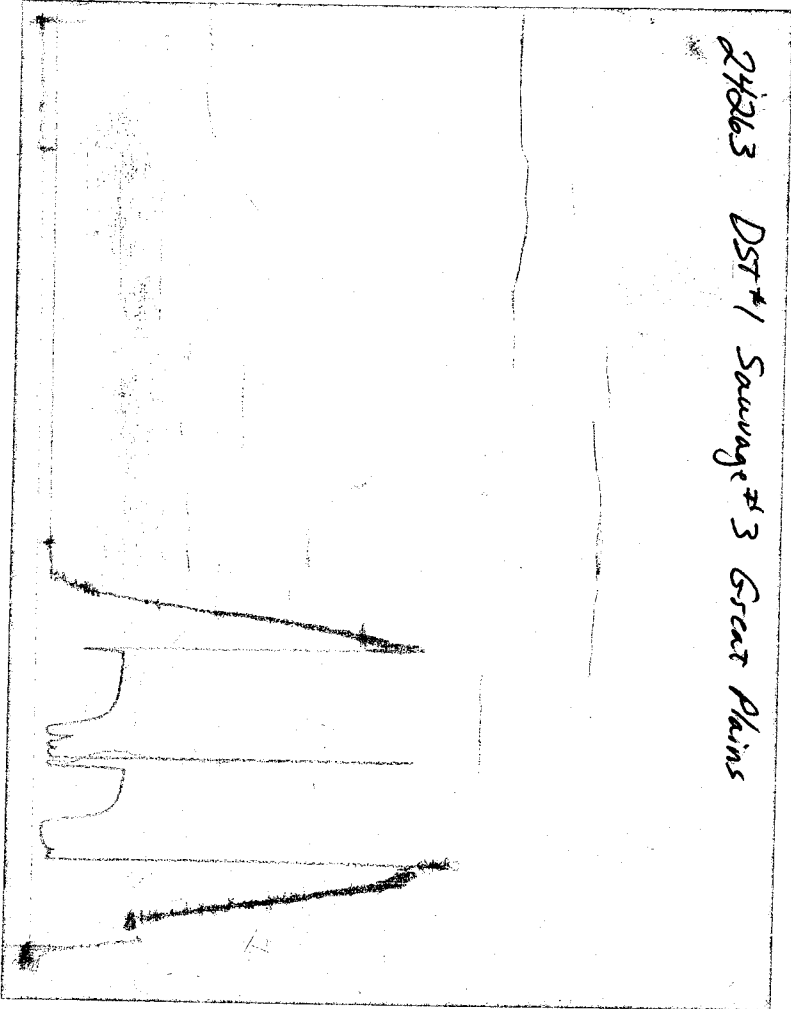
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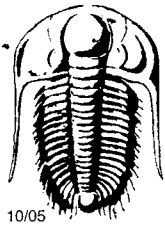
Approved By Richard Bell
 Our Representative Chuck Smith

Final Flow 30 Ruined Packer _____
 Final Shut-In 60 Mileage 201 RT 251²⁵
 T-On Location 13:35pm Sub Total: \$ 1776.25
 T-Started 14:04pm Std. By _____
 T-Open 15:30pm Acc. Chg: _____
 T-Pulled 18:16pm Other: _____
 T-Out 19:48pm Total: _____

CHART PAGE

This is a photocopy of the actual AK-1 recorder chart.





TRILOBITE TESTING INC.

No 24264

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

Well Name & No. Savage #3 Test No. 2 Date 7-10-06
 Company Great Plains Energy, Inc. Zone Tested KC "F"
 Address POB 292 Wahoo, NE 68066 Elevation 2852 KB 2847 GL
 Co. Rep / Geo. Richard Bell Rig WW#4
 Location: Sec. 35 Twp. 4s Rge. 30w Co. Decatur State Ks
 Comment: _____ Release date / time: _____

Interval Tested 3981 to 4007 Initial Str Wt./Lbs. 44,000 Unseated Str Wt/Lbs. 45,000
 Anchor Length 26 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 60,000
 Top Packer Depth 3977 Tool Weight 1,800
 Bottom Packer Depth 3981 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 4007 Wt. Pipe Run 0 Drill Collar Run 120
 Mud Wt. 9.2 LCM 2 Vis. 56 WL 6.4 Drill Pipe Size 4 1/2 XH Ft. Run 3,866

Blow Description IF: Surface blow built to B.O.B. @ 27 min.
ISI: Weak surface return died @ 12 min.
FF: Surface blow built to 7'.
FSI: Surface blow built to 14", died @ 46 min.

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
<u>210</u>	<u>270</u>	<u>120</u>	<u>90</u>
Rec. <u>50</u>	Feet of <u>GMCO</u>	<u>5</u> %gas <u>55</u> %oil	%water <u>40</u> %mud
Rec. <u>40</u>	Feet of <u>GMCO</u>	<u>10</u> %gas <u>60</u> %oil	%water <u>30</u> %mud
Rec. <u>120</u>	Feet of <u>GMCO</u>	<u>10</u> %gas <u>50</u> %oil	%water <u>40</u> %mud
Rec. _____	Feet of _____	%gas _____ %oil _____	%water _____ %mud _____
Rec. _____	Feet of _____	%gas _____ %oil _____	%water _____ %mud _____

BHT 117 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 800 ppm System

AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>1,993</u> PSI	<u>8017</u>	<u>1,100⁰⁰</u>
(B) First Initial Flow Pressure	<u>35</u> PSI	(depth) <u>3984</u>	Jars <u>X</u> <u>250⁰⁰</u>
(C) First Final Flow Pressure	<u>79</u> PSI	Recorder No. <u>13276</u>	Safety Jt. <u>X</u> <u>75⁰⁰</u>
(D) Initial Shut-In Pressure	<u>388</u> PSI	(depth) <u>4002</u>	Circ Sub <u>X</u> <u>NIC</u>
(E) Second Initial Flow Pressure	<u>88</u> PSI	Recorder No. _____	Sampler _____
(F) Second Final Flow Pressure	<u>95</u> PSI	(depth) _____	Straddle _____
(G) Final Shut-In Pressure	<u>388</u> PSI	Initial Opening <u>30</u>	Ext. Packer _____
(Q) Final Hydrostatic Mud	<u>1,918</u> PSI	Initial Shut-In <u>60</u>	Shale Packer <u>X</u> <u>200⁰⁰</u>

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Approved By Richard Bell
 Our Representative Chuck Smith

Final Flow 30
 Final Shut-In 90
T-On Location 02:04am
 T-Started 02:45am
 T-Open 04:33am
 T-Pulled 08:07am
 T-Out 10:04am

Recorder No. _____ Test X 1,100⁰⁰
 Jars X 250⁰⁰
 Safety Jt. X 75⁰⁰
 Circ Sub X NIC
 Sampler _____
 Straddle _____
 Ext. Packer _____
 Shale Packer X 200⁰⁰
 Ruined Packer _____
 Mileage 36 45⁰⁰
 Sub Total: 1670.00
 Std. By _____
 Acc. Chg: _____
 Other: _____
 Total: _____

CHART PAGE
This is a photocopy of the actual AK-1 recorder chart.

24264 DST #2 Savage #3 Great Plains

