



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Brad Rine

### **Jean #1-8**

#### **8-1s-37w Cheyenne KS**

Start Date: 2014.01.08 @ 11:00:00

End Date: 2014.01.08 @ 18:18:30

Job Ticket #: 55888                      DST #: 1

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

Printed: 2014.01.17 @ 10:45:09



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N. Water Suite 300  
Wichita, KS 67202  
ATTN: Brad Rine

**8-1s-37w Cheyenne KS**

**Jean #1-8**

Job Ticket: 55888

**DST#: 1**

Test Start: 2014.01.08 @ 11:00:00

## GENERAL INFORMATION:

Formation: **Foraker**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:21:00

Time Test Ended: 18:18:30

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 61

**Interval: 3706.00 ft (KB) To 3755.00 ft (KB) (TVD)**

Reference Elevations: 3219.00 ft (KB)

Total Depth: 3755.00 ft (KB) (TVD)

3206.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

**Serial #: 8673**

**Inside**

Press@RunDepth: 22.11 psig @ 3707.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.01.08

End Date:

2014.01.08

Last Calib.:

2014.01.08

Start Time: 11:00:01

End Time:

18:18:30

Time On Btm:

2014.01.08 @ 13:20:30

Time Off Btm:

2014.01.08 @ 16:23:30

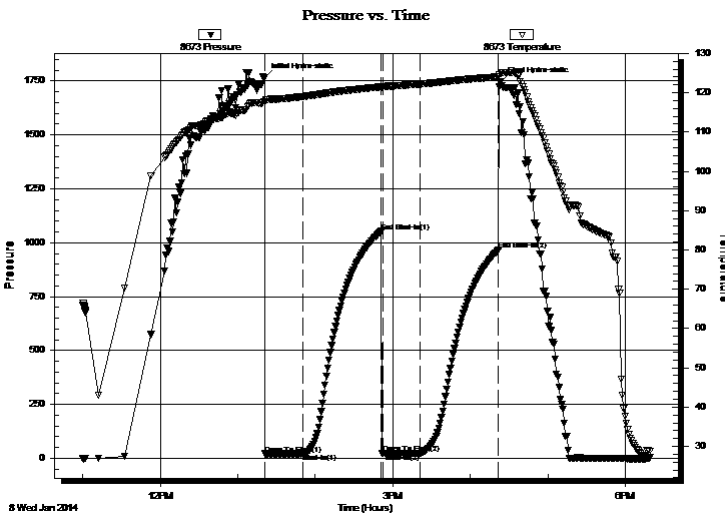
**TEST COMMENT:** 30 - IF: 3/4" Blow at open, died back, dead at 20 min.

60 - IS: No blow back

30 - FF: No blow

60 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1767.71	117.75	Initial Hydro-static
1	20.62	117.79	Open To Flow (1)
30	21.73	119.05	Shut-In(1)
91	1052.77	121.51	End Shut-In(1)
92	22.30	121.62	Open To Flow (2)
121	22.11	122.22	Shut-In(2)
181	966.22	124.05	End Shut-In(2)
183	1749.16	125.01	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	SOCM 93% m, 4% o, 3% g	0.28

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55888

**DST#: 1**

ATTN: Brad Rine

Test Start: 2014.01.08 @ 11:00:00

## Tool Information

Drill Pipe:	Length: 3704.00 ft	Diameter: 3.80 inches	Volume: 51.96 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	52000.00 lb
			<u>Total Volume: 51.96 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial	40000.00 lb
Depth to Top Packer:	3706.00 ft			Final	40000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	49.00 ft				
Tool Length:	77.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments: Tool chased 2' to bottom at open, lost a couple ft. of mud - 3/4" blow at open

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3683.00	
Hydraulic tool	5.00			3688.00	
Jars	5.00			3693.00	
Safety Joint	3.00			3696.00	
Packer	5.00			3701.00	28.00 Bottom Of Top Packer
Packer	5.00			3706.00	
Packer - Shale	0.00			3706.00	
Stubb	1.00			3707.00	
Recorder	0.00	8673	Inside	3707.00	
Recorder	0.00	8651	Outside	3707.00	
Perforations	11.00			3718.00	
Change Over Sub	1.00			3719.00	
Drill Pipe	32.00			3751.00	
Change Over Sub	1.00			3752.00	
Bullnose	3.00			3755.00	49.00 Bottom Packers & Anchor

**Total Tool Length: 77.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55888

**DST#: 1**

ATTN: Brad Rine

Test Start: 2014.01.08 @ 11:00:00

## 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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 4.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	SOCM 93% <i>m</i> , 4% <i>o</i> , 3% <i>g</i>	0.281

Total Length: 20.00 ft      Total Volume: 0.281 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

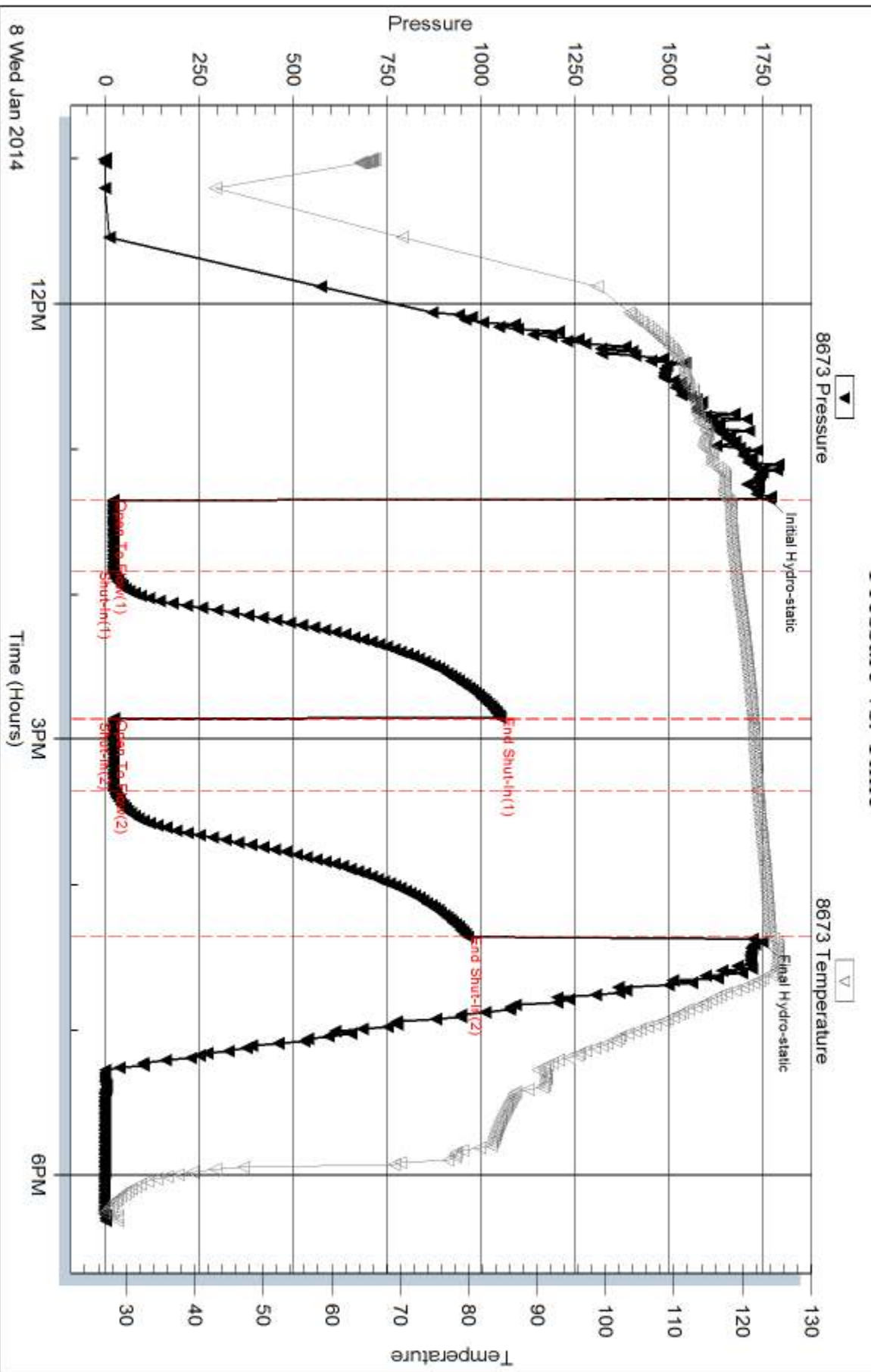
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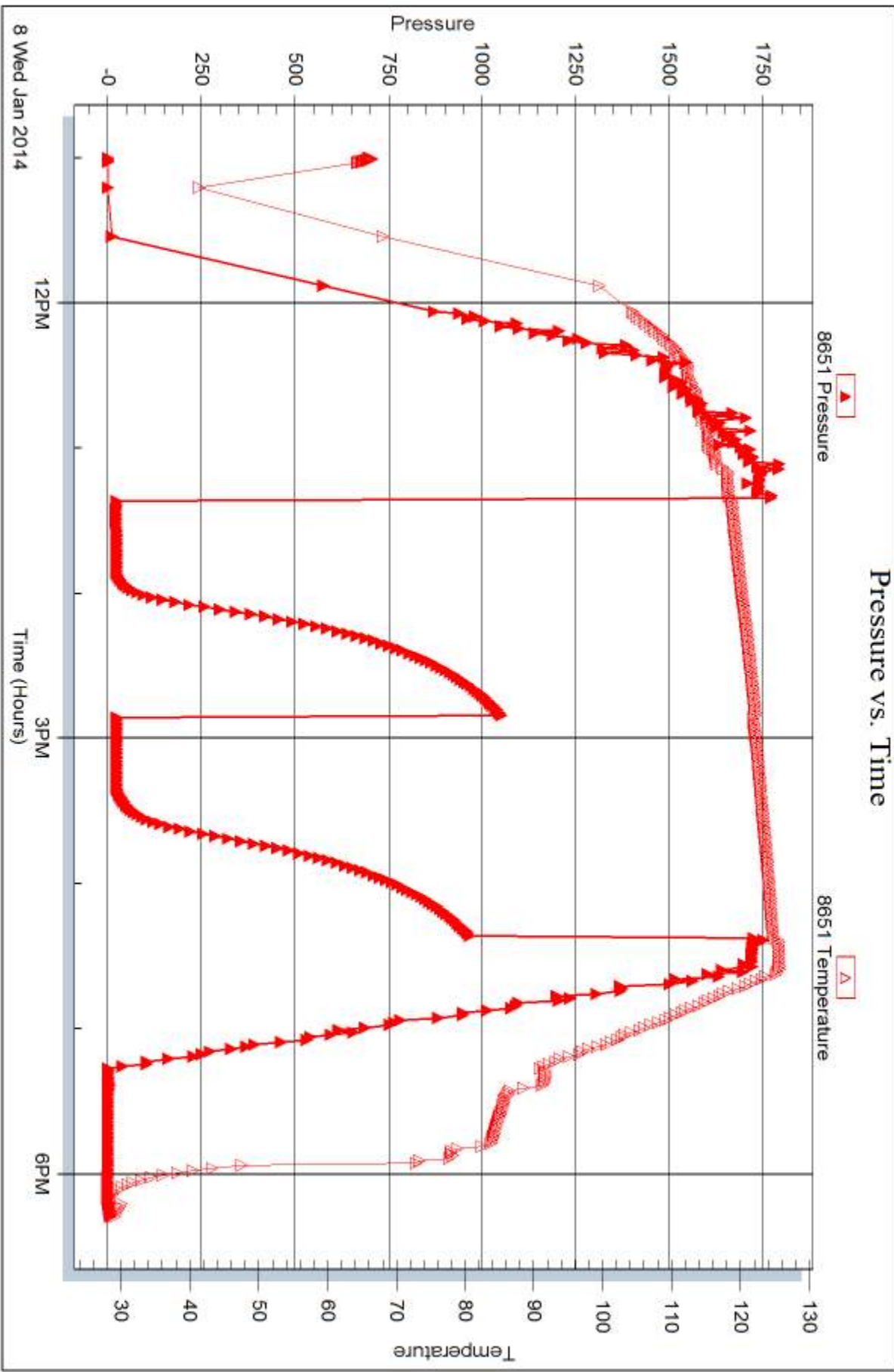
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Brad Rine

**Jean #1-8**

**8-1s-37w Cheyenne KS**

Start Date: 2014.01.10 @ 08:45:00

End Date: 2014.01.10 @ 15:54:00

Job Ticket #: 55942                      DST #: 2

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

Printed: 2014.01.17 @ 10:44:39

Murfin Drilling Co., Inc. 8-1s-37w Cheyenne KS Jean #1-8 DST # 2 LKC A-D 2014.01.10





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N. Water Suite 300  
Wichita, KS 67202  
ATTN: Brad Rine

**8-1s-37w Cheyenne KS**

**Jean #1-8**

Job Ticket: 55942

**DST#: 2**

Test Start: 2014.01.10 @ 08:45:00

## GENERAL INFORMATION:

Formation: **LKC A-D**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 10:53:00  
 Time Test Ended: 15:54:00  
 Interval: **4124.00 ft (KB) To 5250.00 ft (KB) (TVD)**  
 Total Depth: 4250.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Kreuzer Jr.  
 Unit No: 61  
 Reference Elevations: 3219.00 ft (KB)  
 3206.00 ft (CF)  
 KB to GR/CF: 13.00 ft

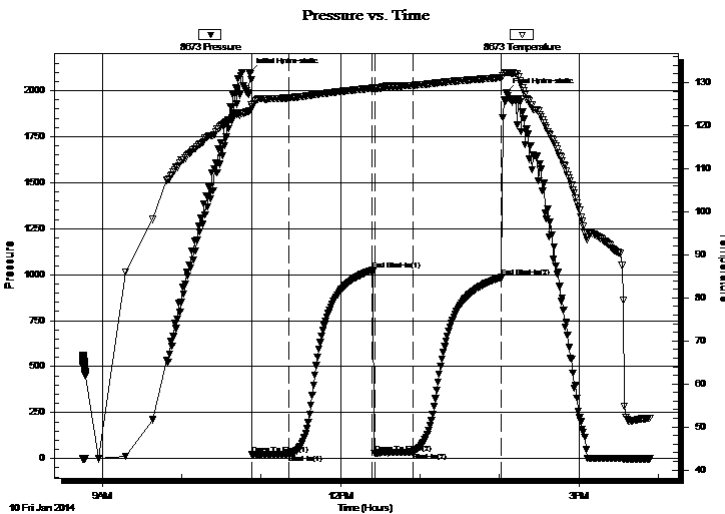
**Serial #: 8673**

**Inside**

Press@RunDepth: 36.12 psig @ 4125.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.10 End Date: 2014.01.10 Last Calib.: 2014.01.10  
 Start Time: 08:45:01 End Time: 15:54:00 Time On Btm: 2014.01.10 @ 10:51:00  
 Time Off Btm: 2014.01.10 @ 14:05:00

TEST COMMENT: IF: Weak blow , surface over 30 mins.  
 IS: No blow back  
 FF: No blow .  
 FS: No blow back.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2099.83	123.49	Initial Hydro-static
2	21.93	124.28	Open To Flow (1)
30	24.75	126.46	Shut-In(1)
93	1024.86	128.69	End Shut-In(1)
95	27.59	128.65	Open To Flow (2)
124	36.12	129.35	Shut-In(2)
191	985.30	131.16	End Shut-In(2)
194	1991.99	132.37	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
40.00	MCO 30%M 70%O	0.56

\* 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 Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55942

**DST#: 2**

ATTN: Brad Rine

Test Start: 2014.01.10 @ 08:45:00

## Tool Information

Drill Pipe:	Length: 4113.00 ft	Diameter: 3.80 inches	Volume: 57.69 bbl	Tool Weight: 2500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 57.69 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	4124.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	126.00 ft			
Tool Length:	154.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4101.00	
Hydraulic tool	5.00			4106.00	
Jars	5.00			4111.00	
Safety Joint	3.00			4114.00	
Packer	5.00			4119.00	28.00 Bottom Of Top Packer
Packer	5.00			4124.00	
Packer - Shale	0.00			4124.00	
Stubb	1.00			4125.00	
Recorder	0.00	8673	Inside	4125.00	
Recorder	0.00	8651	Outside	4125.00	
Perforations	26.00			4151.00	
Change Over Sub	1.00			4152.00	
Drill Pipe	94.00			4246.00	
Change Over Sub	1.00			4247.00	
Bullnose	3.00			4250.00	126.00 Bottom Packers & Anchor

**Total Tool Length: 154.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55942

**DST#: 2**

ATTN: Brad Rine

Test Start: 2014.01.10 @ 08:45:00

## 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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 4.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	MCO 30%M 70%O	0.561

Total Length: 40.00 ft      Total Volume: 0.561 bbl

Num Fluid Samples: 0

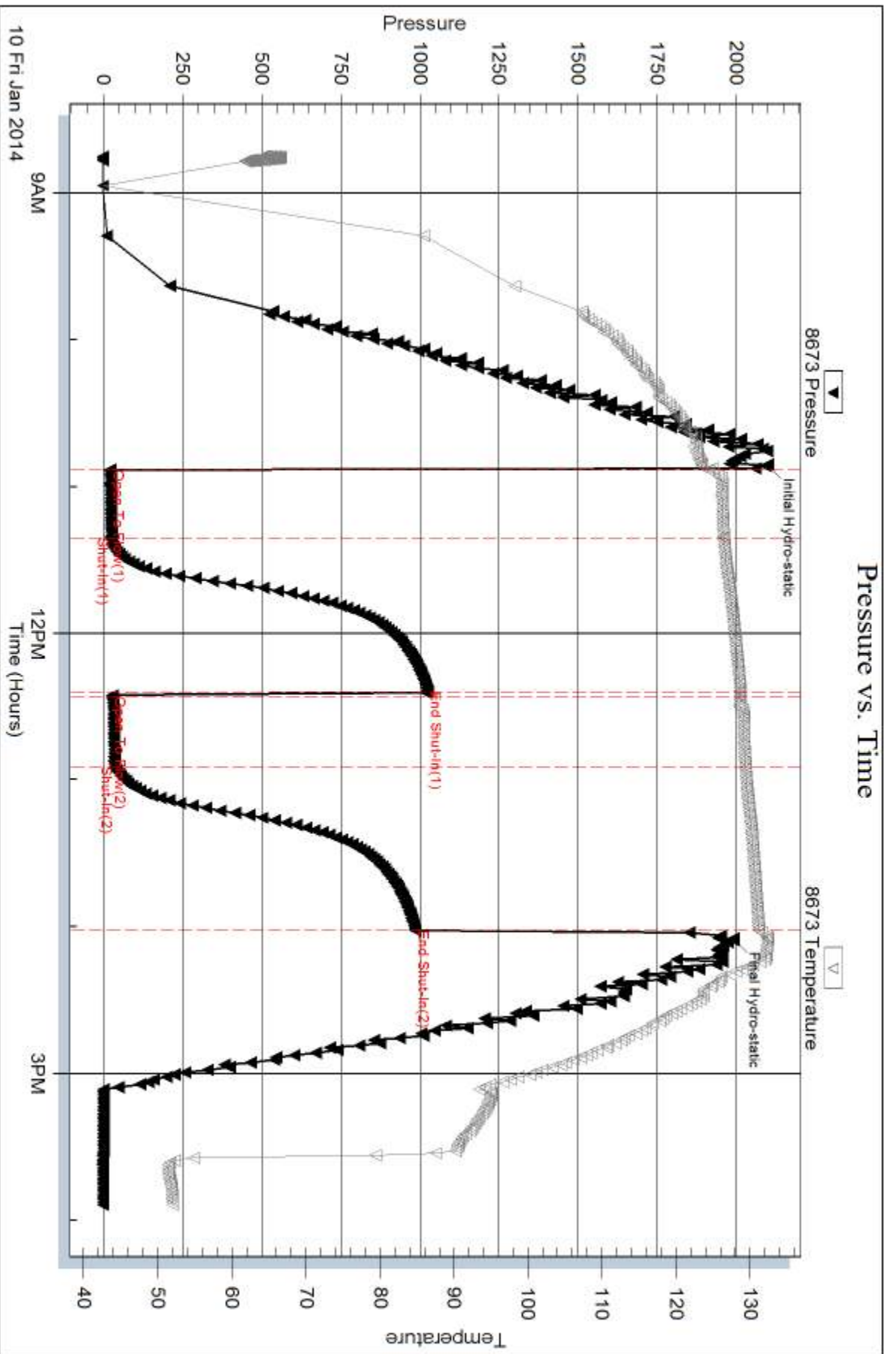
Num Gas Bombs: 0

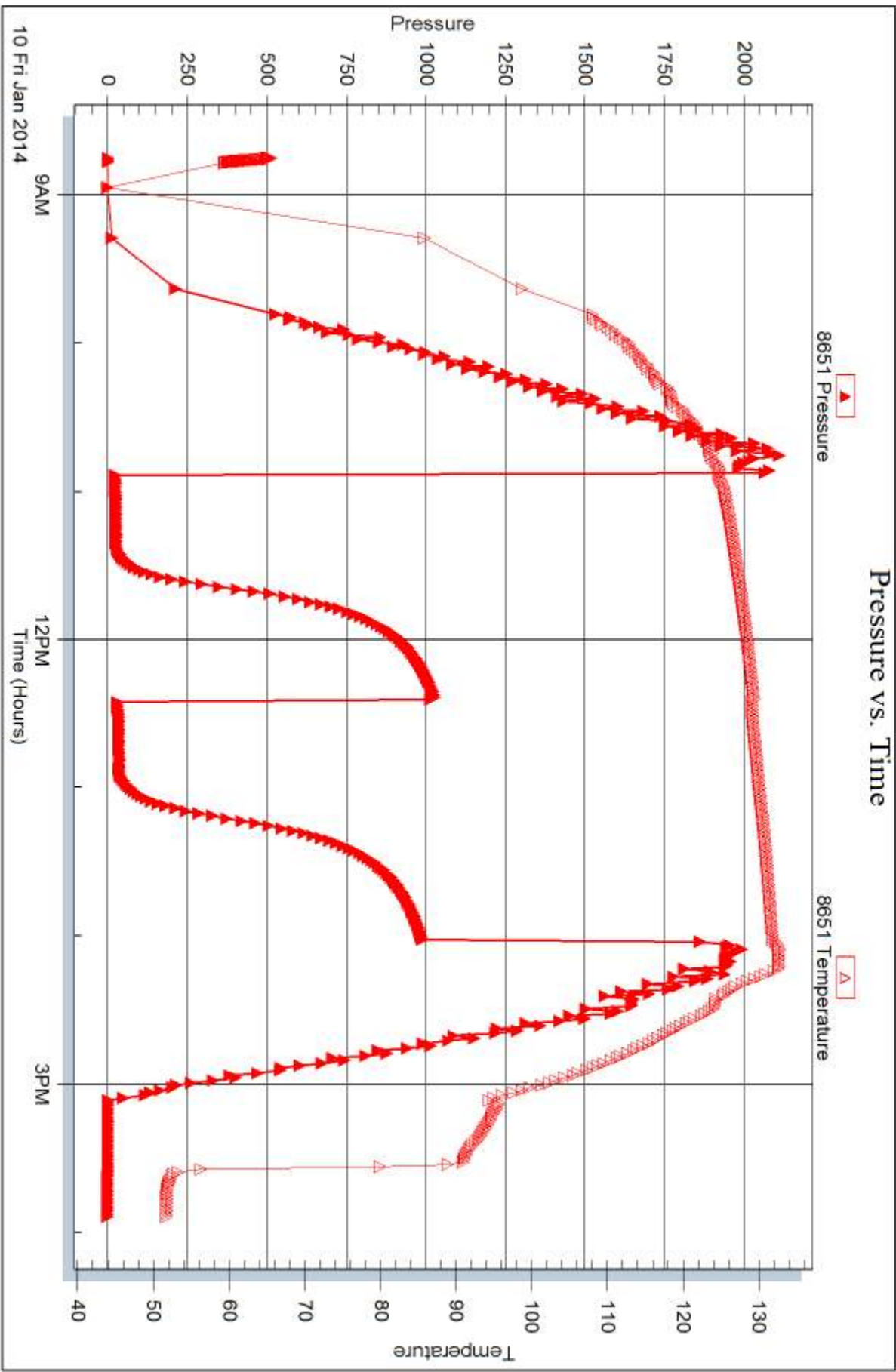
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Brad Rine

### **Jean #1-8**

#### **8-1s-37w Cheyenne KS**

Start Date: 2014.01.11 @ 05:00:00

End Date: 2014.01.11 @ 12:10:30

Job Ticket #: 55943                      DST #: 3

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

Printed: 2014.01.17 @ 10:41:55



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
 250 N. Water Suite 300  
 Wichita, KS 67202  
 ATTN: Brad Rine

**8-1s-37w Cheyenne KS**

**Jean #1-8**

Job Ticket: 55943

**DST#: 3**

Test Start: 2014.01.11 @ 05:00:00

## GENERAL INFORMATION:

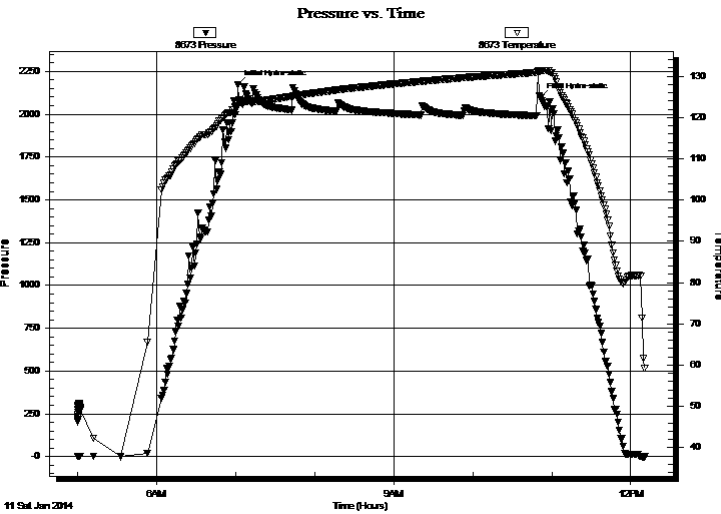
Formation: **LKC G-I**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 07:01:30  
 Time Test Ended: 12:10:30  
 Interval: **4242.00 ft (KB) To 4350.00 ft (KB) (TVD)**  
 Total Depth: 4350.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Kreutzer Jr.  
 Unit No: 61  
 Reference Elevations: 3219.00 ft (KB)  
 3206.00 ft (CF)  
 KB to GR/CF: 13.00 ft

## Serial #: 8673

Inside

Press@RunDepth: psig @ 4243.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.11 End Date: 2014.01.11 Last Calib.: 2014.01.11  
 Start Time: 05:00:01 End Time: 12:10:30 Time On Btm: 2014.01.11 @ 07:01:30  
 Time Off Btm: 2014.01.11 @ 10:51:30

TEST COMMENT: IF: No Blow (30)  
 IS: No blow back(60)  
 FF: No blow (30)  
 FS: No blow back(60)-----Hdy. Tool w ent out.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2171.40	122.79	Initial Hydro-static
230	2094.71	131.27	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)

\* 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 Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55943

**DST#: 3**

ATTN: Brad Rine

Test Start: 2014.01.11 @ 05:00:00

## Tool Information

Drill Pipe:	Length: 4239.00 ft	Diameter: 3.80 inches	Volume: 59.46 bbl	Tool Weight: 2500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 59.46 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	4242.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	108.00 ft			
Tool Length:	136.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4219.00	
Hydraulic tool	5.00			4224.00	
Jars	5.00			4229.00	
Safety Joint	3.00			4232.00	
Packer	5.00			4237.00	28.00 Bottom Of Top Packer
Packer	5.00			4242.00	
Packer - Shale	0.00			4242.00	
Stubb	1.00			4243.00	
Recorder	0.00	8673	Inside	4243.00	
Recorder	0.00	8651	Outside	4243.00	
Perforations	3.00			4246.00	
Change Over Sub	1.00			4247.00	
Drill Pipe	94.00			4341.00	
Change Over Sub	1.00			4342.00	
Perforations	5.00			4347.00	
Bullnose	3.00			4350.00	108.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>136.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55943

**DST#: 3**

ATTN: Brad Rine

Test Start: 2014.01.11 @ 05:00:00

### 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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl

Total Length:                      ft      Total Volume:                      bbl

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

Laboratory Name:                      Laboratory Location:

Recovery Comments:

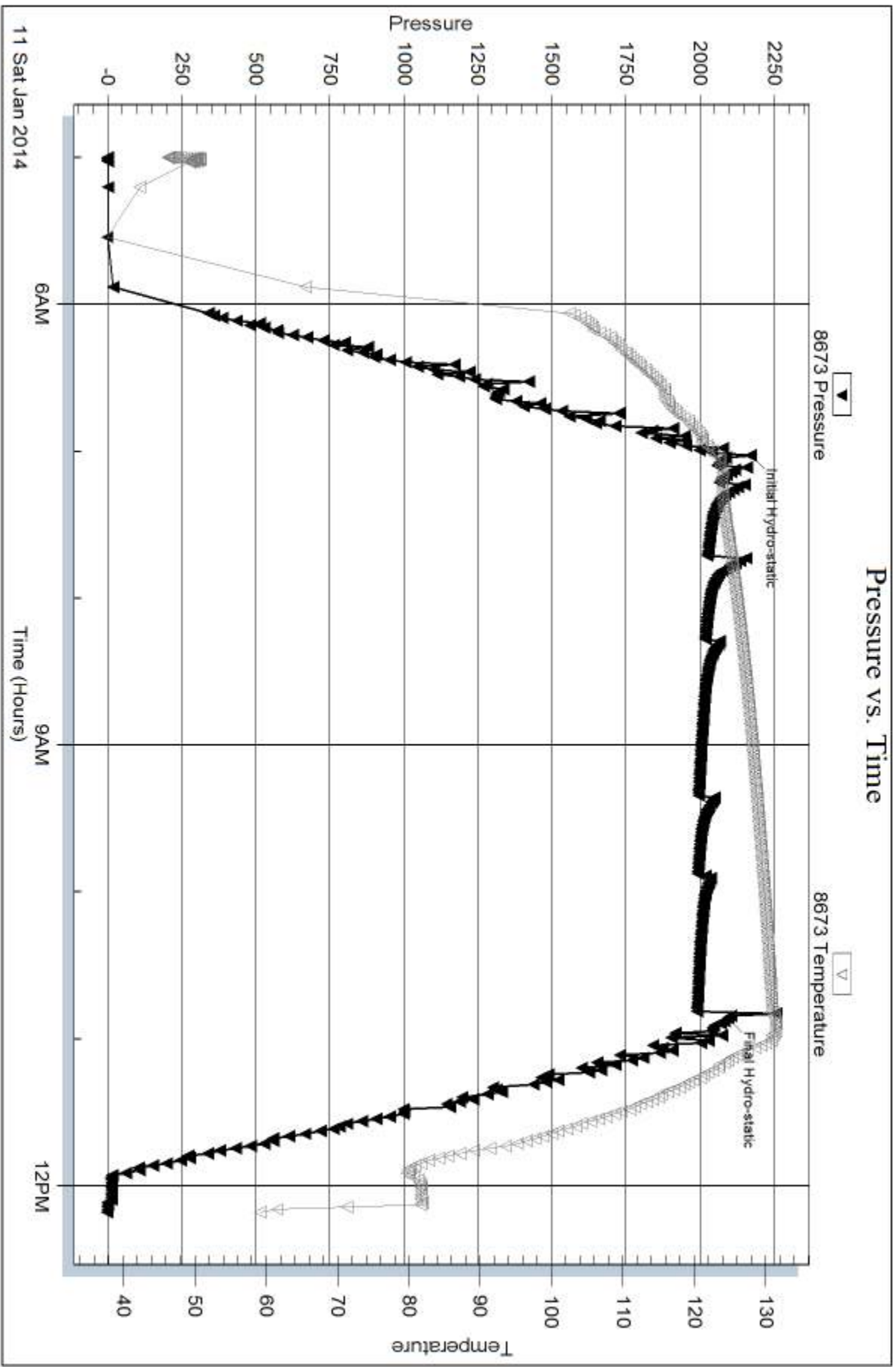
Serial #: 8673

Inside

Marfin Drilling Co., Inc.

Jean #1-8

DST Test Number: 3



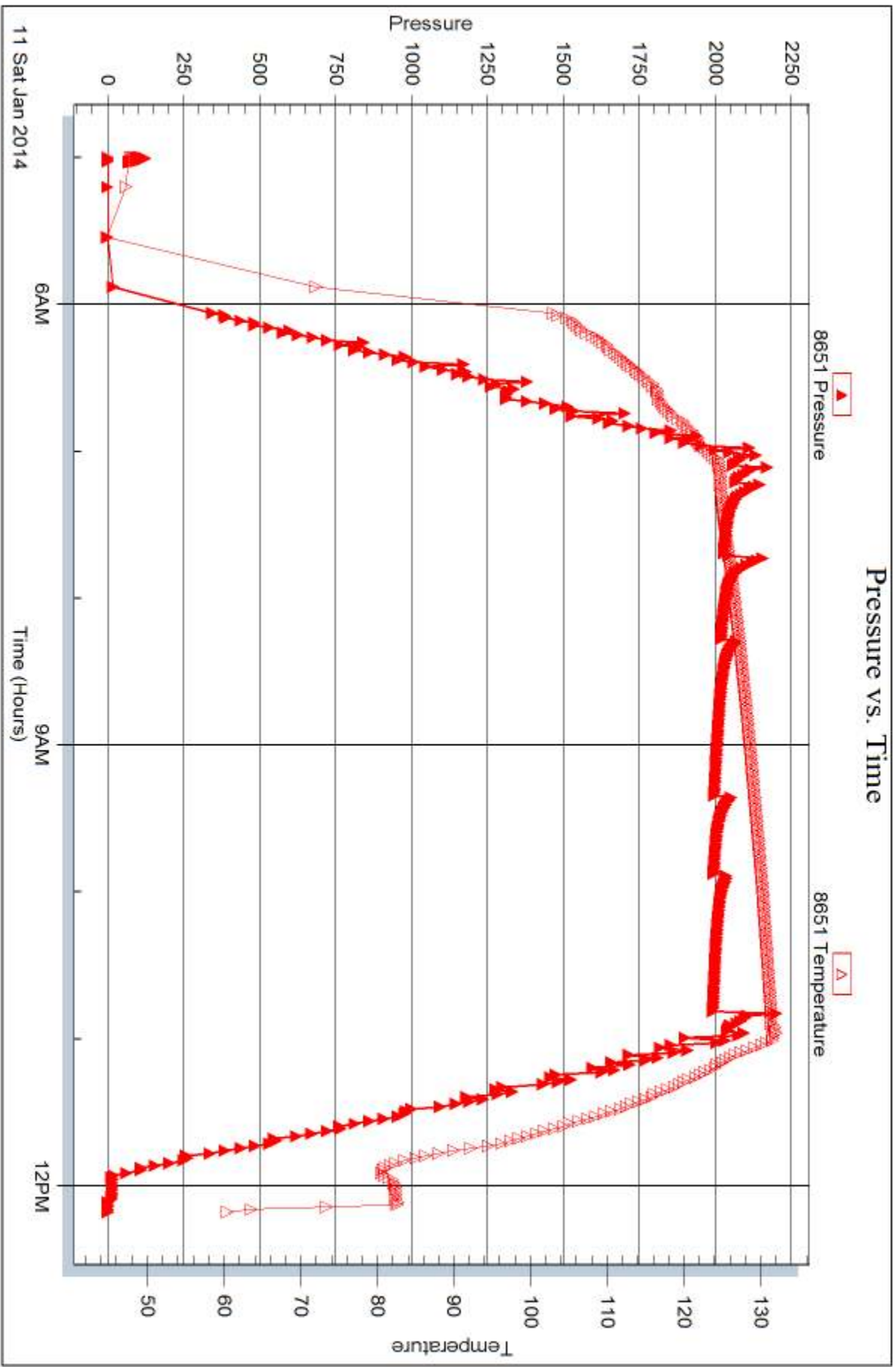
11 Sat Jan 2014

Time (Hours)

Trilobite Testing, Inc

Ref. No: 55943

Printed: 2014.01.17 @ 10:41:57





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Brad Rine

### **Jean #1-8**

### **8-1s-37w Cheyenne KS**

Start Date: 2014.01.11 @ 13:45:00

End Date: 2014.01.11 @ 20:34:30

Job Ticket #: 55944                      DST #: 4

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

Printed: 2014.01.17 @ 10:41:28

Murfin Drilling Co., Inc.  
8-1s-37w Cheyenne KS  
Jean #1-8  
DST # 4  
LKC G-1  
2014.01.11



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N. Water Suite 300  
Wichita, KS 67202  
ATTN: Brad Rine

**8-1s-37w Cheyenne KS**

**Jean #1-8**

Job Ticket: 55944

**DST#: 4**

Test Start: 2014.01.11 @ 13:45:00

## GENERAL INFORMATION:

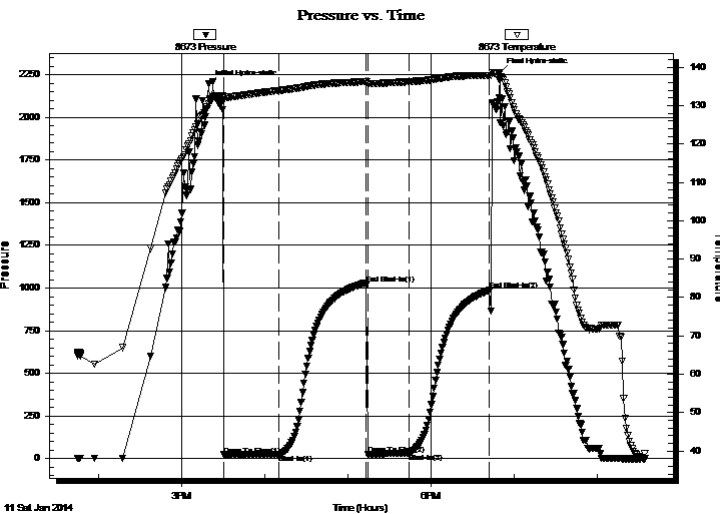
Formation: **LKC G-I**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:30:30  
 Time Test Ended: 20:34:30  
 Interval: **4241.00 ft (KB) To 4350.00 ft (KB) (TVD)**  
 Total Depth: 4350.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Kreuzer Jr.  
 Unit No: 61  
 Reference Elevations: 3219.00 ft (KB)  
 3206.00 ft (CF)  
 KB to GR/CF: 13.00 ft

**Serial #: 8673**

**Inside**

Press@RunDepth: 32.93 psig @ 4242.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.11 End Date: 2014.01.11 Last Calib.: 2014.01.11  
 Start Time: 13:45:01 End Time: 20:34:30 Time On Btm: 2014.01.11 @ 15:19:30  
 Time Off Btm: 2014.01.11 @ 18:50:00

TEST COMMENT: IF: Weak blow over 30 mins.  
 IS: No blow back  
 FF: No blow  
 FS: No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2195.21	130.33	Initial Hydro-static
11	21.57	131.24	Open To Flow (1)
51	25.34	133.91	Shut-In(1)
114	1021.73	136.23	End Shut-In(1)
115	25.13	135.77	Open To Flow (2)
145	32.93	136.20	Shut-In(2)
203	986.76	137.85	End Shut-In(2)
211	2264.53	136.77	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	mco-20%m80%o	0.42

\* 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 Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55944

**DST#: 4**

ATTN: Brad Rine

Test Start: 2014.01.11 @ 13:45:00

## Tool Information

Drill Pipe:	Length: 4238.00 ft	Diameter: 3.80 inches	Volume: 59.45 bbl	Tool Weight: 2500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 46000.00 lb
			<u>Total Volume: 59.45 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	4241.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	109.00 ft			
Tool Length:	137.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4218.00	
Hydraulic tool	5.00			4223.00	
Jars	5.00			4228.00	
Safety Joint	3.00			4231.00	
Packer	5.00			4236.00	28.00 Bottom Of Top Packer
Packer	5.00			4241.00	
Packer - Shale	0.00			4241.00	
Stubb	1.00			4242.00	
Recorder	0.00	8673	Inside	4242.00	
Recorder	0.00	8651	Outside	4242.00	
Perforations	4.00			4246.00	
Change Over Sub	1.00			4247.00	
Drill Pipe	94.00			4341.00	
Change Over Sub	1.00			4342.00	
Perforations	5.00			4347.00	
Bullnose	3.00			4350.00	109.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>137.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55944

**DST#: 4**

ATTN: Brad Rine

Test Start: 2014.01.11 @ 13:45:00

## 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: 60.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	mco-20% m80%o	0.421

Total Length: 30.00 ft      Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

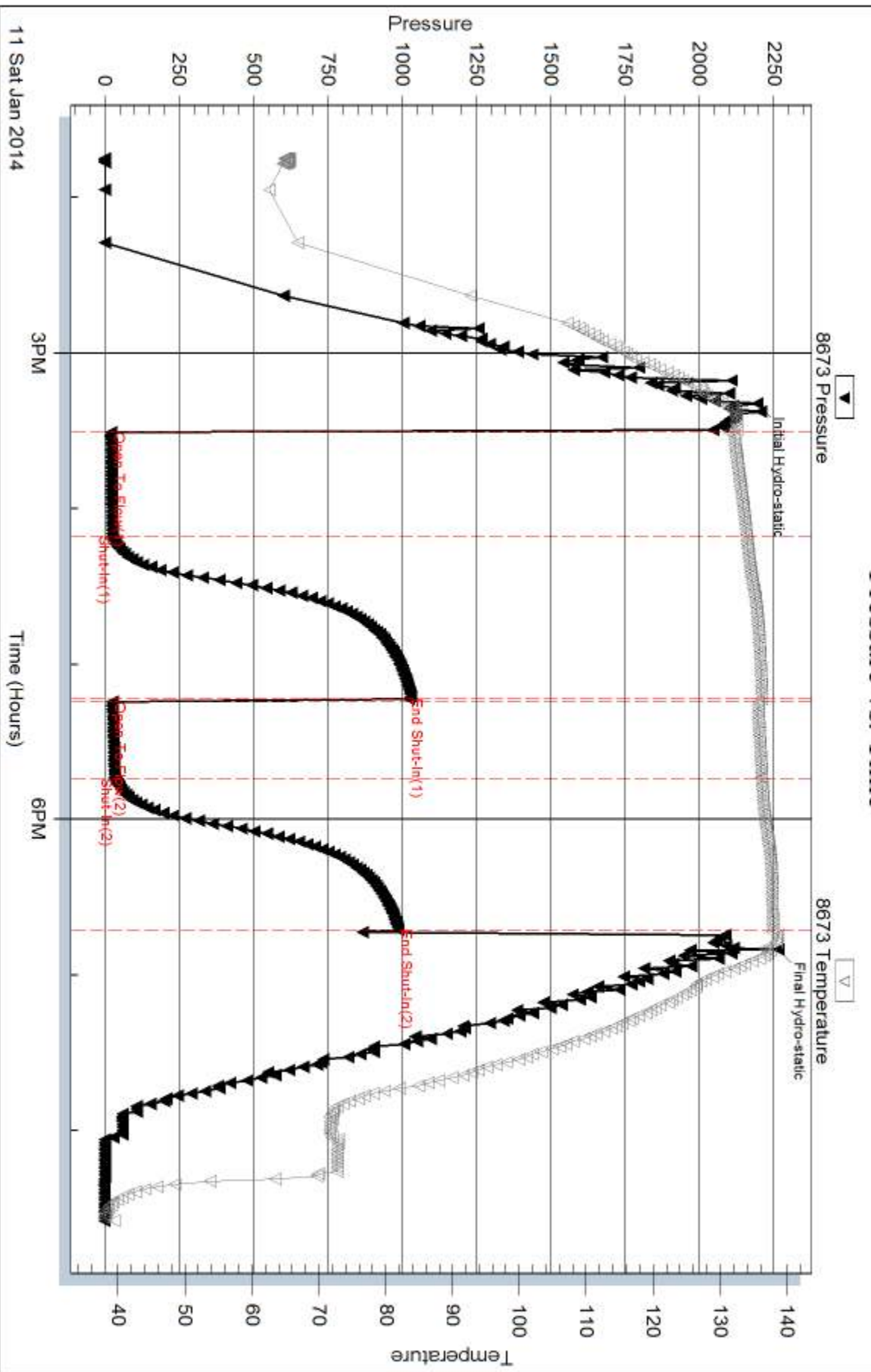
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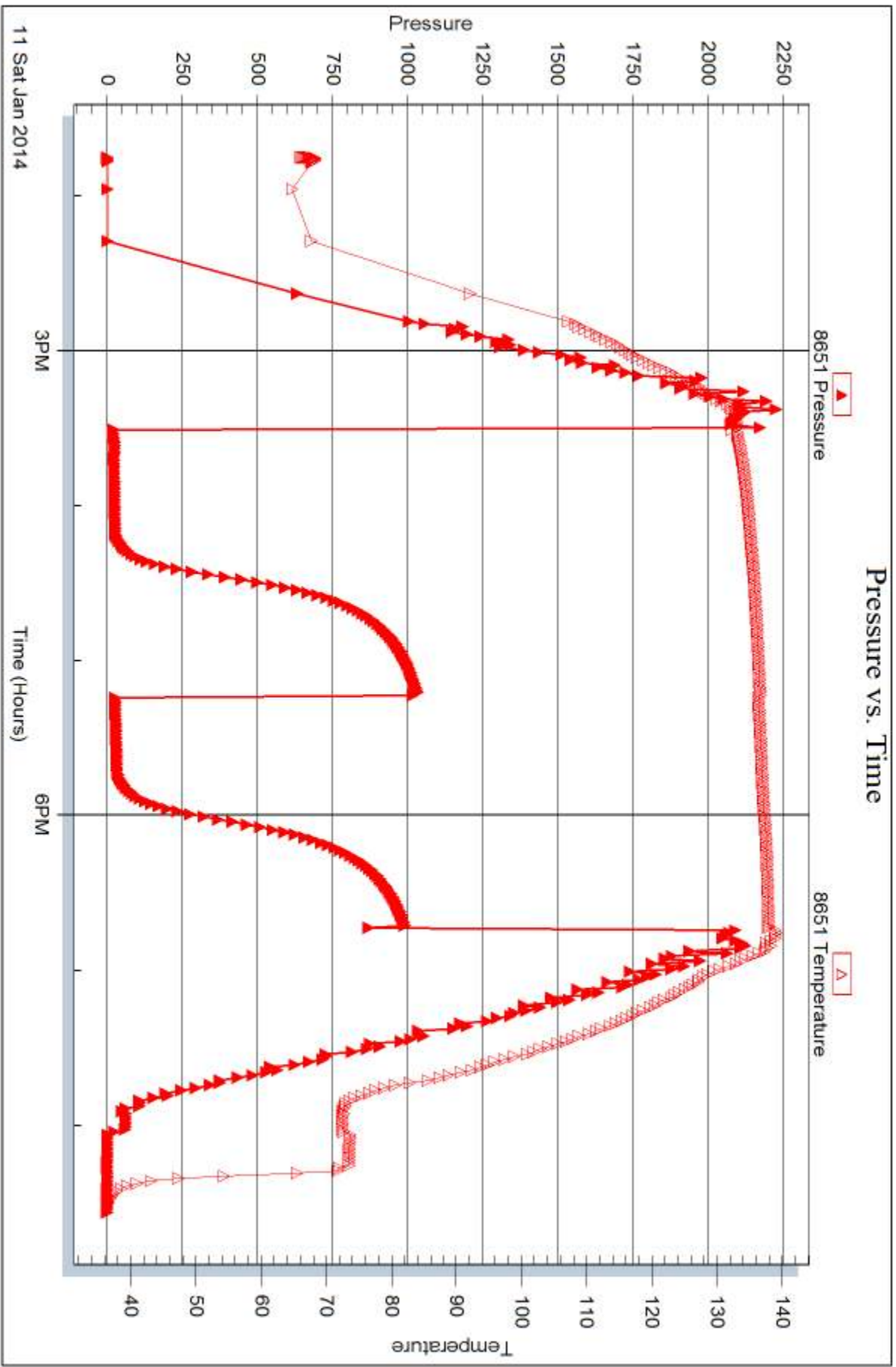
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Brad Rine

### **Jean #1-8**

### **8-1s-37w Cheyenne KS**

Start Date: 2014.01.12 @ 05:45:00

End Date: 2014.01.12 @ 12:38:00

Job Ticket #: 55945                      DST #: 5

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

Printed: 2014.01.17 @ 10:40:51



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N. Water Suite 300  
Wichita, KS 67202  
ATTN: Brad Rine

**8-1s-37w Cheyenne KS**

**Jean #1-8**

Job Ticket: 55945

**DST#: 5**

Test Start: 2014.01.12 @ 05:45:00

## GENERAL INFORMATION:

Formation: **LKC J**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 07:59:30  
 Time Test Ended: 12:38:00  
 Interval: **4337.00 ft (KB) To 4400.00 ft (KB) (TVD)**  
 Total Depth: 4400.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Kreuzer Jr.  
 Unit No: 61  
 Reference Elevations: 3219.00 ft (KB)  
 3206.00 ft (CF)  
 KB to GR/CF: 13.00 ft

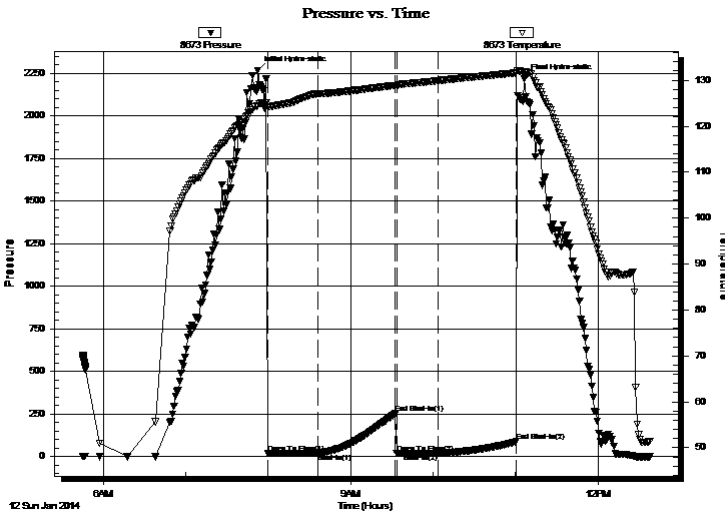
## Serial #: 8673

Inside

Press@RunDepth: 18.47 psig @ 4338.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.12 End Date: 2014.01.12 Last Calib.: 2014.01.12  
 Start Time: 05:45:01 End Time: 12:38:00 Time On Btm: 2014.01.12 @ 07:52:30  
 Time Off Btm: 2014.01.12 @ 11:06:30

TEST COMMENT: IF: Weak blow, Dead in 20 mins.  
 IS: No blow back  
 FF: No blow  
 FS: No blow back,

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2267.89	124.41	Initial Hydro-static
7	18.19	124.33	Open To Flow (1)
44	20.90	127.06	Shut-In(1)
100	252.45	128.89	End Shut-In(1)
101	19.03	128.85	Open To Flow (2)
131	18.47	129.92	Shut-In(2)
188	88.06	131.61	End Shut-In(2)
194	2221.20	131.90	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud	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 Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55945

**DST#: 5**

ATTN: Brad Rine

Test Start: 2014.01.12 @ 05:45:00

## Tool Information

Drill Pipe:	Length: 4334.00 ft	Diameter: 3.80 inches	Volume: 60.79 bbl	Tool Weight: 2500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 60.79 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	4337.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	63.00 ft			
Tool Length:	91.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4314.00	
Hydraulic tool	5.00			4319.00	
Jars	5.00			4324.00	
Safety Joint	3.00			4327.00	
Packer	5.00			4332.00	28.00 Bottom Of Top Packer
Packer	5.00			4337.00	
Packer - Shale	0.00			4337.00	
Stubb	1.00			4338.00	
Recorder	0.00	8673	Inside	4338.00	
Recorder	0.00	8651	Outside	4338.00	
Perforations	25.00			4363.00	
Change Over Sub	1.00			4364.00	
Drill Pipe	32.00			4396.00	
Change Over Sub	1.00			4397.00	
Bullnose	3.00			4400.00	63.00 Bottom Packers & Anchor

**Total Tool Length: 91.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55945

**DST#: 5**

ATTN: Brad Rine

Test Start: 2014.01.12 @ 05:45:00

## 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: 59.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud	0.070

Total Length: 5.00 ft      Total Volume: 0.070 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

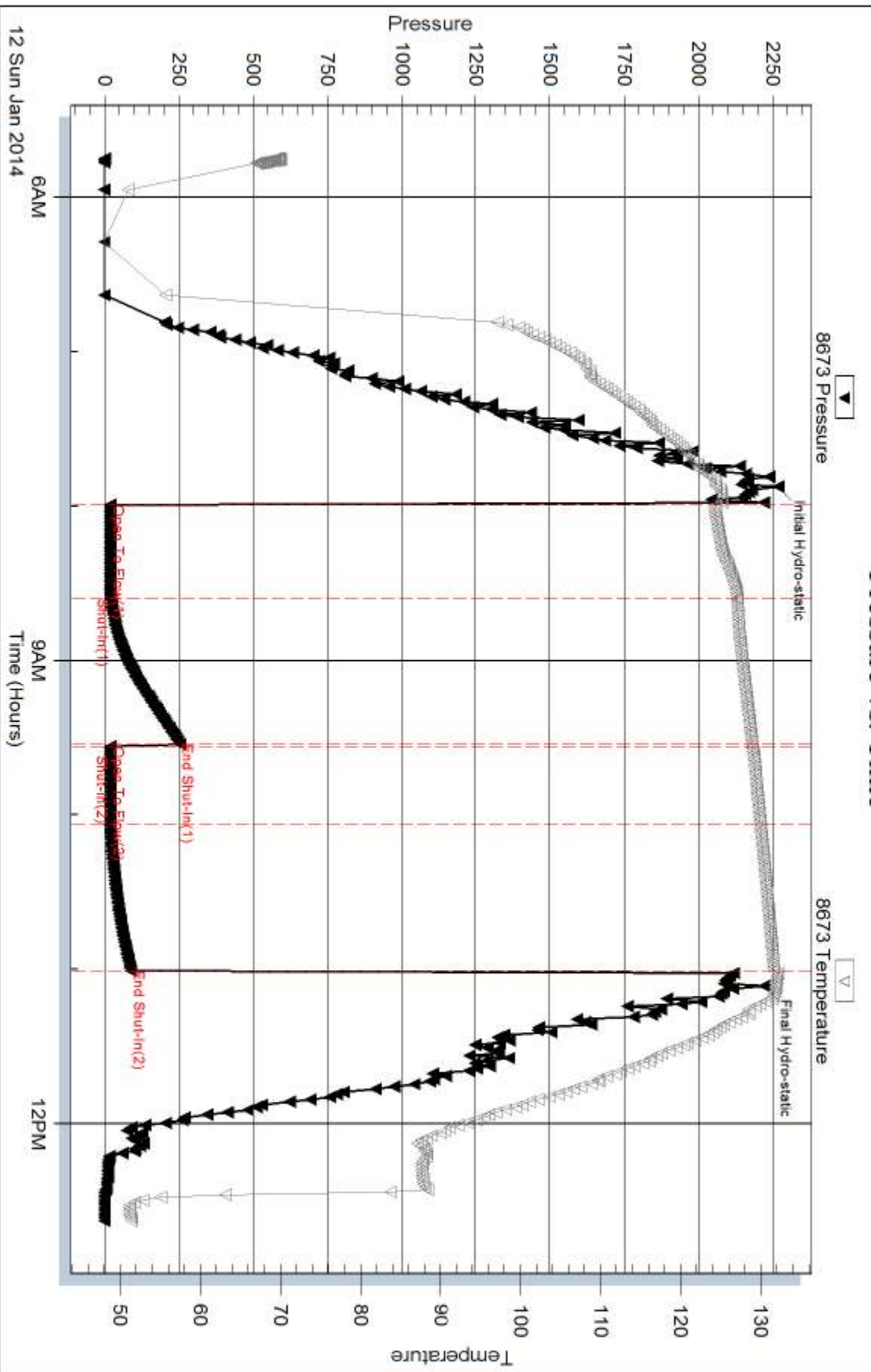
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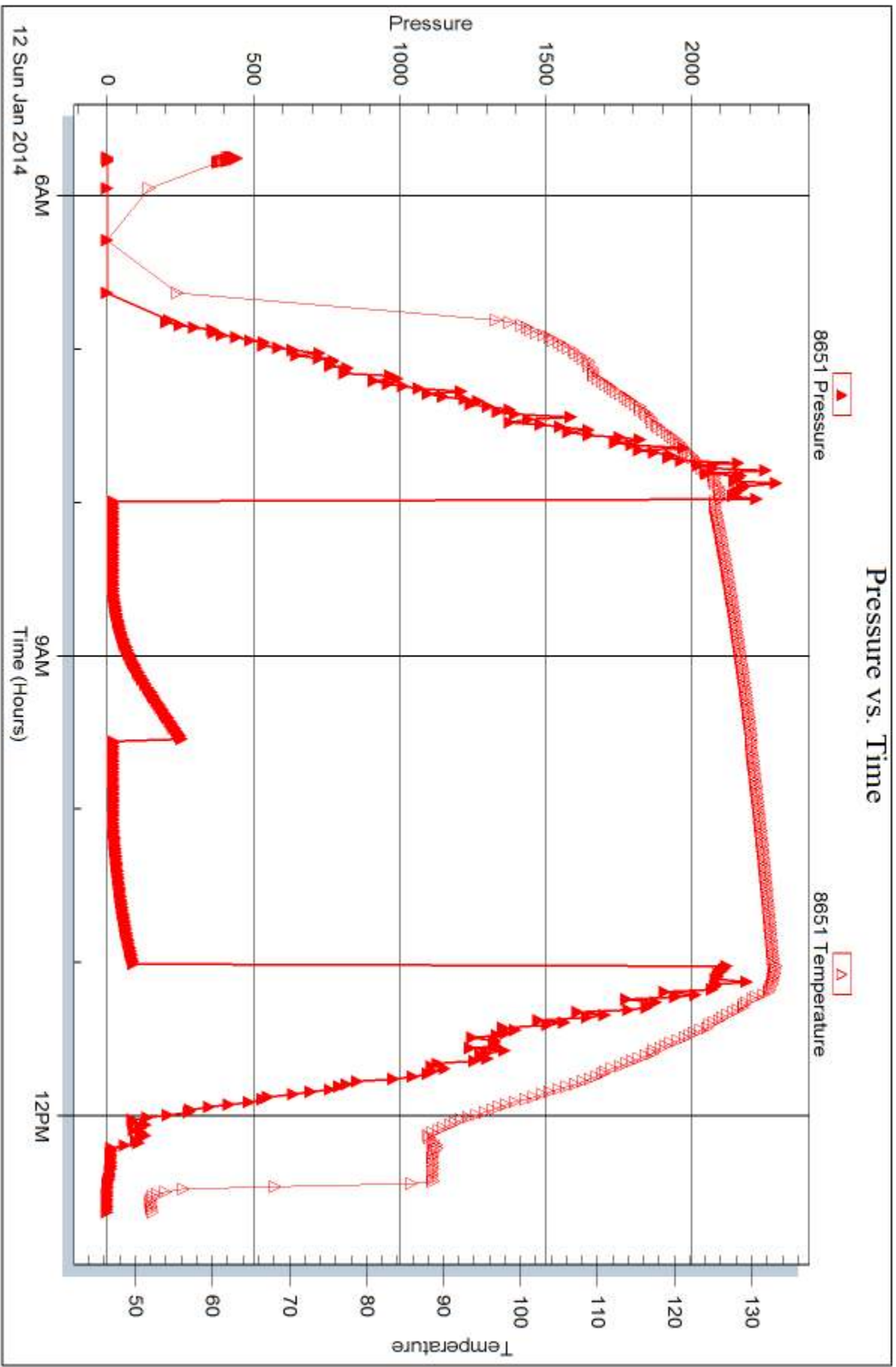
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Brad Rine

### **Jean #1-8**

#### **8-1s-37w Cheyenne KS**

Start Date: 2014.01.13 @ 08:10:00

End Date: 2014.01.13 @ 16:50:00

Job Ticket #: 55946                      DST #: 6

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

Printed: 2014.01.17 @ 10:24:25



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N. Water Suite 300  
Wichita, KS 67202  
ATTN: Brad Rine

**8-1s-37w Cheyenne KS**

**Jean #1-8**

Job Ticket: 55946

**DST#: 6**

Test Start: 2014.01.13 @ 08:10:00

## GENERAL INFORMATION:

Formation: **Pawnee**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 10:30:30  
 Time Test Ended: 16:50:00  
 Interval: **4548.00 ft (KB) To 4600.00 ft (KB) (TVD)**  
 Total Depth: 4600.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 61  
 Reference Elevations: 3219.00 ft (KB)  
 3206.00 ft (CF)  
 KB to GR/CF: 13.00 ft

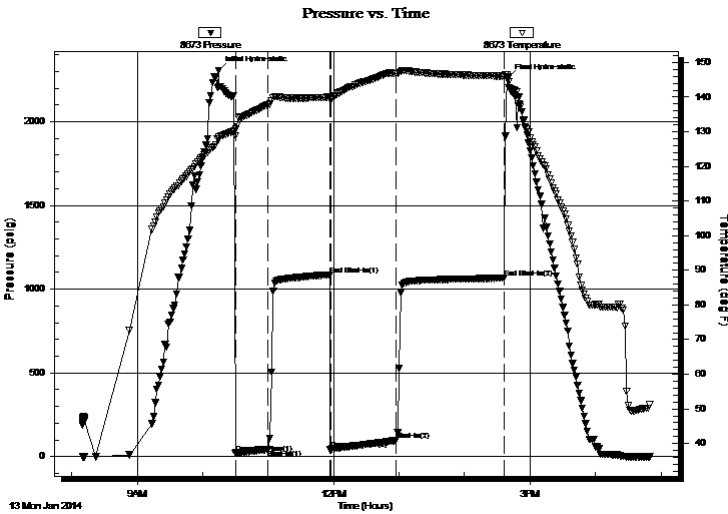
## Serial #: 8673

Inside

Press@RunDepth: 96.64 psig @ 4549.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.13 End Date: 2014.01.13 Last Calib.: 2014.01.13  
 Start Time: 08:10:01 End Time: 16:50:00 Time On Btm: 2014.01.13 @ 10:14:30  
 Time Off Btm: 2014.01.13 @ 14:39:30

TEST COMMENT: IF: Fair blow , Built to B.O.B in 20 mins.  
 IS: No blow back  
 FF: Fair blow , Built to B.O.B in 15 mins.  
 FS: Blow back after 5 mins. Weak surface . Died in 20 mins.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2305.72	127.86	Initial Hydro-static
16	22.12	130.78	Open To Flow (1)
46	42.12	137.80	Shut-In(1)
102	1085.99	140.00	End Shut-In(1)
103	45.31	139.47	Open To Flow (2)
163	96.64	146.78	Shut-In(2)
262	1065.65	146.03	End Shut-In(2)
265	2259.87	145.75	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	gocm-10%g40%o50%m	0.42
252.00	go-20%g80%o	3.53
0.00	188 ft. gas in pipe	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 Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55946

**DST#: 6**

ATTN: Brad Rine

Test Start: 2014.01.13 @ 08:10:00

## Tool Information

Drill Pipe:	Length: 4525.00 ft	Diameter: 3.80 inches	Volume: 63.47 bbl	Tool Weight: 2500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 63.47 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	4548.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	80.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4525.00	
Hydraulic tool	5.00			4530.00	
Jars	5.00			4535.00	
Safety Joint	3.00			4538.00	
Packer	5.00			4543.00	28.00 Bottom Of Top Packer
Packer	5.00			4548.00	
Packer - Shale	0.00			4548.00	
Stubb	1.00			4549.00	
Recorder	0.00	8673	Inside	4549.00	
Recorder	0.00	8651	Outside	4549.00	
Perforations	15.00			4564.00	
Change Over Sub	1.00			4565.00	
Drill Pipe	31.00			4596.00	
Change Over Sub	1.00			4597.00	
Bullnose	3.00			4600.00	52.00 Bottom Packers & Anchor

**Total Tool Length: 80.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55946

**DST#: 6**

ATTN: Brad Rine

Test Start: 2014.01.13 @ 08:10:00

### 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: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.00 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	gocm-10%g40%o50%m	0.421
252.00	go-20%g80%o	3.535
0.00	188 ft. gas in pipe	0.000

Total Length: 282.00 ft      Total Volume: 3.956 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

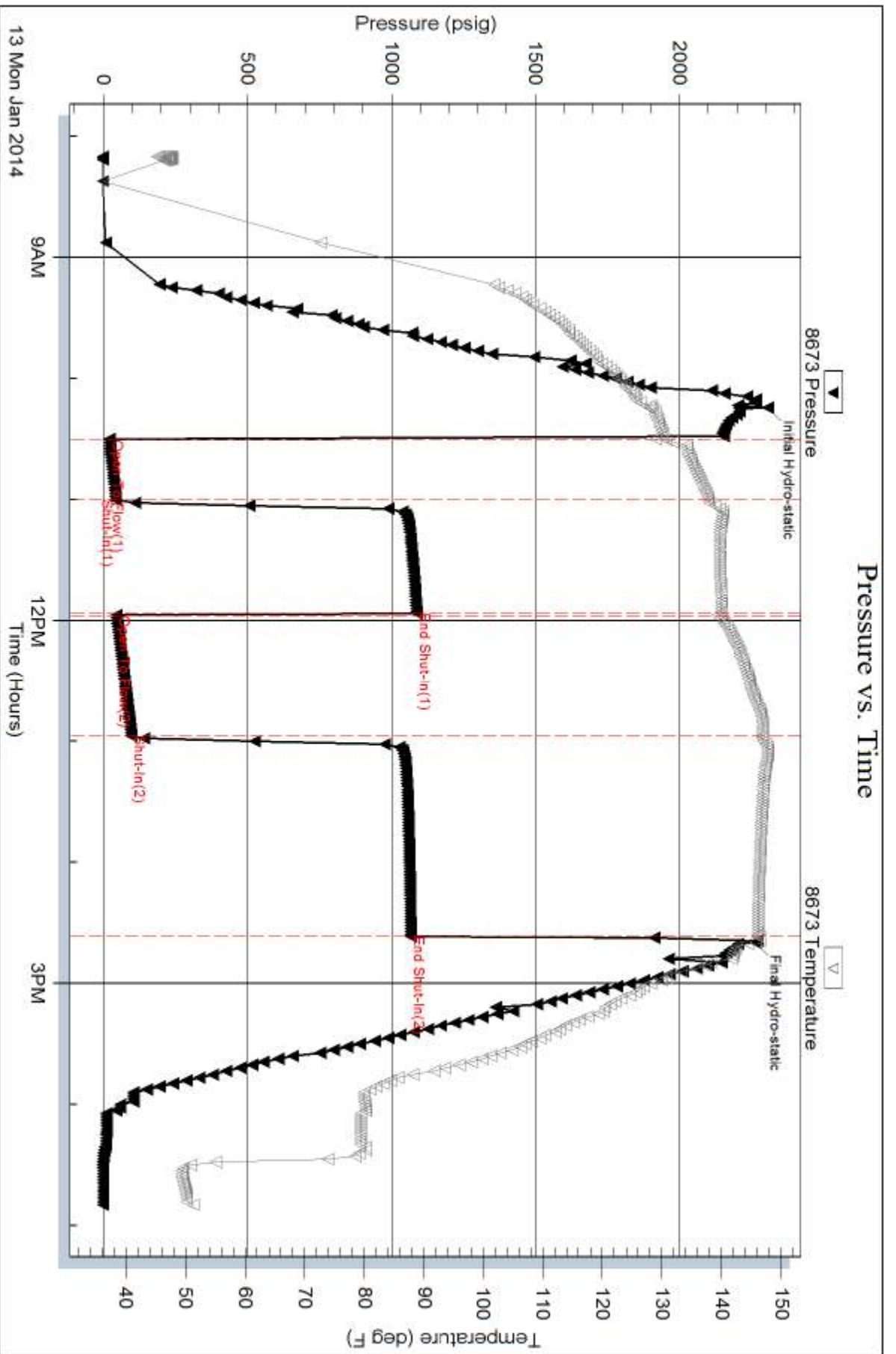
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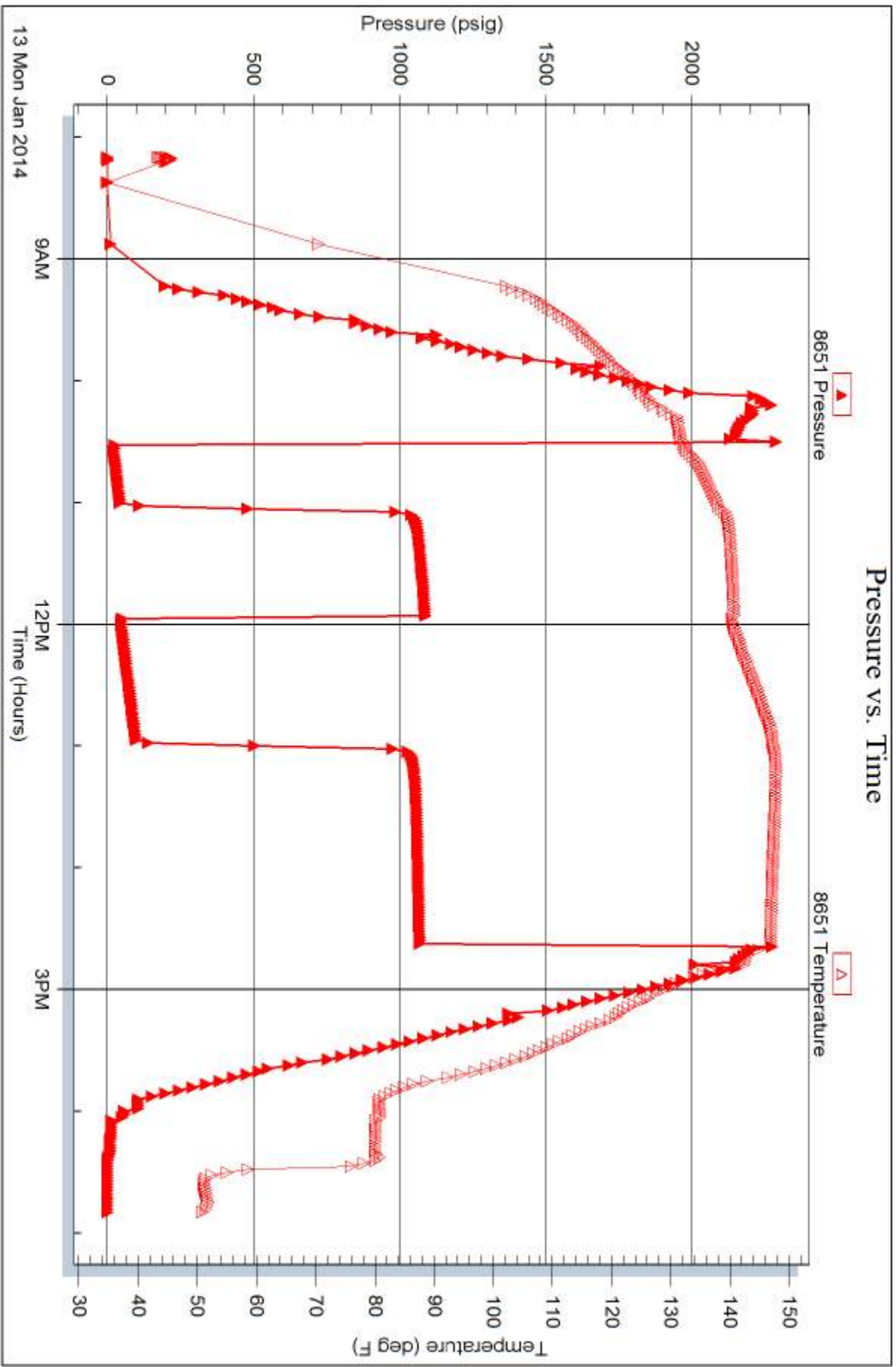
Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity-39@70\*=38









# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55888**

4/10

Well Name & No. Jean #1-8 Test No. 1 Date 1-8-14  
 Company Murfin Drilling Co. Inc Elevation 3219 KB 3206 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Brad Rine Rig Murfin #25  
 Location: Sec. 08 Twp. 1s Rge. 37w Co. Cheyenne State KS

Interval Tested 3706 - 3755 Zone Tested Foraker  
 Anchor Length 49 Drill Pipe Run 3704 Mud Wt. 8.9  
 Top Packer Depth 3701 Drill Collars Run - Vis 60  
 Bottom Packer Depth 3706 (shale) Wt. Pipe Run - WL 4.8  
 Total Depth 3755 Chlorides 900 ppm System LCM 7

Blow Description IF: 3/4" Blow at open, died back, dead at 20 min.  
ISI: No blowback  
FF: No blow  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>50cm</u>	<u>3</u>	<u>4</u>	<u>-</u>	<u>93</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 20 BHT 124 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1777  Test \* 1150 T-On Location 10:30  
 (B) First Initial Flow 21  Jars \* 250 T-Started 11:00  
 (C) First Final Flow 22  Safety Joint \* 75 T-Open 13:21  
 (D) Initial Shut-In 1053  Circ Sub \* NA T-Pulled 16:21  
 (E) Second Initial Flow 22  Hourly Standby \_\_\_\_\_ T-Out 18:15  
 (F) Second Final Flow 22  Mileage 148 RT 229.40 Comments Tool chased 2' to  
 (G) Final Shut-In 966  Sampler \_\_\_\_\_ bottom - lost a couple ft. of  
 (H) Final Hydrostatic 1749  Straddle \_\_\_\_\_ mud - 3/4" blow at open

Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Packer \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 60  Extra Recorder \_\_\_\_\_ Total 1954.40  
 Final Flow 30  Day Standby \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60  Accessibility \_\_\_\_\_  
 Sub Total 1954.40

Approved By Brad Rine Our Representative James Winder

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. 55942

Well Name & No. Jean #1-8 Test No. 2 Date 1-10-14  
 Company Murfin Drilling Co. Inc Elevation 3219 KB 3204 GL  
 Address 250 N. Water St 300 Wichita KS. 67202  
 Co. Rep / Geo. Brad Rine Rig Murfin 25  
 Location: Sec. 08 Twp. 15 Rge. 37W Co. Cherokee State Ks

Interval Tested 4124 4250 Zone Tested LKC A, B, D  
 Anchor Length 126 Drill Pipe Run 4113 Mud Wt. 9.3  
 Top Packer Depth 4119 Drill Collars Run -0- Vis 60  
 Bottom Packer Depth 4124 Wt. Pipe Run -0- WL 6.2  
 Total Depth 4250 Chlorides 500 ppm System LCM 6H

Blow Description IF: Weak surface over 20 mins

SSJ: No blow back

FF: No blow

FJS: No blow back

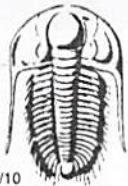
Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>HMC0</u>		<u>70</u>		<u>30</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 40 BHT 129. Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2100  Test 1250 T-On Location 6:30  
 (B) First Initial Flow 22  Jars 250 T-Started 8:45  
 (C) First Final Flow 25  Safety Joint 75 T-Open 10:53  
 (D) Initial Shut-In 1035  Circ Sub \_\_\_\_\_ T-Pulled 14:00  
 (E) Second Initial Flow 28  Hourly Standby \_\_\_\_\_ T-Out 15:54  
 (F) Second Final Flow 36  Mileage 70x2 = 140x1.55 229.40  
 (G) Final Shut-In 985  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1992  Straddle \_\_\_\_\_

Shale Packer TOP PACKER 250  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder 1d 12.25h Sub Total 408.33  
 Day Standby give to James Total 2462.73  
 Accessibility standby 10 JAMES MP/DST Disc't \_\_\_\_\_  
 Sub Total 2054.40

Approved By \_\_\_\_\_ Our Representative Chris Meyer  
 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. **55943**

4/10

Well Name & No. <u>Jean # 1-8</u>	Test No. <u>3</u>	Date <u>1-11-2014</u>
Company <u>Murfin Drilling Co. Inc.</u>	Elevation <u>3214</u>	KB <u>3204</u> GL
Address <u>250 N. Water Ste 300 Wichita Ks. 67202</u>		
Co. Rep / Geo. <u>Brad Rize</u>	Rig <u>Murfin 25</u>	
Location: Sec. <u>08</u> Twp. <u>1S</u> Rge. <u>37W</u>	Co. <u>Cheyenne</u>	State <u>KS</u>

Interval Tested <u>4242</u> <u>4350</u>	Zone Tested <u>LKC- G,H,I</u>
Anchor Length <u>108</u>	Drill Pipe Run <u>4239</u> Mud Wt. <u>9.3</u>
Top Packer Depth <u>4287</u>	Drill Collars Run <u>-0-</u> Vis <u>60</u>
Bottom Packer Depth <u>4242</u>	Wt. Pipe Run <u>-0-</u> WL <u>6.2</u>
Total Depth <u>4350</u>	Chlorides <u>500</u> ppm System LCM <u>6#</u>

Blow Description IF: No blow, Fluted tool No Blow

IST: No blow back

FF: No blow

FSI: No blow back

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	Feet of	%gas	%oil	%water	%mud

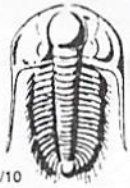
Rec Total \_\_\_\_\_ BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic _____	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>4:00</u>
(B) First Initial Flow _____	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>5:00</u>
(C) First Final Flow _____	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>8:00</u>
(D) Initial Shut-In _____	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>11:00</u>
(E) Second Initial Flow _____	<input type="checkbox"/> Hourly Standby _____	T-Out <u>2:00</u>
(F) Second Final Flow _____	<input checked="" type="checkbox"/> Mileage <u>70 x 2 = 140 x 1.55 = 229.40</u>	Comments _____
(G) Final Shut-In _____	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic _____	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1854.40</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1854.40</u>	

Approved By \_\_\_\_\_

Our Representative Chuck Hays

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. 55944

Well Name & No. Team #1-8 Test No. 41 Date 1-11-14  
 Company Murfin Drilling Co. Elevation 3214 KB 3204 GL  
 Address 250 N. Water St 300 Wichita KS 67202  
 Co. Rep / Geo. Brad Rize Rig Murfin #25  
 Location: Sec. 08 Twp. 1S Rge. 37W Co. Cherokee State KS

Interval Tested 4241 4350 Zone Tested Llc-6, H, F  
 Anchor Length 109 Drill Pipe Run 4238 Mud Wt. 9.3  
 Top Packer Depth 4236 Drill Collars Run 0 Vis 60  
 Bottom Packer Depth 4241 Wt. Pipe Run 0 WL 6.2  
 Total Depth 4350 Chlorides 500 ppm System LCM 6#

Blow Description IF: Max blow over 30 mins.  
ISI: No blow back  
FF: No blow  
FSE: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>mco</u>		<u>80</u>		<u>20</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 30 BHT 135 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2145</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>1145</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1145</u>
(C) First Final Flow <u>25</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>15:30</u>
(D) Initial Shut-In <u>1022</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled _____
(E) Second Initial Flow <u>25</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>20:34</u>
(F) Second Final Flow <u>33</u>	<input checked="" type="checkbox"/> Mileage <u>700 = 140 x 155</u>	Comments _____
(G) Final Shut-In <u>987</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>2265</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<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>1825</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1825</u>	

Approved By \_\_\_\_\_ Our Representative Chris [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 55945

Well Name & No. Jeon # 1-8 Test No. 5 Date 1-12-14  
 Company Murfin Drilling Co Elevation 3219 KB 3204 GL  
 Address 250 N. water ste. 300 Wichita Ks 67202  
 Co. Rep / Geo. Brad Rice Rig Murfin #25  
 Location: Sec. 08 Twp. 15 Rge. 37w Co. Cherokee State Ks.

Interval Tested 4337 4400 Zone Tested LKC-J  
 Anchor Length 63 Drill Pipe Run 4334 Mud Wt. 9.3  
 Top Packer Depth 4332 Drill Collars Run -0- Vis 59  
 Bottom Packer Depth 4337 Wt. Pipe Run -0- WL 6.0  
 Total Depth 4400 Chlorides 900 ppm System LCM 8#

Blow Description IF: Weak blow, died in 20 mins.  
FF: No blow back  
FF: No blow  
FF: No blow back

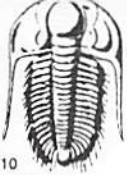
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>mud</u>				

Rec Total 5 BHT 132 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic \_\_\_\_\_  Test 1250 T-On Location 4:25  
 (B) First Initial Flow \_\_\_\_\_  Jars 250 T-Started 5:45  
 (C) First Final Flow \_\_\_\_\_  Safety Joint 75 T-Open 8:00  
 (D) Initial Shut-In \_\_\_\_\_  Circ Sub \_\_\_\_\_ T-Pulled 11:00  
 (E) Second Initial Flow \_\_\_\_\_  Hourly Standby \_\_\_\_\_ T-Out 12:38  
 (F) Second Final Flow \_\_\_\_\_  Mileage 2022140 x 1.55 = 229.40 Comments \_\_\_\_\_  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic \_\_\_\_\_  Straddle \_\_\_\_\_  
 Shale Packer 250  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 2054.40  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 2054.40

Approved By \_\_\_\_\_ Our Representative Chad Myers

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 55946

Well Name & No. Jean # 1-8 Test No. 6 Date 1-13-14  
 Company Murfin Drilling Co Elevation 3214 KB 3204 GL  
 Address 250 N. Water St. 300 Wichita Ks 67202  
 Co. Rep / Geo. Brad Ane Rig Murfin #25  
 Location: Sec. 08 Twp. 15 Rge. 37w Co. Cheyenne State Ks

Interval Tested 4548 4600 Zone Tested Pawnee  
 Anchor Length 52 Drill Pipe Run 4525 Mud Wt. 9.3  
 Top Packer Depth 4543 Drill Collars Run 0 Vis 62  
 Bottom Packer Depth 4548 Wt. Pipe Run 0 WL 6.0  
 Total Depth 4600 Chlorides 900 ppm System LCM 8#

Blow Description IF: Fair blow, Built to B.O.B in 20 mins

ISF: No blow back

FF: Fair Blow, Built to B.O.B in 15 mins

FSF: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>D</u>	<u>180ft + gas in pipe</u>				
<u>252</u>	<u>90</u>	<u>20</u>	<u>80</u>		
<u>30</u>	<u>90cm</u>	<u>10</u>	<u>40</u>		<u>50</u>

Rec Total 282 BHT 146 Gravity 38 API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic <u>2306</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>7:30</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>8:10</u>
(C) First Final Flow <u>42</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>10:30</u>
(D) Initial Shut-In <u>1086</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>14:25</u>
(E) Second Initial Flow <u>45</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>16:50</u>
(F) Second Final Flow <u>97</u>	<input checked="" type="checkbox"/> Mileage <u>70x2 = 140 x 1.55</u> 458.80	Comments <u>loaded tools 11/14 11:15</u>
(G) Final Shut-In <u>1666</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2260</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>2283.80</u>
Final Shut-In <u>40</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>2283.80</u>	

Approved By \_\_\_\_\_

Our Representative Chad Meyer

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