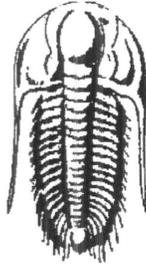


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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water Ste 300
Wichita KS 67202

ATTN: Kris Kennedy

13-9s-26w Sheridan

Borger A #1-13

Start Date: 2005.09.14 @ 14:56:45

End Date: 2005.09.14 @ 20:13:15

Job Ticket #: 23560 DST #: 1

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

Murfin Drilling Company

Borger A #1-13

13-9s-26w Sheridan

DST # 1

Topeka

2005.09.14



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Company
250 N Water Ste 300
Wichita KS 67202
ATTN: Kris Kennedy

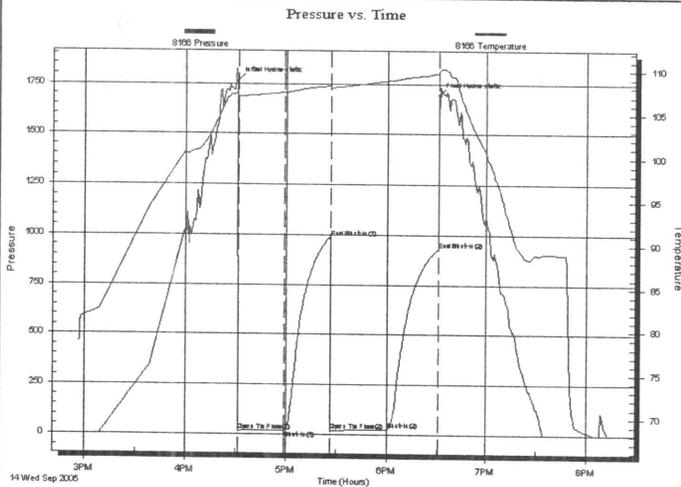
Borger A #1-13
13-9s-26w Sheridan
Job Ticket: 23560 **DST#: 1**
Test Start: 2005.09.14 @ 14:56:45

GENERAL INFORMATION:

Formation: **Topeka**
Deviated: **No Whipstock:** ft (KB)
Time Tool Opened: 16:31:45
Time Test Ended: 20:13:15
Interval: **3584.00 ft (KB) To 3614.00 ft (KB) (TVD)**
Total Depth: 3664.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Straddle
Tester: **Michael**
Unit No: 22
Reference Elevations: 2594.00 ft (KB)
2589.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8166 **Inside**
Press@RunDepth: 22.12 psig @ 3585.00 ft (KB) Capacity: 7000.00 psig
Start Date: 2005.09.14 End Date: 2005.09.14 Last Calib.: 2005.09.16
Start Time: 14:56:46 End Time: 20:13:15 Time On Btm: 2005.09.14 @ 16:31:15
Time Off Btm: 2005.09.14 @ 18:31:00

TEST COMMENT: IF- Weak surface blow died 20m
ISI no blow
FF- No blow
FSI- no blow



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1760.81	107.53	Initial Hydro-static
1	14.42	106.89	Open To Flow (1)
28	17.43	107.50	Shut-In(1)
56	987.44	108.29	End Shut-In(1)
56	19.41	107.94	Open To Flow (2)
89	22.12	108.87	Shut-In(2)
120	930.73	109.70	End Shut-In(2)
120	1691.83	109.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Drilling mud	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company

Borger A #1-13

250 N Water Ste 300
Wichita KS 67202

13-9s-26w Sheridan

Job Ticket: 23560

DST#: 1

ATTN: Kris Kennedy

Test Start: 2005.09.14 @ 14:56:45

Tool Information

Drill Pipe:	Length: 3044.00 ft	Diameter: 3.80 inches	Volume: 42.70 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: 30000.00 lb
Drill Collar:	Length: 531.00 ft	Diameter: 2.25 inches	Volume: 2.61 bbl	Weight to Pull Loose: 10000.00 lb
			<u>Total Volume: 45.31 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 82000.00 lb
Depth to Top Packer:	3584.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	3611.00 ft			
Interval between Packers:	27.00 ft			
Tool Length:	108.00 ft			
Number of Packers:	3	Diameter: inches		

Tool Comments:

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3562.00	
Hydraulic tool	5.00			3567.00	
Jars	5.00			3572.00	
Safety Joint	2.00			3574.00	
Packer	5.00			3579.00	27.00 Bottom Of Top Packer
Packer	5.00			3584.00	
Stubb	1.00			3585.00	
Recorder	0.00	8166	Inside	3585.00	
Perforations	25.00			3610.00	
Recorder	0.00	10991	Outside	3610.00	
Blank Off Sub	1.00			3611.00	27.00 Tool Interval
Packer	5.00			3616.00	
Stubb	1.00			3617.00	
Anchor	12.00			3629.00	
Change Over Sub	1.00			3630.00	
Drill Pipe	31.00			3661.00	
Change Over Sub	1.00			3662.00	
Recorder	0.00	11090	Below	3662.00	
Bullnose	3.00			3665.00	54.00 Bottom Packers & Anchor

Total Tool Length: 108.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

Borger A #1-13

250 N Water Ste 300
Wichita KS 67202

13-9s-26w Sheridan

Job Ticket: 23560

DST#: 1

ATTN: Kris Kennedy

Test Start: 2005.09.14 @ 14:56:45

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: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 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
3.00	Drilling mud	0.015

Total Length: 3.00 ft Total Volume: 0.015 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

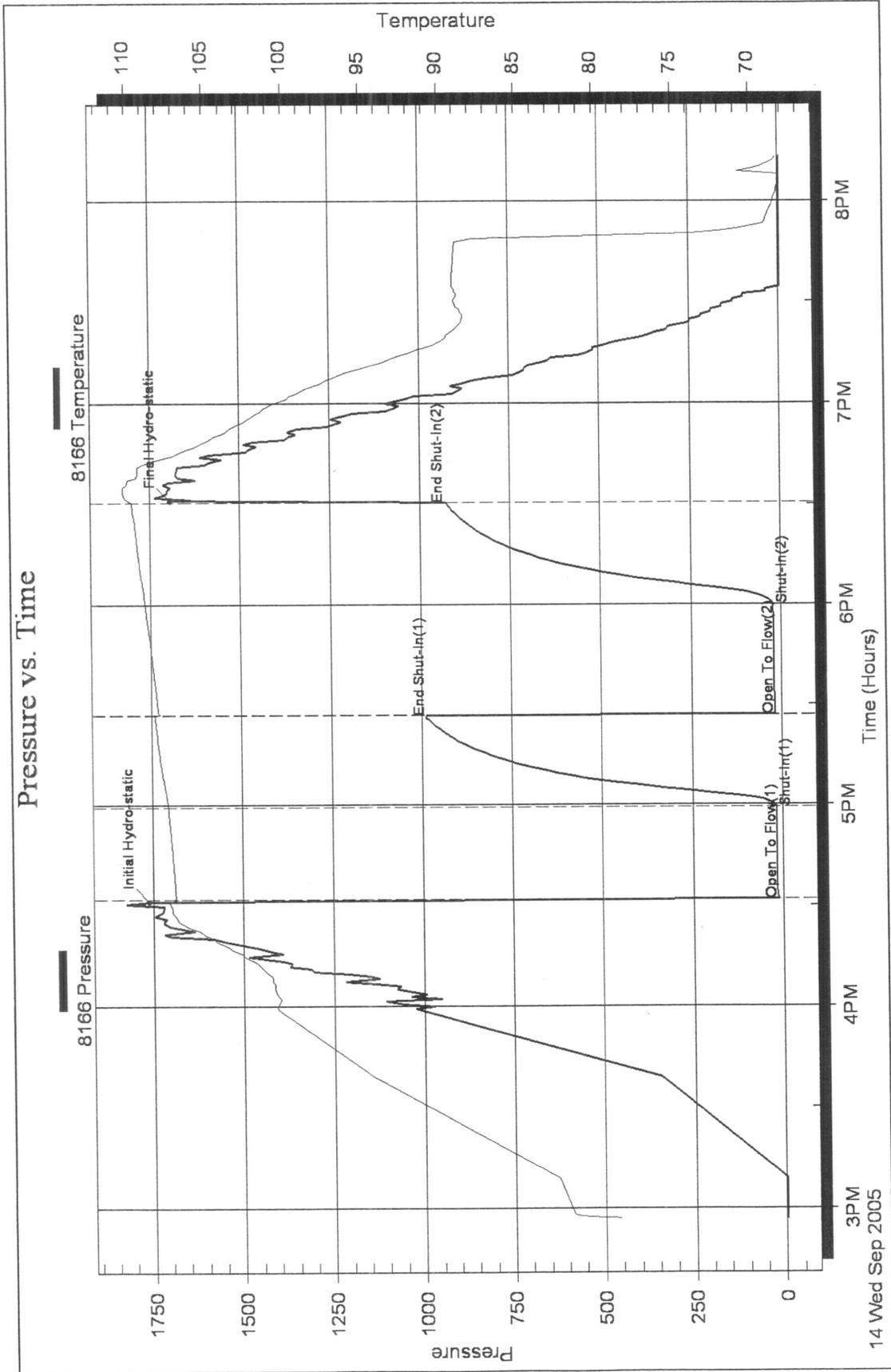
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



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DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water Ste 300
Wichita KS 67202

ATTN: Kris Kennedy

13-9s-26w Sheridan

Borger A #1-13

Start Date: 2005.09.17 @ 19:20:42

End Date: 2005.09.18 @ 01:22:57

Job Ticket #: 23561 DST #: 2

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DRILL STEM TEST REPORT

Murfin Drilling Company

Borger A #1-13

250 N Water Ste 300
Wichita KS 67202

13-9s-26w Sheridan

ATTN: Kris Kennedy

Job Ticket: 23561

DST#: 2

Test Start: 2005.09.17 @ 19:20:42

GENERAL INFORMATION:

Formation: **LKC-cdef**
 Deviated: **No** Whipstock: **ft (KB)**
 Time Tool Opened: 20:53:27
 Time Test Ended: 01:22:57

Test Type: **Conventional Bottom Hole**
 Tester: **Michael**
 Unit No: **22**

Interval: **3888.00 ft (KB) To 3936.00 ft (KB) (TVD)**
 Total Depth: **3936.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2594.00 ft (KB)**
2589.00 ft (CF)
 KB to GR/CF: **5.00 ft**

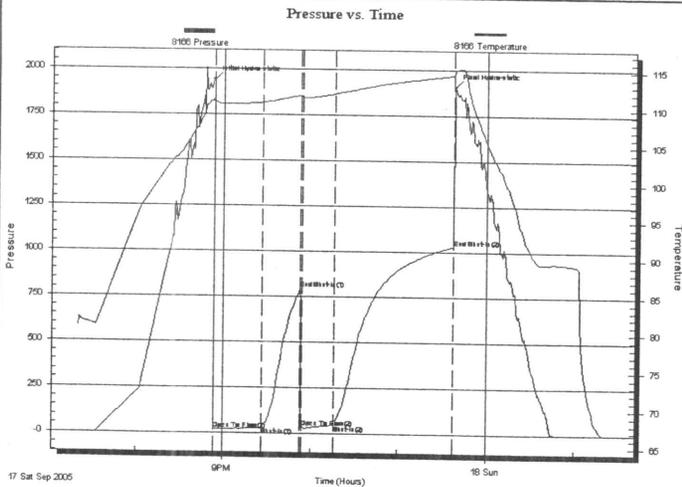
Serial #: 8166

Inside

Press@RunDepth: **48.65 psig @ 3895.00 ft (KB)**
 Start Date: **2005.09.17** End Date: **2005.09.18**
 Start Time: **19:20:43** End Time: **01:22:57**

Capacity: **7000.00 psig**
 Last Calib.: **2005.09.18**
 Time On Btm: **2005.09.17 @ 20:53:12**
 Time Off Btm: **2005.09.17 @ 23:38:42**

TEST COMMENT: **IF 1/4"blow died 26m**
ISI no blow
FF no blow
FSI no blow



PRESSURE SUMMARY

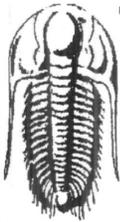
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1939.42	111.24	Initial Hydro-static
1	18.05	110.75	Open To Flow (1)
33	29.34	110.78	Shut-In(1)
60	790.57	111.73	End Shut-In(1)
60	29.10	111.54	Open To Flow (2)
83	48.65	111.98	Shut-In(2)
165	1029.32	114.49	End Shut-In(2)
166	1905.98	115.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Oil spotted Drilling mud 1%O 99%m	0.05

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company

Borger A #1-13

250 N Water Ste 300
Wichita KS 67202

13-9s-26w Sheridan

Job Ticket: 23561

DST#: 2

ATTN: Kris Kennedy

Test Start: 2005.09.17 @ 19:20:42

Tool Information

Drill Pipe:	Length: 3364.00 ft	Diameter: 3.80 inches	Volume: 47.19 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: 30000.00 lb
Drill Collar:	Length: 531.00 ft	Diameter: 2.25 inches	Volume: 2.61 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 49.80 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 82000.00 lb
Depth to Top Packer:	3888.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	69.00 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			3868.00	
Shut In Tool	5.00			3873.00	
Hydraulic tool	5.00			3878.00	
Packer	5.00			3883.00	21.00 Bottom Of Top Packer
Packer	5.00			3888.00	
Blank Spacing	1.00			3889.00	
Perforations	5.00			3894.00	
Change Over Sub	1.00			3895.00	
Recorder	0.00	8166	Inside	3895.00	
Drill Pipe	31.00			3926.00	
Change Over Sub	1.00			3927.00	
Recorder	0.00	10991	Outside	3927.00	
Perforations	6.00			3933.00	
Bullnose	3.00			3936.00	48.00 Bottom Packers & Anchor

Total Tool Length: 69.00

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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

Borger A #1-13

250 N Water Ste 300
Wichita KS 67202

13-9s-26w Sheridan

Job Ticket: 23561

DST#: 2

ATTN: Kris Kennedy

Test Start: 2005.09.17 @ 19:20:42

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 49.00 sec/qt

Water Loss: 6.79 in³

Resistivity: ohm.m

Salinity: 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:

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Oil spotted Drilling mud 1%O 99%m	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

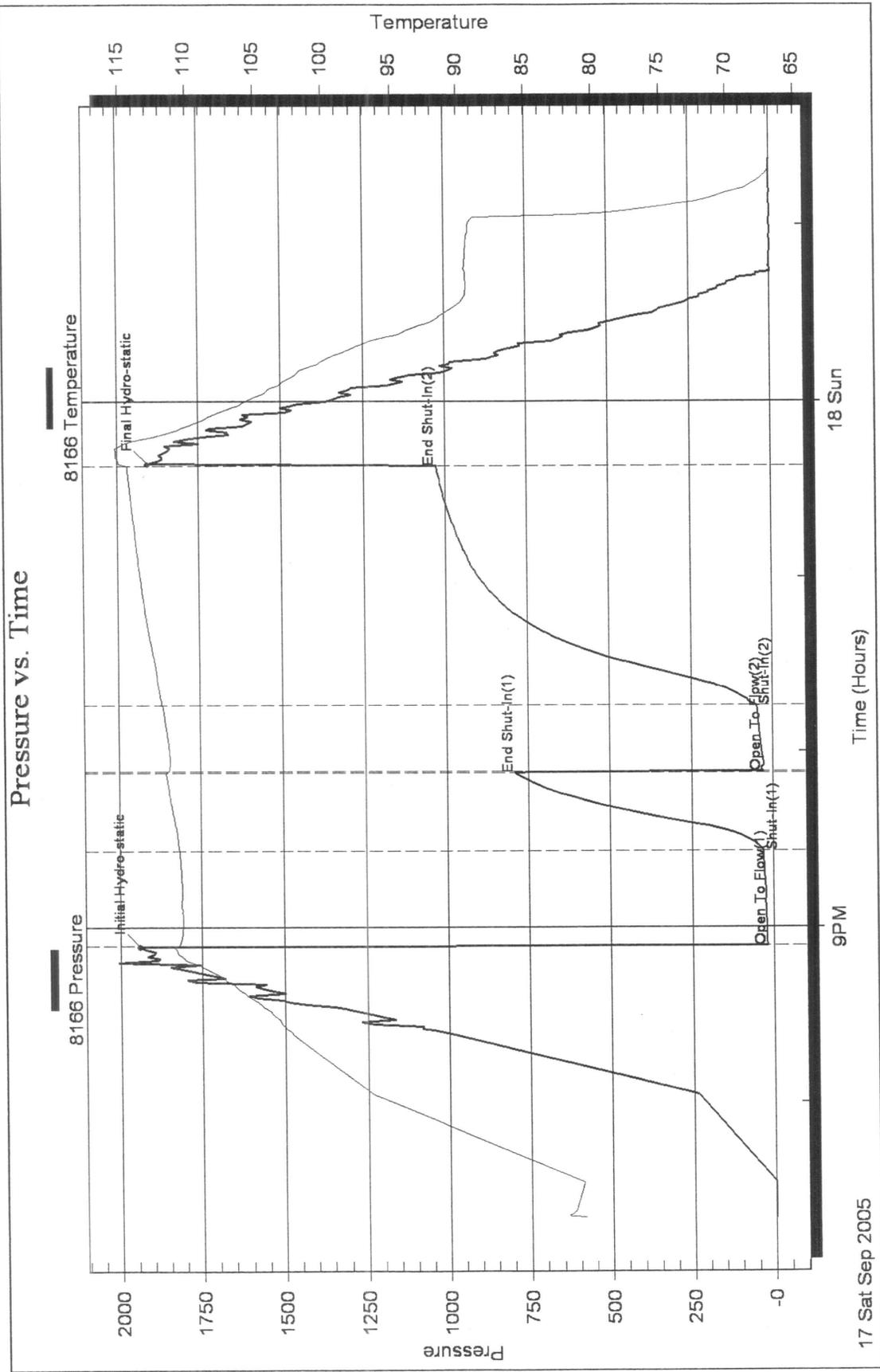
Serial #:

Laboratory Name:

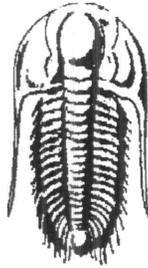
Laboratory Location:

Recovery Comments:

Pressure vs. Time



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DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water Ste 300
Wichita KS 67202

ATTN: Kris Kennedy

13-9s-26w Sheridan

Borger A #1-13

Start Date: 2005.09.18 @ 18:00:37

End Date: 2005.09.19 @ 02:31:52

Job Ticket #: 23562 DST #: 3

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DRILL STEM TEST REPORT

Murfin Drilling Company
250 N Water Ste 300
Wichita KS 67202
ATTN: Kris Kennedy

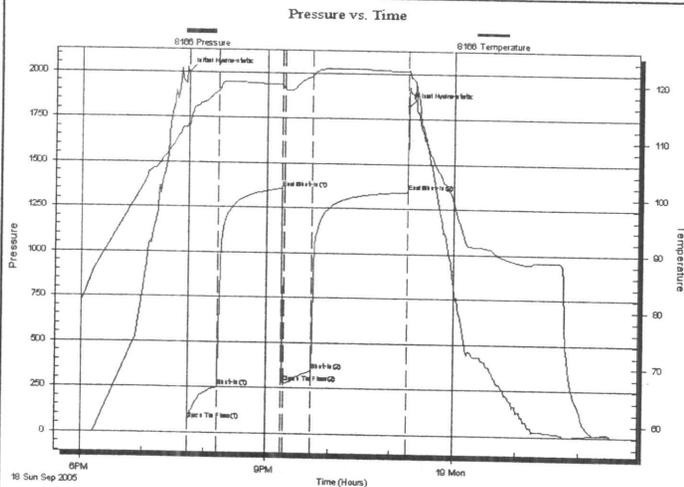
Borger A #1-13
13-9s-26w Sheridan
Job Ticket: 23562 **DST#: 3**
Test Start: 2005.09.18 @ 18:00:37

GENERAL INFORMATION:

Formation: **LKC**
Deviated: **No** Whipstock: ft (KB)
Time Tool Opened: 19:44:22
Time Test Ended: 02:31:52
Interval: **3992.00 ft (KB) To 4054.00 ft (KB) (TVD)**
Total Depth: **4054.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: **Fair**
Test Type: **Conventional Bottom Hole**
Tester: **Michael**
Unit No: **22**
Reference Elevations: **2594.00 ft (KB)**
2589.00 ft (CF)
KB to GR/CF: **5.00 ft**

Serial #: 8166 **Inside**
Press@RunDepth: **346.38 psig @ 3999.00 ft (KB)**
Start Date: **2005.09.18** End Date: **2005.09.19**
Start Time: **18:00:38** End Time: **02:31:52**
Capacity: **7000.00 psig**
Last Calib.: **2005.09.19**
Time On Btm: **2005.09.18 @ 19:43:52**
Time Off Btm: **2005.09.18 @ 23:16:52**

TEST COMMENT: IF- B of B 3m
IS- B of B 13m
FF- B of B 4 1/2 m
IS- B of B 6m Gas to surface 30m



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1999.52	112.76	Initial Hydro-static
1	65.92	112.14	Open To Flow (1)
30	251.22	118.62	Shut-In(1)
91	1355.99	119.88	End Shut-In(1)
93	276.10	119.12	Open To Flow (2)
120	346.38	121.43	Shut-In(2)
213	1344.07	122.37	End Shut-In(2)
213	1820.68	122.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
100.00	Gas&Oil cut mud 5%g25%o70%m	0.49
100.00	Gas&Oil cut mud 10%g30%o60%m	0.49
245.00	Gassy Oily mud 10%g40%o50%m	1.20
455.00	Gassy Clean oil 15%g 85%o	5.60
0.00	Gas to surface 3060'	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company
250 N Water Ste 300
Wichita KS 67202
ATTN: Kris Kennedy

Borger A #1-13
13-9s-26w Sheridan
Job Ticket: 23562 DST#: 3
Test Start: 2005.09.18 @ 18:00:37

Tool Information

Drill Pipe:	Length: 3452.00 ft	Diameter: 3.80 inches	Volume: 48.42 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: 30000.00 lb
Drill Collar:	Length: 531.00 ft	Diameter: 2.25 inches	Volume: 2.61 bbl	Weight to Pull Loose: lb
		Total Volume: 51.03 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 84000.00 lb
Depth to Top Packer:	3992.00 ft			Final lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	83.00 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			3972.00	
Shut In Tool	5.00			3977.00	
Hydraulic tool	5.00			3982.00	
Packer	5.00			3987.00	21.00 Bottom Of Top Packer
Packer	5.00			3992.00	
Blank Spacing	1.00			3993.00	
Perforations	5.00			3998.00	
Change Over Sub	1.00			3999.00	
Recorder	0.00	8166	Inside	3999.00	
Drill Pipe	30.00			4029.00	
Change Over Sub	1.00			4030.00	
Recorder	0.00	10991	Outside	4030.00	
Perforations	21.00			4051.00	
Bullnose	3.00			4054.00	62.00 Bottom Packers & Anchor

Total Tool Length: 83.00

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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

Borger A #1-13

250 N Water Ste 300
Wichita KS 67202

13-9s-26w Sheridan

Job Ticket: 23562

DST#: 3

ATTN: Kris Kennedy

Test Start: 2005.09.18 @ 18:00:37

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: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 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
100.00	Gas&Oil cut mud 5%g25%o70%m	0.492
100.00	Gas&Oil cut mud10%g30%o60%m	0.492
245.00	Gassy Oily mud 10%g40%o50%m	1.205
455.00	Gassy Clean oil 15%g 85%o	5.599
0.00	Gas to surface 3060'	0.000

Total Length: 900.00 ft

Total Volume: 7.788 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

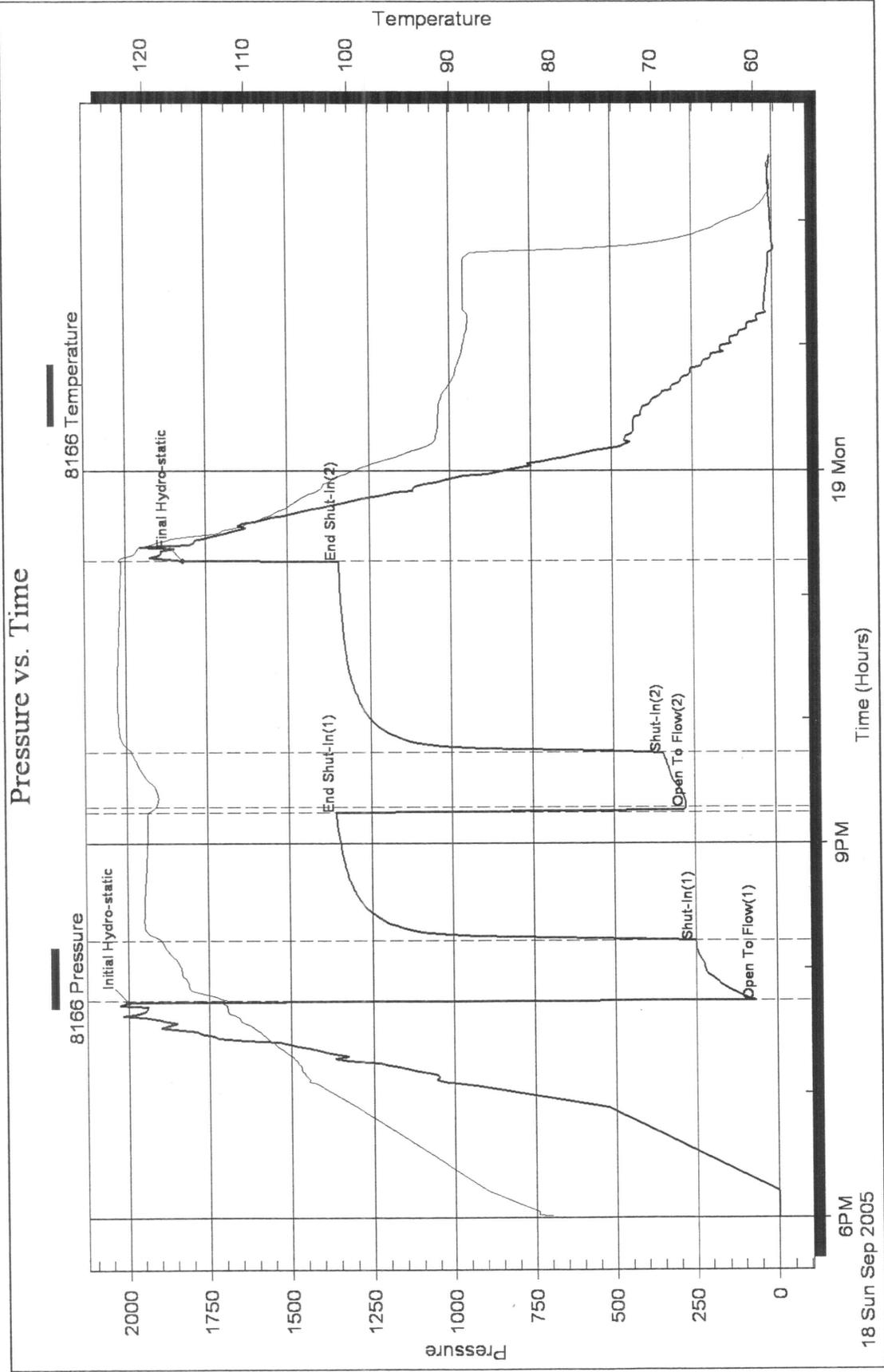
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



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