



KANSAS CORPORATION COMMISSION 1104468  
OIL & GAS CONSERVATION DIVISION

Form AGO-1  
June 2009  
**Form Must Be Typed**  
**Form must be Signed**  
**All blanks must be Filled**

**WELL COMPLETION FORM**  
**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # 33629  
Name: Great Plains Energy, Inc.  
Address 1: 6121 S 58th ST, STE B  
Address 2: \_\_\_\_\_  
City: LIN COLN State: NE Zip: 68516 + \_\_\_\_\_  
Contact Person: Dan Blankenau  
Phone: ( 402 ) 443-6125  
CONTRACTOR: License # 33575  
Name: WW Drilling, LLC  
Wellsite Geologist: Clayton Erickson  
Purchaser: None

Designate Type of Completion:  
 New Well     Re-Entry     Workover  
 Oil     WSW     SWD     SLOW  
 Gas     D&A     ENHR     SIGW  
 OG     GSW     Temp. Abd.  
 CM (Coal Bed Methane)  
 Cathodic     Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:  
Operator: \_\_\_\_\_  
Well Name: \_\_\_\_\_  
Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_  
 Deepening     Re-perf.     Conv. to ENHR     Conv. to SWD  
 Conv. to GSW  
 Plug Back: \_\_\_\_\_ Plug Back Total Depth  
 Commingled    Permit #: \_\_\_\_\_  
 Dual Completion    Permit #: \_\_\_\_\_  
 SWD    Permit #: \_\_\_\_\_  
 ENHR    Permit #: \_\_\_\_\_  
 GSW    Permit #: \_\_\_\_\_  
3/06/2012    3/13/2012    4/09/2012  
Spud Date or    Date Reached TD    Completion Date or  
Recompletion Date       Recompletion Date

API No. 15 - 15-137-20599-00-00  
Spot Description:  
NE SW NW SE Sec. 29 Twp. 3 S. R. 23  East  West  
1680 Feet from  North /  South Line of Section  
2100 Feet from  East /  West Line of Section  
Footages Calculated from Nearest Outside Section Corner:  
 NE     NW     SE     SW  
County: Norton  
Lease Name: PERSINGER Well #: 1-29  
Field Name: Wildcat  
Producing Formation: None  
Elevation: Ground: 2449 Kelly Bushing: 2456  
Total Depth: 3870 Plug Back Total Depth: \_\_\_\_\_  
Amount of Surface Pipe Set and Cemented at: 301 Feet  
Multiple Stage Cementing Collar Used?  Yes  No  
If yes, show depth set: 2060 Feet  
If Alternate II completion, cement circulated from: 3870  
feet depth to: 2700 w/ 165 sx cmt.

**Drilling Fluid Management Plan**  
(Data must be collected from the Reserve Pit)  
Chloride content: 2900 ppm Fluid volume: 80 bbls  
Dewatering method used: Evaporated  
Location of fluid disposal if hauled offsite:  
Operator Name: \_\_\_\_\_  
Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_  
Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West  
County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

**KCC Office Use ONLY**

Letter of Confidentiality Received  
Date: \_\_\_\_\_  
 Confidential Release Date: \_\_\_\_\_  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution  
ALT  I  II  III Approved by: Deanna Garrison Date: 01/14/2013



1104468

Operator Name: Great Plains Energy, Inc. Lease Name: PERSINGER Well #: 1-29  
 Sec. 29 Twp. 3 S. R. 23  East  West County: Norton

**INSTRUCTIONS:** Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:  CD/NL, DIL, Micro, Frac Finder	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum Attached Attached Attached
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CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.250	8.6250	23	301	Common	185	3%cc
Production	7.8750	5.5	14	3870	OWC	195	4% gel, 3%cc

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate				
___ Protect Casing	-			
___ Plug Back TD				
___ Plug Off Zone	-			

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth
8	3780-3790 Arbuckle	250 gal 15% MCA	
4	3762-3768 Gorham	300 gal 15% MCA	

TUBING RECORD: Size: <u>NA</u> Set At: _____ Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR. _____		Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____	
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls. Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Great Plains Energy, Inc.
Well Name	PERSINGER 1-29
Doc ID	1104468

Tops

Anhydrite	2053	+403
Base	2084	+372
Topeka	3307	-851
Heebner	3500	-1044
Toronto	3530	-1074
Lansing	3543	-1087
BKC	3726	-1270
Arbuckle	3780	-1324
Granite	3871	-1415

REMIT TO  
RR 1 BOX 90 D  
HOXIE KS 67740

SCHIPPERS OIL FIELD SERVICE L.L.C.

557

DATE <u>3/8/12</u>	SEC. <u>27</u>	RANGE/TWP. <u>3-23</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Peringer Farms</u>			WELL# <u>1-27</u>		COUNTY <u>W</u>	STATE <u>KS</u>

CONTRACTOR <u>W W C</u>	OWNER <u>Great Plains</u>		
TYPE OF JOB <u>Surface</u>			
HOLE SIZE <u>12 1/2</u>	T.D. <u>322</u>	CEMENT	
CASING SIZE <u>8 3/8</u>	DEPTH <u>301</u>	AMOUNT ORDERED	
TUBING SIZE	DEPTH		
DRILL PIPE <u>4 1/2</u>	DEPTH		
TOOL	DEPTH		
PRES. MAX	MINIMUM	COMMON <u>185</u>	@ <u>15 1/2</u>
DISPLACEMENT <u>18 bb</u>	SHOE JOINT	POZMIX	@
CEMENT LEFT IN CSG. <u>15 1/2</u>		GEL <u>4</u>	@ <u>26</u>
PERFS		CHLORIDE <u>6</u>	@ <u>52</u>
		ASC	@
EQUIPMENT			@
			@
PUMP TRUCK			@
#			@
BULK TRUCK			@
#			@
BULK TRUCK			@
#			@
			@
		HANDLING <u>195</u>	@ <u>2 1/2</u> <u>407 1/2</u>
		MILEAGE <u>60</u>	@ <u>19 1/2</u> <u>1170</u>
			TOTAL

REMARKS	SERVICE <u>Surface</u>		
<u>Play Down @ 8:00 PM</u>	DEPT OF JOB	@	
	PUMP TRUCK CHARGE	@	<u>750 00</u>
	EXTRA FOOTAGE	@	
	MILEAGE <u>60 x 2</u>	@ <u>6 1/2</u>	<u>750 00</u>
<u>Circ Cement to Pit</u>	MANIFOLD	@	
	<u>Light Vehicle 60 x 2</u>	@ <u>2 1/2</u>	<u>270 00</u>
		TOTAL	

CHARGE TO: <u>Great Plains</u>	
STREET	STATE
CITY	ZIP

To: Schippers Oil Field Service LLC  
You are hereby requested to rent cementing equipment and furnish staff to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read & understand the "TERMS AND CONDITIONS" listed on the reverse side.

PLUG & FLOAT EQUIPMENT	
	@
	@
	@
	@
	@
	TOTAL
TAX	
TOTAL CHARGE	
DISCOUNT (IF PAID IN 20 DAYS)	

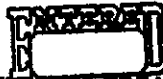
SIGNATURE J. W. Mayer

PRINTED NAME



**CONSOLIDATED**  
ON Well Services, LLC

PO Box 884, Chanute, KS 66720  
620-431-9210 or 800-467-8676



**FIELD TICKET & TREATMENT REPORT**  
**CEMENT**

TICKET NUMBER 34419  
LOCATION Dodley, KS  
FOREMAN Kelly babe  
Walt Dinkel

DATE <u>3-14-12</u>	CUSTOMER # <u>3282</u>	WELL NAME & NUMBER <u>Parsinger Farms</u>	SECTION <u>29</u>	TOWNSHIP <u>3</u>	RANGE <u>23</u>	COUNTY <u>KS</u>	
CUSTOMER <u>Great Plains Energy Inc</u>		Mailing Address <u>Nomon 540 Rd 5 2401 N 1/2 Ninto</u>		TRUCK # <u>399</u>	DRIVER <u>Damon A</u>	TRUCK # <u>410</u>	DRIVER <u>Bobby S</u>
CITY	STATE	ZIP CODE					

JOB TYPE DM HOLE SIZE 7 7/8 HOLE DEPTH 3870 CASING SIZE & WEIGHT 5 1/2 K100  
CASING DEPTH 3870 DRILL PIPE TUBING DD Tool top of #45 OTHER DC @ 2060  
SLURRY WEIGHT 138 SLURRY VOL WATER gal/sk CEMENT LEFT in CASING 20.69  
DISPLACEMENT 94 bbl DISPLACEMENT PSI MIX PSI RATE 6 bbl/min

REMARKS: safety meeting, Rigged up on W&W Drilling Rig #6, hooked up to circulate, circulated 0.1 hr, mixed mud flush, pumped 20 bbl KCL, mixed 20 sks RH, mixed 175 sks down the center, shut down, washed out pumps & lines, released plug, displaced with 94 bbl water, 200 # lift pressure, plug landed @ 1700', released pressure float held, rigged down & left location.

Scratcher on AT #2, 3, 4, 6, 7, 8, 9, 10, 11, 12 Blank Plan  
Baskets b4 45, cent. 3, 3, 4, 7, 9, 11, 44 Walt, Kelly & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401C	1	PUMP CHARGE	3020.00	3020.00
5406	50	MILEAGE	5.00	250.00
1126	195 SKS	CWOC	22.55	4397.35
110A	975 #	Kol-seal	1.56	516.00
5407A	10.1	Ton Mileage delivery	167	943.35
4104	2	5 1/2 Basket	276.00	552.00
41130	7	5 1/2 centralizer	58.00	406.00
41314	40	5 1/2 Resi Procating scratcher	78.00	3120.00
42283	1	5 1/2 AFU Floater shoe	206.00	206.00
4285	1	5 1/2 Portcollar	2075.00	2075.00
11440	300 gal	mud flush	1.50	522.00
1142A	2 gal	KCL	39.10	78.20
41454	1	5 1/2 Latchdown assm. with plug	303.00	303.00
				16,296.50
				1629.62
				1467.13
				241394
			SALES TAX	773.89
			ESTIMATED TOTAL	15440.4

Revin 3737

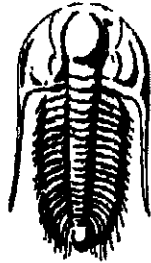
12:30 AM 3-15-12

AUTHORIZATION [Signature]

TITLE \_\_\_\_\_

DATE 3-15-12

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy**

6121 S 58th St. STE - B  
Lincoln, NE 66516

ATTN: Clayton Erickson

**Persinger #1-29**

**29-3s-23w Norton,KS**

Start Date: 2012.03.09 @ 22:38:00

End Date: 2012.03.10 @ 05:16:15

Job Ticket #: 45616                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

**ORIGINAL**

Printed: 2012.03.22 @ 10:25:24

Great Plains Energy

29-3s-23w Norton,KS

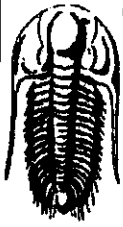
Persinger #1-29

DST # 1

Toronto - LKC "A"

2012.03.09





**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Great Plains Energy

**29-3s-23w Norton, KS**

6121 S 58th St. STE - B  
Lincoln, NE 66516

**Persinger #1-29**

Job Ticket: 45616

DST#: 1

ATTN: Clayton Erickson

Test Start: 2012.03.09 @ 22:38:00

### Tool Information

Drill Pipe:	Length: 3364.00 ft	Diameter: 3.80 inches	Volume: 47.19 bbl	Tool Weight: 2500.00 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: 38000.00 lb
			<u>Total Volume: 47.78 bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 30000.00 lb
Depth to Top Packer:	3495.00 ft			Final 30000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	89.00 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			3467.00	
Shut In Tool	5.00			3472.00	
Hydraulic tool	5.00			3477.00	
Jars	5.00			3482.00	
Safety Joint	3.00			3485.00	
Packer	5.00			3490.00	29.00 Bottom Of Top Packer
Packer	5.00			3495.00	
Stubb	1.00			3496.00	
Recorder	0.00	8648	inside	3496.00	
Recorder	0.00	6799	inside	3496.00	
Perforations	23.00			3519.00	
Drill Pipe	31.00			3550.00	
Bullnose	5.00			3555.00	60.00 Bottom Packers & Anchor

**Total Tool Length: 89.00**





**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Great Plains Energy

29-3s-23w Norton, KS

6121 S 58th St. STE - B  
Lincoln, NE 66516

Persinger #1-29

ATTN: Clayton Erickson

Job Ticket: 45616

DST#: 1

Test Start: 2012.03.09 @ 22:38:00

**Mud and Cushion Information**

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 57.00 sec/qt

Water Loss: 6.36 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

deg API

ppm

ft

bbbl

psig

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbbl
60.00	Mud 100M	0.295

Total Length: 60.00 ft

Total Volume: 0.295 bbl

Num Fluid Samples: 0

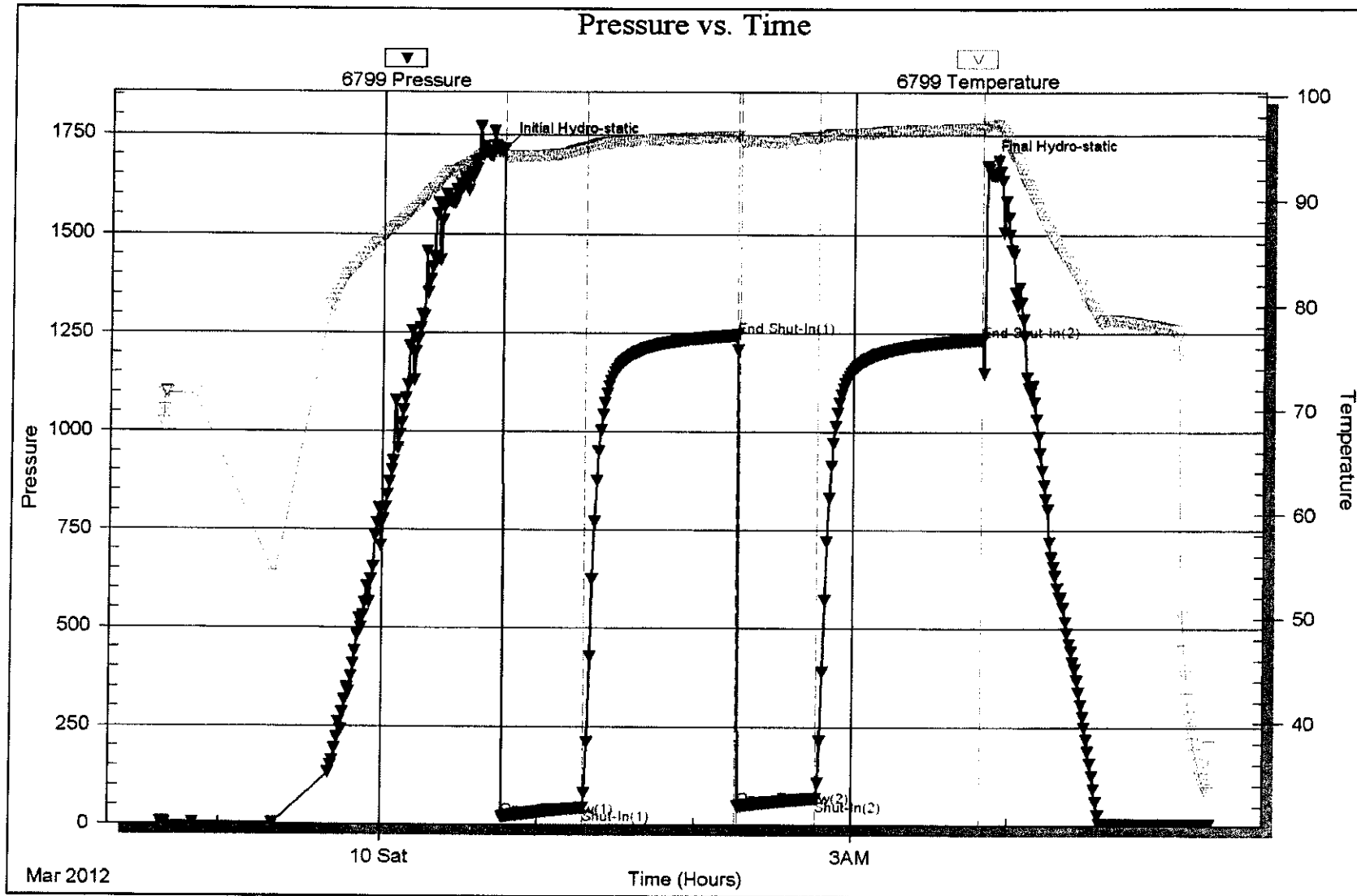
Num Gas Bombs: 0

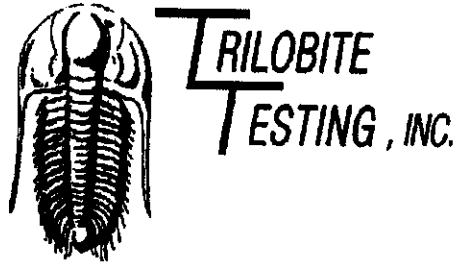
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





## DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy**

6121 S 58th St. STE - B  
Lincoln, NE 66516

ATTN: Clayton Erickson

**Persinger #1-29**

**29-3s-23w Norton,KS**

Start Date: 2012.03.10 @ 13:03:00

End Date: 2012.03.10 @ 20:30:00

Job Ticket #: 45617                      DST #: 2

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

Printed: 2012.03.22 @ 10:25:53

Great Plains Energy

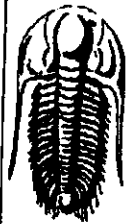
29-3s-23w Norton,KS

Persinger #1-29

DST # 2

LKC "C-D"

2012.03.10



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Great Plains Energy  
 6121 S 58th St. STE - B  
 Lincoln, NE 66516  
 ATTN: Clayton Erickson

**29-3s-23w Norton, KS**  
**Persinger #1-29**  
 Job Ticket: 45617      DST#: 2  
 Test Start: 2012.03.10 @ 13:03:00

## GENERAL INFORMATION:

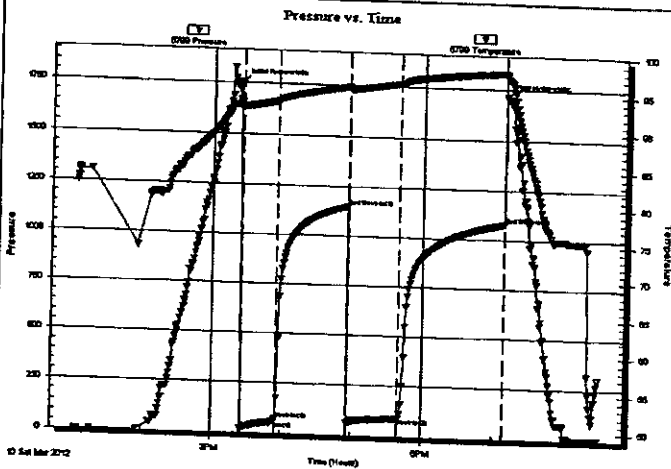
Formation: LKC "C-D"  
 Deviated: No Whipstock:                      ft (KB)  
 Time Tool Opened: 15:24:45  
 Time Test Ended: 20:30:00  
 Interval: 3555.00 ft (KB) To 3594.00 ft (KB) (TVD)  
 Total Depth: 3594.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Initial)  
 Tester: Kevin Mack  
 Unit No: 43

Reference Elevations: 2454.00 ft (KB)  
 2449.00 ft (CF)  
 KB to GR/CF: 5.00 ft

Serial #: 6799      Inside  
 Press@RunDepth: 91.71 psig @ 3556.00 ft (KB)  
 Start Date: 2012.03.10      End Date: 2012.03.10  
 Start Time: 13:03:05      End Time: 20:29:59  
 Capacity: 8000.00 psig  
 Last Calib.: 2012.03.10  
 Time On Btm: 2012.03.10 @ 15:23:45  
 Time Off Btm: 2012.03.10 @ 19:10:00

TEST COMMENT: F- Surface blow built to 1/4" Then died back to 1/8"  
 IS- No Return  
 FF- Surface blow built to 1/8" Then died back to surface.  
 FS- No Return



## PRESSURE SUMMARY

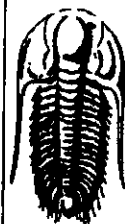
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1752.26	93.24	Initial Hydro-static
1	23.14	92.83	Open To Flow (1)
31	73.45	93.48	Shut-In(1)
91	1148.54	95.65	End Shut-In(1)
92	66.63	95.31	Open To Flow (2)
135	91.71	96.18	Shut-In(2)
225	1078.34	97.90	End Shut-In(2)
227	1716.46	97.51	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud (heavy) 100M	0.02
55.00	MV 15M 85W	0.27
60.00	MV 30M 70W	0.30
10.00	OSVM 70M 30W (oil spots)	0.14
1.00	Free oil 100o	0.01

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Great Plains Energy

**29-3s-23w Norton, KS**

6121 S 58th St. STE - B  
Lincoln, NE 66516

**Persinger #1-29**

Job Ticket: 45617

**DST#: 2**

ATTN: Clayton Erickson

Test Start: 2012.03.10 @ 13:03:00

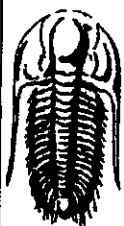
### Tool Information

Drill Pipe:	Length: 3427.00 ft	Diameter: 3.80 inches	Volume: 48.07 bbl	Tool Weight: 2500.00 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: 45000.00 lb
			<b>Total Volume: 48.66 bbl</b>	Tool Chased: ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3555.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	68.00 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			3527.00	
Shut In Tool	5.00			3532.00	
Hydraulic tool	5.00			3537.00	
Jars	5.00			3542.00	
Safety Joint	3.00			3545.00	
Packer	5.00			3550.00	29.00 Bottom Of Top Packer
Packer	5.00			3555.00	
Stubb	1.00			3556.00	
Recorder	0.00	8648	Inside	3556.00	
Recorder	0.00	6799	Inside	3556.00	
Perforations	3.00			3559.00	
Drill Pipe	30.00			3589.00	
Bullnose	5.00			3594.00	39.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>68.00</b>				



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

FLUID SUMMARY

Great Plains Energy

29-3s-23w Norton,KS

6121 S 58th St. STE - B  
Lincoln, NE 66516

Persinger #1-29

Job Ticket: 45617

DST#: 2

ATTN: Clayton Erickson

Test Start: 2012.03.10 @ 13:03:00

### 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:	20000 ppm
Viscosity:	48.00 sec/qt	Cushion Volume:	bbbl		
Water Loss:	6.37 in <sup>3</sup>	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1600.00 ppm				
Filter Cake:	2.00 inches				

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
5.00	Mud (heavy) 100M	0.025
55.00	MW 15M 85W	0.270
60.00	MW 30M 70W	0.295
10.00	OSWM 70M 30W (oil spots)	0.140
1.00	Free oil 100o	0.014

Total Length: 131.00 ft      Total Volume: 0.744 bbl

Num Fluid Samples: 0

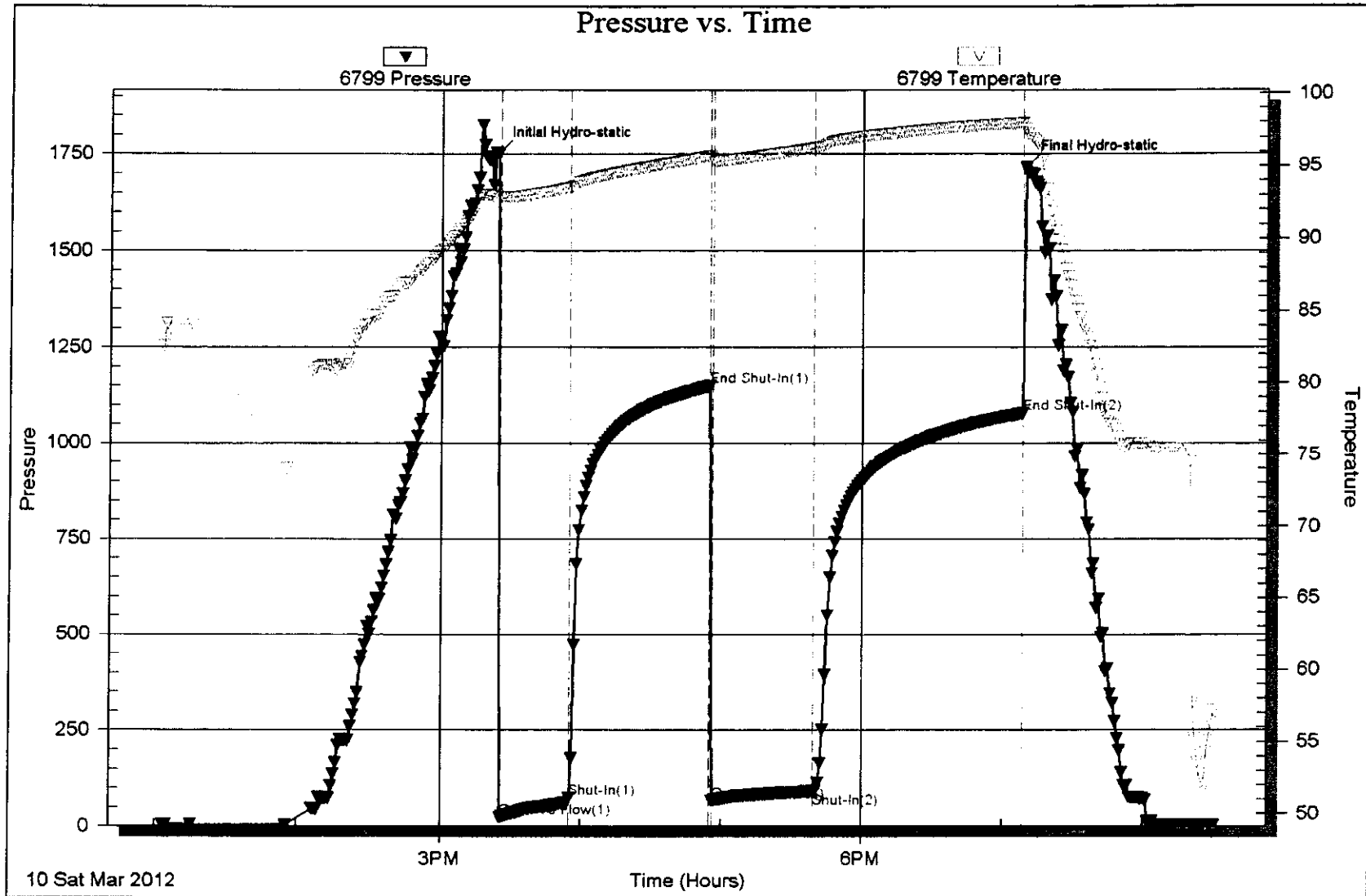
Num Gas Bombs: 0

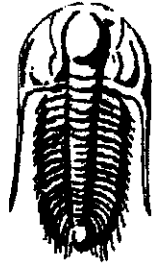
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .43 @ 66 deg = 20,000ppm





**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy**

6121 S 58th St. STE - B  
Lincoln, NE 66516

ATTN: Clayton Erickson

**Persinger #1-29**

**29-3s-23w Norton,KS**

Start Date: 2012.03.11 @ 07:04:00

End Date: 2012.03.11 @ 14:02:45

Job Ticket #: 45618                      DST #: 3

Great Plains Energy  
29-3s-23w Norton,KS  
Persinger #1-29  
DST # 3  
LKC "H"  
2012.03.11

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.03.22 @ 10:26:11





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Great Plains Energy

29-3s-23w Norton, KS

6121 S 58th St. STE - B  
Lincoln, NE 66516

**Persinger #1-29**

ATTN: Clayton Erickson

Job Ticket: 45618

DST#: 3

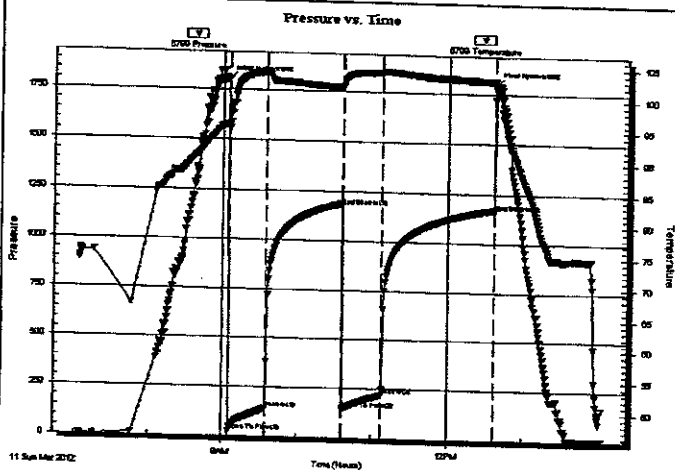
Test Start: 2012.03.11 @ 07:04:00

## GENERAL INFORMATION:

Formation: LKC "H"  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 09:05:30  
 Time Test Ended: 14:02:45  
 Interval: 3635.00 ft (KB) To 3660.00 ft (KB) (TVD)  
 Total Depth: 3660.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Kevin Mack  
 Unit No: 43  
 Reference Elevations: 2454.00 ft (KB)  
 2449.00 ft (CF)  
 KB to GR/CF: 5.00 ft

Serial #: 6799 Inside  
 Press@RunDepth: 219.68 psig @ 3636.00 ft (KB)  
 Start Date: 2012.03.11 End Date: 2012.03.11  
 Start Time: 07:04:05 End Time: 14:02:44  
 Capacity: 8000.00 psig  
 Last Calib.: 2012.03.11  
 Time On Btm: 2012.03.11 @ 09:04:45  
 Time Off Btm: 2012.03.11 @ 12:38:00

TEST COMMENT: IF- BoB in 13 min.  
 IS- No Return  
 FF- BoB in 20 min.  
 FS- No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1800.33	95.40	Initial Hydro-static
1	27.15	94.91	Open To Flow (1)
30	142.27	103.75	Shut-In(1)
91	1176.07	101.69	End Shut-In(1)
92	146.26	101.78	Open To Flow (2)
123	219.68	104.01	Shut-In(2)
213	1160.72	102.94	End Shut-In(2)
214	1798.72	101.91	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud (Heavy) 100M	0.02
175.00	MW 5M 95W	1.41
220.00	MW 10M 90W	3.09

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Great Plains Energy

**29-3s-23w Norton,KS**

6121 S 58th St. STE - B  
Lincoln, NE 66516

**Persinger #1-29**

Job Ticket: 45618

DST#: 3

ATTN: Clayton Erickson

Test Start: 2012.03.11 @ 07:04:00

### Tool Information

Drill Pipe:	Length: 3491.00 ft	Diameter: 3.80 inches	Volume: 48.97 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 2500.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 49.56 bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	3635.00 ft			Final 39000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	54.00 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			3607.00	
Shut In Tool	5.00			3612.00	
Hydraulic tool	5.00			3617.00	
Jars	5.00			3622.00	
Safety Joint	3.00			3625.00	
Packer	5.00			3630.00	29.00 Bottom Of Top Packer
Packer	5.00			3635.00	
Stubb	1.00			3636.00	
Recorder	0.00	8648	Inside	3636.00	
Recorder	0.00	6799	Inside	3636.00	
Perforations	19.00			3655.00	
Bullnose	5.00			3660.00	25.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>54.00</b>				



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

FLUID SUMMARY

Great Plains Energy

29-3s-23w Norton,KS

6121 S 58th St. STE - B  
Lincoln, NE 66516

Persinger #1-29

ATTN: Clayton Erickson

Job Ticket: 45618

DST#: 3

Test Start: 2012.03.11 @ 07:04:00

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 48.00 sec/qt

Water Loss: 6.37 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 1600.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: deg API

Water Salinity: 40000 ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud (Heavy) 100M	0.025
175.00	MW 5M 95W	1.407
220.00	MW 10M 90W	3.086

Total Length: 400.00 ft      Total Volume: 4.518 bbl

Num Fluid Samples: 0

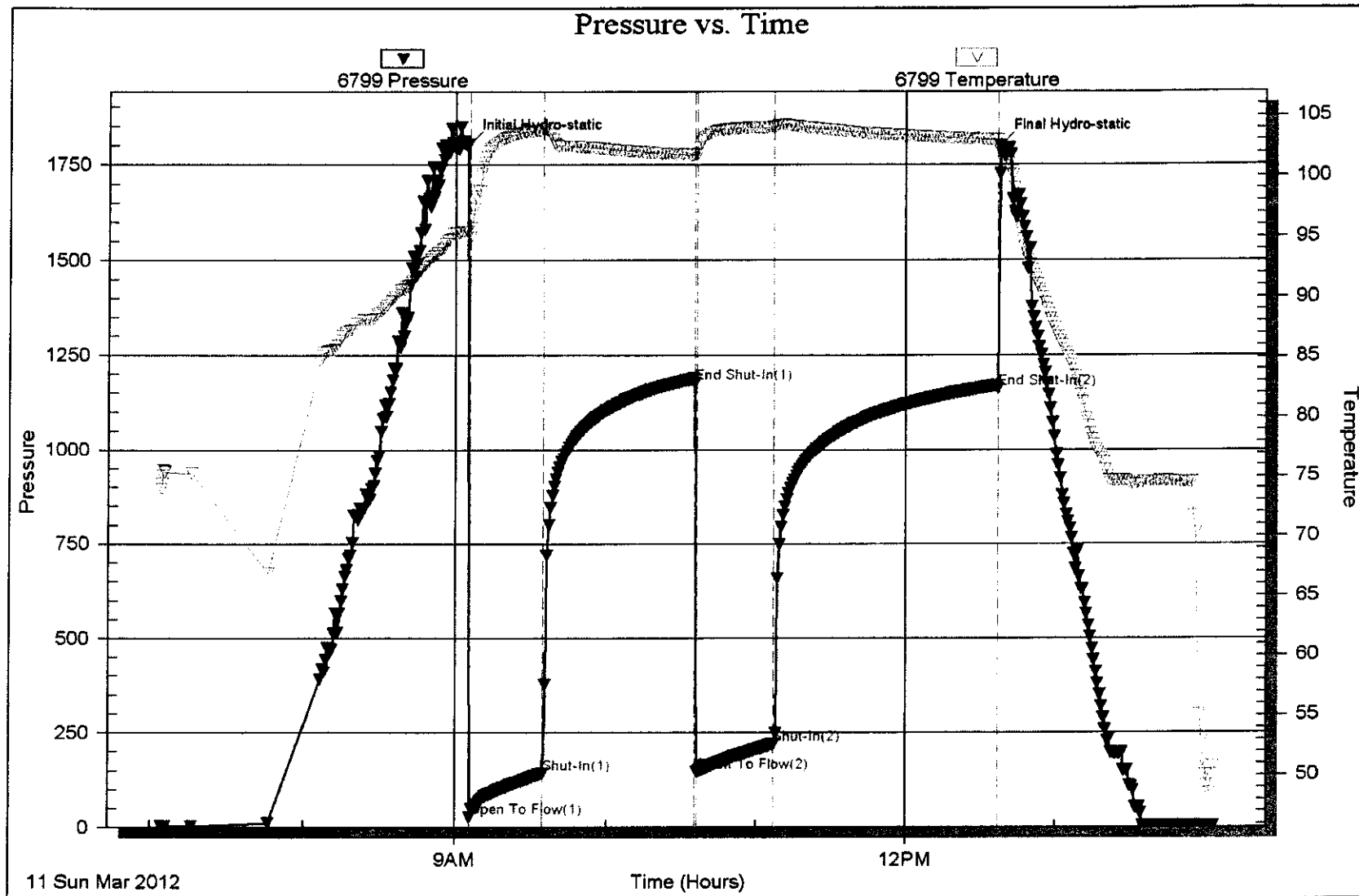
Num Gas Bombs: 0

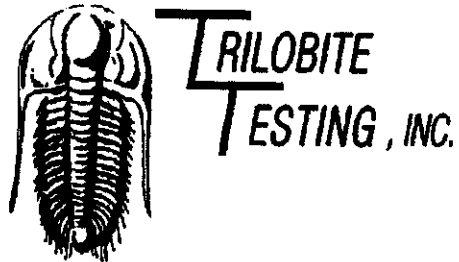
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .2 @ 64 = 40,000ppm





## DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy**

6121 S 58th St. STE - B  
Lincoln, NE 66516

ATTN: Clayton Erickson

**Persinger #1-29**

**29-3s-23w Norton,KS**

Start Date: 2012.03.11 @ 21:47:00

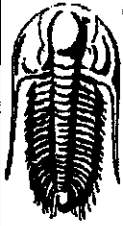
End Date: 2012.03.12 @ 05:04:00

Job Ticket #: 45619                      DST #: 4

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

Printed: 2012.03.22 @ 10:26:30

Great Plains Energy    29-3s-23w Norton,KS    Persinger #1-29    DST # 4    LKC "J.K"    2012.03.11



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Great Plains Energy

29-3s-23w Norton, KS

6121 S 58th St. STE - B  
Lincoln, NE 66516

Persinger #1-29

Job Ticket: 45619

DST#: 4

ATTN: Clayton Erickson

Test Start: 2012.03.11 @ 21:47:00

## GENERAL INFORMATION:

Formation: LKC "J-K"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:49:45

Time Test Ended: 05:04:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: 3660.00 ft (KB) To 3704.00 ft (KB) (TVD)

Total Depth: 4704.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2454.00 ft (KB)

2449.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6799

Inside

Press@RunDepth: 64.07 psig @ 3661.00 ft (KB)

Start Date: 2012.03.11

End Date:

2012.03.12

Start Time: 21:47:05

End Time:

05:03:59

Capacity: 8000.00 psig

Last Calib.: 2012.03.12

Time On Btm: 2012.03.11 @ 23:48:45

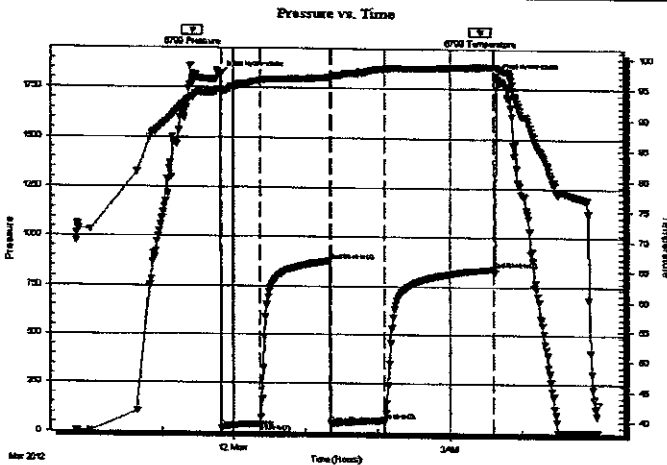
Time Off Btm: 2012.03.12 @ 03:38:45

TEST COMMENT: IF- Surface blow built to 2"

IS- No Return

FF- Surface blow started at 15 min. Built to 1"

FS- No Return



## PRESSURE SUMMARY

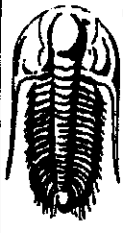
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1813.94	94.75	Initial Hydro-static
1	22.71	94.36	Open To Flow (1)
33	41.55	96.21	Shut-In(1)
91	875.97	96.79	End Shut-In(1)
92	47.06	96.68	Open To Flow (2)
137	64.07	98.25	Shut-In(2)
228	838.26	98.68	End Shut-In(2)
230	1814.05	98.47	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
80.00	Mud 100M	0.39

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Great Plains Energy  
6121 S 58th St. STE - B  
Lincoln, NE 66516  
ATTN: Clayton Erickson

**29-3s-23w Norton, KS**  
**Persinger #1-29**  
Job Ticket: 45619      DST#: 4  
Test Start: 2012.03.11 @ 21:47:00

**Tool Information**

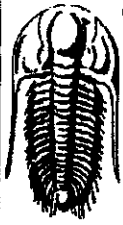
Drill Pipe:	Length: 3521.00 ft	Diameter: 3.80 inches	Volume: 49.39 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 48000.00 lb
			<u>Total Volume: 49.98 bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 37000.00 lb
Depth to Top Packer:	3660.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	73.00 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			3632.00	
Shut In Tool	5.00			3637.00	
Hydraulic tool	5.00			3642.00	
Jars	5.00			3647.00	
Safety Joint	3.00			3650.00	
Packer	5.00			3655.00	29.00      Bottom Of Top Packer
Packer	5.00			3660.00	
Stubb	1.00			3661.00	
Recorder	0.00	8648	Inside	3661.00	
Recorder	0.00	6799	Inside	3661.00	
Perforations	7.00			3668.00	
Drill Pipe	31.00			3699.00	
Bullnose	5.00			3704.00	44.00      Bottom Packers & Anchor

**Total Tool Length: 73.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Great Plains Energy

29-3s-23w Norton, KS

6121 S 58th St. STE - B  
Lincoln, NE 66516

Persinger #1-29

Job Ticket: 45619

DST#: 4

ATTN: Clayton Erickson

Test Start: 2012.03.11 @ 21:47:00

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 52.00 sec/qt

Water Loss: 6.78 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 2200.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: deg API

ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	Mud 100M	0.393

Total Length: 80.00 ft      Total Volume: 0.393 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

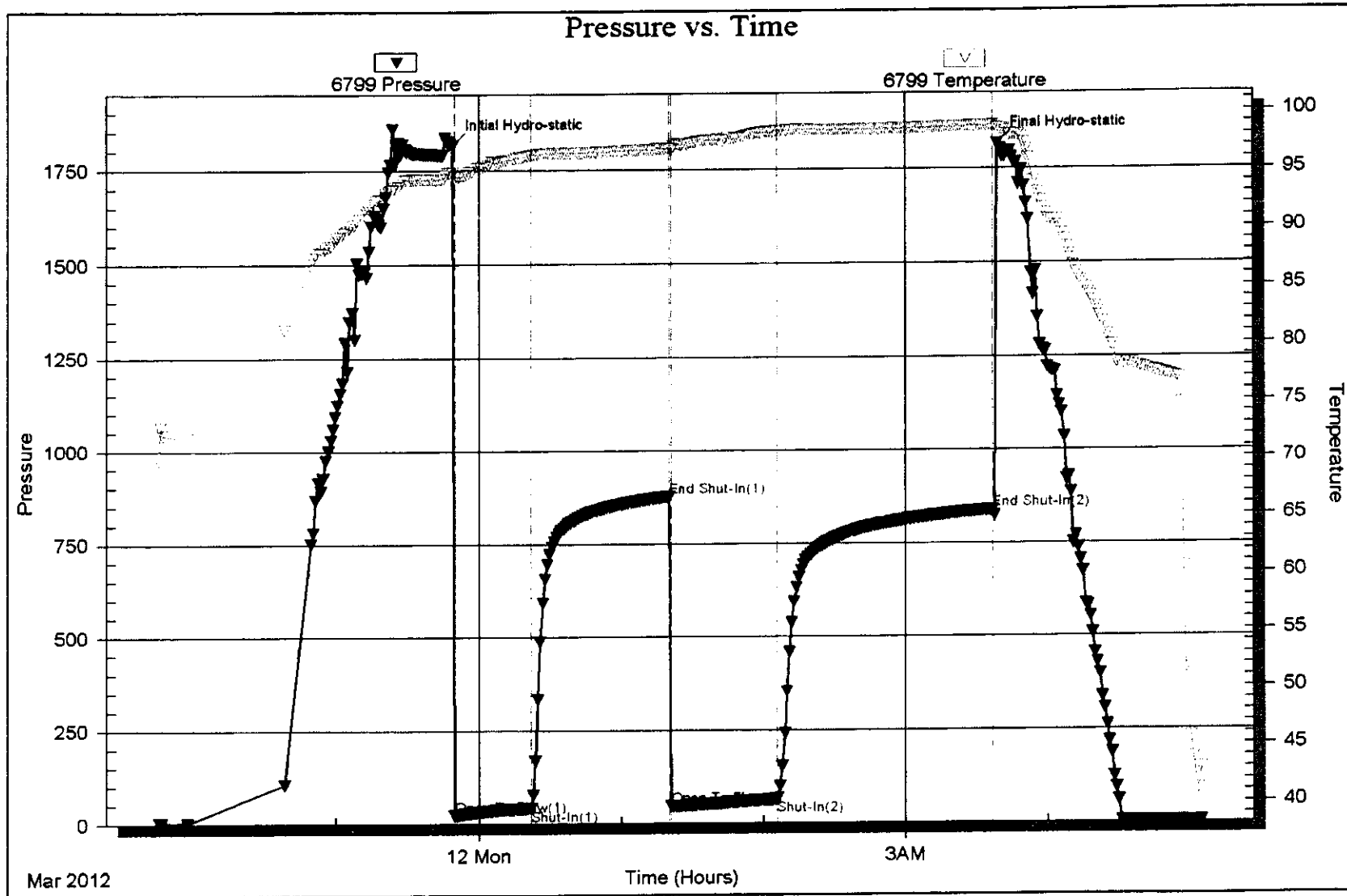
Serial #:

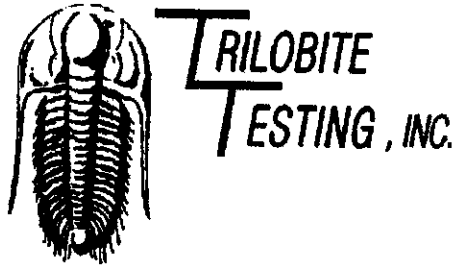
Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy**

6121 S 58th St. STE - B  
Lincoln, NE 66516

ATTN: Clayton Erickson

**Persinger #1-29**

**29-3s-23w Norton,KS**

Start Date: 2012.03.12 @ 05:39:00

End Date: 2012.03.12 @ 13:10:45

Job Ticket #: 45620                      DST #: 5

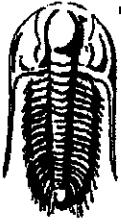
Great Plains Energy    29-3s-23w Norton,KS    Persinger #1-29    DST # 5    Arbuckle    2012.03.12

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.03.22 @ 10:26:51



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Great Plains Energy

29-3s-23w Norton, KS

6121 S 58th St. STE - B  
Lincoln, NE 66516

Persinger #1-29

Job Ticket: 45620

DST#: 5

ATTN: Clayton Erickson

Test Start: 2012.03.12 @ 05:39:00

### GENERAL INFORMATION:

Formation: **Arbuckle**

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

Time Tool Opened: 08:50:45

Time Test Ended: 13:10:45

Test Type: **Conventional Bottom Hole (Initial)**

Tester: **Kevin Mack**

Unit No: **43**

Interval: **3777.00 ft (KB) To 3781.00 ft (KB) (TVD)**

Total Depth: **3781.00 ft (KB) (TVD)**

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

Reference Elevations: **2454.00 ft (KB)**

**2449.00 ft (CF)**

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

Serial #: **6799** Inside

Press@RunDepth: **26.37 psig @ 3778.00 ft (KB)**

Start Date: **2012.03.12**

End Date:

2012.03.13

Capacity: **8000.00 psig**

Last Calib.: **2012.03.13**

Start Time: **17:39:05**

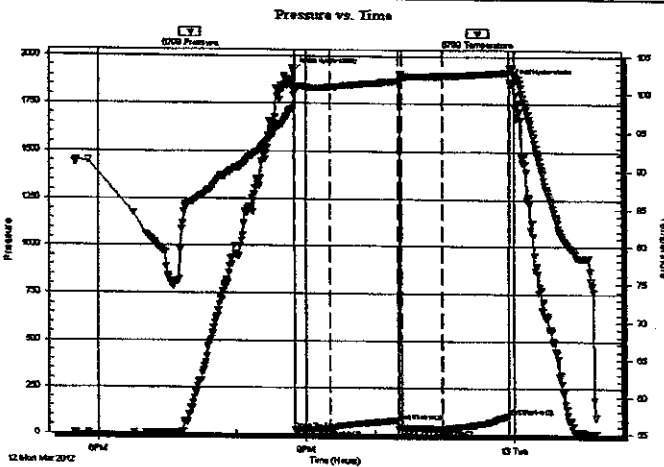
End Time:

01:10:44

Time On Btm: **2012.03.12 @ 20:49:45**

Time Off Btm: **2012.03.12 @ 23:56:30**

TEST COMMENT: IF- Weak surface blow died in 2 min.  
IS- No Return  
FF- No Blow - Flushed tool - No Blow  
FS- No Return



### PRESSURE SUMMARY

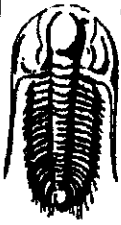
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1919.28	99.67	Initial Hydro-static
1	22.48	100.09	Open To Flow (1)
31	24.25	100.72	Shut-in(1)
90	72.64	101.59	End Shut-in(1)
93	34.22	102.11	Open To Flow (2)
129	26.37	102.29	Shut-in(2)
186	100.49	102.74	End Shut-in(2)
187	1870.26	103.38	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbt)
4.00	OCM 95M 5o	0.02
1.00	Free Oil 100o	0.00

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Great Plains Energy

**29-3s-23w Norton, KS**

6121 S 58th St. STE - B  
Lincoln, NE 66516

**Persinger #1-29**

Job Ticket: 45620

DST#: 5

ATTN: Clayton Erickson

Test Start: 2012.03.12 @ 05:39:00

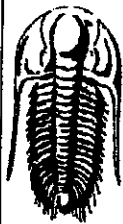
### Tool Information

Drill Pipe:	Length: 3648.00 ft	Diameter: 3.80 inches	Volume: 51.17 bbl	Tool Weight: 2500.00 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: 48000.00 lb
			<u>Total Volume: 51.76 bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3777.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	4.00 ft			
Tool Length:	33.00 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			3749.00	
Shut In Tool	5.00			3754.00	
Hydraulic tool	5.00			3759.00	
Jars	5.00			3764.00	
Safety Joint	3.00			3767.00	
Packer	5.00			3772.00	29.00 Bottom Of Top Packer
Packer	5.00			3777.00	
Stubb	1.00			3778.00	
Recorder	0.00	8648	Inside	3778.00	
Recorder	0.00	6799	Inside	3778.00	
Bullnose	3.00			3781.00	4.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>33.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Great Plains Energy

29-3s-23w Norton, KS

6121 S 58th St. STE - B  
Lincoln, NE 66516

**Persinger #1-29**

Job Ticket: 45620

**DST#: 5**

ATTN: Clayton Erickson

Test Start: 2012.03.12 @ 05:39:00

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 46.00 sec/qt

Water Loss: 6.78 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 2700.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbbl

psig

Oil API:

Water Salinity:

deg API

ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
4.00	OCM 95M 5o	0.020
1.00	Free Oil 100o	0.005

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

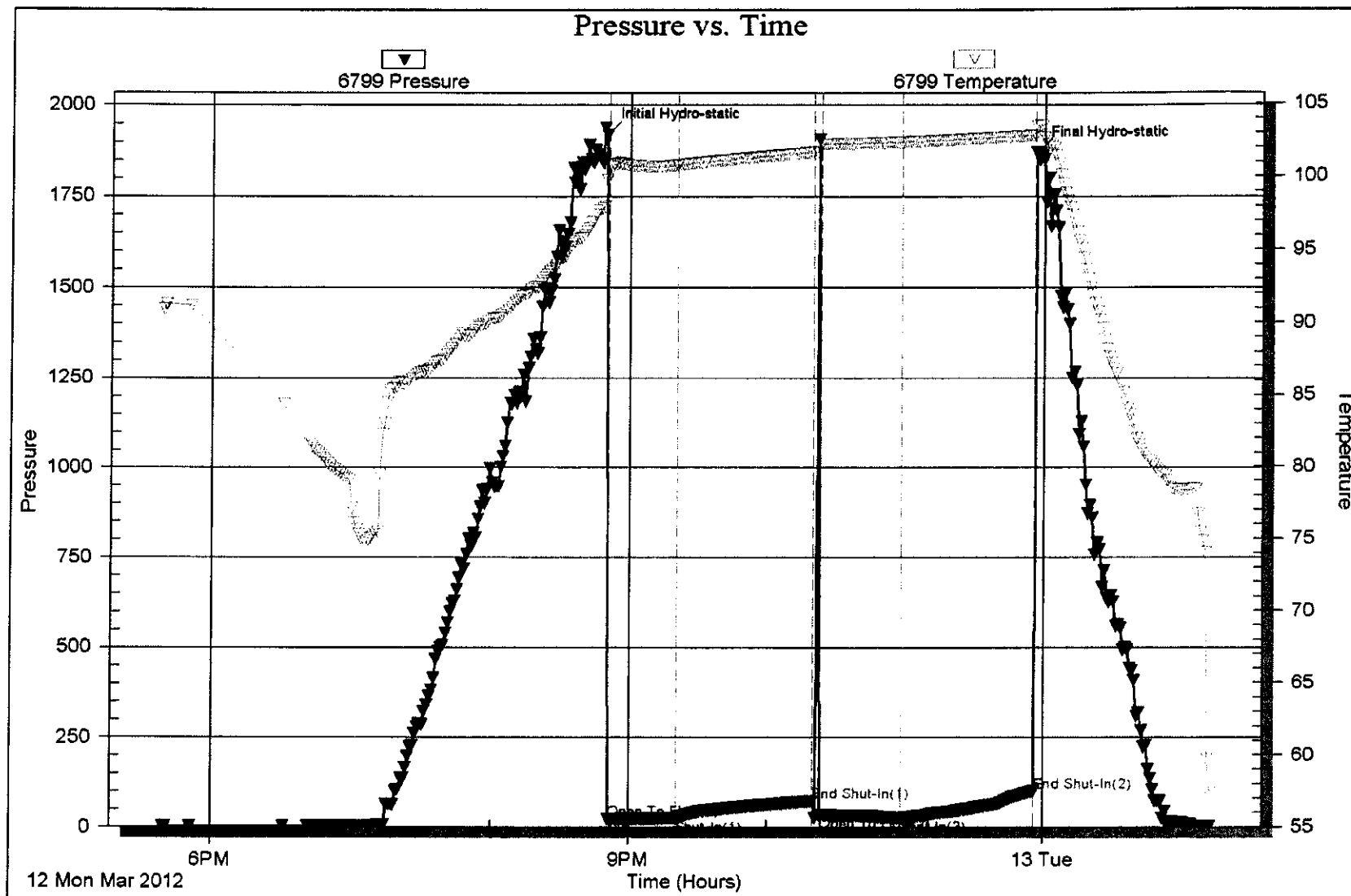
Num Gas Bombs: 0

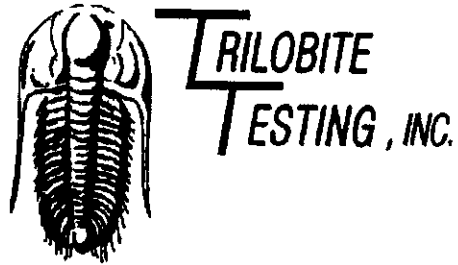
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





## DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy**

6121 S 58th St. STE - B  
Lincoln, NE 66516

ATTN: Clayton Erickson

**Persinger #1-29**

**29-3s-23w Norton,KS**

Start Date: 2012.03.13 @ 05:43:00

End Date: 2012.03.13 @ 12:58:00

Job Ticket #: 45621                      DST #: 6

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

Printed: 2012.03.22 @ 10:28:04

Great Plains Energy  
29-3s-23w Norton,KS  
Persinger #1-29  
DST # 6  
Arbuckle  
2012.03.13



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

Great Plains Energy

29-3s-23w Norton, KS

6121 S 58th St. STE - B  
Lincoln, NE 66516

Persinger #1-29

Job Ticket: 45621

DST#: 6

ATTN: Clayton Erickson

Test Start: 2012.03.13 @ 05:43:00

**GENERAL INFORMATION:**

Formation: **Arbuckle**

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

Time Tool Opened: 07:54:45

Time Test Ended: 12:58:00

Test Type: **Conventional Bottom Hole (Initial)**

Tester: **Kevin Mack**

Unit No: **43**

Interval: **3778.00 ft (KB) To 3786.00 ft (KB) (TVD)**

Total Depth: **3786.00 ft (KB) (TVD)**

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

Reference Elevations: **2454.00 ft (KB)**

**2449.00 ft (CF)**

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

Serial #: **6799** Inside

Press@RunDepth: **62.73 psig @ 3779.00 ft (KB)**

Start Date: **2012.03.13**

End Date:

**2012.03.13**

Capacity: **8000.00 psig**

Start Time: **05:43:05**

End Time:

**12:57:59**

Last Calib.: **2012.03.13**

Time On Btm: **2012.03.13 @ 07:54:30**

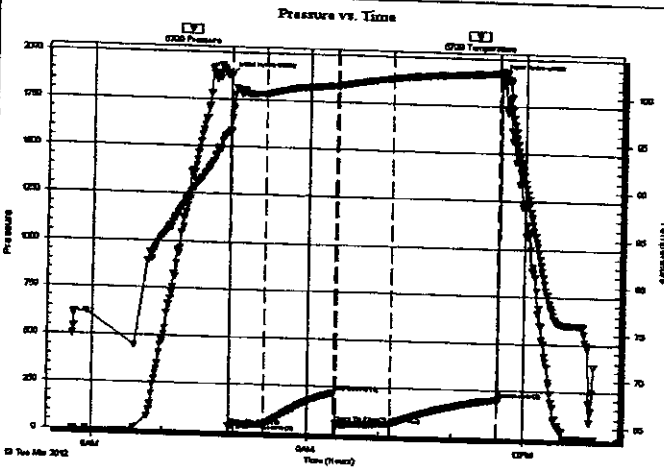
Time Off Btm: **2012.03.13 @ 11:39:15**

TEST COMMENT: **F- 1/2" Blow built to 3 1/4"**

**IS- No Return**

**FF- Surface Blow started at 1 min. Built to**

**FS- No Return**



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1878.79	95.81	Initial Hydro-static
1	33.18	95.58	Open To Flow (1)
30	45.47	99.76	Shut-In(1)
89	219.21	100.80	End Shut-In(1)
90	60.03	100.75	Open To Flow (2)
135	62.73	101.75	Shut-In(2)
224	203.53	102.50	End Shut-In(2)
225	1901.42	102.85	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
50.00	OCWM 25o 5W 70M	0.25
40.00	Free oil 100o	0.20

**Gas Rates**

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Great Plains Energy

**29-3s-23w Norton, KS**

6121 S 58th St. STE - B  
Lincoln, NE 68516

**Persinger #1-29**

Job Ticket: 45621

**DST#: 6**

ATTN: Clayton Erickson

Test Start: 2012.03.13 @ 05:43:00

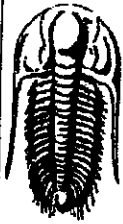
## Tool Information

Drill Pipe:	Length: 3648.00 ft	Diameter: 3.80 inches	Volume: 51.17 bbl	Tool Weight: 2500.00 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: 48000.00 lb
			<b>Total Volume: 51.76 bbl</b>	Tool Chased: ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3778.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	8.00 ft			
Tool Length:	37.00 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			3750.00	
Shut In Tool	5.00			3755.00	
Hydraulic tool	5.00			3760.00	
Jars	5.00			3765.00	
Safety Joint	3.00			3768.00	
Packer	5.00			3773.00	29.00 Bottom Of Top Packer
Packer	5.00			3778.00	
Stubb	1.00			3779.00	
Recorder	0.00	8648	Inside	3779.00	
Recorder	0.00	6799	Inside	3779.00	
Perforations	4.00			3783.00	
Bullnose	3.00			3786.00	8.00 Bottom Packers & Anchor

**Total Tool Length: 37.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Great Plains Energy

29-3s-23w Norton, KS

6121 S 58th St. STE - B  
Lincoln, NE 66516

Persinger #1-29

Job Ticket: 45621

DST#: 6

ATTN: Clayton Erickson

Test Start: 2012.03.13 @ 05:43:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Mud Weight: 9.00 lb/gal

Cushion Length:

Oil API:

36 deg API

Viscosity: 46.00 sec/qt

Cushion Volume:

ft

Water Salinity:

ppm

Water Loss: 6.78 in<sup>3</sup>

Gas Cushion Type:

bbl

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	OCWM 25o 5W 70M	0.246
40.00	Free oil 100o	0.197

Total Length: 90.00 ft      Total Volume: 0.443 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

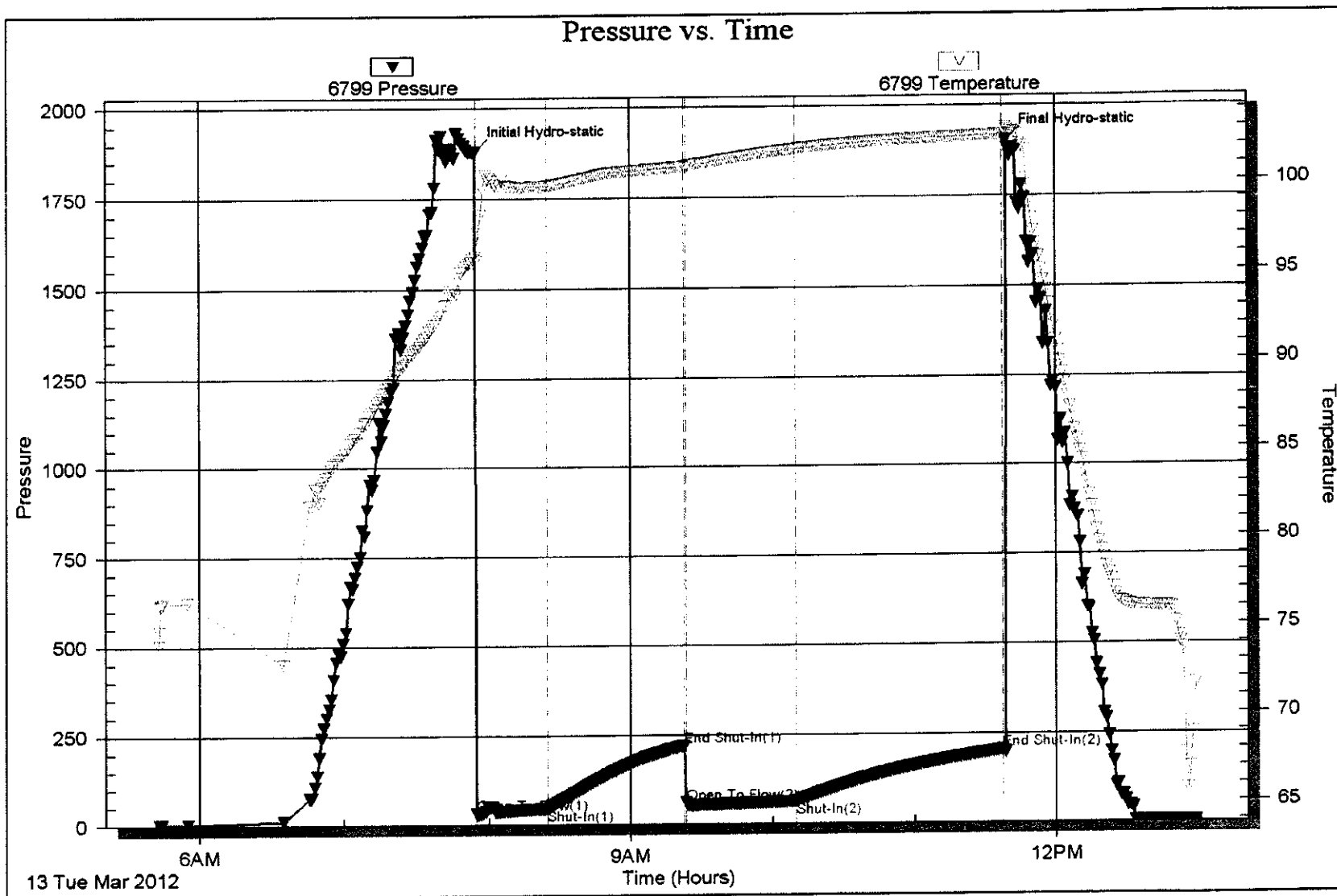
Recovery Comments: Oil API 38 @ 80 deg. = 36

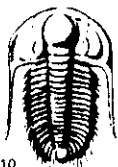
Serial #: 6799

Inside Great Plains Energy

Persinger #1-29

DST Test Number: 6





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 45616

Well Name & No. Persinger Farms #1-29 Test No. 1 Date 3-9-12  
 Company Great Plains Energy Elevation 2454 KB 2449 GL  
 Address 6121 S 58th St STE-B Lincoln, NE 68516  
 Co. Rep / Geo. Clayton Erickson Rig W6#6  
 Location: Sec. 29 Twp. 3s Rge. 23w Co. Norton State KS

Interval Tested 3495 - 3555 Zone Tested Toronto - LKC "A"  
 Anchor Length 60' Drill Pipe Run 3864 Mud Wt. 8.9  
 Top Packer Depth 3491 Drill Collars Run 120' Vis 57  
 Bottom Packer Depth 3495 Wt. Pipe Run Ø WL 6.4  
 Total Depth 3555 Chlorides 4200 ppm System LCM 1.5

Blow Description IF - Weak Surface blow died in 10 min  
IS - No Return  
FF - No Blow  
FS - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>Mud</u>			<u>6.5</u>	

Rec Total 60 BHT 97  
 (A) Initial Hydrostatic 1712  
 (B) First Initial Flow 20  
 (C) First Final Flow 42  
 (D) Initial Shut-In 12.44  
 (E) Second Initial Flow 48  
 (F) Second Final Flow 67  
 (G) Final Shut-In 12.33  
 (H) Final Hydrostatic 1670

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 30  
 Final Shut-In 60

Gravity - API RW - @ - °F Chlorides - ppm  
 Test  
 Jars  
 Safety Joint  
 Circ Sub NIC  
 Hourly Standby  
 Mileage 80RT  
 Sampler  
 Straddle  
 Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility  
 Sub Total 1310

T-On Location 8:30 PM  
 T-Started 10:38 PM  
 T-Open 12:46 AM  
 T-Pulled 3:46 AM  
 T-Out 5:17 AM

Comments  
 Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 10  
 Total 1320  
 MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

ERICKSON WELLSITE GEOLOGY



Scale 1:240 (5"=100') Imperial  
Measured Depth Log

Well Name: Persinger #1-29  
Location: NE SW NW SE 1-29  
License Number:  
Spud Date: 3-6-2012  
Surface Coordinates: 1680' FSL & 2100' Sec 29, T3S, R37W  
Region: Norton County, KS  
Drilling Completed: 3/13/2012

Bottom Hole  
Coordinates:  
Ground Elevation (ft): 2451  
Logged Interval (ft): 3200 To: TD  
Formation:  
Type of Drilling Fluid: Chemical Mud  
K.B. Elevation (ft): 2456  
Total Depth (ft): 3870

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Great Plains Energy, Inc.  
Address: 429 N. Linden, P.O. Box 292  
Wahoo, NE 68066

GEOLOGIST

Name: Clayton Erickson  
Company: Erickson Wellsite Geology  
Address: 402 Palmer Street  
P.O. Box 294  
Loomis, NE 68958

DSTs

DST #1 3495-3555 30-60-30-60; Hydro: 1712-1670 IFP: 20-42 ISIP: 1244 FFP: 48-67 FSIP: 1233; Rec: 60' mud; IF: surface dead in 10min ISI: dead FF: dead FSI: dead

DST #2 3555-3594 30-60-46-90; Hydro: 1752-1716 IFP: 23-73 ISIP: 1148 FFP: 66-91 FSIP: 1078; Rec: 1' free oil 10' oswm 30%w 70%m 60' mw 70%w 30%m 55' mw 85%w 15%m 5' mud; RW: .43@66F Chi: 20,000ppm; IF: 1/4" died back to 1/8" ISI: dead FF: 1/8" died back to surface FSI: dead

10' oswm 30%w 70% m 60' mw 70%w 30% m 50' mw 80%w 10% m 0 mud, RW: .2@64F Chl: 40,000ppm, IF: 1/4" died back to 1/8" ISI: dead FF: 1/8" died back to surface FSI: dead

DST #3 3635-3660 30-60-30-90; Hydro: 1800-1798 IFP: 27-142 ISIP: 1176 FFP: 146-219 FSIP: 1160; Rec: 220' mw 90%w 10% m 175' mw 95%w 5% m 5' mud; RW: .2@64F Chl: 40,000ppm; IF: BOB 13min ISI: dead FF: BOB 20min FSI: dead

DST #4 3660-3704 30-60-45-90; Hydro: 1813-1814 IFP: 22-41 ISIP: 875 FFP: 47-84 FSIP: 838; Rec: 80' mud IF: 2" ISI: dead FF: 1" FSI: dead

DST #5 3777-3781 30-60-30-60; Hydro: 1919-1870 IFP: 22-24 ISIP: 72 FFP: 34-26 FSIP: 100; Rec: 1' oil 4' ocm 5%o 95% m; IF: dead in 2min ISI: dead FF: dead FSI: dead

DST #6 3778-3786 30-60-45-90; Hydro: 1878-1901 IFP: 33-45 ISIP: 219 FFP: 60-62 FSIP: 203; Rec: 40' oil 60' wocm 25%o 5%w 70% m; Grav: 36; IF: 3 1/4" ISI: dead FF: 3" FSI: dead

COMMENTS

FORMATION TOPS

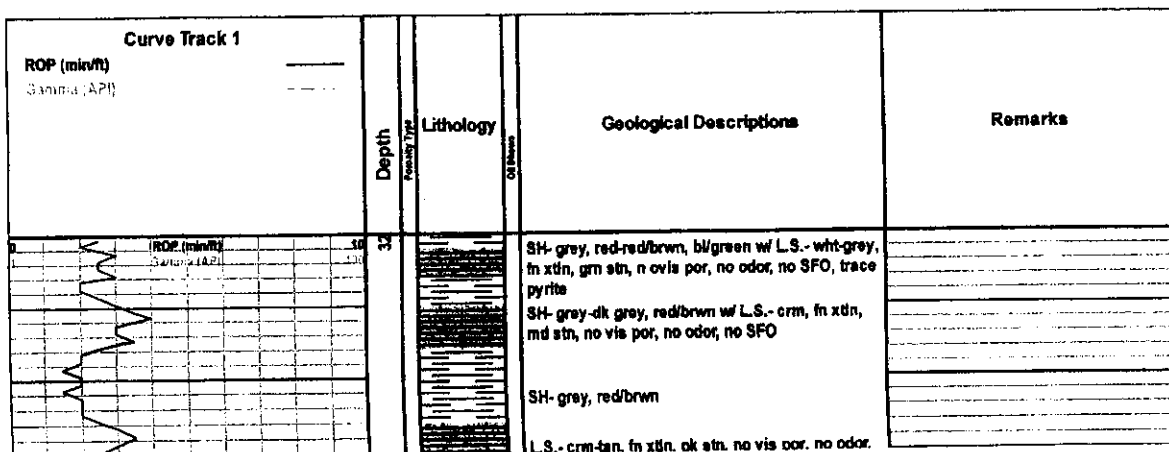
	Log Tops	Sample tops
ANHYDRITE	2053(+403)	2053(+403)
Base Anhy	2084(+372)	2088(+370)
TOPEKA	3307(-851)	3310(-854)
HEEBNER	3500(-1044)	3500(-1044)
TORONTO	3630(-1074)	3529(-1073)
LANSING	3643(-1087)	3543(-1087)
BKC	3726(-1270)	3726(-1270)
GORHAM	3770(-1314)	3769(-1313)
ARBUCKLE	3780(-1324)	3778(-1322)
Granite	3830(-1374)	3830(-1374)
TD	3871(-1415)	3870(-1414)

ROCK TYPES

Anhy	Clyst	Gyp	Mrlst	Shgy
Bent	Carb. shale	Igne	Salt	Sltst
Brec	Arkose	Lmst	Shale	Ss
Cht	Dol	Meta	Shcol	Tlll

OTHER SYMBOLS

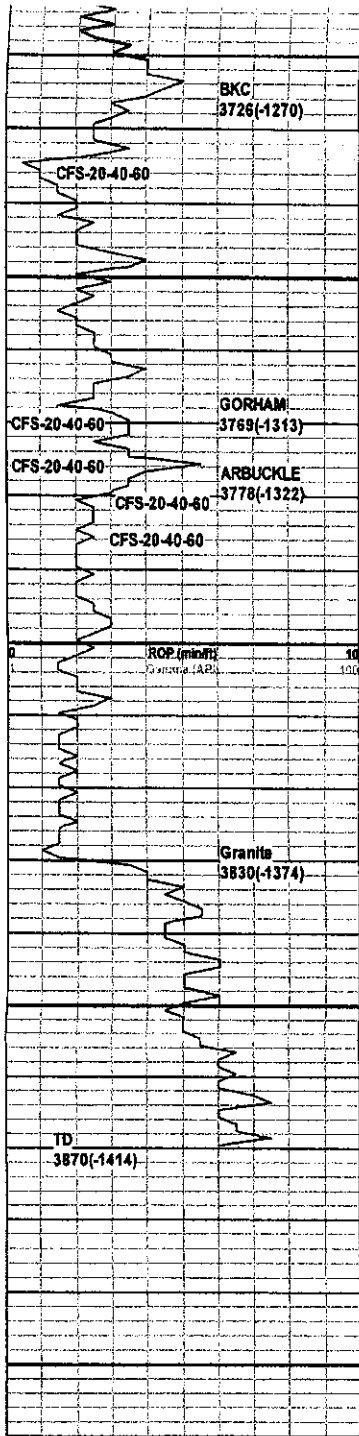
OIL SHOW Even	Spotted	Dead	INTERVAL Dst
Ques			











L.S. - wht, fn xtn, grn stn, fr int gran por, v fnt odor, pr-fr SFO

SH- red/brwn

SH- red/brwn, grey, bl/green

as above

L.S. - crm-v lt grey, fn xtn, pk-grn stn, no via por, no odor, no SFO

L.S. - crm, freq red/brwn arg, fn xtn, wk-ph stn, no via por, no odor, no SFO, scat ell endy w/ SH- red/brwn, grey

S.S. - fn grn, sub round, calc cem, pr int gran por, scat asph res, dk brwn oil stain, pr SFO, no odor

Dolo- wht-red, fn-med xtn, v pr-fr int xtn por, scat vugs, fr odor, fr SFO, abnd glauc

Dolo- crm-pink, med xtn, fr int xtn por, scat vugs, gd odor, fr-gd SFO, com glauc, scat andy

Dolo- crm, med xtn, fr int xtn por, gd odor, gd SFO, abnd glauc, freq pyrite, scat sndy

S.S. - wht-frm, fn-med grn, sub ang-sub round, pry artd, dolo cem, pr int gran por, fr odor, fr SFO w/ abnd tarry-asph res, com glauc w/ Dolo- wht-frm, med-fn xtn, v sndy, pr int xtn por, fr odor, pr-fr SFO, sli chiky

S.S. - wht-frm, some pale bl/green, pr int gran por, dolo cem, fn-med grn, sub ang-sub round, fr odor, pr SFO, com asph res, chiky

S.S. - arkosic, tan-frm-ormg, qtz grains, crs, ang-sub ang, freq feldspar, scat biotite, comm blk asph res, fr odor, pr SFO

Granite

DST #6 3777-3781 30-60-30-60  
Hydro: 1919-1870  
IFP: 22-24 ISIP: 72  
FFP: 34-26 FSIP: 100  
Rec: 1' oil  
4' ocm 5%o 96%w  
IF: dead in 2min ISI: dead  
FF: dead FSI: dead

DST #6 3778-3786 30-60-45-90  
Hydro: 1878-1981  
IFP: 33-45 ISIP: 219  
FFP: 60-62 FSIP: 203  
Rec: 40' oil  
50' wocm 25%o 5%w 70%w  
Grav: 36  
IF: 3 1/4" ISI: dead  
FF: 3" FSI: dead