



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Corp**

250 N Water Ste 300  
Wichita KS 67202-1216

ATTN: Clayton Erickson

### **Bemis I #9**

#### **4-12s-17w Ellis,KS**

Start Date: 2013.04.30 @ 10:09:34

End Date: 2013.04.30 @ 17:26:04

Job Ticket #: 53654                      DST #: 1

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

Printed: 2013.05.13 @ 14:04:39



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Corp  
250 N Water Ste 300  
Wichita KS 67202-1216  
ATTN: Clayton Erickson

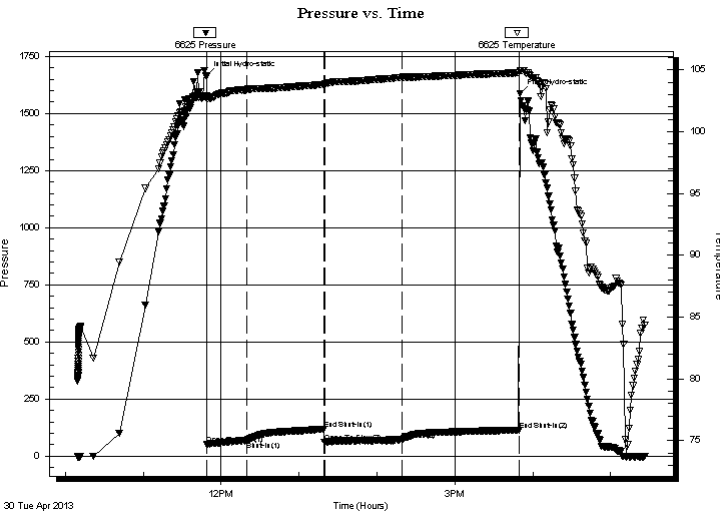
**4-12s-17w Ellis,KS**  
**Bemis I #9**  
Job Ticket: 53654      **DST#: 1**  
Test Start: 2013.04.30 @ 10:09:34

## GENERAL INFORMATION:

Formation: **Toronto-LKC B**  
Deviated: No Whipstock: ft (KB)      Test Type: Conventional Bottom Hole (Initial)  
Time Tool Opened: 11:49:04      Tester: Jeff Brown  
Time Test Ended: 17:26:04      Unit No: 67  
**Interval: 3192.00 ft (KB) To 3283.00 ft (KB) (TVD)**      Reference Elevations: 2043.00 ft (KB)  
Total Depth: 3283.00 ft (KB) (TVD)      2032.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Good      KB to GR/CF: 11.00 ft

**Serial #: 6625      Outside**  
Press @ RunDepth: 71.02 psig @ 3261.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2013.04.30      End Date: 2013.04.30      Last Calib.: 2013.04.30  
Start Time: 10:09:35      End Time: 17:26:04      Time On Btm: 2013.04.30 @ 11:48:34  
Time Off Btm: 2013.04.30 @ 15:50:04

**TEST COMMENT:** IFP=Weak blow built to 1 1/4 in  
ISI=Dead no blow back  
FFP=Fair blow built to 6 3/4 in  
FSI=Dead no blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1664.20	102.89	Initial Hydro-static
1	51.01	102.67	Open To Flow (1)
31	65.84	103.40	Shut-In(1)
91	119.02	103.84	End Shut-In(1)
91	60.98	103.84	Open To Flow (2)
151	71.02	104.41	Shut-In(2)
241	114.48	104.78	End Shut-In(2)
242	1587.11	104.97	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	SOCGM 3%G 5%O 92%M	0.30

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Corp  
250 N Water Ste 300  
Wichita KS 67202-1216  
ATTN: Clayton Erickson

**4-12s-17w Ellis, KS**  
**Bemis I #9**  
Job Ticket: 53654      **DST#: 1**  
Test Start: 2013.04.30 @ 10:09:34

**Tool Information**

Drill Pipe:	Length: 2921.00 ft	Diameter: 3.80 inches	Volume: 40.97 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 263.00 ft	Diameter: 2.25 inches	Volume: 1.29 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 42.26 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 71000.00 lb
Depth to Top Packer:	3192.00 ft			Final 71000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	91.00 ft			
Tool Length:	119.00 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			3165.00	
Shut In Tool	5.00			3170.00	
Hydraulic tool	5.00			3175.00	
Jars	5.00			3180.00	
Safety Joint	3.00			3183.00	
Packer	4.00			3187.00	28.00      Bottom Of Top Packer
Packer	5.00			3192.00	
Stubb	1.00			3193.00	
Perforations	3.00			3196.00	
Change Over Sub	1.00			3197.00	
Drill Pipe	63.00			3260.00	
Change Over Sub	1.00			3261.00	
Recorder	0.00	6625	Outside	3261.00	
Recorder	0.00	8679	Inside	3261.00	
Perforations	19.00			3280.00	
Bullnose	3.00			3283.00	91.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>119.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Corp

**4-12s-17w Ellis,KS**

250 N Water Ste 300  
Wichita KS 67202-1216

**Bemis I #9**

Job Ticket: 53654

**DST#: 1**

ATTN: Clayton Erickson

Test Start: 2013.04.30 @ 10:09:34

### 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:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3800.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	SOCGM 3%G 5%O 92%M	0.295

Total Length: 60.00 ft      Total Volume: 0.295 bbl

Num Fluid Samples: 0

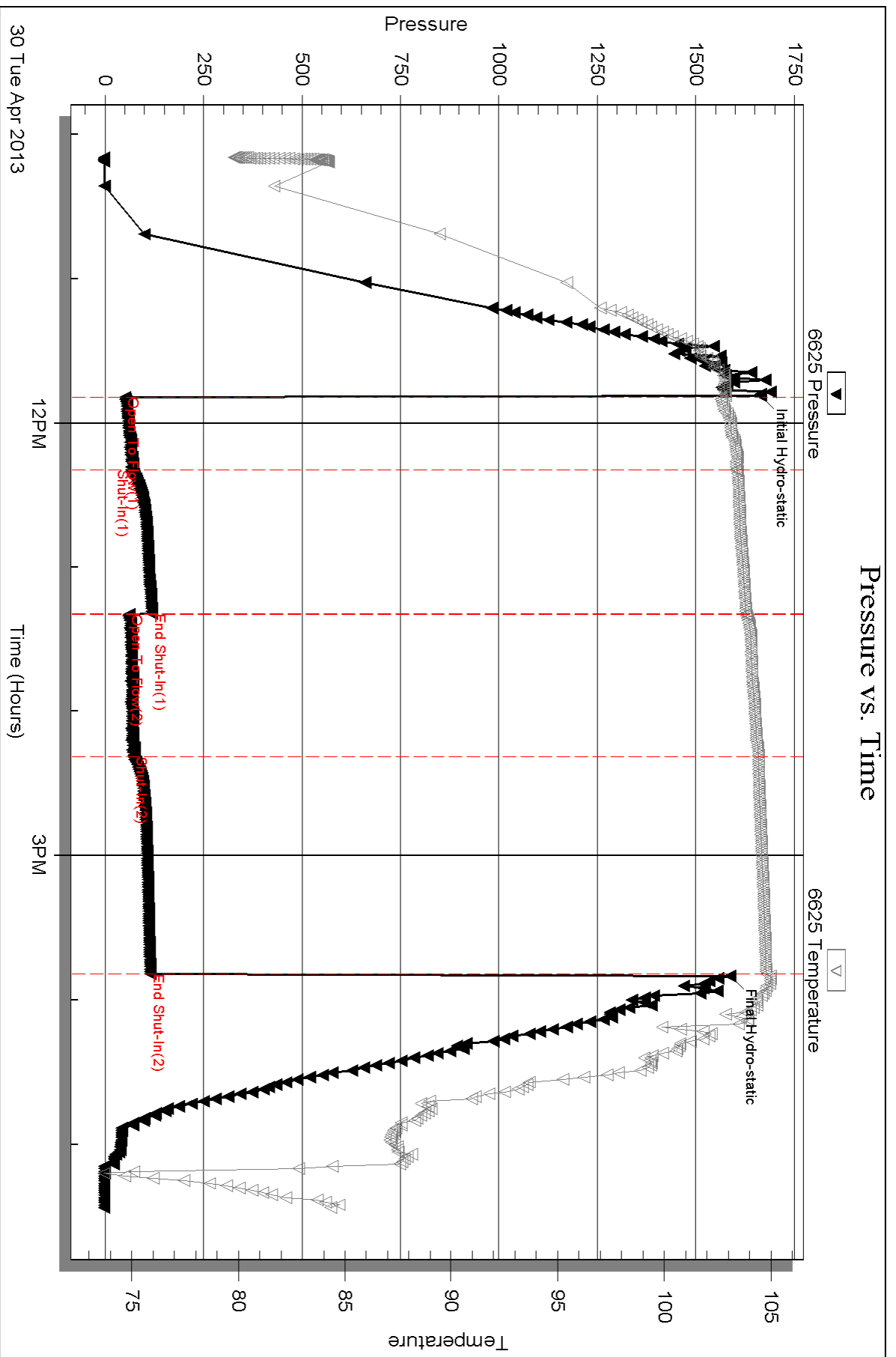
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



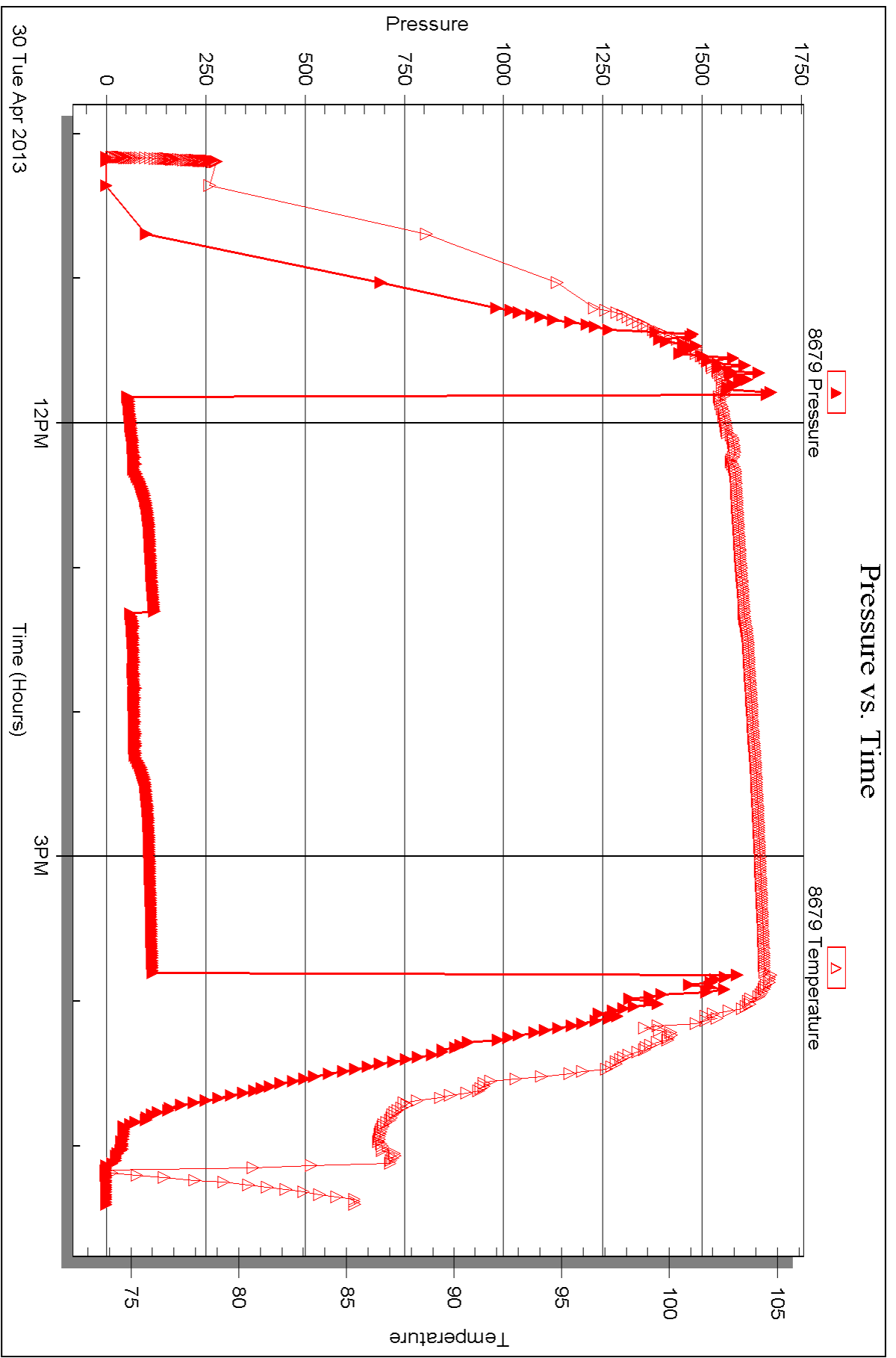
Serial #: 8679

Inside

Murfin Drilling Corp

Bennis I #9

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 53854

Printed: 2013.05.13 @ 14:04:42



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Corp**

250 N Water Ste 300  
Wichita KS 67202-1216

ATTN: Clayton Erickson

### **Bemis I #9**

#### **4-12s-17w Ellis,KS**

Start Date: 2013.05.01 @ 01:50:15

End Date: 2013.05.01 @ 08:35:15

Job Ticket #: 53655                      DST #: 2

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

Printed: 2013.05.13 @ 14:03:46





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Corp  
 250 N Water Ste 300  
 Wichita KS 67202-1216  
 ATTN: Clayton Erickson

**4-12s-17w Ellis,KS**

**Bemis I #9**

Job Ticket: 53655

**DST#: 2**

Test Start: 2013.05.01 @ 01:50:15

## GENERAL INFORMATION:

Formation: **LKC D-F**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 03:43:15  
 Time Test Ended: 08:35:15  
 Interval: **3274.00 ft (KB) To 3331.00 ft (KB) (TVD)**  
 Total Depth: 3331.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jeff Brown  
 Unit No: 67  
 Reference Elevations: 2043.00 ft (KB)  
 2032.00 ft (CF)  
 KB to GR/CF: 11.00 ft

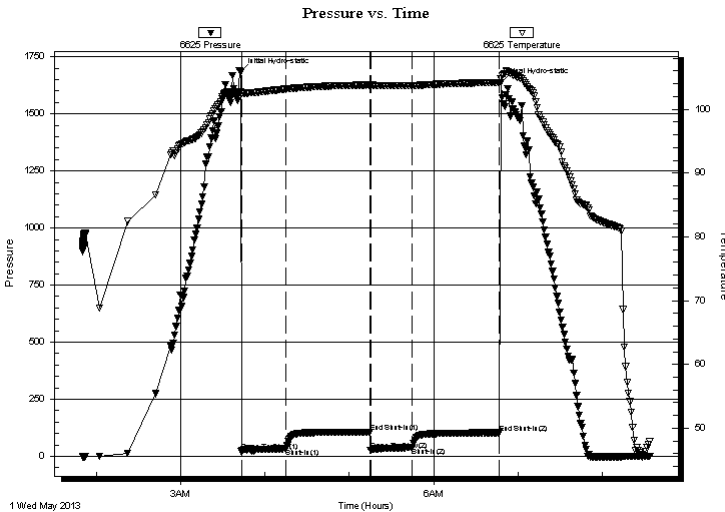
## Serial #: 6625

**Outside**

Press @ Run Depth: 39.35 psig @ 3310.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.05.01 End Date: 2013.05.01 Last Calib.: 2013.05.01  
 Start Time: 01:50:16 End Time: 08:34:15 Time On Btm: 2013.05.01 @ 03:42:45  
 Time Off Btm: 2013.05.01 @ 06:47:45

**TEST COMMENT:** IFP=Good blow BOB in 18 min  
 ISI=Dead no blow back  
 FFP=Strong blow BOB in 3 min  
 FSI=Dead no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1683.35	102.76	Initial Hydro-static
1	19.84	102.54	Open To Flow (1)
32	33.38	103.16	Shut-In(1)
92	105.45	103.82	End Shut-In(1)
93	27.30	103.80	Open To Flow (2)
122	39.35	103.72	Shut-In(2)
184	103.23	104.21	End Shut-In(2)
185	1637.70	104.77	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	HOCGWM 20%G 5%W 35%M 40%O	0.30
120.00	GIP	0.59

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Corp  
250 N Water Ste 300  
Wichita KS 67202-1216  
ATTN: Clayton Erickson

**4-12s-17w Ellis, KS**  
**Bemis I #9**  
Job Ticket: 53655      **DST#: 2**  
Test Start: 2013.05.01 @ 01:50:15

**Tool Information**

Drill Pipe:	Length: 3014.00 ft	Diameter: 3.80 inches	Volume: 42.28 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 263.00 ft	Diameter: 2.25 inches	Volume: 1.29 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 43.57 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 69000.00 lb
Depth to Top Packer:	3274.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.00 ft			
Tool Length:	85.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			3247.00	
Shut In Tool	5.00			3252.00	
Hydraulic tool	5.00			3257.00	
Jars	5.00			3262.00	
Safety Joint	3.00			3265.00	
Packer	4.00			3269.00	28.00      Bottom Of Top Packer
Packer	5.00			3274.00	
Stubb	1.00			3275.00	
Perforations	2.00			3277.00	
Change Over Sub	1.00			3278.00	
Drill Pipe	31.00			3309.00	
Change Over Sub	1.00			3310.00	
Recorder	0.00	6625	Outside	3310.00	
Recorder	0.00	8679	Inside	3310.00	
Perforations	18.00			3328.00	
Bullnose	3.00			3331.00	57.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>85.00</b>				



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilling Corp

**4-12s-17w Ellis,KS**

250 N Water Ste 300  
Wichita KS 67202-1216

**Bemis I #9**

Job Ticket: 53655

**DST#: 2**

ATTN: Clayton Erickson

Test Start: 2013.05.01 @ 01:50:15

**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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.57 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3800.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
60.00	HOCGWM 20%G 5%W 35%M 40%O	0.295
120.00	GIP	0.590

Total Length: 180.00 ft

Total Volume: 0.885 bbl

Num Fluid Samples: 0

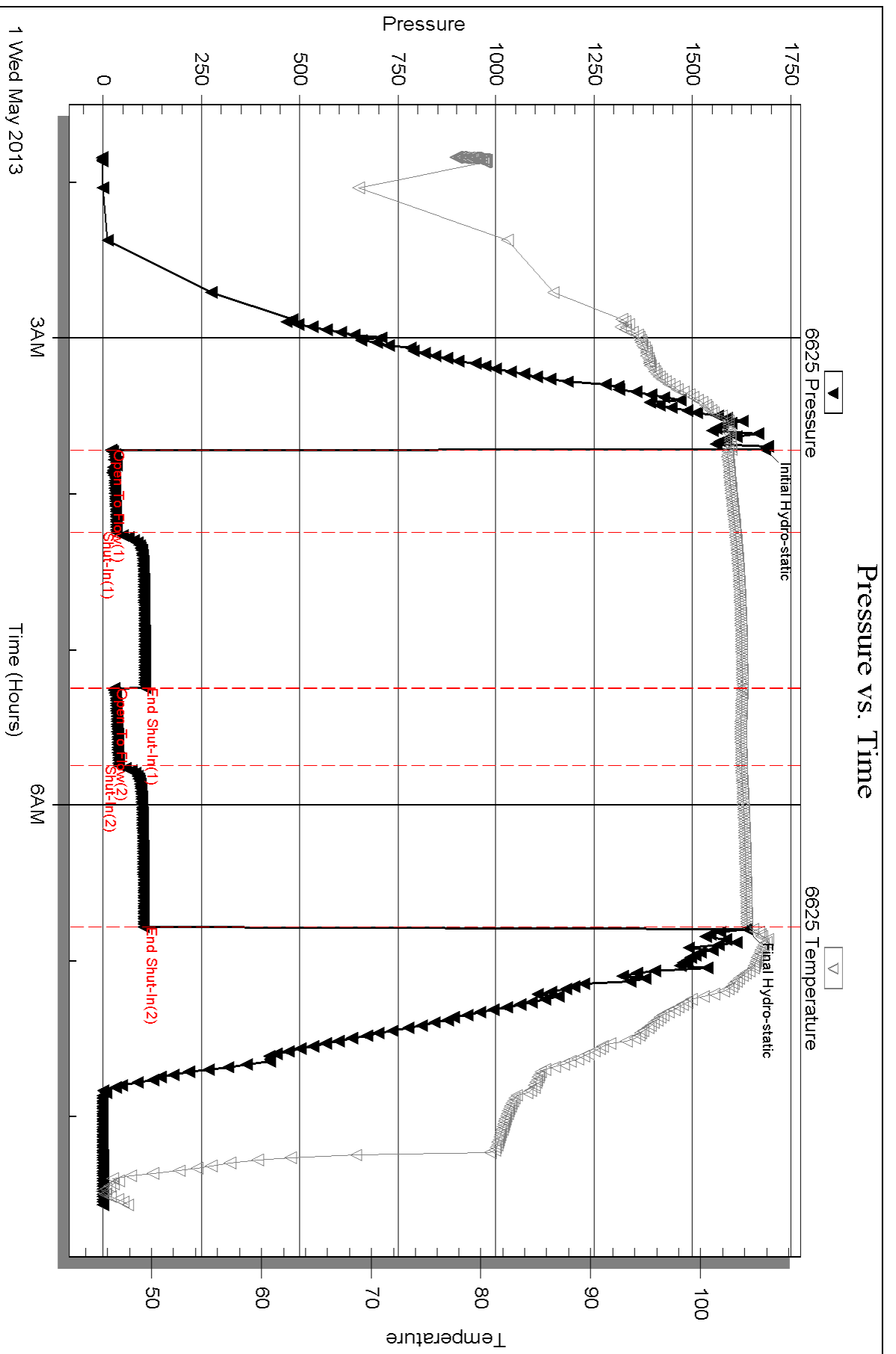
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



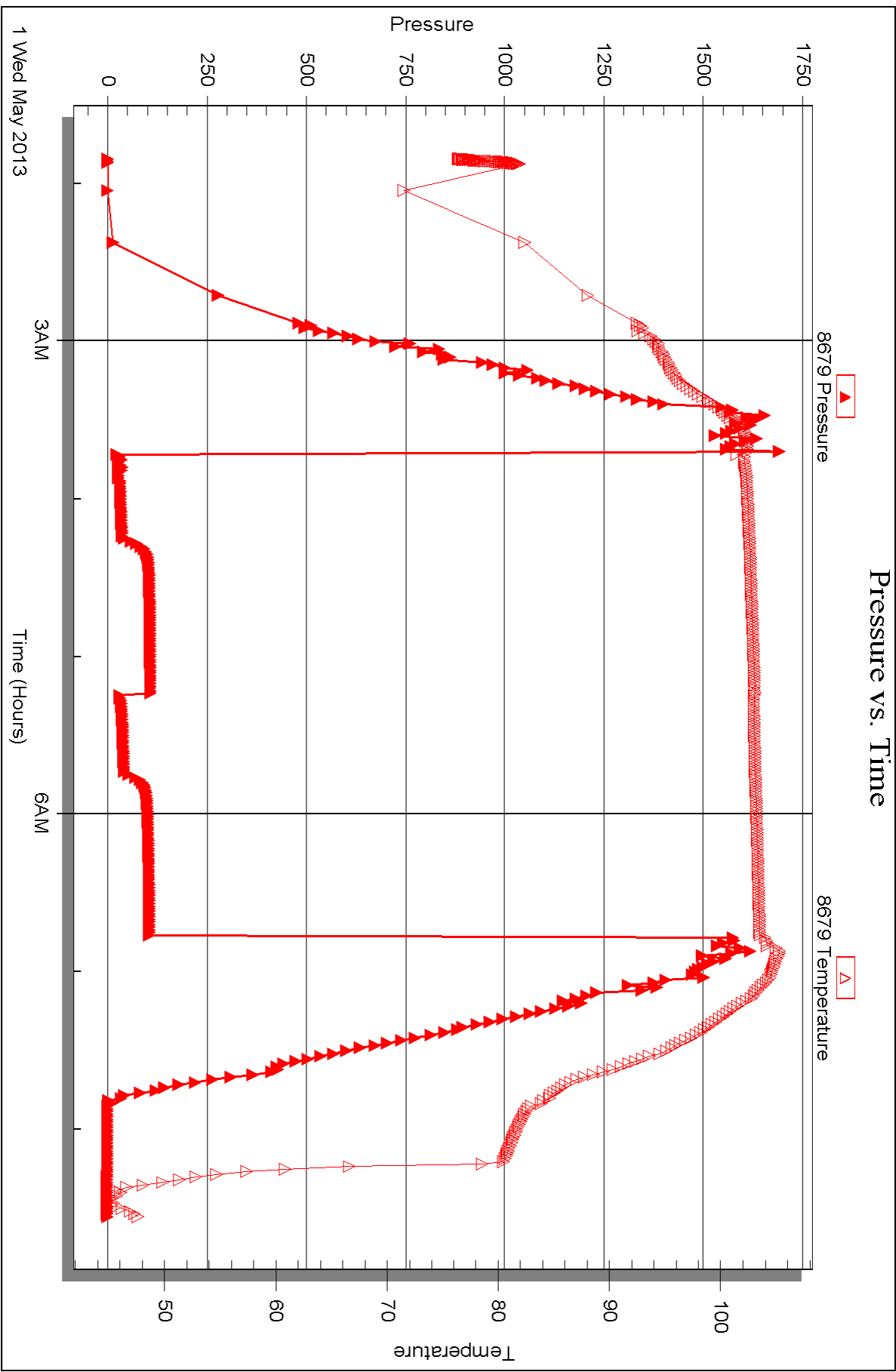
Serial #: 8679

Inside

Murfin Drilling Corp

Bennis I #9

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Corp**

250 N Water Ste 300  
Wichita KS 67202-1216

ATTN: Clayton Erickson

### **Bemis I #9**

#### **4-12s-17w Ellis,KS**

Start Date: 2013.05.02 @ 02:04:24

End Date: 2013.05.02 @ 08:38:54

Job Ticket #: 53656                      DST #: 3

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

Printed: 2013.05.13 @ 14:03:07

Murfin Drilling Corp  
4-12s-17w Ellis,KS  
Bemis I #9  
DST # 3  
LKC H-K  
2013.05.02



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Corp  
250 N Water Ste 300  
Wichita KS 67202-1216  
ATTN: Clayton Erickson

**4-12s-17w Ellis, KS**

**Bemis I #9**

Job Ticket: 53656

**DST#: 3**

Test Start: 2013.05.02 @ 02:04:24

## GENERAL INFORMATION:

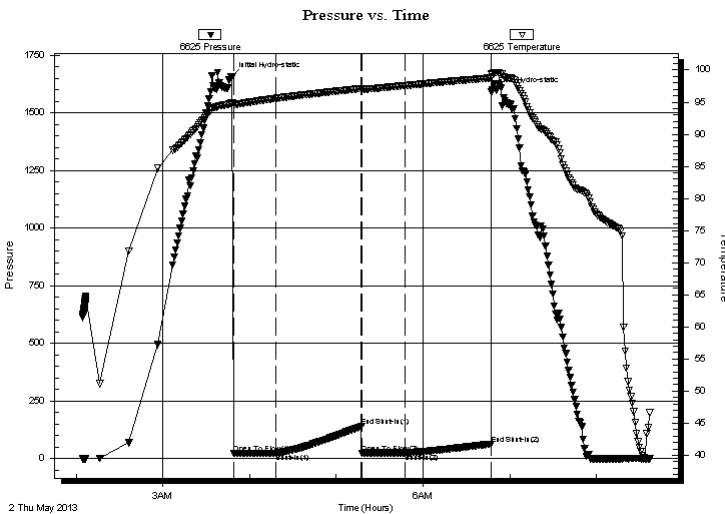
Formation: **LKC H-K**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 03:48:54  
 Time Test Ended: 08:38:54  
 Interval: **3352.00 ft (KB) To 3457.00 ft (KB) (TVD)**  
 Total Depth: 3457.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jeff Brown  
 Unit No: 67  
 Reference Elevations: 2043.00 ft (KB)  
 2032.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 6625 Outside**

Press @ Run Depth: 24.28 psig @ 3421.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.05.02 End Date: 2013.05.02 Last Calib.: 2013.05.02  
 Start Time: 02:04:25 End Time: 08:36:54 Time On Btm: 2013.05.02 @ 03:47:54  
 Time Off Btm: 2013.05.02 @ 06:47:24

**TEST COMMENT:** IFP=Weak blow built to 1 1/4 in  
 ISI=Dead no blow back  
 FFP=Dead no blow  
 FSI=Dead no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1656.70	94.91	Initial Hydro-static
1	21.39	94.70	Open To Flow (1)
30	23.13	95.57	Shut-In(1)
90	139.92	97.11	End Shut-In(1)
90	22.98	97.11	Open To Flow (2)
120	24.28	97.59	Shut-In(2)
179	63.02	98.76	End Shut-In(2)
180	1591.18	99.48	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud with oil spots	0.05

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Corp  
250 N Water Ste 300  
Wichita KS 67202-1216  
ATTN: Clayton Erickson

**4-12s-17w Ellis, KS**  
**Bemis I #9**  
Job Ticket: 53656      **DST#: 3**  
Test Start: 2013.05.02 @ 02:04:24

**Tool Information**

Drill Pipe:	Length: 3078.00 ft	Diameter: 3.80 inches	Volume: 43.18 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 263.00 ft	Diameter: 2.25 inches	Volume: 1.29 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 44.47 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 71000.00 lb
Depth to Top Packer:	3352.00 ft			Final 71000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	105.00 ft			
Tool Length:	133.00 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			3325.00	
Shut In Tool	5.00			3330.00	
Hydraulic tool	5.00			3335.00	
Jars	5.00			3340.00	
Safety Joint	3.00			3343.00	
Packer	4.00			3347.00	28.00      Bottom Of Top Packer
Packer	5.00			3352.00	
Stubb	1.00			3353.00	
Perforations	3.00			3356.00	
Change Over Sub	1.00			3357.00	
Drill Pipe	63.00			3420.00	
Change Over Sub	1.00			3421.00	
Recorder	0.00	6625	Outside	3421.00	
Recorder	0.00	8679	Inside	3421.00	
Perforations	33.00			3454.00	
Bullnose	3.00			3457.00	105.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>133.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Corp

**4-12s-17w Ellis,KS**

250 N Water Ste 300  
Wichita KS 67202-1216

**Bemis I #9**

Job Ticket: 53656

**DST#: 3**

ATTN: Clayton Erickson

Test Start: 2013.05.02 @ 02:04:24

## 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: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.57 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3700.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
10.00	Mud w ith oil spots	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbf

Num Fluid Samples: 0

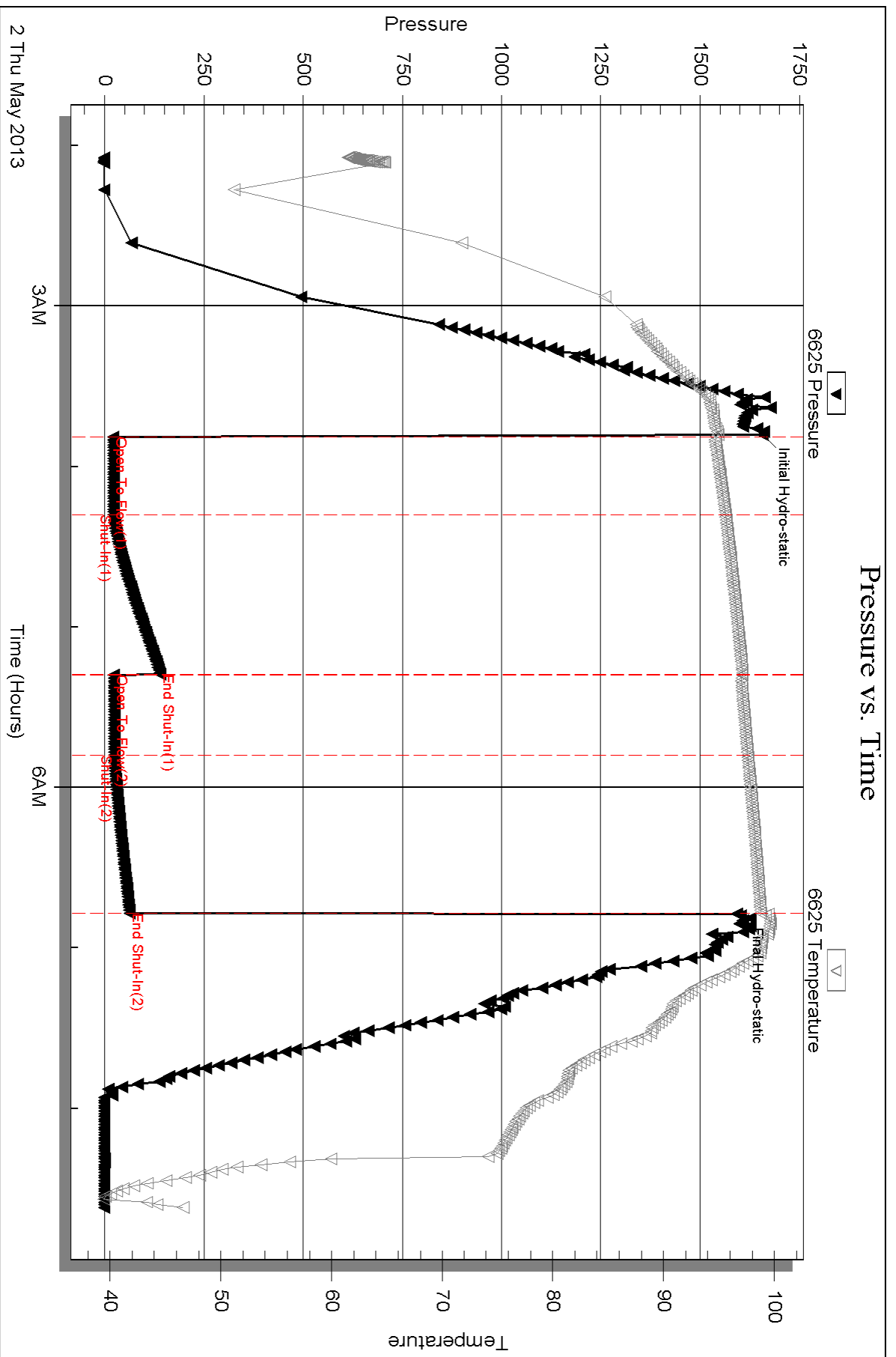
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



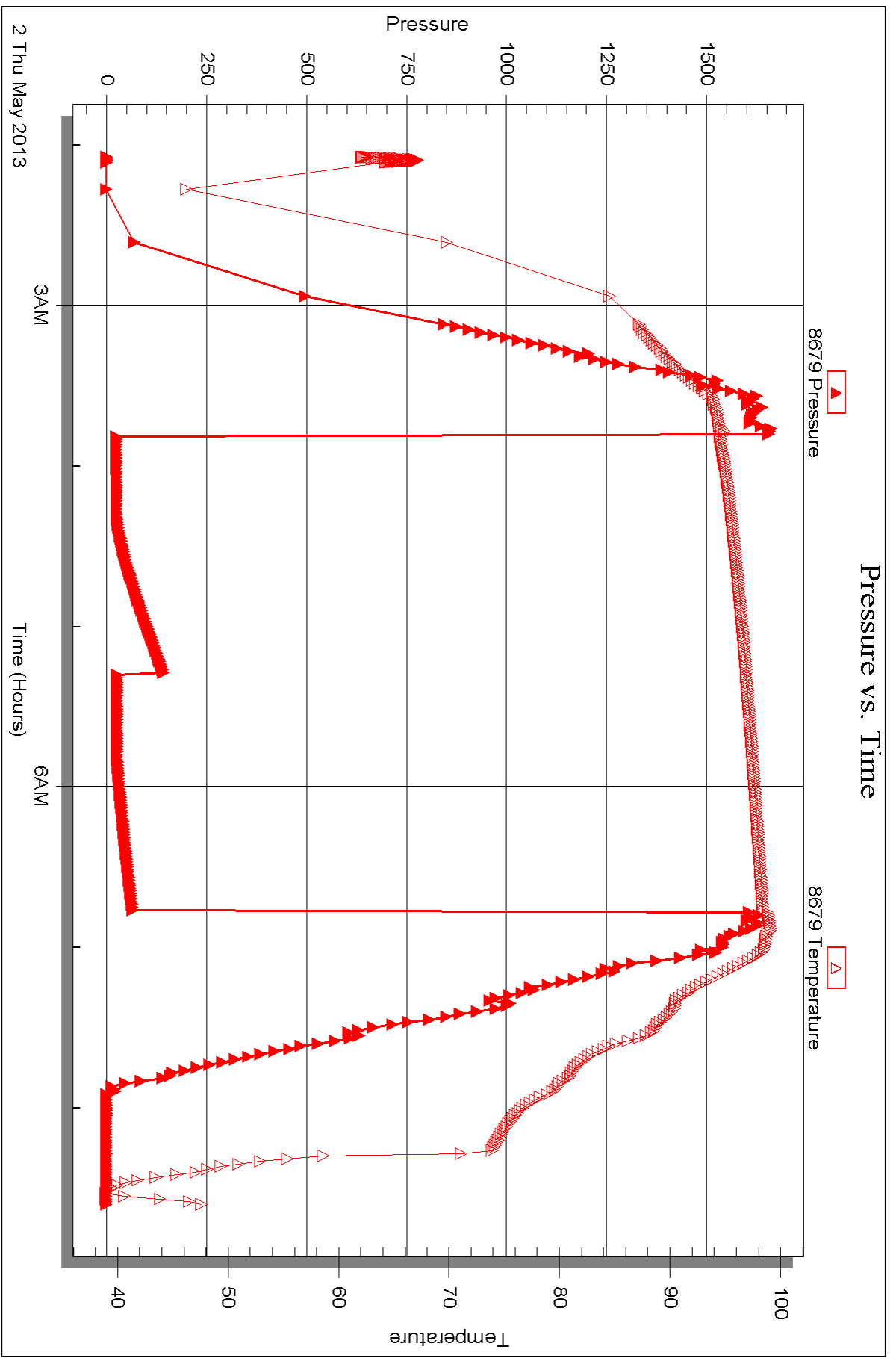
Serial #: 8679

Inside

Murfin Drilling Corp

Bennis I #9

DST Test Number: 3





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Corp**

250 N Water Ste 300  
Wichita KS 67202-1216

ATTN: Clayton Erickson

### **Bemis I #9**

#### **4-12s-17w Ellis,KS**

Start Date: 2013.05.02 @ 17:23:15

End Date: 2013.05.03 @ 00:48:45

Job Ticket #: 53657                      DST #: 4

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

Printed: 2013.05.13 @ 14:02:31



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Corp  
250 N Water Ste 300  
Wichita KS 67202-1216  
ATTN: Clayton Erickson

**4-12s-17w Ellis,KS**

**Bemis I #9**

Job Ticket: 53657

**DST#: 4**

Test Start: 2013.05.02 @ 17:23:15

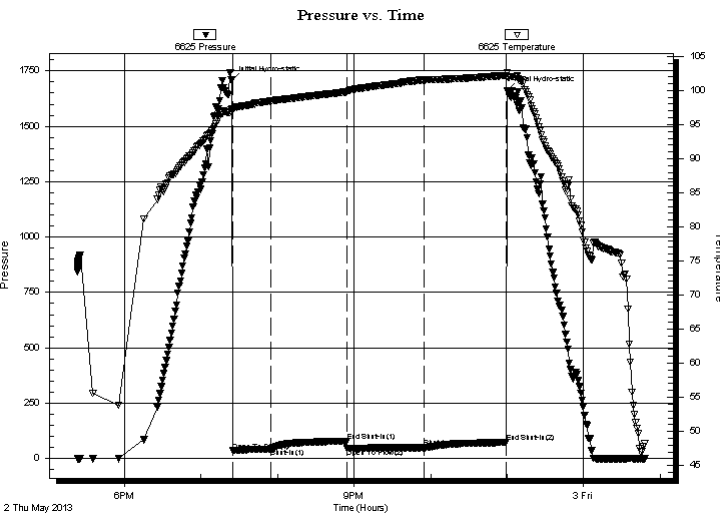
## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 19:24:45  
 Time Test Ended: 00:48:45  
 Interval: **3453.00 ft (KB) To 3508.00 ft (KB) (TVD)**  
 Total Depth: 3508.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jeff Brown  
 Unit No: 67  
 Reference Elevations: 2043.00 ft (KB)  
 2032.00 ft (CF)  
 KB to GR/CF: 11.00 ft

## Serial #: 6625 Outside

Press @ Run Depth: 48.74 psig @ 3490.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.05.02 End Date: 2013.05.03 Last Calib.: 2013.05.03  
 Start Time: 17:23:16 End Time: 00:47:45 Time On Btm: 2013.05.02 @ 19:24:15  
 Time Off Btm: 2013.05.02 @ 22:59:45

TEST COMMENT: IFP=Weak blow built to 1 1/2 in  
 ISI=Dead no blow back  
 FFP=Weak surface blow died out in 48 min  
 FSI=Dead no blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1707.16	97.28	Initial Hydro-static
1	34.16	97.08	Open To Flow (1)
31	44.13	98.49	Shut-In(1)
90	77.97	99.80	End Shut-In(1)
91	44.78	99.84	Open To Flow (2)
151	48.74	101.54	Shut-In(2)
215	72.80	102.21	End Shut-In(2)
216	1660.80	102.66	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud with a scum of oil	0.07

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Corp  
250 N Water Ste 300  
Wichita KS 67202-1216  
ATTN: Clayton Erickson

**4-12s-17w Ellis, KS**  
**Bemis I #9**  
Job Ticket: 53657      **DST#: 4**  
Test Start: 2013.05.02 @ 17:23:15

**Tool Information**

Drill Pipe:	Length: 3173.00 ft	Diameter: 3.80 inches	Volume: 44.51 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 263.00 ft	Diameter: 2.25 inches	Volume: 1.29 bbl	Weight to Pull Loose: 78000.00 lb
		Total Volume: 45.80 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 69000.00 lb
Depth to Top Packer:	3453.00 ft			Final 69000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	83.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3426.00	
Shut In Tool	5.00			3431.00	
Hydraulic tool	5.00			3436.00	
Jars	5.00			3441.00	
Safety Joint	3.00			3444.00	
Packer	4.00			3448.00	28.00      Bottom Of Top Packer
Packer	5.00			3453.00	
Stubb	1.00			3454.00	
Perforations	3.00			3457.00	
Change Over Sub	1.00			3458.00	
Drill Pipe	31.00			3489.00	
Change Over Sub	1.00			3490.00	
Recorder	0.00	6625	Outside	3490.00	
Recorder	0.00	8679	Inside	3490.00	
Perforations	15.00			3505.00	
Bullnose	3.00			3508.00	55.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>		<b>83.00</b>			



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Corp

**4-12s-17w Ellis,KS**

250 N Water Ste 300  
Wichita KS 67202-1216

**Bemis I #9**

Job Ticket: 53657

**DST#: 4**

ATTN: Clayton Erickson

Test Start: 2013.05.02 @ 17:23:15

## 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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3800.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud with a scum of oil	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:

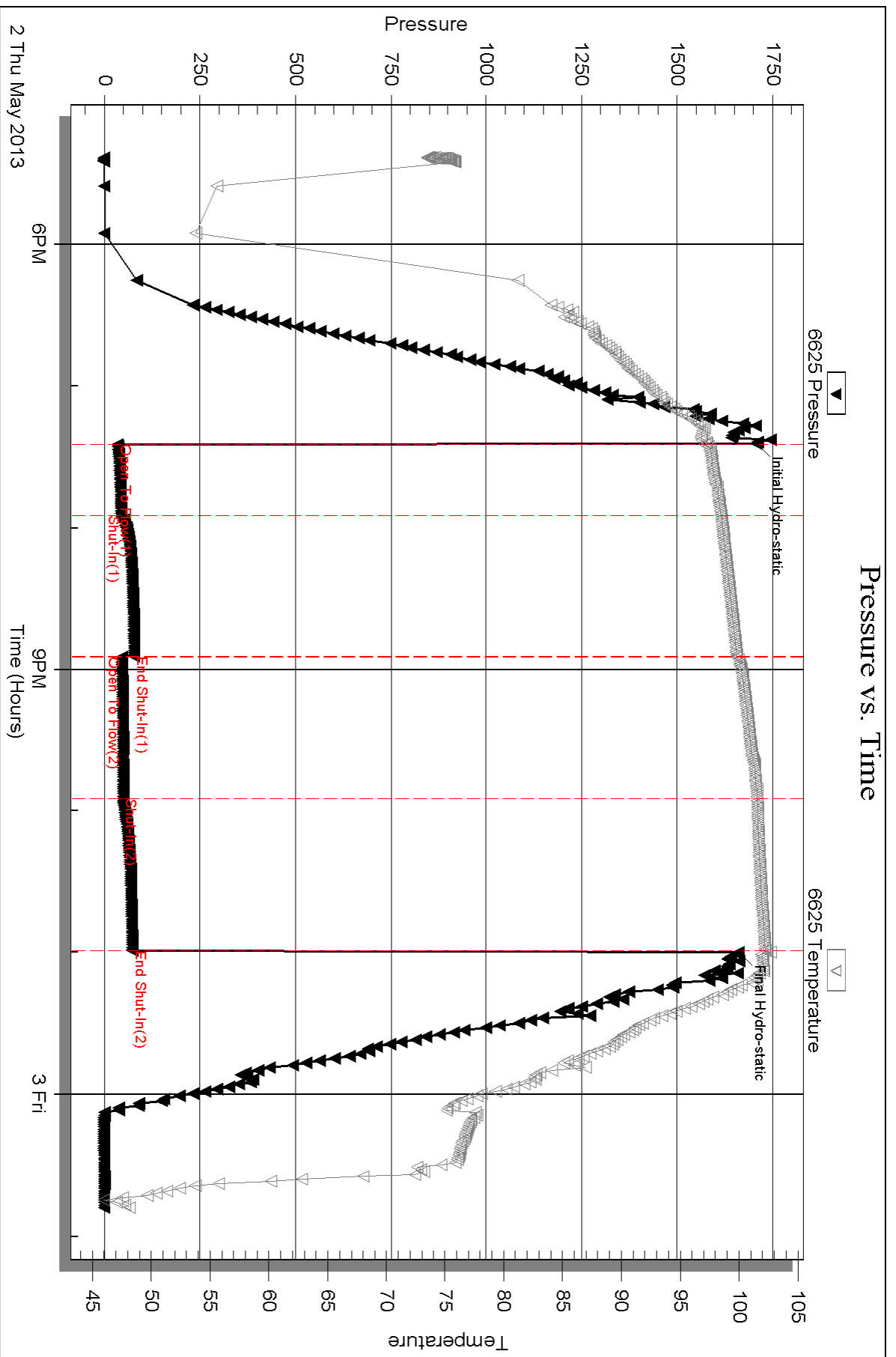
Recovery Comments:

Serial #: 6625

Outside Murfin Drilling Corp

Bemis I #9

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 53657

Printed: 2013.05.13 @ 14:02:33

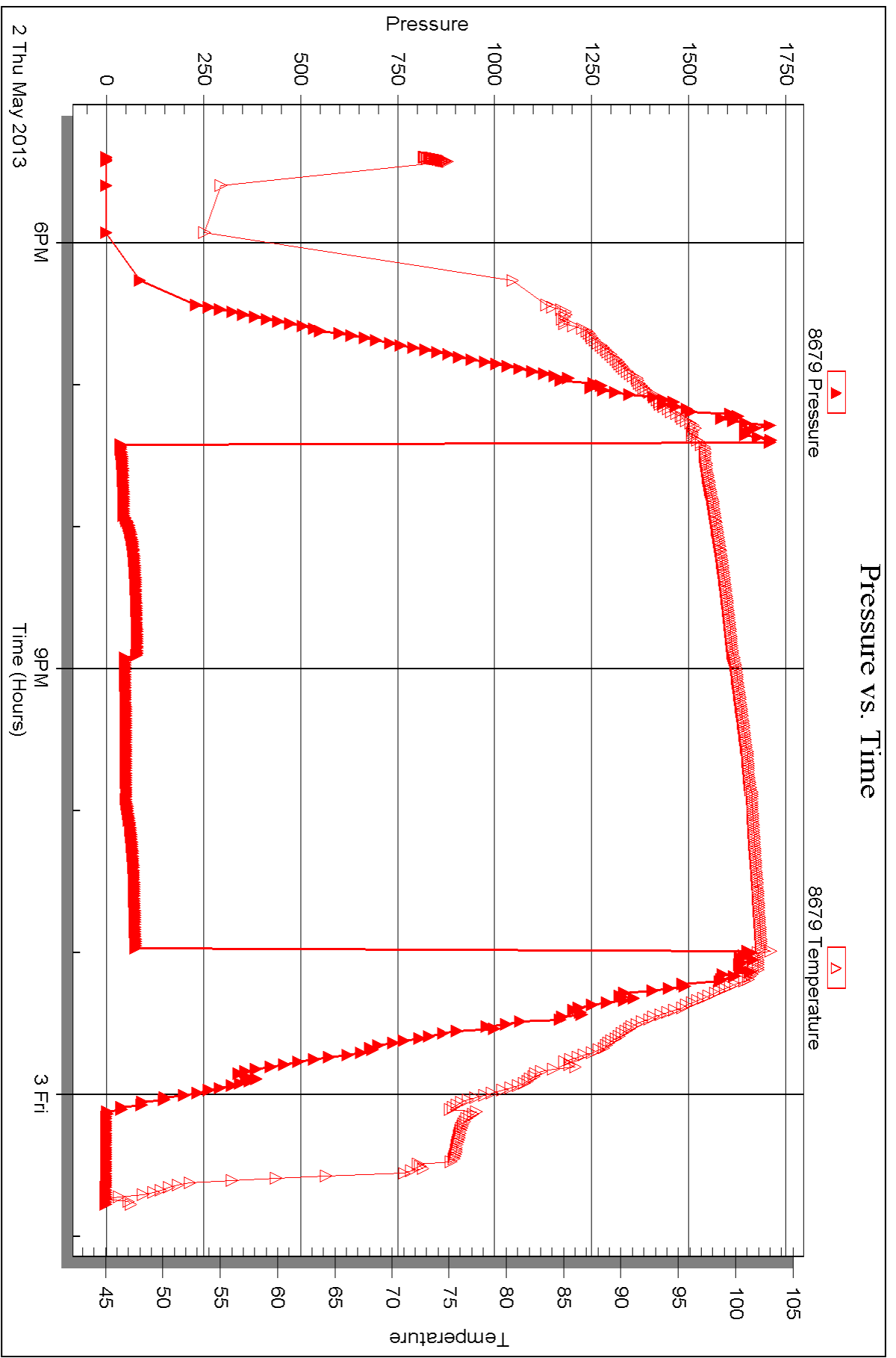
Serial #: 8679

Inside

Murfin Drilling Corp

Bennis I #9

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 53657

Printed: 2013.05.13 @ 14:02:34



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Corp**

250 N Water Ste 300  
Wichita KS 67202-1216

ATTN: Clayton Erickson

### **Bemis I #9**

#### **4-12s-17w Ellis,KS**

Start Date: 2013.05.03 @ 05:52:15

End Date: 2013.05.03 @ 13:55:15

Job Ticket #: 53658                      DST #: 5

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

Printed: 2013.05.13 @ 14:01:50



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Corp  
 250 N Water Ste 300  
 Wichita KS 67202-1216  
 ATTN: Clayton Erickson

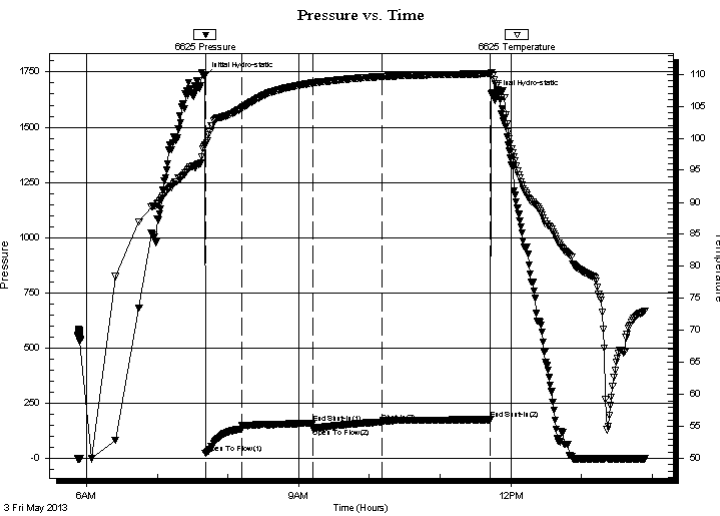
**4-12s-17w Ellis, KS**  
**Bemis I #9**  
 Job Ticket: 53658 **DST#: 5**  
 Test Start: 2013.05.03 @ 05:52:15

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 07:40:45  
 Tester: Jeff Brown  
 Time Test Ended: 13:55:15  
 Unit No: 67  
 Interval: **3508.00 ft (KB) To 3518.00 ft (KB) (TVD)**  
 Reference Elevations: 2043.00 ft (KB)  
 Total Depth: 3518.00 ft (KB) (TVD) 2032.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 11.00 ft

**Serial #: 6625 Outside**  
 Press @ Run Depth: 164.15 psig @ 3509.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.05.03 End Date: 2013.05.03 Last Calib.: 2013.05.03  
 Start Time: 05:52:16 End Time: 13:54:15 Time On Btm: 2013.05.03 @ 07:40:15  
 Time Off Btm: 2013.05.03 @ 11:43:45

**TEST COMMENT:** IFP=Good blow BOB in 11-1/2 min  
 ISI=Weak surface blow back  
 FFP=Fair blow built to 8 in  
 FSI=Weak surface blow back built to 1/4 in



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1729.38	98.83	Initial Hydro-static
1	23.80	99.04	Open To Flow (1)
31	133.19	104.67	Shut-In(1)
92	160.40	108.64	End Shut-In(1)
92	134.79	108.65	Open To Flow (2)
151	164.15	109.63	Shut-In(2)
243	175.77	110.08	End Shut-In(2)
244	1649.72	110.29	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
263.00	OCMW 10%O 15%M 75%W	1.29
63.00	GOCMW 10%G 15%O 35%M 40%W	0.88
10.00	MCWO 15%M 25%W 60%O	0.14

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Corp  
250 N Water Ste 300  
Wichita KS 67202-1216  
ATTN: Clayton Erickson

**4-12s-17w Ellis, KS**  
**Bemis I #9**  
Job Ticket: 53658      **DST#: 5**  
Test Start: 2013.05.03 @ 05:52:15

**Tool Information**

Drill Pipe:	Length: 3236.00 ft	Diameter: 3.80 inches	Volume: 45.39 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	22000.00 lb
Drill Collar:	Length: 263.00 ft	Diameter: 2.25 inches	Volume: 1.29 bbl	Weight to Pull Loose:	lb
			<u>Total Volume: 46.68 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial	69000.00 lb
Depth to Top Packer:	3508.00 ft			Final	lb
Depth to Bottom Packer:	ft				
Interval between Packers:	10.00 ft				
Tool Length:	38.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			3481.00	
Shut In Tool	5.00			3486.00	
Hydraulic tool	5.00			3491.00	
Jars	5.00			3496.00	
Safety Joint	3.00			3499.00	
Packer	4.00			3503.00	28.00      Bottom Of Top Packer
Packer	5.00			3508.00	
Stubb	1.00			3509.00	
Recorder	0.00	6625	Outside	3509.00	
Recorder	0.00	8679	Inside	3509.00	
Perforations	6.00			3515.00	
Bullnose	3.00			3518.00	10.00      Bottom Packers & Anchor

**Total Tool Length: 38.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Corp

**4-12s-17w Ellis,KS**

250 N Water Ste 300  
Wichita KS 67202-1216

**Bemis I #9**

Job Ticket: 53658

**DST#: 5**

ATTN: Clayton Erickson

Test Start: 2013.05.03 @ 05:52:15

### 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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.57 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
263.00	OCMW 10%O 15%M 75%W	1.293
63.00	GOCMW 10%G 15%O 35%M 40%W	0.884
10.00	MCWO 15%M 25%W 60%O	0.140

Total Length: 336.00 ft

Total Volume: 2.317 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

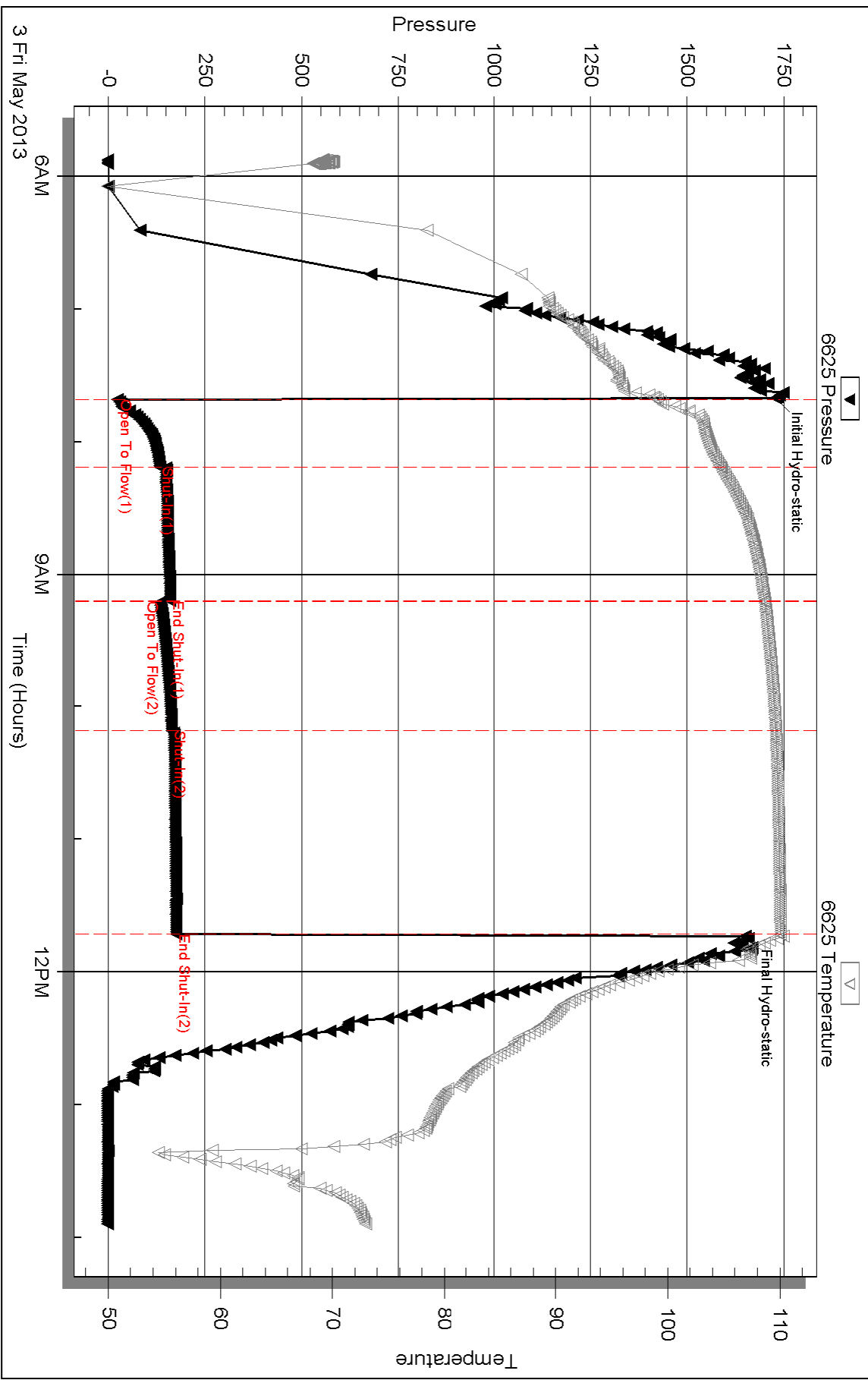
Serial #: 6625

Outside Murfin Drilling Corp

Bemis I #9

DST Test Number: 5

### Pressure vs. Time



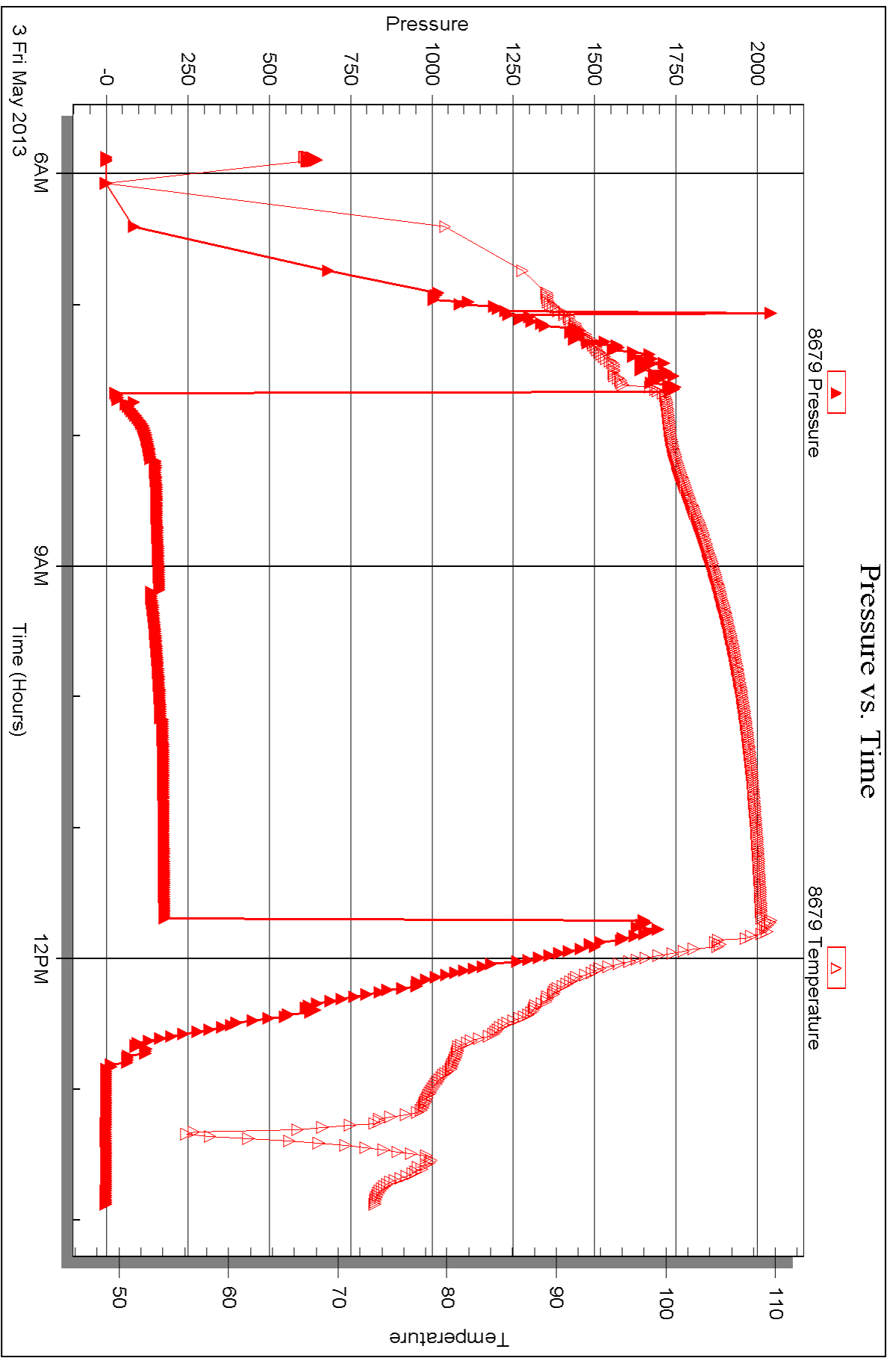
Serial #: 8679

Inside

Murfin Drilling Corp

Bennis I #9

DST Test Number: 5



Triobite Testing, Inc

Ref. No: 53858

Printed: 2013.05.13 @ 14:01:53



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Corp**

250 N Water Ste 300  
Wichita KS 67202-1216

ATTN: Clayton Erickson

### **Bemis I #9**

#### **4-12s-17w Ellis,KS**

Start Date: 2013.05.03 @ 23:33:22

End Date: 2013.05.04 @ 07:16:52

Job Ticket #: 53659                      DST #: 6

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

Printed: 2013.05.13 @ 14:01:09



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Corp  
 250 N Water Ste 300  
 Wichita KS 67202-1216  
 ATTN: Clayton Erickson

**4-12s-17w Ellis,KS**  
**Bemis I #9**  
 Job Ticket: 53659 **DST#: 6**  
 Test Start: 2013.05.03 @ 23:33:22

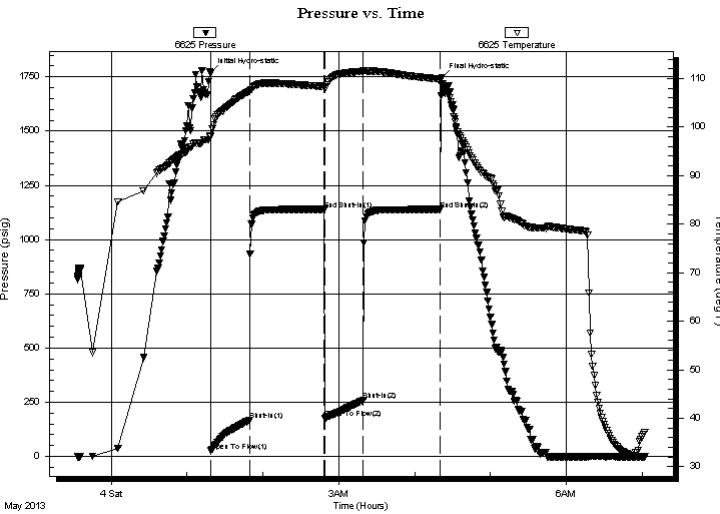
## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 01:18:52  
 Tester: Jeff Brown  
 Time Test Ended: 07:16:52  
 Unit No: 67  
 Interval: **3545.00 ft (KB) To 3559.00 ft (KB) (TVD)**  
 Reference Elevations: 2043.00 ft (KB)  
 Total Depth: 3559.00 ft (KB) (TVD)  
 2032.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Good  
 KB to GR/CF: 11.00 ft

## Serial #: 6625 Outside

Press @ Run Depth: 260.02 psig @ 3546.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.05.03 End Date: 2013.05.04 Last Calib.: 2013.05.04  
 Start Time: 23:33:23 End Time: 07:01:52 Time On Btm: 2013.05.04 @ 01:18:22  
 Time Off Btm: 2013.05.04 @ 04:21:22

**TEST COMMENT:** IFP=Good blow BOB in 6 min  
 ISI=Weak surface blow back  
 FFP=Good blow BOB in 8 1/2 min  
 FSI=Weak surface blow back built to 1 1/2 in



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1768.35	98.13	Initial Hydro-static
1	25.50	98.09	Open To Flow (1)
31	167.73	107.38	Shut-In(1)
90	1139.51	108.38	End Shut-In(1)
91	177.05	107.84	Open To Flow (2)
121	260.02	111.54	Shut-In(2)
182	1139.19	109.91	End Shut-In(2)
183	1747.06	108.81	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCGM 10%G 20%O 70%M	0.30
203.00	MCGO 10%G 20%M 70%O	1.00
419.00	GASSY OIL 20%G 80%O	5.88
0.00	220-GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Corp  
250 N Water Ste 300  
Wichita KS 67202-1216  
ATTN: Clayton Erickson

**4-12s-17w Ellis, KS**  
**Bemis I #9**  
Job Ticket: 53659      **DST#: 6**  
Test Start: 2013.05.03 @ 23:33:22

**Tool Information**

Drill Pipe:	Length: 3267.00 ft	Diameter: 3.80 inches	Volume: 45.83 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	22000.00 lb
Drill Collar:	Length: 263.00 ft	Diameter: 2.25 inches	Volume: 1.29 bbl	Weight to Pull Loose:	79000.00 lb
			<u>Total Volume: 47.12 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial	69000.00 lb
Depth to Top Packer:	3545.00 ft			Final	72000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	14.00 ft				
Tool Length:	42.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			3518.00	
Shut In Tool	5.00			3523.00	
Hydraulic tool	5.00			3528.00	
Jars	5.00			3533.00	
Safety Joint	3.00			3536.00	
Packer	4.00			3540.00	28.00      Bottom Of Top Packer
Packer	5.00			3545.00	
Stubb	1.00			3546.00	
Recorder	0.00	6625	Outside	3546.00	
Recorder	0.00	8679	Inside	3546.00	
Perforations	10.00			3556.00	
Bullnose	3.00			3559.00	14.00      Bottom Packers & Anchor

**Total Tool Length: 42.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Corp

**4-12s-17w Ellis,KS**

250 N Water Ste 300  
Wichita KS 67202-1216

**Bemis I #9**

Job Ticket: 53659

**DST#: 6**

ATTN: Clayton Erickson

Test Start: 2013.05.03 @ 23:33:22

## 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:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	OCGM 10%G 20%O 70%M	0.295
203.00	MCGO 10%G 20%M 70%O	0.998
419.00	GASSY OIL 20%G 80%O	5.877
0.00	220-GIP	0.000

Total Length: 682.00 ft

Total Volume: 7.170 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

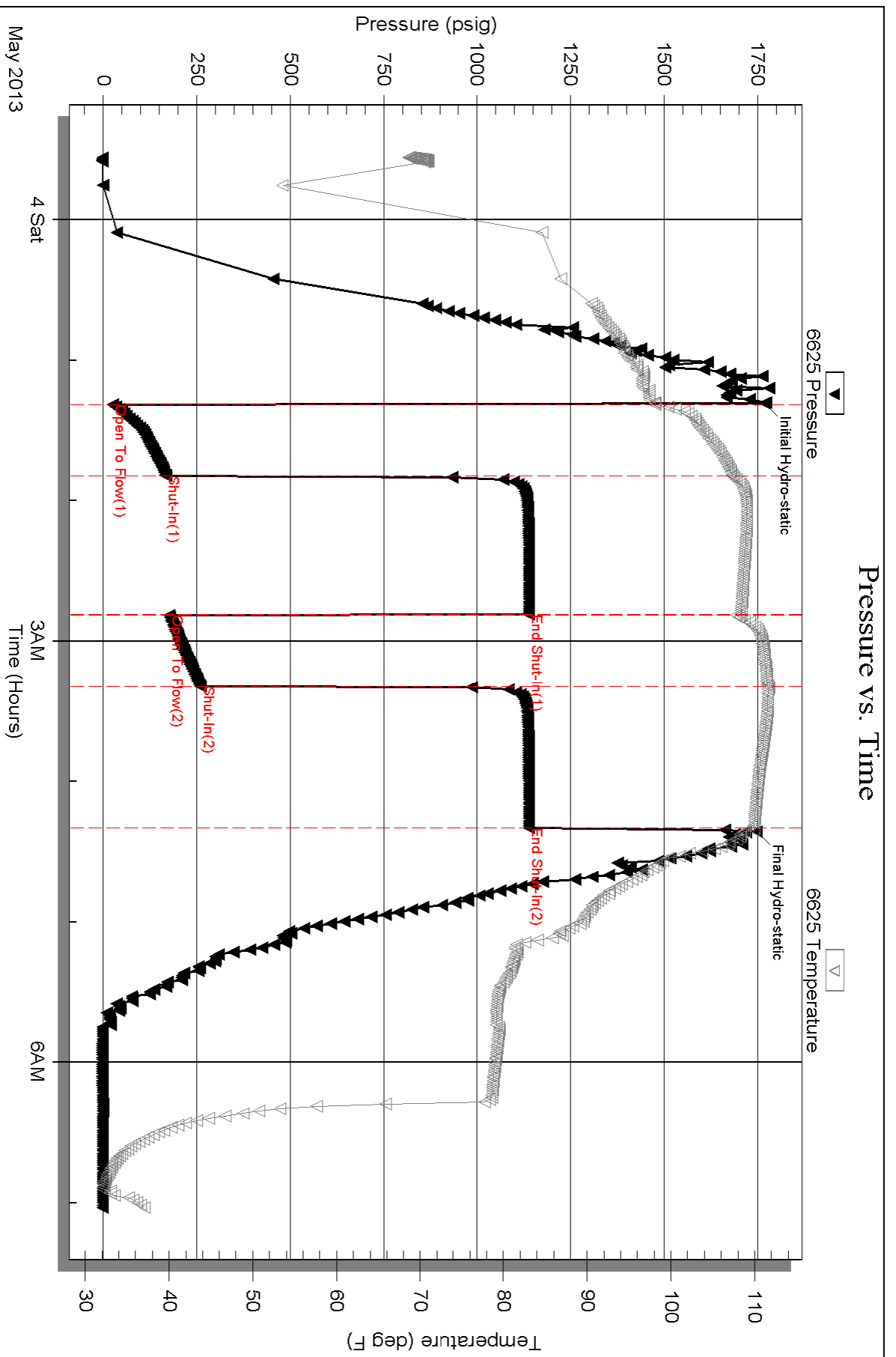
Laboratory Name:

Laboratory Location:

Recovery Comments:



# Pressure vs. Time



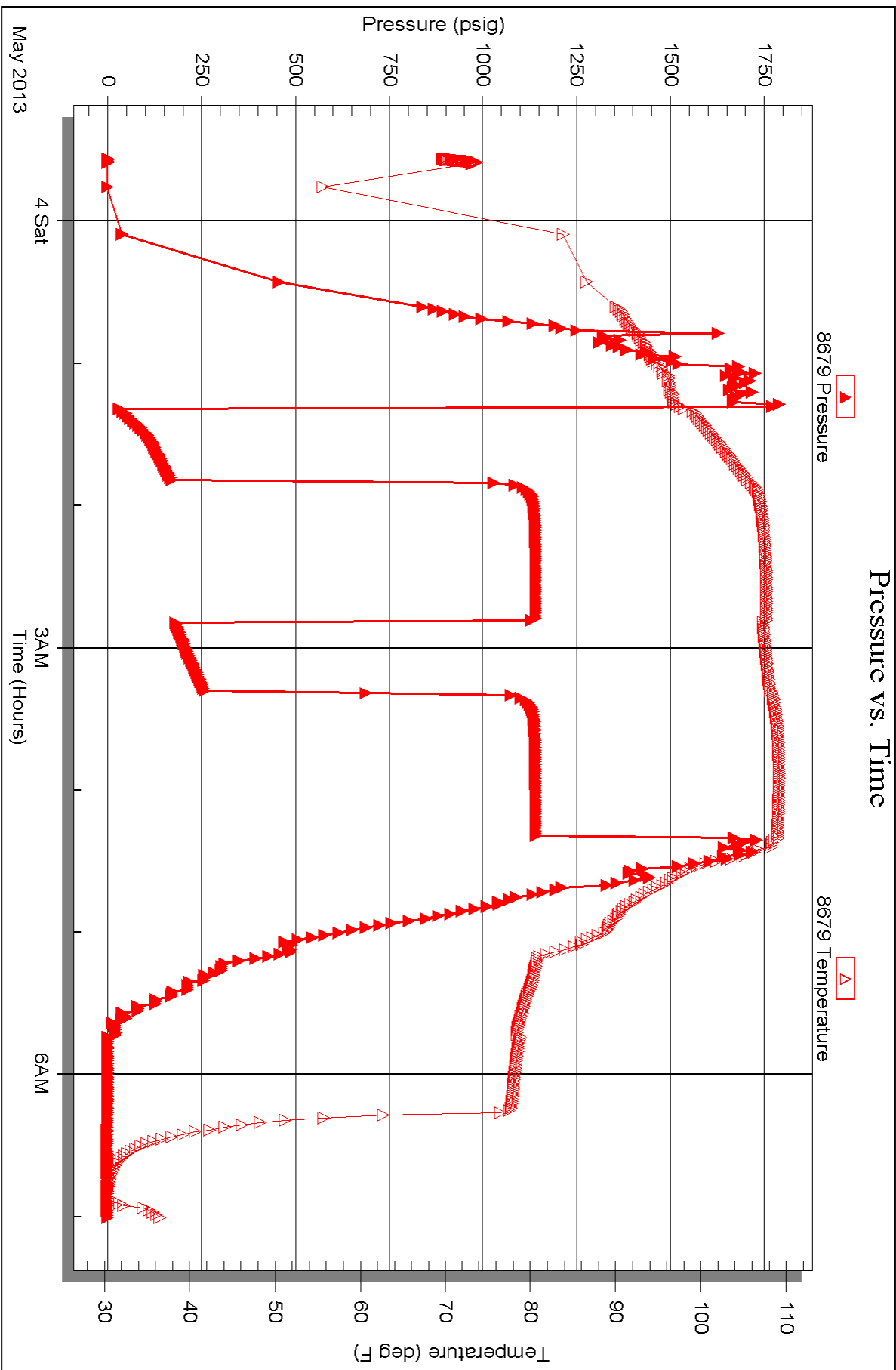
Serial #: 8679

Inside

Murfin Drilling Corp

Bennis I #9

DST Test Number: 6





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53654

Well Name & No. Bemis I-A9 Test No. 1 Date 4-30-13  
 Company Murfin Drilling Company INC Elevation 2043 KB 2032 GL  
 Address 250 N Water Ste 300 Wichita KS 67202 + 1216  
 Co. Rep / Geo. Clayton Erickson Rig Murfin #21  
 Location: Sec. 4 Twp. 12S Rge. 17W Co. ELLIS State KS

Interval Tested 3192 - 3283 Zone Tested Toronto, LKC-A-B  
 Anchor Length 91 Drill Pipe Run 2983 2921 Mud Wt. 9.2  
 Top Packer Depth 3187 Drill Collars Run 204 263 Vis 53  
 Bottom Packer Depth 3192 Wt. Pipe Run 0 WL 7.6  
 Total Depth 3283 Chlorides 3800 ppm System LCM 2

Blow Description FF-Weak Blow Built To 1 1/4 IN  
ISI-Dead NO Blow Back  
FF-Fair Blow Built To 6 3/4 IN  
ISI-Dead NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>SOCGM</u>	<u>3</u>	<u>5</u>		<u>92</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 60 BHT 105 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1664</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>9:46</u>
(B) First Initial Flow <u>51</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>10:09</u>
(C) First Final Flow <u>66</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>11:49</u>
(D) Initial Shut-In <u>119</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>15:49</u>
(E) Second Initial Flow <u>61</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>17:26</u>
(F) Second Final Flow <u>71</u>	<input checked="" type="checkbox"/> Mileage <u>36 RT</u> 55.80	Comments _____
(G) Final Shut-In <u>114</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1587</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60 90  
 Final Shut-In \_\_\_\_\_

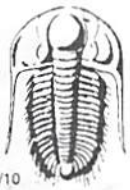
Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Sub Total 1530.80

Sub Total 1530.80

Approved By \_\_\_\_\_ Our Representative Jeff Brown

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53655

Well Name & No. Bemis I-#9 Test No. 2 Date 5-1-13  
 Company Murfin Drilling company INC Elevation 2043 KB 2032 GL  
 Address 250 N Water Ste 300 Wichita KS 67202 +1216  
 Co. Rep / Geo. Clayton Erickson Rig Murfin #21  
 Location: Sec. 4 Twp. 12S Rge. 17W Co. ELLIS State KS

Interval Tested 3274-3331 Zone Tested LKC-D-E-F  
 Anchor Length 57 Drill Pipe Run 3014 Mud Wt. 9.2  
 Top Packer Depth 3269 Drill Collars Run 263 Vis 53  
 Bottom Packer Depth 3274 Wt. Pipe Run 0 WL 7.40  
 Total Depth 3331 Chlorides 3800 ppm System LCM 2

Blow Description FFP-GOOD Blow Bob IN 18 min  
1st-Dead No Blow Back  
FFP-Strong Blow Bob IN 3 min  
1st-Dead No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>HOC GWM</u>	<u>20</u>	<u>40</u>	<u>5</u>	<u>35</u>
Rec	Feet of <u>120 GIP</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

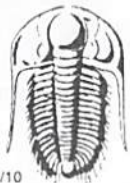
Rec Total 60 BHT 104 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1683</u>	<input checked="" type="checkbox"/> Test 1150	T-On Location <u>1:33</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>1:50</u>
(C) First Final Flow <u>33</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>3:44</u>
(D) Initial Shut-In <u>105</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>6:44</u>
(E) Second Initial Flow <u>27</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>8:35</u>
(F) Second Final Flow <u>39</u>	<input checked="" type="checkbox"/> Mileage 55.80	Comments _____
(G) Final Shut-In <u>103</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1638</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>1530.80</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>1530.80</u>	

Approved By \_\_\_\_\_ Our Representative Jeff Brown

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53656

Well Name & No. Bemis I- #9 Test No. 3 Date 5-2-13  
 Company Murfin Drilling Company INC Elevation 2043 KB 2032 GL  
 Address 250 N Water Ste 300 Wichita KS 67202 + 1216  
 Co. Rep / Geo. Clayton Erickson Rig Murfin #21  
 Location: Sec. 4 Twp. 12 S Rge. 17 W Co. ELLIS State KS

Interval Tested 3352-3457 Zone Tested LKC-H-I-J-K  
 Anchor Length 105 Drill Pipe Run 3078 Mud Wt. 9.2  
 Top Packer Depth 3347 Drill Collars Run 263 Vis 54  
 Bottom Packer Depth 3352 Wt. Pipe Run 0 WL 7.6  
 Total Depth 3457 Chlorides 3700 ppm System LCM 2

Blow Description IP-Weak Blow Built To 1 1/4 IN  
BF-Dead No Blow Back  
FP-Dead No Blow  
FST-Dead No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud with oil spots</u>				<u>100</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT 99 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1657  Test 1150 T-On Location 1:45  
 (B) First Initial Flow 21  Jars 250 T-Started 2:04  
 (C) First Final Flow 23  Safety Joint 75 T-Open 3:48  
 (D) Initial Shut-In 140  Circ Sub \_\_\_\_\_ T-Pulled 6:48  
 (E) Second Initial Flow 23  Hourly Standby \_\_\_\_\_ T-Out 8:38  
 (F) Second Final Flow 24  Mileage 55.80  
 (G) Final Shut-In 63  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1591  Straddle \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  
 Initial Shut-In 60  Shale Packer \_\_\_\_\_  
 Final Flow 30  Extra Packer \_\_\_\_\_  
 Final Shut-In 60  Extra Recorder \_\_\_\_\_  
 Sub Total 0  
 Total 1530.80  
 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1530.80

Approved By \_\_\_\_\_ Our Representative Jeff Brown

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53657

Well Name & No. Bemis I-49 Test No. 4 Date 5-2-13  
 Company Murfin Drilling Company INC Elevation 2043 KB 2032 GL  
 Address 250 N Water Ste 300 Wichita KS 67202 + 1214  
 Co. Rep / Geo. Clayton Erickson Rig Murfin #21  
 Location: Sec. 4 Twp. 12S Rge. 17W Co. ELLIS State KS

Interval Tested 3453 - 3508 Zone Tested ArBuckle  
 Anchor Length 55 Drill Pipe Run 3173 Mud Wt. 9.2  
 Top Packer Depth 3448 Drill Collars Run 263 Vis 52  
 Bottom Packer Depth 3453 Wt. Pipe Run 0 WL 7.4  
 Total Depth 3508 Chlorides 3800 ppm System LCM 2

Blow Description FP-Weak Blow Built To 1 1/2 IN  
IS-Dead No Blow Back  
FP-Weak Surface Blow Died Out IN 48 min  
IS-Dead No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>mud with A SCUM of oil</u>				<u>100%</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15 BHT 102 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1707</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>16:58</u>
(B) First Initial Flow <u>34</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>17:23</u>
(C) First Final Flow <u>44</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>19:25</u>
(D) Initial Shut-In <u>78</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>22:55</u>
(E) Second Initial Flow <u>45</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>00:48</u>
(F) Second Final Flow <u>49</u>	<input checked="" type="checkbox"/> Mileage <u>55.80</u>	Comments _____
(G) Final Shut-In <u>73</u>	<input type="checkbox"/> Sampler _____	<input type="checkbox"/> Ruined Shale Packer _____
(H) Final Hydrostatic <u>1661</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Total <u>1530.80</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility _____	
	Sub Total <u>1530.80</u>	

Approved By \_\_\_\_\_ Our Representative Jeff Brown

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53658

Well Name & No. Bemis I-#9 Test No. 5 Date 5-3-13  
 Company Murfin Drilling Company INC Elevation 2043 KB 2032 GL  
 Address 250 N Water STE 300 Wichita KS 67202 + 1216  
 Co. Rep / Geo. Clayton Erickson Rig Murfin #21  
 Location: Sec. 4 Twp. 12s Rge. 17W Co. ELLIS State KS

Interval Tested 3508-3518 Zone Tested Ar Buckle  
 Anchor Length 10 Drill Pipe Run 3236 Mud Wt. 9.2  
 Top Packer Depth 3503 Drill Collars Run 263 Vis 53  
 Bottom Packer Depth 3508 Wt. Pipe Run 0 WL 7.6  
 Total Depth 3518 Chlorides 4000 ppm System LCM 2

Blow Description 1st GOOD Blow BOB IN 11 1/2 min  
1st Weak Surface Blow Back  
2nd Fair Blow Built To 8 IN  
3rd Weak Surface Blow Back Built To 1/4 IN

Rec	Feet of	%gas	%oil	%water	%mud
<u>263</u>	<u>OC MW</u>	<u>10</u>	<u>75</u>	<u>15</u>	<u>15</u>
<u>63</u>	<u>GOC MW</u>	<u>10</u>	<u>40</u>	<u>35</u>	<u>35</u>
<u>10</u>	<u>OC MW MCWO</u>	<u>60</u>	<u>25</u>	<u>15</u>	<u>15</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

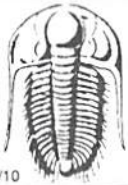
Rec Total 336 BHT 110 Gravity \_\_\_\_\_ API RW 27.2 @ 71.4° F Chlorides 25,500 ppm

(A) Initial Hydrostatic 1729  Test 1150 T-On Location 5:39  
 (B) First Initial Flow 24  Jars 250 T-Started 5:52  
 (C) First Final Flow 133  Safety Joint 75 T-Open 7:41  
 (D) Initial Shut-In 160  Circ Sub T-Pulled 11:41  
 (E) Second Initial Flow 135  Hourly Standby T-Out 13:55  
 (F) Second Final Flow 164  Mileage 55.80  
 (G) Final Shut-In 176  Sampler  
 (H) Final Hydrostatic 1650  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90  
 Sub Total 1530.80  
 Total 1530.80  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Jeff Brown

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53659

Well Name & No. Bemis I-#9 Test No. 6 Date 5-3-13  
 Company Murfin Drilling Company INC Elevation 2043 KB 2032 GL  
 Address 250 N Water Ste 300 Wichita KS 67202 + 1214  
 Co. Rep / Geo. Clayton Erickson Rig Murfin #21  
 Location: Sec. 4 Twp. 12S Rge. 17W Co. ELLIS State KS

Interval Tested 3545 - 3559 Zone Tested Art Buckle  
 Anchor Length 14 Drill Pipe Run 3267 Mud Wt. 9.2  
 Top Packer Depth 3540 Drill Collars Run 263 Vis 53  
 Bottom Packer Depth 3545 Wt. Pipe Run 0 WL 7.4  
 Total Depth 3559 Chlorides 4000 ppm System LCM 2

Blow Description IP-GOOD Blow BOB IN 10 min  
IS-Weak Surface Blow Back  
FR-GOOD Blow BOB IN 8 1/2 IN  
IS-Weak Surface Blow Back Built TO 1 1/2 IN

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>OCGM</u>	<u>10</u>	<u>20</u>	<u>70</u>	
<u>203</u>	<u>mcGO</u>	<u>10</u>	<u>70</u>	<u>20</u>	
<u>419</u>	<u>Gassy Oil</u>	<u>20</u>	<u>80</u>		
	<u>220-GIP</u>				

Rec Total 682 BHT 110 Gravity 29 API RW @ ° F Chlorides ppm  
 (A) Initial Hydrostatic 1768  Test 1150 T-On Location 23:19  
 (B) First Initial Flow 26  Jars 250 T-Started 23:33  
 (C) First Final Flow 168  Safety Joint 75 T-Open 1:20  
 (D) Initial Shut-In 1140  Circ Sub T-Pulled 4:20  
 (E) Second Initial Flow 177  Hourly Standby T-Out 7:14  
 (F) Second Final Flow 260  Mileage 55.80 Comments  
 (G) Final Shut-In 1139  Sampler  
 (H) Final Hydrostatic 1747  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder Sub Total 0  
 Day Standby Total 1530.80  
 Accessibility MP/DST Disc't  
 Sub Total 1530.80

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 30  
 Final Shut-In 60

Approved By \_\_\_\_\_ Our Representative Jeff Brown

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