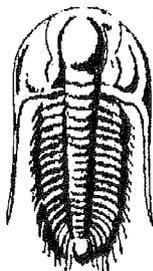


15-065-23330

14-10s-24w CONFIDENTIAL 2007

CONFIDENTIAL



**TRILOBITE**  
**TESTING, INC.**

**DRILL STEM TEST REPORT**

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300  
Wichita KS 67202

ATTN: David Doyle

**14 10 24 Graham KS**

**Goltl # 4-14**

Start Date: 2007.08.11 @ 06:43:13

End Date: 2007.08.11 @ 14:10:28

Job Ticket #: 28792                      DST #: 1

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

RECEIVED  
KANSAS CORPORATION COMMISSION  
**DEC 03 2007**  
CONSERVATION DIVISION  
WICHITA, KS

Murfin Drilling Co Inc

Goltl # 4-14

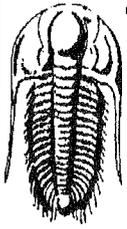
14 10 24 Graham KS

DST # 1

Toronto/A-B

LK

2007.08.11



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300  
Wichita KS 67202

ATTN: David Doyle

**Goitl # 4-14**

**14 10 24 Graham KS**

Job Ticket: 28792

**DST#: 1**

Test Start: 2007.08.11 @ 06:43:13

## GENERAL INFORMATION:

Formation: **Toronto/A-B LK**

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

Time Tool Opened: 08:57:33

Time Test Ended: 14:10:28

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 38

Interval: **3751.00 ft (KB) To 3818.00 ft (KB) (TVD)**

Total Depth: **3818.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2432.00 ft (KB)**

**2427.00 ft (CF)**

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

**Serial #: 6741** Inside

Press@RunDepth: **75.90 psig @ 3754.00 ft (KB)**

Start Date: **2007.08.11**

End Date:

**2007.08.11**

Capacity: **7000.00 psig**

Last Calib.: **2007.08.11**

Start Time: **06:43:15**

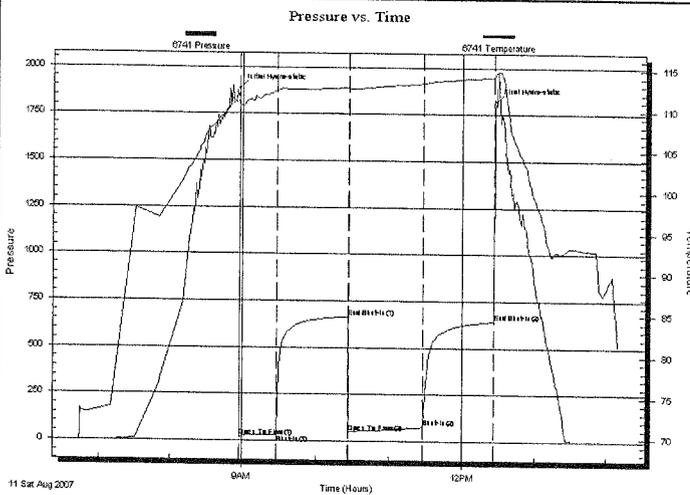
End Time:

**14:10:28**

Time On Btm: **2007.08.11 @ 08:57:13**

Time Off Btm: **2007.08.11 @ 12:27:58**

TEST COMMENT: IF Weak building to 1 1/2 "  
FF Weak steady surface blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1884.74	111.14	Initial Hydro-static
1	17.96	110.71	Open To Flow (1)
31	31.34	112.34	Shut-In(1)
90	664.40	112.82	End Shut-In(1)
90	47.65	112.57	Open To Flow (2)
151	75.90	113.30	Shut-In(2)
210	641.26	114.09	End Shut-In(2)
211	1820.89	114.64	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	Sitly OCM 1%O 99%M	1.41
15.00	Sitly OCM 5%O 95%M	0.21

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co Inc

**Golt # 4-14**

250 N Water Ste 300  
Wichita KS 67202

**14 10 24 Graham KS**

ATTN: David Doyle

Job Ticket: 28792

DST#: 1

Test Start: 2007.08.11 @ 06:43:13

### Tool Information

Drill Pipe:	Length: 3698.00 ft	Diameter: 3.80 inches	Volume: 51.87 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 52.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3751.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	67.00 ft			
Tool Length:	96.00 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			3723.00	
Shut In Tool	5.00			3728.00	
Hydraulic tool	5.00			3733.00	
Jars	5.00			3738.00	
Safety Joint	3.00			3741.00	
Packer	5.00			3746.00	29.00 Bottom Of Top Packer
Packer	5.00			3751.00	
Stubb	1.00			3752.00	
Perforations	1.00			3753.00	
Change Over Sub	1.00			3754.00	
Recorder	0.00	6741	Inside	3754.00	
Drill Pipe	31.00			3785.00	
Change Over Sub	1.00			3786.00	
Recorder	0.00	13254	Outside	3786.00	
Perforations	29.00			3815.00	
Bullnose	3.00			3818.00	67.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>96.00</b>				



**TRILOBITE**  
TESTING, INC

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilling Co Inc

**Goltl # 4-14**

250 N Water Ste 300  
Wichita KS 67202

**14 10 24 Graham KS**

Job Ticket: 28792

**DST#: 1**

ATTN: David Doyle

Test Start: 2007.08.11 @ 06:43:13

**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: 7.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
120.00	Sltly OCM 1%O 99%M	1.410
15.00	Sltly OCM 5%O 95%M	0.210

Total Length: 135.00 ft      Total Volume: 1.620 bbl

Num Fluid Samples: 0

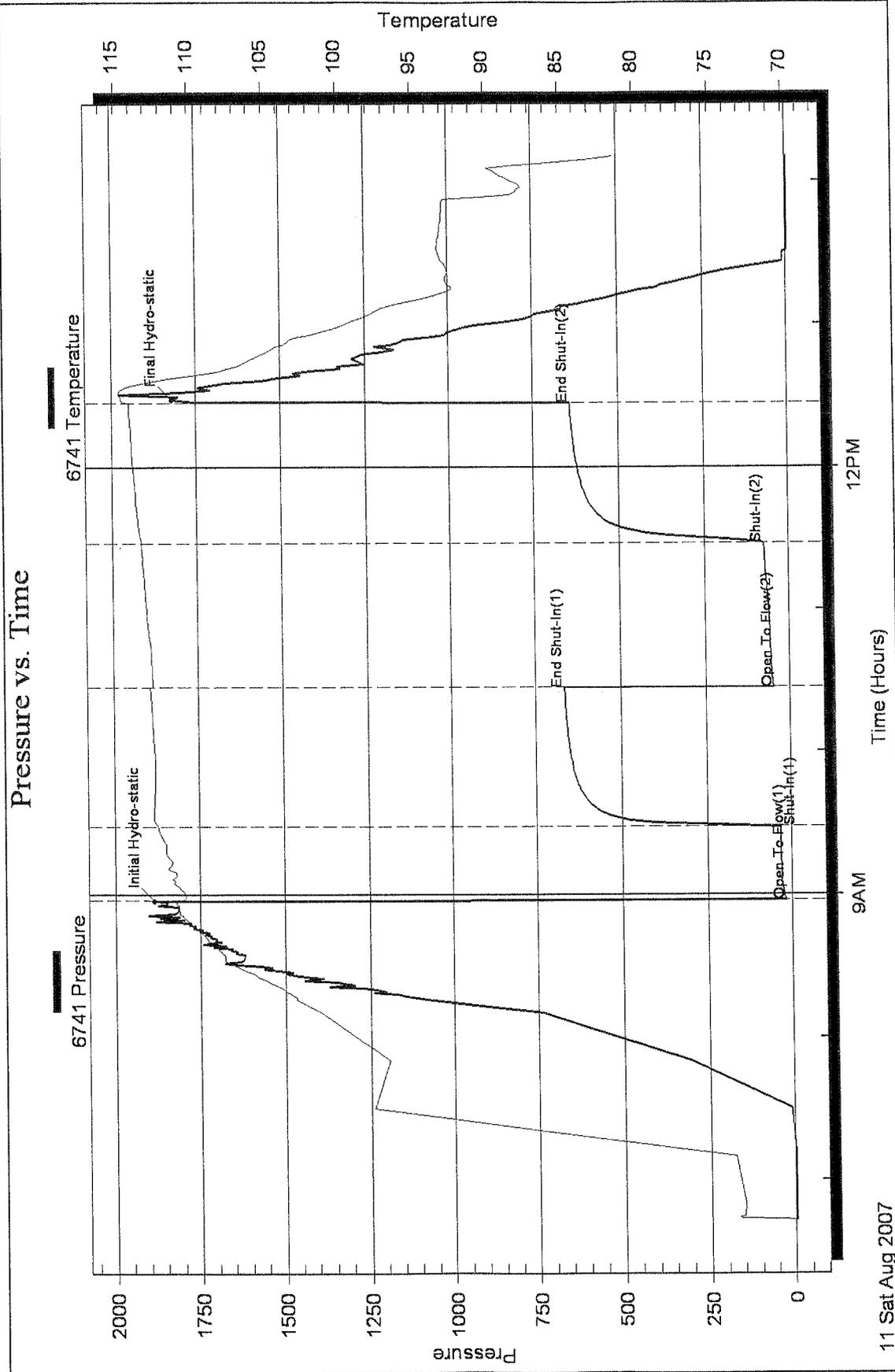
Num Gas Bombs: 0

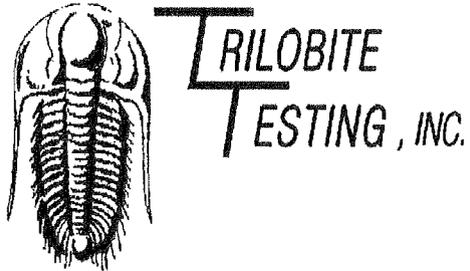
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300  
Wichita KS 67202

ATTN: David Doyle

**14 10 24 Graham KS**

**Goltl # 4-14**

Start Date: 2007.08.11 @ 23:28:35

End Date: 2007.08.12 @ 08:23:20

Job Ticket #: 28793                      DST #: 2

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

Murfin Drilling Co Inc

Goltl # 4-14

14 10 24 Graham KS

DST # 2

C-G

LKC

2007.08.11



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc

**Golft # 4-14**

250 N Water Ste 300  
Wichita KS 67202

**14 10 24 Graham KS**

ATTN: David Doyle

Job Ticket: 28793

**DST#: 2**

Test Start: 2007.08.11 @ 23:28:35

## GENERAL INFORMATION:

Formation: **C-G LKC**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 01:52:25  
 Time Test Ended: 08:23:20

Test Type: Conventional Bottom Hole  
 Tester: Dan Bangle  
 Unit No: 38

Interval: **3818.00 ft (KB) To 3896.00 ft (KB) (TVD)**  
 Total Depth: 3896.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2432.00 ft (KB)  
 2427.00 ft (CF)  
 KB to GR/CF: 5.00 ft

## Serial #: 6741

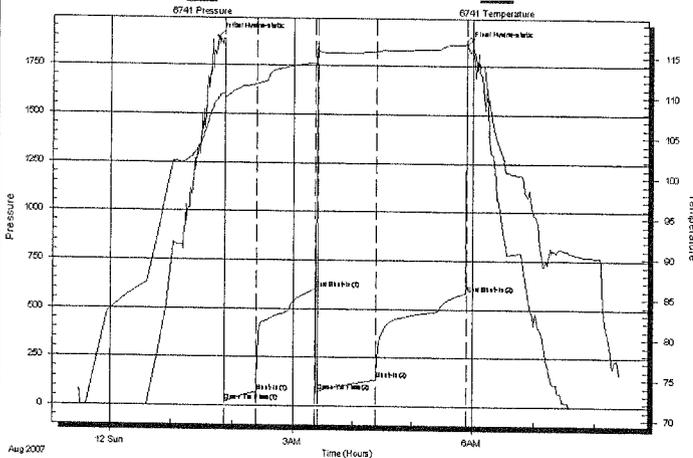
Inside

Press@RunDepth: 136.54 psig @ 3821.00 ft (KB)  
 Start Date: 2007.08.11 End Date: 2007.08.12  
 Start Time: 23:28:37 End Time: 08:23:20

Capacity: 7000.00 psig  
 Last Calib.: 2007.08.12  
 Time On Btm: 2007.08.12 @ 01:45:05  
 Time Off Btm: 2007.08.12 @ 05:55:05

TEST COMMENT: IF Strong B-B in 25 min  
 ISI Weak buiding to 1/2 "  
 FF Weak building to 8 "  
 FSI Weak steady surface blow

Pressure vs. Time



## PRESSURE SUMMARY

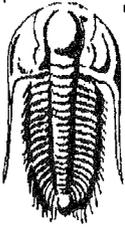
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1894.61	109.67	Initial Hydro-static
8	18.69	110.02	Open To Flow (1)
38	70.66	111.54	Shut-In(1)
97	599.94	114.24	End Shut-In(1)
100	74.59	115.85	Open To Flow (2)
159	136.54	115.60	Shut-In(2)
250	584.34	116.60	End Shut-In(2)
250	1857.38	117.16	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	OCMdyW 20%O 60%W 20%M	0.60
62.00	OCGsyM 10%G 40%O 50%M	0.87
125.00	MCGsyO 10%G 60%O 30%M	1.75
45.00	CGsyO 10%G 90%O	0.63
0.00	573 GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Murfin Drilling Co Inc

**Golft # 4-14**

250 N Water Ste 300  
Wichita KS 67202

**14 10 24 Graham KS**

Job Ticket: 28793

**DST#: 2**

ATTN: David Doyle

Test Start: 2007.08.11 @ 23:28:35

**Tool Information**

Drill Pipe:	Length: 3790.00 ft	Diameter: 3.80 inches	Volume: 53.16 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 53.31 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3818.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	78.00 ft			
Tool Length:	107.00 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			3790.00	
Shut In Tool	5.00			3795.00	
Hydraulic tool	5.00			3800.00	
Jars	5.00			3805.00	
Safety Joint	3.00			3808.00	
Packer	5.00			3813.00	29.00 Bottom Of Top Packer
Packer	5.00			3818.00	
Stubb	1.00			3819.00	
Perforations	1.00			3820.00	
Change Over Sub	1.00			3821.00	
Recorder	0.00	6741	Inside	3821.00	
Drill Pipe	63.00			3884.00	
Change Over Sub	1.00			3885.00	
Recorder	0.00	13254	Outside	3885.00	
Perforations	8.00			3893.00	
Bullnose	3.00			3896.00	78.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>107.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc

**Goitl # 4-14**

250 N Water Ste 300  
Wichita KS 67202

**14 10 24 Graham KS**

Job Ticket: 28793

**DST#: 2**

ATTN: David Doyle

Test Start: 2007.08.11 @ 23:28:35

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

39 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

70000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3600.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	OCMdyW 20%O 60%W 20%M	0.596
62.00	OCGsyM 10%G 40%O 50%M	0.870
125.00	MCGsyO 10%G 60%O 30%M	1.753
45.00	CGsyO 10%G 90%O	0.631
0.00	573 GIP	0.000

Total Length: 294.00 ft      Total Volume: 3.850 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

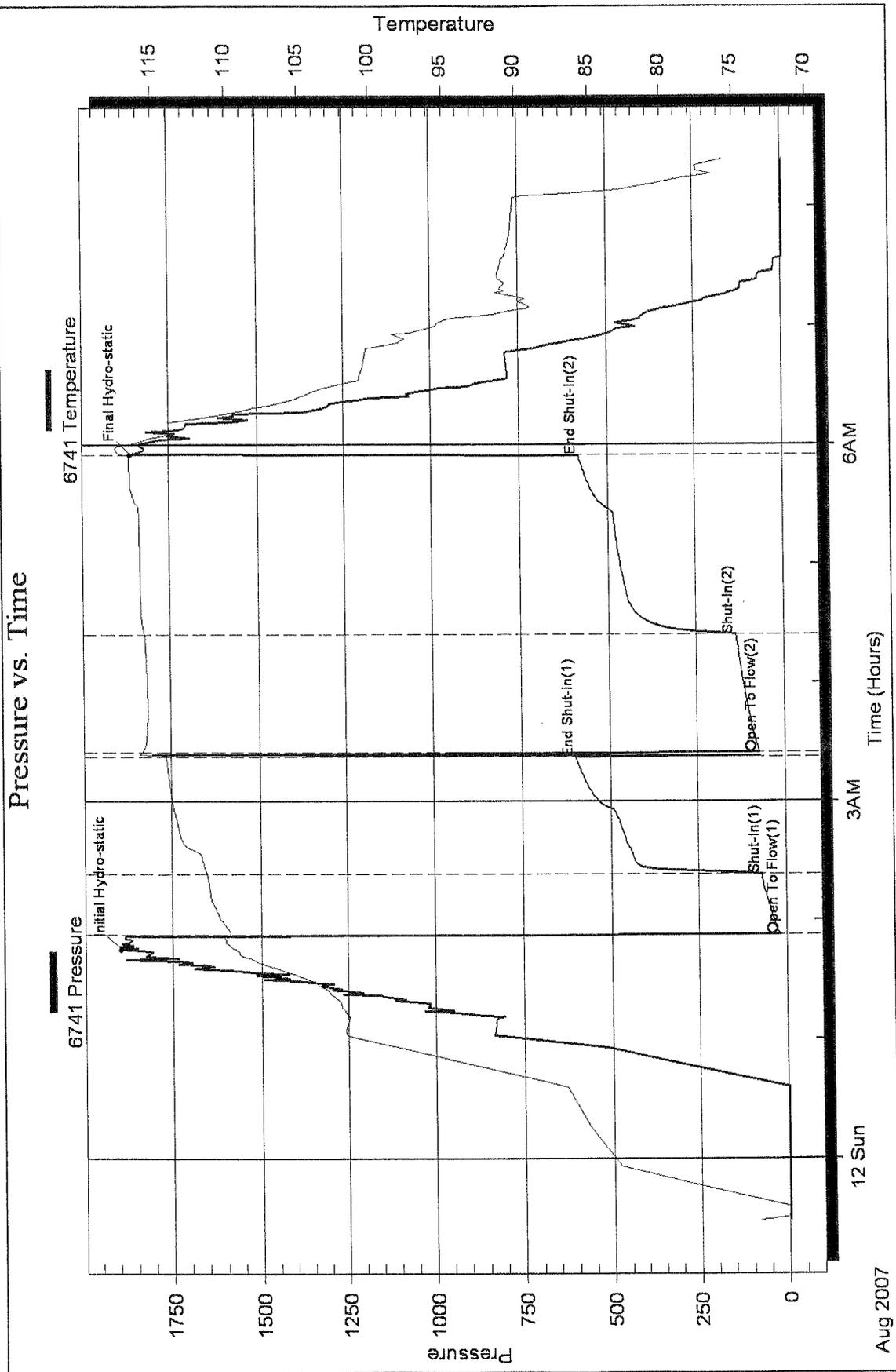
Serial #:

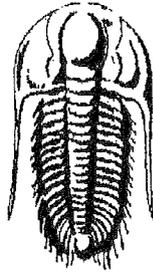
Laboratory Name:

Laboratory Location:

Recovery Comments: Rv .09 @ 80 = 70000ppm

### Pressure vs. Time





**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300  
Wichita KS 67202

ATTN: David Doyle

**14 10 24 Graham KS**

**Golfl # 4-14**

Start Date: 2007.08.12 @ 17:15:44

End Date: 2007.08.13 @ 00:44:44

Job Ticket #: 28794                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

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NOV 28 2007  
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Murfin Drilling Co Inc

Golfl # 4-14

14 10 24 Graham KS

DST # 3

H-K

LKC

2007.08.12



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc

**Golt # 4-14**

250 N Water Ste 300  
Wichita KS 67202

**14 10 24 Graham KS**

Job Ticket: 28794

**DST#: 3**

ATTN: David Doyle

Test Start: 2007.08.12 @ 17:15:44

## GENERAL INFORMATION:

Formation: **H-K LKC**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 19:08:04  
 Time Test Ended: 00:44:44

Test Type: Conventional Bottom Hole  
 Tester: Dan Bangle  
 Unit No: 38

Interval: **3896.00 ft (KB) To 3981.00 ft (KB) (TVD)**  
 Total Depth: 3981.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2432.00 ft (KB)  
 2427.00 ft (CF)  
 KB to GR/CF: 5.00 ft

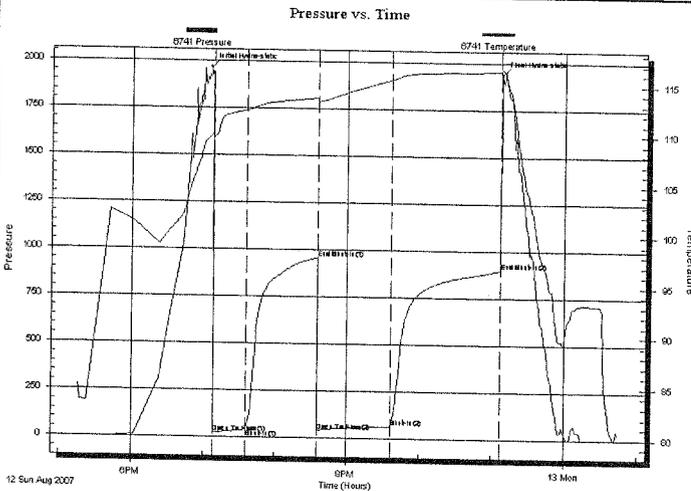
## Serial #: 6741

Inside

Press@RunDepth: 62.73 psig @ 3899.00 ft (KB)  
 Start Date: 2007.08.12 End Date: 2007.08.13  
 Start Time: 17:15:46 End Time: 00:44:44

Capacity: 7000.00 psig  
 Last Calib.: 2007.08.13  
 Time On Btm: 2007.08.12 @ 19:05:44  
 Time Off Btm: 2007.08.12 @ 23:07:29

TEST COMMENT: IF Strong B-B in 22 min  
 FF Strong B-B in 22 min



## PRESSURE SUMMARY

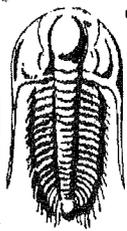
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1966.33	109.87	Initial Hydro-static
3	19.61	109.63	Open To Flow (1)
30	38.55	112.36	Shut-In (1)
90	956.63	113.62	End Shut-In (1)
90	35.92	113.36	Open To Flow (2)
151	62.73	115.47	Shut-In (2)
241	898.33	116.40	End Shut-In (2)
242	1940.80	116.60	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
92.00	MCGsyO 10%G 45%O 45%M	1.02
32.00	CGsyO 10%G 90%O	0.45
0.00	620 GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co Inc  
250 N Water Ste 300  
Wichita KS 67202  
ATTN: David Doyle

**Golft # 4-14**  
**14 10 24 Graham KS**  
Job Ticket: 28794      **DST#: 3**  
Test Start: 2007.08.12 @ 17:15:44

### Tool Information

Drill Pipe:	Length: 3852.00 ft	Diameter: 3.80 inches	Volume: 54.03 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 54.18 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3896.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	85.00 ft			
Tool Length:	114.00 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	
Jars	5.00			3883.00	
Safety Joint	3.00			3886.00	
Packer	5.00			3891.00	29.00      Bottom Of Top Packer
Packer	5.00			3896.00	
Stubb	1.00			3897.00	
Perforations	1.00			3898.00	
Change Over Sub	1.00			3899.00	
Recorder	0.00	6741	Inside	3899.00	
Drill Pipe	63.00			3962.00	
Change Over Sub	1.00			3963.00	
Recorder	0.00	13254	Outside	3963.00	
Perforations	15.00			3978.00	
Bullnose	3.00			3981.00	85.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>114.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc

**Golft # 4-14**

250 N Water Ste 300  
Wichita KS 67202

**14 10 24 Graham KS**

Job Ticket: 28794

**DST#: 3**

ATTN: David Doyle

Test Start: 2007.08.12 @ 17:15:44

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 38 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.79 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 3600.00 ppm		
Filter Cake: inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
92.00	MCGsyO 10%G 45%O 45%M	1.017
32.00	CGsyO 10%G 90%O	0.449
0.00	620 GIP	0.000

Total Length: 124.00 ft      Total Volume: 1.466 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time

