

ORIGINAL

CONFIDENTIAL

KCC

APR 18 2005

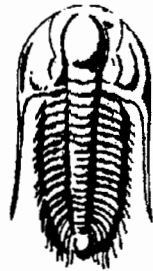
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CONFIDENTIAL

APR 19 2005

15-179-21123

KCC WICHITA



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

14-9s-26w Sheridan

Popp-Borger Unit #1-14

Start Date: 2005.01.21 @ 19:37:17

End Date: 2005.01.22 @ 03:08:46

Job Ticket #: 20779 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Murfin Drilling Co Inc

Popp-Borger Unit #1-14

14-9s-26w Sheridan

DST # 1

Tor LKC A-D

2005.01.21



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

Popp-Borger Unit #1-14

14-9s-26w Sheridan

Job Ticket: 20779

DST#: 1

Test Start: 2005.01.21 @ 19:37:17

GENERAL INFORMATION:

Formation: Tor LKC A-D

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:52:46

Time Test Ended: 03:08:46

Test Type: Conventional Bottom Hole

Tester: Ray Schwager

Unit No: 28

Interval: 3846.00 ft (KB) To 3936.00 ft (KB) (TVD)

Total Depth: 3936.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair

Reference Elevations: 2649.00 ft (KB)

2644.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6668

Inside

Press@RunDepth: 372.65 psig @ 3849.01 ft (KB)

Start Date: 2005.01.21

End Date:

2005.01.22

Capacity: 7000.00 psig

Last Calib.: 2005.01.22

Start Time: 19:37:17

End Time:

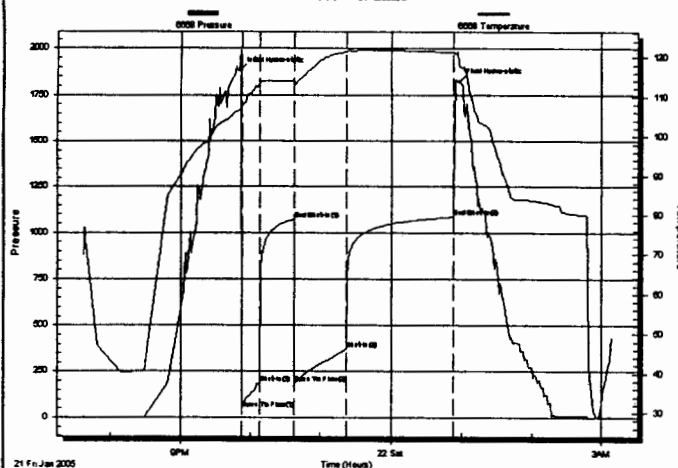
03:08:46

Time On Btm: 2005.01.21 @ 21:50:46

Time Off Btm: 2005.01.22 @ 00:57:46

TEST COMMENT: FFP-w k to strg in 5 min
FFP-w k to strg in 10 min
Times 15-30-45-90
ISP-no bl, FSP-w k bl bk 1/2"bl

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1878.46	106.66	Initial Hydro-static
2	47.39	107.39	Open To Flow (1)
17	185.70	113.51	Shut-In(1)
47	1070.51	114.08	End Shut-In(1)
47	188.15	113.71	Open To Flow (2)
92	372.65	121.37	Shut-In(2)
182	1085.13	121.28	End Shut-In(2)
187	1821.66	118.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	w ater RW .09@70F	2.27
60.00	SO&GCW 5%gas 1%oil 94%w ater	0.84
330.00	MGO 20%gas 60%oil 20%mud	4.63
180.00	HO&GCM 20%gas 30%oil 50%mud	2.52
0.00	210°GP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

Popp-Borger Unit #1-14

14-9s-26w Sheridan

Job Ticket: 20779

DST#: 1

Test Start: 2005.01.21 @ 19:37:17

Tool Information

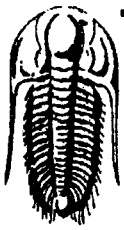
Drill Pipe:	Length: 3719.00 ft	Diameter: 3.80 inches	Volume: 52.17 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 70000.00 lb
		Total Volume: 52.76 bbl		Tool Chased 3.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 43000.00 lb
Depth to Top Packer:	3846.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	90.02 ft			
Tool Length:	111.02 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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Change Over Sub	1.00			3826.00	
Shut In Tool	5.00			3831.00	
Hydraulic tool	5.00			3836.00	
Packer	5.00			3841.00	21.00 Bottom Of Top Packer
Packer	5.00			3846.00	
Stubb	1.00			3847.00	
Perforations	2.00			3849.00	
Recorder	0.01	6668	Inside	3849.01	
Blank Spacing	63.00			3912.01	
Recorder	0.01	13534	Outside	3912.02	
Perforations	21.00			3933.02	
Bullnose	3.00			3936.02	90.02 Bottom Packers & Anchor

Total Tool Length: 111.02



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

Popp-Borger Unit #1-14

250 N Water Ste 300
Wichita Ks 67202

14-9s-26w Sheridan

Job Ticket: 20779

DST#: 1

ATTN: David Doyel

Test Start: 2005.01.21 @ 19:37:17

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:

90000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
240.00	water RW .09@70F	2.273
60.00	SO&GCW 5%gas 1%oil 94%water	0.842
330.00	MGO 20%gas 60%oil 20%mud	4.629
180.00	HO&GCM 20%gas 30%oil 50%mud	2.525
0.00	210'GIP	0.000

Total Length: 810.00 ft

Total Volume: 10.269 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

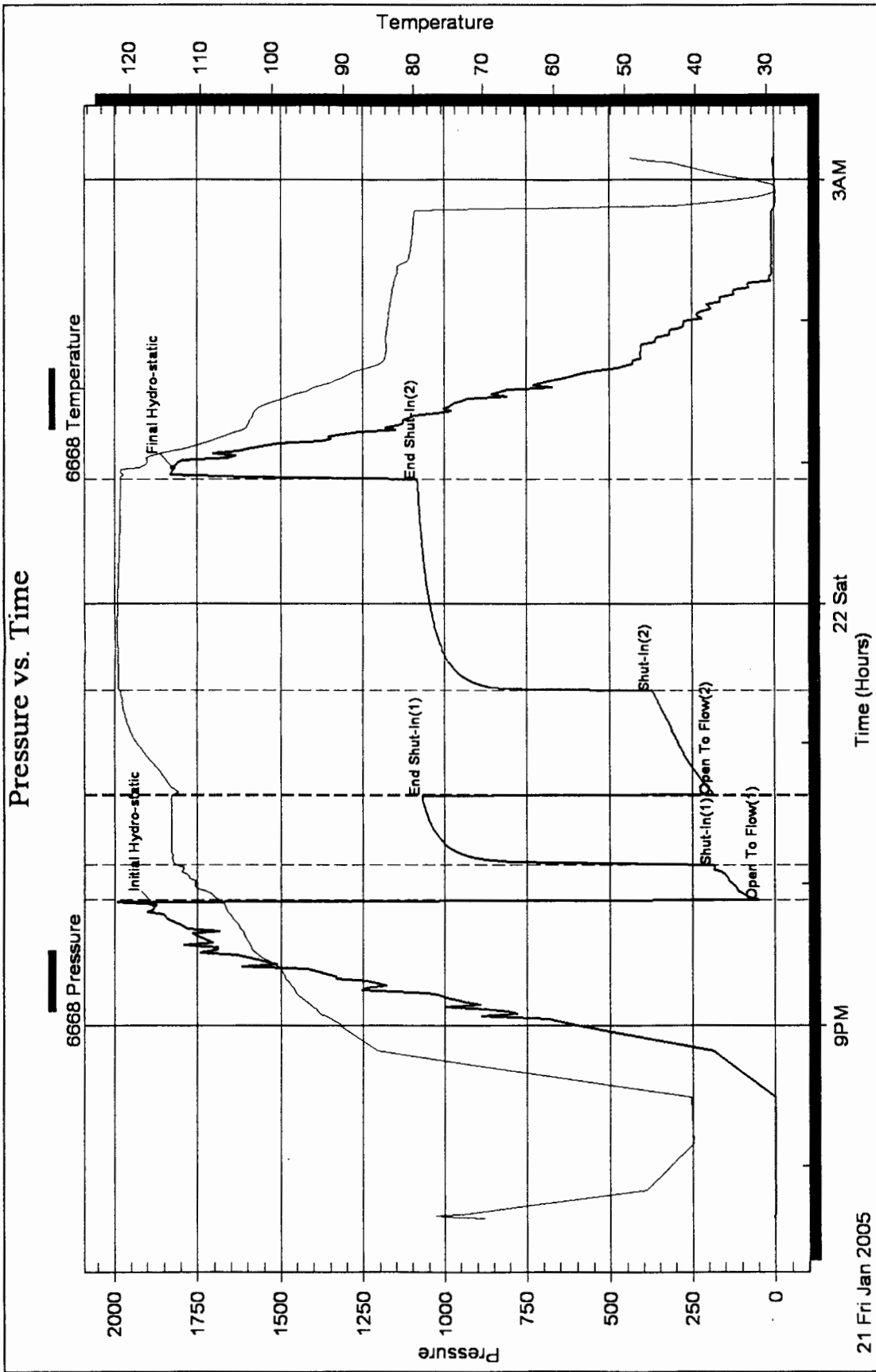
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

14-9s-26w Sheridan

Popp-Borger Unit #1-14

Start Date: 2005.01.22 @ 11:32:49

End Date: 2005.01.22 @ 17:57:48

Job Ticket #: 20780 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

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

Popp-Borger Unit #1-14

14-9s-26w Sheridan

Job Ticket: 20780

DST#: 2

Test Start: 2005.01.22 @ 11:32:49

GENERAL INFORMATION:

Formation: LKC E-G

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:45:18

Time Test Ended: 17:57:48

Test Type: Conventional Bottom Hole

Tester: Ray Schwager

Unit No: 28

Interval: 3946.00 ft (KB) To 3976.00 ft (KB) (TVD)

Total Depth: 3976.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair

Reference Elevations: 2649.00 ft (KB)

2644.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6668 Inside

Press@RunDepth: 17.32 psig @ 3949.01 ft (KB)

Start Date: 2005.01.22

End Date:

2005.01.22

Start Time: 11:32:49

End Time:

17:57:48

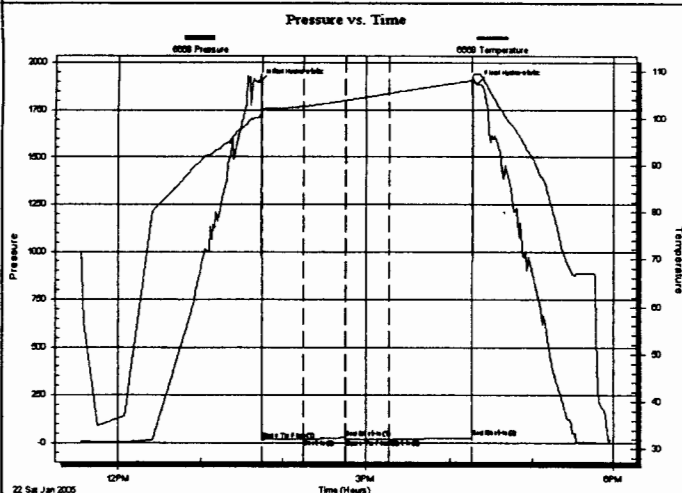
Capacity: 7000.00 psig

Last Calib.: 2005.01.22

Time On Btm: 2005.01.22 @ 13:42:48

Time Off Btm: 2005.01.22 @ 16:19:48

TEST COMMENT: FFP-w k bl thru-out 1/4" to surface bl
FFP-no bl
Times 30-30-30-60
no bl on shut-in



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1897.74	100.16	Initial Hydro-static
3	14.70	101.69	Open To Flow (1)
32	19.77	102.54	Shut-In(1)
62	26.70	103.79	End Shut-In(1)
63	18.71	103.82	Open To Flow (2)
93	17.32	105.31	Shut-In(2)
153	26.77	108.07	End Shut-In(2)
157	1888.19	109.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	mud w/show of oil	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

Popp-Borger Unit #1-14

14-9s-26w Sheridan

Job Ticket: 20780

DST#: 2

Test Start: 2005.01.22 @ 11:32:49

Tool Information

Drill Pipe:	Length: 3815.00 ft	Diameter: 3.80 inches	Volume: 53.51 bbl	Tool Weight: 2200.00 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: 60000.00 lb
		Total Volume:	54.10 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3946.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.02 ft			
Tool Length:	51.02 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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Change Over Sub	1.00			3926.00	
Shut In Tool	5.00			3931.00	
Hydraulic tool	5.00			3936.00	
Packer	5.00			3941.00	21.00 Bottom Of Top Packer
Packer	5.00			3946.00	
Stubb	1.00			3947.00	
Perforations	2.00			3949.00	
Recorder	0.01	6668	Inside	3949.01	
Perforations	24.00			3973.01	
Recorder	0.01	13534	Outside	3973.02	
Bullnose	3.00			3976.02	30.02 Bottom Packers & Anchor

Total Tool Length: 51.02



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

Popp-Borger Unit #1-14

250 N Water Ste 300
Wichita Ks 67202

14-9s-26w Sheridan

Job Ticket: 20780

DST#: 2

ATTN: David Doyel

Test Start: 2005.01.22 @ 11:32:49

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: 49.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.76 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	mud w/show of oil	0.005

Total Length: 1.00 ft

Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

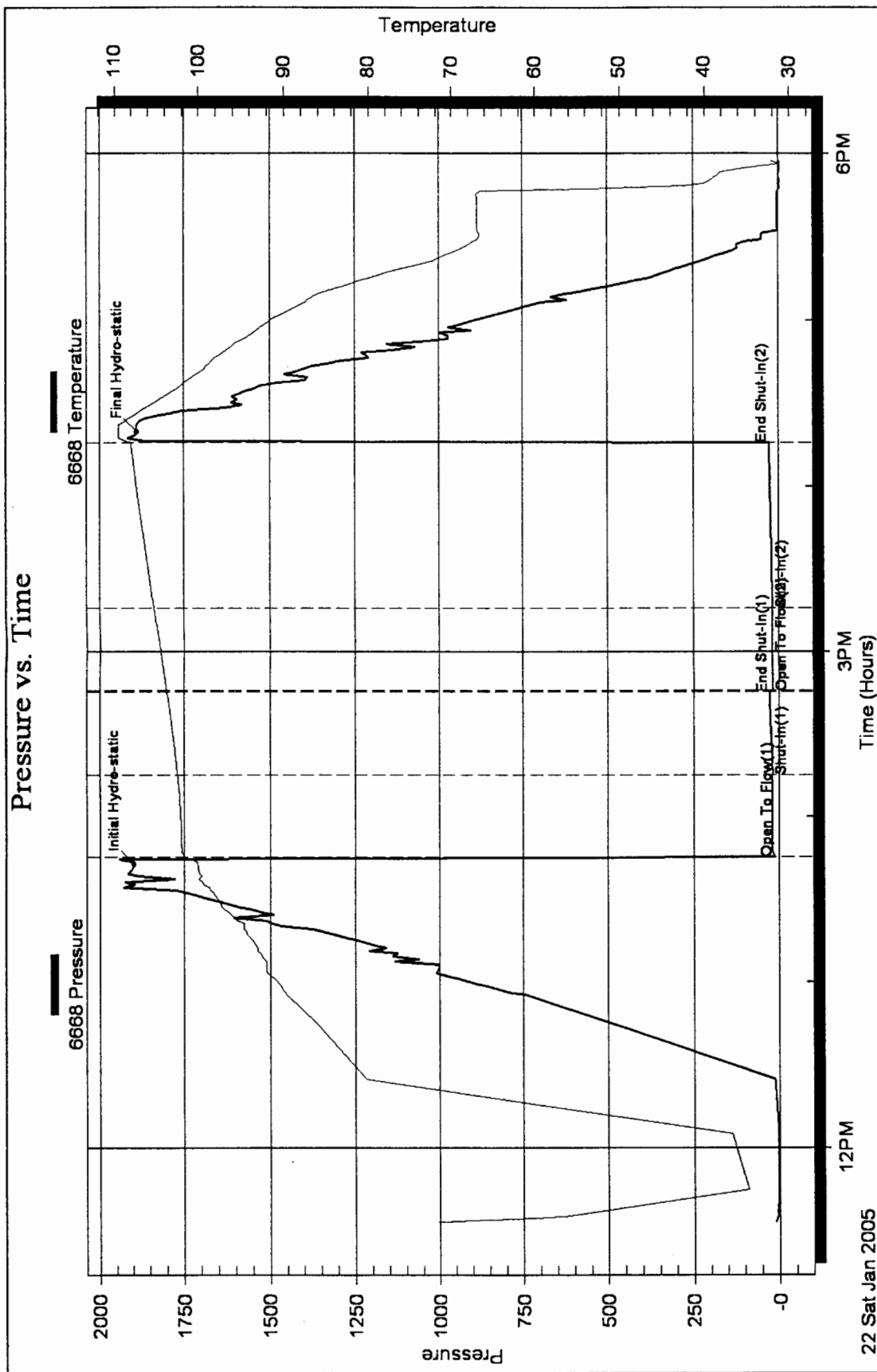
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

14-9s-26w Sheridan

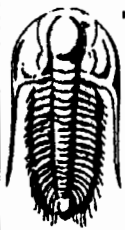
Popp-Borger Unit #1-14

Start Date: 2005.01.23 @ 10:59:34

End Date: 2005.01.23 @ 19:14:33

Job Ticket #: 20781 DST #: 3

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

Popp-Borger Unit #1-14

14-9s-26w Sheridan

Job Ticket: 20781

DST#: 3

Test Start: 2005.01.23 @ 10:59:34

GENERAL INFORMATION:

Formation: LKC I-K

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:05:33

Time Test Ended: 19:14:33

Test Type: Conventional Bottom Hole

Tester: Ray Schwager

Unit No: 28

Interval: 4020.00 ft (KB) To 4100.00 ft (KB) (TVD)

Total Depth: 4100.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair

Reference Elevations: 2649.00 ft (KB)

2644.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6668

Inside

Press@RunDepth: 78.41 psig @ 4030.01 ft (KB)

Start Date: 2005.01.23

End Date:

2005.01.23

Start Time: 10:59:34

End Time:

19:14:33

Capacity: 7000.00 psig

Last Calib.: 2005.01.23

Time On Btm: 2005.01.23 @ 13:03:33

Time Off Btm: 2005.01.23 @ 17:15:33

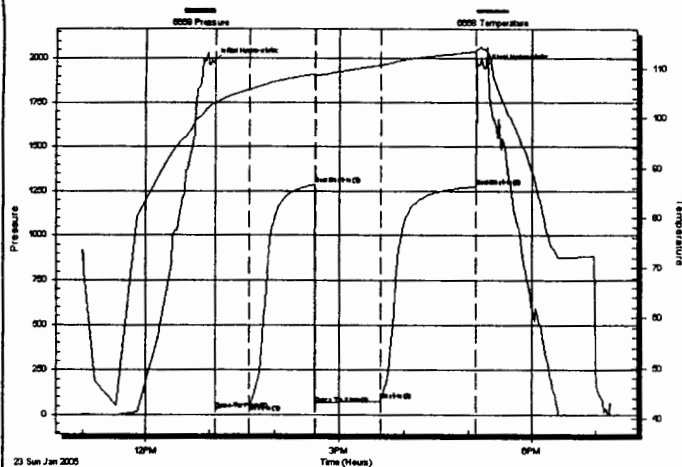
TEST COMMENT: FFP-w k bl thru-out 1/2" to 2 1/2" bl

FFP-w k to strg in 60 min

Times 30-60-60-90

ISIP-surface bl bk,FSIP-

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1978.38	103.04	Initial Hydro-static
2	25.76	103.21	Open To Flow (1)
33	59.19	105.81	Shut-In(1)
93	1286.76	108.97	End Shut-In(1)
94	58.86	108.72	Open To Flow (2)
155	78.41	110.80	Shut-In(2)
244	1278.16	113.52	End Shut-In(2)
252	1945.36	113.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	MGO 10%gas 50%oil 40%mud	0.39
70.00	Clean Oil	0.62
0.00	330'GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

Popp-Borger Unit #1-14

14-9s-26w Sheridan

Job Ticket: 20781

DST#: 3

Test Start: 2005.01.23 @ 10:59:34

Tool Information

Drill Pipe:	Length: 3905.00 ft	Diameter: 3.80 inches	Volume: 54.78 bbl	Tool Weight: 2200.00 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: 70000.00 lb
		Total Volume: 55.37 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	4020.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	80.02 ft			
Tool Length:	101.02 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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Change Over Sub	1.00			4000.00	
Shut In Tool	5.00			4005.00	
Hydraulic tool	5.00			4010.00	
Packer	5.00			4015.00	21.00 Bottom Of Top Packer
Packer	5.00			4020.00	
Stubb	1.00			4021.00	
Perforations	9.00			4030.00	
Recorder	0.01	6668	Inside	4030.01	
Perforations	4.00			4034.01	
Recorder	0.01	13534	Outside	4034.02	
Blank Spacing	63.00			4097.02	
Bullnose	3.00			4100.02	80.02 Bottom Packers & Anchor

Total Tool Length: 101.02



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

Popp-Borger Unit #1-14

14-9s-26w Sheridan

Job Ticket: 20781

DST#: 3

Test Start: 2005.01.23 @ 10:59:34

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 49.00 sec/qt

Water Loss: 6.77 in³

Resistivity: ohm.m

Salinity: 2500.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: 38 deg API

Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	MGO 10%gas 50%oil 40%mud	0.393
70.00	Clean Oil	0.618
0.00	330'GIP	0.000

Total Length: 150.00 ft Total Volume: 1.011 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

