

DRILL STEM TEST REPORT

Prepared For: **Phillips Exploration**

4109 N Ironwood
Wichita KS 67226

ATTN: Jim Phillips

29 8S 22W Graham KS

Fritts #2-29

Start Date: 2007.10.15 @ 19:47:17

End Date: 2007.10.16 @ 02:16:11

Job Ticket #: 30631 DST #: 1

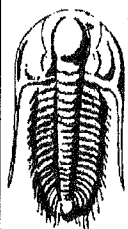
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Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Phillips Exploration
Fritts #2-29
29 8S 22W Graham KS
DST # 1
70' - 90'
2007.10.15



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Phillips Exploration

4109 N Ironwood
Wichita KS 67226

ATTN: Jim Phillips

Fritts #2-29

29 8S 22W Graham KS

Job Ticket: 30631

DST#: 1

Test Start: 2007.10.15 @ 19:47:17

GENERAL INFORMATION:

Formation: **70' - 90'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:34:12

Time Test Ended: 02:16:11

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: **3516.00 ft (KB) To 3540.00 ft (KB) (TVD)**

Total Depth: 3540.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2200.00 ft (KB)

2195.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8018 Inside

Press@RunDepth: 378.60 psig @ 3517.01 ft (KB)

Start Date: 2007.10.15

End Date: 2007.10.16

Capacity: 7000.00 psig

Last Calib.: 2007.10.16

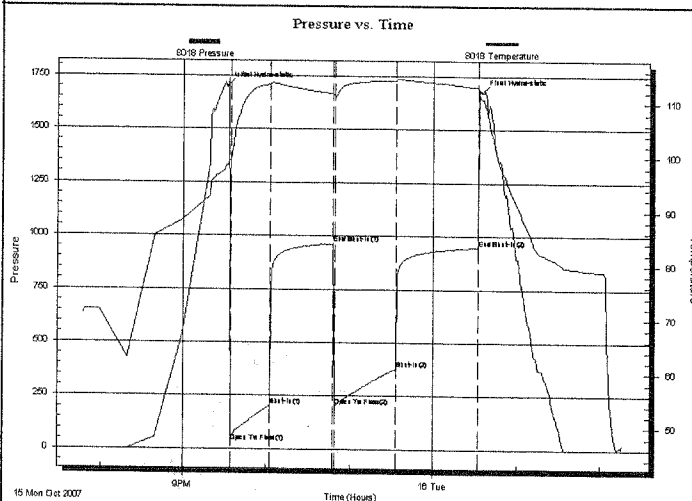
Start Time: 19:47:17

End Time: 02:16:11

Time On Btm: 2007.10.15 @ 21:31:42

Time Off Btm: 2007.10.16 @ 00:34:41

TEST COMMENT: IFP BOB 7 min.
ISI No blow back
FFP BOB 8 min.
FSI No blow back



PRESSURE SUMMARY

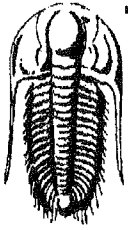
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1698.87	98.45	Initial Hydro-static
3	29.73	99.31	Open To Flow (1)
31	203.25	113.44	Shut-In (1)
77	962.14	111.77	End Shut-In (1)
78	204.39	111.41	Open To Flow (2)
122	378.60	114.22	Shut-In (2)
181	946.74	113.04	End Shut-In (2)
183	1672.32	110.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	100%M	0.15
710.00	MW 95%W 5%M	9.11
45.00	VSOCWM 3%O 37%W 60%M	0.63

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Phillips Exploration

Fritts #2-29

4109 N Ironwood
Wichita KS 67226

29 8S 22W Graham KS

ATTN: Jim Phillips

Job Ticket: 30631

DST#: 1

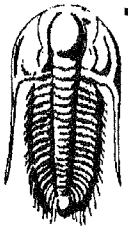
Test Start: 2007.10.15 @ 19:47:17

Tool Information

Drill Pipe:	Length: 3391.00 ft	Diameter: 3.80 inches	Volume: 47.57 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: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 60000.00 lb
		Total Volume:	48.17 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 41000.00 lb
Depth to Top Packer:	3516.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.02 ft			
Tool Length:	46.02 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			3499.00	
Hydraulic tool	5.00			3504.00	
Safety Joint	2.00			3506.00	
Packer	5.00			3511.00	22.00 Bottom Of Top Packer
Packer	5.00			3516.00	
Stubb	1.00			3517.00	
Recorder	0.01	8018	Inside	3517.01	
Perforations	20.00			3537.01	
Recorder	0.01	13548	Outside	3537.02	
Bullnose	3.00			3540.02	24.02 Bottom Packers & Anchor
Total Tool Length:	46.02				



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DRILL STEM TEST REPORT

FLUID SUMMARY

Phillips Exploration

Fritts #2-29

4109 N Ironwood
Wichita KS 67226

29 8S 22W Graham KS

ATTN: Jim Phillips

Job Ticket: 30631

DST#: 1

Test Start: 2007.10.15 @ 19:47:17

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:

46000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	100%M	0.148
710.00	MW 95%W 5%M	9.112
45.00	VSOCWM 3%O 37%W 60%M	0.631

Total Length: 785.00 ft

Total Volume: 9.891 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

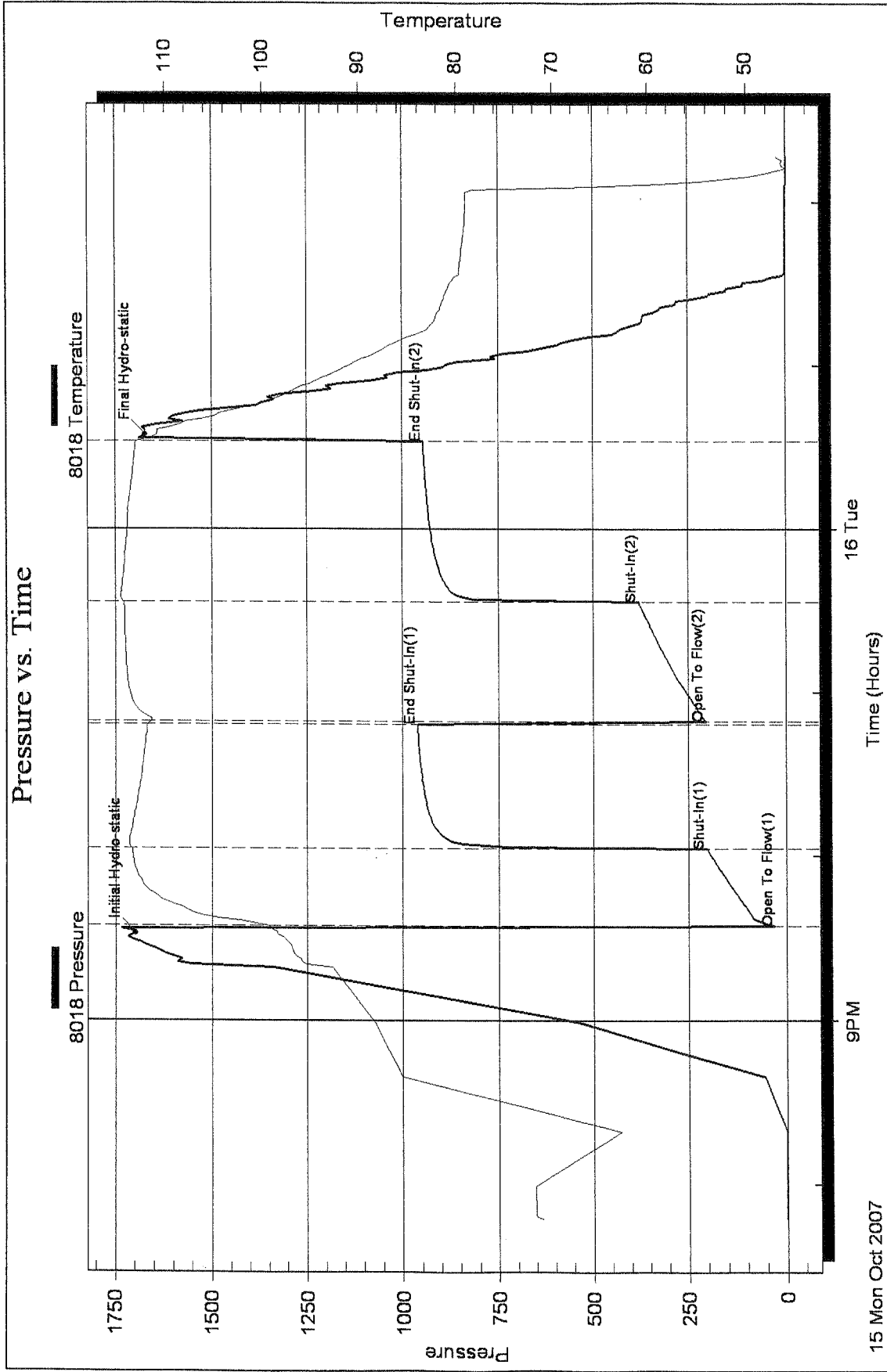
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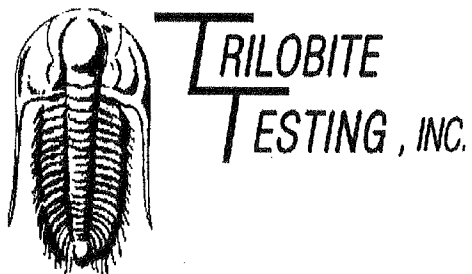
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Phillips Exploration**

4109 N Ironwood
Wichita KS 67226

ATTN: Jim Phillips

29 8S 22W Graham KS

Fritts #2-29

Start Date: 2007.10.16 @ 12:30:22

End Date: 2007.10.16 @ 18:55:16

Job Ticket #: 30632 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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Phillips Exploration

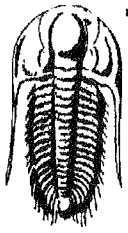
Fritts #2-29

29 8S 22W Graham KS

DST # 2

LKC "L - J"

2007.10.16



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Phillips Exploration

Fritts #2-29

4109 N Ironwood
Wichita KS 67226

29 8S 22W Graham KS

ATTN: Jim Phillips

Job Ticket: 30632

DST#: 2

Test Start: 2007.10.16 @ 12:30:22

GENERAL INFORMATION:

Formation: **LKC "L - J"**
 Deviated: **No** Whipstock: **ft (KB)**
 Time Tool Opened: 14:04:17
 Time Test Ended: 18:55:16

Test Type: **Conventional Bottom Hole**
 Tester: **Brian Fairbank**
 Unit No: **41**

Interval: **3592.00 ft (KB) To 3635.00 ft (KB) (TVD)**
 Total Depth: **3635.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition:

Reference Elevations: **2200.00 ft (KB)**
2195.00 ft (CF)
 KB to GR/CF: **5.00 ft**

Serial #: 8018

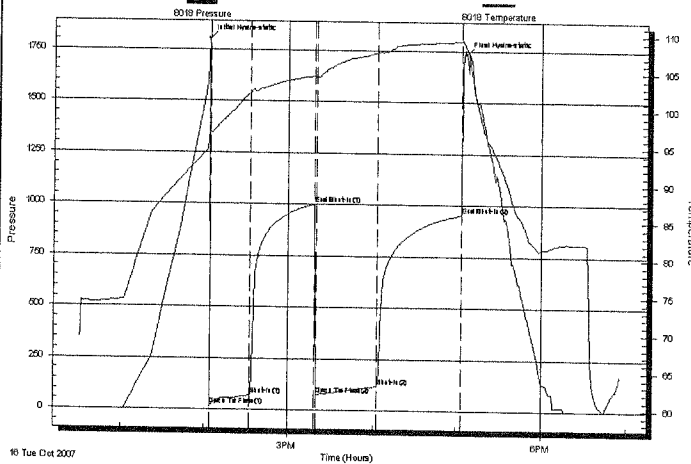
Inside

Press@RunDepth: **116.22 psig @ 3595.01 ft (KB)**
 Start Date: **2007.10.16** End Date: **2007.10.16**
 Start Time: **12:30:22** End Time: **18:55:16**

Capacity: **7000.00 psig**
 Last Calib.: **2007.10.16**
 Time On Btm: **2007.10.16 @ 14:03:17**
 Time Off Btm: **2007.10.16 @ 17:06:16**

TEST COMMENT: IFP BOB 11 min.
 ISI 1 3/4 " blow back - died off to 1/2 "
 FFP BOB 8 min.
 FSI 2 1/2 " blow back died 47 min.

Pressure vs. Time



PRESSURE SUMMARY

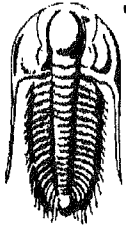
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1802.34	97.36	Initial Hydro-static
1	17.91	96.93	Open To Flow (1)
30	70.43	102.27	Shut-In(1)
75	1000.64	104.53	End Shut-In(1)
76	77.40	104.29	Open To Flow (2)
120	116.22	107.66	Shut-In(2)
180	952.64	109.25	End Shut-In(2)
183	1733.61	108.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
173.00	GHOCM 30%G 30%O 40%M	1.31
90.00	FREE OIL 98%O 2%M	1.26

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Phillips Exploration

Fritts #2-29

4109 N Ironwood
Wichita KS 67226

29 8S 22W Graham KS

Job Ticket: 30632

DST#: 2

ATTN: Jim Phillips

Test Start: 2007.10.16 @ 12:30:22

Tool Information

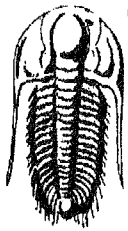
Drill Pipe:	Length: 3452.00 ft	Diameter: 3.80 inches	Volume: 48.42 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 49.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3592.00 ft			Final 43000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	43.02 ft			
Tool Length:	65.02 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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Shut In Tool	5.00			3575.00	
Hydraulic tool	5.00			3580.00	
Safety Joint	2.00			3582.00	
Packer	5.00			3587.00	22.00 Bottom Of Top Packer
Packer	5.00			3592.00	
Stubb	1.00			3593.00	
Perforations	1.00			3594.00	
Change Over Sub	1.00			3595.00	
Recorder	0.01	8018	inside	3595.01	
Blank Spacing	31.00			3626.01	
Change Over Sub	1.00			3627.01	
Perforations	5.00			3632.01	
Recorder	0.01	13548	Outside	3632.02	
Bullnose	3.00			3635.02	43.02 Bottom Packers & Anchor

Total Tool Length: 65.02



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Phillips Exploration

Fritts #2-29

4109 N Ironwood
Wichita KS 67226

29 8S 22W Graham KS

Job Ticket: 30632

DST#: 2

ATTN: Jim Phillips

Test Start: 2007.10.16 @ 12:30:22

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5600.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
173.00	GHOCM 30%G 30%O 40%M	1.306
90.00	FREE OIL 98%O 2%M	1.262

Total Length: 263.00 ft

Total Volume: 2.568 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

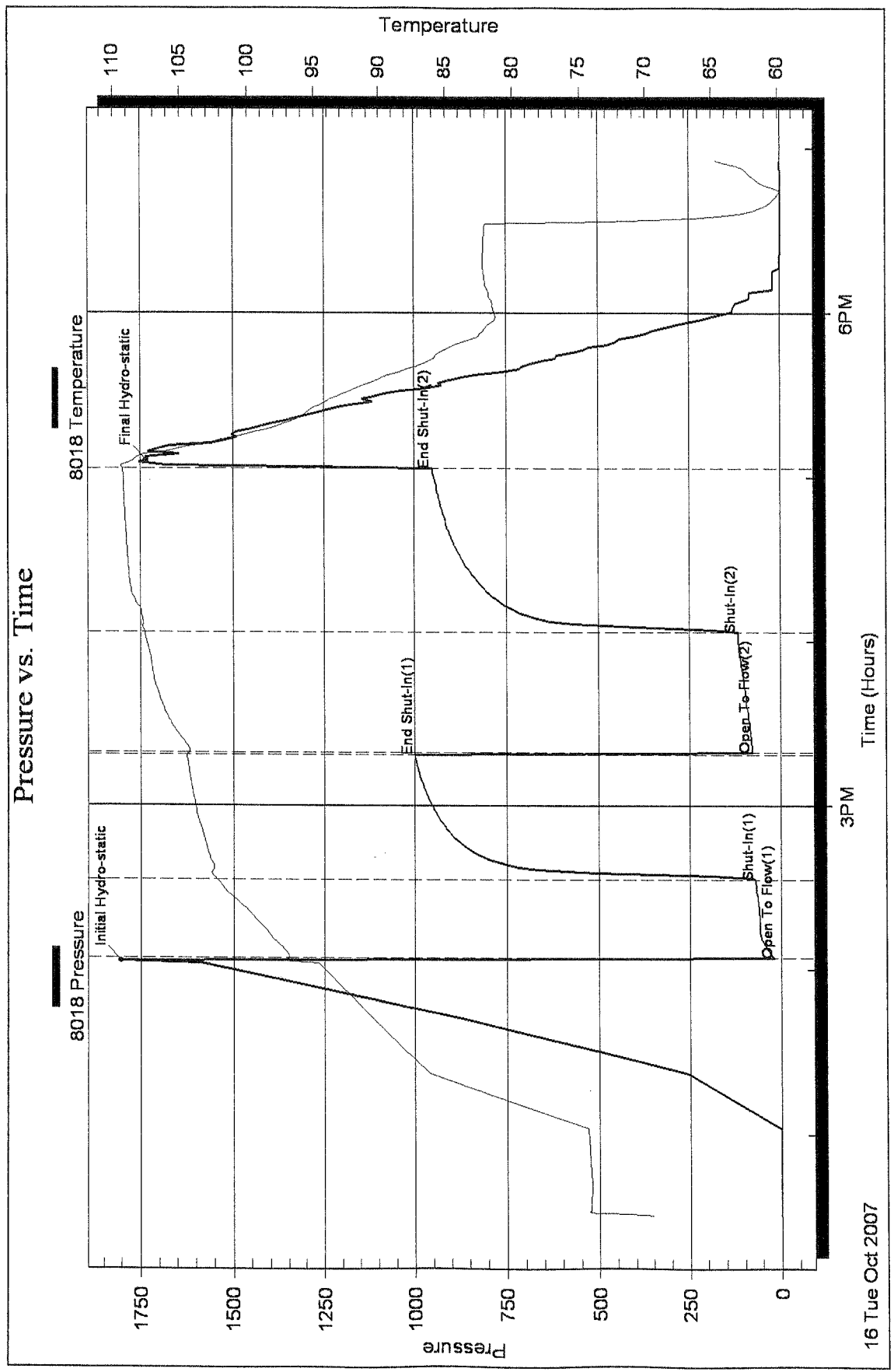
Serial #:

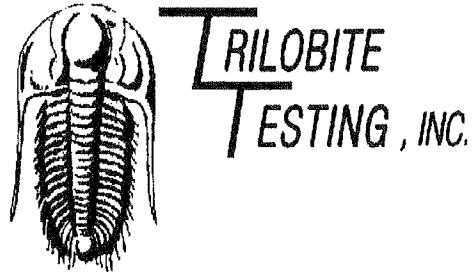
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Phillips Exploration**

4109 N Ironwood
Wichita KS 67226

ATTN: Jim Phillips

29 8S 22W Graham KS

Fritts #2-29

Start Date: 2007.10.17 @ 00:38:07

End Date: 2007.10.17 @ 07:10:01

Job Ticket #: 30633 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Phillips Exploration

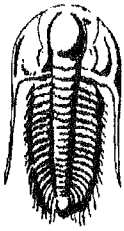
Fritts #2-29

29 8S 22W Graham KS

DST # 3

2007

2007.10.17



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Phillips Exploration

Fritts #2-29

4109 N Ironwood
Wichita KS 67226

29 8S 22W Graham KS

ATTN: Jim Phillips

Job Ticket: 30633

DST#: 3

Test Start: 2007.10.17 @ 00:38:07

GENERAL INFORMATION:

Formation: **200'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:28:02
 Time Test Ended: 07:10:01

Test Type: Conventional Bottom Hole
 Tester: Brian Fairbank
 Unit No: 41

Interval: **3634.00 ft (KB) To 3654.00 ft (KB) (TVD)**
 Total Depth: 3654.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2200.00 ft (KB)
 2195.00 ft (CF)
 KB to GR/CF: 5.00 ft

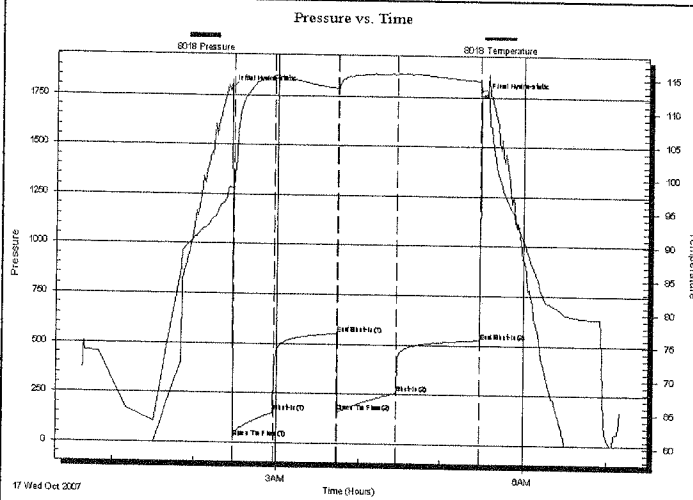
Serial #: 8018

Inside

Press@RunDepth: 257.40 psig @ 3636.01 ft (KB)
 Start Date: 2007.10.17 End Date: 2007.10.17
 Start Time: 00:38:07 End Time: 07:10:01

Capacity: 7000.00 psig
 Last Calib.: 2007.10.17
 Time On Btm: 2007.10.17 @ 02:25:32
 Time Off Btm: 2007.10.17 @ 05:31:01

TEST COMMENT: IFP BOB 10 min.
 ISI No blow back
 FFP BOB 15 min.
 FSI No blow back



PRESSURE SUMMARY

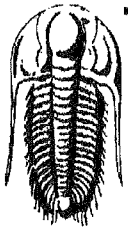
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1775.66	98.55	Initial Hydro-static
3	25.63	98.07	Open To Flow (1)
32	154.11	115.14	Shut-In(1)
78	552.83	113.45	End Shut-In(1)
79	158.63	113.01	Open To Flow (2)
122	257.40	115.61	Shut-In(2)
183	524.08	114.73	End Shut-In(2)
186	1753.20	113.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	100%M	0.05
485.00	MW 95%W 5%M	5.77
40.00	MW w/O spts 70%W 30%M	0.56

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Phillips Exploration

Fritts #2-29

4109 N Ironwood
Wichita KS 67226

29 8S 22W Graham KS

ATTN: Jim Phillips

Job Ticket: 30633

DST#: 3

Test Start: 2007.10.17 @ 00:38:07

Tool Information

Drill Pipe:	Length: 3514.00 ft	Diameter: 3.80 inches	Volume: 49.29 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: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 49.89 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3634.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.02 ft			
Tool Length:	42.02 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			3617.00	
Hydraulic tool	5.00			3622.00	
Safety Joint	2.00			3624.00	
Packer	5.00			3629.00	22.00 Bottom Of Top Packer
Packer	5.00			3634.00	
Stubb	1.00			3635.00	
Perforations	1.00			3636.00	
Recorder	0.01	8018	Inside	3636.01	
Perforations	15.00			3651.01	
Recorder	0.01	13548	Outside	3651.02	
Bullnose	3.00			3654.02	20.02 Bottom Packers & Anchor
Total Tool Length:	42.02				



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DRILL STEM TEST REPORT

FLUID SUMMARY

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Fritts #2-29

4109 N Ironwood
Wichita KS 67226

29 8S 22W Graham KS

ATTN: Jim Phillips

Job Ticket: 30633

DST#: 3

Test Start: 2007.10.17 @ 00:38:07

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 53.00 sec/qt

Water Loss: 8.76 in³

Resistivity: ohm.m

Salinity: 5600.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: deg API

Water Salinity: 25000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	100%M	0.049
485.00	MW 95%W 5%M	5.774
40.00	MW w/O spts 70%W 30%M	0.561

Total Length: 535.00 ft Total Volume: 6.384 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

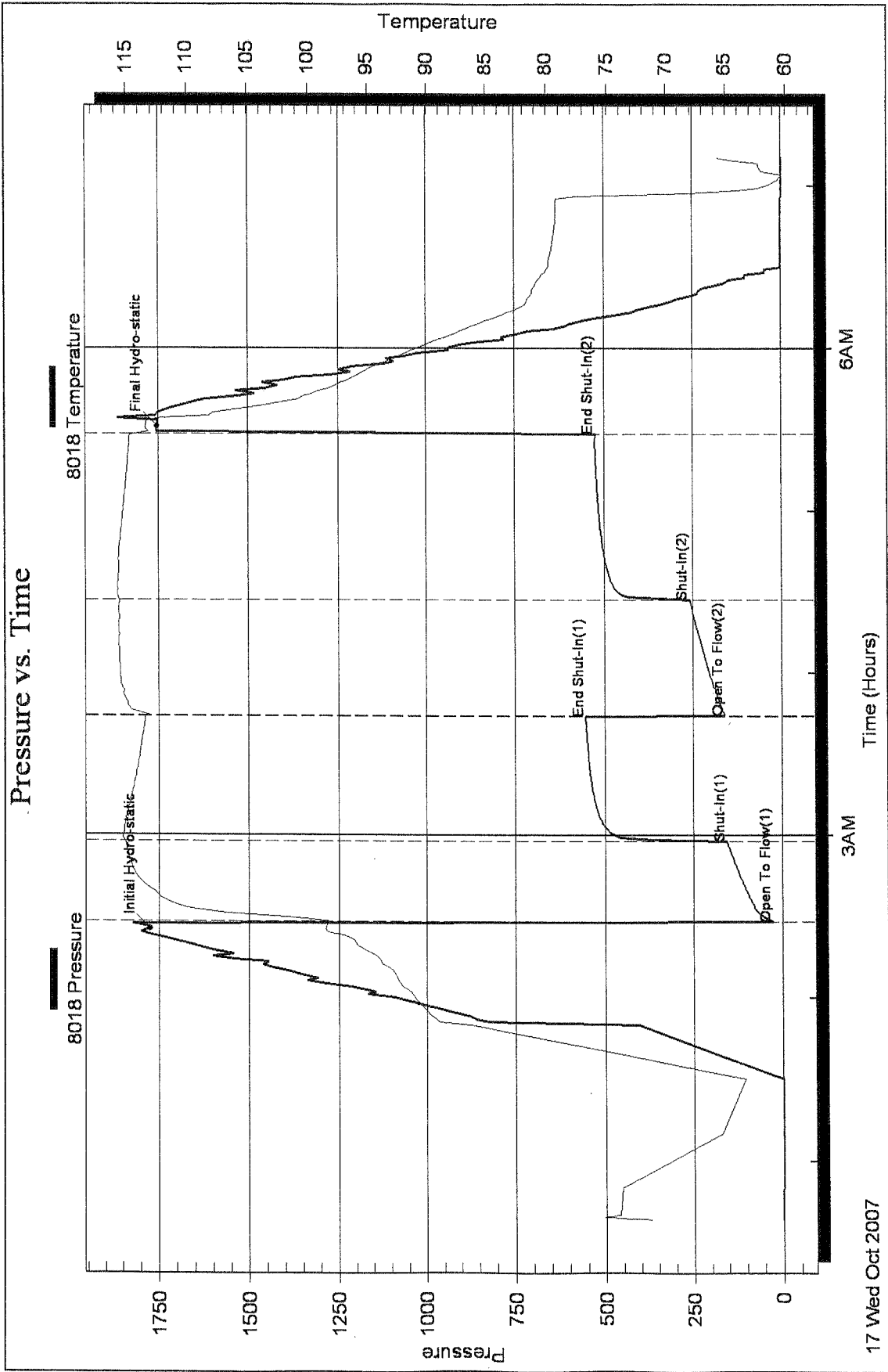
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



17 Wed Oct 2007