

**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy**

429 N Linden Bx 292
Wahoo NE 68066

ATTN: Dan Blankenau

35-4s-30w-Decatur

Sauvage#1

Start Date: 2005.11.05 @ 21:09:11

End Date: 2005.11.06 @ 05:09:11

Job Ticket #: 23338 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Great Plains Energy

Sauvage#1

35-4s-30w-Decatur

DST # 1

Toronto

2005.11.05



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Great Plains Energy

Sauvage#1

429 N Linden Bx 292
Wahoo NE 68066

35-4s-30w-Decatur

Job Ticket: 23338

DST#: 1

ATTN: Dan Blankenau

Test Start: 2005.11.05 @ 21:09:11

Tool Information

Drill Pipe:	Length: 3727.00 ft	Diameter: 3.80 inches	Volume: 52.28 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.25 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 55000.00 lb
		Total Volume: - bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3873.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	43.00 ft			
Tool Length:	70.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3851.00	
Hydraulic tool	5.00			3856.00	
Jars	5.00			3861.00	
Safety Joint	2.00			3863.00	
Packer	5.00			3868.00	27.00 Bottom Of Top Packer
Packer	5.00			3873.00	
Stubb	1.00			3874.00	
Change Over Sub	1.00			3875.00	
Recorder	0.00	6799	Inside	3875.00	
Blank Spacing	30.00			3905.00	
Change Over Sub	1.00			3906.00	
Perforations	7.00			3913.00	
Recorder	0.00	13548	Inside	3913.00	
Bullnose	3.00			3916.00	43.00 Bottom Packers & Anchor

Total Tool Length: 70.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Great Plains Energy

Sauvage#1

429 N Linden Bx 292
Wahoo NE 68066

35-4s-30w-Decatur

Job Ticket: 23338

DST#: 1

ATTN: Dan Blankenau

Test Start: 2005.11.05 @ 21:09:11

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:

ppm

Viscosity: 75.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.56 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
134.00	DM	0.750

Total Length: 134.00 ft

Total Volume: 0.750 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6799

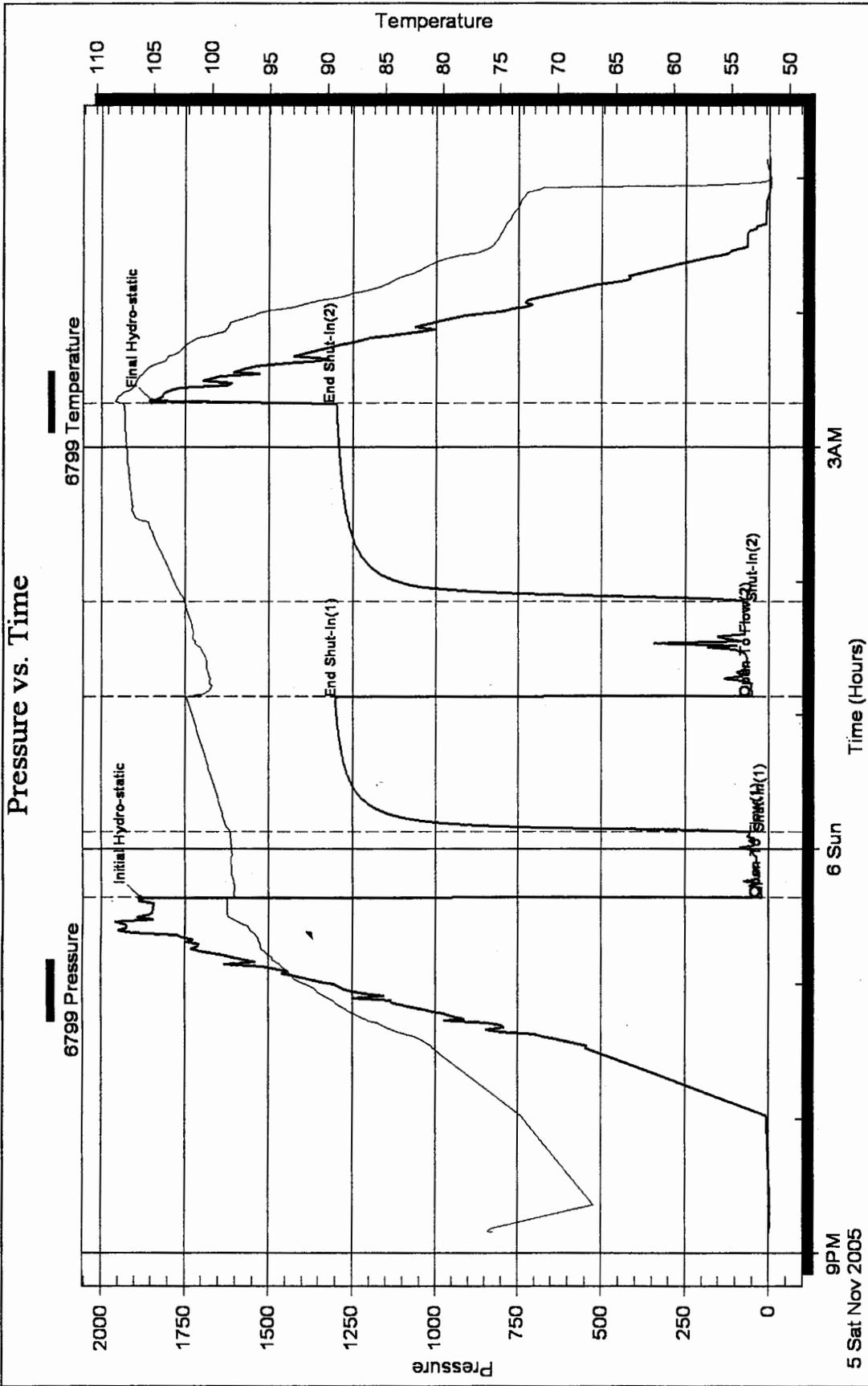
Inside

Great Plains Energy

35-4s-30w - Decatur

DST Test Number: 1

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 23338

Printed: 2005.11.14 @ 14:19:14 Page 5



DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy**

429 N Linden Bx 292
Wahoo NE 68066

ATTN: Dan Blankenau

35-4s-30w-Decatur

Sauvage#1

Start Date: 2005.11.05 @ 23:43:26

End Date: 2005.11.06 @ 06:28:11

Job Ticket #: 23339 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Great Plains Energy

Sauvage#1

35-4s-30w-Decatur

DST # 2

L,Kc A

2005.11.05



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Great Plains Energy
429 N Linden Bx 292
Wahoo NE 68066
ATTN: Dan Blankenau

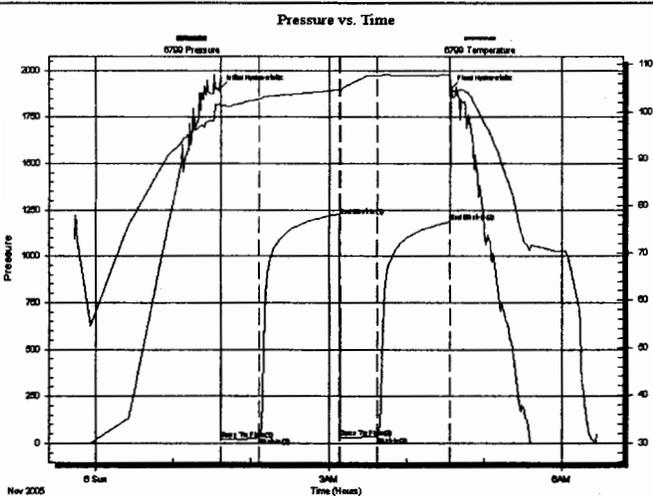
Sauvage#1
35-4s-30w-Decatur
Job Ticket: 23339 **DST#: 2**
Test Start: 2005.11.05 @ 23:43:26

GENERAL INFORMATION:

Formation: **L,Kc A**
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole**
 Time Tool Opened: **01:36:56** Tester: **Joe**
 Time Test Ended: **06:28:11** Unit No: **13**
 Interval: **3915.00 ft (KB) To 3928.00 ft (KB) (TVD)** Reference Elevations: **2836.00 ft (KB)**
 Total Depth: **3916.00 ft (KB) (TVD)** **2830.00 ft (CF)**
 Hole Diameter: **7.80 inches** Hole Condition: **Good** **KB to GR/CF: 6.00 ft**

Serial #: 6799 **Inside**
 Press@RunDepth: **34.32 psig @ 3916.00 ft (KB)** Capacity: **7000.00 psig**
 Start Date: **2005.11.05** End Date: **2005.11.06** Last Calib.: **2005.11.06**
 Start Time: **23:43:27** End Time: **06:28:11** Time On Btmr: **2005.11.06 @ 01:36:26**
 Time Off Btmr: **2005.11.06 @ 04:33:56**

TEST COMMENT: **IF-Weak Surface Blow Built to a .25" in** **IS-No Blow back**
FF-No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1903.64	101.71	Initial Hydro-static
1	18.91	101.07	Open To Flow (1)
30	31.41	102.70	Shut-in(1)
92	1216.05	104.62	End Shut-in(1)
92	30.73	104.32	Open To Flow (2)
121	34.32	107.54	Shut-in(2)
177	1185.96	107.80	End Shut-in(2)
178	1898.63	104.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	DM100%	0.05

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Great Plains Energy

Sauvage#1

429 N Linden Bx 292
Wahoo NE 68066

35-4s-30w-Decatur

Job Ticket: 23339

DST#: 2

ATTN: Dan Blankenau

Test Start: 2005.11.05 @ 23:43:26

Tool Information

Drill Pipe:	Length: 3788.00 ft	Diameter: 3.80 inches	Volume: 53.14 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 53.75 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3915.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	13.00 ft			
Tool Length:	40.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3893.00	
Hydraulic tool	5.00			3898.00	
Jars	5.00			3903.00	
Safety Joint	2.00			3905.00	
Packer	5.00			3910.00	27.00 Bottom Of Top Packer
Packer	5.00			3915.00	
Stubb	1.00			3916.00	
Recorder	0.00	6799	Inside	3916.00	
Perforations	9.00			3925.00	
Recorder	0.00	13548	Inside	3925.00	
Bullnose	3.00			3928.00	13.00 Bottom Packers & Anchor

Total Tool Length: 40.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Great Plains Energy

Sauvage#1

429 N Linden Bx 292
Wahoo NE 68066

35-4s-30w-Decatur

Job Ticket: 23339

DST#: 2

ATTN: Dan Blankenau

Test Start: 2005.11.05 @ 23:43:26

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:

ppm

Viscosity: 75.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.56 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	DM100%	0.049

Total Length: 10.00 ft

Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

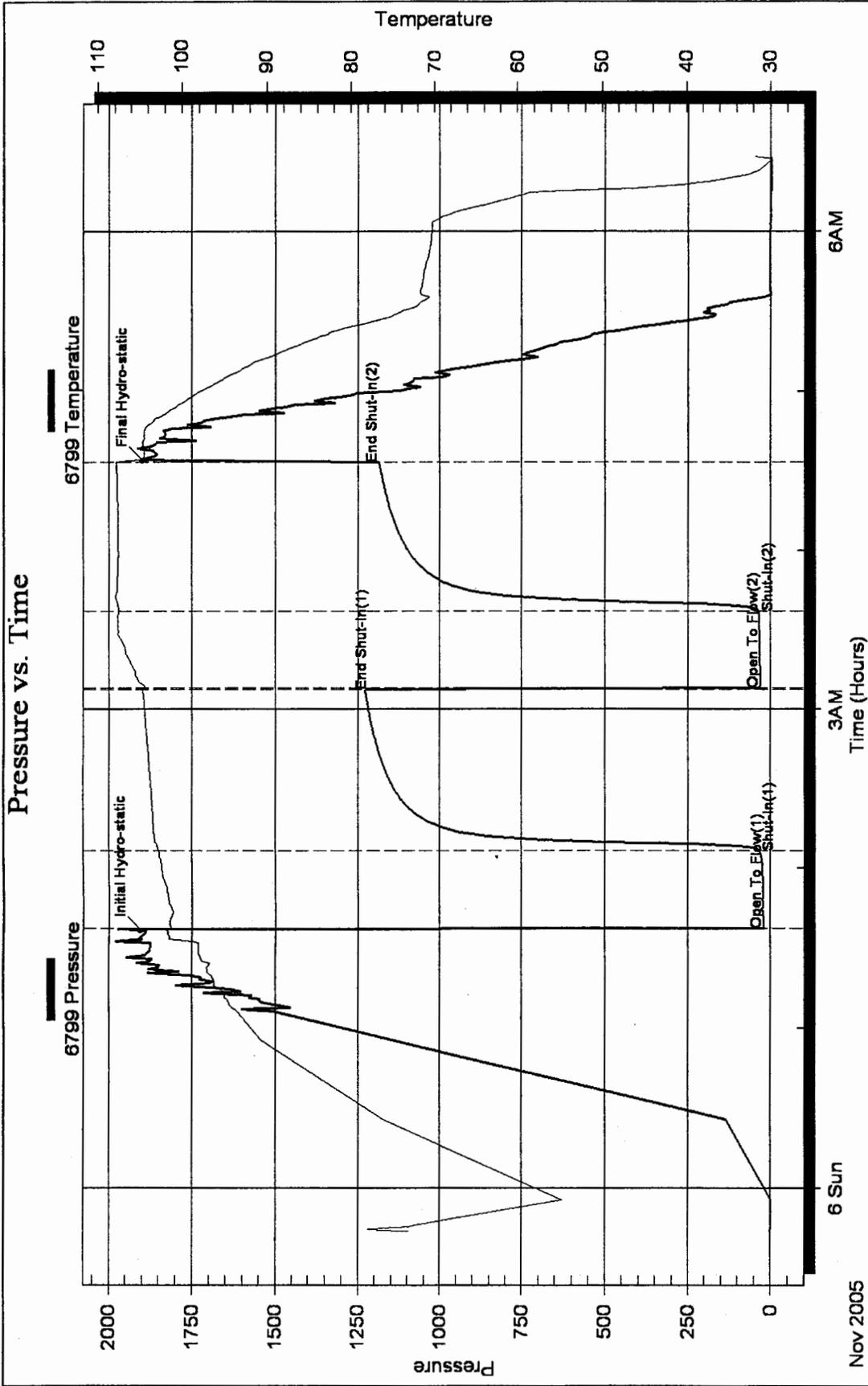
Serial #: 6799

Inside

Great Plains Energy

35-4s-30w -Decatur

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy**

429 N Linden Bx 292
Wahoo NE 68066

ATTN: Dan Blankenau

35-4s-30w-Decatur

Sauvage#1

Start Date: 2005.11.06 @ 16:01:38

End Date: 2005.11.07 @ 00:50:53

Job Ticket #: 23340 DST #: 3

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Great Plains Energy
429 N Linden Bx 292
Wahoo NE 68066

Sauvage#1

35-4s-30w-Decatur

Job Ticket: 23340

DST#: 3

ATTN: Dan Blankenau

Test Start: 2005.11.06 @ 16:01:38

Tool Information

Drill Pipe:	Length: 3786.00 ft	Diameter: 3.80 inches	Volume: 53.11 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.25 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 50000.00 lb
		Total Volume: - bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3927.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	83.00 ft			
Tool Length:	110.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3905.00	
Hydraulic tool	5.00			3910.00	
Jars	5.00			3915.00	
Safety Joint	2.00			3917.00	
Packer	5.00			3922.00	27.00 Bottom Of Top Packer
Packer	5.00			3927.00	
Stubb	1.00			3928.00	
Change Over Sub	1.00			3929.00	
Recorder	0.00	6799	Inside	3929.00	
Blank Spacing	62.00			3991.00	
Change Over Sub	1.00			3992.00	
Perforations	15.00			4007.00	
Recorder	0.00	13548	Inside	4007.00	
Bullnose	3.00			4010.00	83.00 Bottom Packers & Anchor

Total Tool Length: 110.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Great Plains Energy

Sauvage#1

429 N Linden Bx 292
Wahoo NE 68066

35-4s-30w-Decatur

Job Ticket: 23340

DST#: 3

ATTN: Dan Blankenau

Test Start: 2005.11.06 @ 16:01:38

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:

ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.57 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Free Oil	0.010
155.00	GyOCMyW5%O25%G30%M40%W	1.063
93.00	MyWCO5%M10%W85%O	1.305
248.00	GyWCO10%G15%W75%O	3.479
62.00	GyWyMCO10%G10%W15%M65%O	0.870
60.00	OCM2%O98%M	0.842

Total Length: 620.00 ft

Total Volume: 7.569 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6799

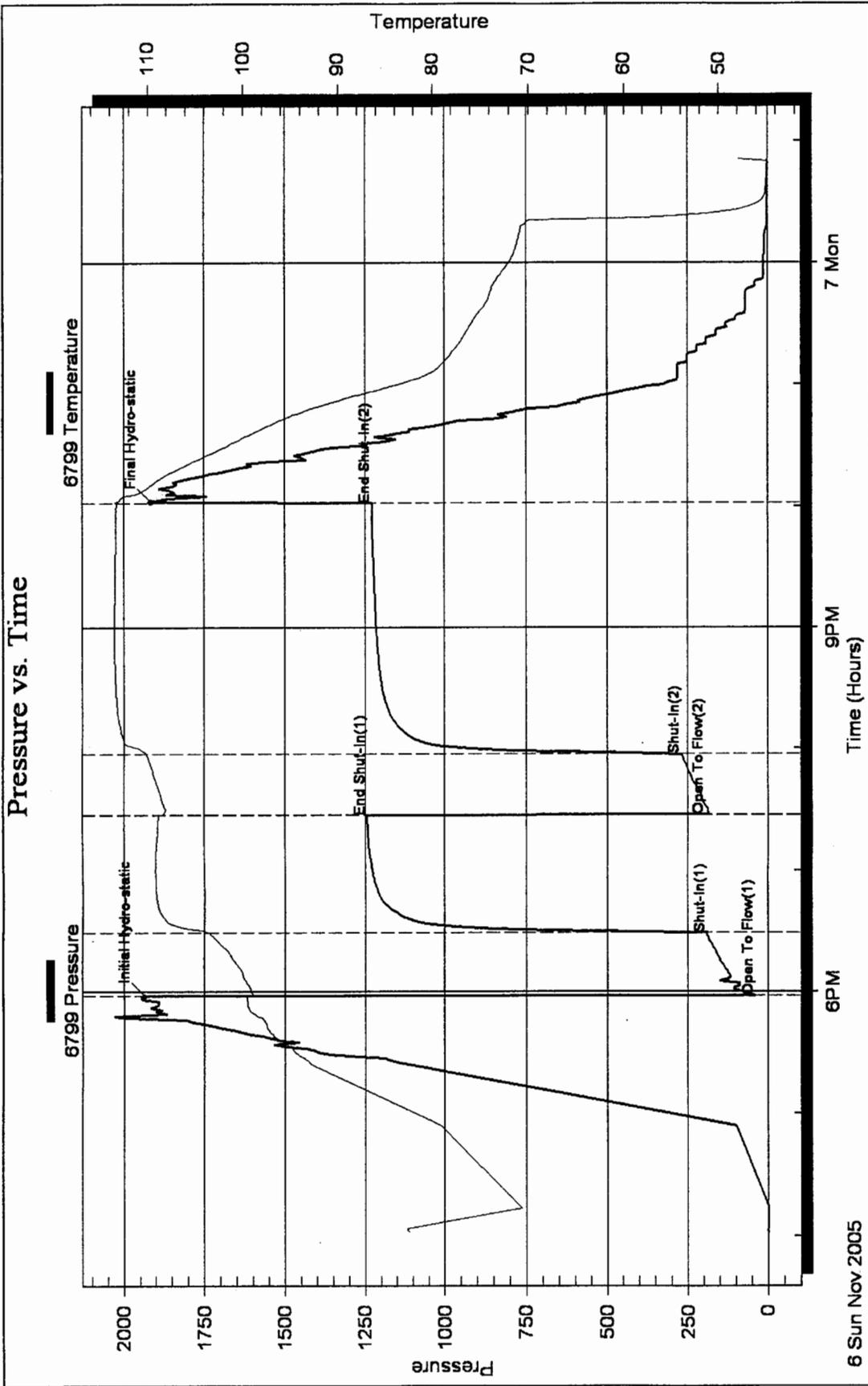
Inside

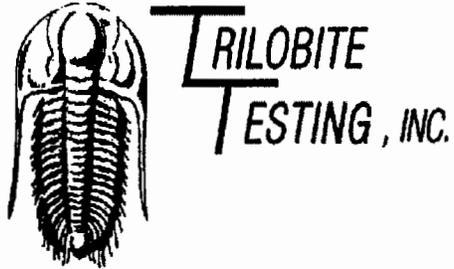
Great Plains Energy

35-4s-30w - Decatur

DST Test Number: 3

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy**

429 N Linden Bx 292
Wahoo NE 68066

ATTN: Dan Blankenau

35-4s-30w-Decatur

Sauvage#1

Start Date: 2005.11.08 @ 01:40:09

End Date: 2005.11.08 @ 11:53:24

Job Ticket #: 23341 DST #: 4

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

Great Plains Energy

Sauvage#1

35-4s-30w-Decatur

DST # 4

L,Kc H,J,K

2005.11.08



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Great Plains Energy

429 N Linden Bx 292
Wahoo NE 68066

ATTN: Dan Blankenau

Sauvage#1

35-4s-30w-Decatur

Job Ticket: 23341

DST#: 4

Test Start: 2005.11.08 @ 01:40:09

GENERAL INFORMATION:

Formation: L, Kc H, J, K

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:59:39

Time Test Ended: 11:53:24

Test Type: Conventional Straddle

Tester: Joe

Unit No: 13

Interval: 4016.00 ft (KB) To 4104.00 ft (KB) (TVD)

Total Depth: 4109.00 ft (KB) (TVD)

Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 2836.00 ft (KB)

2830.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: 6799

Inside

Press@RunDepth: 521.61 psig @ 4018.00 ft (KB)

Start Date: 2005.11.08

End Date: 2005.11.08

Start Time: 01:40:10

End Time: 11:53:24

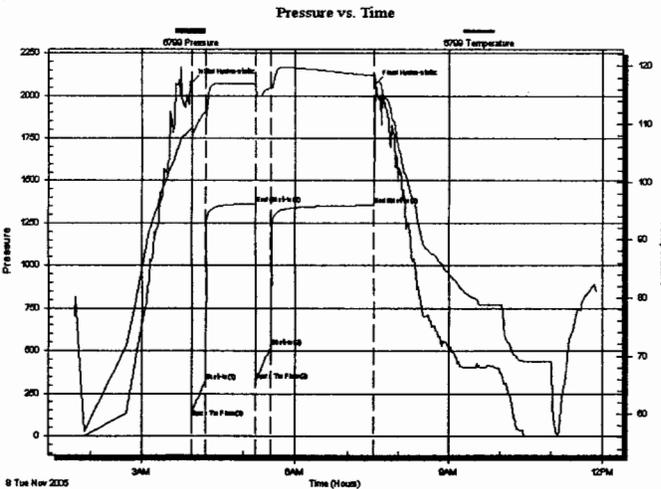
Capacity: 7000.00 psig

Last Calib.: 2005.11.08

Time On Btm: 2005.11.08 @ 03:59:24

Time Off Btm: 2005.11.08 @ 07:32:54

TEST COMMENT: F-Strong Blow Built to BOB in less than a min
 IS-Good Blow back blew off BOB in 30min
 FF-Strong Blow Built to BOB in a 1.5min
 FSI-Good Blow back Built to BOB in 12min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2077.72	109.20	Initial Hydro-static
1	107.88	108.21	Open To Flow (1)
16	318.56	112.07	Shut-In(1)
75	1359.44	116.84	End Shut-In(1)
75	325.27	116.14	Open To Flow (2)
93	521.61	116.36	Shut-In(2)
212	1354.86	118.36	End Shut-In(2)
214	2071.61	117.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	2356 GP	0.00
1471.00	GassyFreeOil10%G90%O	19.50
2.00	OilyMud15%O85%M	0.03

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Great Plains Energy

Sauvage#1

429 N Linden Bx 292
Wahoo NE 68066

35-4s-30w-Decatur

Job Ticket: 23341

DST#: 4

ATTN: Dan Blankenau

Test Start: 2005.11.08 @ 01:40:09

Tool Information

Drill Pipe:	Length: 3885.00 ft	Diameter: 3.80 inches	Volume: 54.50 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.25 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	4016.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	4191.00 ft			
Interval between Packers:	175.00 ft			
Tool Length:	202.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3994.00	
Hydraulic tool	5.00			3999.00	
Jars	5.00			4004.00	
Safety Joint	2.00			4006.00	
Packer	5.00			4011.00	27.00 Bottom Of Top Packer
Packer	5.00			4016.00	
Stubb	1.00			4017.00	
Change Over Sub	1.00			4018.00	
Recorder	0.00	6799	Inside	4018.00	
Blank Spacing	62.00			4080.00	
Change Over Sub	1.00			4081.00	
Recorder	0.00	13760	Outside	4081.00	
Perforations	19.00			4100.00	
Blank Off Sub	1.00			4101.00	
Packer - Shale	5.00			4106.00	
Stubb	1.00			4107.00	
Change Over Sub	1.00			4108.00	
Blank Spacing	62.00			4170.00	
Change Over Sub	1.00			4171.00	
Perforations	17.00			4188.00	
Recorder	0.00	13548	Inside	4188.00	
Bullnose	3.00			4191.00	175.00 Bottom Packers & Anchor

Total Tool Length: 202.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Great Plains Energy

Sauvage#1

429 N Linden Bx 292
Wahoo NE 68066

35-4s-30w-Decatur

Job Ticket: 23341

DST#: 4

ATTN: Dan Blankenau

Test Start: 2005.11.08 @ 01:40:09

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:

ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	2356 GIP	0.000
1471.00	GassyFreeOil10%G90%O	19.505
2.00	OilyMud15%O85%M	0.028

Total Length: 1473.00 ft

Total Volume: 19.533 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

