

**CONFIDENTIAL**

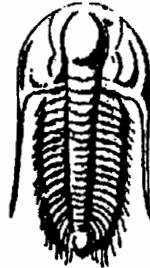
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**ORIGINAL**

**KCC**

**MAR 22 2005**

**CONFIDENTIAL**



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

Prepared For: **Murfin Drilg Co Inc**

250 N Water Suite 300  
Wichita, Ks

ATTN: Paul Gunzelman

**7-3-26 Decatur Ks**

**Montgomery-Knutson #1-7**

Start Date: 2005.01.13 @ 17:16:03

End Date: 2005.01.13 @ 23:42:42

Job Ticket #: 20090                      DST #: 1

**RECEIVED  
MAR 24 2005  
KCC WICHITA**

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

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

7-3-26 Decatur Ks

DST # 1

topoka-oread

2005.01.13



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

250 N Water Suite 300  
Wichita, Ks

7-3-26 Decatur Ks

Job Ticket: 20090

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2005.01.13 @ 17:16:03

### GENERAL INFORMATION:

Formation: topeka-oread

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:24:58

Time Test Ended: 23:42:42

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 25

Interval: 3462.00 ft (KB) To 3482.00 ft (KB) (TVD)

Reference Elevations: 2600.00 ft (KB)

Total Depth: 3482.00 ft (KB) (TVD)

2595.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 12.98 psig @ 3463.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2005.01.13

End Date:

2005.01.13

Last Calib.: 2005.01.13

Start Time: 17:16:03

End Time:

23:42:42

Time On Btm: 2005.01.13 @ 19:24:43

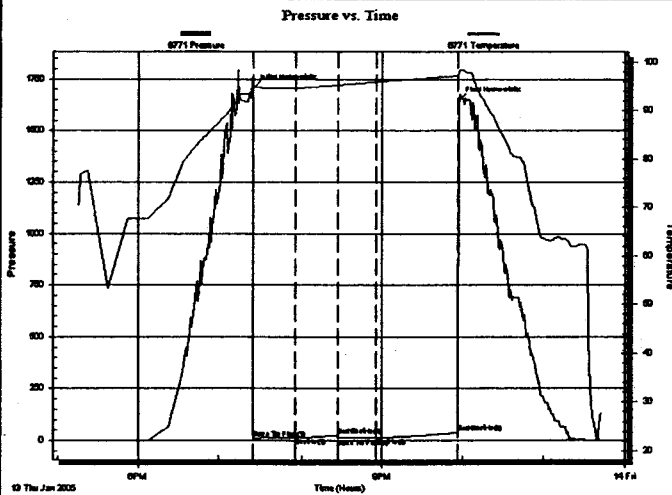
Time Off Btm: 2005.01.13 @ 21:57:13

TEST COMMENT: Weak blow died in 15 min.

No return

No blow

No return



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1705.30	94.76	Initial Hydro-static
1	10.52	94.47	Open To Flow (1)
31	12.65	94.58	Shut-In(1)
63	24.88	95.15	End Shut-In(1)
63	11.75	95.15	Open To Flow (2)
92	12.98	95.85	Shut-In(2)
152	37.85	97.15	End Shut-In(2)
153	1645.57	97.64	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
2.00	mud 100% m	0.01

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Murfin Drilg Co Inc  
250 N Water Suite 300  
Wichita, Ks  
ATTN: Paul Gunzelman

Montgomery-Knutson #1-7  
7-3-26 Decatur Ks  
Job Ticket: 20090 DST#: 1  
Test Start: 2005.01.13 @ 17:16:03

**Tool Information**

Drill Pipe:	Length: 2995.00 ft	Diameter: 3.80 inches	Volume: 42.01 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: 30000.00 lb
Drill Collar:	Length: 459.00 ft	Diameter: 2.25 inches	Volume: 2.26 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 44.27 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3462.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	42.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

**Tool Description**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3441.00	
Shut In Tool	5.00			3446.00	
Hydraulic tool	5.00			3451.00	
Safety Joint	2.00			3453.00	
Packer	5.00			3458.00	22.00 Bottom Of Top Packer
Packer	4.00			3462.00	
Stubb	1.00			3463.00	
Recorder	0.00	6771	Inside	3463.00	
Perforations	14.00			3477.00	
Recorder	0.00	11057	Outside	3477.00	
Bullnose	5.00			3482.00	20.00 Bottom Packers & Anchor

**Total Tool Length: 42.00**



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

250 N Water Suite 300  
Wichita, Ks

7-3-26 Decatur Ks

Job Ticket: 20090

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2005.01.13 @ 17:16:03

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 47.00 sec/qt

Water Loss: 7.19 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

0 deg API

800 ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	mud 100% <sub>m</sub>	0.010

Total Length: 2.00 ft

Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6771

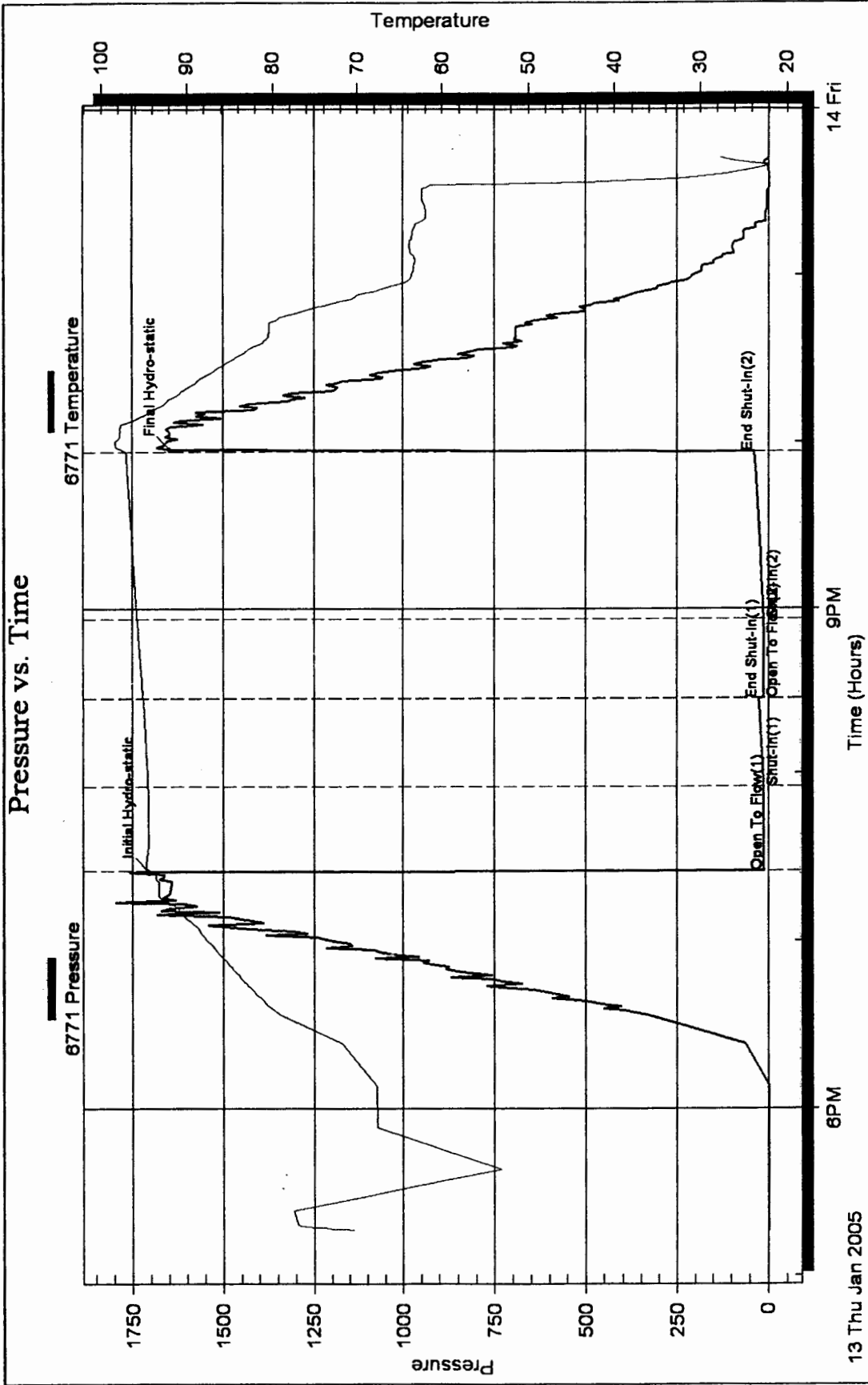
Inside

Murfin Dtlg Co Inc

7-3-26 Decatur KS

DST Test Number: 1

### Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilg Co Inc**

250 N Water Suite 300  
Wichita, Ks

ATTN: Paul Gunzelman

**7-3-26 Decatur Ks**

**Montgomery-Knutson #1-7**

Start Date: 2005.01.14 @ 11:10:07

End Date: 2005.01.14 @ 19:42:01

Job Ticket #: 20091                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

7-3-26 Decatur Ks

DST # 2

Toronto, A

2005.01.14



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilg Co Inc  
250 N Water Suite 300  
Wichita, KS  
ATTN: Paul Gunzelman

Montgomery-Knutson #1-7  
7-3-26 Decatur Ks  
Job Ticket: 20091      DST#: 2  
Test Start: 2005.01.14 @ 11:10:07

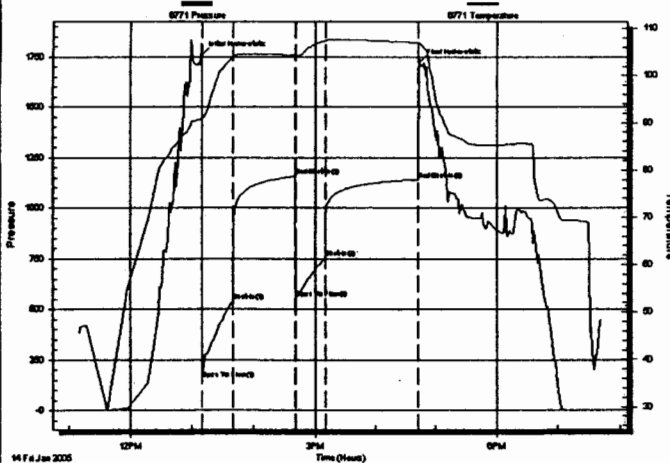
## GENERAL INFORMATION:

Formation: **Toronto, A**  
 Deviated: **No Whipstock:**      ft (KB)  
 Time Tool Opened: 13:10:17  
 Time Test Ended: 19:42:01  
 Interval: **3495.00 ft (KB) To 3551.00 ft (KB) (TVD)**  
 Total Depth: **3551.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**  
 Test Type: **Conventional Bottom Hole**  
 Tester: **Shane McBride**  
 Unit No: **25**  
 Reference Elevations: **2600.00 ft (KB)**  
**2595.00 ft (CF)**  
 KB to GR/CF: **5.00 ft**

**Serial #: 6771**      Inside  
 Press@RunDepth: **750.87 psig @ 3496.00 ft (KB)**      Capacity: **7000.00 psig**  
 Start Date: **2005.01.14**      End Date: **2005.01.14**      Last Calib.: **2005.01.14**  
 Start Time: **11:10:07**      End Time: **19:42:01**      Time On Btm: **2005.01.14 @ 13:10:02**  
 Time Off Btm: **2005.01.14 @ 16:43:47**

**TEST COMMENT:** B.O.B. in 2 min.  
 Return blow in 2 min built to 4" in.  
 B.O.B. in 2 min.  
 Return blow in 2 min. built to 3" in.

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1759.83	91.22	Initial Hydro-static
1	154.50	90.89	Open To Flow (1)
30	536.66	103.73	Shut-In(1)
91	1156.26	104.40	End Shut-In(1)
91	552.23	104.21	Open To Flow (2)
120	750.87	107.34	Shut-In(2)
213	1141.31	107.02	End Shut-In(2)
214	1721.29	106.79	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	m c o 25% m 75%	0.59
1895.00	c g o 20% g 80%	23.49

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

250 N Water Suite 300  
Wichita, Ks

7-3-26 Decatur Ks

Job Ticket: 20091

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2005.01.14 @ 11:10:07

### Tool Information

Drill Pipe:	Length: 3023.00 ft	Diameter: 3.80 inches	Volume: 42.40 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: 30000.00 lb
Drill Collar:	Length: 459.00 ft	Diameter: 2.25 inches	Volume: 2.26 bbl	Weight to Pull Loose: 72000.00 lb
			<b>Total Volume: 44.66 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3495.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.00 ft			
Tool Length:	78.00 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			3474.00	
Shut In Tool	5.00			3479.00	
Hydraulic tool	5.00			3484.00	
Safety Joint	2.00			3486.00	
Packer	5.00			3491.00	22.00 Bottom Of Top Packer
Packer	4.00			3495.00	
Stubb	1.00			3496.00	
Recorder	0.00	6771	Inside	3496.00	
Perforations	17.00			3513.00	
Change Over Sub	1.00			3514.00	
Drill Pipe	31.00			3545.00	
Change Over Sub	1.00			3546.00	
Recorder	0.00	11057	Outside	3546.00	
Bullnose	5.00			3551.00	56.00 Bottom Packers & Anchor

**Total Tool Length: 78.00**



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilg Co Inc  
250 N Water Suite 300  
Wichita, Ks  
ATTN: Paul Gunzelman

Montgomery-Knutson #1-7  
7-3-26 Decatur Ks  
Job Ticket: 20091      DST#: 2  
Test Start: 2005.01.14 @ 11:10:07

### Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 29 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 800 ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.39 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 800.00 ppm		
Filter Cake: 2.00 inches		

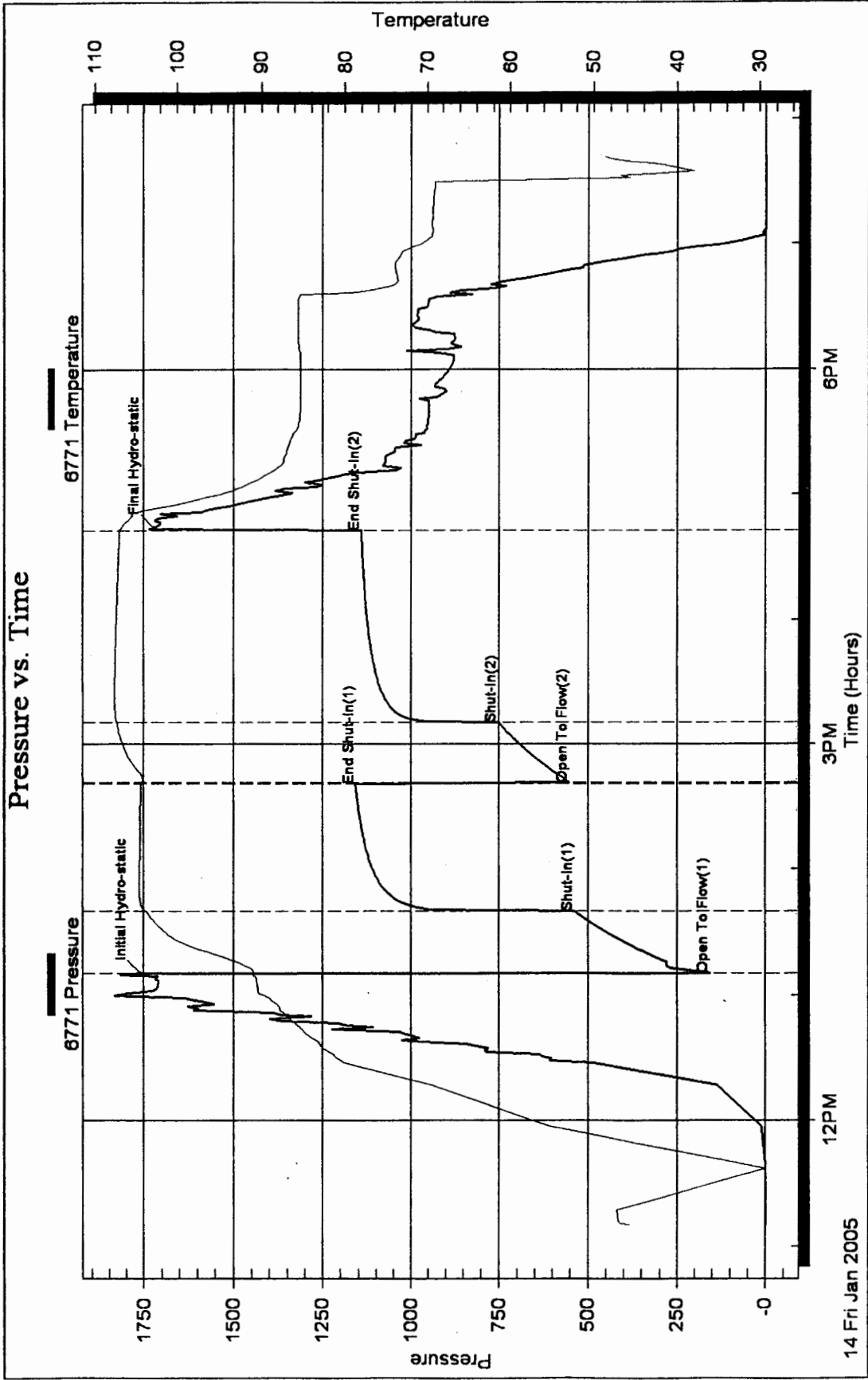
### Recovery Information

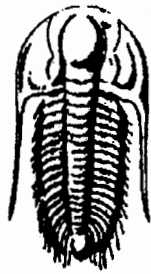
Recovery Table

Length ft	Description	Volume bbl
120.00	m c o 25% m 75% o	0.590
1895.00	c g o 20% g 80% o	23.494

Total Length: 2015.00 ft      Total Volume: 24.084 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

### Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilg Co Inc**  
250 N Water Suite 300  
Wichita, Ks

ATTN: Paul Gunzelman

**7-3-26 Decatur Ks**

**Montgomery-Knutson #1-7**

Start Date: 2005.01.15 @ 02:18:03

End Date: 2005.01.15 @ 10:23:27

Job Ticket #: 20092                      DST #: 3

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

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

7-3-26 Decatur Ks

DST # 3

Lansing Pollnow

2005.01.15



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Murfin Drilg Co Inc  
250 N Water Suite 300  
Wichita, Ks

ATTN: Paul Gunzelman

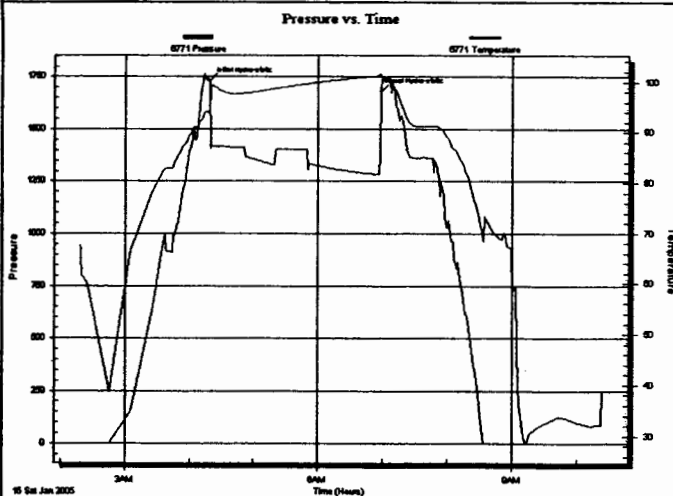
Montgomery-Knutson #1-7  
7-3-26 Decatur Ks  
Job Ticket: 20092      DST#: 3  
Test Start: 2005.01.15 @ 02:18:03

### GENERAL INFORMATION:

Formation: **Lansing Pollnow**  
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole**  
 Time Tool Opened: **07:35:00** Tester: **Shane McBride**  
 Time Test Ended: **10:23:27** Unit No: **25**  
 Interval: **3550.00 ft (KB) To 3568.00 ft (KB) (TVD)** Reference Elevations: **2600.00 ft (KB)**  
 Total Depth: **3568.00 ft (KB) (TVD)** **2595.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair** KB to GR/CF: **5.00 ft**

Serial #: **6771** Inside  
 Press@RunDepth: **psig @ 3551.00 ft (KB)** Capacity: **7000.00 psig**  
 Start Date: **2005.01.15** End Date: **2005.01.15** Last Calib.: **2005.01.15**  
 Start Time: **02:18:03** End Time: **10:23:27** Time On Btrr: **2005.01.15 @ 04:18:28**  
 Time Off Btrr: **2005.01.15 @ 06:58:27**

TEST COMMENT: **3/4" in. blow died in 12 min.**  
**No return**  
**No blow**  
**No return**



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1731.69	94.09	Initial Hydro-static
160	1679.87	101.40	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
2852.00	mud 100% m	35.82

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

250 N Water Suite 300  
Wichita, Ks

7-3-26 Decatur Ks

Job Ticket: 20092

DST#: 3

ATTN: Paul Gunzelman

Test Start: 2005.01.15 @ 02:18:03

### Tool Information

Drill Pipe:	Length: 3087.00 ft	Diameter: 3.80 inches	Volume: 43.30 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: 30000.00 lb
Drill Collar:	Length: 459.00 ft	Diameter: 2.25 inches	Volume: 2.26 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 45.56 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3550.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	40.00 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			3529.00	
Shut In Tool	5.00			3534.00	
Hydraulic tool	5.00			3539.00	
Safety Joint	2.00			3541.00	
Packer	5.00			3546.00	22.00 Bottom Of Top Packer
Packer	4.00			3550.00	
Stubb	1.00			3551.00	
Recorder	0.00	6771	Inside	3551.00	
Perforations	12.00			3563.00	
Recorder	0.00	11057	Outside	3563.00	
Bullnose	5.00			3568.00	18.00 Bottom Packers & Anchor

**Total Tool Length: 40.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

250 N Water Suite 300  
Wichita, Ks

7-3-26 Decatur Ks

Job Ticket: 20092      DST#: 3

ATTN: Paul Gunzelman

Test Start: 2005.01.15 @ 02:18:03

**Mud and Cushion Information**

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

1000 ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
2852.00	mud 100%m	35.825

Total Length: 2852.00 ft

Total Volume: 35.825 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

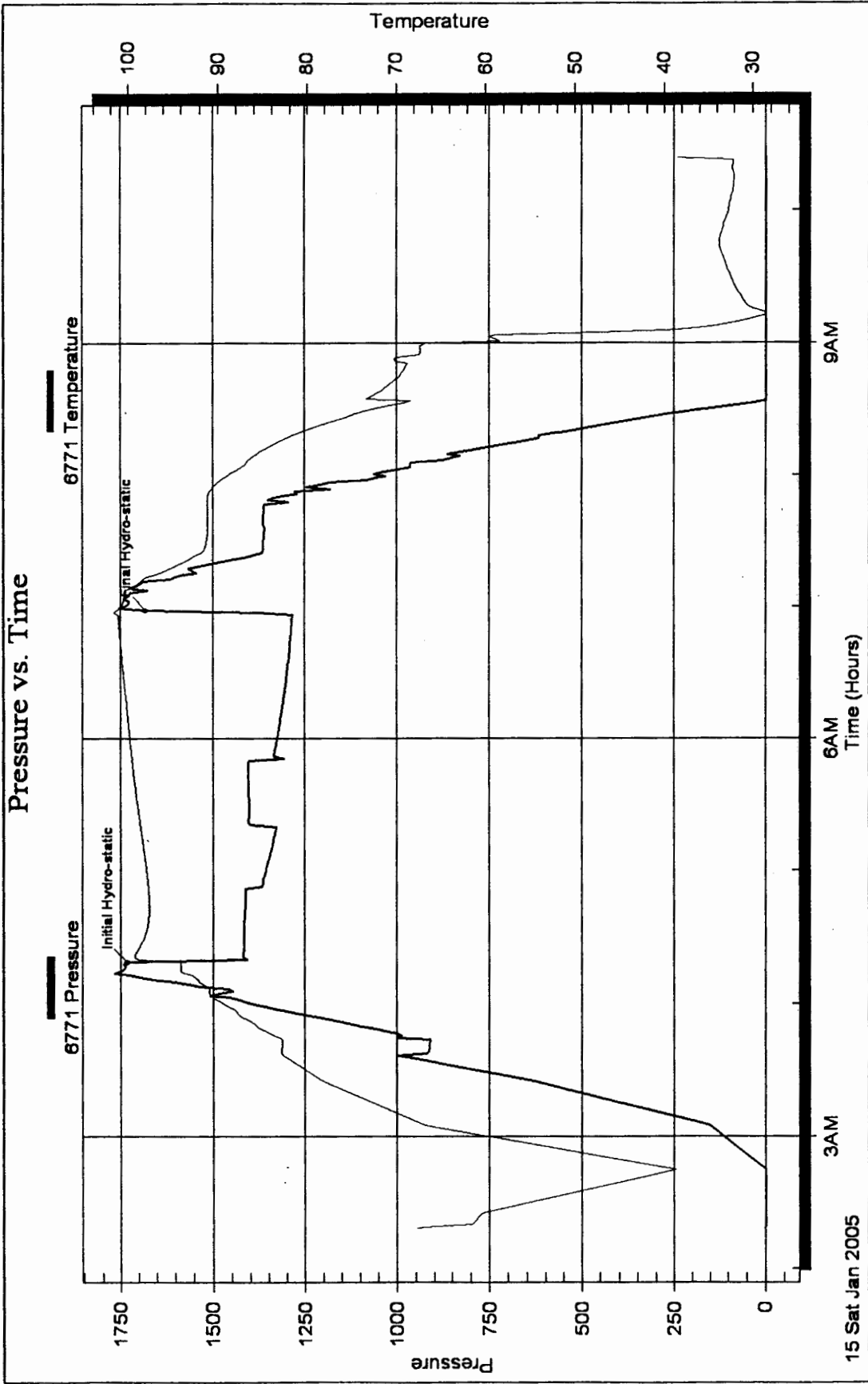
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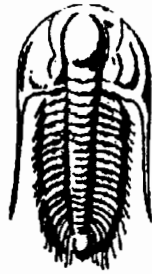
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilg Co Inc**

250 N Water Suite 300  
Wichita, Ks

ATTN: Paul Gunzelman

**7-3-26 Decatur Ks**

**Montgomery-Knutson #1-7**

Start Date: 2005.01.15 @ 14:18:31

End Date: 2005.01.15 @ 22:25:55

Job Ticket #: 20093                      DST #: 4

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

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

7-3-26 Decatur Ks

DST # 4

Lansing Pollnow

2005.01.15



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilg Co Inc

250 N Water Suite 300  
Wchita, Ks

ATTN: Paul Gunzelman

Montgomery-Knutson #1-7

7-3-26 Decatur Ks

Job Ticket: 20093

DST#: 4

Test Start: 2005.01.15 @ 14:18:31

### GENERAL INFORMATION:

Formation: **Lansing Pollnow**

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

Time Tool Opened: 15:58:26

Time Test Ended: 22:25:55

Test Type: **Conventional Bottom Hole**

Tester: **Shane McBride**

Unit No: **25**

Interval: **3550.00 ft (KB) To 3568.00 ft (KB) (TVD)**

Total Depth: **3568.00 ft (KB) (TVD)**

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

Reference Elevations: **2600.00 ft (KB)**

**2595.00 ft (CF)**

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

Serial #: **6771**

Inside

Press@RunDepth: **379.74 psig @ 3551.00 ft (KB)**

Start Date: **2005.01.15**

End Date:

**2005.01.15**

Start Time: **14:18:31**

End Time:

**22:25:55**

Capacity: **7000.00 psig**

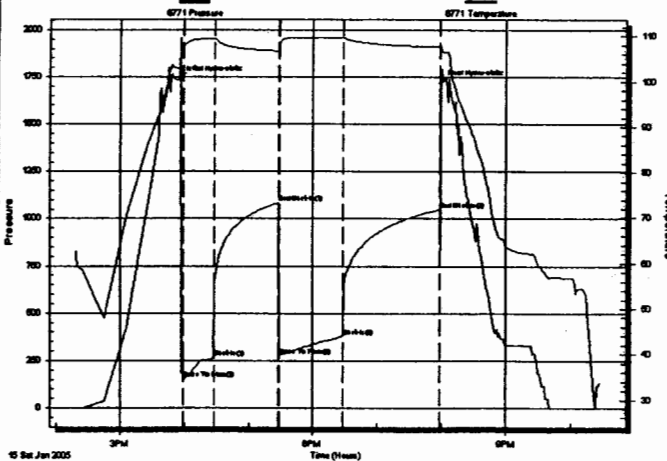
Last Calib.: **2005.01.15**

Time On Btm: **2005.01.15 @ 15:55:11**

Time Off Btm: **2005.01.15 @ 19:59:11**

TEST COMMENT: B.O.B. in 7 min. slide tool 20' to bottom  
No return  
B.O.B. in 15 min.  
1/4" in return blow, died in 40 min.

Pressure vs. Time



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1732.91	102.76	Initial Hydro-static
4	151.67	108.00	Open To Flow (1)
32	265.69	109.50	Shut-In(1)
93	1082.86	106.77	End Shut-In(1)
94	275.19	107.18	Open To Flow (2)
153	379.74	109.69	Shut-In(2)
244	1049.52	107.65	End Shut-In(2)
244	1715.12	107.79	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
538.00	s m c w 10% m 90% w trace of gas	3.37
279.00	s o c m w 3% o 35% m 62% w trace of gas	3.91
20.00	c o 100% o trace of gas	0.28

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

250 N Water Suite 300  
Wichita, Ks

7-3-26 Decatur Ks

Job Ticket: 20093

DST#: 4

ATTN: Paul Gunzelman

Test Start: 2005.01.15 @ 14:18:31

**Tool Information**

Drill Pipe:	Length: 3087.00 ft	Diameter: 3.80 inches	Volume: 43.30 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: 30000.00 lb
Drill Collar:	Length: 459.00 ft	Diameter: 2.25 inches	Volume: 2.26 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 45.56 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3550.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	40.00 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			3529.00	
Shut In Tool	5.00			3534.00	
Hydraulic tool	5.00			3539.00	
Safety Joint	2.00			3541.00	
Packer	5.00			3546.00	22.00 Bottom Of Top Packer
Packer	4.00			3550.00	
Stubb	1.00			3551.00	
Recorder	0.00	6771	Inside	3551.00	
Perforations	12.00			3563.00	
Recorder	0.00	11057	Outside	3563.00	
Bullnose	5.00			3568.00	18.00 Bottom Packers & Anchor

**Total Tool Length: 40.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

250 N Water Suite 300  
Wichita, Ks

7-3-26 Decatur Ks

Job Ticket: 20093

DST#: 4

ATTN: Paul Gunzelman

Test Start: 2005.01.15 @ 14:18:31

**Mud and Cushion Information**

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

39500 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
538.00	s m c w 10% m 90% w trace of gas	3.365
279.00	s o c m w 3% o 35% m 62% w trace of gas	3.914
20.00	c o 100% o trace of gas	0.281

Total Length: 837.00 ft

Total Volume: 7.560 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

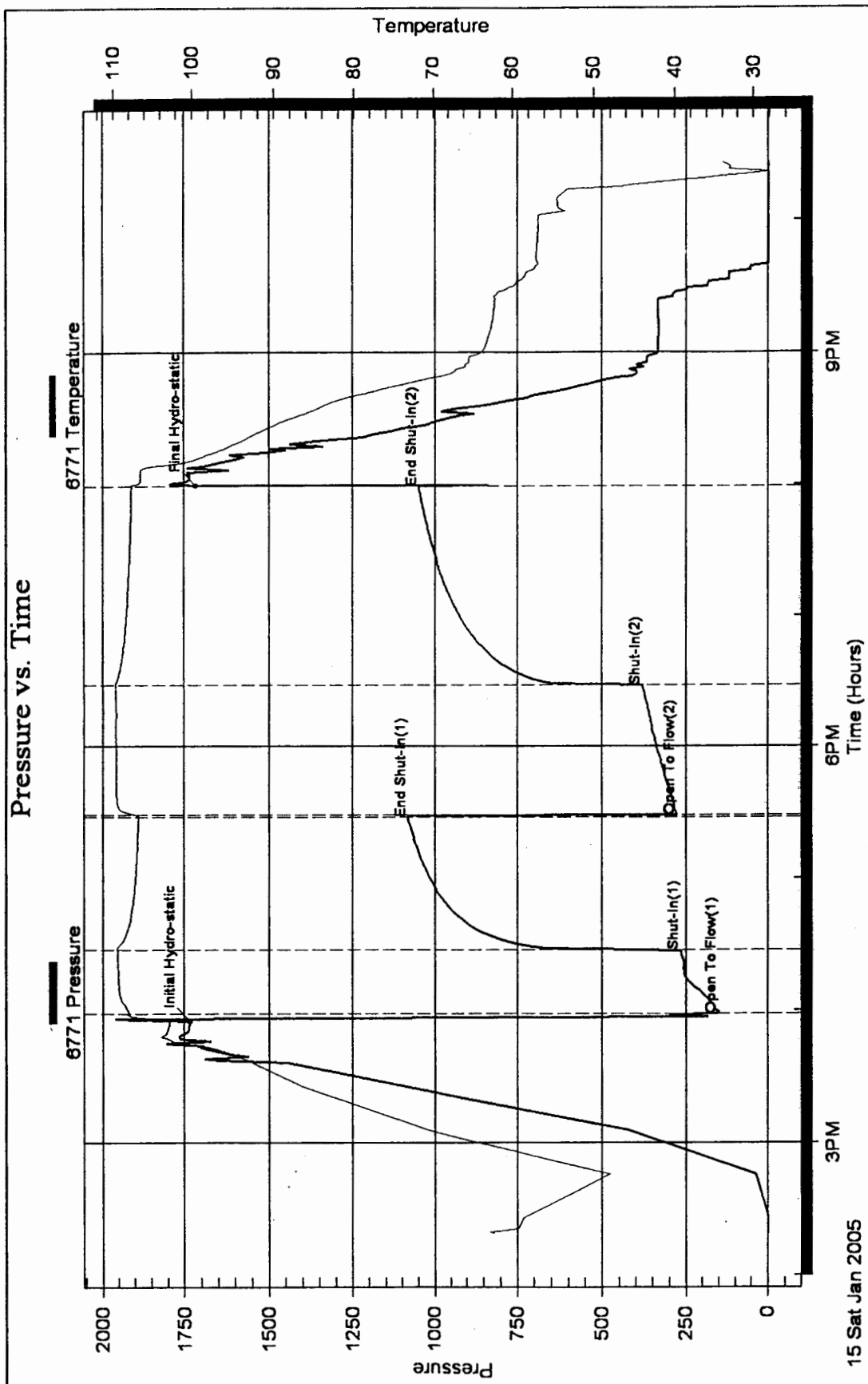
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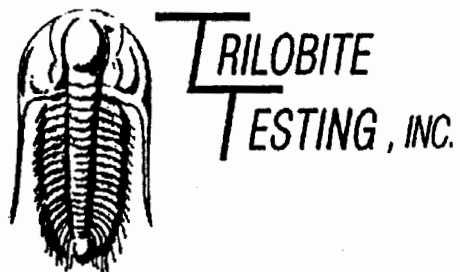
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilg Co Inc**  
250 N Water Suite 300  
Wichita, Ks

ATTN: Paul Gunzelman

### 7-3-26 Decatur Ks

#### Montgomery-Knutson #1-7

Start Date: 2005.01.16 @ 07:49:17

End Date: 2005.01.16 @ 11:45:12

Job Ticket #: 20094                      DST #: 5

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

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

7-3-26 Decatur Ks

DST # 5

C-D-8-F

2005.01.16



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Murfin Drilg Co Inc  
250 N Water Suite 300  
Wichita, Ks

ATTN: Paul Gunzelman

Montgomery-Knutson #1-7

7-3-26 Decatur Ks

Job Ticket: 20094

DST#: 5

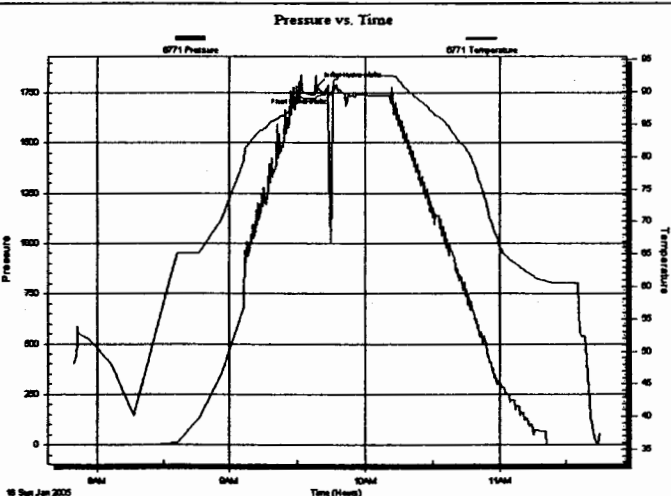
Test Start: 2005.01.16 @ 07:49:17

### GENERAL INFORMATION:

Formation: C-D-&-F  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 10:00:00  
 Time Test Ended: 11:45:12  
 Interval: 3566.00 ft (KB) To 3611.00 ft (KB) (TVD)  
 Total Depth: 3611.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole  
 Tester: Shane McBride  
 Unit No: 25  
 Reference Elevations: 2600.00 ft (KB)  
 2595.00 ft (CF)  
 KB to GR/CF: 5.00 ft

Serial #: 6771 Inside  
 Press@RunDepth: psig @ 3567.00 ft (KB) Capacity: 7000.00 psig  
 Start Date: 2005.01.16 End Date: 2005.01.16 Last Calib.: 2005.01.16  
 Start Time: 07:49:17 End Time: 11:45:12 Time On Btrm: 2005.01.16 @ 09:38:57  
 Time Off Btrm: 2005.01.16 @ 09:45:57

TEST COMMENT: Packer failuer @ open tried to reset failed again pull tool



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1782.92	89.40	Initial Hydro-static
7	1759.06	91.26	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
614.00	mud 100% m	4.43

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

250 N Water Suite 300  
Wichita, Ks

7-3-26 Decatur Ks

Job Ticket: 20094

DST#: 5

ATTN: Paul Gunzelman

Test Start: 2005.01.16 @ 07:49:17

**Tool Information**

Drill Pipe:	Length: 3116.00 ft	Diameter: 3.80 inches	Volume: 43.71 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: 30000.00 lb
Drill Collar:	Length: 459.00 ft	Diameter: 2.25 inches	Volume: 2.26 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 45.97 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3566.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 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			3545.00	
Shut In Tool	5.00			3550.00	
Hydraulic tool	5.00			3555.00	
Safety Joint	2.00			3557.00	
Packer	5.00			3562.00	22.00 Bottom Of Top Packer
Packer	4.00			3566.00	
Stubb	1.00			3567.00	
Recorder	0.00	6771	Inside	3567.00	
Perforations	7.00			3574.00	
Change Over Sub	1.00			3575.00	
Drill Pipe	30.00			3605.00	
Change Over Sub	1.00			3606.00	
Recorder	0.00	11057	Outside	3606.00	
Bullnose	5.00			3611.00	45.00 Bottom Packers & Anchor

**Total Tool Length: 67.00**



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

250 N Water Suite 300  
Wichita, Ks

7-3-26 Decatur Ks

Job Ticket: 20094

DST#: 5

ATTN: Paul Gunzelman

Test Start: 2005.01.16 @ 07:49:17

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

1150 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1150.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
614.00	mud 100% <sub>m</sub>	4.432

Total Length: 614.00 ft

Total Volume: 4.432 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

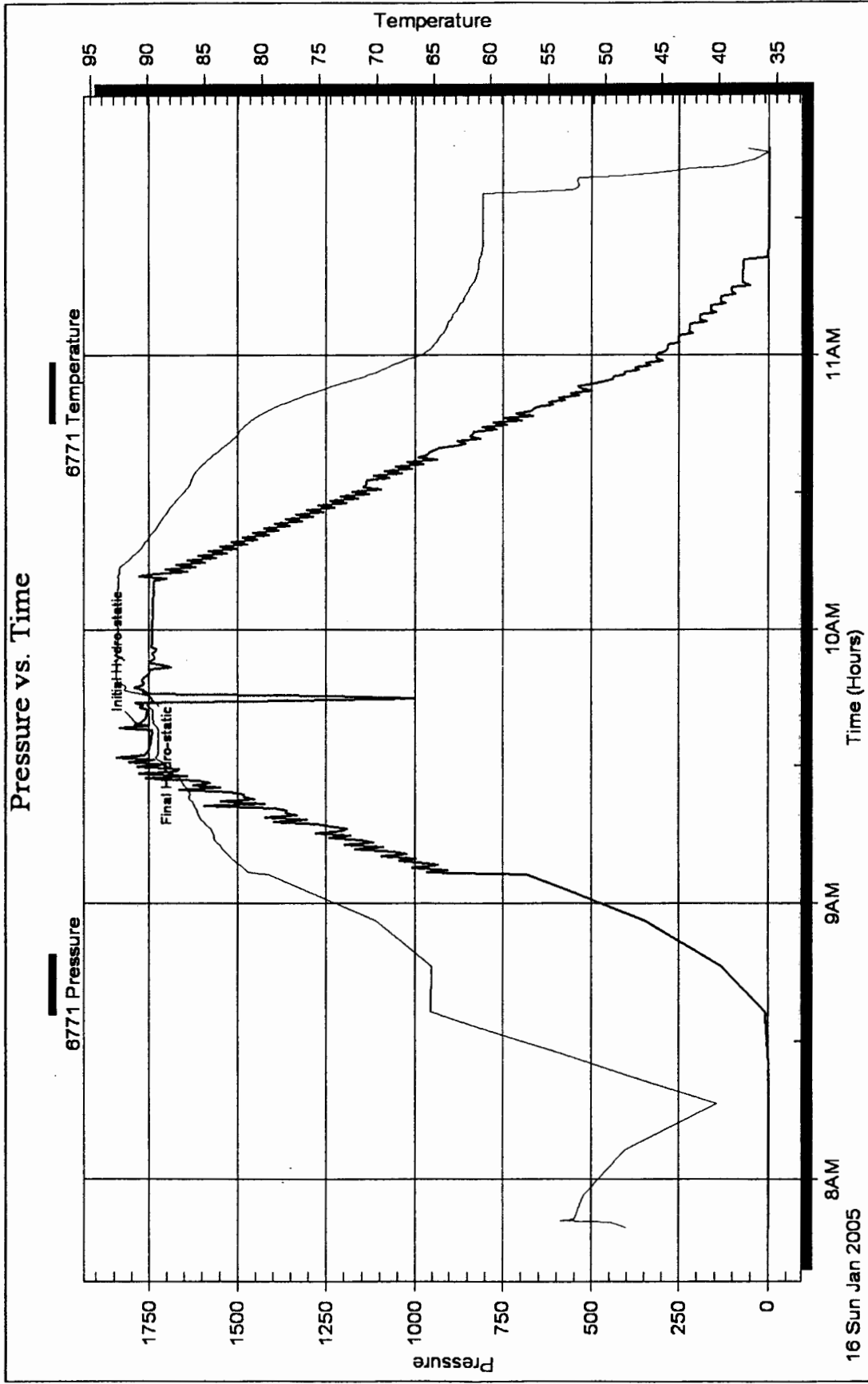
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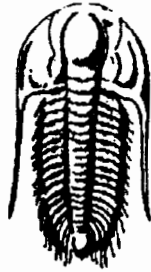
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilg Co Inc**  
250 N Water Suite 300  
Wichita, Ks

ATTN: Paul Gunzelman

**7-3-26 Decatur Ks**

**Montgomery-Knutson #1-7**

Start Date: 2005.01.16 @ 18:10:06

End Date: 2005.01.17 @ 01:49:45

Job Ticket #: 20095                      DST #: 6

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

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

7-3-26 Decatur Ks

DST # 6

Lans G

2005.01.16



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Murfin Drilg Co Inc

250 N Water Suite 300  
Wichita, Ks

ATTN: Paul Gunzelman

Montgomery-Knutson #1-7

7-3-26 Decatur Ks

Job Ticket: 20095

DST#: 6

Test Start: 2005.01.16 @ 18:10:06

### GENERAL INFORMATION:

Formation: Lans G

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:12:31

Time Test Ended: 01:49:45

Interval: 3582.00 ft (KB) To 3629.00 ft (KB) (TVD)

Total Depth: 3482.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 25

Reference Elevations: 2600.00 ft (KB)

2595.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 328.14 psig @ 3583.00 ft (KB)

Start Date: 2005.01.16

End Date:

2005.01.17

Capacity: 7000.00 psig

Last Calib.: 2005.01.17

Start Time: 18:10:06

End Time:

01:49:45

Time On Btmr 2005.01.16 @ 20:12:16

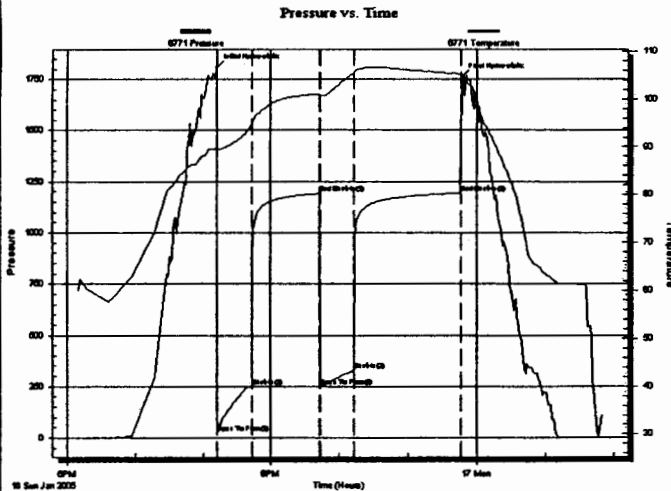
Time Off Btmr 2005.01.16 @ 23:46:46

TEST COMMENT: B.O.B. in 10 min.

No return

B.O.B. in 17 min

No return



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1808.31	89.66	Initial Hydro-static
1	22.42	89.00	Open To Flow (1)
31	250.94	94.61	Shut-In(1)
91	1190.91	100.99	End Shut-In(1)
91	250.80	100.47	Open To Flow (2)
120	328.14	105.34	Shut-In(2)
214	1192.83	105.24	End Shut-In(2)
215	1762.25	105.20	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
339.00	w ater 100%w	1.67
120.00	m c w 20% m 80% w trace of oil	0.59
205.00	s o c m w 5% o 40% m 55% w	2.88
5.00	c o 100% o	0.07

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

250 N Water Suite 300  
Wichita, Ks

7-3-26 Decatur Ks

Job Ticket: 20095

DST#: 6

ATTN: Paul Gunzelman

Test Start: 2005.01.16 @ 18:10:06

### Tool Information

Drill Pipe:	Length: 3118.00 ft	Diameter: 3.80 inches	Volume: 43.74 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: 30000.00 lb
Drill Collar:	Length: 459.00 ft	Diameter: 2.25 inches	Volume: 2.26 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 46.00 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3582.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 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			3561.00	
Shut In Tool	5.00			3566.00	
Hydraulic tool	5.00			3571.00	
Safety Joint	2.00			3573.00	
Packer	5.00			3578.00	22.00 Bottom Of Top Packer
Packer	4.00			3582.00	
Stubb	1.00			3583.00	
Recorder	0.00	6771	Inside	3583.00	
Perforations	9.00			3592.00	
Change Over Sub	1.00			3593.00	
Drill Pipe	30.00			3623.00	
Change Over Sub	1.00			3624.00	
Recorder	0.00	11057	Outside	3624.00	
Bullnose	5.00			3629.00	47.00 Bottom Packers & Anchor

**Total Tool Length: 69.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

250 N Water Suite 300  
Wichita, Ks

7-3-26 Decatur Ks

Job Ticket: 20095

DST#: 6

ATTN: Paul Gunzelman

Test Start: 2005.01.16 @ 18:10:06

**Mud and Cushion Information**

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 60.00 sec/qt  
Water Loss: 5.99 in<sup>3</sup>  
Resistivity: 0.00 ohm.m  
Salinity: 1150.00 ppm  
Filter Cake: 2.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: 30 deg API  
Water Salinity: 44000 ppm

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
339.00	water 100%w	1.667
120.00	m c w 20% m 80% w trace of oil	0.590
205.00	s o c m w 5% o 40% m 55% w	2.876
5.00	c o 100% o	0.070

Total Length: 669.00 ft      Total Volume: 5.203 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

Serial #: 6771

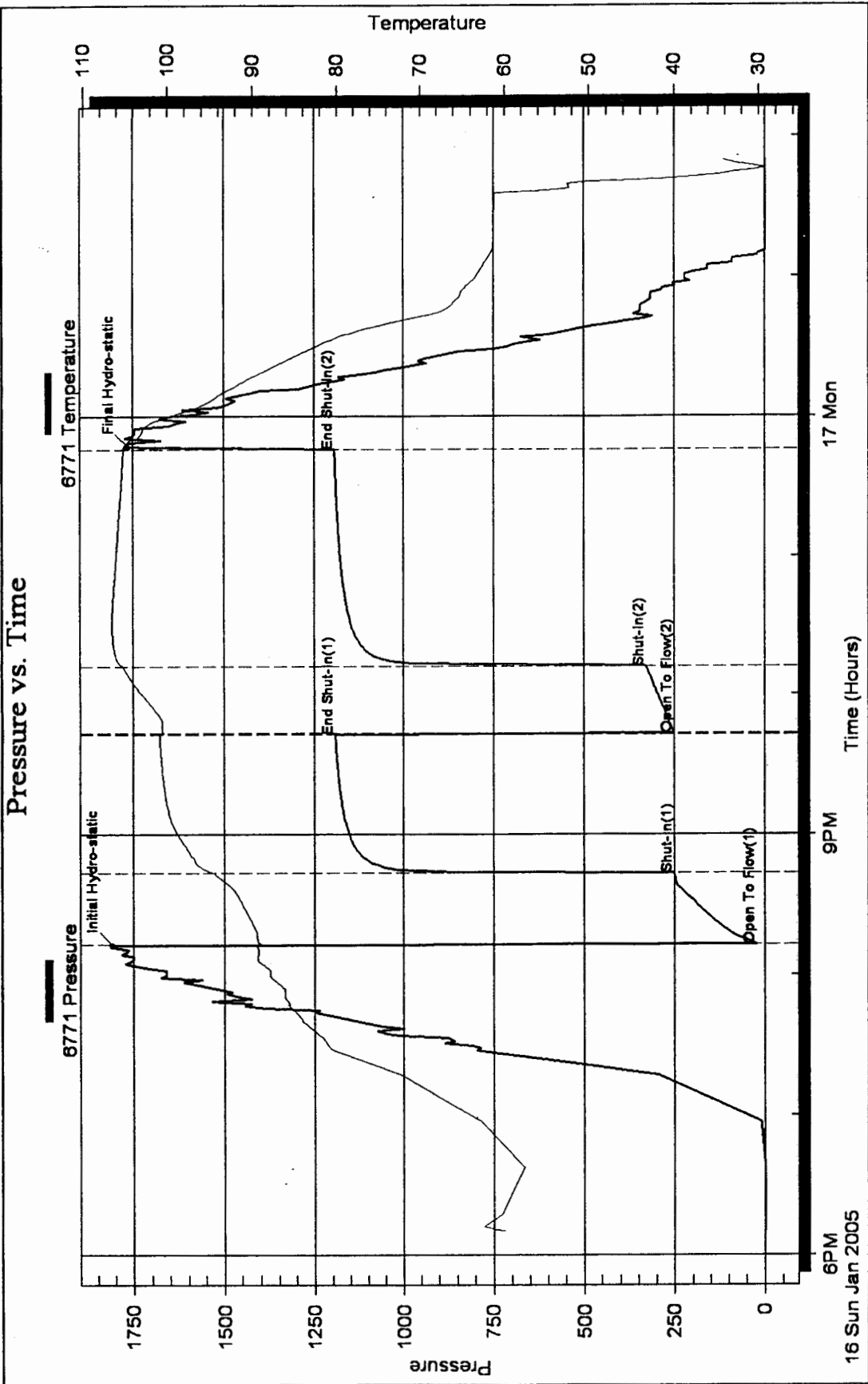
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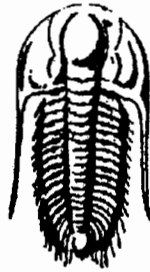
Murfin Drilg Co Inc

7-3-26 Decatur Ks

DST Test Number: 6

### Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilg Co Inc**

250 N Water Suite 300  
Wichita, Ks

ATTN: Paul Gunzelman

**7-3-26 Decatur Ks**

**Montgomery-Knutson #1-7**

Start Date: 2005.01.17 @ 12:56:57

End Date: 2005.01.17 @ 18:38:36

Job Ticket #: 20096                      DST #: 7

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

7-3-26 Decatur Ks

DST # 7

KC H-J

2005.01.17



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Murfin Drilg Co Inc  
250 N Water Suite 300  
Wichita, Ks  
ATTN: Paul Gunzelman

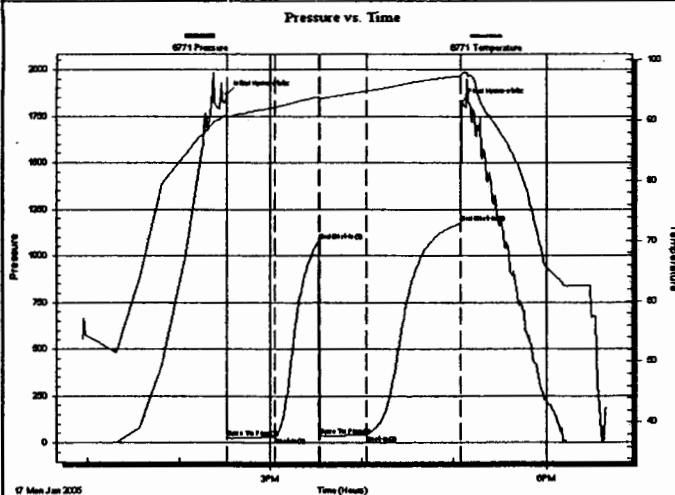
Montgomery-Knutson #1-7  
7-3-26 Decatur Ks  
Job Ticket: 20096 DST#: 7  
Test Start: 2005.01.17 @ 12:56:57

### GENERAL INFORMATION:

Formation: KC H-J  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 14:31:37  
Time Test Ended: 18:38:36  
Interval: 3628.00 ft (KB) To 3690.00 ft (KB) (TVD)  
Total Depth: 3690.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole  
Tester: Shane McBride  
Unit No: 25  
Reference Elevations: 2600.00 ft (KB)  
2595.00 ft (CF)  
KB to GR/CF: 5.00 ft

Serial #: 6771 Inside  
Press@RunDepth: 43.10 psig @ 3629.00 ft (KB)  
Start Date: 2005.01.17 End Date: 2005.01.17  
Start Time: 12:56:57 End Time: 18:38:36  
Capacity: 7000.00 psig  
Last Calib.: 2005.01.17  
Time On Btmr: 2005.01.17 @ 14:31:22  
Time Off Btmr: 2005.01.17 @ 17:05:07

TEST COMMENT: 1/4" in blow died in 22 min.  
No return  
Surface blow died in 8 min.  
No return



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1867.20	90.87	Initial Hydro-static
1	24.84	90.18	Open To Flow (1)
32	30.96	92.18	Shut-In (1)
61	1078.28	93.89	End Shut-In (1)
61	34.65	93.66	Open To Flow (2)
92	43.10	94.83	Shut-In (2)
153	1174.18	97.39	End Shut-In (2)
154	1827.20	97.69	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
5.00	c o 100%o	0.02
5.00	o c m 30%o 70%m	0.02

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

250 N Water Suite 300  
Wichita, Ks

7-3-26 Decatur Ks

Job Ticket: 20096

DST#: 7

ATTN: Paul Gunzelman

Test Start: 2005.01.17 @ 12:56:57

**Tool Information**

Drill Pipe:	Length: 3178.00 ft	Diameter: 3.80 inches	Volume: 44.58 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: 30000.00 lb
Drill Collar:	Length: 459.00 ft	Diameter: 2.25 inches	Volume: 2.26 bbl	Weight to Pull Loose: 75000.00 lb
		Total Volume: 46.84 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	3628.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	84.00 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			3607.00	
Shut In Tool	5.00			3612.00	
Hydraulic tool	5.00			3617.00	
Safety Joint	2.00			3619.00	
Packer	5.00			3624.00	22.00 Bottom Of Top Packer
Packer	4.00			3628.00	
Stubb	1.00			3629.00	
Recorder	0.00	6771	Inside	3629.00	
Perforations	24.00			3653.00	
Change Over Sub	1.00			3654.00	
Drill Pipe	30.00			3684.00	
Change Over Sub	1.00			3685.00	
Recorder	0.00	11057	Outside	3685.00	
Bullnose	5.00			3690.00	62.00 Bottom Packers & Anchor

**Total Tool Length: 84.00**



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilg Co Inc

Montgomery-Knutson #1-7

250 N Water Suite 300  
Wichita, Ks

7-3-26 Decatur Ks

Job Ticket: 20096

DST#: 7

ATTN: Paul Gunzelman

Test Start: 2005.01.17 @ 12:56:57

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

2600 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2600.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	c o 100%o	0.025
5.00	o c m 30%o 70%m	0.025

Total Length: 10.00 ft

Total Volume: 0.050 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

