



## DRILL STEM TEST REPORT

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

250 N Water, Ste 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Culwell #2-10**

#### **10-1s-37w Cheyenne,KS**

Start Date: 2015.03.13 @ 03:32:00

End Date: 2015.03.13 @ 11:17:30

Job Ticket #: 62256                      DST #: 1

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

Printed: 2015.03.17 @ 11:37:25

Murfin Drlg Co., Inc. 10-1s-37w Cheyenne,KS Culwell #2-10 DST # 1 LKC "A-D" 2015.03.13



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62256

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2015.03.13 @ 03:32:00

## GENERAL INFORMATION:

Formation: **LKC "A-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:35:30

Time Test Ended: 11:17:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Quintana

Unit No: 57

**Interval: 4034.00 ft (KB) To 4160.00 ft (KB) (TVD)**

Reference Elevations: 3152.00 ft (KB)

Total Depth: 4160.00 ft (KB) (TVD)

3141.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8647**

**Inside**

Press@RunDepth: 162.35 psig @ 4035.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.13

End Date:

2015.03.13

Last Calib.:

2015.03.13

Start Time: 03:32:01

End Time:

11:17:30

Time On Btm:

2015.03.13 @ 05:33:30

Time Off Btm:

2015.03.13 @ 09:04:30

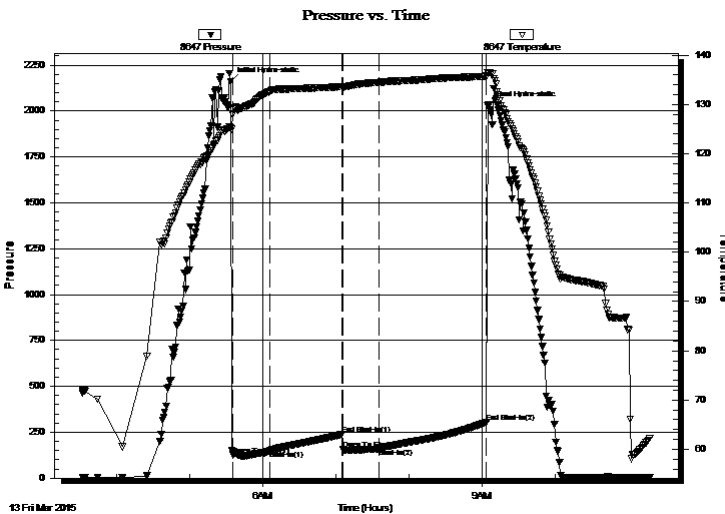
**TEST COMMENT:** 30 - IF - Opened w/ surface blw o, built to B.o.B in 4 min.

60 - ISI - No Return

30 - FF - Blow built to 6 1/2"

90 - FSI - No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2159.70	125.18	Initial Hydro-static
2	127.25	128.01	Open To Flow (1)
32	150.40	132.67	Shut-In(1)
91	238.12	133.60	End Shut-In(1)
92	157.44	133.56	Open To Flow (2)
122	162.35	134.50	Shut-In(2)
210	305.59	135.74	End Shut-In(2)
211	2026.38	136.51	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
241.00	GOCM 70% m, 20% o, 10% g	1.50
103.00	SGO 86% o, 14% g	1.44
0.00	186' GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62256

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2015.03.13 @ 03:32:00

## Tool Information

Drill Pipe:	Length: 3816.00 ft	Diameter: 3.80 inches	Volume: 53.53 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 205.92 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.92 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4034.00 ft			Final 60000.00 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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4011.00	
Hydraulic tool	5.00			4016.00	
Jars	5.00			4021.00	
Safety Joint	3.00			4024.00	
Packer	5.00			4029.00	28.00 Bottom Of Top Packer
Packer	5.00			4034.00	
Stubb	1.00			4035.00	
Recorder	0.00	8647	Inside	4035.00	
Recorder	0.00	8372	Outside	4035.00	
Perforations	25.00			4060.00	
Change Over Sub	1.00			4061.00	
Drill Pipe	95.00			4156.00	
Change Over Sub	1.00			4157.00	
Bullnose	3.00			4160.00	126.00 Bottom Packers & Anchor

**Total Tool Length: 154.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62256

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2015.03.13 @ 03:32:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
241.00	GOCM 70% <sub>m</sub> , 20% <sub>o</sub> , 10% <sub>g</sub>	1.505
103.00	SGO 86% <sub>o</sub> , 14% <sub>g</sub>	1.445
0.00	186' GIP	0.000

Total Length: 344.00 ft      Total Volume: 2.950 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity 31 @ 68F Corrected = 32

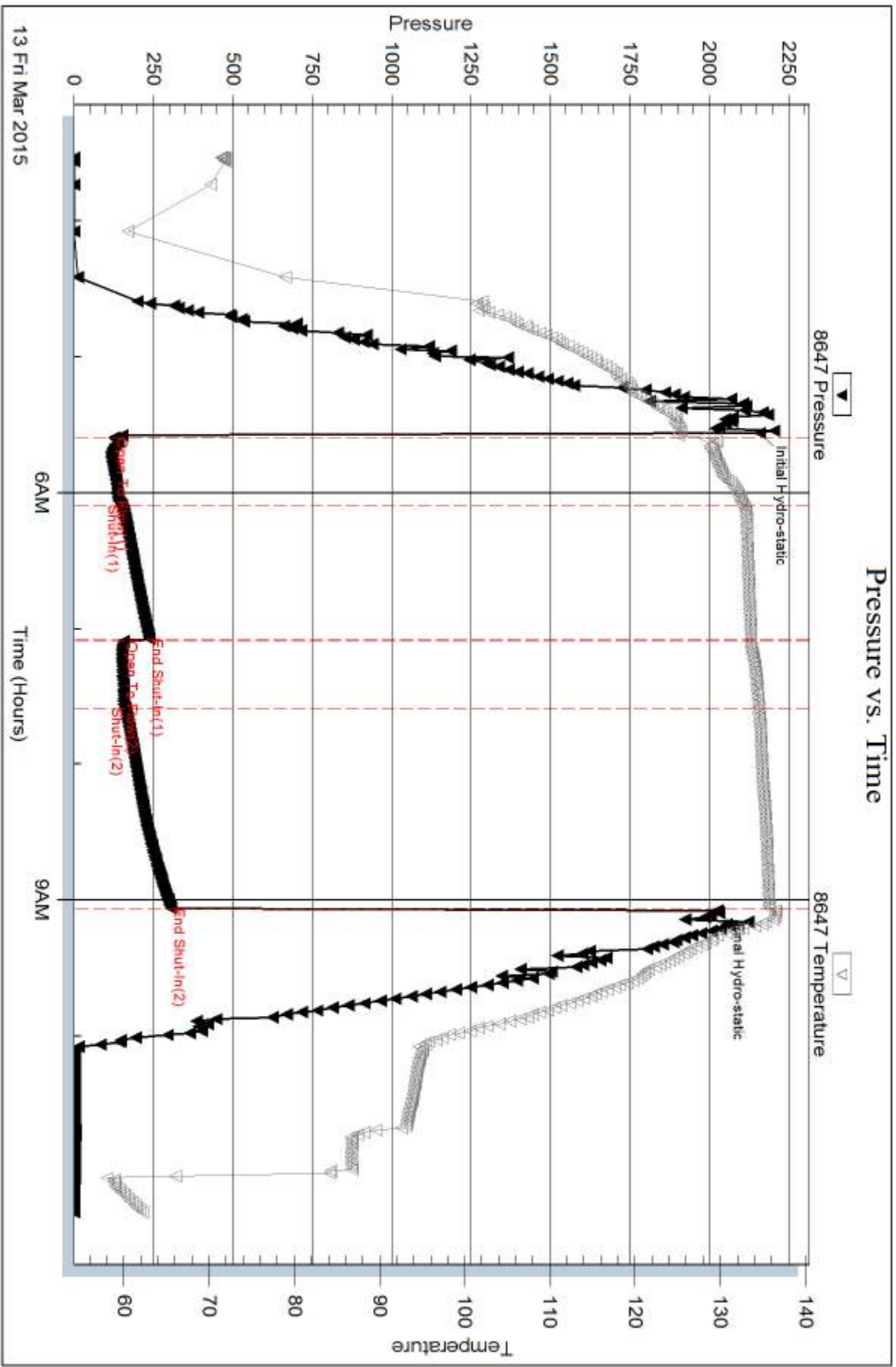
Serial #: 8647

Inside

Murfin Drtg Co., Inc.

Oilwell #2-10

DST Test Number: 1





## DRILL STEM TEST REPORT

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

250 N Water, Ste 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Culwell #2-10**

#### **10-1s-37w Cheyenne,KS**

Start Date: 2015.03.14 @ 04:18:00

End Date: 2015.03.14 @ 11:08:00

Job Ticket #: 62257                      DST #: 2

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

Printed: 2015.03.17 @ 11:36:54



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62257

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2015.03.14 @ 04:18:00

## GENERAL INFORMATION:

Formation: **LKC "G-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:14:30

Time Test Ended: 11:08:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Quintana

Unit No: 57

**Interval: 4157.00 ft (KB) To 4310.00 ft (KB) (TVD)**

Reference Elevations: 3152.00 ft (KB)

Total Depth: 4310.00 ft (KB) (TVD)

3141.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8647**

**Inside**

Press@RunDepth: 70.03 psig @ 4158.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.14

End Date:

2015.03.14

Last Calib.:

2015.03.14

Start Time: 04:18:01

End Time:

11:08:00

Time On Btm:

2015.03.14 @ 06:13:30

Time Off Btm:

2015.03.14 @ 09:15:30

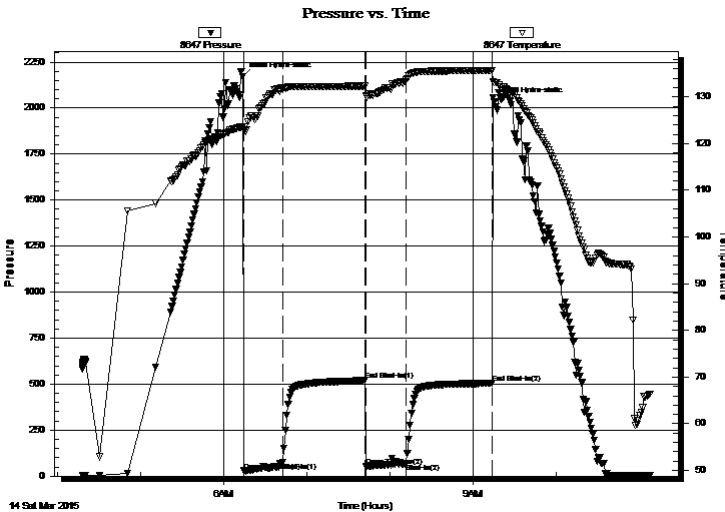
**TEST COMMENT:** 30 - IF - Opened w/ surface blow , built to 3/4"

60 - ISI - No Return

30 - FF - No Blow

60 - FSI - No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2171.69	123.60	Initial Hydro-static
1	27.91	122.89	Open To Flow (1)
29	76.51	132.00	Shut-In(1)
88	521.30	132.31	End Shut-In(1)
89	53.19	130.21	Open To Flow (2)
118	70.03	133.70	Shut-In(2)
180	504.32	135.66	End Shut-In(2)
182	2034.09	133.05	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
65.00	100% mud w/ oil spots in tool	0.32

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62257

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2015.03.14 @ 04:18:00

## GENERAL INFORMATION:

Formation: **LKC "G-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:14:30

Time Test Ended: 11:08:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Quintana

Unit No: 57

**Interval: 4157.00 ft (KB) To 4310.00 ft (KB) (TVD)**

Reference Elevations: 3152.00 ft (KB)

Total Depth: 4310.00 ft (KB) (TVD)

3141.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8372 Outside**

Press@RunDepth: psig @ 4158.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.14

End Date:

2015.03.14

Last Calib.:

2015.03.14

Start Time: 04:18:01

End Time:

11:09:00

Time On Btm:

Time Off Btm:

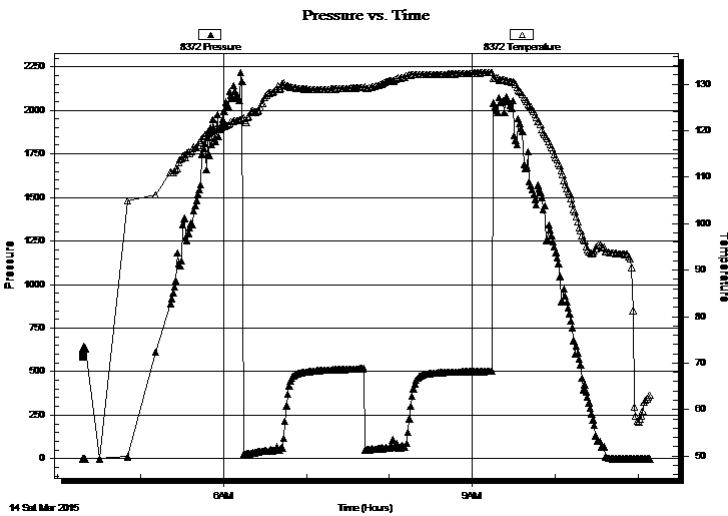
TEST COMMENT: 30 - IF - Opened w/ surface blow , built to 3/4"

60 - ISI - No Return

30 - FF - No Blow

60 - FSI - No Return

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
65.00	100% mud w/ oil spots in tool	0.32

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62257

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2015.03.14 @ 04:18:00

## Tool Information

Drill Pipe:	Length: 3937.00 ft	Diameter: 3.80 inches	Volume: 55.23 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 205.92 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose:	65000.00 lb
			<u>Total Volume:</u> - bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	13.92 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	4157.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	153.00 ft				
Tool Length:	181.00 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			4134.00	
Hydraulic tool	5.00			4139.00	
Jars	5.00			4144.00	
Safety Joint	3.00			4147.00	
Packer	5.00			4152.00	28.00 Bottom Of Top Packer
Packer	5.00			4157.00	
Stubb	1.00			4158.00	
Recorder	0.00	8647	Inside	4158.00	
Recorder	0.00	8372	Outside	4158.00	
Perforations	21.00			4179.00	
Change Over Sub	1.00			4180.00	
Drill Pipe	126.00			4306.00	
Change Over Sub	1.00			4307.00	
Bullnose	3.00			4310.00	153.00 Bottom Packers & Anchor

**Total Tool Length: 181.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62257

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2015.03.14 @ 04:18:00

## 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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	100% mud w / oil spots in tool	0.320

Total Length: 65.00 ft      Total Volume: 0.320 bbl

Num Fluid Samples: 0

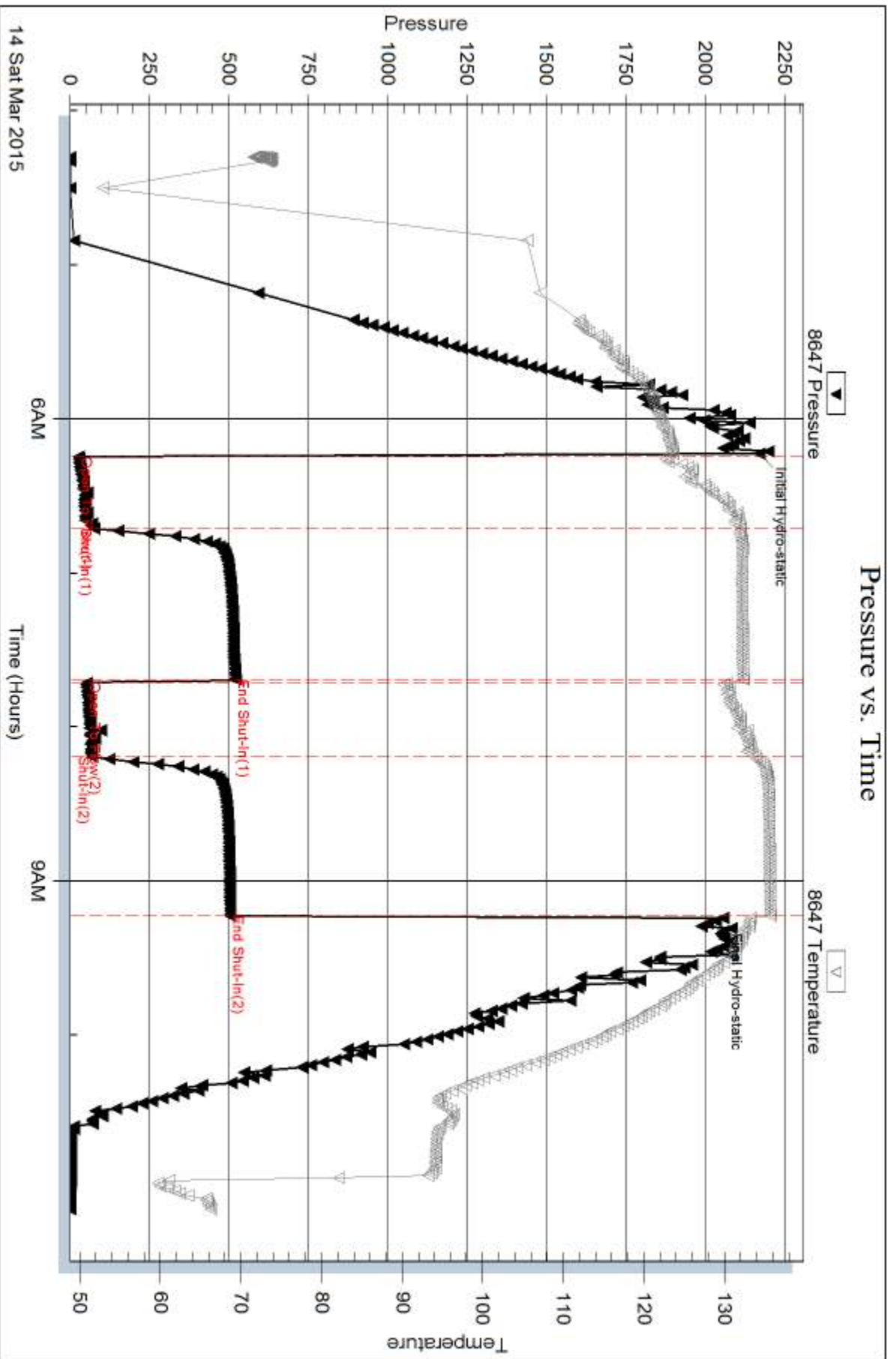
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

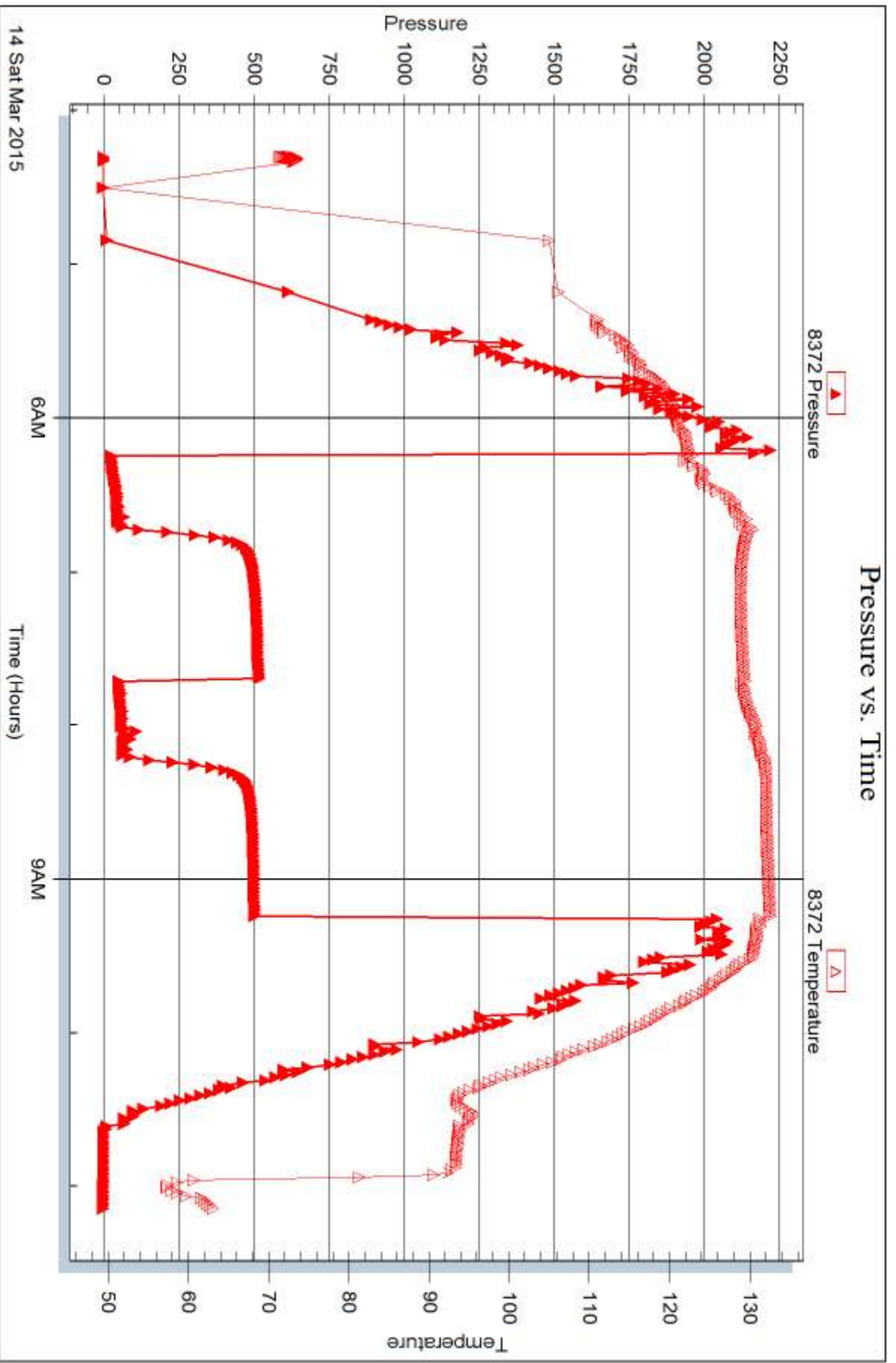


Serial #: 8372

Outside Murfin Drtg Co., Inc.

Oilwell #2-10

DST Test Number: 2





## DRILL STEM TEST REPORT

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

250 N Water, Ste 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Culwell #2-10**

#### **10-1s-37w Cheyenne,KS**

Start Date: 2015.03.15 @ 08:47:00

End Date: 2015.03.15 @ 16:39:30

Job Ticket #: 62258                      DST #: 3

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

Printed: 2015.03.17 @ 11:36:11



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62258

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2015.03.15 @ 08:47:00

## GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:46:30

Time Test Ended: 16:39:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Quintana

Unit No: 57

**Interval: 4462.00 ft (KB) To 4510.00 ft (KB) (TVD)**

Reference Elevations: 3152.00 ft (KB)

Total Depth: 4510.00 ft (KB) (TVD)

3141.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8647**

**Inside**

Press@RunDepth: 26.38 psig @ 4463.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.15

End Date:

2015.03.15

Last Calib.:

2015.03.15

Start Time:

08:47:01

End Time:

16:39:30

Time On Btm:

2015.03.15 @ 10:45:00

Time Off Btm:

2015.03.15 @ 14:48:30

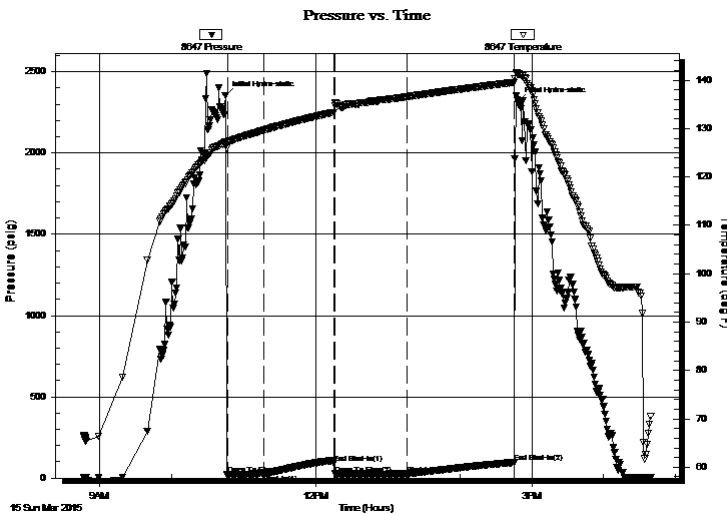
**TEST COMMENT:** 30 - IF - Opened w/ surface blow , died back to nothing

60 - ISI - No Return

60 - FF - No Blow

90 - FSI - No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2352.48	127.15	Initial Hydro-static
2	21.48	127.02	Open To Flow (1)
32	26.29	129.62	Shut-In(1)
91	91.09	133.35	End Shut-In(1)
92	26.28	135.25	Open To Flow (2)
152	26.38	136.59	Shut-In(2)
241	94.69	139.54	End Shut-In(2)
244	2314.89	141.38	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% mud w/ oil spots	0.02

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62258

**DST#: 3**

ATTN: Saman Sharifaie

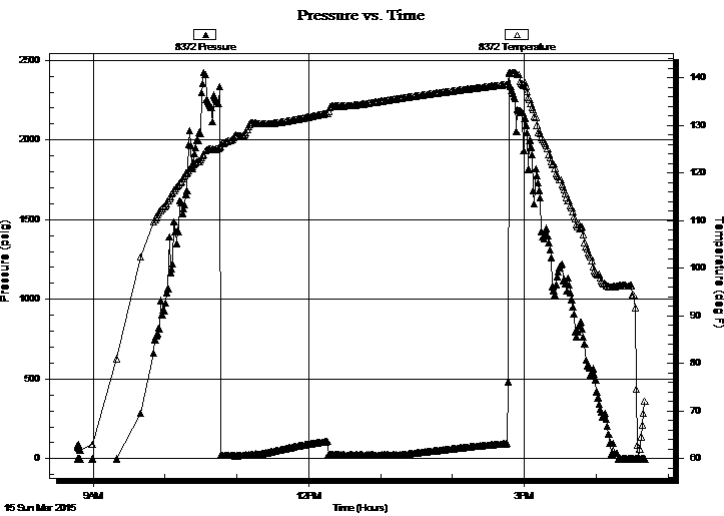
Test Start: 2015.03.15 @ 08:47:00

## GENERAL INFORMATION:

Formation: <b>Pawnee</b>			
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Initial)	
Time Tool Opened: 10:46:30		Tester: Brandon Quintana	
Time Test Ended: 16:39:30		Unit No: 57	
<b>Interval: 4462.00 ft (KB) To 4510.00 ft (KB) (TVD)</b>		Reference Elevations: 3152.00 ft (KB)	
Total Depth: 4510.00 ft (KB) (TVD)		3141.00 ft (CF)	
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF: 11.00 ft	

<b>Serial #: 8372</b>	<b>Outside</b>			
Press@RunDepth: psig @ 4463.00 ft (KB)		Capacity: 8000.00 psig		
Start Date: 2015.03.15	End Date: 2015.03.15	Last Calib.: 2015.03.15		
Start Time: 08:47:01	End Time: 16:41:00	Time On Btm:		
		Time Off Btm:		

**TEST COMMENT:** 30 - IF - Opened w/ surface blow , died back to nothing  
 60 - ISI - No Return  
 60 - FF - No Blow  
 90 - FSI - No Return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% mud w/ oil spots	0.02

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62258

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2015.03.15 @ 08:47:00

## Tool Information

Drill Pipe:	Length: 4258.00 ft	Diameter: 3.80 inches	Volume: 59.73 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 205.92 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:	29.92 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4462.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	76.00 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			4439.00	
Hydraulic tool	5.00			4444.00	
Jars	5.00			4449.00	
Safety Joint	3.00			4452.00	
Packer	5.00			4457.00	28.00 Bottom Of Top Packer
Packer	5.00			4462.00	
Stubb	1.00			4463.00	
Recorder	0.00	8647	Inside	4463.00	
Recorder	0.00	8372	Outside	4463.00	
Perforations	10.00			4473.00	
Change Over Sub	1.00			4474.00	
Drill Pipe	32.00			4506.00	
Change Over Sub	1.00			4507.00	
Bullnose	3.00			4510.00	48.00 Bottom Packers & Anchor

**Total Tool Length: 76.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62258

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2015.03.15 @ 08:47:00

### 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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 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	100% mud w / oil spots	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:

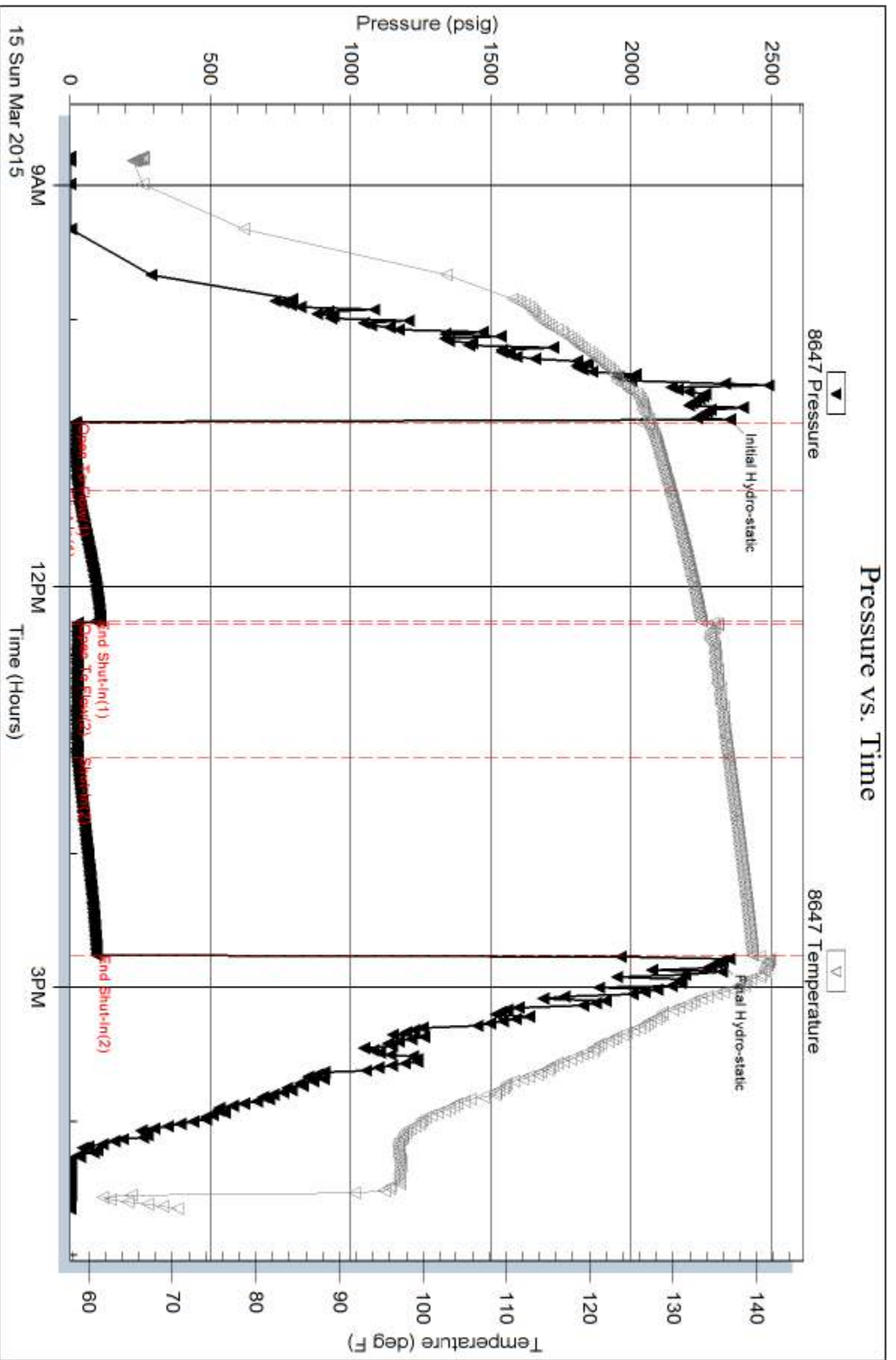
Serial #: 8647

Inside

Murfin Drtg Co., Inc.

Oilwell #2-10

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 62258

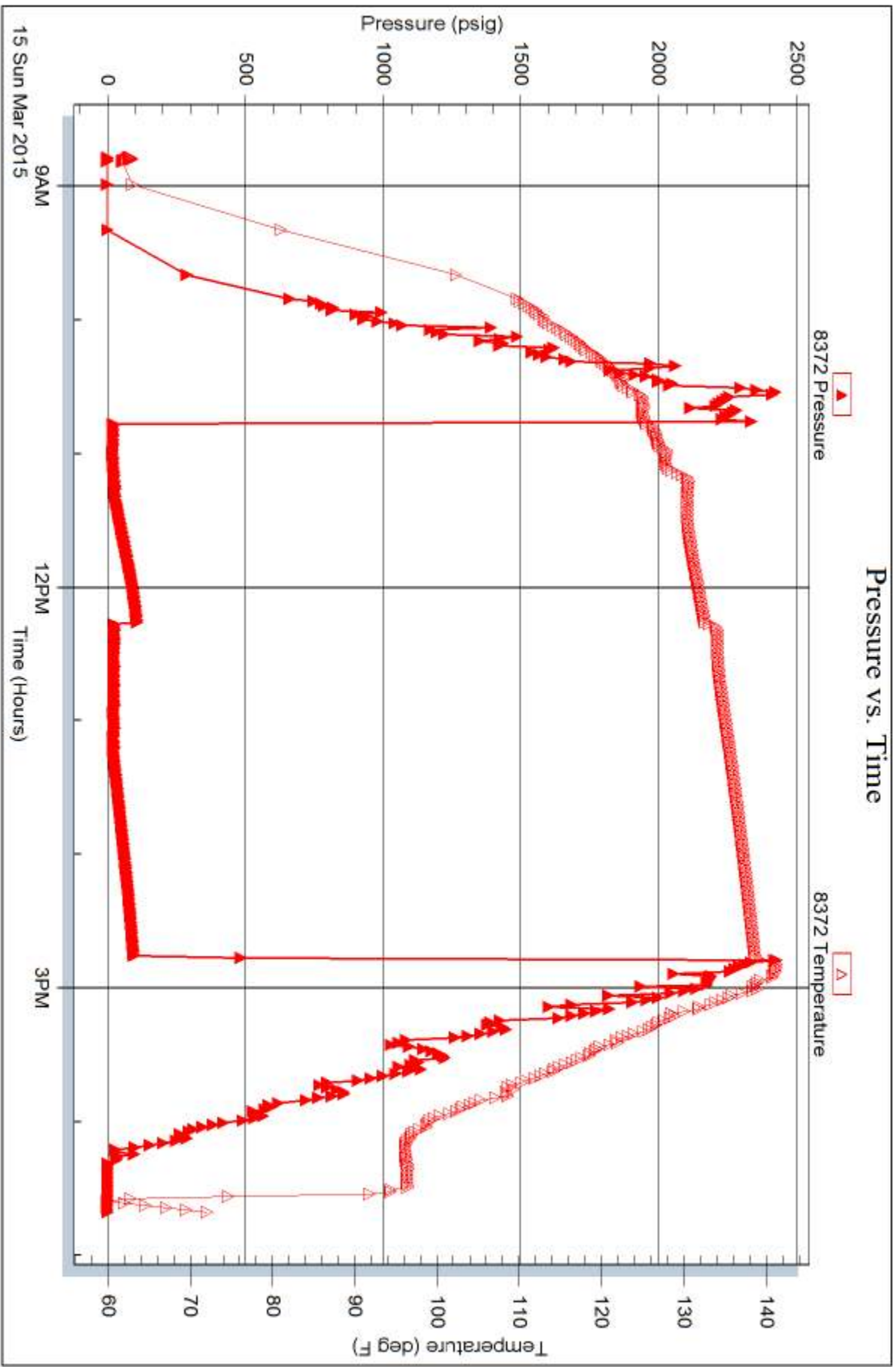
Printed: 2015.03.17 @ 11:36:13

Serial #: 8372

Outside Murfin Drtg Co., Inc.

Oilwell #2-10

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 62258

Printed: 2015.03.17 @ 11:36:13



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **62256**

Well Name & No. Culwell 'C' #2-10 Test No. 1 Date 3-13-15  
 Company Murfin Drig. Co., Inc. Elevation 3152 KB 3141 GL  
 Address 250 N Water, STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #2  
 Location: Sec. 10 Twp. 1S Rge. 37W Co. Cheyenne State KS

Interval Tested 4034 - 4160 Zone Tested LKC "A-D"  
 Anchor Length 126' Drill Pipe Run 3816 Mud Wt. 9.1  
 Top Packer Depth 4029 Drill Collars Run 205.92 Vis 53  
 Bottom Packer Depth 4034 Wt. Pipe Run - WL 8.8  
 Total Depth 4160 Chlorides 1000 ppm System LCM 11

Blow Description IF - Opened w/ surface blow, built to B.O.B in 4 min.  
ISI - No Return  
FF - Blow built to B 1/2"  
FSI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
103	560	14	86		
241	600m	10	20		70
186	GIP	100			

Rec Total 344 BHT 135 Gravity 32 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 2159  
 (B) First Initial Flow 127  
 (C) First Final Flow 150  
 (D) Initial Shut-In 238  
 (E) Second Initial Flow 157  
 (F) Second Final Flow 162  
 (G) Final Shut-In 305  
 (H) Final Hydrostatic 2026

Test 1150  
 Jars 250  
 Safety Joint 75  
 Circ Sub  
 Hourly Standby  
 Mileage 146 R.T. 146  
 Sampler  
 Straddle  
 Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility  
 Sub Total 1621

T-On Location 3:05 AM  
 T-Started 3:32 AM  
 T-Open 5:36 AM  
 T-Pulled 9:06 AM  
 T-Out 11:20 AM

Comments \_\_\_\_\_  
 Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 1621  
 MP/DST Disc't \_\_\_\_\_

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

Approved By \_\_\_\_\_ Our Representative Bnd Qit

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. 62257

Well Name & No. Culwell 'C' #2-10 Test No. 2 Date 3-14-15  
 Company Murfin Drlg. Co., Inc. Elevation 3152 KB 3141 GL  
 Address 250 N. Water, STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Sharfaic Rig Murfin #2  
 Location: Sec. 10 Twp. 19 Rge. 37W Co. Cheyenne State KS

Interval Tested 4157-4310 Zone Tested LKC "G-5"  
 Anchor Length 153' Drill Pipe Run 3937 Mud Wt. 9.3  
 Top Packer Depth 4152 Drill Collars Run 205.92 Vis 5Z  
 Bottom Packer Depth 4157 Wt. Pipe Run - WL 8.4  
 Total Depth 4310 Chlorides 1800 ppm System LCM 14

Blow Description IF - Opened w/ surface blow, built to 3/4"  
ISI - No Return  
FF - No Blow  
FSI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>65</u>	<u>Mud w/ oil spots in tool</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 65 BHT 135 Gravity 1150 API RW @ °F Chlorides 1800 ppm  
 (A) Initial Hydrostatic 2171  Test 1150 T-On Location 4:05 AM  
 (B) First Initial Flow 27  Jars 250 T-Started 4:18 AM  
 (C) First Final Flow 67  Safety Joint \_\_\_\_\_ T-Open 6:18 AM  
 (D) Initial Shut-In 521  Circ Sub \_\_\_\_\_ T-Pulled 9:13 AM  
 (E) Second Initial Flow 53  Hourly Standby \_\_\_\_\_ T-Out 11:09 AM  
 (F) Second Final Flow 70  Mileage 146 R.T. Comments \_\_\_\_\_  
 (G) Final Shut-In 504  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2034  Straddle \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  
 Initial Shut-In 60  Extra Packer \_\_\_\_\_  
 Final Flow 30  Extra Recorder \_\_\_\_\_  
 Final Shut-In 60  Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1621  Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1621  
 MP/DST Disc't \_\_\_\_\_

Our Representative Bud Ot

Approved By \_\_\_\_\_  
 I am 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 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. **62258**

Well Name & No. Culwell C' #2-10 Test No. 3 Date 3-15-15  
 Company Murfin Drlg. Co., Inc. Elevation 3152 KB 3141 GL  
 Address 250 N. Water, STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #2  
 Location: Sec. 16 Twp. 15 Rge. 37W Co. Cheyenne State KS

Interval Tested 4462-4510 Zone Tested Pawnee  
 Anchor Length 48 Drill Pipe Run 4258 Mud Wt. 9.3  
 Top Packer Depth 4457 Drill Collars Run 205.92 Vis 51  
 Bottom Packer Depth 4462 Wt. Pipe Run - WL 8  
 Total Depth 4510 Chlorides 900 ppm System LCM 17  
 Blow Description IF- Opened w/ surface blow, died back to nothing  
ISI- No Return  
FF- No Blow  
FSI- No Return

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

Rec Total 5 BHT 139 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2352  Test 1150 T-On Location 8:38 AM  
 (B) First Initial Flow 21  Jars 250 T-Started 8:47 AM  
 (C) First Final Flow 26  Safety Joint 75 T-Open 10:47 AM  
 (D) Initial Shut-In 91  Circ Sub \_\_\_\_\_ T-Pulled 2:47 PM  
 (E) Second Initial Flow 26  Hourly Standby \_\_\_\_\_ T-Out 4:42 PM  
 (F) Second Final Flow 26  Mileage 146 R.T. 146 Comments \_\_\_\_\_  
 (G) Final Shut-In 94  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2314  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Initial Open 30  Shale Packer \_\_\_\_\_  
 Initial Shut-In 60  Extra Packer \_\_\_\_\_  
 Final Flow 60  Extra Recorder \_\_\_\_\_  
 Final Shut-In 90  Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1621 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Burd Out

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