

DRILL STEM TEST REPORT

Prepared For: **Paul Bowmen Oil Co.**

801 codell Rd.
Codell, Ks. 67663

ATTN: Don Bowmen

29--10s--19w

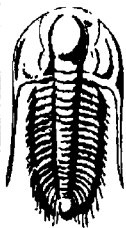
Largent # 8

Start Date: 2005.04.24 @ 22:08:47

End Date: 2005.04.25 @ 04:50:17

Job Ticket #: 21134 DST #: 1

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

Paul Bow men Oil Co.

Largent # 8

801 codell Rd.
Codell, Ks. 67663

29-10s-19w

Job Ticket: 21134

DST#: 1

ATTN: Don Bow men

Test Start: 2005.04.24 @ 22:08:47

GENERAL INFORMATION:

Formation: **L.Kc.-C**

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

Time Tool Opened: 23:50:47

Time Test Ended: 04:50:17

Test Type: **Conventional Bottom Hole**

Tester: **John Schmidt**

Unit No: **31**

Interval: **3365.00 ft (KB) To 3460.00 ft (KB) (TVD)**

Total Depth: **3460.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2170.00 ft (KB)**

2165.00 ft (CF)

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

Serial #: 8018

Inside

Press@RunDepth: **108.23 psig @ 3369.00 ft (KB)**

Start Date: **2005.04.24**

End Date:

2005.04.25

Capacity: **7000.00 psig**

Last Calib.: **2005.04.25**

Start Time: **22:08:48**

End Time:

04:50:17

Time On Btm: **2005.04.24 @ 23:50:17**

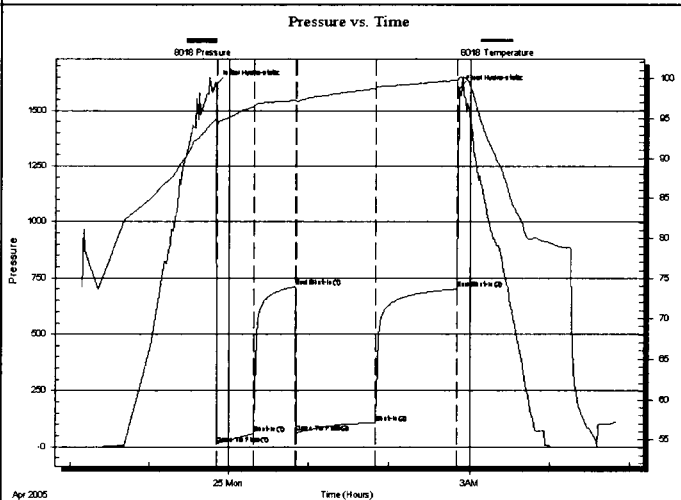
Time Off Btm: **2005.04.25 @ 02:51:17**

TEST COMMENT: **F-Weak built to 4" in.**

ISI-Dead

FF-Weak to fair built to 6" in.

FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1618.93	94.99	Initial Hydro-static
1	14.08	94.02	Open To Flow (1)
29	58.80	96.51	Shut-In(1)
60	711.12	97.25	End Shut-In(1)
61	62.38	97.08	Open To Flow (2)
120	108.23	98.74	Shut-In(2)
180	701.24	99.78	End Shut-In(2)
181	1599.77	100.08	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
205.00	Muddy salt water	1.19

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Paul Bow men Oil Co.

Largent # 8

801 codell Rd.
Codell, Ks. 67663

29-10s-19w

Job Ticket: 21134

DST#: 1

ATTN: Don Bow men

Test Start: 2005.04.24 @ 22:08:47

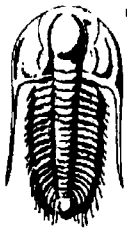
Tool Information

Drill Pipe:	Length: 3176.00 ft	Diameter: 3.80 inches	Volume: 44.55 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 48000.00 lb
			Total Volume: 45.46 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3365.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	95.00 ft			
Tool Length:	115.00 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			3346.00	
Shut In Tool	5.00			3351.00	
Hydraulic tool	5.00			3356.00	
Packer	4.00			3360.00	20.00 Bottom Of Top Packer
Packer	5.00			3365.00	
Stubb	1.00			3366.00	
Perforations	2.00			3368.00	
Change Over Sub	1.00			3369.00	
Recorder	0.00	8018	Inside	3369.00	
Blank Spacing	62.00			3431.00	
Change Over Sub	1.00			3432.00	
Recorder	0.00	11084	Outside	3432.00	
Perforations	25.00			3457.00	
Bullnose	3.00			3460.00	95.00 Bottom Packers & Anchor

Total Tool Length: 115.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Paul Bow men Oil Co.

Largent # 8

801 codell Rd.
Codell, Ks. 67663

29-10s-19w

Job Ticket: 21134

DST#: 1

ATTN: Don Bow men

Test Start: 2005.04.24 @ 22:08:47

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:

36000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.79 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
205.00	Muddy salt water	1.190

Total Length: 205.00 ft

Total Volume: 1.190 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

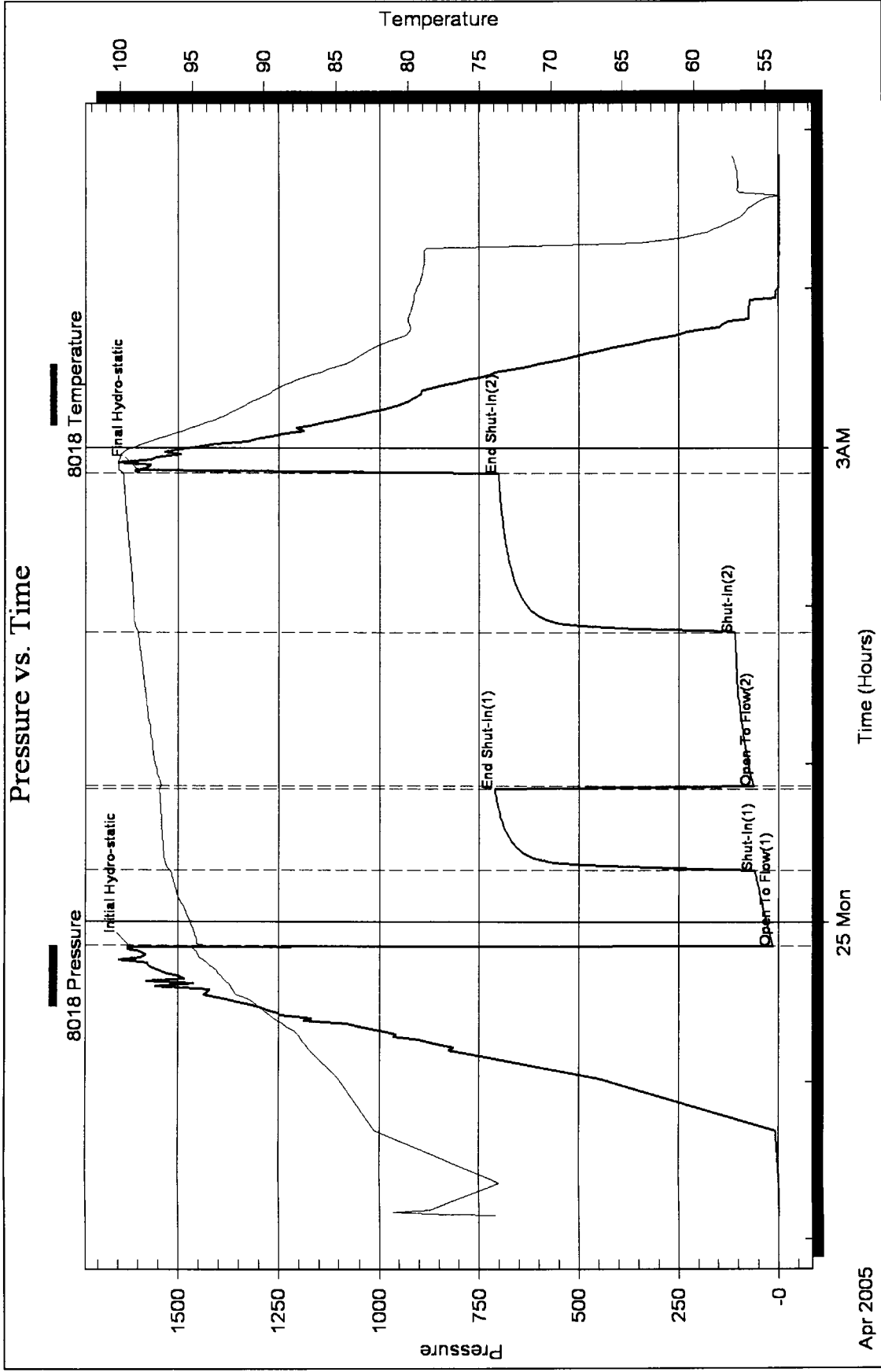
Serial #:

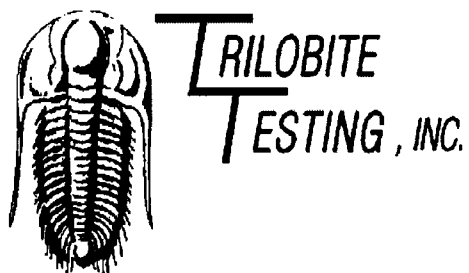
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Paul Bowmen Oil Co.**

801 codell Rd.
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ATTN: Don Bowmen

29-10s-19w

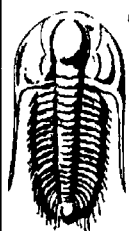
Largent # 8

Start Date: 2005.04.25 @ 12:10:00

End Date: 2005.04.25 @ 16:54:30

Job Ticket #: 21135 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

Paul Bow men Oil Co.

801 codell Rd.
Codell, Ks. 67663

ATTN: Don Bow men

Largent # 8

29-10s-19w

Job Ticket: 21135

DST#: 2

Test Start: 2005.04.25 @ 12:10:00

GENERAL INFORMATION:

Formation: **L.Kc.-E & F**

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

Time Tool Opened: 13:48:30

Time Test Ended: 16:54:30

Test Type: **Conventional Bottom Hole**

Tester: **John Schmidt**

Unit No: **31**

Interval: **3460.00 ft (KB) To 3500.00 ft (KB) (TVD)**

Total Depth: **3500.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2170.00 ft (KB)**

2165.00 ft (CF)

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

Serial #: 8018

Inside

Press@RunDepth: **18.68 psig @ 3467.00 ft (KB)**

Start Date: **2005.04.25**

End Date:

2005.04.25

Start Time: **12:10:01**

End Time:

16:54:30

Capacity: **7000.00 psig**

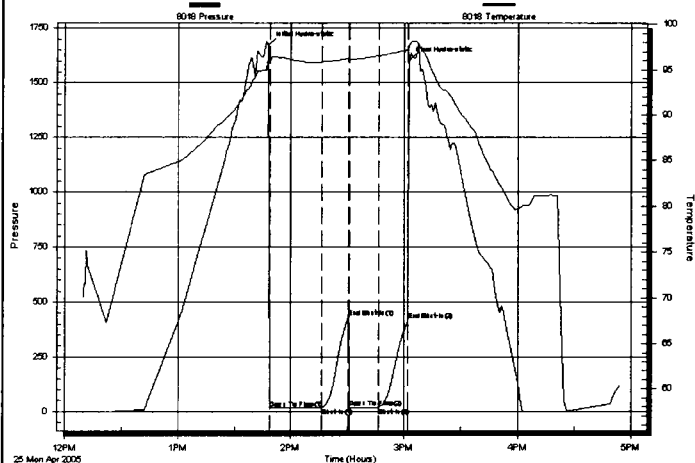
Last Calib.: **2005.04.25**

Time On Btm: **2005.04.25 @ 13:48:00**

Time Off Btm: **2005.04.25 @ 15:02:30**

TEST COMMENT: **F-**

Pressure vs. Time



PRESSURE SUMMARY

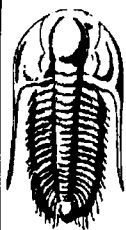
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1674.18	95.97	Initial Hydro-static
1	14.38	95.71	Open To Flow (1)
29	17.04	95.83	Shut-In(1)
43	431.71	96.22	End Shut-In(1)
43	17.90	96.06	Open To Flow (2)
59	18.68	96.54	Shut-In(2)
74	415.67	97.14	End Shut-In(2)
75	1601.00	97.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Oil spotted Drilling Mud	0.07

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Paul Bow men Oil Co.

Largent # 8

801 codell Rd.
Codell, Ks. 67663

29-10s-19w

Job Ticket: 21135

DST#: 2

ATTN: Don Bow men

Test Start: 2005.04.25 @ 12:10:00

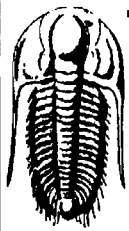
Tool Information

Drill Pipe:	Length: 3267.00 ft	Diameter: 3.80 inches	Volume: 45.83 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose:	44000.00 lb
			Total Volume: 46.74 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	40000.00 lb
Depth to Top Packer:	3460.00 ft			Final	40000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	40.00 ft				
Tool Length:	60.00 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			3441.00	
Shut In Tool	5.00			3446.00	
Hydraulic tool	5.00			3451.00	
Packer	4.00			3455.00	20.00 Bottom Of Top Packer
Packer	5.00			3460.00	
Stubb	1.00			3461.00	
Perforations	6.00			3467.00	
Recorder	0.00	8018	Inside	3467.00	
Perforations	30.00			3497.00	
Recorder	0.00	13308	Outside	3497.00	
Bullnose	3.00			3500.00	40.00 Bottom Packers & Anchor

Total Tool Length: 60.00



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FLUID SUMMARY

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801 codell Rd.
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29-10s-19w

Job Ticket: 21135

DST#: 2

ATTN: Don Bow men

Test Start: 2005.04.25 @ 12:10:00

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:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.78 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
15.00	Oil spotted Drilling Mud	0.074

Total Length: 15.00 ft

Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

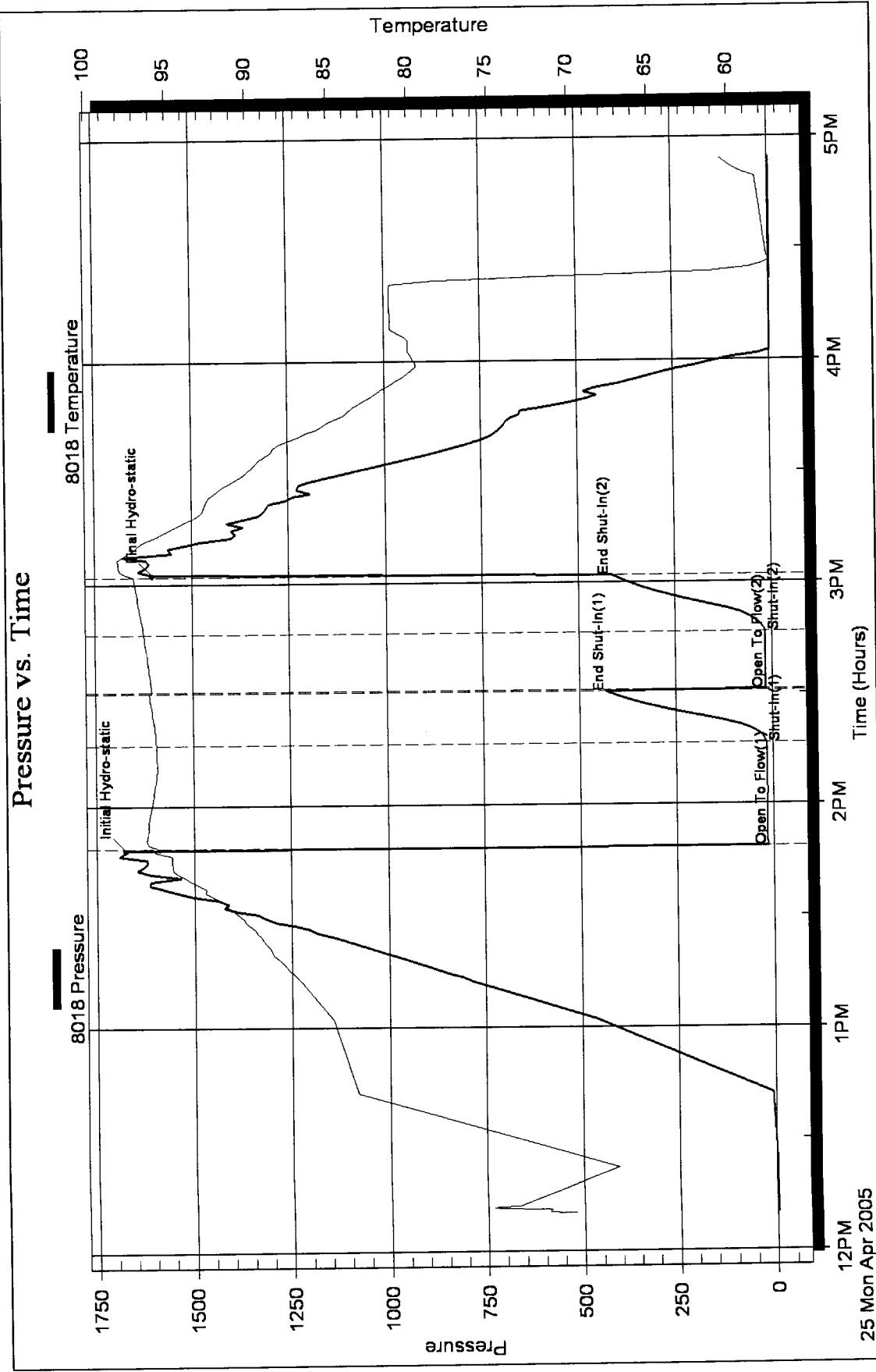
Serial #:

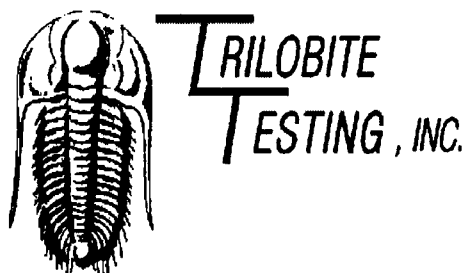
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Paul Bowmen Oil Co.**

801 codell Rd.
Codell, Ks. 67663

ATTN: Don Bowmen

29--10s--19w

Largent # 8

Start Date: 2005.04.26 @ 08:12:10

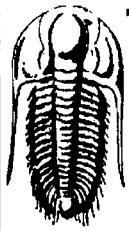
End Date: 2005.04.26 @ 14:25:10

Job Ticket #: 21136 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



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DRILL STEM TEST REPORT

Paul Bow men Oil Co.

801 codell Rd.
Codell, Ks. 67663

ATTN: Don Bow men

Largent # 8

29-10s-19w

Job Ticket: 21136

DST#: 3

Test Start: 2005.04.26 @ 08:12:10

GENERAL INFORMATION:

Formation: **Arbuckle**

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

Time Tool Opened: 09:58:40

Time Test Ended: 14:25:10

Test Type: **Conventional Bottom Hole**

Tester: **John Schmidt**

Unit No: **31**

Interval: **3710.00 ft (KB) To 3728.00 ft (KB) (TVD)**

Total Depth: **3460.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2170.00 ft (KB)**

2165.00 ft (CF)

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

Serial #: 8018

Inside

Press@RunDepth: **203.91 psig @ 3711.00 ft (KB)**

Start Date: **2005.04.26**

End Date:

2005.04.26

Capacity: **7000.00 psig**

Last Calib.: **2005.04.26**

Start Time: **08:12:11**

End Time:

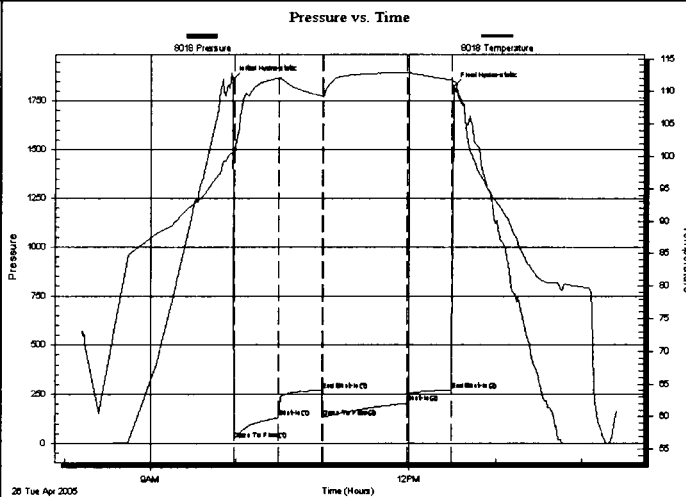
14:25:10

Time On Btm: **2005.04.26 @ 09:57:40**

Time Off Btm: **2005.04.26 @ 12:30:40**

TEST COMMENT: **F-Strong B.O.B. 18 min.**
FF-Strong B.O.B. 32 min.

ISI-Weak Surface blow back.
FSI-Very weak surface blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1861.77	100.48	Initial Hydro-static
1	17.77	99.89	Open To Flow (1)
32	131.12	112.09	Shut-In(1)
63	270.57	109.28	End Shut-In(1)
63	132.79	109.22	Open To Flow (2)
121	203.91	112.88	Shut-In(2)
152	270.47	111.77	End Shut-In(2)
153	1826.11	111.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
496.00	Salt water	5.27
4.00	Oil	0.06

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Paul Bow men Oil Co.

Largent # 8

801 codell Rd.
Codell, Ks. 67663

29-10s-19w

Job Ticket: 21136

DST#: 3

ATTN: Don Bow men

Test Start: 2005.04.26 @ 08:12:10

Tool Information

Drill Pipe:	Length: 3515.00 ft	Diameter: 3.80 inches	Volume: 49.31 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 45000.00 lb
			Total Volume: 50.22 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3710.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	38.00 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			3691.00	
Shut In Tool	5.00			3696.00	
Hydraulic tool	5.00			3701.00	
Packer	4.00			3705.00	20.00 Bottom Of Top Packer
Packer	5.00			3710.00	
Stubb	1.00			3711.00	
Recorder	0.00	8018	Inside	3711.00	
Perforations	14.00			3725.00	
Recorder	0.00	13308	Outside	3725.00	
Bullnose	3.00			3728.00	18.00 Bottom Packers & Anchor
Total Tool Length:	38.00				



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29-10s-19w

Job Ticket: 21136

DST#: 3

ATTN: Don Bow men

Test Start: 2005.04.26 @ 08:12:10

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:

42000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.78 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
496.00	Salt water	5.272
4.00	Oil	0.056

Total Length: 500.00 ft

Total Volume: 5.328 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8018

Inside

Paul Bowman Oil Co.

29--10s--19w

DST Test Number: 3

