



## DRILL STEM TEST REPORT

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

250 N. Water, STE 300  
Wichita, KS 67202

ATTN: Robert Hendrix

### **Kacirek Trust #4-5**

### **5-2s-36w Rawlins,KS**

Start Date: 2014.10.15 @ 06:51:00

End Date: 2014.10.15 @ 15:52:00

Job Ticket #: 60733                      DST #: 1

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

Printed: 2014.10.22 @ 09:16:47



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.  
 250 N. Water, STE 300  
 Wichita, KS 67202  
 ATTN: Robert Hendrix

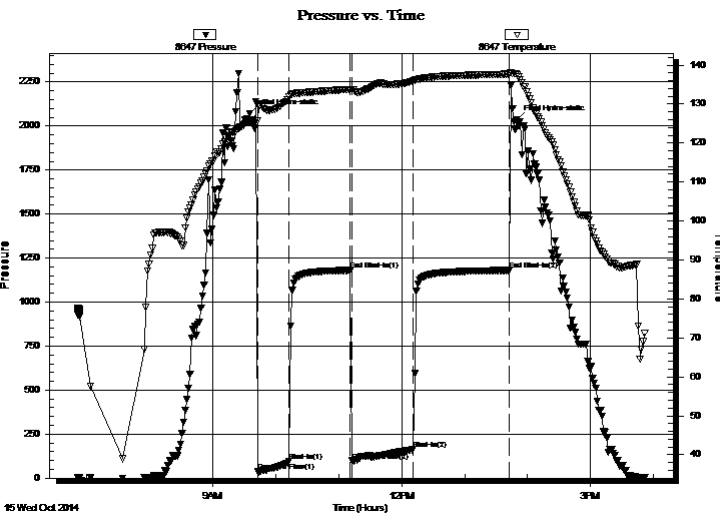
**5-2s-36w Rawlins,KS**  
**Kacirek Trust #4-5**  
 Job Ticket: 60733 **DST#: 1**  
 Test Start: 2014.10.15 @ 06:51:00

## GENERAL INFORMATION:

Formation: **Oread**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 09:42:30  
 Time Test Ended: 15:52:00  
 Interval: **4081.00 ft (KB) To 4136.00 ft (KB) (TVD)**  
 Total Depth: 4136.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Brandon Quintana  
 Unit No: 48  
 Reference Elevations: 3279.00 ft (KB)  
 3268.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8647 Inside**  
 Press@RunDepth: 162.31 psig @ 4082.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.10.15 End Date: 2014.10.15 Last Calib.: 2014.10.15  
 Start Time: 06:51:01 End Time: 15:52:00 Time On Btm: 2014.10.15 @ 09:35:00  
 Time Off Btm: 2014.10.15 @ 13:50:00

**TEST COMMENT:** 30 - IF - Opened w/ surface blow , built to 7 1/4"  
 60 - ISI - Surface return, didn't build  
 60 - FF - Blow built to B.o.B in 50 Min.  
 90 - FSI - Return built to 1 1/2"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2071.77	125.43	Initial Hydro-static
8	38.59	125.72	Open To Flow (1)
38	93.59	131.90	Shut-In(1)
96	1180.84	133.79	End Shut-In(1)
98	98.54	133.64	Open To Flow (2)
156	162.31	135.88	Shut-In(2)
248	1180.39	137.70	End Shut-In(2)
255	2035.56	137.41	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	GWOCM 60%m, 20%g, 10%w, 10%o	0.59
120.00	OCM 90%m, 10%o	0.89
62.00	MCO 60%o, 40%m	0.87
10.00	100%FO	0.14

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.

**5-2s-36w Rawlins,KS**

250 N. Water, STE 300  
Wichita, KS 67202

**Kacirek Trust #4-5**

Job Ticket: 60733

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2014.10.15 @ 06:51:00

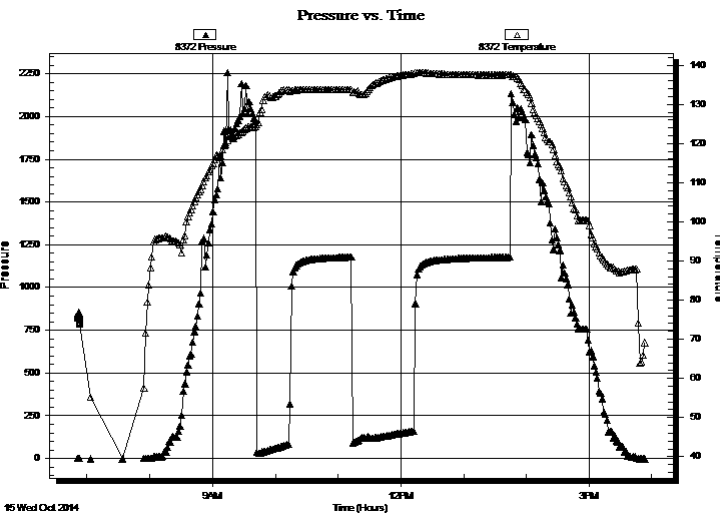
## GENERAL INFORMATION:

Formation: **Oread**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 09:42:30  
 Tester: Brandon Quintana  
 Time Test Ended: 15:52:00  
 Unit No: 48  
**Interval: 4081.00 ft (KB) To 4136.00 ft (KB) (TVD)**  
 Reference Elevations: 3279.00 ft (KB)  
 Total Depth: 4136.00 ft (KB) (TVD) 3268.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

## Serial #: 8372 Outside

Press@RunDepth: psig @ 4082.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.10.15 End Date: 2014.10.15 Last Calib.: 2014.10.15  
 Start Time: 06:51:01 End Time: 15:53:30 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 30 - IF - Opened w/ surface blow , built to 7 1/4"  
 60 - ISI - Surface return, didn't build  
 60 - FF - Blow built to B.o.B in 50 Min.  
 90 - FSI - Return built to 1 1/2"



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	GWOCM 60%m, 20%g, 10%w, 10%o	0.59
120.00	OCM 90%m, 10%o	0.89
62.00	MCO 60%o, 40%m	0.87
10.00	100%FO	0.14

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg. Co., Inc.

**5-2s-36w Rawlins,KS**

250 N. Water, STE 300  
Wichita, KS 67202

**Kacirek Trust #4-5**

Job Ticket: 60733

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2014.10.15 @ 06:51:00

## Tool Information

Drill Pipe:	Length: 3877.00 ft	Diameter: 3.80 inches	Volume: 54.38 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: 207.34 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.34 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4081.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	83.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4054.00	
Shut In Tool	5.00			4059.00	
Hydraulic tool	5.00		Inside	4064.00	
Jars	5.00			4069.00	
Safety Joint	3.00			4072.00	
Packer	5.00			4077.00	28.00 Bottom Of Top Packer
Packer	4.00			4081.00	
Stubb	1.00			4082.00	
Recorder	0.00	8647	Inside	4082.00	
Recorder	0.00	8372	Outside	4082.00	
Perforations	18.00			4100.00	
Change Over Sub	1.00			4101.00	
Drill Pipe	31.00			4132.00	
Change Over Sub	1.00			4133.00	
Bullnose	3.00			4136.00	55.00 Bottom Packers & Anchor

**Total Tool Length: 83.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drlg. Co., Inc.

**5-2s-36w Rawlins,KS**

250 N. Water, STE 300  
Wichita, KS 67202

**Kacirek Trust #4-5**

Job Ticket: 60733

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2014.10.15 @ 06:51:00

## 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:

bbbl

Water Loss: 8.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GWOCM 60%m, 20%g, 10%w, 10%o	0.590
120.00	OCM 90%m, 10%o	0.888
62.00	MCO 60%o, 40%m	0.870
10.00	100%FO	0.140

Total Length: 312.00 ft

Total Volume: 2.488 bbl

Num Fluid Samples: 0

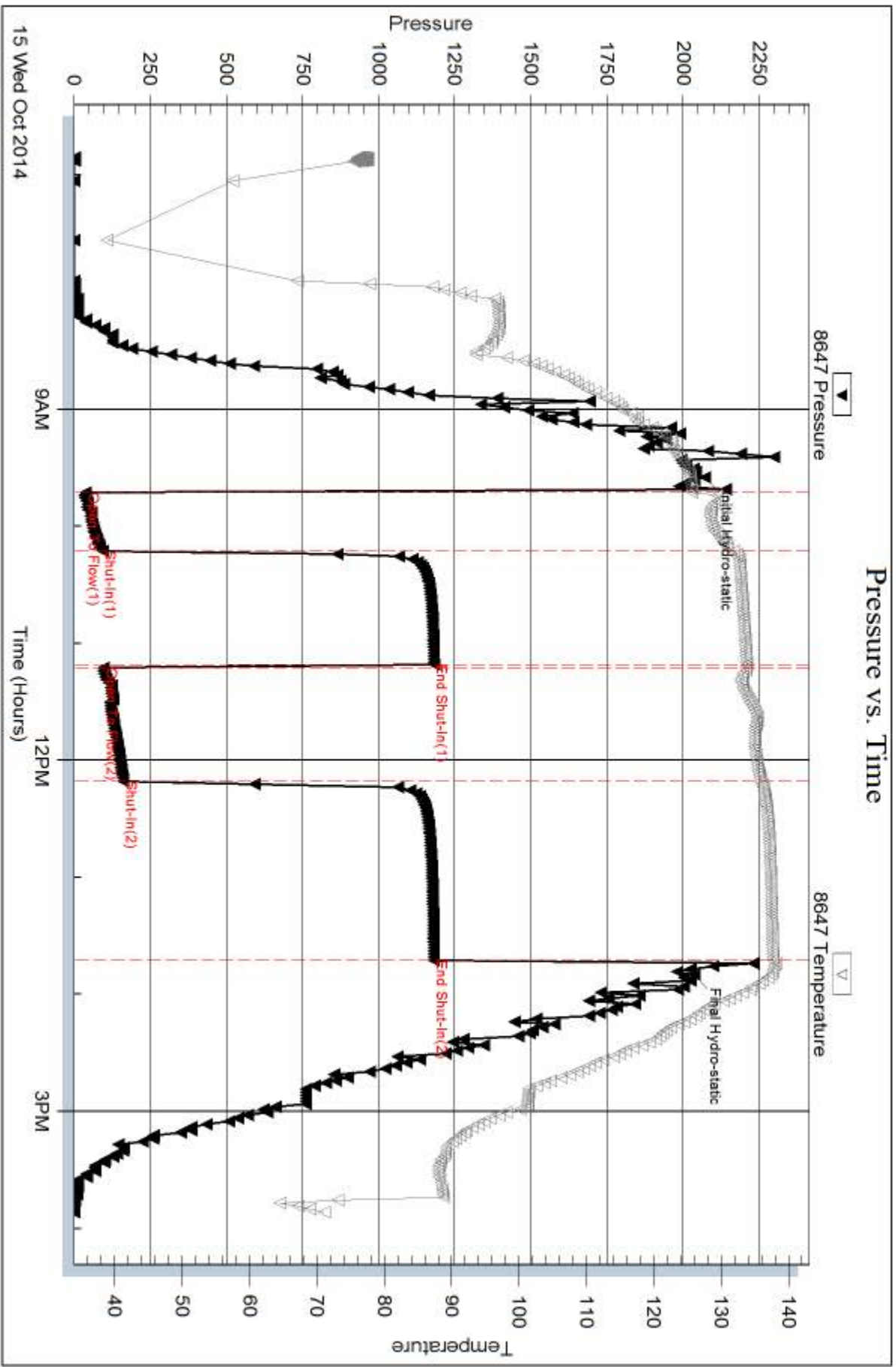
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

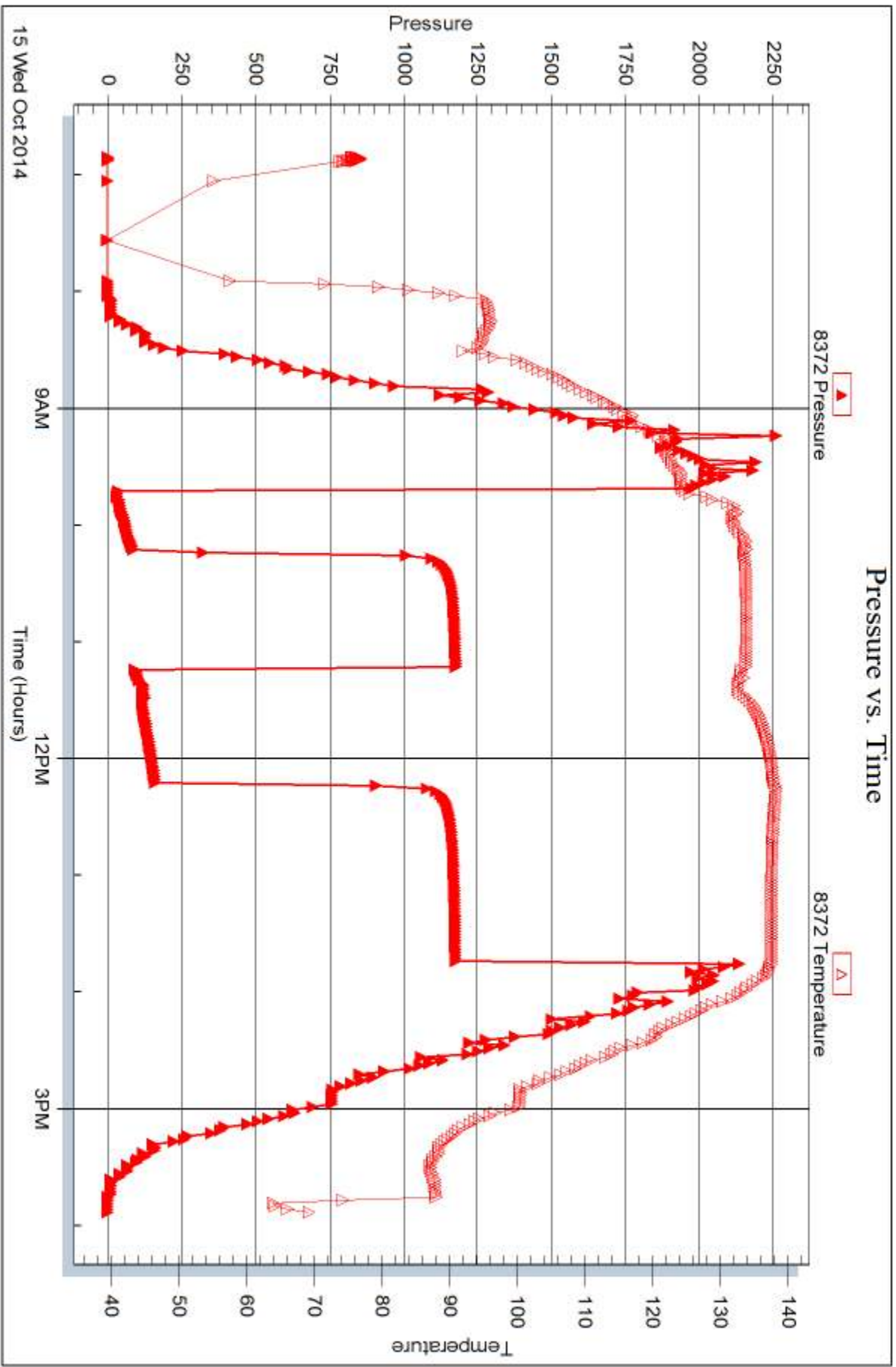


Serial #: 8372

Outside Murfin Dtg. Co., Inc.

Kacirek Trust #4-5

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 60733

Printed: 2014, 10, 22 @ 09:16:48



## DRILL STEM TEST REPORT

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

250 N. Water, STE 300  
Wichita, KS 67202

ATTN: Robert Hendrix

### **Kacirek Trust #4-5**

### **5-2s-36w Rawlins,KS**

Start Date: 2014.10.16 @ 03:37:00

End Date: 2014.10.16 @ 13:23:30

Job Ticket #: 60734                      DST #: 2

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

Printed: 2014.10.22 @ 09:16:24





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.

**5-2s-36w Rawlins,KS**

250 N. Water, STE 300  
Wichita, KS 67202

**Kacirek Trust #4-5**

Job Ticket: 60734

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2014.10.16 @ 03:37:00

## GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:24:00

Time Test Ended: 13:23:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Quintana

Unit No: 48

**Interval: 4161.00 ft (KB) To 4253.00 ft (KB) (TVD)**

Reference Elevations: 3279.00 ft (KB)

Total Depth: 4253.00 ft (KB) (TVD)

3268.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8647**

**Inside**

Press@RunDepth: 272.53 psig @ 4162.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.16

End Date: 2014.10.16

Last Calib.: 2014.10.16

Start Time: 03:37:01

End Time: 13:23:30

Time On Btm: 2014.10.16 @ 06:13:30

Time Off Btm: 2014.10.16 @ 10:48:00

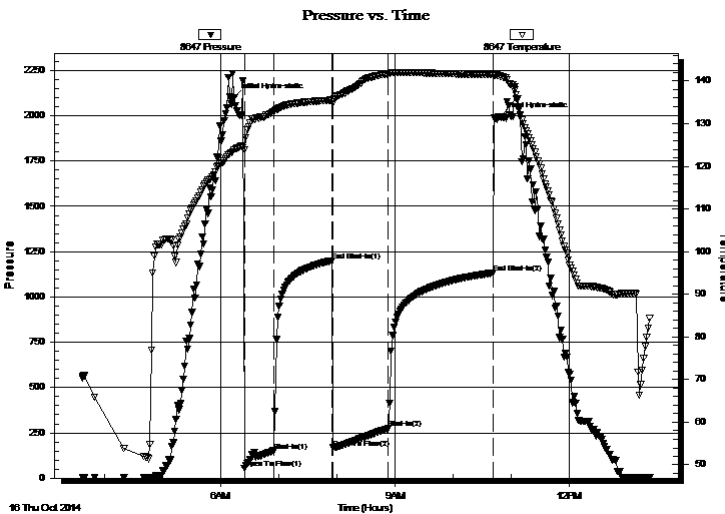
**TEST COMMENT:** 30 - IF - Opened w/ surface blow , built to B.o.B in 9 min.

60 - ISI - Return built to 6"

60 - FF - Blow built to 9"

90 - FSI - Return built to 6"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2099.63	123.98	Initial Hydro-static
11	53.61	123.89	Open To Flow (1)
41	150.65	132.83	Shut-In(1)
101	1199.18	135.51	End Shut-In(1)
102	166.65	134.76	Open To Flow (2)
159	272.53	141.72	Shut-In(2)
267	1132.00	141.49	End Shut-In(2)
275	1996.24	141.19	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	GWOCM 60% <i>m</i> , 20% <i>g</i> , 10% <i>w</i> , 10% <i>o</i>	0.59
182.00	MCO 38% <i>o</i> , 34% <i>m</i> , 28% <i>g</i>	1.76
344.00	100%FO	4.83
620.00	100%GIP	8.70

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.  
250 N. Water, STE 300  
Wichita, KS 67202  
ATTN: Robert Hendrix

**5-2s-36w Rawlins,KS**  
**Kacirek Trust #4-5**  
Job Ticket: 60734 **DST#: 2**  
Test Start: 2014.10.16 @ 03:37:00

## GENERAL INFORMATION:

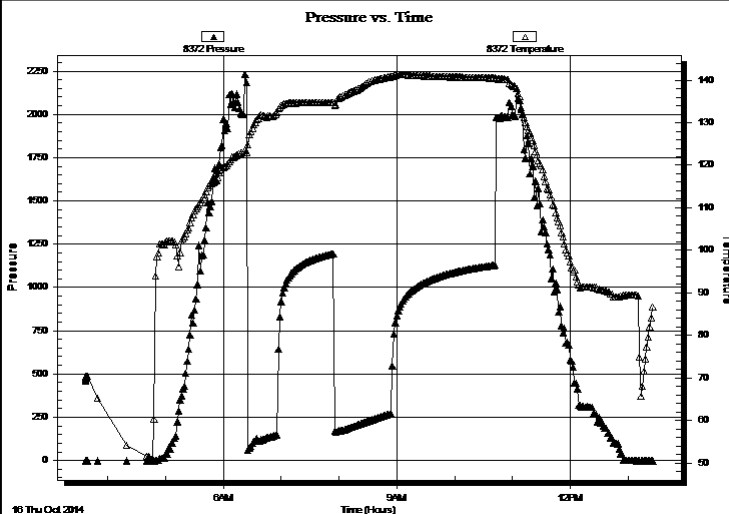
Formation: **LKC "A"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 06:24:00  
Time Test Ended: 13:23:30  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Brandon Quintana  
Unit No: 48  
Interval: **4161.00 ft (KB) To 4253.00 ft (KB) (TVD)**  
Reference Elevations: 3279.00 ft (KB)  
Total Depth: 4253.00 ft (KB) (TVD)  
3268.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
KB to GR/CF: 11.00 ft

## Serial #: 8372

Outside

Press@RunDepth: psig @ 4162.00 ft (KB)  
Capacity: 8000.00 psig  
Start Date: 2014.10.16 End Date: 2014.10.16 Last Calib.: 2014.10.16  
Start Time: 03:37:01 End Time: 13:25:30  
Time On Btm:  
Time Off Btm:

TEST COMMENT: 30 - IF - Opened w/ surface blow , built to B.o.B in 9 min.  
60 - ISI - Return built to 6"  
60 - FF - Blow built to 9"  
90 - FSI - Return built to 6"



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	GWOCM 60%m, 20%g, 10%w, 10%o	0.59
182.00	MCO 38%o, 34%m, 28%g	1.76
344.00	100%FO	4.83
620.00	100%GIP	8.70

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg. Co., Inc.

**5-2s-36w Rawlins,KS**

250 N. Water, STE 300  
Wichita, KS 67202

**Kacirek Trust #4-5**

Job Ticket: 60734

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2014.10.16 @ 03:37:00

## Tool Information

Drill Pipe:	Length: 3940.00 ft	Diameter: 3.80 inches	Volume: 55.27 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: 207.34 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
				String Weight: Initial	69000.00 lb
Drill Pipe Above KB:	14.34 ft			Final	70000.00 lb
Depth to Top Packer:	4161.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	92.00 ft				
Tool Length:	120.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4134.00	
Shut In Tool	5.00			4139.00	
Hydraulic tool	5.00		Inside	4144.00	
Jars	5.00			4149.00	
Safety Joint	3.00			4152.00	
Packer	5.00			4157.00	28.00 Bottom Of Top Packer
Packer	4.00			4161.00	
Stubb	1.00			4162.00	
Recorder	0.00	8647	Inside	4162.00	
Recorder	0.00	8372	Outside	4162.00	
Perforations	23.00			4185.00	
Change Over Sub	1.00			4186.00	
Drill Pipe	63.00			4249.00	
Change Over Sub	1.00			4250.00	
Bullnose	3.00			4253.00	92.00 Bottom Packers & Anchor

**Total Tool Length: 120.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drlg. Co., Inc.

**5-2s-36w Rawlins,KS**

250 N. Water, STE 300  
Wichita, KS 67202

**Kacirek Trust #4-5**

Job Ticket: 60734

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2014.10.16 @ 03:37:00

## 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: 75.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GWOCM 60%m, 20%g, 10%w , 10%o	0.590
182.00	MCO 38%o, 34%m, 28%g	1.757
344.00	100%FO	4.825
620.00	100%GIP	8.697

Total Length: 1266.00 ft      Total Volume: 15.869 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

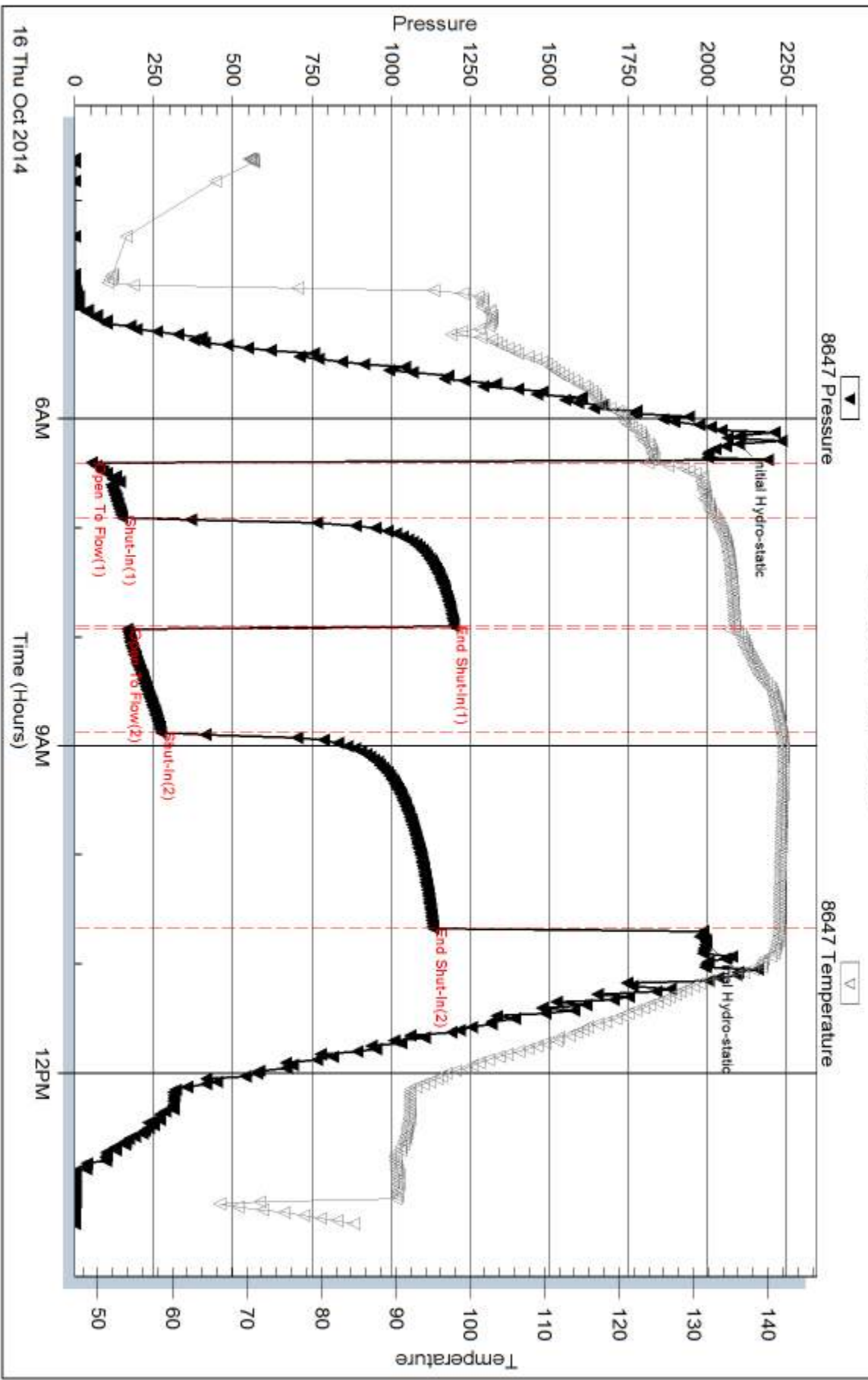
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity 37 @ 80 Corrected = 39

### Pressure vs. Time

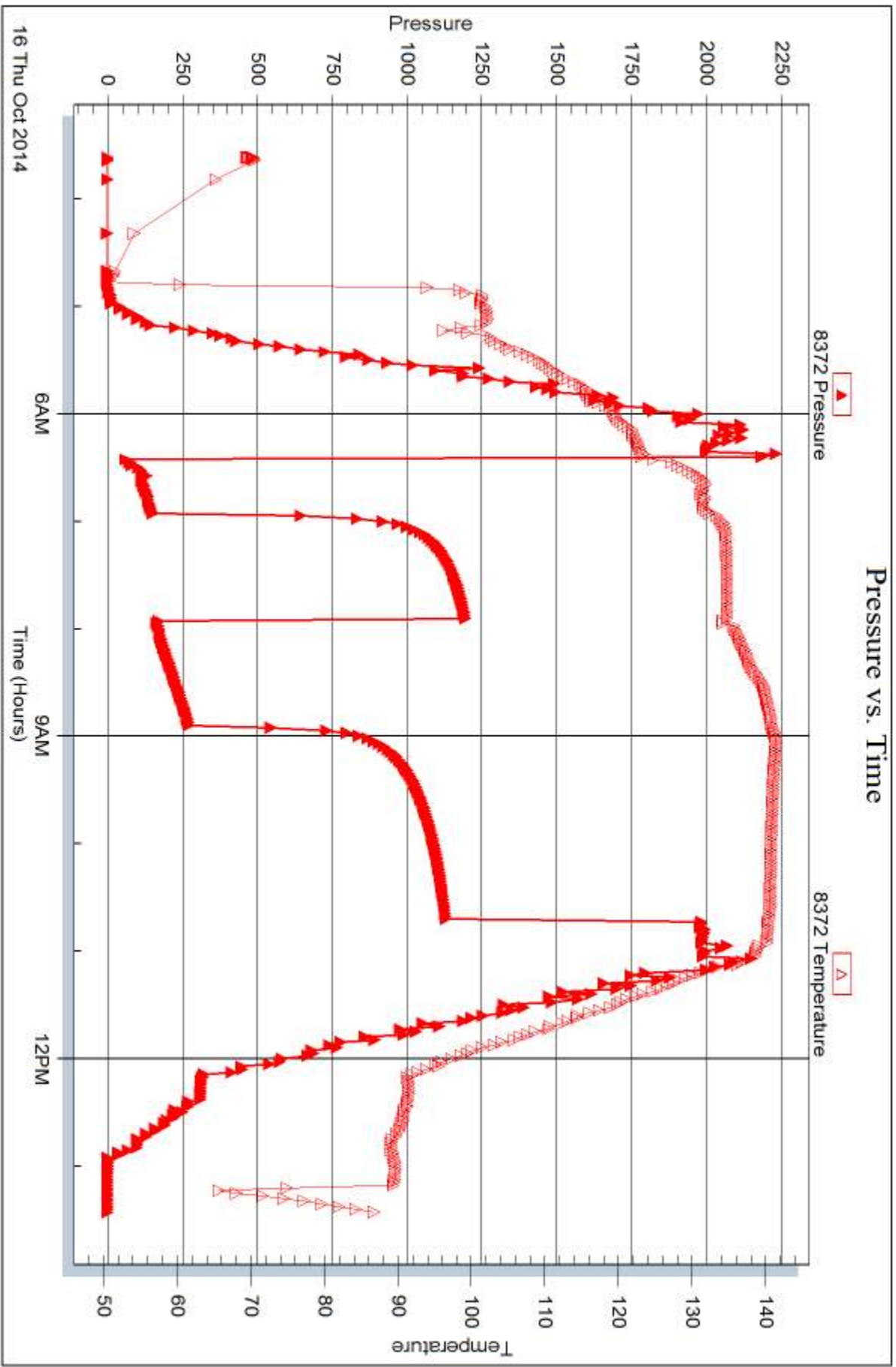


Serial #: 8372

Outside Murfin Drtg. Co., Inc.

Kacirek Trust #4-5

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 60734

Printed: 2014, 10, 22 @ 09:16:25



## DRILL STEM TEST REPORT

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

250 N. Water, STE 300  
Wichita, KS 67202

ATTN: Robert Hendrix

### **Kacirek Trust #4-5**

### **5-2s-36w Rawlins,KS**

Start Date: 2014.10.16 @ 22:24:00

End Date: 2014.10.17 @ 05:49:30

Job Ticket #: 60735                      DST #: 3

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

Printed: 2014.10.22 @ 09:15:02



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.  
250 N. Water, STE 300  
Wichita, KS 67202  
ATTN: Robert Hendrix

**5-2s-36w Rawlins,KS**  
**Kacirek Trust #4-5**  
Job Ticket: 60735 **DST#: 3**  
Test Start: 2014.10.16 @ 22:24:00

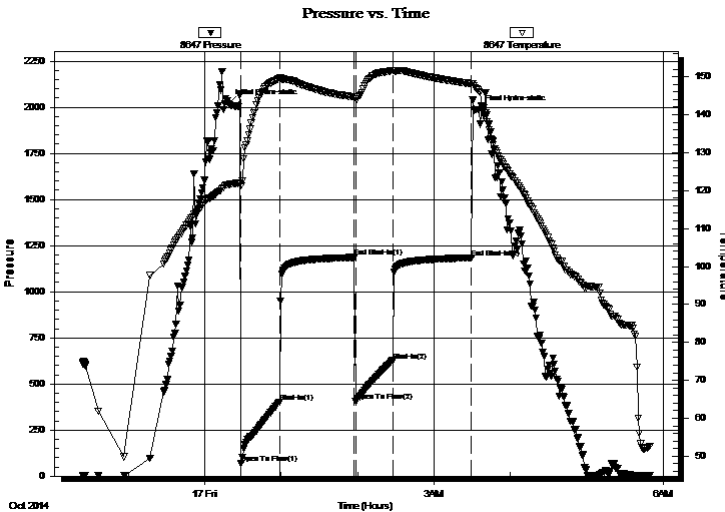
## GENERAL INFORMATION:

Formation: **LKC "D"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 00:28:30  
Time Test Ended: 05:49:30  
Interval: **4241.00 ft (KB) To 4296.00 ft (KB) (TVD)**  
Total Depth: 4296.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Brandon Quintana  
Unit No: 48  
Reference Elevations: 3279.00 ft (KB)  
3268.00 ft (CF)  
KB to GR/CF: 11.00 ft

**Serial #: 8647 Inside**  
Press@RunDepth: 626.45 psig @ 4242.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2014.10.16 End Date: 2014.10.17 Last Calib.: 2014.10.17  
Start Time: 22:24:01 End Time: 05:49:30 Time On Btm: 2014.10.17 @ 00:18:30  
Time Off Btm: 2014.10.17 @ 03:34:30

**TEST COMMENT:** 30 - IF - Opened w/ surface blow , built to B.o.B in 4 min  
60 - ISI - No Return  
30 - FF - Blow built to B.o.B in 4 min.  
60 - FSI - No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2020.94	121.62	Initial Hydro-static
10	70.28	121.35	Open To Flow (1)
40	401.74	149.45	Shut-In(1)
99	1186.16	144.65	End Shut-In(1)
100	405.75	144.22	Open To Flow (2)
129	626.45	151.56	Shut-In(2)
191	1184.02	148.23	End Shut-In(2)
196	1986.94	146.51	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
860.00	MW 90%w, 10%m	10.17
479.00	60%m, 40%w	6.72

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.  
250 N. Water, STE 300  
Wichita, KS 67202  
ATTN: Robert Hendrix

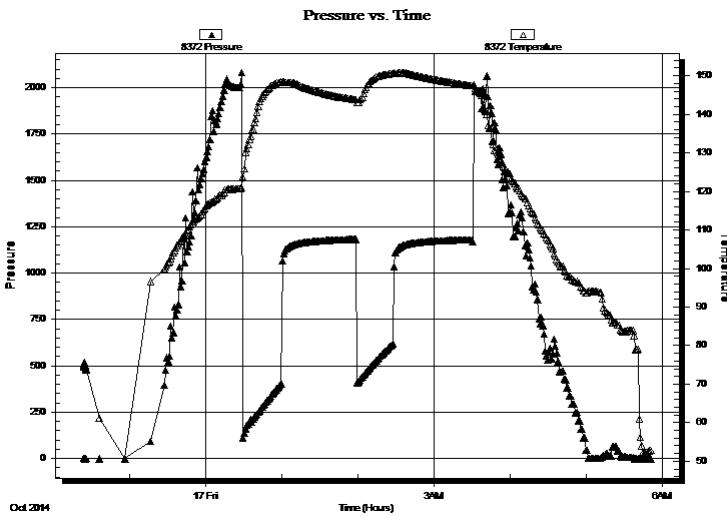
**5-2s-36w Rawlins,KS**  
**Kacirek Trust #4-5**  
Job Ticket: 60735 **DST#: 3**  
Test Start: 2014.10.16 @ 22:24:00

## GENERAL INFORMATION:

Formation: **LKC "D"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 00:28:30  
Time Test Ended: 05:49:30  
Interval: **4241.00 ft (KB) To 4296.00 ft (KB) (TVD)**  
Total Depth: 4296.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Brandon Quintana  
Unit No: 48  
Reference Elevations: 3279.00 ft (KB)  
3268.00 ft (CF)  
KB to GR/CF: 11.00 ft

**Serial #: 8372 Outside**  
Press@RunDepth: psig @ 4242.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2014.10.16 End Date: 2014.10.17 Last Calib.: 2014.10.17  
Start Time: 22:24:01 End Time: 05:51:00 Time On Btm:  
Time Off Btm:

**TEST COMMENT:** 30 - IF - Opened w/ surface blow , built to B.o.B in 4 min  
60 - ISI - No Return  
30 - FF - Blow built to B.o.B in 4 min.  
60 - FSI - No Return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
860.00	MW 90%w, 10%m	10.17
479.00	60%m, 40%w	6.72

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg. Co., Inc.

**5-2s-36w Rawlins,KS**

250 N. Water, STE 300  
Wichita, KS 67202

**Kacirek Trust #4-5**

Job Ticket: 60735

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2014.10.16 @ 22:24:00

## Tool Information

Drill Pipe:	Length: 4036.00 ft	Diameter: 3.80 inches	Volume: 56.61 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: 207.34 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.34 ft			String Weight: Initial 69000.00 lb
Depth to Top Packer:	4241.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	83.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4214.00	
Shut In Tool	5.00			4219.00	
Hydraulic tool	5.00		Inside	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	4.00			4241.00	
Stubb	1.00			4242.00	
Recorder	0.00	8647	Inside	4242.00	
Recorder	0.00	8372	Outside	4242.00	
Perforations	18.00			4260.00	
Change Over Sub	1.00			4261.00	
Drill Pipe	31.00			4292.00	
Change Over Sub	1.00			4293.00	
Bullnose	3.00			4296.00	55.00 Bottom Packers & Anchor

**Total Tool Length: 83.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drlg. Co., Inc.

**5-2s-36w Rawlins,KS**

250 N. Water, STE 300  
Wichita, KS 67202

**Kacirek Trust #4-5**

Job Ticket: 60735

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2014.10.16 @ 22:24:00

### 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:

83000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.37 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
860.00	MW 90%w , 10%m	10.175
479.00	60%m, 40%w	6.719

Total Length: 1339.00 ft      Total Volume: 16.894 bbl

Num Fluid Samples: 0

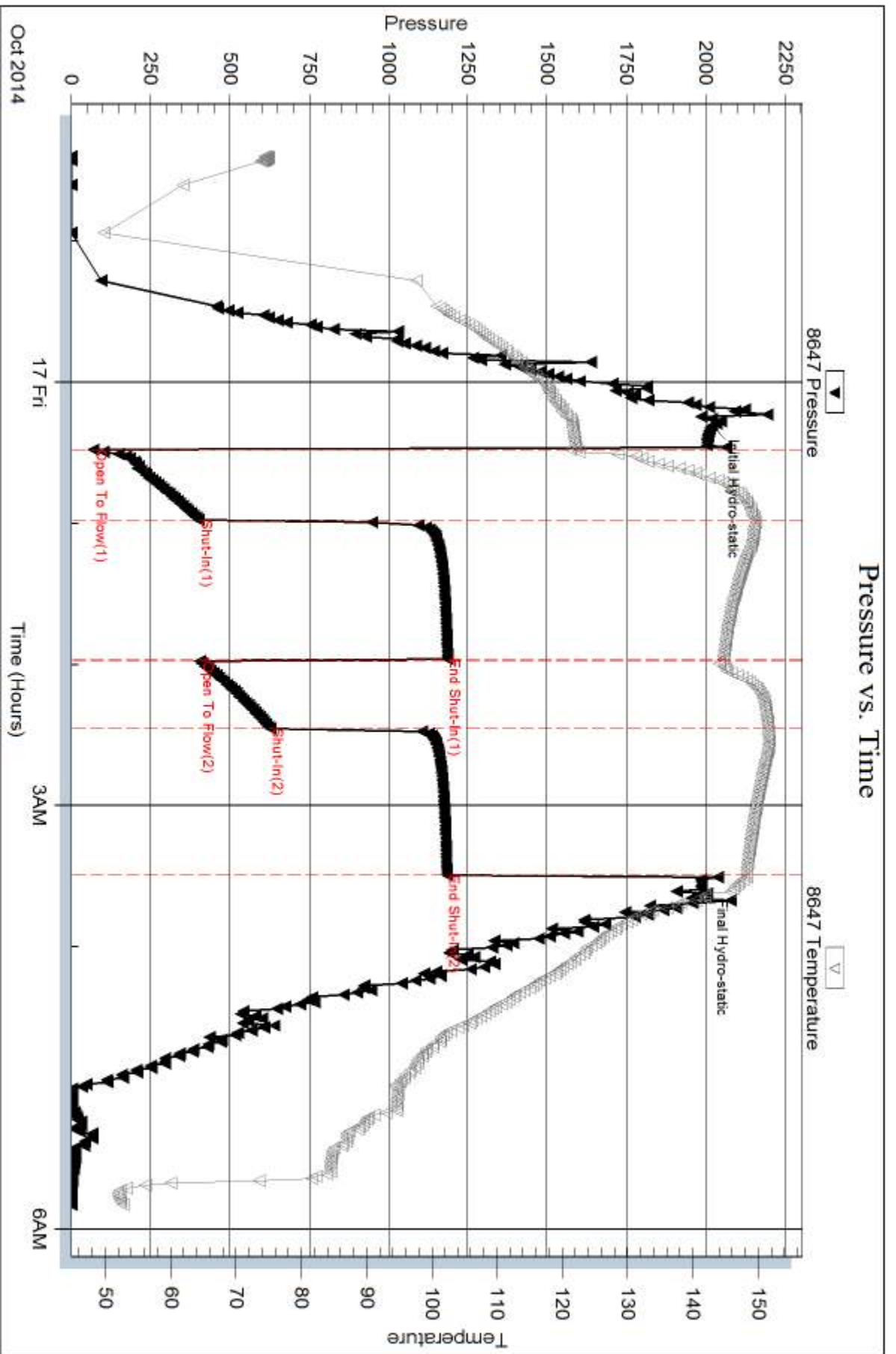
Num Gas Bombs: 0

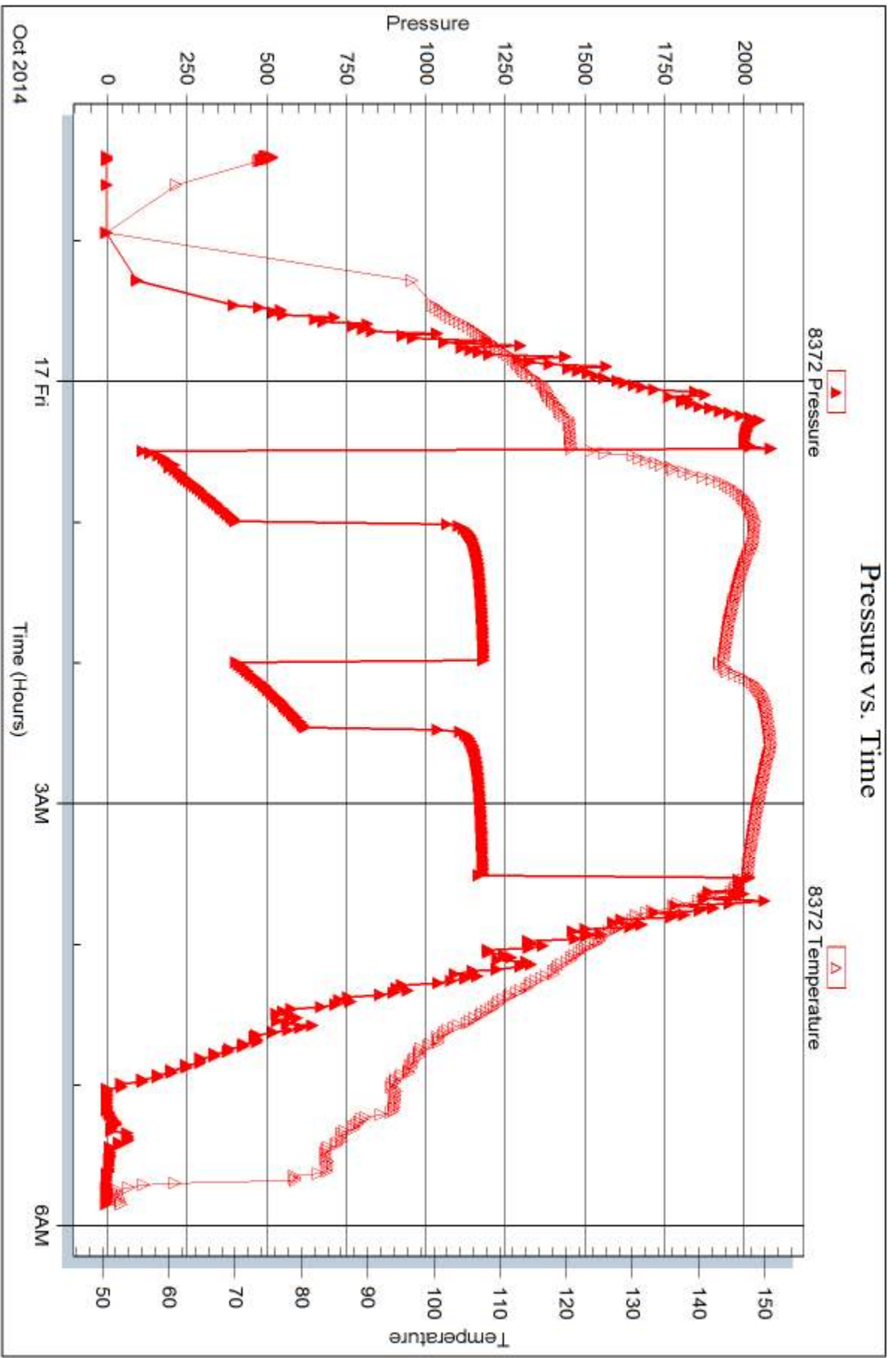
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .14 @ 50F Chlorides 83000ppm







## DRILL STEM TEST REPORT

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

250 N. Water, STE 300  
Wichita, KS 67202

ATTN: Robert Hendrix

### **Kacirek Trust #4-5**

### **5-2s-36w Rawlins,KS**

Start Date: 2014.10.17 @ 15:29:00

End Date: 2014.10.17 @ 23:31:30

Job Ticket #: 60736                      DST #: 4

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

Printed: 2014.10.22 @ 09:14:35



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.

**5-2s-36w Rawlins,KS**

250 N. Water, STE 300  
Wichita, KS 67202

**Kacirek Trust #4-5**

Job Ticket: 60736

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2014.10.17 @ 15:29:00

## GENERAL INFORMATION:

Formation: **LKC "G"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 17:36:30  
 Time Test Ended: 23:31:30  
 Interval: **4307.00 ft (KB) To 4306.00 ft (KB) (TVD)**  
 Total Depth: 4360.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Brandon Quintana  
 Unit No: 48  
 Reference Elevations: 3279.00 ft (KB)  
 3268.00 ft (CF)  
 KB to GR/CF: 11.00 ft

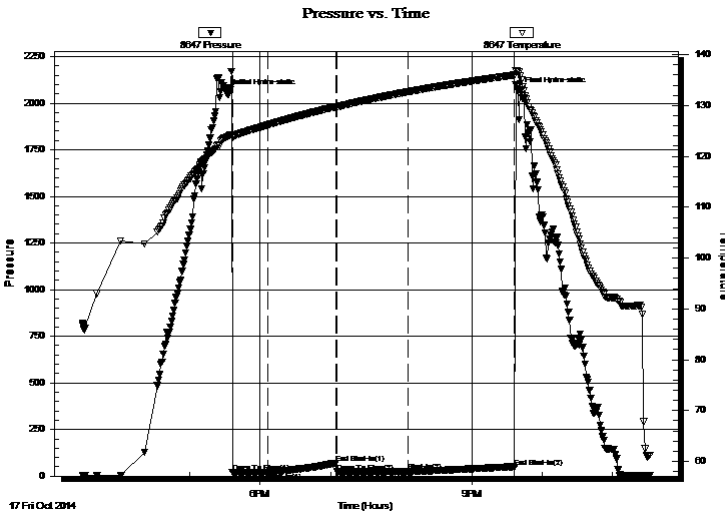
## Serial #: 8647

Inside

Press@RunDepth: 23.34 psig @ 4308.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.10.17 End Date: 2014.10.17 Last Calib.: 2014.10.17  
 Start Time: 15:29:01 End Time: 23:31:30 Time On Btm: 2014.10.17 @ 17:31:30  
 Time Off Btm: 2014.10.17 @ 21:39:30

TEST COMMENT: 30 - IF - Opened w/ surface blow , didn't build  
 60 - ISI - No Return  
 60 - FF - No Blow  
 90 - FSI - No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2051.81	123.81	Initial Hydro-static
5	20.91	123.64	Open To Flow (1)
35	20.81	126.17	Shut-In(1)
93	70.57	129.76	End Shut-In(1)
94	22.08	129.74	Open To Flow (2)
154	23.34	132.67	Shut-In(2)
245	48.93	136.00	End Shut-In(2)
248	2060.59	136.70	Final Hydro-static

## Recovery

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

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.  
250 N. Water, STE 300  
Wichita, KS 67202  
ATTN: Robert Hendrix

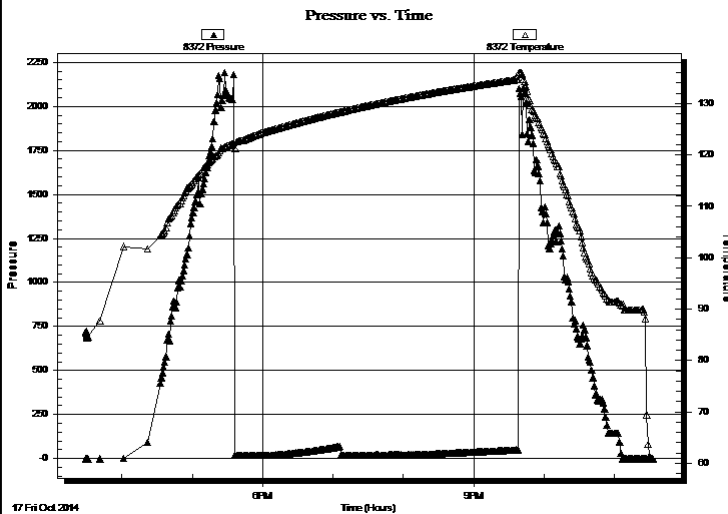
**5-2s-36w Rawlins,KS**  
**Kacirek Trust #4-5**  
Job Ticket: 60736 **DST#: 4**  
Test Start: 2014.10.17 @ 15:29:00

## GENERAL INFORMATION:

Formation: **LKC "G"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 17:36:30  
Time Test Ended: 23:31:30  
Interval: **4307.00 ft (KB) To 4306.00 ft (KB) (TVD)**  
Total Depth: 4360.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Brandon Quintana  
Unit No: 48  
Reference Elevations: 3279.00 ft (KB)  
3268.00 ft (CF)  
KB to GR/CF: 11.00 ft

**Serial #: 8372** **Outside**  
Press@RunDepth: psig @ 4308.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2014.10.17 End Date: 2014.10.17 Last Calib.: 2014.10.17  
Start Time: 15:29:01 End Time: 23:33:00 Time On Btm:  
Time Off Btm:

TEST COMMENT: 30 - IF - Opened w/ surface blow , didn't build  
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)
2.00	100%m	0.01

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg. Co., Inc.

**5-2s-36w Rawlins,KS**

250 N. Water, STE 300  
Wichita, KS 67202

**Kacirek Trust #4-5**

Job Ticket: 60736

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2014.10.17 @ 15:29:00

## Tool Information

Drill Pipe:	Length: 4098.00 ft	Diameter: 3.80 inches	Volume: 57.48 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: 207.34 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.34 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4307.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	53.00 ft			
Tool Length:	81.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4280.00	
Shut In Tool	5.00			4285.00	
Hydraulic tool	5.00		Inside	4290.00	
Jars	5.00			4295.00	
Safety Joint	3.00			4298.00	
Packer	5.00			4303.00	28.00 Bottom Of Top Packer
Packer	4.00			4307.00	
Stubb	1.00			4308.00	
Recorder	0.00	8647	Inside	4308.00	
Recorder	0.00	8372	Outside	4308.00	
Perforations	16.00			4324.00	
Change Over Sub	1.00			4325.00	
Drill Pipe	31.00			4356.00	
Change Over Sub	1.00			4357.00	
Bullnose	3.00			4360.00	53.00 Bottom Packers & Anchor

**Total Tool Length: 81.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drlg. Co., Inc.

**5-2s-36w Rawlins,KS**

250 N. Water, STE 300  
Wichita, KS 67202

**Kacirek Trust #4-5**

Job Ticket: 60736

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2014.10.17 @ 15:29:00

### 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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	100%m	0.010

Total Length: 2.00 ft      Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

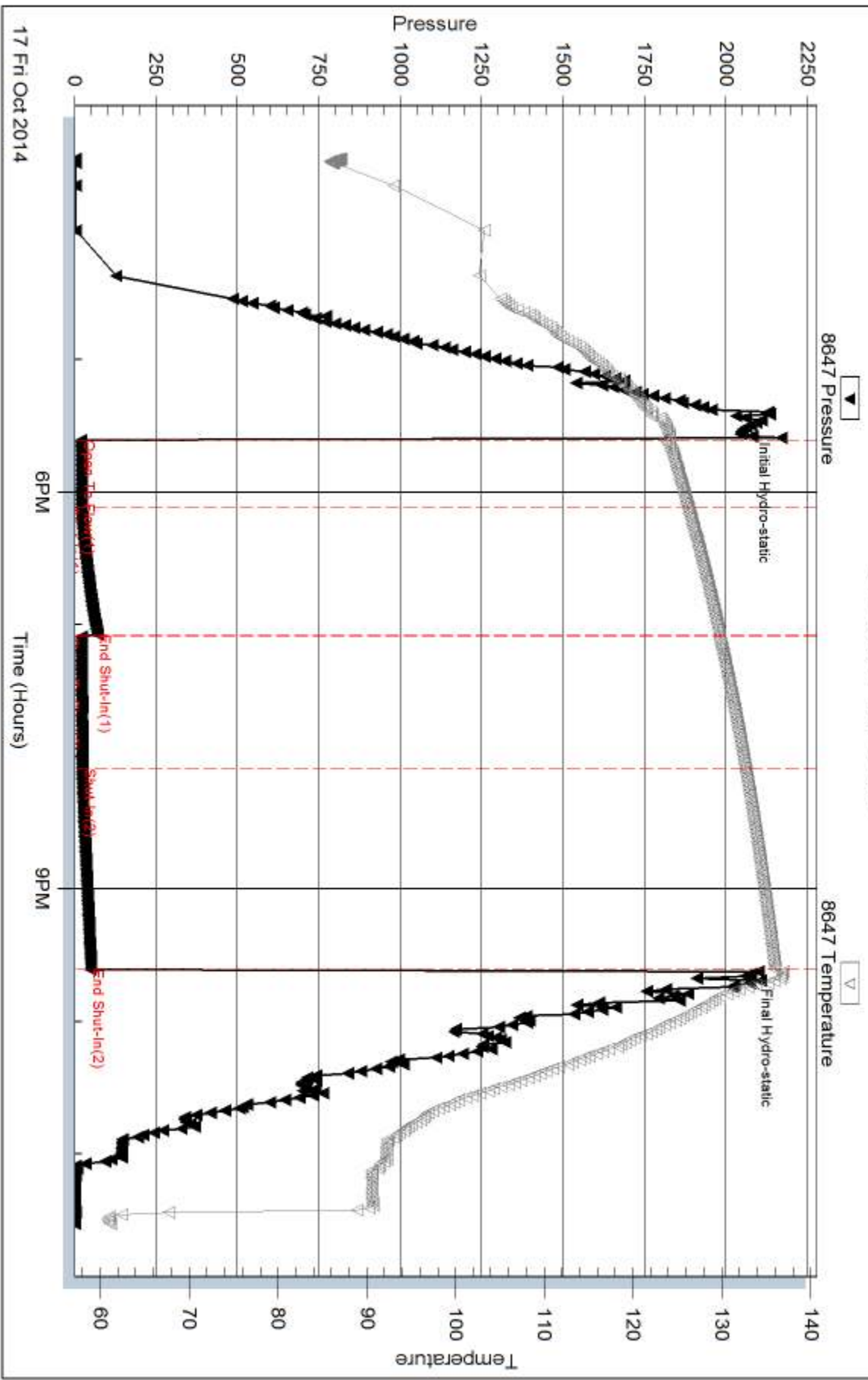
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

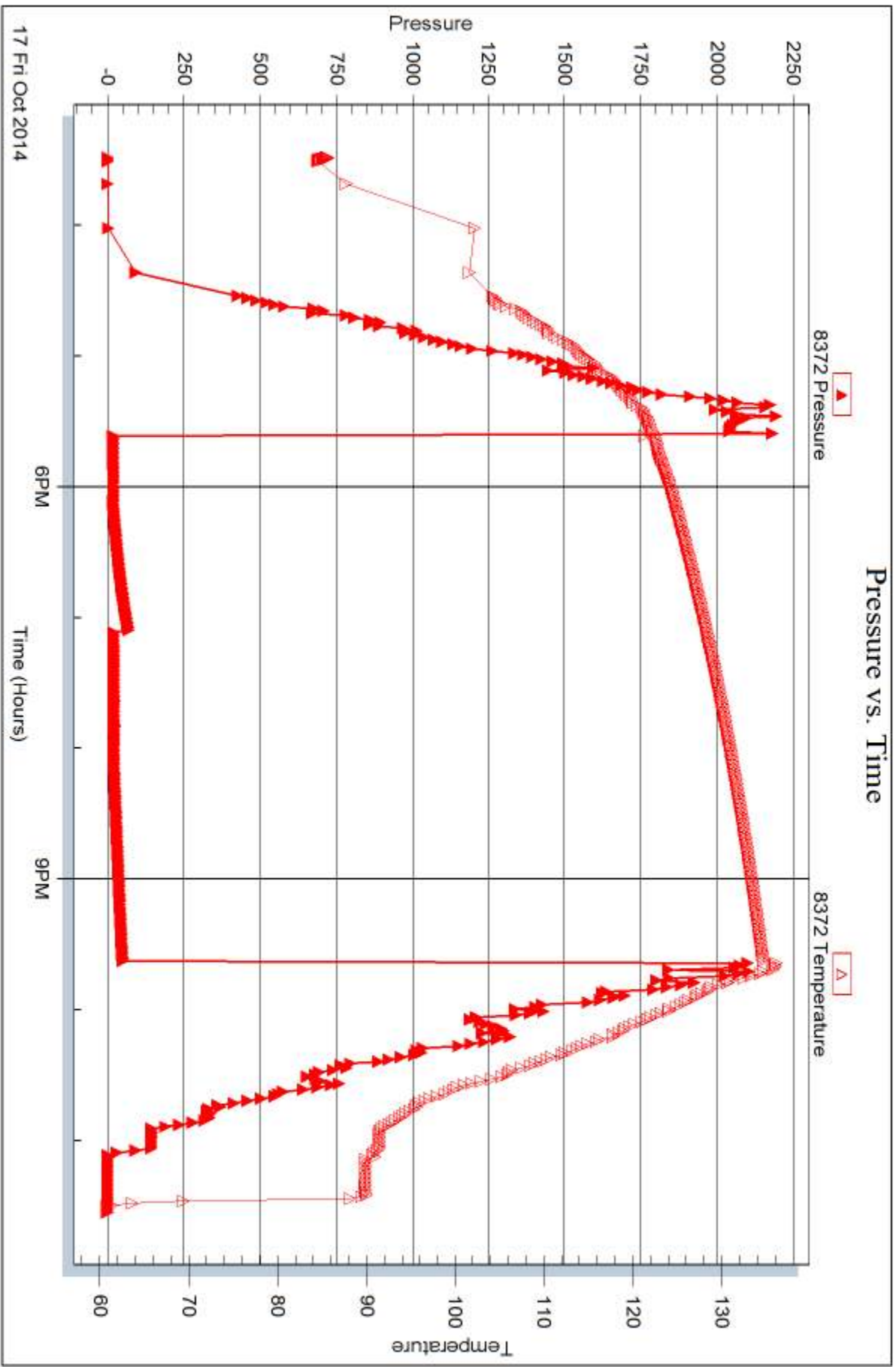


Serial #: 8372

Outside Murfin Dtg. Co., Inc.

Kacirek Trust #4-5

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 60736

Printed: 2014, 10, 22 @ 09:14:37



## DRILL STEM TEST REPORT

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

250 N. Water, STE 300  
Wichita, KS 67202

ATTN: Robert Hendrix

### **Kacirek Trust #4-5**

### **5-2s-36w Rawlins,KS**

Start Date: 2014.10.18 @ 10:23:00

End Date: 2014.10.18 @ 18:37:30

Job Ticket #: 60737                      DST #: 5

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

Printed: 2014.10.22 @ 09:09:56

Murfin Drlg. Co., Inc. 5-2s-36w Rawlins,KS Kacirek Trust #4-5 DST # 5 LKC "H-J" 2014.10.18



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.

**5-2s-36w Rawlins,KS**

250 N. Water, STE 300  
Wichita, KS 67202

**Kacirek Trust #4-5**

ATTN: Robert Hendrix

Job Ticket: 60737

**DST#: 5**

Test Start: 2014.10.18 @ 10:23:00

## GENERAL INFORMATION:

Formation: **LKC "H-J"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 12:27:30  
 Time Test Ended: 18:37:30  
 Interval: **4350.00 ft (KB) To 4440.00 ft (KB) (TVD)**  
 Total Depth: 4440.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Brandon Quintana  
 Unit No: 48  
 Reference Elevations: 3279.00 ft (KB)  
 3268.00 ft (CF)  
 KB to GR/CF: 11.00 ft

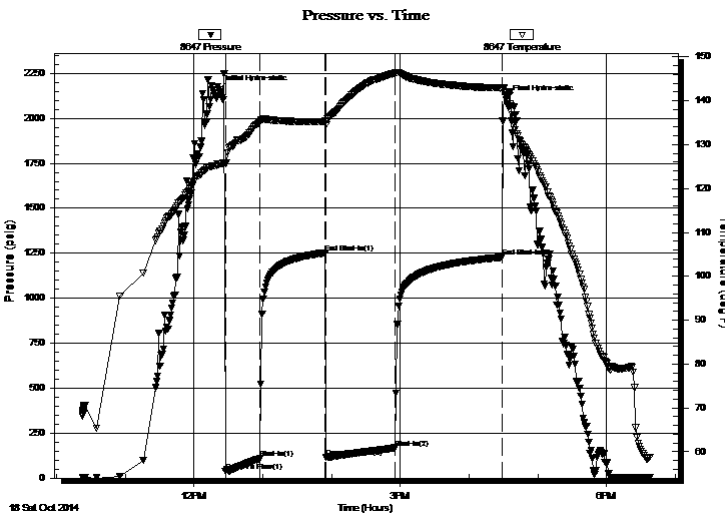
## Serial #: 8647

Inside

Press@RunDepth: 168.24 psig @ 4351.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.10.18 End Date: 2014.10.18 Last Calib.: 2014.10.18  
 Start Time: 10:23:01 End Time: 18:37:30 Time On Btm: 2014.10.18 @ 12:21:30  
 Time Off Btm: 2014.10.18 @ 16:32:30

TEST COMMENT: 30 - IF - Opened w/ surface blow , built to 7"  
 60 - ISI - No Return  
 60 - FF - Blow built to 8"  
 90 - FSI - No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2161.18	125.55	Initial Hydro-static
6	37.20	125.58	Open To Flow (1)
36	108.35	135.13	Shut-In(1)
93	1252.97	135.30	End Shut-In(1)
94	115.22	134.62	Open To Flow (2)
154	168.24	146.28	Shut-In(2)
247	1227.90	142.89	End Shut-In(2)
251	2102.85	141.30	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
180.00	WM w / oil spots 80%w , 20%m	0.89
152.00	WOCM 60%m, 20%w , 20%o	1.88

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.  
250 N. Water, STE 300  
Wichita, KS 67202  
ATTN: Robert Hendrix

**5-2s-36w Rawlins, KS**  
**Kacirek Trust #4-5**  
Job Ticket: 60737      **DST#: 5**  
Test Start: 2014.10.18 @ 10:23:00

## GENERAL INFORMATION:

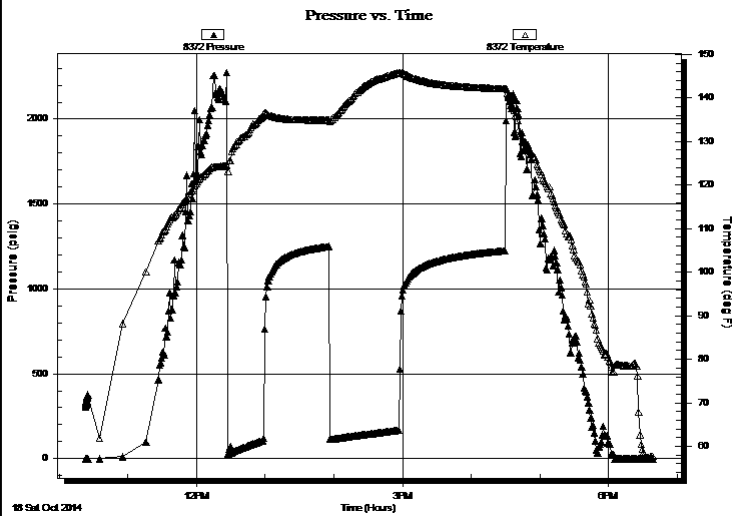
Formation: **LKC "H-J"**  
Deviated: No Whipstock:      ft (KB)      Test Type: Conventional Bottom Hole (Initial)  
Time Tool Opened: 12:27:30      Tester: Brandon Quintana  
Time Test Ended: 18:37:30      Unit No: 48  
**Interval: 4350.00 ft (KB) To 4440.00 ft (KB) (TVD)**      Reference Elevations: 3279.00 ft (KB)  
Total Depth: 4440.00 ft (KB) (TVD)      3268.00 ft (CF)  
Hole Diameter: 7.88 inches      Hole Condition: Fair      KB to GR/CF: 11.00 ft

## Serial #: 8372

**Outside**

Press@RunDepth:      psig @ 4351.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2014.10.18      End Date: 2014.10.18      Last Calib.: 2014.10.18  
Start Time: 10:23:01      End Time: 18:39:00      Time On Btm:  
Time Off Btm:

TEST COMMENT: 30 - IF - Opened w/ surface blow , built to 7"  
60 - ISI - No Return  
60 - FF - Blow built to 8"  
90 - FSI - No Return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
180.00	WM w / oil spots 80%w , 20%m	0.89
152.00	WOCM 60%m, 20%w , 20%o	1.88

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg. Co., Inc.

**5-2s-36w Rawlins,KS**

250 N. Water, STE 300  
Wichita, KS 67202

**Kacirek Trust #4-5**

Job Ticket: 60737

**DST#: 5**

ATTN: Robert Hendrix

Test Start: 2014.10.18 @ 10:23:00

## Tool Information

Drill Pipe:	Length: 4131.00 ft	Diameter: 3.80 inches	Volume: 57.95 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: 207.34 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.34 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4350.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	90.00 ft			
Tool Length:	118.00 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
Change Over Sub	1.00			4323.00	
Shut In Tool	5.00			4328.00	
Hydraulic tool	5.00		Inside	4333.00	
Jars	5.00			4338.00	
Safety Joint	3.00			4341.00	
Packer	5.00			4346.00	28.00 Bottom Of Top Packer
Packer	4.00			4350.00	
Stubb	1.00			4351.00	
Recorder	0.00	8647	Inside	4351.00	
Recorder	0.00	8372	Outside	4351.00	
Perforations	22.00			4373.00	
Change Over Sub	1.00			4374.00	
Drill Pipe	62.00			4436.00	
Change Over Sub	1.00			4437.00	
Bullnose	3.00			4440.00	90.00 Bottom Packers & Anchor

**Total Tool Length: 118.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drlg. Co., Inc.

**5-2s-36w Rawlins,KS**

250 N. Water, STE 300  
Wichita, KS 67202

**Kacirek Trust #4-5**

Job Ticket: 60737

**DST#: 5**

ATTN: Robert Hendrix

Test Start: 2014.10.18 @ 10:23:00

### 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: 10.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
180.00	WM w / oil spots 80%w , 20%m	0.885
152.00	WOCM 60%m, 20%w , 20%o	1.883

Total Length: 332.00 ft      Total Volume: 2.768 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .13 @ 75F Chlorides 64000ppm

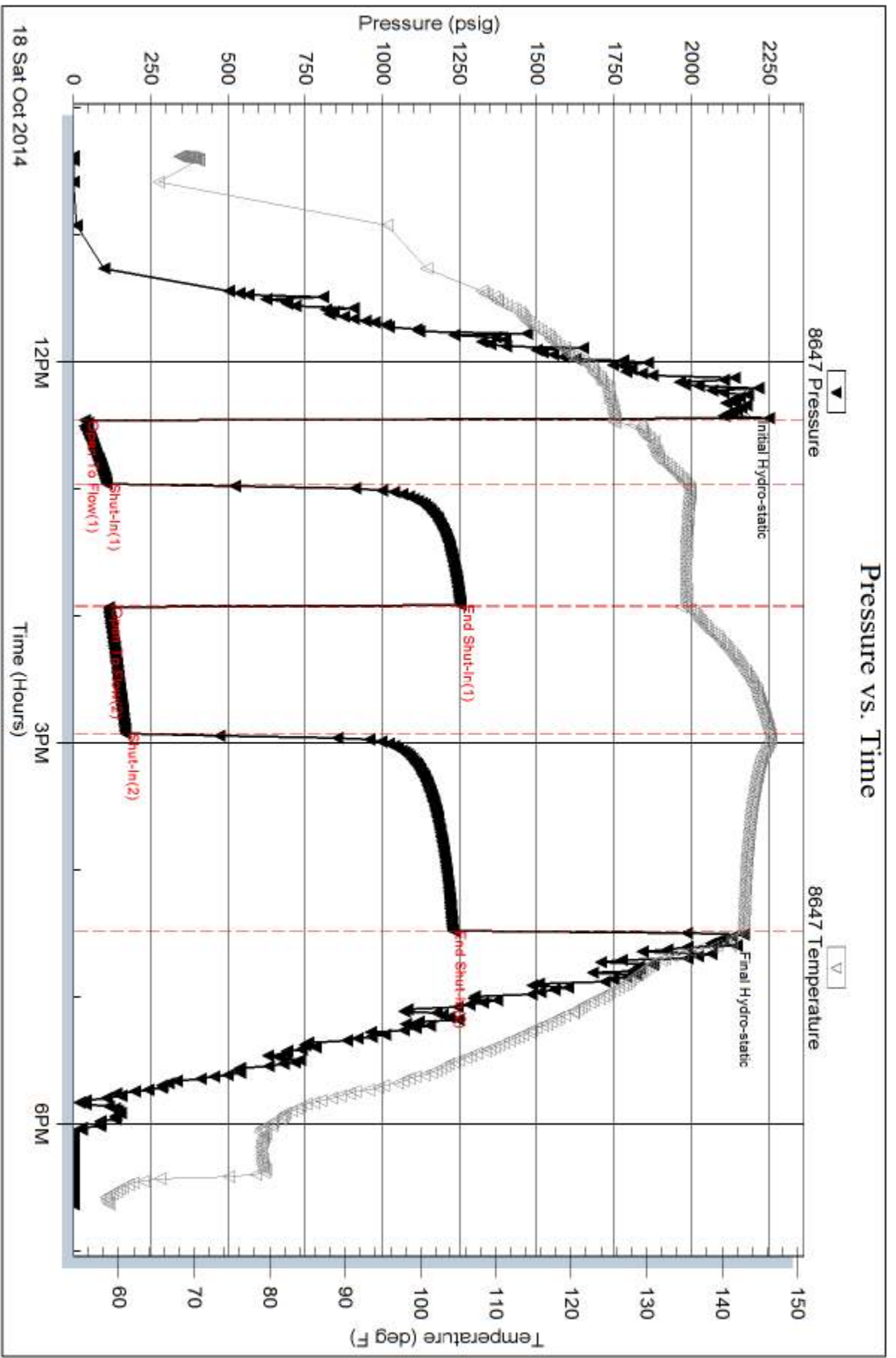
Serial #: 8647

Inside

Murfin Drng. Co., Inc.

Kacirek Trust #4-5

DST Test Number: 5

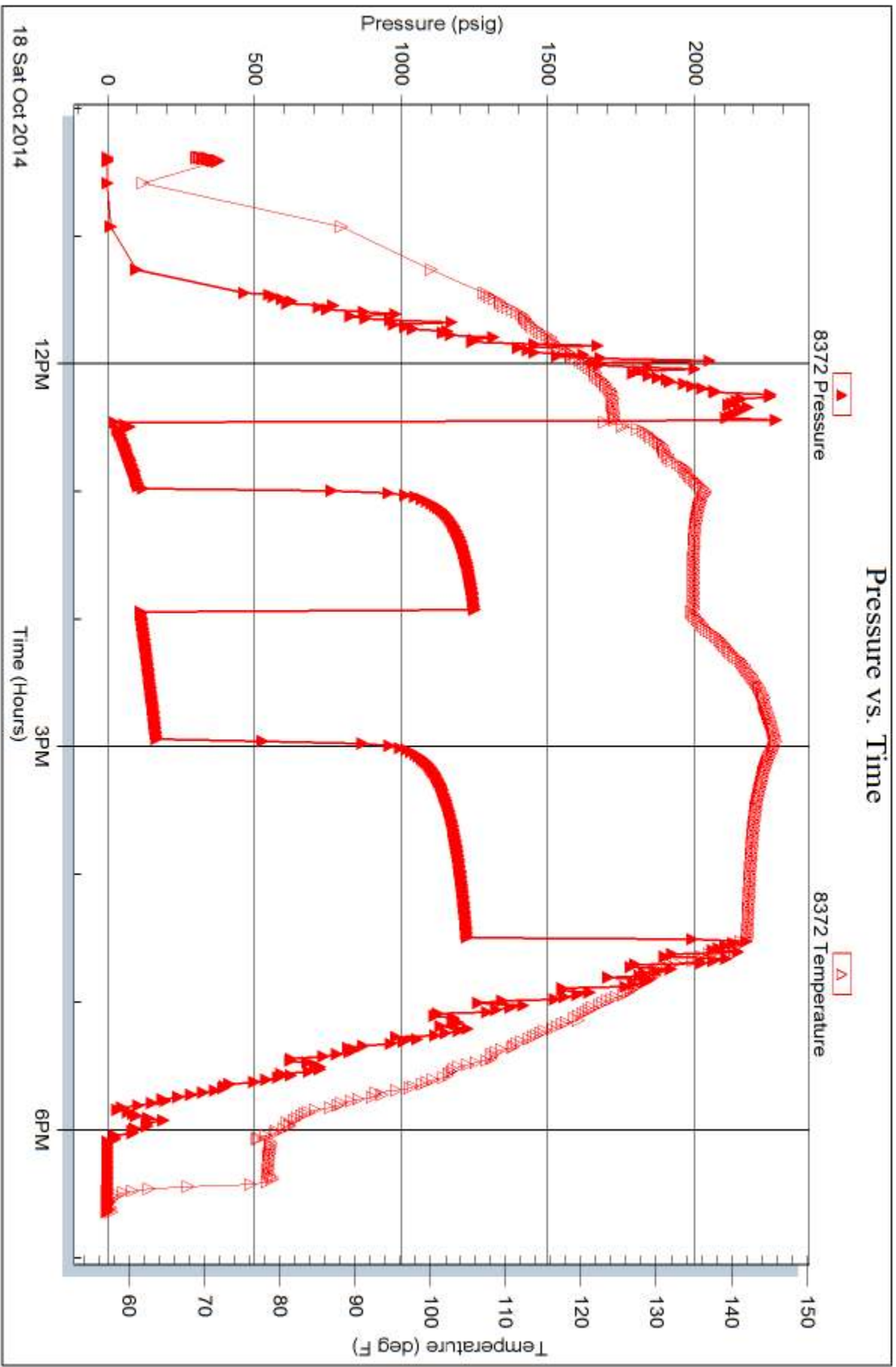


Serial #: 8372

Outside Murfin Drfg. Co., Inc.

Kacirek Trust #4-5

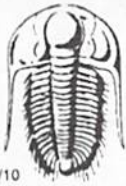
DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 60737

Printed: 2014, 10, 22 @ 09:09:57



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **60733**

Well Name & No. Kacirek Trust #4-5 Test No. 1 Date 10-15-14  
 Company Murfin Drlg. Co., Inc. Elevation ~~3279~~ 3268 GL  
 Address 250 N. Water, STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 5 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4081 - 4136 Zone Tested Oread  
 Anchor Length 55' Drill Pipe Run 3877 Mud Wt. 9.2  
 Top Packer Depth 4076 Drill Collars Run 207.34 Vis 65  
 Bottom Packer Depth 4081 Wt. Pipe Run — WL 8.4  
 Total Depth 4136 Chlorides 600 ppm System LCM 10

Blow Description IF-Opened w/ surface blow, built to 7'1/4"  
ISI- Surface return, didn't build  
FF- Blow built to B.O.B in 50 min.  
FSI- Return built to 1'1/2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>FO</u>		<u>100</u>		
<u>62</u>	<u>MCO</u>		<u>60</u>		<u>40</u>
<u>120</u>	<u>OCM</u>		<u>10</u>		<u>90</u>
<u>120</u>	<u>GWOCM</u>	<u>20</u>	<u>10</u>	<u>60</u>	<u>60</u>

Rec Total 312 BHT 137 Gravity — API RW @ ° F Chlorides ppm  
 (A) Initial Hydrostatic 2071  Test 1250 T-On Location 6:31 AM  
 (B) First Initial Flow 38  Jars 250 T-Started 6:51 AM  
 (C) First Final Flow 93  Safety Joint 75 T-Open 9:43 AM  
 (D) Initial Shut-In 1180  Circ Sub \_\_\_\_\_ T-Pulled 1:43 PM  
 (E) Second Initial Flow 98  Hourly Standby \_\_\_\_\_ T-Out 3:54 PM  
 (F) Second Final Flow 162  Mileage 113 R.T. 175.15  
 (G) Final Shut-In 1180  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2035  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1750.15

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

Comments \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1750.15  
 MP/DST Disc't \_\_\_\_\_

Approved By [Signature] Our Representative Bud O't

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. **60734**

Well Name & No. Kacirek Trust #4-5 Test No. 2 Date 10-16-14  
 Company Murfin Drilg. Co., Inc. Elevation 3279 KB 3268 GL  
 Address 250 N. Water, STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 5 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4161 - 4253 Zone Tested LSG "A"  
 Anchor Length 92' Drill Pipe Run 3940 Mud Wt. 9.3  
 Top Packer Depth 4156 Drill Collars Run 207.34 Vis 75  
 Bottom Packer Depth 4161 Wt. Pipe Run - WL 8.4  
 Total Depth 4253 Chlorides 600 ppm System LCM 8

Blow Description IF - Opened w/ surface blow, built to B.o.B in 9 min  
ISI - Return built to 6"  
FF - Blow built to B.o.B in 9 min  
FBI - Return built to 6"

Rec	Feet of	%gas	%oil	%water	%mud
344	FO		100%		
182	GMCO	28%	38%		34%
120	GWOCM	20%	10%	10%	60%
620	GIP	100%			
Rec Total	646'	BHT	141	Gravity	39

(A) Initial Hydrostatic 2099  Test 1250 T-On Location 3:20 AM  
 (B) First Initial Flow 53  Jars 250 T-Started 3:37 AM  
 (C) First Final Flow 150  Safety Joint 75 T-Open 6:25 AM  
 (D) Initial Shut-In 1199  Circ Sub \_\_\_\_\_ T-Pulled 10:25 AM  
 (E) Second Initial Flow 166  Hourly Standby \_\_\_\_\_ T-Out 1:25 PM  
 (F) Second Final Flow 272  Mileage 113 R.T. 175.15 Comments \_\_\_\_\_  
 (G) Final Shut-In 1132  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1996  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 60  Day Standby \_\_\_\_\_ Total 1750.15  
 Final Flow 60  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 90 Sub Total 1750.15

Approved By [Signature] Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 60735

Well Name & No. Kacirek Trust #4-5 Test No. 3 Date 10-16-14  
 Company Murfin Drly. Co., Inc. Elevation 3279 KB 3268 GL  
 Address 250 N. Water, STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 5 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4241 - 4296 Zone Tested LSG "D"  
 Anchor Length 55' Drill Pipe Run 4036 Mud Wt. 9.3  
 Top Packer Depth 4236 Drill Collars Run 207.34 Vis 59  
 Bottom Packer Depth 4241 Wt. Pipe Run — WL 10.4  
 Total Depth 4296 Chlorides 600 ppm System LCM 10

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

Rec	Feet of	%gas	%oil	%water	%mud
<u>479</u>	<u>WM</u>			<u>40</u>	<u>60</u>
<u>860</u>	<u>MW</u>			<u>90</u>	<u>10</u>

Rec Total 1339 BHT 148 Gravity \_\_\_\_\_ API RW 14@ 50 °F Chlorides 83000 ppm

(A) Initial Hydrostatic 2020  Test 1250 T-On Location 9:50 PM  
 (B) First Initial Flow 70  Jars 250 T-Started 10:24 PM  
 (C) First Final Flow 401  Safety Joint 75 T-Open 12:29 AM  
 (D) Initial Shut-In 1186  Circ Sub \_\_\_\_\_ T-Pulled 3:29 AM  
 (E) Second Initial Flow 405  Hourly Standby \_\_\_\_\_ T-Out 5:50 AM  
 (F) Second Final Flow 626  Mileage 113 R.T. 170.15 Comments \_\_\_\_\_  
 (G) Final Shut-In 1184  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1986  Straddle \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 60  Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Final Flow 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Final Shut-In 60  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1750.15  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1750.15

Approved By R. P. Hill Our Representative B. D. At

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **60736**

4/10

Well Name & No. Kacirek Trust #4-5 Test No. 4 Date 10-17-14  
 Company Murfin Drlg. Co., Inc. Elevation 3279 KB 3268 GL  
 Address 250 N. Water, STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 5 Twp. 25 Rge. 36w Co. Rawlins State KS

Interval Tested 4307-4360 Zone Tested LSG "6"  
 Anchor Length 53' Drill Pipe Run 4098 Mud Wt. 9  
 Top Packer Depth 4302 Drill Collars Run 207.34 Vis 61  
 Bottom Packer Depth 4307 Wt. Pipe Run — WL 8  
 Total Depth 4360 Chlorides 600 ppm System LCM 10

Blow Description IF- Opened w/ surface blow, didn't build  
ISI- No Return  
FF- No Blow  
FSI- 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 136 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 20SI  Test 1250 T-On Location 3:20 PM  
 (B) First Initial Flow 20  Jars 250 T-Started 3:29 PM  
 (C) First Final Flow 20  Safety Joint 75 T-Open 5:37 PM  
 (D) Initial Shut-In 70  Circ Sub \_\_\_\_\_ T-Pulled 9:37 PM  
 (E) Second Initial Flow 22  Hourly Standby \_\_\_\_\_ T-Out 11:34 PM  
 (F) Second Final Flow 23  Mileage 113 R.T. 170.15 Comments \_\_\_\_\_  
 (G) Final Shut-In 48  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2060  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 60  Day Standby \_\_\_\_\_ Total 1750.15  
 Final Shut-In 90  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1750.15

Approved By [Signature] Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **60737**

Well Name & No. Kacirek Trust #4-5 Test No. 5 Date 10-18-14  
 Company Murfin Drilg. Co., Inc. Elevation 3279 KB 3268 GL  
 Address 250 N. Water, STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 5 Twp. 2S Rge. 36w Co. Rawlins State KS

Interval Tested ~~4350-4360~~ 4350-4440 Zone Tested LSG "H-5"  
 Anchor Length 90 Drill Pipe Run 4131 Mud Wt. 9.3  
 Top Packer Depth 4345 Drill Collars Run 207.34 Vis 59  
 Bottom Packer Depth 4350 Wt. Pipe Run — WL 10.4  
 Total Depth 4440 Chlorides 600 ppm System LCM 10  
 Blow Description IF- Opened w/ surface blow, built to 7"  
ISI- No Return  
FF- Blow built to 8"  
FSI- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>152</u>	<u>WOCM</u>		<u>20%</u>	<u>20%</u>	<u>60%</u>
<u>180</u>	<u>WM w/ oil spots</u>			<u>80%</u>	<u>20%</u>

Rec Total 332 BHT 142 Gravity \_\_\_\_\_ API RW .13 @ 75 °F Chlorides 64000 ppm  
 (A) Initial Hydrostatic 2161  Test 1250 T-On Location 10:14 AM  
 (B) First Initial Flow 37  Jars 250 T-Started 10:23 AM  
 (C) First Final Flow 108  Safety Joint 75 T-Open 12:27 PM  
 (D) Initial Shut-In 1252  Circ Sub \_\_\_\_\_ T-Pulled 4:27 PM  
 (E) Second Initial Flow 115  Hourly Standby \_\_\_\_\_ T-Out 6:39 PM  
 (F) Second Final Flow 168  Mileage 113 R.T. 170.15 Comments \_\_\_\_\_  
 (G) Final Shut-In 1227  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2102  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 60  Day Standby \_\_\_\_\_ Total 1750.15  
 Final Flow 60  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 90 Sub Total 1750.15

Approved By Rh D. [Signature] Our Representative Bruce [Signature]  
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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 60738

4/10

Well Name & No. Kacirek Trust #4-5 Test No. — Date 10-19-14  
 Company Murfin Drlg. Co., Inc. Elevation 3279 KB 3268 GL  
 Address 250 N. Water, STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 5 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested \_\_\_\_\_ Zone Tested \_\_\_\_\_  
 Anchor Length \_\_\_\_\_ Drill Pipe Run \_\_\_\_\_ Mud Wt. \_\_\_\_\_  
 Top Packer Depth \_\_\_\_\_ Drill Collars Run \_\_\_\_\_ Vis \_\_\_\_\_  
 Bottom Packer Depth \_\_\_\_\_ Wt. Pipe Run \_\_\_\_\_ WL \_\_\_\_\_  
 Total Depth \_\_\_\_\_ Chlorides \_\_\_\_\_ ppm System LCM \_\_\_\_\_

Blow Description \_\_\_\_\_  
NO TEST

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 \_\_\_\_\_  Test \_\_\_\_\_ T-On Location \_\_\_\_\_  
 (B) First Initial Flow \_\_\_\_\_  Jars \_\_\_\_\_ T-Started \_\_\_\_\_  
 (C) First Final Flow \_\_\_\_\_  Safety Joint \_\_\_\_\_ T-Open \_\_\_\_\_  
 (D) Initial Shut-In \_\_\_\_\_  Circ Sub \_\_\_\_\_ T-Pulled \_\_\_\_\_  
 (E) Second Initial Flow \_\_\_\_\_  Hourly Standby \_\_\_\_\_ T-Out 6:39 PM on 10-18-14  
 (F) Second Final Flow \_\_\_\_\_  Mileage 113 R.T. 170.15 Comments Picked up tool @ 8:50 PM on 10-19-14  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 (H) Final Hydrostatic \_\_\_\_\_  Straddle \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Initial Open \_\_\_\_\_  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In \_\_\_\_\_  Extra Recorder \_\_\_\_\_ Sub Total \_\_\_\_\_  
 Final Flow \_\_\_\_\_  Day Standby X2 Total \_\_\_\_\_  
 Final Shut-In \_\_\_\_\_  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Brdn At

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