



## DRILL STEM TEST REPORT

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

250 N Water STE 300  
Wichita KS 67202+1216

ATTN: Steve Miller

### **Mears 'B' #1-11**

#### **11-2S-37W Cheyenne,KS**

Start Date: 2017.07.23 @ 17:46:00

End Date: 2017.07.24 @ 00:08:15

Job Ticket #: 62994                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.07.31 @ 11:50:58



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
250 N Water STE 300  
Wichita KS 67202+1216  
ATTN: Steve Miller

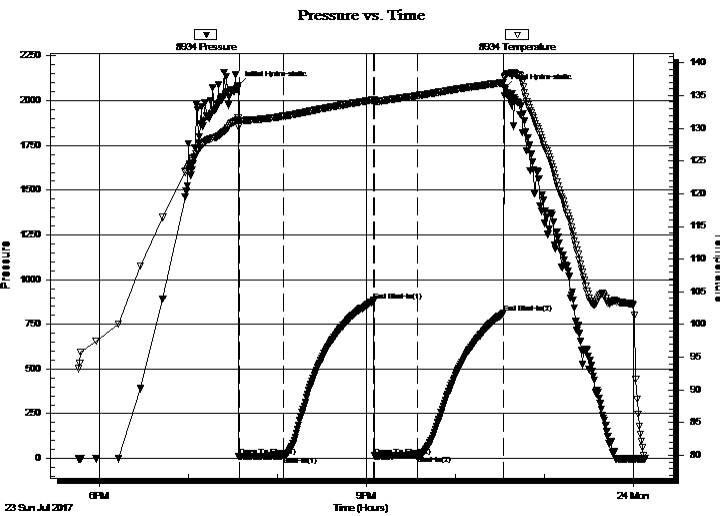
**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
Job Ticket: 62994 **DST#: 1**  
Test Start: 2017.07.23 @ 17:46:00

## GENERAL INFORMATION:

Formation: **Oread**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 19:34:45  
Time Test Ended: 00:08:15  
Interval: **4198.00 ft (KB) To 4270.00 ft (KB) (TVD)**  
Total Depth: 4270.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Spencer J. Staab  
Unit No: 84  
Reference Elevations: 3396.00 ft (KB)  
3391.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 8934 Inside**  
Press@RunDepth: 16.99 psig @ 4202.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2017.07.23 End Date: 2017.07.24 Last Calib.: 2017.07.24  
Start Time: 17:46:15 End Time: 00:08:15 Time On Btm: 2017.07.23 @ 19:33:45  
Time Off Btm: 2017.07.23 @ 22:33:30

**TEST COMMENT:** 30-IF-Weak Surface Blow ; Died 15 mins in  
60-ISI-No Return  
30-FF-No Blow  
60-FSI-No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2085.64	131.54	Initial Hydro-static
1	11.74	131.12	Open To Flow (1)
31	14.54	131.84	Shut-In(1)
92	882.49	134.33	End Shut-In(1)
92	14.34	133.91	Open To Flow (2)
121	16.99	134.98	Shut-In(2)
179	812.00	136.96	End Shut-In(2)
180	2070.20	137.86	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co. Inc.  
250 N Water STE 300  
Wichita KS 67202+1216  
ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
Job Ticket: 62994 **DST#: 1**  
Test Start: 2017.07.23 @ 17:46:00

**Tool Information**

Drill Pipe:	Length: 3985.00 ft	Diameter: 3.80 inches	Volume: 55.90 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 205.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4198.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	72.00 ft			
Tool Length:	92.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4179.00	
Shut In Tool	5.00			4184.00	
Hydraulic tool	5.00			4189.00	
Packer	5.00			4194.00	20.00 Bottom Of Top Packer
Packer	4.00			4198.00	
Stubb	1.00			4199.00	
Perforations	2.00			4201.00	
Change Over Sub	1.00			4202.00	
Recorder	0.00	9120	Inside	4202.00	
Recorder	0.00	8934	Inside	4202.00	
Drill Pipe	63.00			4265.00	
Change Over Sub	1.00			4266.00	
Bullnose	4.00			4270.00	72.00 Bottom Packers & Anchor

**Total Tool Length: 92.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc.  
250 N Water STE 300  
Wichita KS 67202+1216  
ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
Job Ticket: 62994      **DST#: 1**  
Test Start: 2017.07.23 @ 17:46:00

## 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: 65.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.99 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 600.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments: 5#LCM

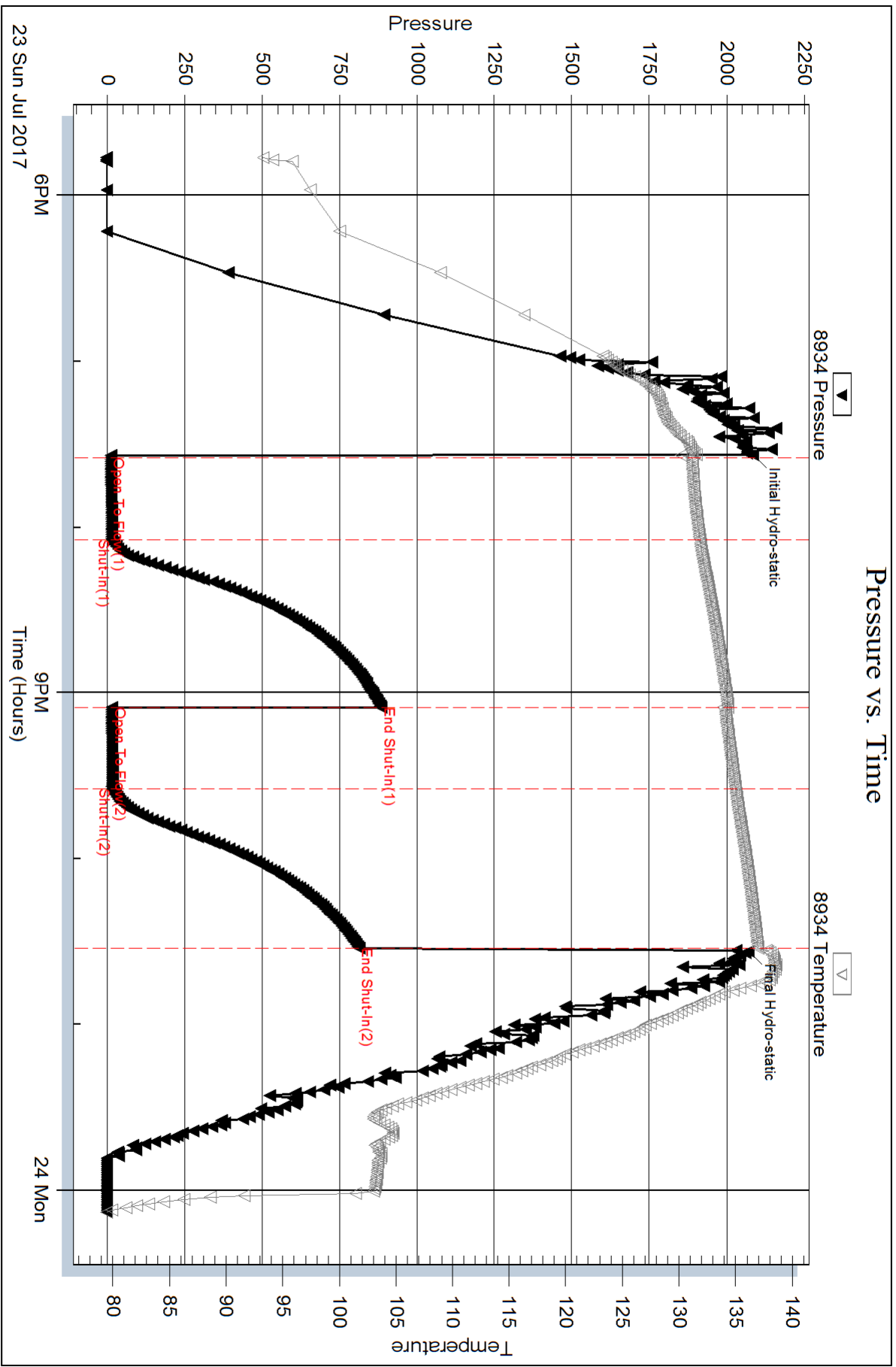
Serial #: 8934

Inside

Murfin Drilling Co. Inc.

Mears B: #1-11

DST Test Number: 1



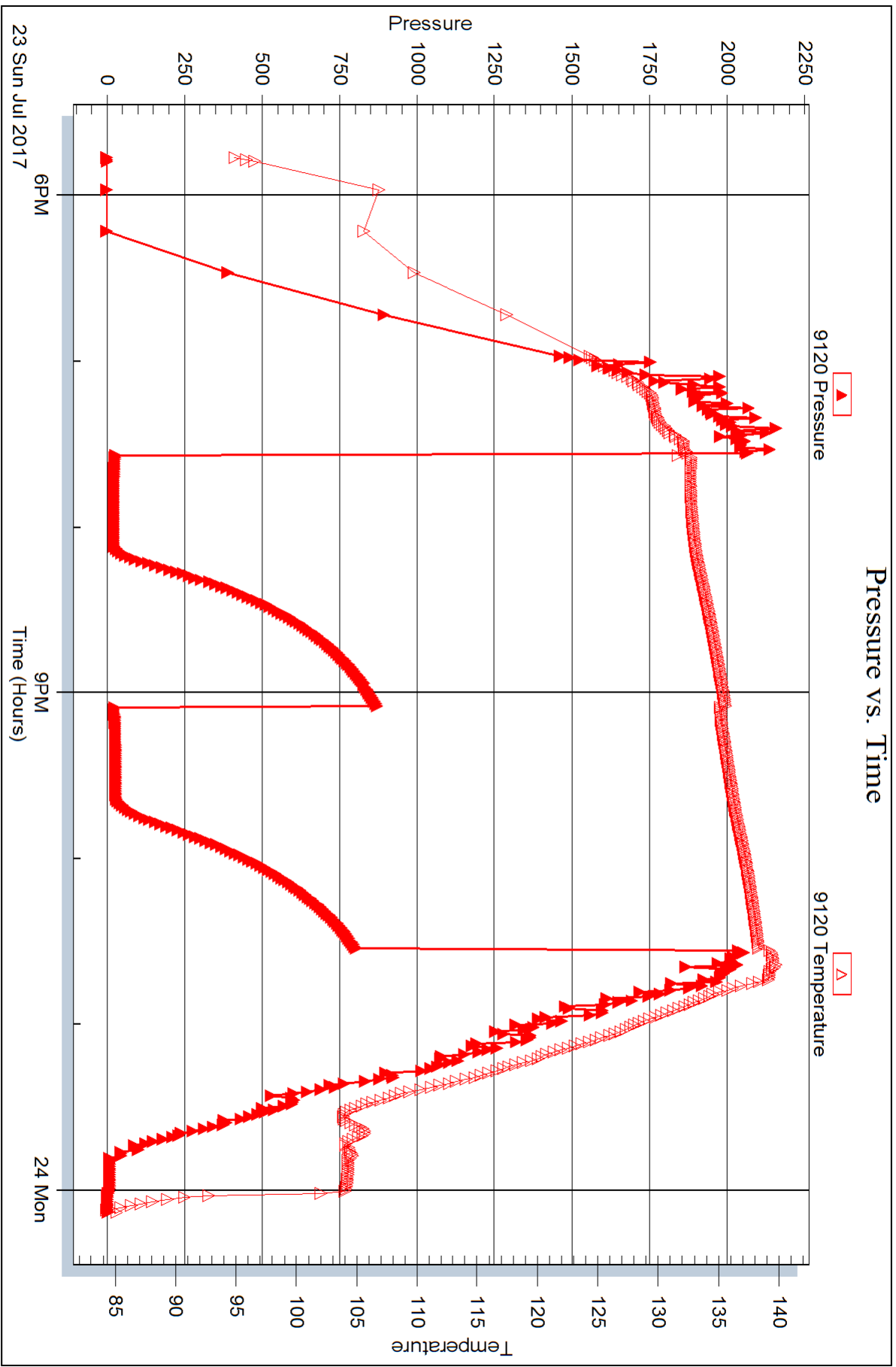
Serial #: 9120

Inside

Murfin Drilling Co. Inc.

Mears B#1-11

DST Test Number: 1





## DRILL STEM TEST REPORT

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

250 N Water STE 300  
Wichita KS 67202+1216

ATTN: Steve Miller

### **Mears 'B' #1-11**

#### **11-2S-37W Cheyenne,KS**

Start Date: 2017.07.24 @ 08:25:00

End Date: 2017.07.24 @ 15:15:00

Job Ticket #: 62995                      DST #: 2

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.07.31 @ 11:49:12





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
 250 N Water STE 300  
 Wichita KS 67202+1216  
 ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
 Job Ticket: 62995 **DST#: 2**  
 Test Start: 2017.07.24 @ 08:25:00

## GENERAL INFORMATION:

Formation: **LKC 'A'**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 10:21:45  
 Time Test Ended: 15:15:00  
 Interval: **4292.00 ft (KB) To 4345.00 ft (KB) (TVD)**  
 Total Depth: 4345.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Spencer J. Staab  
 Unit No: 84  
 Reference Elevations: 3396.00 ft (KB)  
 3391.00 ft (CF)  
 KB to GR/CF: 5.00 ft

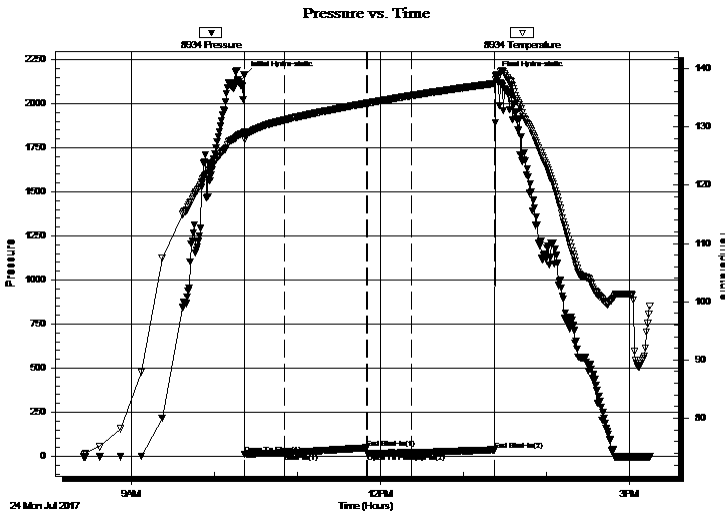
## Serial #: 8934

Inside

Press@RunDepth: 19.37 psig @ 4296.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.07.24 End Date: 2017.07.24 Last Calib.: 2017.07.24  
 Start Time: 08:25:15 End Time: 15:15:00 Time On Btm: 2017.07.24 @ 10:21:30  
 Time Off Btm: 2017.07.24 @ 13:23:15

TEST COMMENT: 30-IF-Weak Surge; Died Immediately  
 60-ISI-No Return  
 30-FF-No Blow  
 60-FSI-No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2159.86	129.10	Initial Hydro-static
1	12.29	127.88	Open To Flow (1)
29	17.29	131.19	Shut-In(1)
89	48.41	134.07	End Shut-In(1)
89	14.81	134.08	Open To Flow (2)
121	19.37	135.39	Shut-In(2)
181	36.76	137.47	End Shut-In(2)
182	2157.03	138.88	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
9.00	OCM 25%O 75%M	0.04
1.00	Clean Oil 100%O	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.  
250 N Water STE 300  
Wichita KS 67202+1216  
ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
Job Ticket: 62995 **DST#: 2**  
Test Start: 2017.07.24 @ 08:25:00

## Tool Information

Drill Pipe:	Length: 4091.00 ft	Diameter: 3.80 inches	Volume: 57.39 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 205.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose:	64000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
				String Weight: Initial	62000.00 lb
Drill Pipe Above KB:	24.00 ft			Final	62000.00 lb
Depth to Top Packer:	4292.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	53.00 ft				
Tool Length:	73.00 ft				
Number of Packers:	1	Diameter:	6.75 inches		
Tool Comments:					

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4273.00	
Shut In Tool	5.00			4278.00	
Hydraulic tool	5.00			4283.00	
Packer	5.00			4288.00	20.00 Bottom Of Top Packer
Packer	4.00			4292.00	
Stubb	1.00			4293.00	
Perforations	2.00			4295.00	
Change Over Sub	1.00			4296.00	
Recorder	0.00	9120	Inside	4296.00	
Recorder	0.00	8934	Inside	4296.00	
Drill Pipe	32.00			4328.00	
Change Over Sub	1.00			4329.00	
Perforations	12.00			4341.00	
Bullnose	4.00			4345.00	53.00 Bottom Packers & Anchor

**Total Tool Length: 73.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc.  
250 N Water STE 300  
Wichita KS 67202+1216  
ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
Job Ticket: 62995      **DST#: 2**  
Test Start: 2017.07.24 @ 08:25:00

## 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: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.39 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 600.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
9.00	OCM 25%O 75%M	0.044
1.00	Clean Oil 100%O	0.005

Total Length: 10.00 ft      Total Volume: 0.049 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: 4#LCM

Serial #: 8934

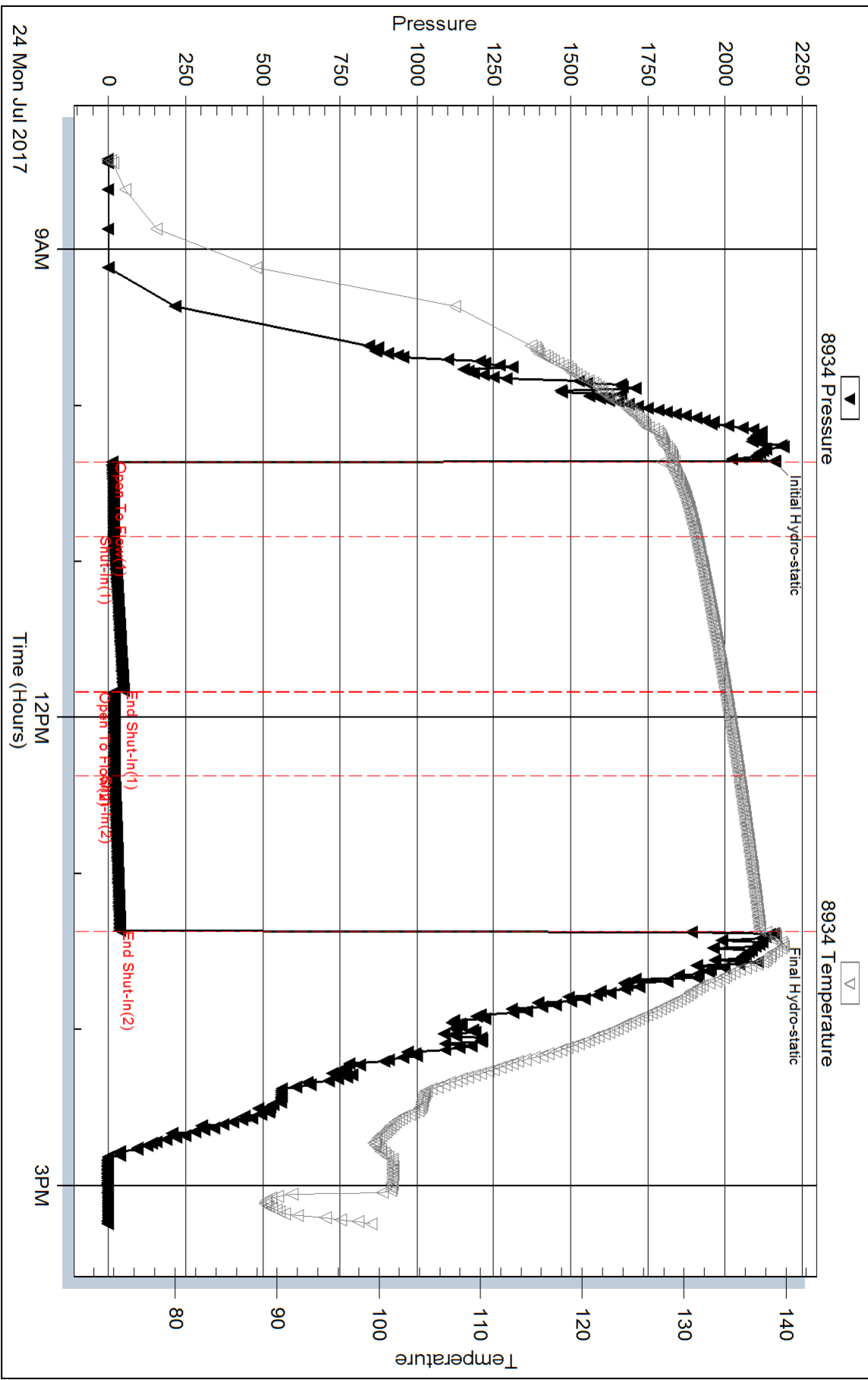
Inside

Murfin Drilling Co. Inc.

Mears B #1-11

DST Test Number: 2

# Pressure vs. Time



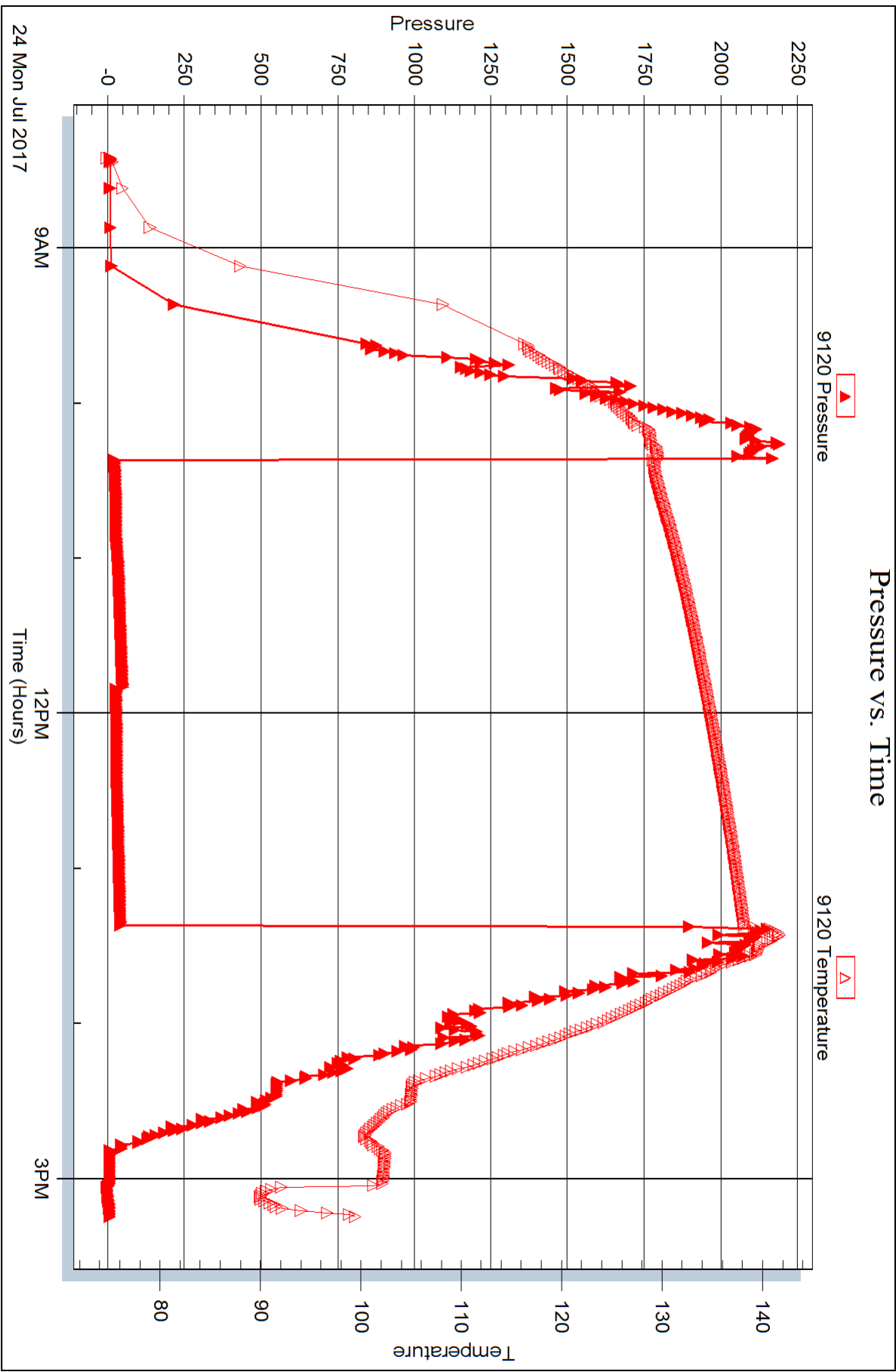
Serial #: 9120

Inside

Murfin Drilling Co. Inc.

Mears B #1-11

DST Test Number: 2





## DRILL STEM TEST REPORT

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

250 N Water STE 300  
Wichita KS 67202+1216

ATTN: Steve Miller

### **Mears 'B' #1-11**

#### **11-2S-37W Cheyenne,KS**

Start Date: 2017.07.25 @ 00:20:00

End Date: 2017.07.25 @ 10:58:30

Job Ticket #: 62996                      DST #: 3

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.07.31 @ 11:43:18



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
 250 N Water STE 300  
 Wichita KS 67202+1216  
 ATTN: Steve Miller

**11-2S-37W Cheyenne, KS**  
**Mears 'B' #1-11**  
 Job Ticket: 62996 **DST#: 3**  
 Test Start: 2017.07.25 @ 00:20:00

## GENERAL INFORMATION:

Formation: **LKC 'D'**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 02:15:30 Tester: Spencer J. Staab  
 Time Test Ended: 10:58:30 Unit No: 84  
 Interval: **4350.00 ft (KB) To 4408.00 ft (KB) (TVD)** Reference Elevations: 3396.00 ft (KB)  
 Total Depth: 4408.00 ft (KB) (TVD) 3391.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

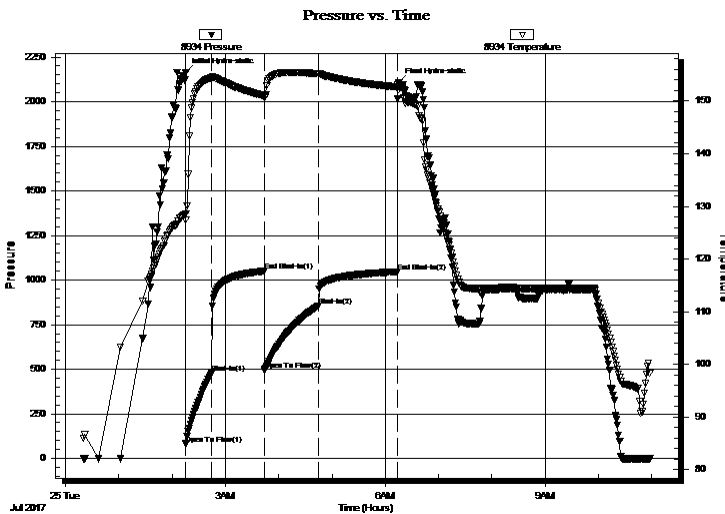
## Serial #: 8934

Inside

Press@RunDepth: 856.08 psig @ 4359.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.07.25 End Date: 2017.07.25 Last Calib.: 2017.07.25  
 Start Time: 00:20:15 End Time: 10:58:30 Time On Btm: 2017.07.25 @ 02:15:15  
 Time Off Btm: 2017.07.25 @ 06:15:30

TEST COMMENT: 30-IF-Strong Blow ; BOB in 2 mins  
 60-ISI-Weak Blow ; Built to 1"  
 60-FF-Strong Blow ; BOB in 1 1/2 min  
 90-FSI-Weak Blow ; Built to 1"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2164.29	128.60	Initial Hydro-static
1	81.79	127.46	Open To Flow (1)
30	480.54	154.44	Shut-In(1)
89	1050.67	151.03	End Shut-In(1)
90	495.46	150.82	Open To Flow (2)
150	856.08	155.19	Shut-In(2)
239	1046.48	152.67	End Shut-In(2)
241	2106.80	152.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1060.00	OMCW 10%O 10%M 80%W	13.00
500.00	MCGO 20%M 40%G 40%O	7.01
400.00	Clean Oil 100%O	5.61
0.00	180' 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 Co. Inc.  
250 N Water STE 300  
Wichita KS 67202+1216  
ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
Job Ticket: 62996 **DST#: 3**  
Test Start: 2017.07.25 @ 00:20:00

**Tool Information**

Drill Pipe:	Length: 4155.00 ft	Diameter: 3.80 inches	Volume: 58.28 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 205.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
				String Weight: Initial	60000.00 lb
Drill Pipe Above KB:	30.00 ft			Final	69000.00 lb
Depth to Top Packer:	4350.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	58.00 ft				
Tool Length:	78.00 ft				
Number of Packers:	1	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			4331.00	
Shut In Tool	5.00			4336.00	
Hydraulic tool	5.00			4341.00	
Packer	5.00			4346.00	20.00 Bottom Of Top Packer
Packer	4.00			4350.00	
Stubb	1.00			4351.00	
Perforations	7.00			4358.00	
Change Over Sub	1.00			4359.00	
Recorder	0.00	9120	Inside	4359.00	
Recorder	0.00	8934	Inside	4359.00	
Drill Pipe	32.00			4391.00	
Change Over Sub	1.00			4392.00	
Perforations	12.00			4404.00	
Bullnose	4.00			4408.00	58.00 Bottom Packers & Anchor

**Total Tool Length: 78.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc.  
250 N Water STE 300  
Wichita KS 67202+1216  
ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
Job Ticket: 62996      **DST#: 3**  
Test Start: 2017.07.25 @ 00:20:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 27 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 32000 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.39 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 600.00 ppm		
Filter Cake: inches		

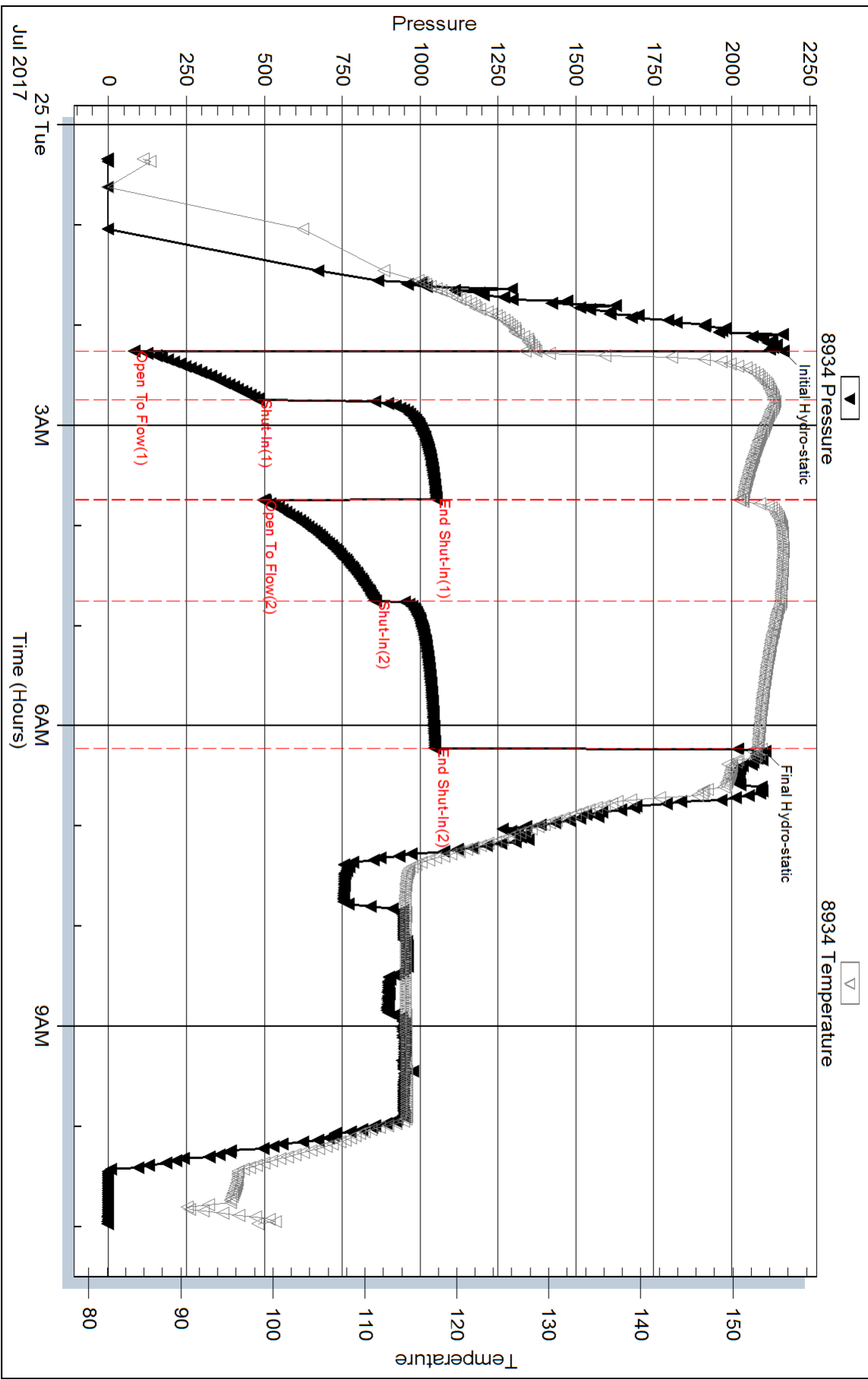
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1060.00	OMCW 10%O 10%M 80%W	13.002
500.00	MCGO 20%M 40%G 40%O	7.014
400.00	Clean Oil 100%O	5.611
0.00	180' GIP	0.000

Total Length: 1960.00 ft      Total Volume: 25.627 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: 4#LCM  
 RW=.081@84degrees

### Pressure vs. Time



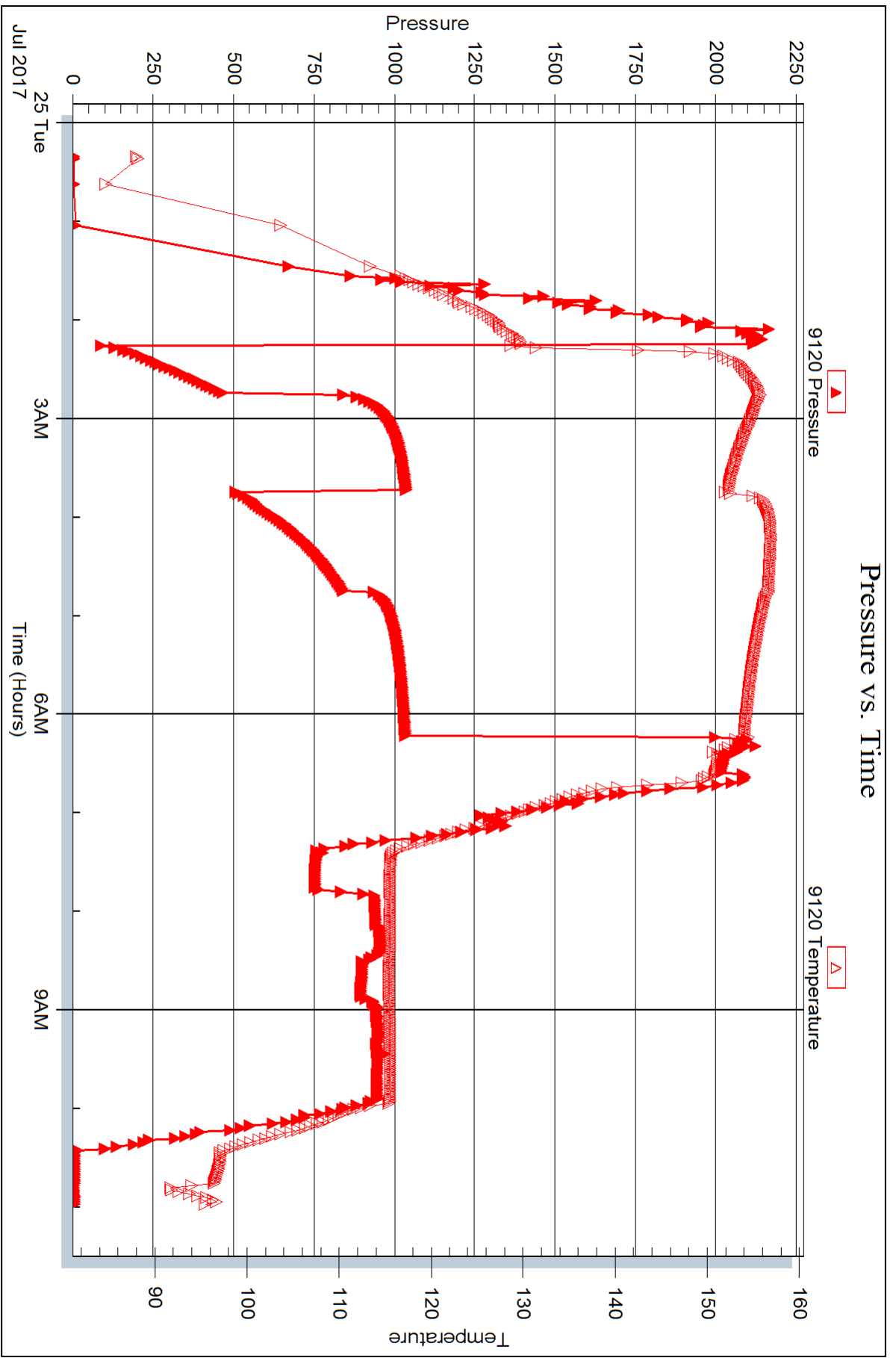
Serial #: 9120

Inside

Murfin Drilling Co. Inc.

Mears B #1-11

DST Test Number: 3





## DRILL STEM TEST REPORT

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

250 N Water STE 300  
Wichita KS 67202+1216

ATTN: Steve Miller

### **Mears 'B' #1-11**

#### **11-2S-37W Cheyenne,KS**

Start Date: 2017.07.25 @ 20:45:00

End Date: 2017.07.26 @ 03:53:30

Job Ticket #: 62997                      DST #: 4

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.07.31 @ 11:38:56

Murfin Drilling Co. Inc. 11-2S-37W Cheyenne,KS Mears 'B' #1-11 DST # 4 LKC 'G' 2017.07.25



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
 250 N Water STE 300  
 Wichita KS 67202+1216  
 ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
 Job Ticket: 62997 **DST#: 4**  
 Test Start: 2017.07.25 @ 20:45:00

## GENERAL INFORMATION:

Formation: **LKC 'G'**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:06:15  
 Time Test Ended: 03:53:30  
 Interval: **4416.00 ft (KB) To 4458.00 ft (KB) (TVD)**  
 Total Depth: 4458.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Spencer J. Staab  
 Unit No: 84  
 Reference Elevations: 3396.00 ft (KB)  
 3391.00 ft (CF)  
 KB to GR/CF: 5.00 ft

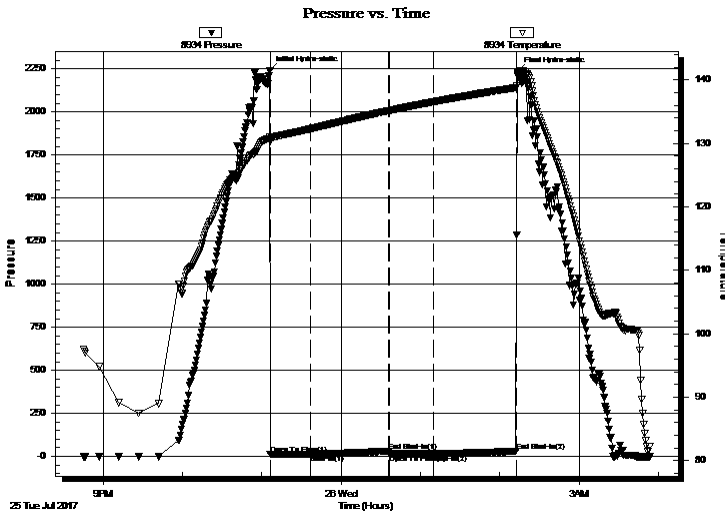
## Serial #: 8934

Inside

Press@RunDepth: 14.96 psig @ 4421.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.07.25 End Date: 2017.07.26 Last Calib.: 2017.07.26  
 Start Time: 20:45:15 End Time: 03:53:30 Time On Btm: 2017.07.25 @ 23:06:00  
 Time Off Btm: 2017.07.26 @ 02:13:15

TEST COMMENT: 30-IF-Weak Blow ; Built to 1/4"  
 60-ISI-No Return  
 30-FF-No Blow  
 60-FSI-No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2240.09	131.06	Initial Hydro-static
1	12.68	130.29	Open To Flow (1)
31	14.05	132.33	Shut-In(1)
90	30.56	135.17	End Shut-In(1)
91	13.83	135.17	Open To Flow (2)
124	14.96	136.56	Shut-In(2)
187	29.57	138.80	End Shut-In(2)
188	2234.45	140.64	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud 100%M	0.01

\* 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.  
250 N Water STE 300  
Wichita KS 67202+1216  
ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
Job Ticket: 62997 **DST#: 4**  
Test Start: 2017.07.25 @ 20:45:00

## Tool Information

Drill Pipe:	Length: 4221.00 ft	Diameter: 3.80 inches	Volume: 59.21 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 205.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4416.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			4397.00	
Shut In Tool	5.00			4402.00	
Hydraulic tool	5.00			4407.00	
Packer	5.00			4412.00	20.00 Bottom Of Top Packer
Packer	4.00			4416.00	
Stubb	1.00			4417.00	
Perforations	3.00			4420.00	
Change Over Sub	1.00			4421.00	
Recorder	0.00	9120	Inside	4421.00	
Recorder	0.00	8934	Inside	4421.00	
Drill Pipe	32.00			4453.00	
Change Over Sub	1.00			4454.00	
Bullnose	4.00			4458.00	42.00 Bottom Packers & Anchor

**Total Tool Length: 62.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc.  
250 N Water STE 300  
Wichita KS 67202+1216  
ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
Job Ticket: 62997      **DST#: 4**  
Test Start: 2017.07.25 @ 20:45:00

## 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: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.99 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 800.00 ppm			
Filter Cake: inches			

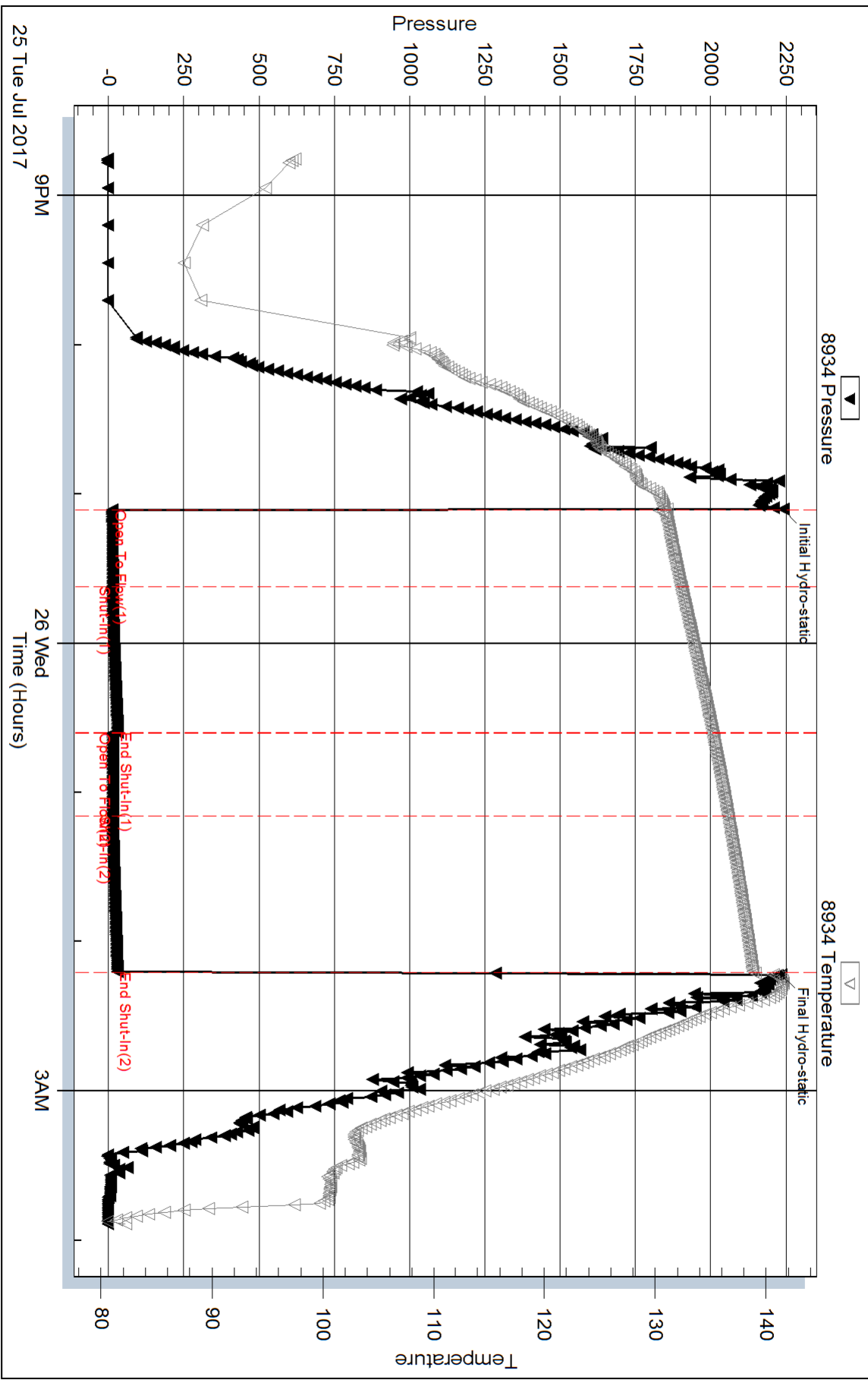
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Mud 100%M	0.010

Total Length: 2.00 ft      Total Volume: 0.010 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: 4#LCM

### Pressure vs. Time



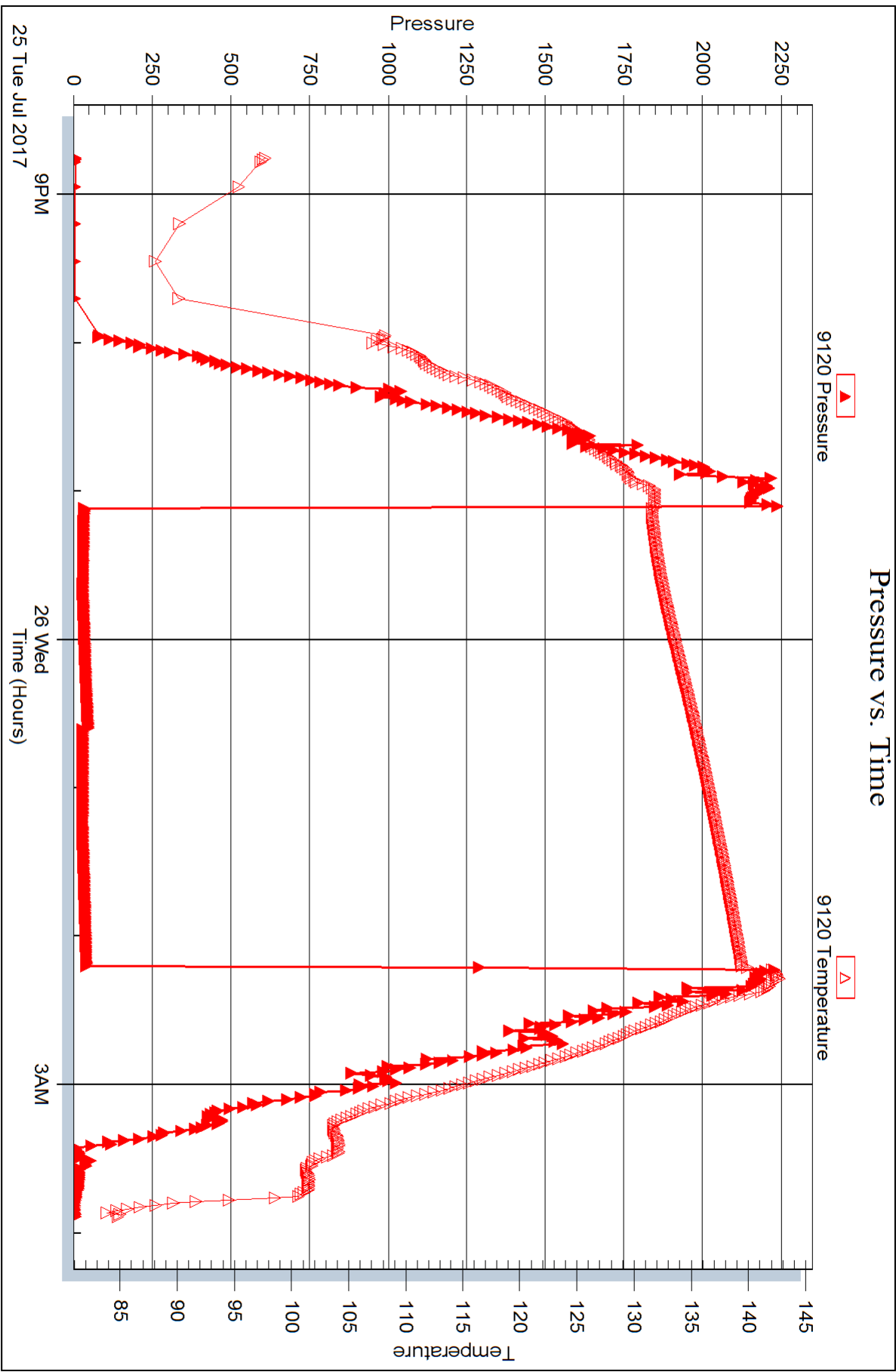
Serial #: 9120

Inside

Murfin Drilling Co. Inc.

Mears B #1-11

DST Test Number: 4





## DRILL STEM TEST REPORT

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

250 N Water STE 300  
Wichita KS 67202+1216

ATTN: Steve Miller

### **Mears 'B' #1-11**

#### **11-2S-37W Cheyenne,KS**

Start Date: 2017.07.26 @ 16:32:00

End Date: 2017.07.27 @ 00:52:30

Job Ticket #: 62998                      DST #: 5

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.07.31 @ 11:34:19

Murfin Drilling Co. Inc.  
11-2S-37W Cheyenne,KS  
Mears 'B' #1-11  
DST # 5  
LKC 'H-J'  
2017.07.26



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
 250 N Water STE 300  
 Wichita KS 67202+1216  
 ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
 Job Ticket: 62998 **DST#: 5**  
 Test Start: 2017.07.26 @ 16:32:00

## GENERAL INFORMATION:

Formation: **LKC 'H-J'**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 18:34:45  
 Time Test Ended: 00:52:30  
 Interval: **4461.00 ft (KB) To 4544.00 ft (KB) (TVD)**  
 Total Depth: 4544.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Spencer J. Staab  
 Unit No: 84  
 Reference Elevations: 3396.00 ft (KB)  
 3391.00 ft (CF)  
 KB to GR/CF: 5.00 ft

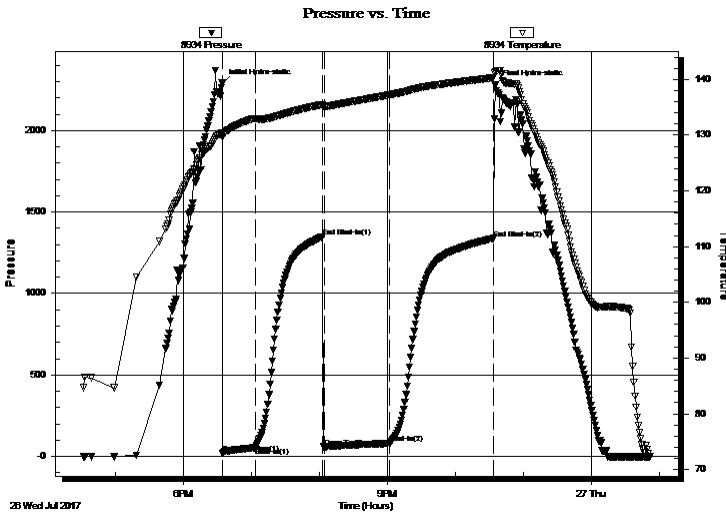
## Serial #: 8934

Inside

Press@RunDepth: 80.33 psig @ 4466.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.07.26 End Date: 2017.07.27 Last Calib.: 2017.07.27  
 Start Time: 16:32:15 End Time: 00:52:30 Time On Btm: 2017.07.26 @ 18:34:30  
 Time Off Btm: 2017.07.26 @ 22:35:30

TEST COMMENT: 30-IF-Weak Blow ; Built to 4 1/4"  
 60-ISI-No Return  
 60-FF-Weak Blow ; Built to 2"  
 90-FSI-No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2290.27	130.47	Initial Hydro-static
1	19.74	129.69	Open To Flow (1)
29	54.11	132.95	Shut-In(1)
89	1347.63	135.51	End Shut-In(1)
91	57.80	135.28	Open To Flow (2)
148	80.33	137.23	Shut-In(2)
240	1338.06	140.29	End Shut-In(2)
241	2283.31	141.43	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
80.00	Muddy Oil 50%M 50%O	0.39
80.00	Gassy Oil 30%G 70%O	0.39
0.00	60' GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Murfin Drilling Co. Inc.  
 250 N Water STE 300  
 Wichita KS 67202+1216  
 ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
 Job Ticket: 62998 **DST#: 5**  
 Test Start: 2017.07.26 @ 16:32:00

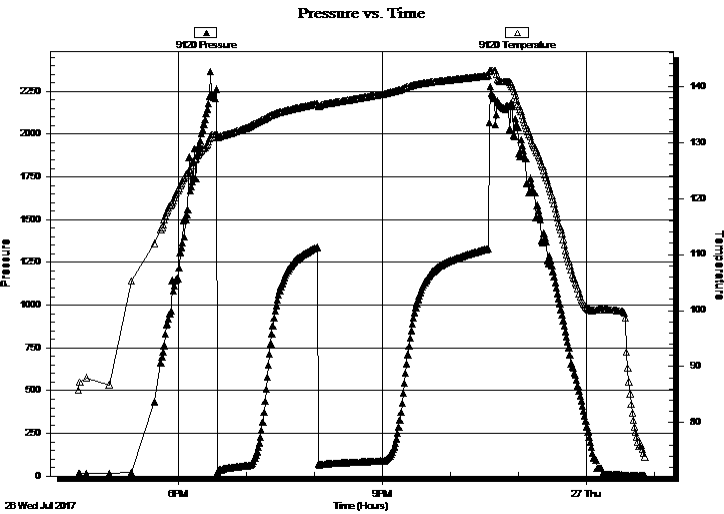
**GENERAL INFORMATION:**

Formation: **LKC 'H-J'**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 18:34:45  
 Time Test Ended: 00:52:30  
 Interval: **4461.00 ft (KB) To 4544.00 ft (KB) (TVD)**  
 Total Depth: 4544.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Spencer J. Staab  
 Unit No: 84  
 Reference Elevations: 3396.00 ft (KB)  
 3391.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 9120 Inside**

Press@RunDepth: psig @ 4466.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.07.26 End Date: 2017.07.27 Last Calib.: 2017.07.27  
 Start Time: 16:32:15 End Time: 00:52:30 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 30-IF-Weak Blow ; Built to 4 1/4"  
 60-ISI-No Return  
 60-FF-Weak Blow ; Built to 2"  
 90-FSI-No Return



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

**Recovery**

Length (ft)	Description	Volume (bbl)
80.00	Muddy Oil 50%M 50%O	0.39
80.00	Gassy Oil 30%G 70%O	0.39
0.00	60' GIP	0.00

**Gas Rates**

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co. Inc.  
250 N Water STE 300  
Wichita KS 67202+1216  
ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
Job Ticket: 62998 **DST#: 5**  
Test Start: 2017.07.26 @ 16:32:00

## Tool Information

Drill Pipe:	Length: 4245.00 ft	Diameter: 3.80 inches	Volume: 59.55 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 205.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4461.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	83.00 ft			
Tool Length:	103.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4442.00	
Shut In Tool	5.00			4447.00	
Hydraulic tool	5.00			4452.00	
Packer	5.00			4457.00	20.00 Bottom Of Top Packer
Packer	4.00			4461.00	
Stubb	1.00			4462.00	
Perforations	3.00			4465.00	
Change Over Sub	1.00			4466.00	
Recorder	0.00	9120	Inside	4466.00	
Recorder	0.00	8934	Inside	4466.00	
Drill Pipe	63.00			4529.00	
Change Over Sub	1.00			4530.00	
Perforations	10.00			4540.00	
Bullnose	4.00			4544.00	83.00 Bottom Packers & Anchor

**Total Tool Length: 103.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc.  
250 N Water STE 300  
Wichita KS 67202+1216  
ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
Job Ticket: 62998      **DST#: 5**  
Test Start: 2017.07.26 @ 16:32:00

## Mud and Cushion Information

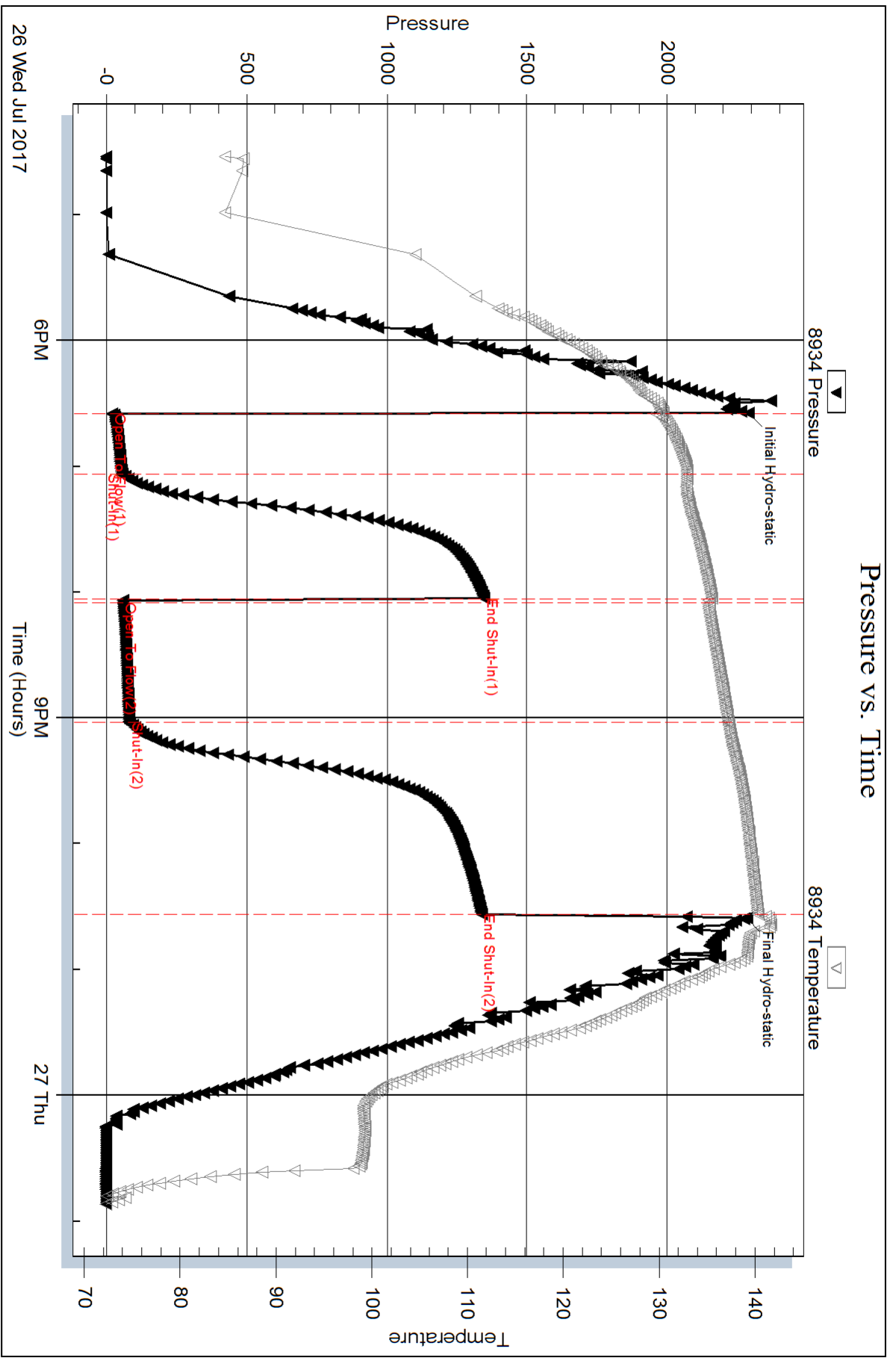
Mud Type: Gel Chem	Cushion Type:	Oil API: 36 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 73.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.39 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 800.00 ppm		
Filter Cake: inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	Muddy Oil 50%M 50%O	0.393
80.00	Gassy Oil 30%G 70%O	0.393
0.00	60' GIP	0.000

Total Length: 160.00 ft      Total Volume: 0.786 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: 6#LCM



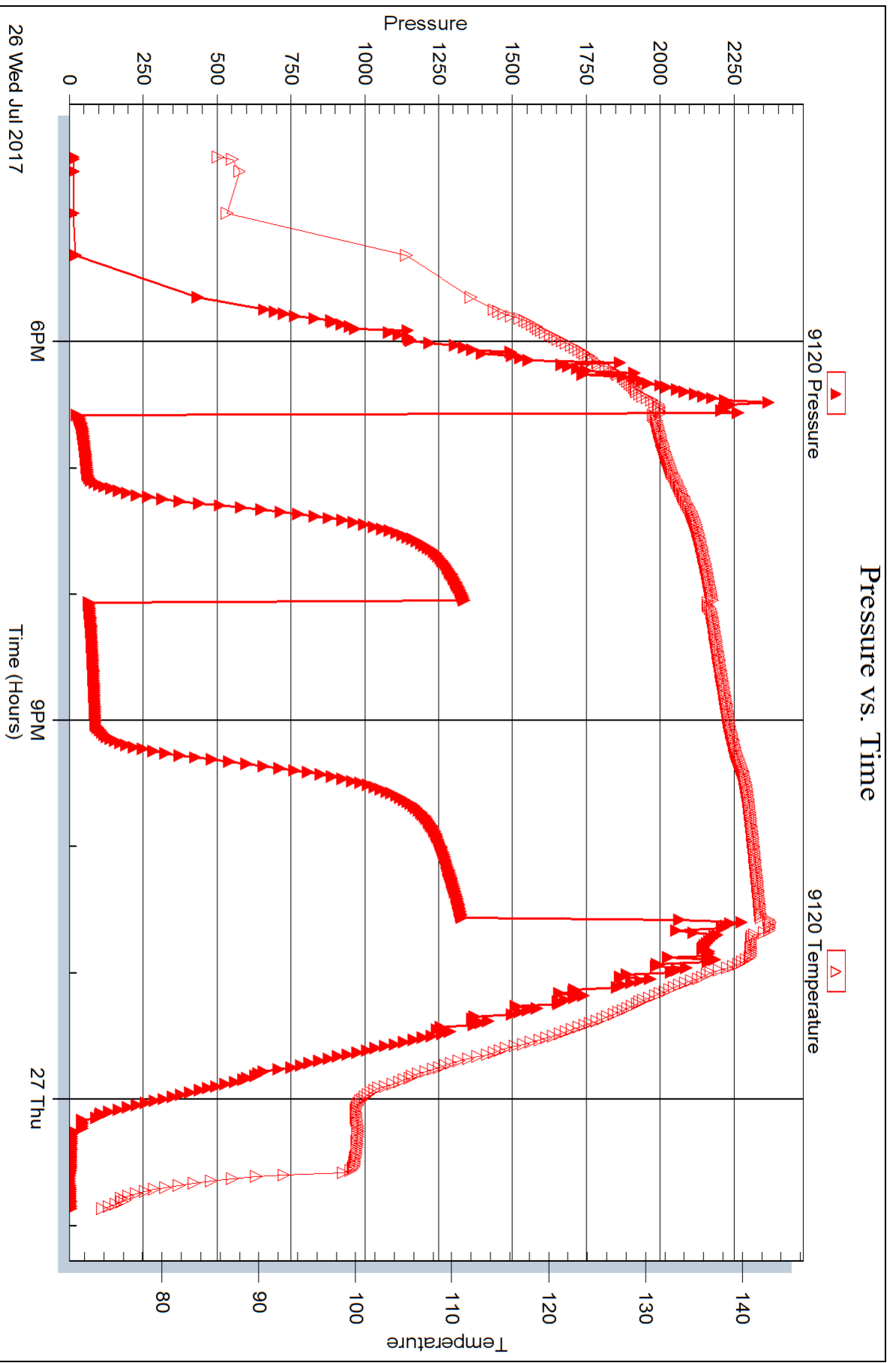
Serial #: 9120

Inside

Murfin Drilling Co. Inc.

Mears B#1-11

DST Test Number: 5





## DRILL STEM TEST REPORT

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

250 N Water STE 300  
Wichita KS 67202+1216

ATTN: Steve Miller

### **Mears 'B' #1-11**

#### **11-2S-37W Cheyenne,KS**

Start Date: 2017.07.27 @ 23:48:00

End Date: 2017.07.28 @ 07:40:45

Job Ticket #: 62999                      DST #: 6

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.07.31 @ 11:31:16



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
 250 N Water STE 300  
 Wichita KS 67202+1216  
 ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
 Job Ticket: 62999 **DST#: 6**  
 Test Start: 2017.07.27 @ 23:48:00

## GENERAL INFORMATION:

Formation: **Fort Scott**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 01:36:30  
 Time Test Ended: 07:40:45  
 Interval: **4617.00 ft (KB) To 4760.00 ft (KB) (TVD)**  
 Total Depth: 4760.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Spencer J. Staab  
 Unit No: 84  
 Reference Elevations: 3396.00 ft (KB)  
 3391.00 ft (CF)  
 KB to GR/CF: 5.00 ft

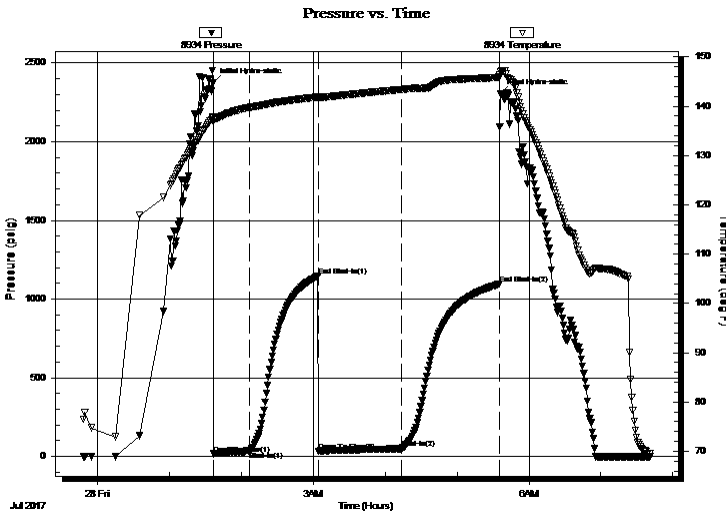
## Serial #: 8934

Inside

Press@RunDepth: 49.95 psig @ 4619.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.07.27 End Date: 2017.07.28 Last Calib.: 2017.07.28  
 Start Time: 23:48:15 End Time: 07:40:45 Time On Btm: 2017.07.28 @ 01:36:15  
 Time Off Btm: 2017.07.28 @ 05:36:15

TEST COMMENT: 30-IF-Weak Blow ; Built to 1 1/2"  
 60-ISI-No Return  
 60-FF-Weak Blow ; Built to 4 1/4"  
 90-FSI-No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2377.54	137.76	Initial Hydro-static
1	16.71	136.82	Open To Flow (1)
31	31.61	139.78	Shut-In(1)
88	1148.06	141.88	End Shut-In(1)
89	31.69	141.61	Open To Flow (2)
158	49.95	143.41	Shut-In(2)
239	1095.06	145.88	End Shut-In(2)
240	2304.08	146.98	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
50.00	OCM 25%O 75%M	0.25
30.00	Muddy Oil 50%M 50%O	0.15
30.00	Clean Oil 100%O	0.15

\* 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.  
250 N Water STE 300  
Wichita KS 67202+1216  
ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
Job Ticket: 62999 **DST#: 6**  
Test Start: 2017.07.27 @ 23:48:00

**Tool Information**

Drill Pipe:	Length: 4401.00 ft	Diameter: 3.80 inches	Volume: 61.73 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 205.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
				String Weight: Initial	66000.00 lb
Drill Pipe Above KB:	9.00 ft			Final	66000.00 lb
Depth to Top Packer:	4617.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	143.00 ft				
Tool Length:	163.00 ft				
Number of Packers:	1	Diameter:	6.75 inches		

Tool Comments:

**Tool Description**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4598.00	
Shut In Tool	5.00			4603.00	
Hydraulic tool	5.00			4608.00	
Packer	5.00			4613.00	20.00 Bottom Of Top Packer
Packer	4.00			4617.00	
Stubb	1.00			4618.00	
Change Over Sub	1.00			4619.00	
Recorder	0.00	9120	Inside	4619.00	
Recorder	0.00	8934	Inside	4619.00	
Drill Pipe	126.00			4745.00	
Change Over Sub	1.00			4746.00	
Perforations	10.00			4756.00	
Bullnose	4.00			4760.00	143.00 Bottom Packers & Anchor

**Total Tool Length: 163.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc.  
250 N Water STE 300  
Wichita KS 67202+1216  
ATTN: Steve Miller

**11-2S-37W Cheyenne,KS**  
**Mears 'B' #1-11**  
Job Ticket: 62999      **DST#: 6**  
Test Start: 2017.07.27 @ 23:48:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 39 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 81.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.19 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 800.00 ppm		
Filter Cake: inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	OCM 25%O 75%M	0.246
30.00	Muddy Oil 50%M 50%O	0.148
30.00	Clean Oil 100%O	0.148

Total Length: 110.00 ft      Total Volume: 0.542 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: 5#LCM



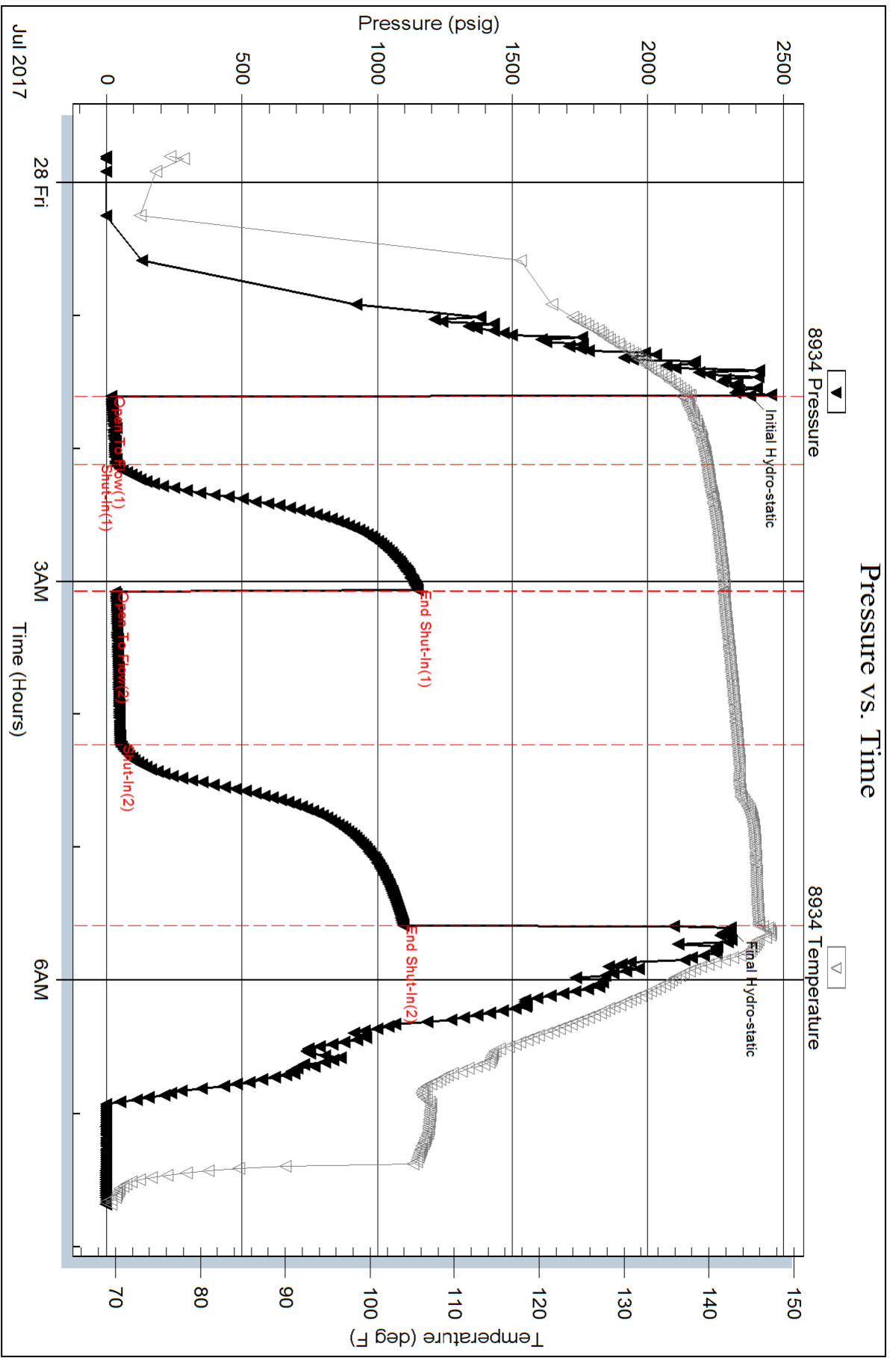
Serial #: 8934

Inside

Murfin Drilling Co. Inc.

Mears B: #1-11

DST Test Number: 6



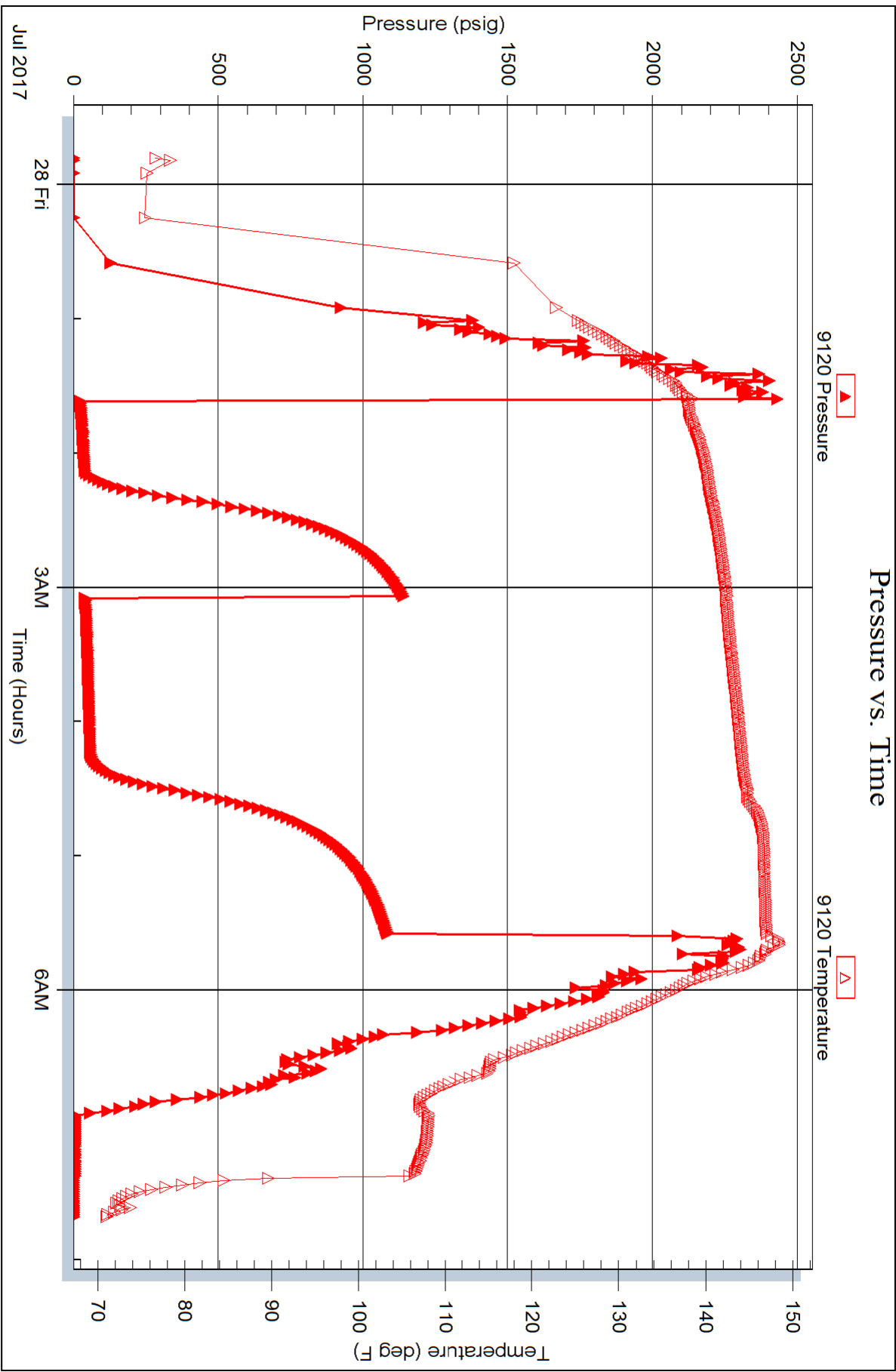
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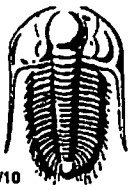
Inside

Murfin Drilling Co. Inc.

Mears B #1-11

DST Test Number: 6





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62994

Well Name & No. Mears 'B' #1-11 Test No. 1 Date 07/23/2017  
 Company Murfin Drilling Co Elevation 3396 KB 3391 GL  
 Address 250 N Water STE 300 Wichita KS 67202+1216  
 Co. Rep / Geo. Steve Miller Rig Murfin #24  
 Location: Sec. 11 Twp. 24 Rge. 37 Co. Cheyenne State KS

Interval Tested 4198' - 4270' Zone Tested Orad  
 Anchor Length 72' Drill Pipe Run 3985' Mud Wt. 9.0  
 Top Packer Depth 4193' Drill Collars Run 205' Vis 65  
 Bottom Packer Depth 4198' Wt. Pipe Run - WL 6.0  
 Total Depth 4270' Chlorides 600 ppm System LCM 5#

Blow Description 17 - Weak Surface Blow; Died 15"  
ISA - No Return  
77 - No Blow  
75D - No Return

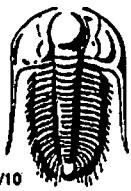
Rec	Feet of	%gas	%oil	%water	%mud
<u>5'</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5' BHT 138° Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 2085  Test 1150 T-On Location 17:03  
 (B) First Initial Flow 11  Jars - T-Started 17:46  
 (C) First Final Flow 14  Safety Joint - T-Open 19:33  
 (D) Initial Shut-In 882  Circ Sub - T-Pulled 22:33  
 (E) Second Initial Flow 14  Hourly Standby - T-Out 00:06 07/24/2017  
 (F) Second Final Flow 16  Mileage 340 RT 114rt 85.50 Comments Stayed in Benkelman  
 (G) Final Shut-In 812  Sampler -  
 (H) Final Hydrostatic 2070  Straddle -  Ruined Shale Packer -  
 Shale Packer -  Ruined Packer -

Initial Open 30  Extra Packer -  Extra Copies -  
 Initial Shut-In 60  Extra Recorder - Sub Total 0  
 Final Flow 30  Day Standby - Total 1235.50  
 Final Shut-In 60  Accessibility - MP/DST Disc't -  
 Sub Total 1235.50

Approved By \_\_\_\_\_ Our Representative Spencer J. Neal - Thanks!  
 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.  
 785-259-0056



# TRILOBITE TESTING INC.

1515 Commerce Parkway - Hays, Kansas 67601

## Test Ticket

NO. 62995

Well Name & No. Mears 'B' # 1-11 Test No. 2 Date 07/24/2017  
 Company Murfin Drilling Co, Inc Elevation 3396 KB 3391 GL  
 Address 250 N Water STE 300 Wichita Ks 67202+1216  
 Co. Rep / Geo. Steve Miller Rig Murfin #24  
 Location: Sec. 11 Twp. 2 S Rge. 37 W Co. Cheyenne State Ks

Interval Tested 4292' - 4345' Zone Tested LKC 'a'  
 Anchor Length 53' Drill Pipe Run 4091 Mud Wt. 9.1  
 Top Packer Depth 4287' Drill Collars Run 205' Vis 56  
 Bottom Packer Depth 4292' Wt. Pipe Run - WL 6.4  
 Total Depth 4345' Chlorides 600 ppm System LCM 4#

Blow Description 17-Surge Blow: Died immediately  
1SD- No Return  
77- No Blow  
7SD- No Return

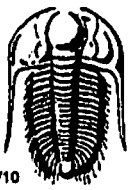
Rec	Feet of	%gas	%oil	%water	%mud
9'	OCM	25		75	
1'	Clean Oil	100			

Rec Total 10' BHT 138° Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>2159</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>07:30</u>
(B) First Initial Flow <u>12</u>	<input type="checkbox"/> Jars	T-Started <u>08:25</u>
(C) First Final Flow <u>17</u>	<input type="checkbox"/> Safety Joint	T-Open <u>10:20</u>
(D) Initial Shut-In <u>48</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>13:20</u>
(E) Second Initial Flow <u>14</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>15:12</u>
(F) Second Final Flow <u>19</u>	<input checked="" type="checkbox"/> Mileage <u>340 RT</u> 85.50	Comments <u>Stayed in</u>
(G) Final Shut-In <u>36</u>	<input type="checkbox"/> Sampler	<u>Bemkelsman</u>
(H) Final Hydrostatic <u>2157</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>1235.50</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't- <u>-</u>
	Sub Total <u>1235.50</u>	

Approved By \_\_\_\_\_ Our Representative Spencer J. Staal Thanks!  
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personal 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.

785-259-0056



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62996

Well Name & No. Mears 'B' # 1-11 Test No. 3 Date 07/24/2017  
 Company Murfin Drilling Co., Inc. Elevation 3396 KB 3391 GL  
 Address 250 N Water St E 300 Wichita Ks 67202+1216  
 Co. Rep / Geo. Steve Miller Rig Murfin #24  
 Location: Sec. 11 Twp. 2s Rge. 37w Co. Cheyenne State Ks

Interval Tested 4350' - 4408' Zone Tested LKC 'D'  
 Anchor Length 58' Drill Pipe Run 4155' Mud Wt. 9.1  
 Top Packer Depth 4345' Drill Collars Run 205' Vis 56  
 Bottom Packer Depth 4350' Wt. Pipe Run - WL 6.4  
 Total Depth 4408' Chlorides 600 ppm System LCM 4#

Blow Description 77- Strong Blow; BOB 2' mins  
75D- Weak Blow; Built to 1"  
77- Strong Blow; BOB in 1:30  
75D- Weak Blow; Built to 1"

Rec	Feet of	%gas	%oil	%water	%mud
<u>1060'</u>	<u>0 MCW</u>	<u>10</u>	<u>80</u>	<u>10</u>	<u>0</u>
<u>500'</u>	<u>MCDO</u>	<u>40</u>	<u>40</u>	<u>20</u>	<u>0</u>
<u>400'</u>	<u>Clean Oil</u>	<u>100</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>180'</u>	<u>HP 180'</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Rec Total 1960' BHT 152° Gravity 27° API RW 81 @ 84 ° F Chlorides 32,000 ppm

(A) Initial Hydrostatic 2164'  
 (B) First Initial Flow 81  
 (C) First Final Flow 480  
 (D) Initial Shut-In 1050  
 (E) Second Initial Flow 495  
 (F) Second Final Flow 856  
 (G) Final Shut-In 1046  
 (H) Final Hydrostatic 2106  
 Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90

Test 1150  
 Jars \_\_\_\_\_  
 Safety Joint \_\_\_\_\_  
 Circ Sub \_\_\_\_\_  
 Hourly Standby \_\_\_\_\_  
 Mileage 340 RT 85.50  
 Sampler \_\_\_\_\_  
 Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1235.50

T-On Location 23:35  
 T-Started 00:20 07/24/2017  
 T-Open 02:15  
 T-Pulled 06:15  
 T-Out 10:56  
 Comments stayed in bucket  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1235.50  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Spencer J. Gual Thanks!  
 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.

785-259-0056



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62997

Well Name & No. Mears 'B' # 1-11 Test No. 4 Date 07/25/2017  
 Company Murfin Drilling Co., Inc. Elevation 3396 KB 3391 GL  
 Address 250 N Water STE 300 Wichita KS 67202 +1216  
 Co. Rep / Geo. Steve Miller Rig Murfin #24  
 Location: Sec. 11 Twp. 2s Rge. 37w Co. Cheyenne State KS

Interval Tested 4416' - 4458' Zone Tested LKC 'J'  
 Anchor Length 42' Drill Pipe Run 4221' Mud Wt. 9.2  
 Top Packer Depth 4411' Drill Collars Run 205' Vis 57  
 Bottom Packer Depth 4416' Wt. Pipe Run - WL 6.0  
 Total Depth 4458' Chlorides 800 ppm System LCM 4#

Blow Description 7-Weak Blow; Built to 1/4"

75D - No Return  
77 - No Blow  
78D - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>2'</u>	<u>Mud</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 2' BHT 140° Gravity - API RW - @ - °F Chlorides - ppm

- (A) Initial Hydrostatic 2240
- (B) First Initial Flow 12
- (C) First Final Flow 14
- (D) Initial Shut-In 30
- (E) Second Initial Flow 13
- (F) Second Final Flow 14
- (G) Final Shut-In 29
- (H) Final Hydrostatic 2234

- Test 1150
- Jars
- Safety Joint
- Circ Sub
- Hourly Standby
- Mileage 340 RT 85.50
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility

T-On Location 20:01  
 T-Started 20:45  
 T-Open 23:05  
 T-Pulled 02:10 07/26/2017  
 T-Out 03:52

Comments stayed in Bembeleson

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

- Ruined Shale Packer
- Ruined Packer 320
- Extra Copies
- Sub Total 3220
- Total 1555.50
- MP/DST Disc't

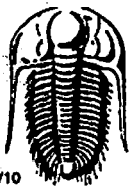
Sub Total 1235.50

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

Our Representative James J. Stahl Thanks!

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.

785-259-0056



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62998

Well Name & No. Mears 'B' # 1-11 Test No. 5 Date 07/26/2017  
 Company Murfin Drilling Co Inc Elevation 3396 KB 3391 GL  
 Address 250 N Water St E 300 Wichita Ks 67202+1216  
 Co. Rep / Geo. Steve Miller Rig Murfin #24  
 Location: Sec. 11 Twp. 24 Rge. 37w Co. Cherokee State Ks

Interval Tested 4461' - 4544 Zone Tested LKC 'H-J'  
 Anchor Length 83' Drill Pipe Run 4245' Mud Wt. 9.1  
 Top Packer Depth 4456' Drill Collars Run 205' Vis 73  
 Bottom Packer Depth 4461' Wt. Pipe Run - WL 6.4  
 Total Depth 4544' Chlorides 800 ppm System LCM 6#

Blow Description 17-Weak Blow; Built to 4 1/4"

15D- No Return

77-Weak Blow; Built to 2"

75D- No Return

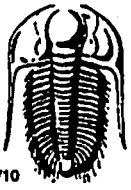
Rec	Feet of	%gas	%oil	%water	%mud
<u>80'</u>	<u>Gassy Oil</u>	<u>30%</u>	<u>70%</u>		
<u>80'</u>	<u>Muddy Oil</u>		<u>50%</u>		<u>50%</u>
	<u>60' JBP</u>	<u>100%</u>			
Rec Total	<u>160'</u>	BHT	<u>140°</u>	Gravity	<u>36°</u>
		API RW	<u>-</u>	@	<u>-</u>
		F	Chlorides		<u>-</u>
		ppm			

(A) Initial Hydrostatic 2290  Test 1150 T-On Location 15:15  
 (B) First Initial Flow 19  Jars 16:32  
 (C) First Final Flow 54  Safety Joint 18:33  
 (D) Initial Shut-In 1347  Circ Sub 22:33  
 (E) Second Initial Flow 57  Hourly Standby 00:51 07/27/17  
 (F) Second Final Flow 80  Mileage 340 RT 85.50  
 (G) Final Shut-In 1338  Sampler Benhelman  
 (H) Final Hydrostatic 2283  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Initial Open 30  Extra Recorder  
 Initial Shut-In 60  Day Standby  
 Final Flow 60  Accessibility  
 Final Shut-In 90  Sub Total 1235.50  
 Sub Total 1235.50 MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative Spencer J. Staal Thanks

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62999

Well Name & No. Mears 'B' #1-11 Test No. 6 Date 07/27/2017  
 Company Murfin Drilling Co. Inc. Elevation 3396 KB 3391 GL  
 Address 250 N Water STE 300 Wichita Ks 67202+1216  
 Co. Rep / Geo. Steve Miller Rig Murfin #24  
 Location: Sec. 11 Twp. 2s Rge. 37w Co. Cherokee State Ks

Interval Tested 4617'-4760' Zone Tested Fort Scott  
 Anchor Length 143' Drill Pipe Run 4401' Mud Wt. 9.3  
 Top Packer Depth 4612' Drill Collars Run 205' Vis 81  
 Bottom Packer Depth 4617' Wt. Pipe Run - WL 7.2  
 Total Depth 4760' Chlorides 800 ppm System LCM 5#

Blow Description 07-Weak Blow; Built to 1 1/2"  
DS- No Return  
77-Weak Blow; Built to 4 1/4"  
7SD- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>50'</u>	<u>OCM</u>	<u>25</u>	<u>75</u>	<u>75</u>	<u>75</u>
<u>30'</u>	<u>Muddy Oil</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>
<u>30'</u>	<u>Clean Oil</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

Rec Total 110' BHT 146° Gravity 39° API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2377  Test 1150 T-On Location 22:05  
 (B) First Initial Flow 16  Jars      T-Started 23:48  
 (C) First Final Flow 31  Safety Joint      T-Open 01:35 07/28/2017  
 (D) Initial Shut-In 1148  Circ Sub      T-Pulled 05:35  
 (E) Second Initial Flow 31  Hourly Standby      T-Out 07:39  
 (F) Second Final Flow 49  Mileage 340 RT 171 Comments loaded tools @ 18:30  
 (G) Final Shut-In 1095  Sampler       
 (H) Final Hydrostatic 2304  Straddle       Ruined Shale Packer       
 Ruined Packer 320  
 Extra Copies       
 Initial Open 30  Shale Packer       
 Initial Shut-In 60  Extra Packer      Sub Total 320  
 Final Flow 60  Extra Recorder      Total 1641  
 Final Shut-In 90  Day Standby      MP/DST Disc't       
 Accessibility       
 Sub Total 1321

Approved By \_\_\_\_\_ Our Representative Spencer J. Staal-Thanks

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