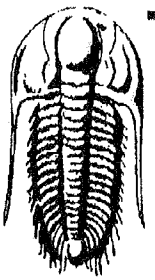
CONFIDENTIAL 15-167-23292 5-15s-15w ORIGINAL

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TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg Co Inc**

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

5-15-15-Russell-Ks

Mudd # 1-5

Start Date: 2005.07.11 @ 06:20:28
End Date: 2005.07.11 @ 12:07:13
Job Ticket #: 21674 DST #: 1

15-167-23292
SE NE SE
1700 FSL 330 FEL

Murfin Drlg Co Inc
Mudd # 1-5
5-15-15-Russell-Ks
DST # 1
Oread
2005.07.11

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 Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 21674 **DST#: 1**

Test Start: 2005.07.11 @ 06:20:28

GENERAL INFORMATION:

Formation: **Oread**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:12:28
Time Test Ended: 12:07:13

Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 21

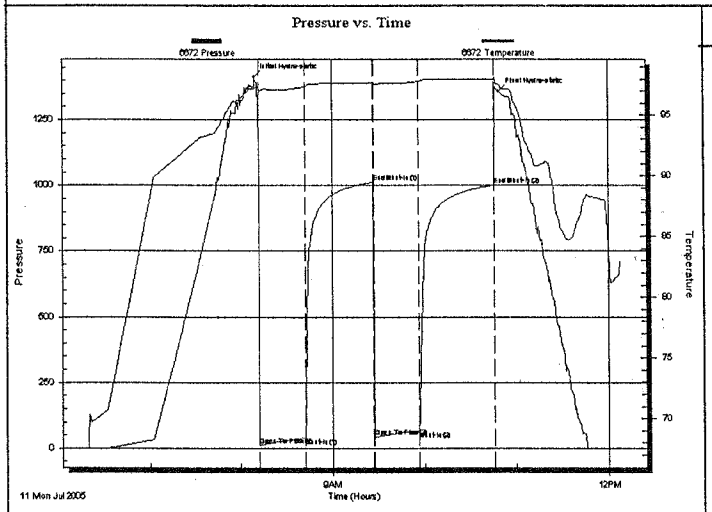
Interval: 2992.00 ft (KB) To 3012.00 ft (KB) (TVD)
Total Depth: 3012.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1878.00 ft (KB)
1873.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6672 **Inside**
Press@RunDepth: 67.23 psig @ 2993.00 ft (KB)
Start Date: 2005.07.11 End Date: 2005.07.11
Start Time: 06:20:29 End Time: 12:07:13

Capacity: 7000.00 psig
Last Calib.: 2005.07.11
Time On Btm: 2005.07.11 @ 08:09:28
Time Off Btm: 2005.07.11 @ 10:48:58

TEST COMMENT: IF-Weak steady surface blow
FF-Weak steady surface blow
Times-30-45-30-45



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1412.55	97.20	Initial Hydro-static
3	10.96	97.06	Open To Flow (1)
33	41.26	97.36	Shut-In(1)
78	1012.60	97.68	End Shut-In(1)
78	43.68	97.53	Open To Flow (2)
108	67.23	97.77	Shut-In(2)
157	1000.95	98.00	End Shut-In(2)
160	1358.45	97.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
125.00	Mdy Wtr Rw .13 @ 70 = 60000ppm	0.62

Gas Rates

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

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 21674 **DST#: 1**

Test Start: 2005.07.11 @ 06:20:28

Tool Information

Drill Pipe:	Length:	2859.00 ft	Diameter:	3.80 inches	Volume:	40.10 bbl	Tool Weight:	1500.00 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:	124.00 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	Weight to Pull Loose:	50000.00 lb
					Total Volume:	40.71 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		15.00 ft					String Weight: Initial	42000.00 lb
Depth to Top Packer:		2992.00 ft					Final	42000.00 lb
Depth to Bottom Packer:		ft						
Interval betw een Packers:		20.00 ft						
Tool Length:		44.00 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			2969.00		
Shut In Tool	5.00			2974.00		
Hydraulic tool	5.00			2979.00		
Safety Joint	3.00			2982.00		
Packer	5.00			2987.00	24.00	Bottom Of Top Packer
Packer	5.00			2992.00		
Stubb	1.00			2993.00		
Recorder	0.00	6672	Inside	2993.00		
Perforations	16.00			3009.00		
Recorder	0.00	13254	Outside	3009.00		
Bullnose	3.00			3012.00	20.00	Bottom Packers & Anchor
Total Tool Length:	**44.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 21674 **DST#: 1**

Test Start: 2005.07.11 @ 06:20:28

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:	47.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.77 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3400.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

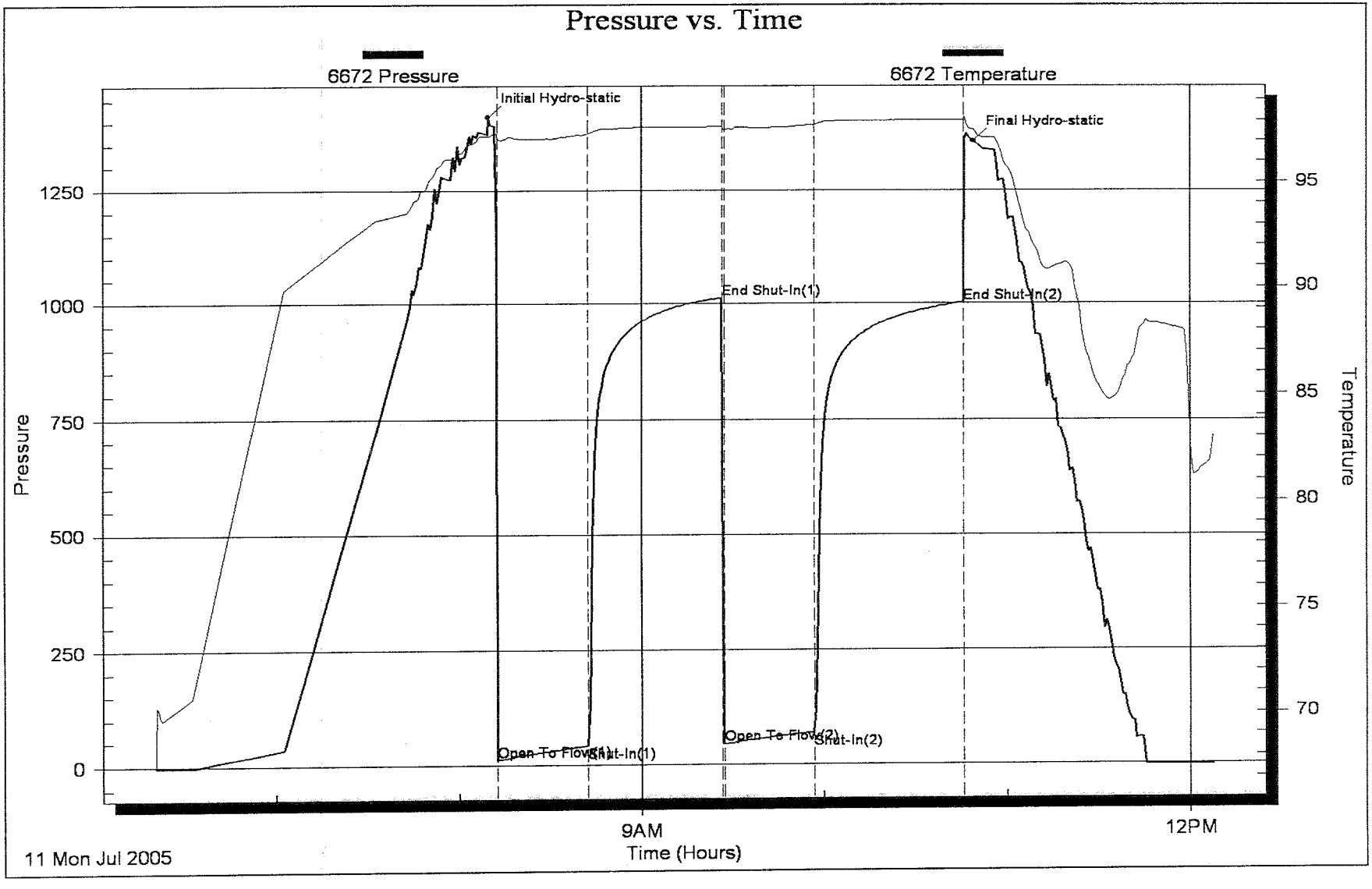
Length ft	Description	Volume bbl
125.00	Mdy Wtr Rw .13 @ 70 = 60000ppm	0.624

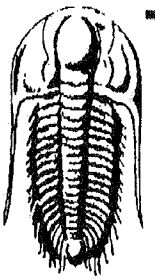
Total Length: 125.00 ft Total Volume: 0.624 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
6672 Pressure
6672 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1250
1000
750
500
250
0
95
90
85
80
75
70
9AM
12PM
Time (Hours)
11 Mon Jul 2005



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg Co Inc**

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

5-15-15-Russell-Ks

Mudd # 1-5

Start Date: 2005.07.12 @ 07:40:19
End Date: 2005.07.12 @ 13:31:04
Job Ticket #: 21675 DST #: 2

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

DRILL STEM TEST REPORT

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 21675 **DST#: 2**

Test Start: 2005.07.12 @ 07:40:19

GENERAL INFORMATION:

Formation: **Toronto/A-B-D**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:34:04
Time Test Ended: 13:31:04

Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 21

Interval: 3045.00 ft (KB) To 3155.00 ft (KB) (TVD)
Total Depth: 3155.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

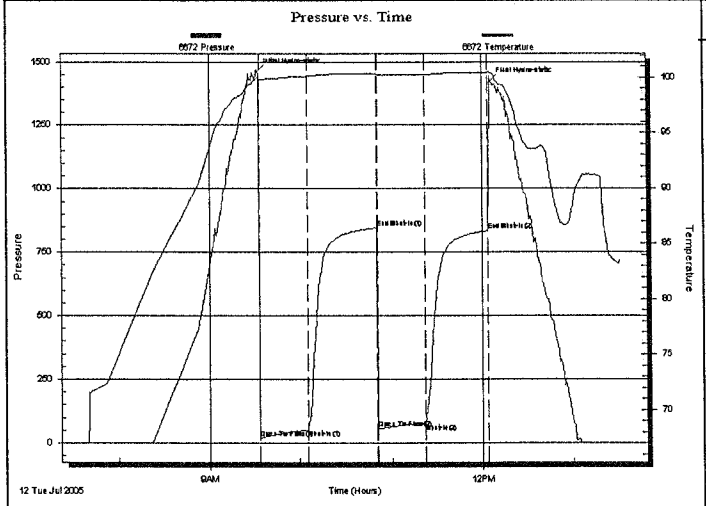
Reference Elevations: 1878.00 ft (KB)
1873.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6672 **Inside**

Press@RunDepth: 76.67 psig @ 3052.00 ft (KB)
Start Date: 2005.07.12 End Date: 2005.07.12
Start Time: 07:40:20 End Time: 13:31:04

Capacity: 7000.00 psig
Last Calib.: 2005.07.12
Time On Btm: 2005.07.12 @ 09:32:34
Time Off Btm: 2005.07.12 @ 12:05:49

TEST COMMENT: IF-Weak building to 3/4"in 15 min - then decreasing to1/2" in 30 min
FF-No blow for the 1st 20 min - then very weak surface blow
Times-30-45-30-45



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1460.40	99.94	Initial Hydro-static
2	17.62	99.72	Open To Flow (1)
34	51.07	100.10	Shut-In(1)
78	845.21	100.33	End Shut-In(1)
78	54.79	100.20	Open To Flow (2)
109	76.67	100.23	Shut-In(2)
152	833.85	100.38	End Shut-In(2)
154	1423.20	100.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	Thin Mud	0.61

Gas Rates

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

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 21675 **DST#: 2**

Test Start: 2005.07.12 @ 07:40:19

Tool Information

Drill Pipe:	Length:	2916.00 ft	Diameter:	3.80 inches	Volume:	40.90 bbl	Tool Weight:		1300.00 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:	124.00 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	Weight to Pull Loose:		60000.00 lb
					Total Volume:	41.51 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		19.00 ft					String Weight:	Initial	45000.00 lb
Depth to Top Packer:		3045.00 ft						Final	45000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		110.00 ft							
Tool Length:		134.00 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			3022.00		
Shut In Tool	5.00			3027.00		
Hydraulic tool	5.00			3032.00		
Safety Joint	3.00			3035.00		
Packer	5.00			3040.00	24.00	Bottom Of Top Packer
Packer	5.00			3045.00		
Stubb	1.00			3046.00		
Perforations	5.00			3051.00		
Change Over Sub	1.00			3052.00		
Recorder	0.00	6672	Inside	3052.00		
Drill Pipe	95.00			3147.00		
Change Over Sub	1.00			3148.00		
Recorder	0.00	13254	Outside	3148.00		
Perforations	4.00			3152.00		
Bullnose	3.00			3155.00	110.00	Bottom Packers & Anchor
Total Tool Length:	**134.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 21675 **DST#: 2**

Test Start: 2005.07.12 @ 07:40:19

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:	47.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.76 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3400.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

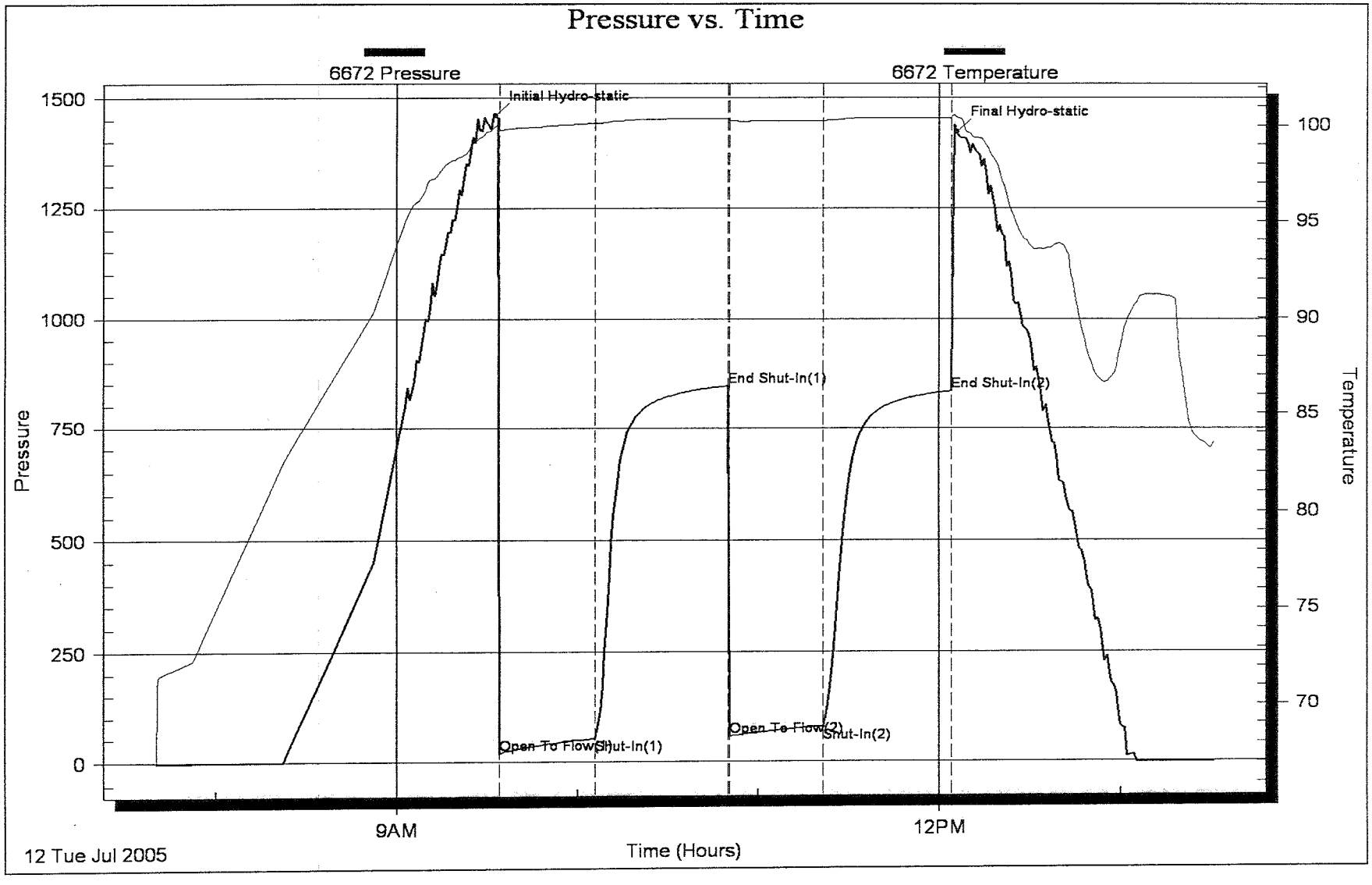
Length ft	Description	Volume bbl
124.00	Thin Mud	0.610

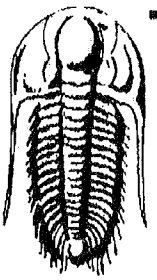
Total Length: 124.00 ft Total Volume: 0.610 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
6672 Pressure
6672 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
1500
1250
1000
750
500
250
0
Pressure
100
95
90
85
80
75
70
Temperature
9AM
12PM
Time (Hours)
12 Tue Jul 2005



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg Co Inc**

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

5-15-15-Russell-Ks

Mudd # 1-5

Start Date: 2005.07.12 @ 19:32:18
End Date: 2005.07.13 @ 01:19:18
Job Ticket #: 22026 DST #: 3

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

DRILL STEM TEST REPORT

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 22026 **DST#: 3**

Test Start: 2005.07.12 @ 19:32:18

GENERAL INFORMATION:

Formation: F LKC
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:07:03
Time Test Ended: 01:19:18

Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 21

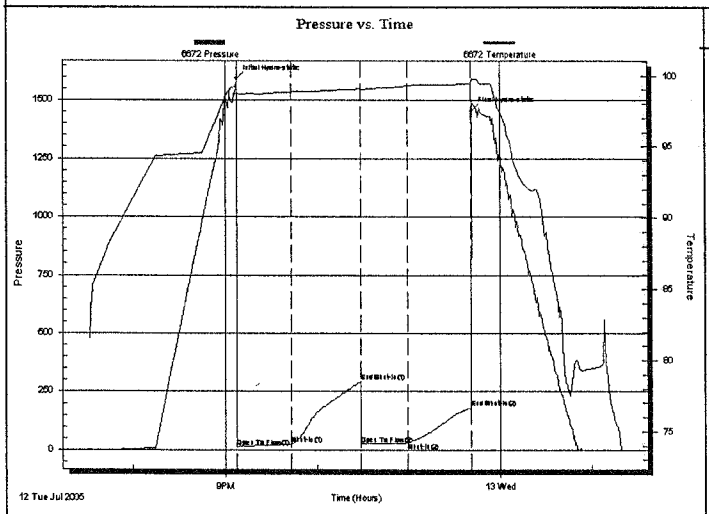
Interval: 3160.00 ft (KB) To 3186.00 ft (KB) (TVD)
Total Depth: 3186.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1878.00 ft (KB)
1873.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6672 **Inside**
Press@RunDepth: 31.94 psig @ 3161.00 ft (KB)
Start Date: 2005.07.12 End Date: 2005.07.13
Start Time: 19:32:19 End Time: 01:19:18

Capacity: 7000.00 psig
Last Calib.: 2005.07.13
Time On Btm: 2005.07.12 @ 21:06:48
Time Off Btm: 2005.07.12 @ 23:41:48

TEST COMMENT: IF-Weak died in 10 min
FF-No blow
Times-30-45-30-45



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1592.08	99.25	Initial Hydro-static
1	12.95	98.87	Open To Flow (1)
36	23.28	98.86	Shut-In(1)
82	293.11	99.07	End Shut-In(1)
82	26.65	99.05	Open To Flow (2)
113	31.94	99.30	Shut-In(2)
155	181.38	99.42	End Shut-In(2)
155	1453.28	99.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	DM w / oil show in tool	0.07

Gas Rates

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

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 22026 **DST#: 3**

Test Start: 2005.07.12 @ 19:32:18

Tool Information

Drill Pipe:	Length:	3042.00 ft	Diameter:	3.80 inches	Volume:	42.67 bbl	Tool Weight:		1600.00 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:	124.00 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	Weight to Pull Loose:		50000.00 lb
					Total Volume:	43.28 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		30.00 ft					String Weight:	Initial	45000.00 lb
Depth to Top Packer:		3160.00 ft						Final	45000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		26.00 ft							
Tool Length:		50.00 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			3137.00		
Shut In Tool	5.00			3142.00		
Hydraulic tool	5.00			3147.00		
Safety Joint	3.00			3150.00		
Packer	5.00			3155.00	24.00	Bottom Of Top Packer
Packer	5.00			3160.00		
Stubb	1.00			3161.00		
Recorder	0.00	6672	Inside	3161.00		
Perforations	22.00			3183.00		
Recorder	0.00	13254	Outside	3183.00		
Bullnose	3.00			3186.00	26.00	Bottom Packers & Anchor
Total Tool Length:	**50.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 22026 **DST#: 3**

Test Start: 2005.07.12 @ 19:32:18

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:	44.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.38 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

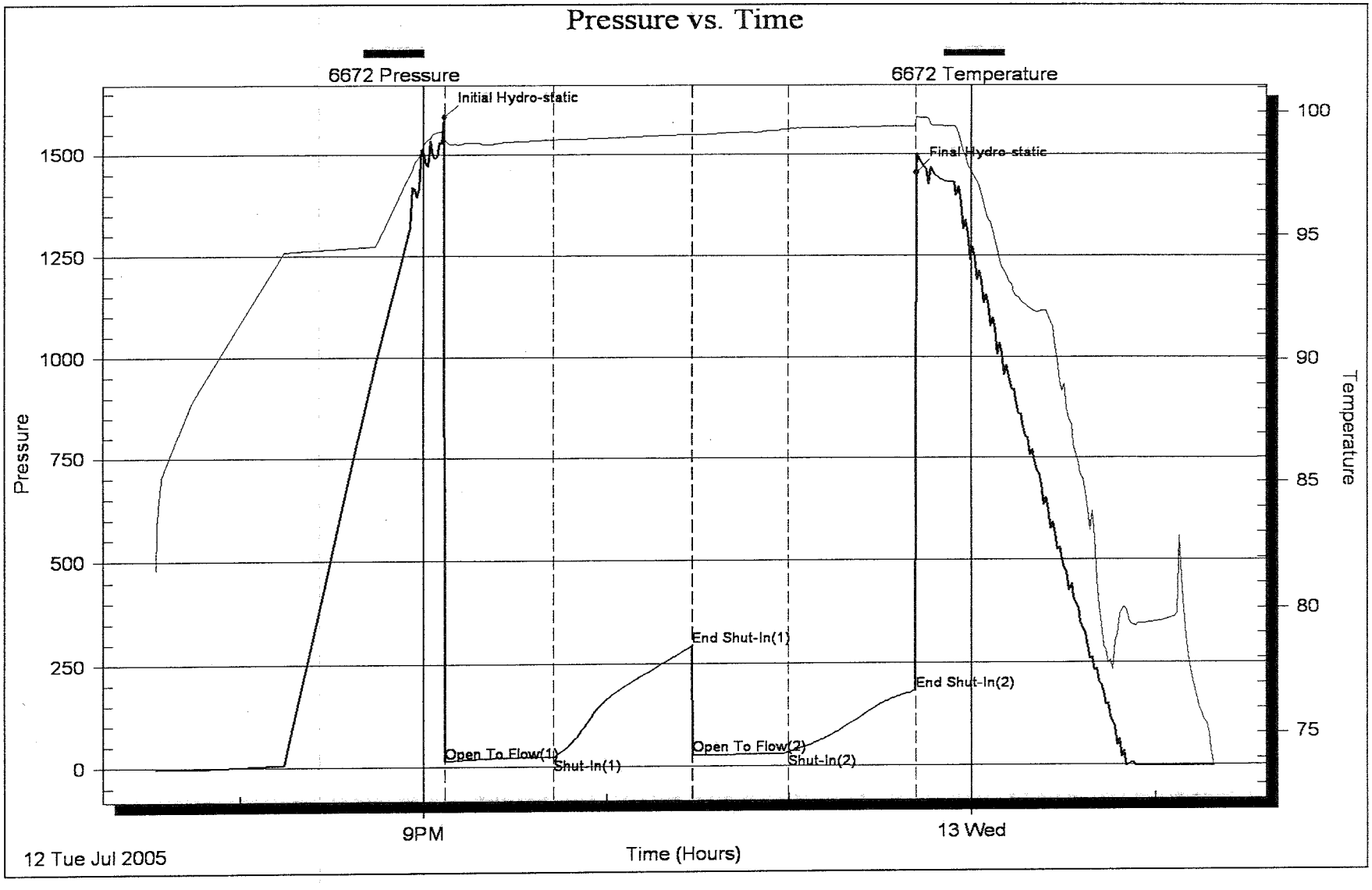
Length ft	Description	Volume bbl
15.00	DM w / oil show in tool	0.074

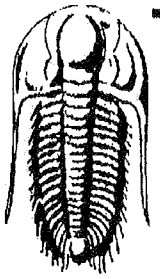
Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
6672 Pressure
6672 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1500
1250
1000
750
500
250
0
100
95
90
85
80
75
9PM
13 Wed
12 Tue Jul 2005
Time (Hours)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg Co Inc**

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

5-15-15-Russell-Ks

Mudd # 1-5

Start Date: 2005.07.13 @ 20:14:34
End Date: 2005.07.14 @ 04:02:19
Job Ticket #: 22027 DST #: 4

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 Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 22027 **DST#: 4**

Test Start: 2005.07.13 @ 20:14:34

GENERAL INFORMATION:

Formation: H-L LKC
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:09:49
Time Test Ended: 04:02:19

Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 21

Interval: 3231.00 ft (KB) To 3340.00 ft (KB) (TVD)
Total Depth: 3340.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

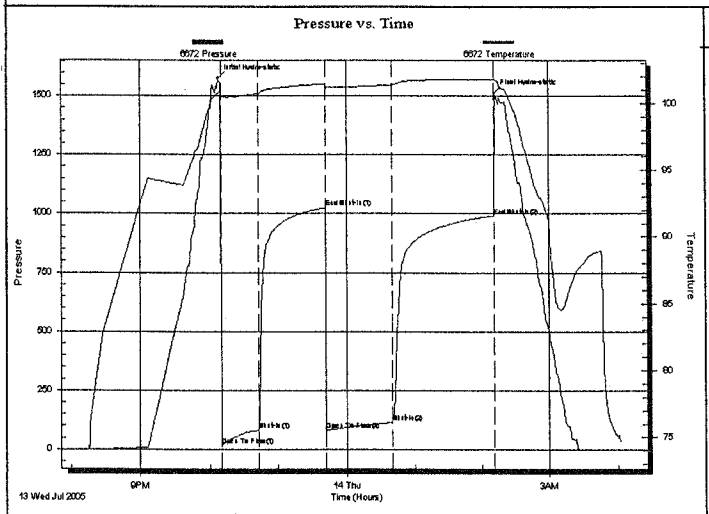
Reference Elevations: 1878.00 ft (KB)
1873.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6672 **Inside**

Press@RunDepth: 115.14 psig @ 3238.00 ft (KB)
Start Date: 2005.07.13 End Date: 2005.07.14
Start Time: 20:14:35 End Time: 04:02:19

Capacity: 7000.00 psig
Last Calib.: 2005.07.14
Time On Btm: 2005.07.13 @ 22:07:34
Time Off Btm: 2005.07.14 @ 02:11:49

TEST COMMENT: IF-WEak building to 1 3/4"
FF-Weak steady surface blow
Times-30-60-60-90



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1574.92	100.74	Initial Hydro-static
3	17.85	100.43	Open To Flow (1)
36	79.63	100.71	Shut-In(1)
94	1024.82	101.45	End Shut-In(1)
95	81.26	100.99	Open To Flow (2)
153	115.14	101.39	Shut-In(2)
244	990.98	101.81	End Shut-In(2)
245	1512.51	101.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	Mdy Wtr	1.40
30.00	DM	0.42
1.00	CO	0.01
0.00	Rw .10 @ 80 = 70000ppm	0.00

Gas Rates

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

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 22027 **DST#: 4**

Test Start: 2005.07.13 @ 20:14:34

Tool Information

Drill Pipe:	Length:	3101.00 ft	Diameter:	3.80 inches	Volume:	43.50 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	124.00 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	
					Total Volume:	44.11 bbl	

Drill Pipe Above KB:	18.00 ft
Depth to Top Packer:	3231.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	109.00 ft
Tool Length:	133.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:	1300.00 lb
Weight set on Packer:	25000.00 lb
Weight to Pull Loose:	50000.00 lb
Tool Chased	0.00 ft
String Weight: Initial	46000.00 lb
Final	46000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3208.00		
Shut In Tool	5.00			3213.00		
Hydraulic tool	5.00			3218.00		
Safety Joint	3.00			3221.00		
Packer	5.00			3226.00	24.00	Bottom Of Top Packer
Packer	5.00			3231.00		
Stubb	1.00			3232.00		
Perforations	5.00			3237.00		
Change Over Sub	1.00			3238.00		
Recorder	0.00	6672	Inside	3238.00		
Drill Pipe	94.00			3332.00		
Change Over Sub	1.00			3333.00		
Recorder	0.00	13254	Outside	3333.00		
Perforations	4.00			3337.00		
Bullnose	3.00			3340.00	109.00	Bottom Packers & Anchor
Total Tool Length:	**133.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 22027 **DST#: 4**

Test Start: 2005.07.13 @ 20:14:34

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:	70000 ppm
Viscosity:	41.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.78 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	6000.00 ppm				
Filter Cake:	inches				

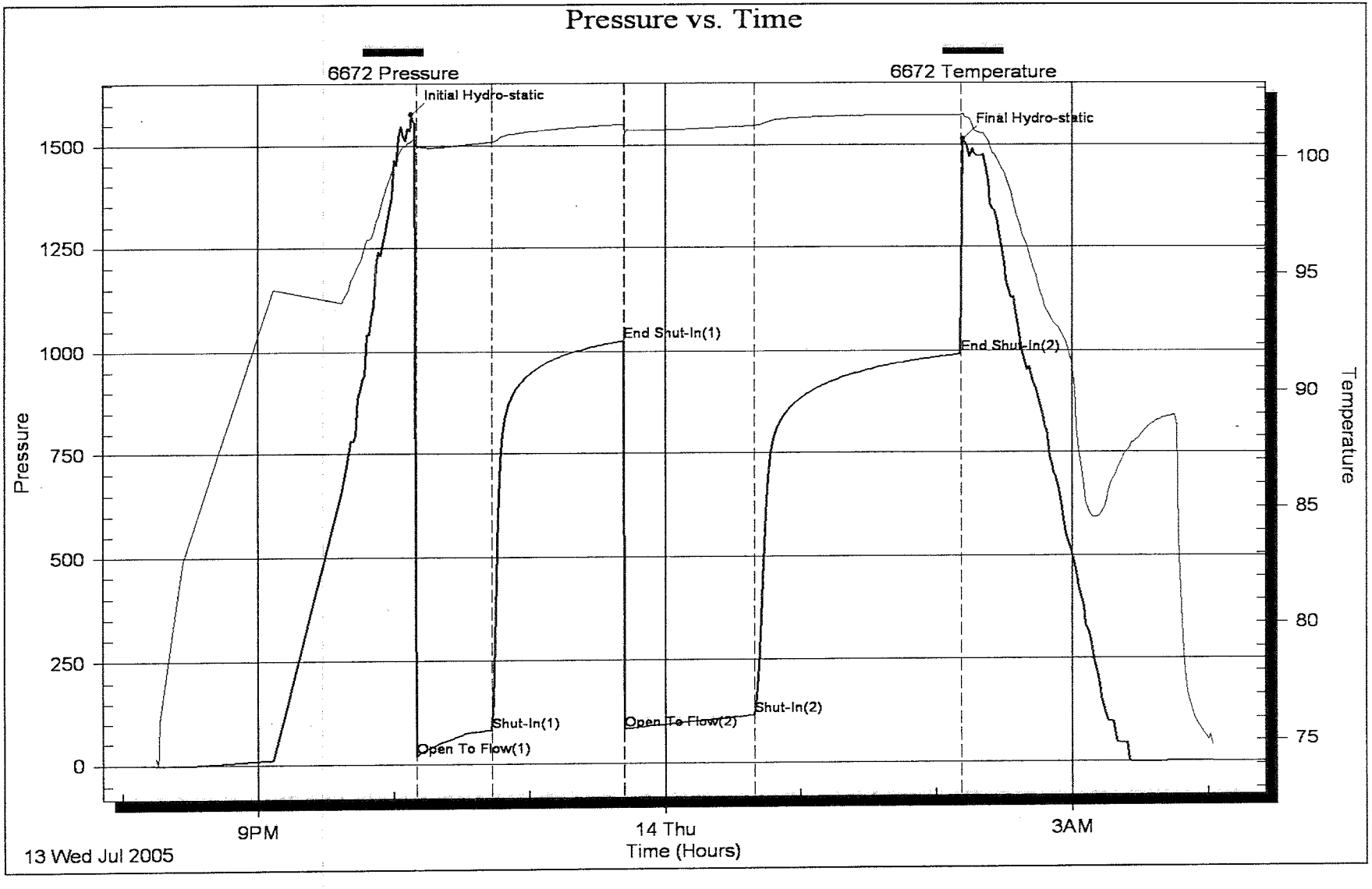
Recovery Information

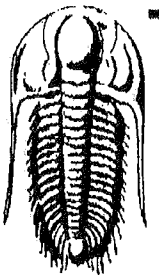
Recovery Table

Length ft	Description	Volume bbl
180.00	Mdy Wtr	1.395
30.00	DM	0.421
1.00	CO	0.014
0.00	Rw .10 @ 80 = 70000ppm	0.000

Total Length: 211.00 ft Total Volume: 1.830 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:


Pressure vs. Time
6672 Pressure
6672 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Shut-In(2)
Open To Flow(1)
Open To Flow(2)
Pressure
Temperature
1500
1250
1000
750
500
250
0
100
95
90
85
80
75
9PM
14 Thu
3AM
Time (Hours)
13 Wed Jul 2005



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg Co Inc**

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

5-15-15-Russell-Ks

Mudd # 1-5

Start Date: 2005.07.14 @ 12:40:42
End Date: 2005.07.14 @ 18:36:27
Job Ticket #: 22028 DST #: 5

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

DRILL STEM TEST REPORT

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 22028 **DST#: 5**

Test Start: 2005.07.14 @ 12:40:42

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:50:42
Time Test Ended: 18:36:27

Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 21

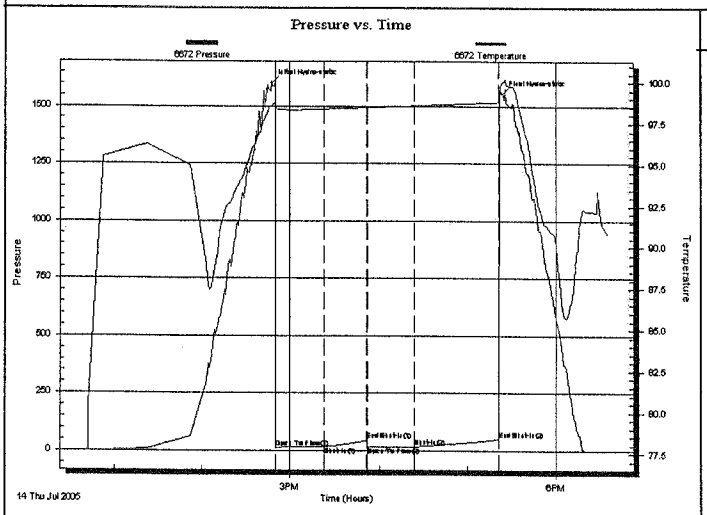
Interval: 3321.00 ft (KB) To 3364.00 ft (KB) (TVD)
Total Depth: 3364.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1878.00 ft (KB)
1873.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6672 **Inside**
Press@RunDepth: 16.94 psig @ 3324.00 ft (KB)
Start Date: 2005.07.14 End Date: 2005.07.14
Start Time: 12:40:43 End Time: 18:36:27

Capacity: 7000.00 psig
Last Calib.: 2005.07.14
Time On Btm: 2005.07.14 @ 14:48:12
Time Off Btm: 2005.07.14 @ 17:23:27

TEST COMMENT: IF-Weak died in 5 min
FF-No blow
Times-30-30-30-60



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1599.33	98.62	Initial Hydro-static
3	13.65	98.38	Open To Flow (1)
35	15.81	98.39	Shut-In(1)
63	44.46	98.48	End Shut-In(1)
64	15.78	98.48	Open To Flow (2)
96	16.94	98.59	Shut-In(2)
154	50.44	98.82	End Shut-In(2)
156	1553.98	100.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	DM w / oil spots	0.02

Gas Rates

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

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 22028 **DST#: 5**

Test Start: 2005.07.14 @ 12:40:42

Tool Information

Drill Pipe:	Length:	3197.00 ft	Diameter:	3.80 inches	Volume:	44.85 bbl	Tool Weight:		1300.00 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:	124.00 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	Weight to Pull Loose:		50000.00 lb
					Total Volume:	45.46 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		24.00 ft					String Weight:	Initial	46000.00 lb
Depth to Top Packer:		3321.00 ft						Final	46000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		43.00 ft							
Tool Length:		67.00 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			3298.00		
Shut In Tool	5.00			3303.00		
Hydraulic tool	5.00			3308.00		
Safety Joint	3.00			3311.00		
Packer	5.00			3316.00	24.00	Bottom Of Top Packer
Packer	5.00			3321.00		
Stubb	1.00			3322.00		
Perforations	1.00			3323.00		
Change Over Sub	1.00			3324.00		
Recorder	0.00	6672	Inside	3324.00		
Drill Pipe	31.00			3355.00		
Change Over Sub	1.00			3356.00		
Perforations	5.00			3361.00		
Recorder	0.00	13254	Outside	3361.00		
Bullnose	3.00			3364.00	43.00	Bottom Packers & Anchor
Total Tool Length:	**67.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 22028 **DST#: 5**

Test Start: 2005.07.14 @ 12:40:42

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:	40.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.98 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	7000.00 ppm				
Filter Cake:	inches				

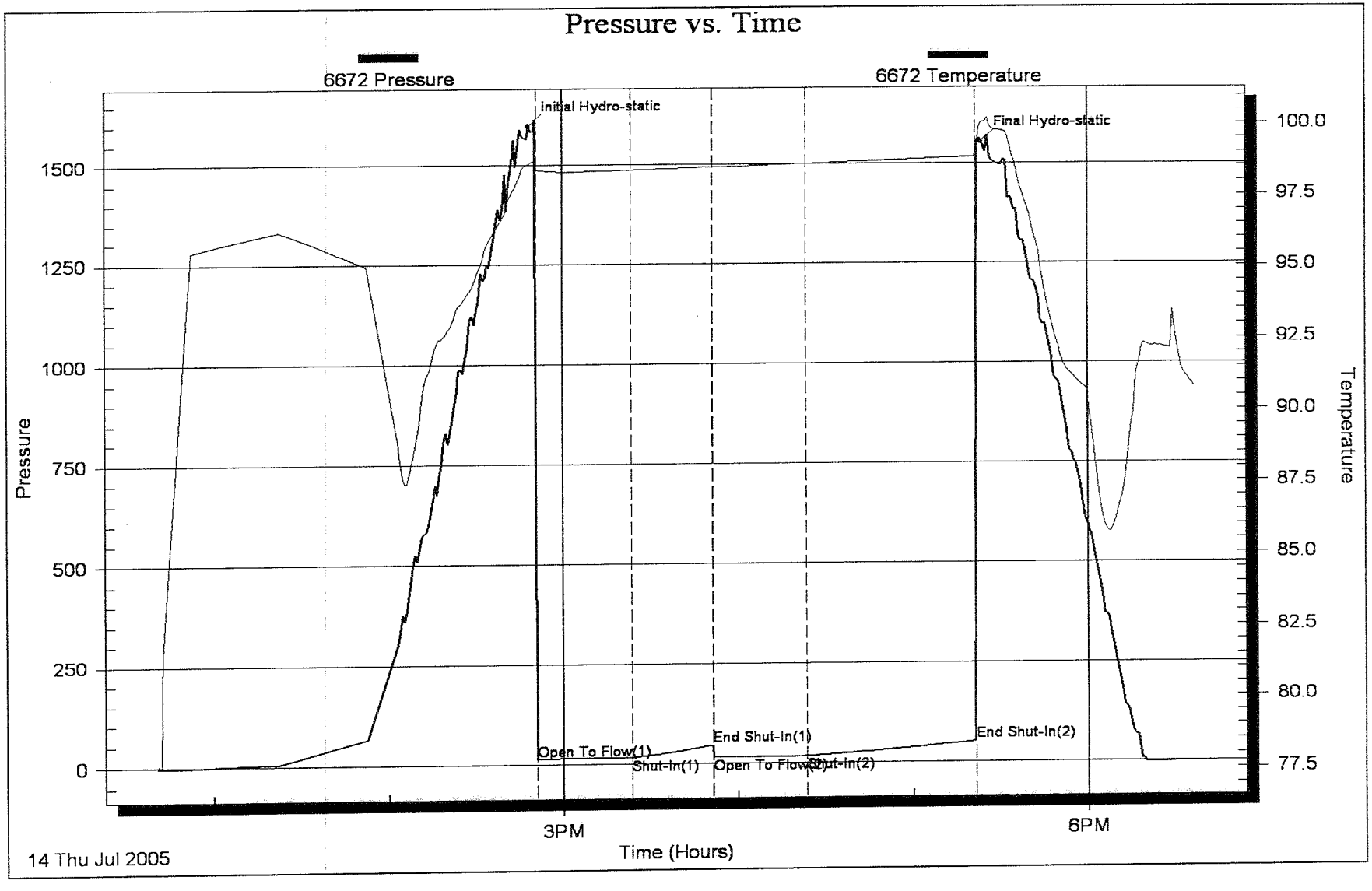
Recovery Information

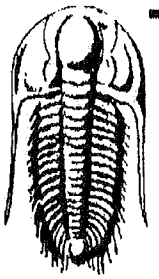
Recovery Table

Length ft	Description	Volume bbl
5.00	DM w / oil spots	0.025

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:


Pressure vs. Time
6672 Pressure
6672 Temperature
Initial Hydro-static
Final Hydro-static
Open To Flow(1)
Shut-In(1)
End Shut-In(1)
Open To Flow(2)
Shut-In(2)
End Shut-In(2)
Pressure
Temperature
Time (Hours)
3PM
6PM
14 Thu Jul 2005
1500
1250
1000
750
500
250
0
100.0
97.5
95.0
92.5
90.0
87.5
85.0
82.5
80.0
77.5



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg Co Inc**

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

5-15-15-Russell-Ks

Mudd # 1-5

Start Date: 2005.07.15 @ 07:37:40
End Date: 2005.07.15 @ 15:10:55
Job Ticket #: 22029 DST #: 6

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

DRILL STEM TEST REPORT

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 22029 **DST#: 6**

Test Start: 2005.07.15 @ 07:37:40

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:34:25
Time Test Ended: 15:10:55

Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 21

Interval: 3364.00 ft (KB) To 3379.00 ft (KB) (TVD)
Total Depth: 3379.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

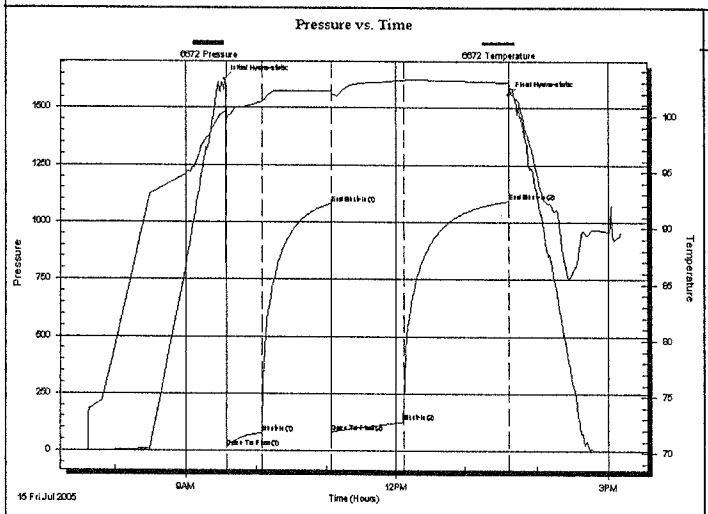
Reference Elevations: 1878.00 ft (KB)
1873.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6672 **Inside**

Press@RunDepth: 124.66 psig @ 3365.00 ft (KB)
Start Date: 2005.07.15 End Date: 2005.07.15
Start Time: 07:37:41 End Time: 15:10:55

Capacity: 7000.00 psig
Last Calib.: 2005.07.15
Time On Btm: 2005.07.15 @ 09:32:40
Time Off Btm: 2005.07.15 @ 13:36:55

TEST COMMENT: IF-Weak building to 4"
FF-Weak building to 2"
Times-30-60-60-90



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1625.05	100.34	Initial Hydro-static
2	14.23	99.60	Open To Flow (1)
33	76.78	101.29	Shut-In(1)
92	1081.96	102.19	End Shut-In(1)
92	78.91	101.98	Open To Flow (2)
155	124.66	103.16	Shut-In(2)
244	1091.68	103.00	End Shut-In(2)
245	1558.26	103.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
248.00	Mdy Wtr Rw .25 @ 80 = 25000ppm	2.35

Gas Rates

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

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 22029 **DST#: 6**

Test Start: 2005.07.15 @ 07:37:40

Tool Information

Drill Pipe:	Length:	3228.00 ft	Diameter:	3.80 inches	Volume:	45.28 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	124.00 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	
					Total Volume:	45.89 bbl	

Drill Pipe Above KB:	12.00 ft
Depth to Top Packer:	3364.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	15.00 ft
Tool Length:	39.00 ft
Number of Packers:	2 Diameter: 6.75 inches
Tool Comments:	

Tool Weight:	1200.00 lb
Weight set on Packer:	25000.00 lb
Weight to Pull Loose:	60000.00 lb
Tool Chased	0.00 ft
String Weight: Initial	46000.00 lb
Final	46000.00 lb

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3341.00		
Shut In Tool	5.00			3346.00		
Hydraulic tool	5.00			3351.00		
Safety Joint	3.00			3354.00		
Packer	5.00			3359.00	24.00	Bottom Of Top Packer
Packer	5.00			3364.00		
Stubb	1.00			3365.00		
Recorder	0.00	6672	Inside	3365.00		
Perforations	11.00			3376.00		
Recorder	0.00	13254	Outside	3376.00		
Bullnose	3.00			3379.00	15.00	Bottom Packers & Anchor
Total Tool Length:	**39.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg Co Inc

200 N Wtr Ste 300
Wichita Ks 67202

ATTN: David Doyle

Mudd # 1-5

5-15-15-Russell-Ks

Job Ticket: 22029 **DST#: 6**

Test Start: 2005.07.15 @ 07:37:40

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:	25000 ppm
Viscosity:	41.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.98 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	8000.00 ppm				
Filter Cake:	inches				

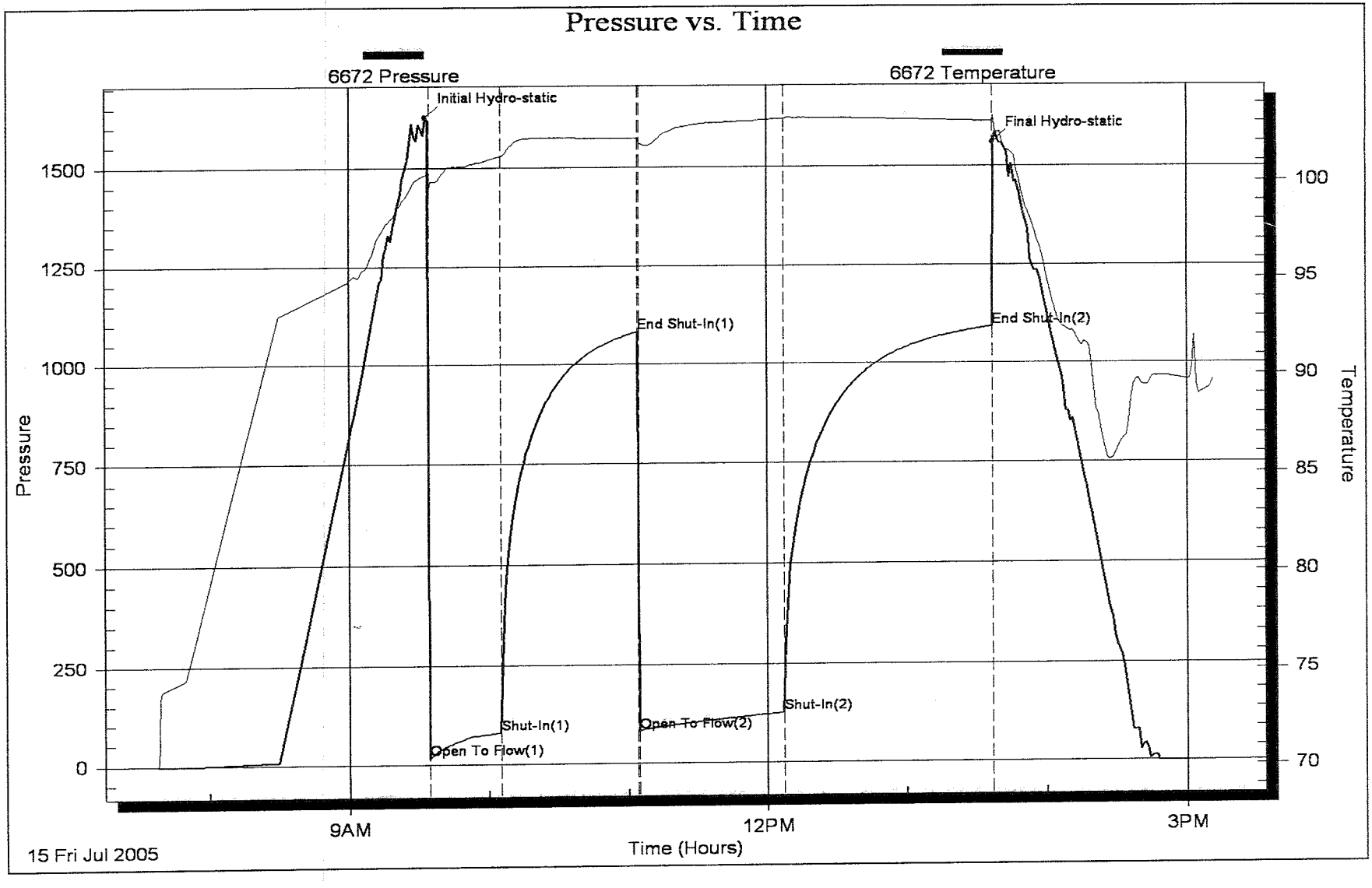
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
248.00	Mdy Wtr Rw .25 @ 80 = 25000ppm	2.349

Total Length: 248.00 ft Total Volume: 2.349 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:


Pressure vs. Time
6672 Pressure
6672 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Open To Flow(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1500
1250
1000
750
500
250
0
100
95
90
85
80
75
70
9AM
12PM
3PM
Time (Hours)
15 Fri Jul 2005