



## DRILL STEM TEST REPORT

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

250 N WaterSte 300  
Wichita, KS 67202-1216

ATTN: Brad Rine

### **Burke Trust 'B' 1-14**

### **14-1s-36w Rawlins,KS**

Start Date: 2013.11.16 @ 07:55:38

End Date: 2013.11.16 @ 16:10:23

Job Ticket #: 54663                      DST #: 1

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

Printed: 2013.11.25 @ 16:28:52



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc.  
250 N WaterSte 300  
Wichita, KS 67202-1216  
ATTN: Brad Rine

**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
Job Ticket: 54663 **DST#: 1**  
Test Start: 2013.11.16 @ 07:55:38

## GENERAL INFORMATION:

Formation: **Foraker**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 10:34:23  
Time Test Ended: 16:10:23  
Interval: **3757.00 ft (KB) To 3815.00 ft (KB) (TVD)**  
Total Depth: 3815.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Shanev McBride  
Unit No: 55  
Reference Elevations: 3280.00 ft (KB)  
3275.00 ft (CF)  
KB to GR/CF: 5.00 ft

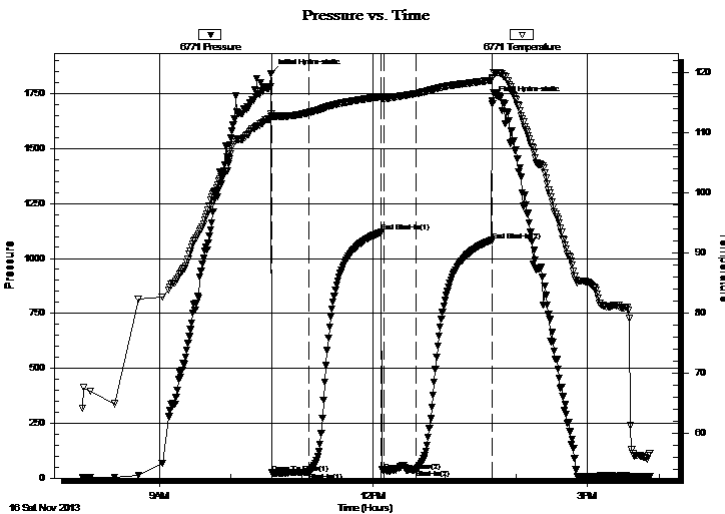
## Serial #: 6771

Inside

Press@RunDepth: 38.29 psig @ 3758.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2013.11.16 End Date: 2013.11.16 Last Calib.: 2013.11.16  
Start Time: 07:55:38 End Time: 15:52:23 Time On Btm: 2013.11.16 @ 10:34:08  
Time Off Btm: 2013.11.16 @ 13:39:53

TEST COMMENT: 1/4" blow died in 24 min.  
No return  
No Blow  
No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1842.48	113.08	Initial Hydro-static
1	23.70	112.65	Open To Flow (1)
32	27.89	113.35	Shut-In(1)
93	1119.42	116.03	End Shut-In(1)
95	32.48	115.64	Open To Flow (2)
122	38.29	116.52	Shut-In(2)
186	1080.01	118.73	End Shut-In(2)
186	1718.65	119.06	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	h m c o 50% m 50% o	0.02

## Gas Rates

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



# TRILOBITE TESTING, INC

## DRILL STEM TEST REPORT

Murfin Drilling Co Inc.  
 250 N WaterSte 300  
 Wichita, KS 67202-1216  
 ATTN: Brad Rine

**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
 Job Ticket: 54663 **DST#: 1**  
 Test Start: 2013.11.16 @ 07:55:38

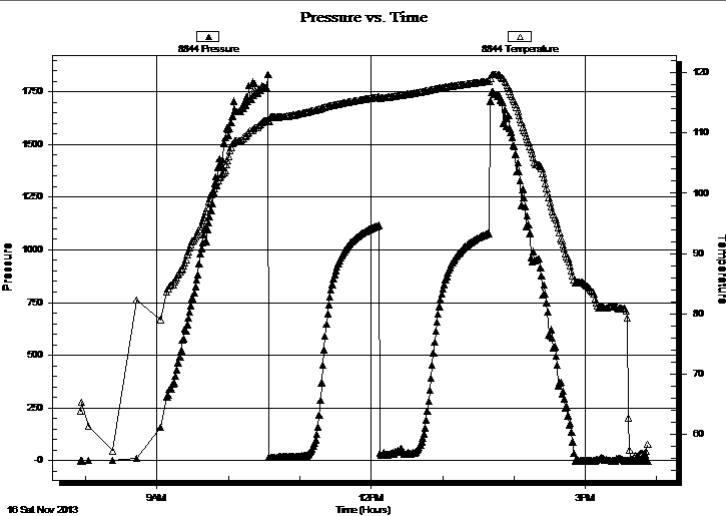
### GENERAL INFORMATION:

Formation: <b>Foraker</b>	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Shanev McBride
Time Tool Opened: 10:34:23	Unit No: 55
Time Test Ended: 16:10:23	Reference Elevations: 3280.00 ft (KB)
<b>Interval: 3757.00 ft (KB) To 3815.00 ft (KB) (TVD)</b>	3275.00 ft (CF)
Total Depth: 3815.00 ft (KB) (TVD)	KB to GR/CF: 5.00 ft
Hole Diameter: 7.88 inches Hole Condition: Fair	

**Serial #: 8844 Outside**

Press@RunDepth: psig @ 3758.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2013.11.16 End Date: 2013.11.16	Last Calib.: 2013.11.16
Start Time: 07:55:52 End Time: 15:52:37	Time On Btm:
	Time Off Btm:

**TEST COMMENT:** 1/4" blow died in 24 min.  
 No return  
 No Blow  
 No return



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
5.00	h m c o 50% m 50% o	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.

**14-1s-36w Rawlins,KS**

250 N WaterSte 300  
Wichita, KS 67202-1216

**Burke Trust 'B' 1-14**

Job Ticket: 54663

**DST#: 1**

ATTN: Brad Rine

Test Start: 2013.11.16 @ 07:55:38

## Tool Information

Drill Pipe:	Length: 3552.00 ft	Diameter: 3.80 inches	Volume: 49.83 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 66000.00 lb
			<u>Total Volume: 50.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3757.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	86.00 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			3730.00	
Shut In Tool	5.00			3735.00	
Hydraulic tool	5.00			3740.00	
Jars	5.00			3745.00	
Safety Joint	3.00			3748.00	
Packer	5.00			3753.00	28.00 Bottom Of Top Packer
Packer	4.00			3757.00	
Stubb	1.00			3758.00	
Recorder	0.00	6771	Inside	3758.00	
Recorder	0.00	8844	Outside	3758.00	
Perforations	18.00			3776.00	
Change Over Sub	1.00			3777.00	
Drill Pipe	32.00			3809.00	
Change Over Sub	1.00			3810.00	
Bullnose	5.00			3815.00	58.00 Bottom Packers & Anchor

**Total Tool Length: 86.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc.

**14-1s-36w Rawlins,KS**

250 N WaterSte 300  
Wichita, KS 67202-1216

**Burke Trust 'B' 1-14**

Job Ticket: 54663

**DST#: 1**

ATTN: Brad Rine

Test Start: 2013.11.16 @ 07:55:38

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.96 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 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	h m c o 50% m 50% o	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

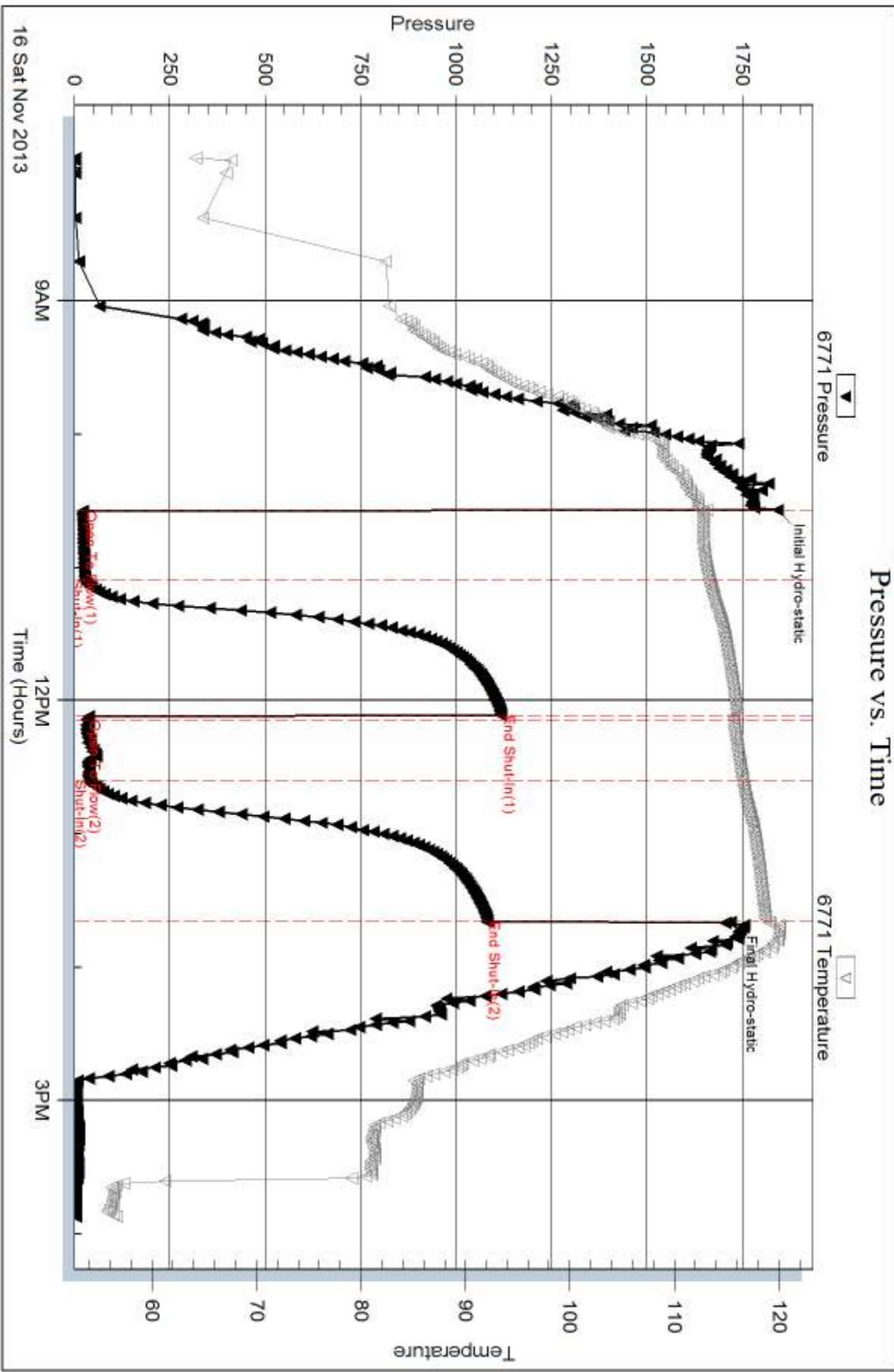
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

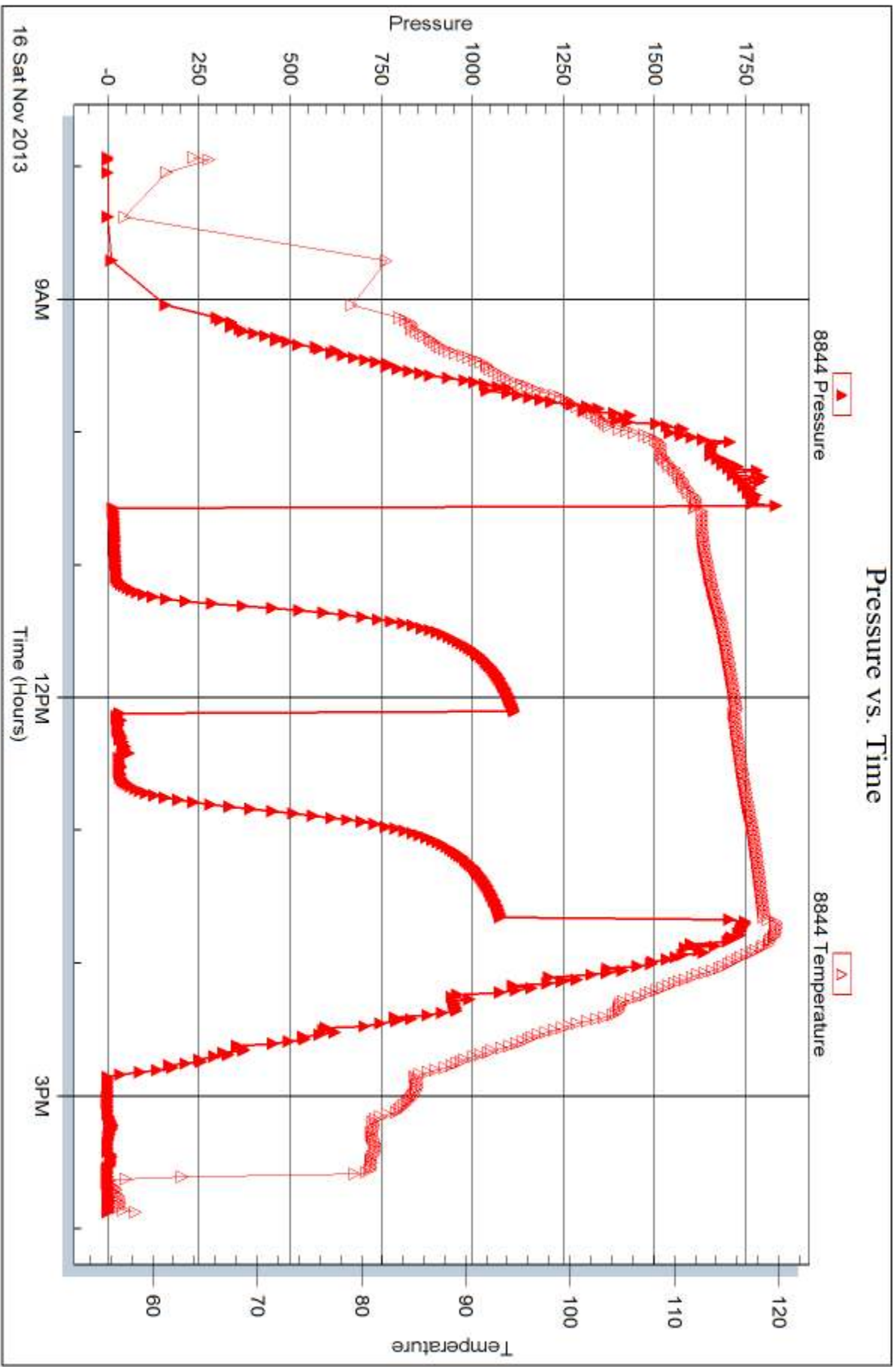


Serial #: 8844

Outside Murfin Drilling Co Inc.

Burke Trust B' 1-14

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 54663

Printed: 2013.11.25 @ 16:28:55



## DRILL STEM TEST REPORT

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

250 N WaterSte 300  
Wichita, KS 67202-1216

ATTN: Brad Rine

### **Burke Trust 'B' 1-14**

### **14-1s-36w Rawlins,KS**

Start Date: 2013.11.17 @ 15:04:00

End Date: 2013.11.18 @ 01:05:00

Job Ticket #: 55198                      DST #: 2

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

Printed: 2013.11.25 @ 16:27:25





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc.  
250 N WaterSte 300  
Wichita, KS 67202-1216  
ATTN: Brad Rine

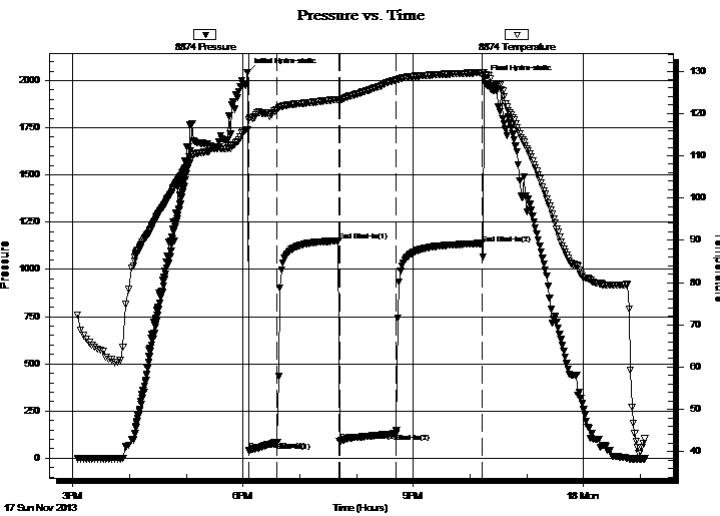
**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
Job Ticket: 55198 **DST#: 2**  
Test Start: 2013.11.17 @ 15:04:00

## GENERAL INFORMATION:

Formation: **Oread**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 18:06:00  
Time Test Ended: 01:05:00  
Interval: **4078.00 ft (KB) To 4127.00 ft (KB) (TVD)**  
Total Depth: 4127.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Kevin Mack  
Unit No: 66  
Reference Elevations: 3280.00 ft (KB)  
3275.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 8874 Inside**  
Press@RunDepth: 130.04 psig @ 4079.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2013.11.17 End Date: 2013.11.18 Last Calib.: 2013.11.18  
Start Time: 15:05:00 End Time: 01:05:00 Time On Btm: 2013.11.17 @ 18:04:30  
Time Off Btm: 2013.11.17 @ 22:15:00

**TEST COMMENT:** 30 - IF- Bled off initial surge - Surface Blow built to 3"  
60 - IS- No Return  
60 - FF- Surface Blow started at 5 min. Built to 5 1/4"  
60 - FS- No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2043.06	116.18	Initial Hydro-static
2	40.89	118.51	Open To Flow (1)
32	86.01	120.96	Shut-In(1)
97	1151.19	123.34	End Shut-In(1)
98	91.02	123.06	Open To Flow (2)
157	130.04	127.87	Shut-In(2)
248	1137.57	129.70	End Shut-In(2)
251	2007.79	129.59	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	OSMW 40M 60W (oil spots)	0.30
60.00	OSWM 50M 50W (oil spots)	0.30
60.00	OSMW 70M 30W (oil spots)	0.30
60.00	OSMW 90M 10W (oil spots)	0.79

## Gas Rates

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



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# DRILL STEM TEST REPORT

Murfin Drilling Co Inc.  
250 N WaterSte 300  
Wichita, KS 67202-1216  
ATTN: Brad Rine

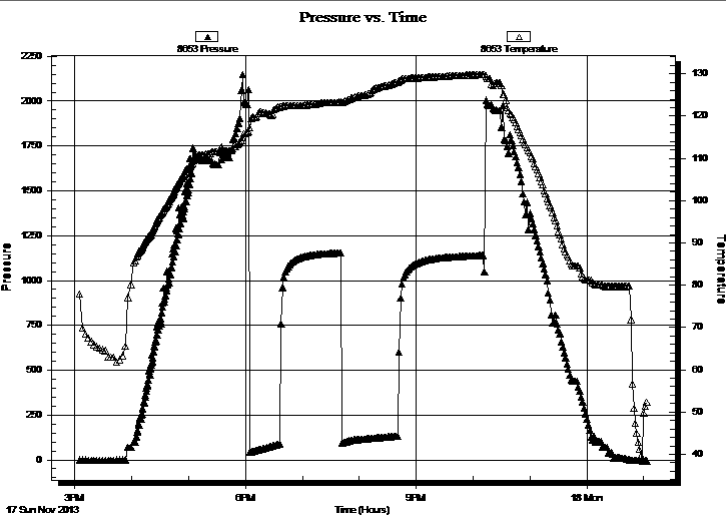
**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
Job Ticket: 55198 **DST#: 2**  
Test Start: 2013.11.17 @ 15:04:00

## GENERAL INFORMATION:

Formation: **Oread**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 18:06:00  
Time Test Ended: 01:05:00  
Interval: **4078.00 ft (KB) To 4127.00 ft (KB) (TVD)**  
Total Depth: 4127.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Kevin Mack  
Unit No: 66  
Reference Elevations: 3280.00 ft (KB)  
3275.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 8653 Outside**  
Press@RunDepth: psig @ 4079.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2013.11.17 End Date: 2013.11.18 Last Calib.: 2013.11.18  
Start Time: 15:05:00 End Time: 01:03:00 Time On Btm:  
Time Off Btm:

**TEST COMMENT:** 30 - IF- Bled off initial surge - Surface Blow built to 3"  
60 - IS- No Return  
60 - FF- Surface Blow started at 5 min. Built to 5 1/4"  
60 - FS- No Return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	OSMW 40M 60W (oil spots)	0.30
60.00	OSWM 50M 50W (oil spots)	0.30
60.00	OSMW 70M 30W (oil spots)	0.30
60.00	OSMW 90M 10W (oil spots)	0.79

## 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 WaterSte 300  
Wichita, KS 67202-1216  
ATTN: Brad Rine

**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
Job Ticket: 55198 **DST#: 2**  
Test Start: 2013.11.17 @ 15:04:00

## Tool Information

Drill Pipe:	Length: 3874.00 ft	Diameter: 3.80 inches	Volume: 54.34 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 55.25 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	4078.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	49.00 ft			
Tool Length:	77.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4051.00	
Shut In Tool	5.00			4056.00	
Hydraulic tool	5.00			4061.00	
Jars	5.00			4066.00	
Safety Joint	3.00			4069.00	
Packer	5.00			4074.00	28.00 Bottom Of Top Packer
Packer	4.00			4078.00	
Stubb	1.00			4079.00	
Recorder	0.00	8653	Outside	4079.00	
Recorder	0.00	8874	Inside	4079.00	
Perforations	10.00			4089.00	
Change Over Sub	1.00			4090.00	
Drill Pipe	31.00			4121.00	
Change Over Sub	1.00			4122.00	
Bullnose	5.00			4127.00	49.00 Bottom Packers & Anchor

**Total Tool Length: 77.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc.

**14-1s-36w Rawlins,KS**

250 N WaterSte 300  
Wichita, KS 67202-1216

**Burke Trust 'B' 1-14**

Job Ticket: 55198

**DST#: 2**

ATTN: Brad Rine

Test Start: 2013.11.17 @ 15:04:00

## 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: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	OSMW 40M 60W (oil spots)	0.295
60.00	OSWM 50M 50W (oil spots)	0.295
60.00	OSMW 70M 30W (oil spots)	0.295
60.00	OSMW 90M 10W (oil spots)	0.787

Total Length: 240.00 ft

Total Volume: 1.672 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8874

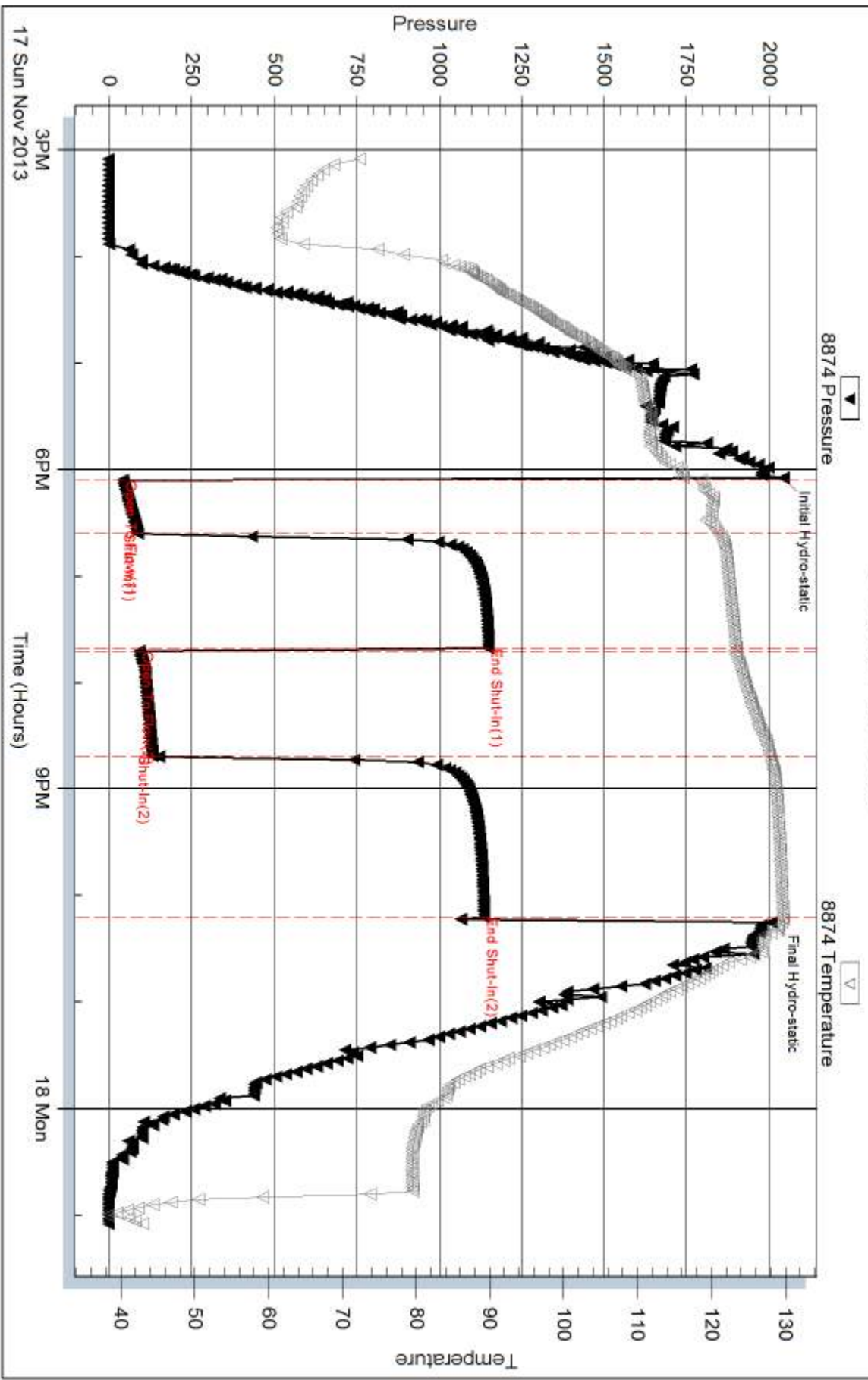
Inside

Murfin Drilling Co Inc.

Burke Trust B' 1-14

DST Test Number: 2

### Pressure vs. Time

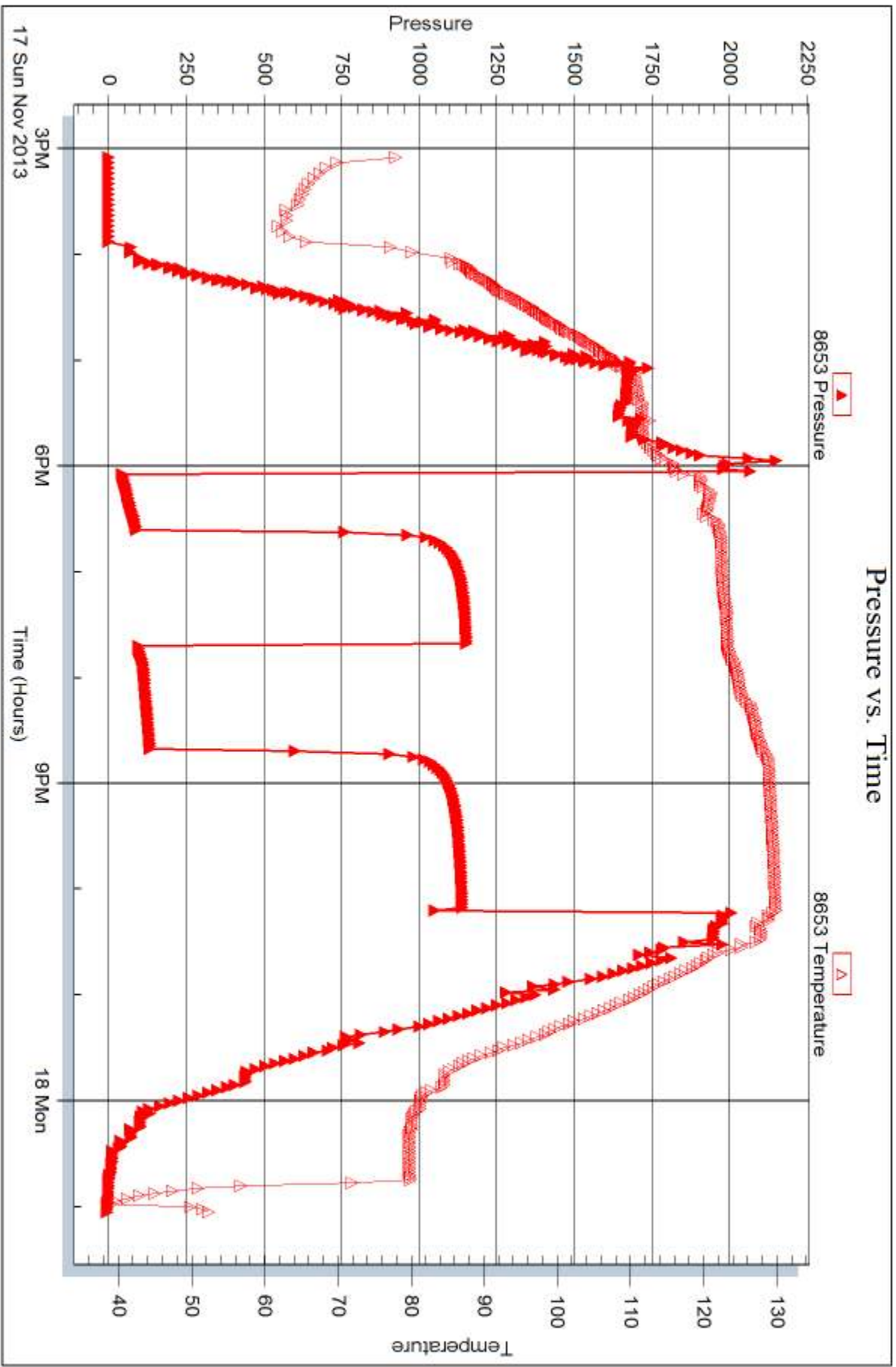


Serial #: 8653

Outside Murfin Drilling Co Inc.

Burke Trust B' 1-14

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 55198

Printed: 2013.11.25 @ 16:27:28



## DRILL STEM TEST REPORT

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

250 N WaterSte 300  
Wichita, KS 67202-1216

ATTN: Brad Rine

### **Burke Trust 'B' 1-14**

#### **14-1s-36w Rawlins,KS**

Start Date: 2013.11.18 @ 17:38:00

End Date: 2013.11.19 @ 06:37:00

Job Ticket #: 55199                      DST #: 3

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

Printed: 2013.11.25 @ 16:25:31

Murfin Drilling Co Inc. 14-1s-36w Rawlins,KS Burke Trust 'B' 1-14 DST # 3 LKC "A" 2013.11.18



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc.  
250 N WaterSte 300  
Wichita, KS 67202-1216  
ATTN: Brad Rine

**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
Job Ticket: 55199 **DST#: 3**  
Test Start: 2013.11.18 @ 17:38:00

## GENERAL INFORMATION:

Formation: **LKC "A"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 20:44:30  
Time Test Ended: 06:37:00  
Interval: **4158.00 ft (KB) To 4250.00 ft (KB) (TVD)**  
Total Depth: 4250.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Kevin Mack  
Unit No: 66  
Reference Elevations: 3280.00 ft (KB)  
3275.00 ft (CF)  
KB to GR/CF: 5.00 ft

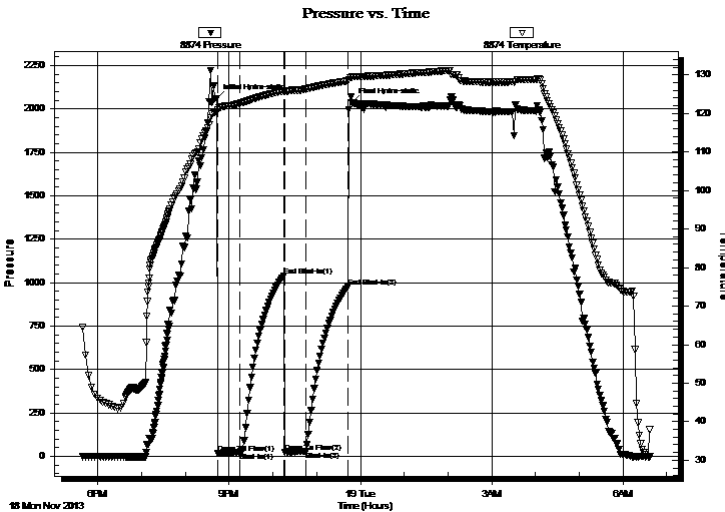
## Serial #: 8874

Inside

Press@RunDepth: 25.57 psig @ 4159.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2013.11.18 End Date: 2013.11.19 Last Calib.: 2013.11.19  
Start Time: 17:39:00 End Time: 06:37:00 Time On Btm: 2013.11.18 @ 20:42:30  
Time Off Btm: 2013.11.18 @ 23:48:00

TEST COMMENT: 30 - IF- 1/2" Blow built to 1 1/4"  
60 - IS- No Return  
30 - FF- No Blow  
60 - FS- No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2058.23	120.18	Initial Hydro-static
2	17.21	120.78	Open To Flow (1)
32	22.01	122.58	Shut-In(1)
92	1038.37	125.79	End Shut-In(1)
94	24.44	125.59	Open To Flow (2)
122	25.57	126.25	Shut-In(2)
180	975.36	128.39	End Shut-In(2)
186	2036.53	129.39	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100M	0.05

## Gas Rates

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





**TRILOBITE TESTING, INC**

### DRILL STEM TEST REPORT

Murfin Drilling Co Inc.

250 N WaterSte 300  
Wichita, KS 67202-1216

ATTN: Brad Rine

**14-1s-36w Rawlins,KS**

**Burke Trust 'B' 1-14**

Job Ticket: 55199

**DST#: 3**

Test Start: 2013.11.18 @ 17:38:00

**GENERAL INFORMATION:**

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:44:30

Time Test Ended: 06:37:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

**Interval: 4158.00 ft (KB) To 4250.00 ft (KB) (TVD)**

Total Depth: 4250.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3280.00 ft (KB)

3275.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8653 Outside**

Press@RunDepth: psig @ 4159.00 ft (KB)

Start Date: 2013.11.18

End Date:

2013.11.19

Capacity: 8000.00 psig

Last Calib.:

2013.11.19

Start Time: 17:39:00

End Time:

06:34:30

Time On Btm:

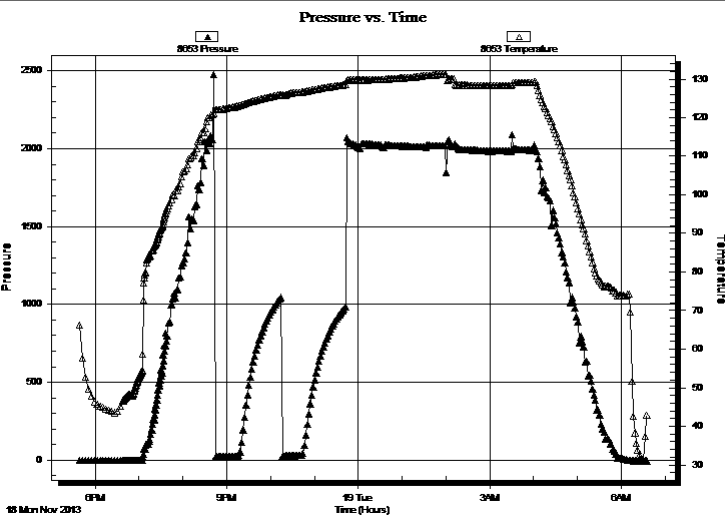
Time Off Btm:

**TEST COMMENT:** 30 - IF- 1/2" Blow built to 1 1/4"

60 - IS- No Return

30 - FF- No Blow

60 - FS- No Return



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
10.00	Mud 100M	0.05

**Gas Rates**

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co Inc.

**14-1s-36w Rawlins,KS**

250 N WaterSte 300  
Wichita, KS 67202-1216

**Burke Trust 'B' 1-14**

Job Ticket: 55199

**DST#: 3**

ATTN: Brad Rine

Test Start: 2013.11.18 @ 17:38:00

## Tool Information

Drill Pipe:	Length: 3964.00 ft	Diameter: 3.80 inches	Volume: 55.60 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 56.51 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4158.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	92.00 ft			
Tool Length:	120.00 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			4131.00	
Shut In Tool	5.00			4136.00	
Hydraulic tool	5.00			4141.00	
Jars	5.00			4146.00	
Safety Joint	3.00			4149.00	
Packer	5.00			4154.00	28.00 Bottom Of Top Packer
Packer	4.00			4158.00	
Stubb	1.00			4159.00	
Recorder	0.00	8653	Outside	4159.00	
Recorder	0.00	8874	Inside	4159.00	
Perforations	21.00			4180.00	
Change Over Sub	1.00			4181.00	
Drill Pipe	63.00			4244.00	
Change Over Sub	1.00			4245.00	
Bullnose	5.00			4250.00	92.00 Bottom Packers & Anchor

**Total Tool Length: 120.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc.

**14-1s-36w Rawlins,KS**

250 N WaterSte 300  
Wichita, KS 67202-1216

**Burke Trust 'B' 1-14**

Job Ticket: 55199

**DST#: 3**

ATTN: Brad Rine

Test Start: 2013.11.18 @ 17:38:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
10.00	Mud 100M	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbf

Num Fluid Samples: 0

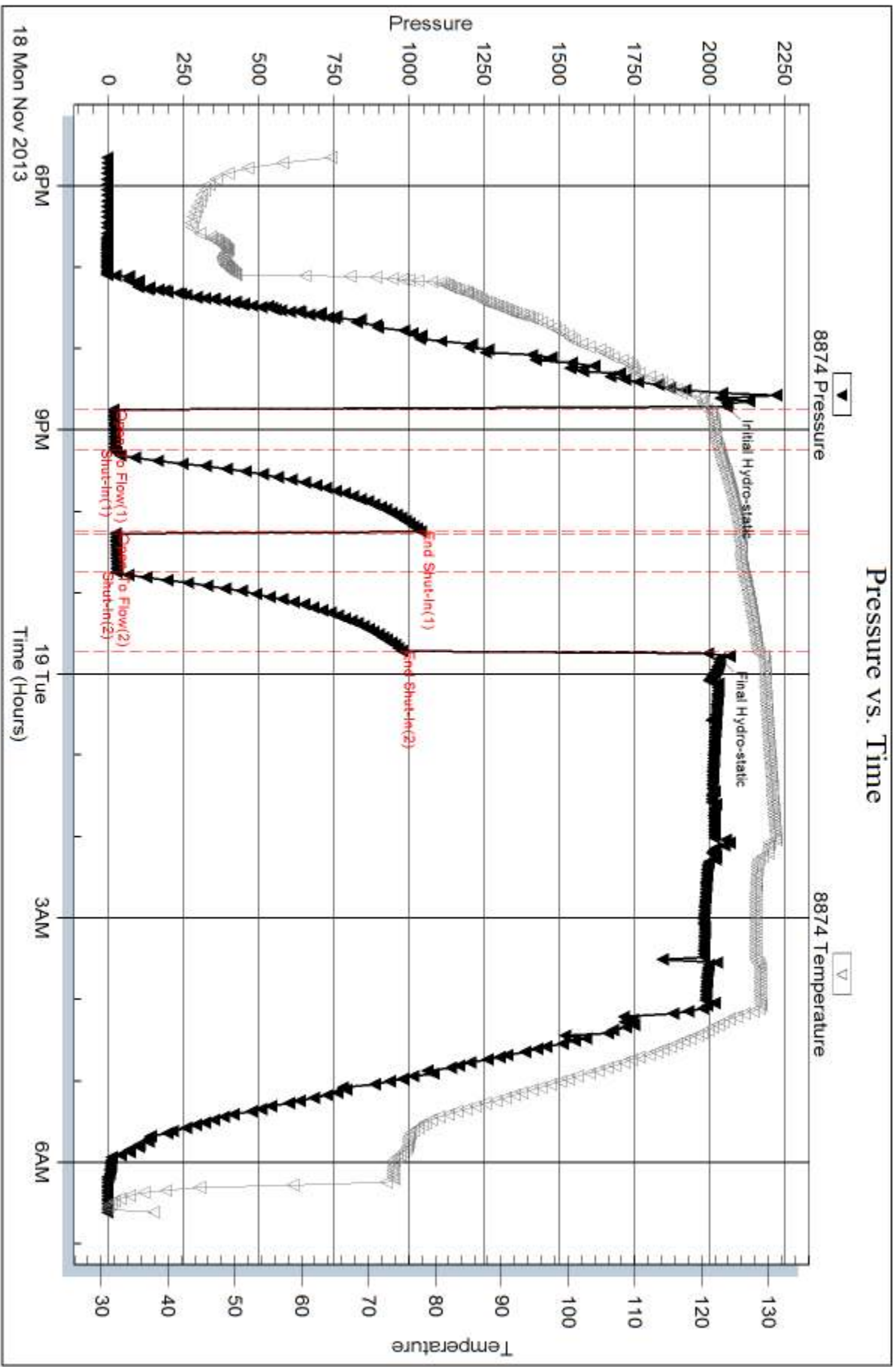
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

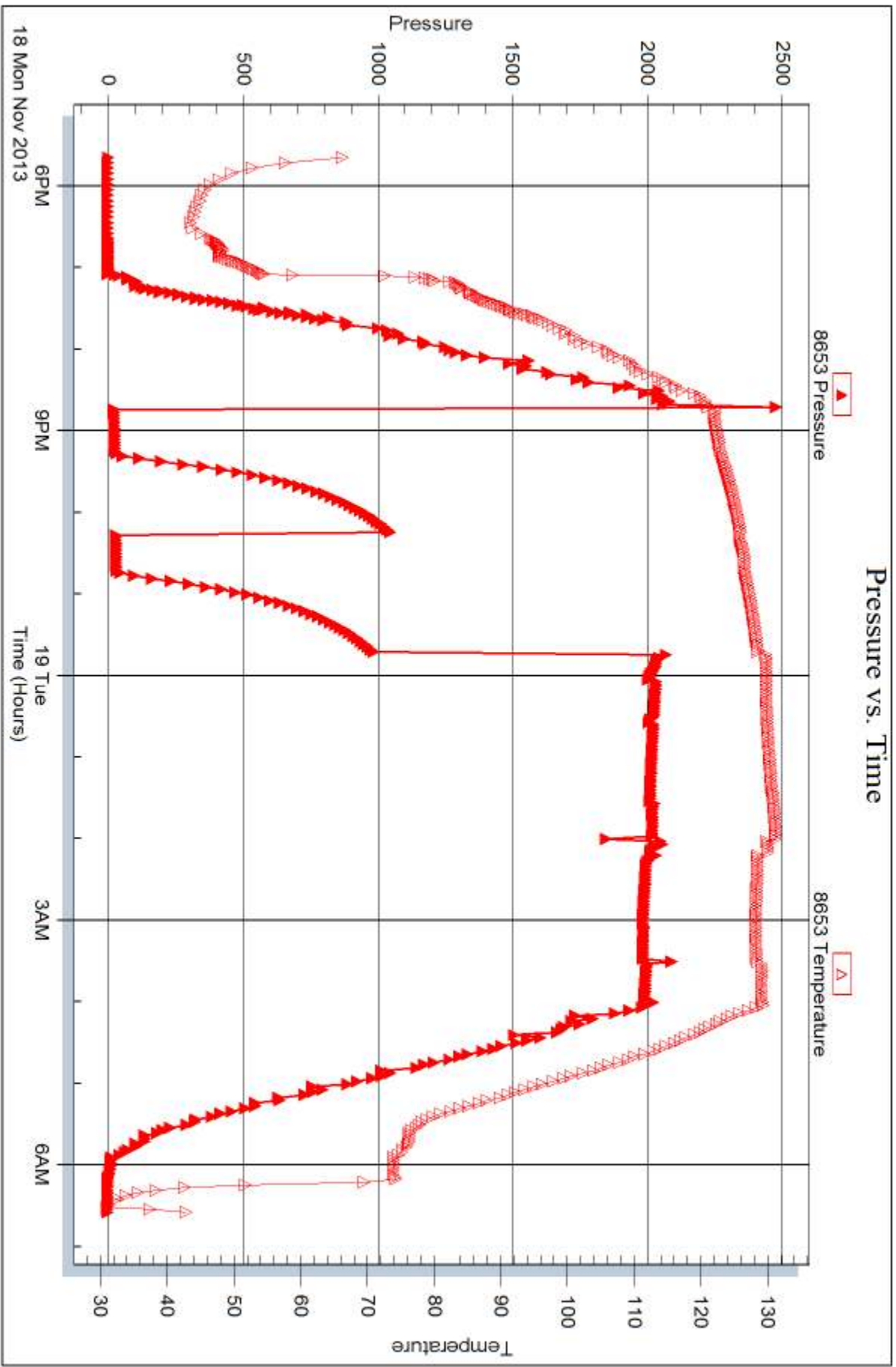


Serial #: 8653

Outside Murfin Drilling Co Inc.

Burke Trust B' 1-14

DST Test Number: 3





## DRILL STEM TEST REPORT

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

250 N WaterSte 300  
Wichita, KS 67202-1216

ATTN: Brad Rine

### **Burke Trust 'B' 1-14**

### **14-1s-36w Rawlins,KS**

Start Date: 2013.11.19 @ 15:10:00

End Date: 2013.11.20 @ 01:09:30

Job Ticket #: 55200                      DST #: 4

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

Printed: 2013.11.25 @ 16:24:07

Murfin Drilling Co Inc. 14-1s-36w Rawlins,KS Burke Trust 'B' 1-14 DST # 4 LKC "D" 2013.11.19



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc.  
250 N WaterSte 300  
Wichita, KS 67202-1216  
ATTN: Brad Rine

**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
Job Ticket: 55200 **DST#: 4**  
Test Start: 2013.11.19 @ 15:10:00

## GENERAL INFORMATION:

Formation: **LKC "D"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 17:58:30  
Time Test Ended: 01:09:30  
Interval: **4236.00 ft (KB) To 4293.00 ft (KB) (TVD)**  
Total Depth: 4293.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Reference Elevations: 3280.00 ft (KB)  
3275.00 ft (CF)  
KB to GR/CF: 5.00 ft  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Kevin Mack  
Unit No: 66

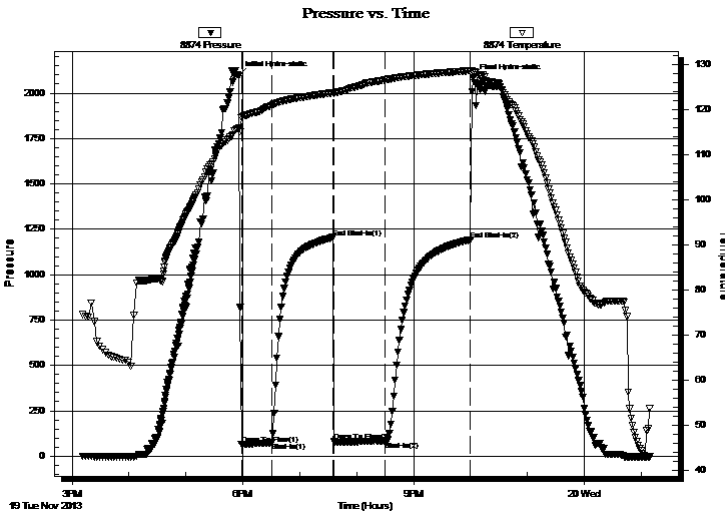
## Serial #: 8874

Inside

Press@RunDepth: 84.04 psig @ 4237.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2013.11.19 End Date: 2013.11.20 Last Calib.: 2013.11.20  
Start Time: 15:11:00 End Time: 01:09:30 Time On Btm: 2013.11.19 @ 17:55:30  
Time Off Btm: 2013.11.19 @ 22:03:00

TEST COMMENT: 30 - IF- Bled off initial surge - Surface Blow built to 1"  
60 - IS- No Return  
60 - FF- Surface Blow started at 10 min. Built to 1"  
90 - FS- No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2094.09	115.88	Initial Hydro-static
3	64.06	118.23	Open To Flow (1)
35	74.10	120.75	Shut-In(1)
99	1204.86	123.64	End Shut-In(1)
101	83.66	123.56	Open To Flow (2)
155	84.04	126.50	Shut-In(2)
245	1192.15	128.56	End Shut-In(2)
248	2082.14	128.29	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	Show of oil spots in tool	0.00
122.00	Mud 100M	0.60

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Co Inc.  
250 N WaterSte 300  
Wichita, KS 67202-1216  
ATTN: Brad Rine

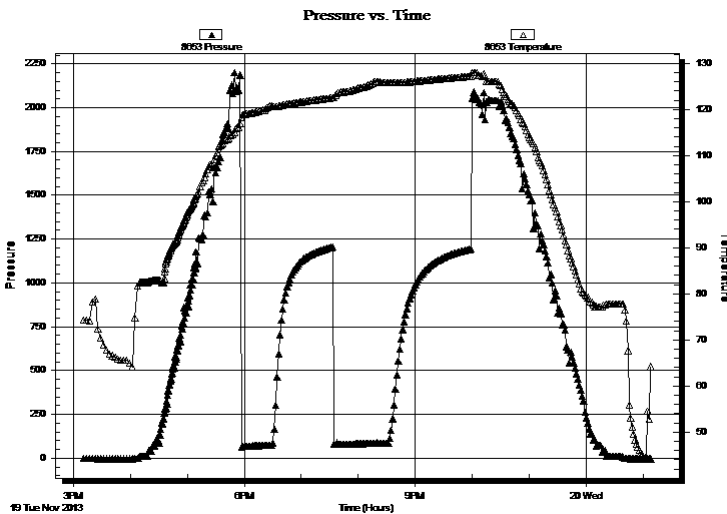
**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
Job Ticket: 55200 **DST#: 4**  
Test Start: 2013.11.19 @ 15:10:00

### GENERAL INFORMATION:

Formation: **LKC "D"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 17:58:30  
Time Test Ended: 01:09:30  
Interval: **4236.00 ft (KB) To 4293.00 ft (KB) (TVD)**  
Total Depth: 4293.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Reference Elevations: 3280.00 ft (KB)  
3275.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 8653 Outside**  
Press@RunDepth: psig @ 4237.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2013.11.19 End Date: 2013.11.20 Last Calib.: 2013.11.20  
Start Time: 15:11:00 End Time: 01:07:30 Time On Btm:  
Time Off Btm:

TEST COMMENT: 30 - IF- Bled off initial surge - Surface Blow built to 1"  
60 - IS- No Return  
60 - FF- Surface Blow started at 10 min. Built to 1"  
90 - FS- No Return



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
0.00	Show of oil spots in tool	0.00
122.00	Mud 100M	0.60

### 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 WaterSte 300  
Wichita, KS 67202-1216  
ATTN: Brad Rine

**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
Job Ticket: 55200 **DST#: 4**  
Test Start: 2013.11.19 @ 15:10:00

## Tool Information

Drill Pipe:	Length: 4030.00 ft	Diameter: 3.80 inches	Volume: 56.53 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume: 57.44 bbl</u>	Tool Chased	10.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	4236.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	57.00 ft				
Tool Length:	85.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments: chased tool approx 10' to bottom.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4209.00	
Shut In Tool	5.00			4214.00	
Hydraulic tool	5.00			4219.00	
Jars	5.00			4224.00	
Safety Joint	3.00			4227.00	
Packer	5.00			4232.00	28.00 Bottom Of Top Packer
Packer	4.00			4236.00	
Stubb	1.00			4237.00	
Recorder	0.00	8653	Outside	4237.00	
Recorder	0.00	8874	Inside	4237.00	
Perforations	17.00			4254.00	
Change Over Sub	1.00			4255.00	
Drill Pipe	32.00			4287.00	
Change Over Sub	1.00			4288.00	
Bullnose	5.00			4293.00	57.00 Bottom Packers & Anchor

**Total Tool Length: 85.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc.  
250 N WaterSte 300  
Wichita, KS 67202-1216  
ATTN: Brad Rine

**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
Job Ticket: 55200 **DST#: 4**  
Test Start: 2013.11.19 @ 15:10:00

## Mud and Cushion Information

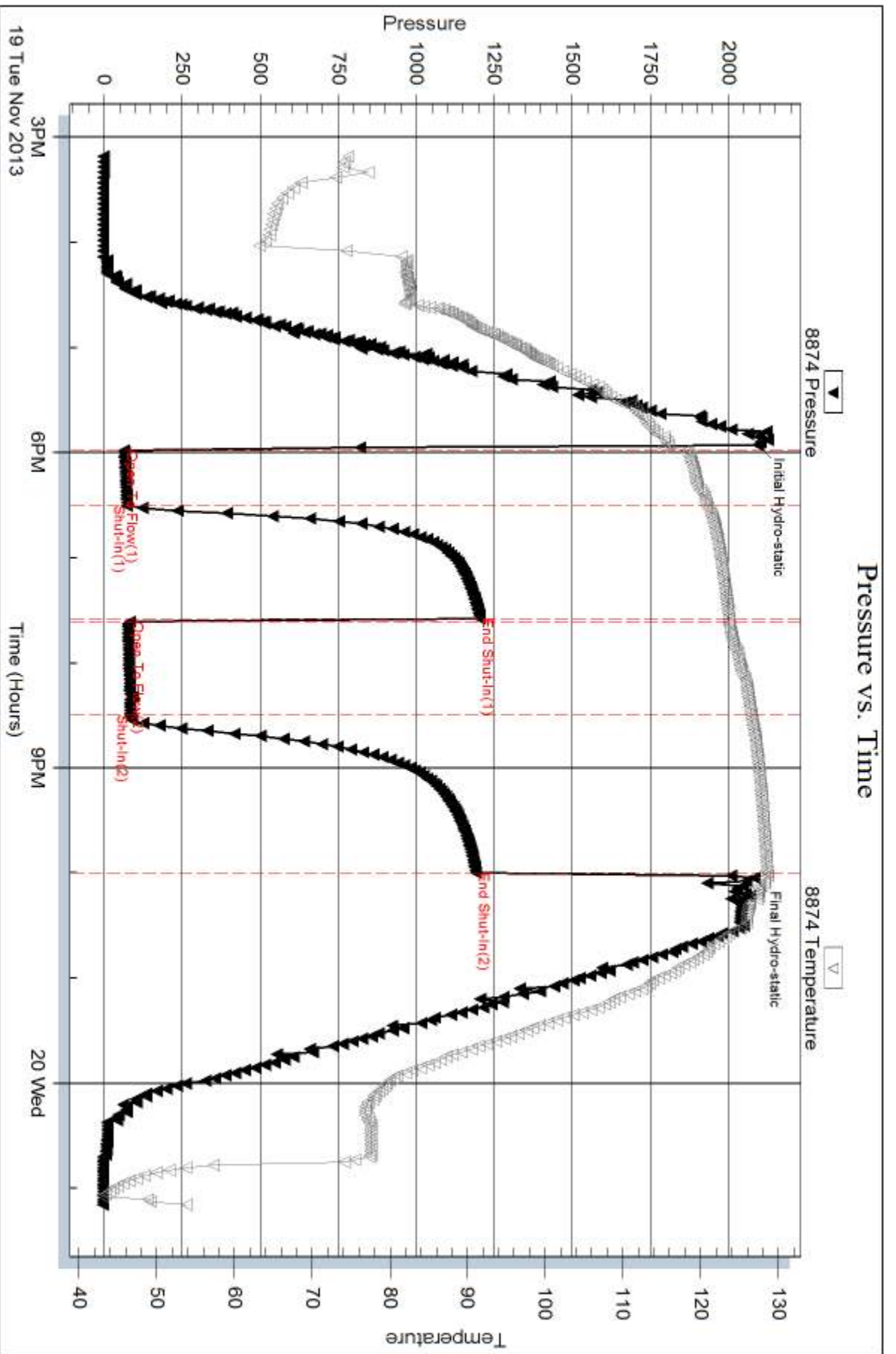
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.99 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 1100.00 ppm			
Filter Cake: 2.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	Show of oil spots in tool	0.000
122.00	Mud 100M	0.600

Total Length: 122.00 ft      Total Volume: 0.600 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

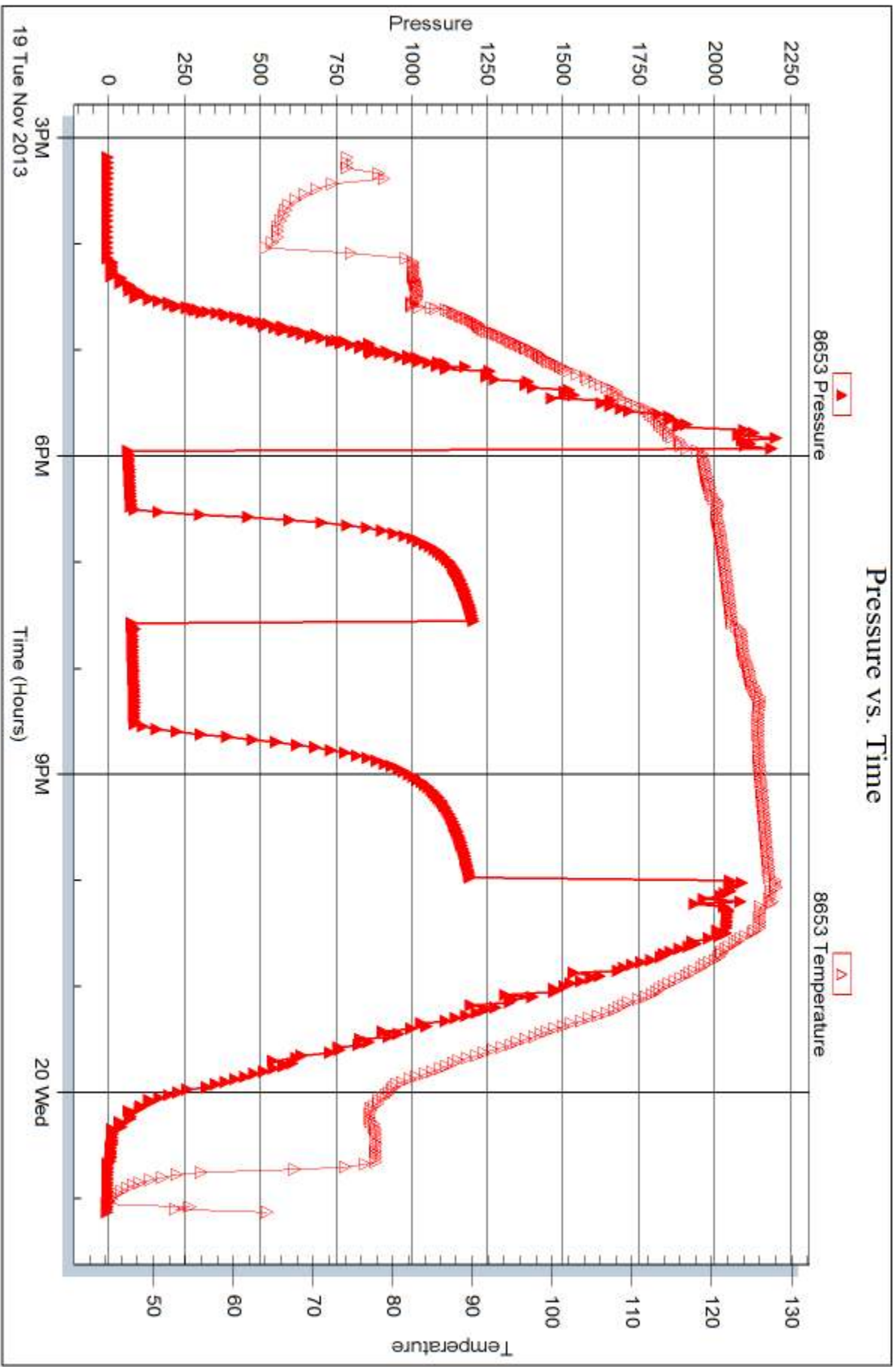


Serial #: 8653

Outside Murfin Drilling Co Inc.

Burke Trust B' 1-14

DST Test Number: 4





## DRILL STEM TEST REPORT

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

250 N WaterSte 300  
Wichita, KS 67202-1216

ATTN: Brad Rine

### **Burke Trust 'B' 1-14**

### **14-1s-36w Rawlins,KS**

Start Date: 2013.11.20 @ 16:00:00

End Date: 2013.11.21 @ 01:55:00

Job Ticket #: 53552                      DST #: 5

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

Printed: 2013.11.25 @ 16:23:26



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc.  
250 N WaterSte 300  
Wichita, KS 67202-1216  
ATTN: Brad Rine

**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
Job Ticket: 53552 **DST#: 5**  
Test Start: 2013.11.20 @ 16:00:00

## GENERAL INFORMATION:

Formation: **LKC "G,H,I"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 18:43:30  
Time Test Ended: 01:55:00  
Interval: **4287.00 ft (KB) To 4402.00 ft (KB) (TVD)**  
Total Depth: 4402.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Kevin Mack  
Unit No: 66  
Reference Elevations: 3280.00 ft (KB)  
3275.00 ft (CF)  
KB to GR/CF: 5.00 ft

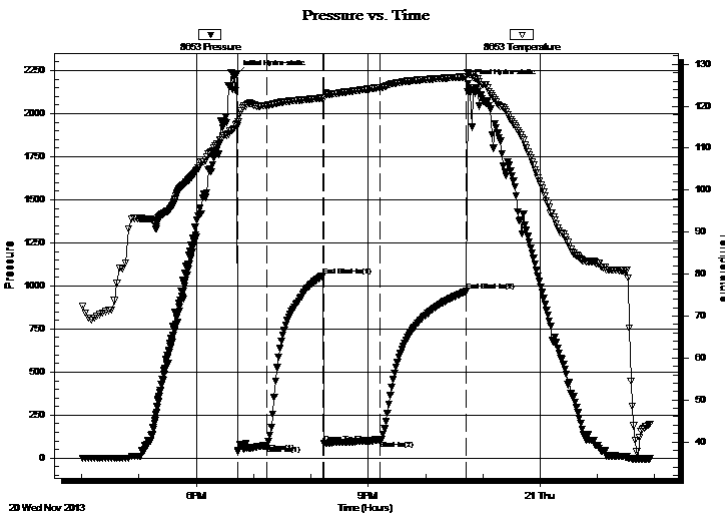
## Serial #: 8653

Outside

Press@RunDepth: 103.65 psig @ 4288.00 ft (KB)  
Start Date: 2013.11.20 End Date: 2013.11.21  
Start Time: 16:01:00 End Time: 01:55:00  
Capacity: 8000.00 psig  
Last Calib.: 2013.11.21  
Time On Btm: 2013.11.20 @ 18:42:30  
Time Off Btm: 2013.11.20 @ 22:44:30

TEST COMMENT: 30 - IF- BoB in 22 min  
60 - IS- No Return  
60 - FF- BoB in 15 min.  
90 - FS- No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2226.86	115.91	Initial Hydro-static
1	36.66	115.30	Open To Flow (1)
32	75.47	120.23	Shut-In(1)
90	1059.37	122.00	End Shut-In(1)
92	88.01	122.07	Open To Flow (2)
150	103.65	124.48	Shut-In(2)
240	968.07	127.05	End Shut-In(2)
242	2175.89	127.76	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCM 70M 30o	0.30
62.00	MCO 50M 50o	0.30
62.00	MCO 40M 60o	0.30
40.00	Clean Oil 100o	0.54

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc.  
 250 N WaterSte 300  
 Wichita, KS 67202-1216  
 ATTN: Brad Rine

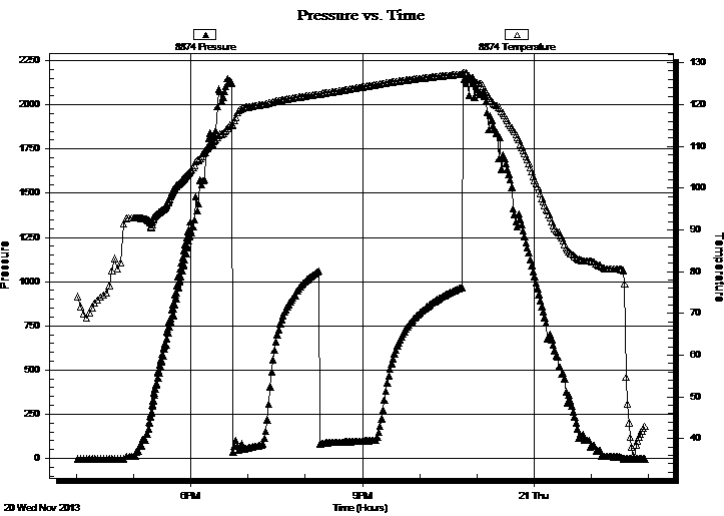
**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
 Job Ticket: 53552 **DST#: 5**  
 Test Start: 2013.11.20 @ 16:00:00

## GENERAL INFORMATION:

Formation: **LKC "G,H,I"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 18:43:30  
 Time Test Ended: 01:55:00  
 Interval: **4287.00 ft (KB) To 4402.00 ft (KB) (TVD)**  
 Total Depth: 4402.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Kevin Mack  
 Unit No: 66  
 Reference Elevations: 3280.00 ft (KB)  
 3275.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8874 Inside**  
 Press@RunDepth: psig @ 4288.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.11.20 End Date: 2013.11.21 Last Calib.: 2013.11.21  
 Start Time: 16:01:00 End Time: 01:57:00 Time On Btm:  
 Time Off Btm:

TEST COMMENT: 30 - IF- BoB in 22 min  
 60 - IS- No Return  
 60 - FF- BoB in 15 min.  
 90 - FS- No Return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCM 70M 30o	0.30
62.00	MCO 50M 50o	0.30
62.00	MCO 40M 60o	0.30
40.00	Clean Oil 100o	0.54

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co Inc.

**14-1s-36w Rawlins,KS**

250 N WaterSte 300  
Wichita, KS 67202-1216

**Burke Trust 'B' 1-14**

Job Ticket: 53552

**DST#: 5**

ATTN: Brad Rine

Test Start: 2013.11.20 @ 16:00:00

## Tool Information

Drill Pipe:	Length: 4090.00 ft	Diameter: 3.80 inches	Volume: 57.37 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 58.28 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4287.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	115.00 ft			
Tool Length:	143.00 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			4260.00	
Shut In Tool	5.00			4265.00	
Hydraulic tool	5.00			4270.00	
Jars	5.00			4275.00	
Safety Joint	3.00			4278.00	
Packer	5.00			4283.00	28.00 Bottom Of Top Packer
Packer	4.00			4287.00	
Stubb	1.00			4288.00	
Recorder	0.00	8653	Outside	4288.00	
Recorder	0.00	8874	Inside	4288.00	
Perforations	11.00			4299.00	
Change Over Sub	1.00			4300.00	
Drill Pipe	96.00			4396.00	
Change Over Sub	1.00			4397.00	
Bullnose	5.00			4402.00	115.00 Bottom Packers & Anchor

**Total Tool Length: 143.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc.

**14-1s-36w Rawlins,KS**

250 N WaterSte 300  
Wichita, KS 67202-1216

**Burke Trust 'B' 1-14**

Job Ticket: 53552

**DST#: 5**

ATTN: Brad Rine

Test Start: 2013.11.20 @ 16:00:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 67.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	OCM 70M 30o	0.295
62.00	MCO 50M 50o	0.305
62.00	MCO 40M 60o	0.305
40.00	Clean Oil 100o	0.543

Total Length: 224.00 ft      Total Volume: 1.448 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API 35 @ 70 deg = 34 cor

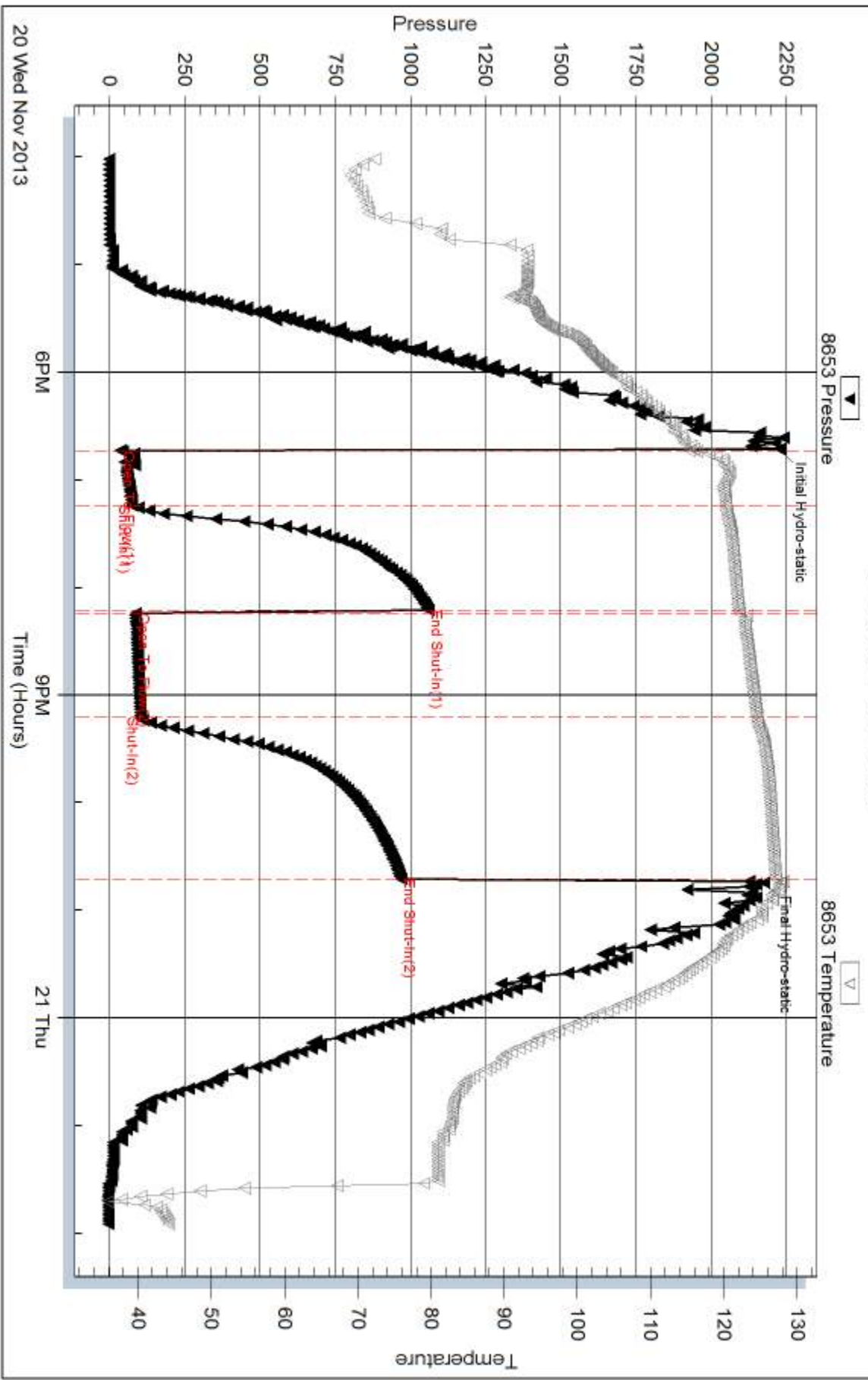
Serial #: 8653

Outside Murfin Drilling Co Inc.

Burke Trust B' 1-14

DST Test Number: 5

### Pressure vs. Time



Tribble Testing, Inc

Ref. No: 53552

Printed: 2013.11.25 @ 16:23:28

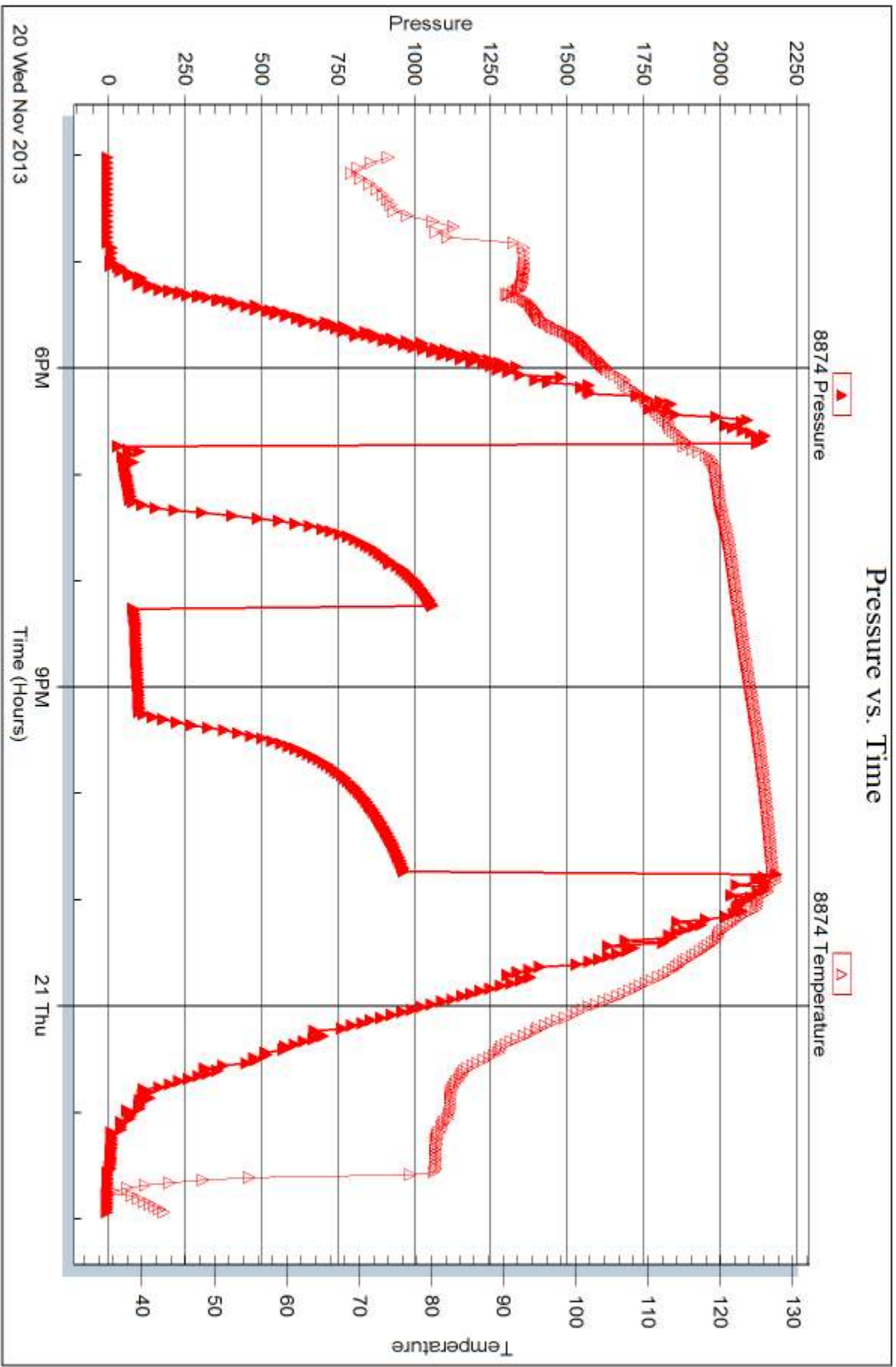
Serial #: 8874

Inside

Murfin Drilling Co Inc.

Burke Trust B' 1-14

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 53552

Printed: 2013.11.25 @ 16:23:29



## DRILL STEM TEST REPORT

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

250 N WaterSte 300  
Wichita, KS 67202-1216

ATTN: Brad Rine

### **Burke Trust 'B' 1-14**

### **14-1s-36w Rawlins,KS**

Start Date: 2013.11.21 @ 11:20:00

End Date: 2013.11.21 @ 21:55:30

Job Ticket #: 53553                      DST #: 6

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

Printed: 2013.11.25 @ 16:19:13

Murfin Drilling Co Inc.  
14-1s-36w Rawlins,KS  
Burke Trust 'B' 1-14  
DST # 6  
LKC "J"  
2013.11.21



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc.  
 250 N WaterSte 300  
 Wichita, KS 67202-1216  
 ATTN: Brad Rine

**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
 Job Ticket: 53553 **DST#: 6**  
 Test Start: 2013.11.21 @ 11:20:00

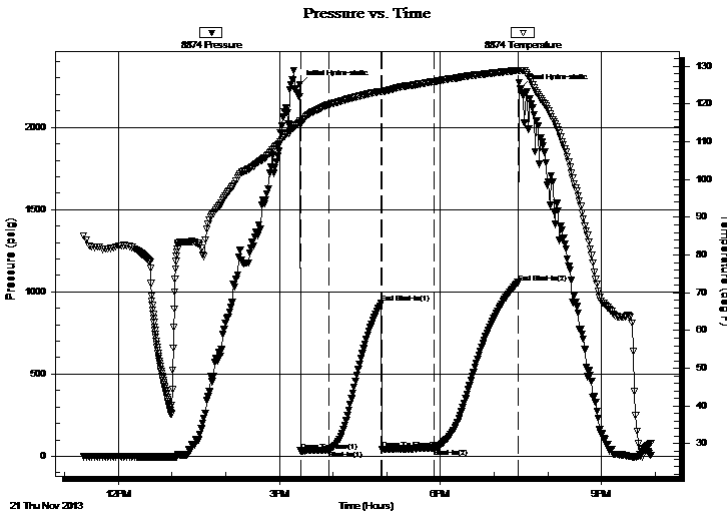
## GENERAL INFORMATION:

Formation: **LKC "J"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:23:30  
 Time Test Ended: 21:55:30  
 Interval: **4391.00 ft (KB) To 4440.00 ft (KB) (TVD)**  
 Total Depth: 4440.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Kevin Mack  
 Unit No: 66  
 Reference Elevations: 3280.00 ft (KB)  
 3275.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8874 Inside**  
 Press@RunDepth: 49.27 psig @ 4392.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.11.21 End Date: 2013.11.21 Last Calib.: 2013.11.21  
 Start Time: 11:21:00 End Time: 21:55:30 Time On Btm: 2013.11.21 @ 15:23:00  
 Time Off Btm: 2013.11.21 @ 19:29:30

**TEST COMMENT:** 30 - IF- 1/2" Blow built to 2"  
 60 - IS- No Reutrn  
 60 - FF- Surface Blow started at 5 min. Built to 3/4" Then died in 40 min.  
 90 - FS- No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2262.05	115.48	Initial Hydro-static
1	32.79	114.98	Open To Flow (1)
32	37.63	119.81	Shut-In(1)
91	930.77	123.39	End Shut-In(1)
92	43.08	123.28	Open To Flow (2)
150	49.27	125.94	Shut-In(2)
244	1056.26	128.92	End Shut-In(2)
247	2233.24	128.80	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	OSM 100M (oil spots)	0.30
0.00	Show of free oil in tool	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

Murfin Drilling Co Inc.  
 250 N WaterSte 300  
 Wichita, KS 67202-1216  
 ATTN: Brad Rine

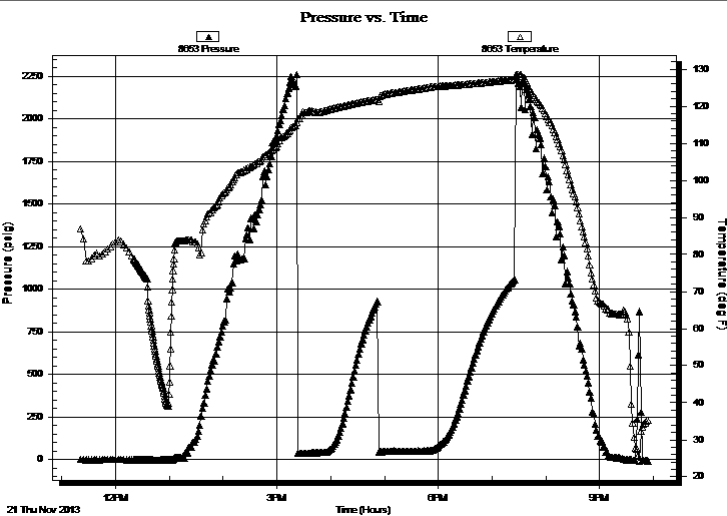
**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
 Job Ticket: 53553 **DST#: 6**  
 Test Start: 2013.11.21 @ 11:20:00

## GENERAL INFORMATION:

Formation: **LKC "J"**  
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 15:23:30 Tester: Kevin Mack  
 Time Test Ended: 21:55:30 Unit No: 66  
**Interval: 4391.00 ft (KB) To 4440.00 ft (KB) (TVD)** Reference Elevations: 3280.00 ft (KB)  
 Total Depth: 4440.00 ft (KB) (TVD) 3275.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

**Serial #: 8653** Outside  
 Press@RunDepth: psig @ 4392.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.11.21 End Date: 2013.11.21 Last Calib.: 2013.11.21  
 Start Time: 11:21:00 End Time: 21:53:30 Time On Btm:  
 Time Off Btm:

TEST COMMENT: 30 - IF- 1/2" Blow built to 2"  
 60 - IS- No Reutr  
 60 - FF- Surface Blow started at 5 min. Built to 3/4" Then died in 40 min.  
 90 - FS- No Return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	OSM 100M (oil spots)	0.30
0.00	Show of free oil in tool	0.00

## 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 WaterSte 300  
Wichita, KS 67202-1216  
ATTN: Brad Rine

**14-1s-36w Rawlins,KS**  
**Burke Trust 'B' 1-14**  
Job Ticket: 53553 **DST#: 6**  
Test Start: 2013.11.21 @ 11:20:00

## Tool Information

Drill Pipe:	Length: 4192.00 ft	Diameter: 3.80 inches	Volume: 58.80 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose:	53000.00 lb
			<u>Total Volume: 59.71 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	4391.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	49.00 ft				
Tool Length:	77.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4364.00	
Shut In Tool	5.00			4369.00	
Hydraulic tool	5.00			4374.00	
Jars	5.00			4379.00	
Safety Joint	3.00			4382.00	
Packer	5.00			4387.00	28.00 Bottom Of Top Packer
Packer	4.00			4391.00	
Stubb	1.00			4392.00	
Recorder	0.00	8653	Outside	4392.00	
Recorder	0.00	8874	Inside	4392.00	
Perforations	10.00			4402.00	
Change Over Sub	1.00			4403.00	
Drill Pipe	31.00			4434.00	
Change Over Sub	1.00			4435.00	
Bullnose	5.00			4440.00	49.00 Bottom Packers & Anchor

**Total Tool Length: 77.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc.

**14-1s-36w Rawlins,KS**

250 N WaterSte 300  
Wichita, KS 67202-1216

**Burke Trust 'B' 1-14**

Job Ticket: 53553

**DST#: 6**

ATTN: Brad Rine

Test Start: 2013.11.21 @ 11:20:00

## 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: 67.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	OSM 100M (oil spots)	0.295
0.00	Show of free oil in tool	0.000

Total Length: 60.00 ft      Total Volume: 0.295 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



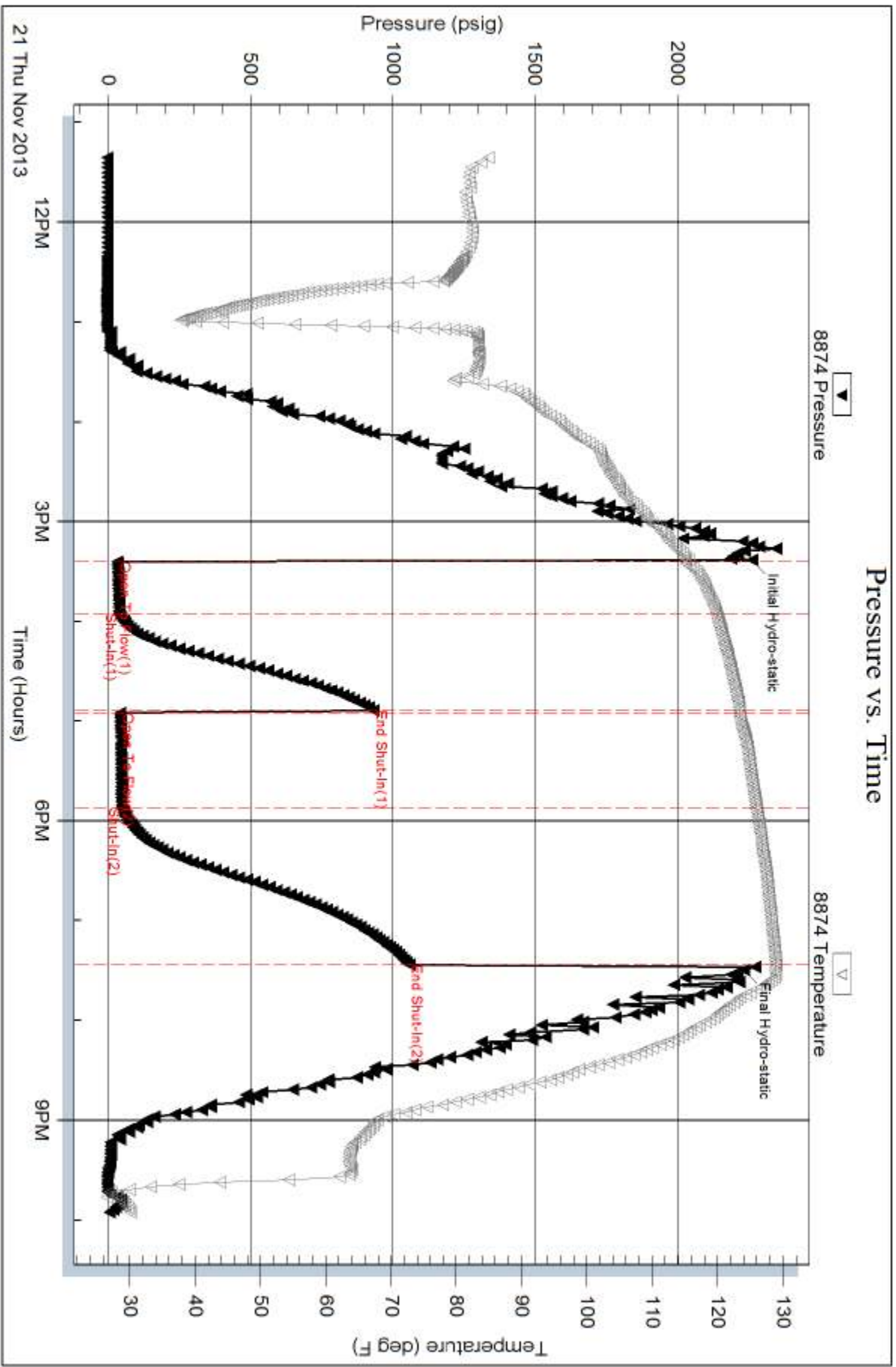
Serial #: 8874

Inside

Murfin Drilling Co Inc.

Burke Trust B' 1-14

DST Test Number: 6

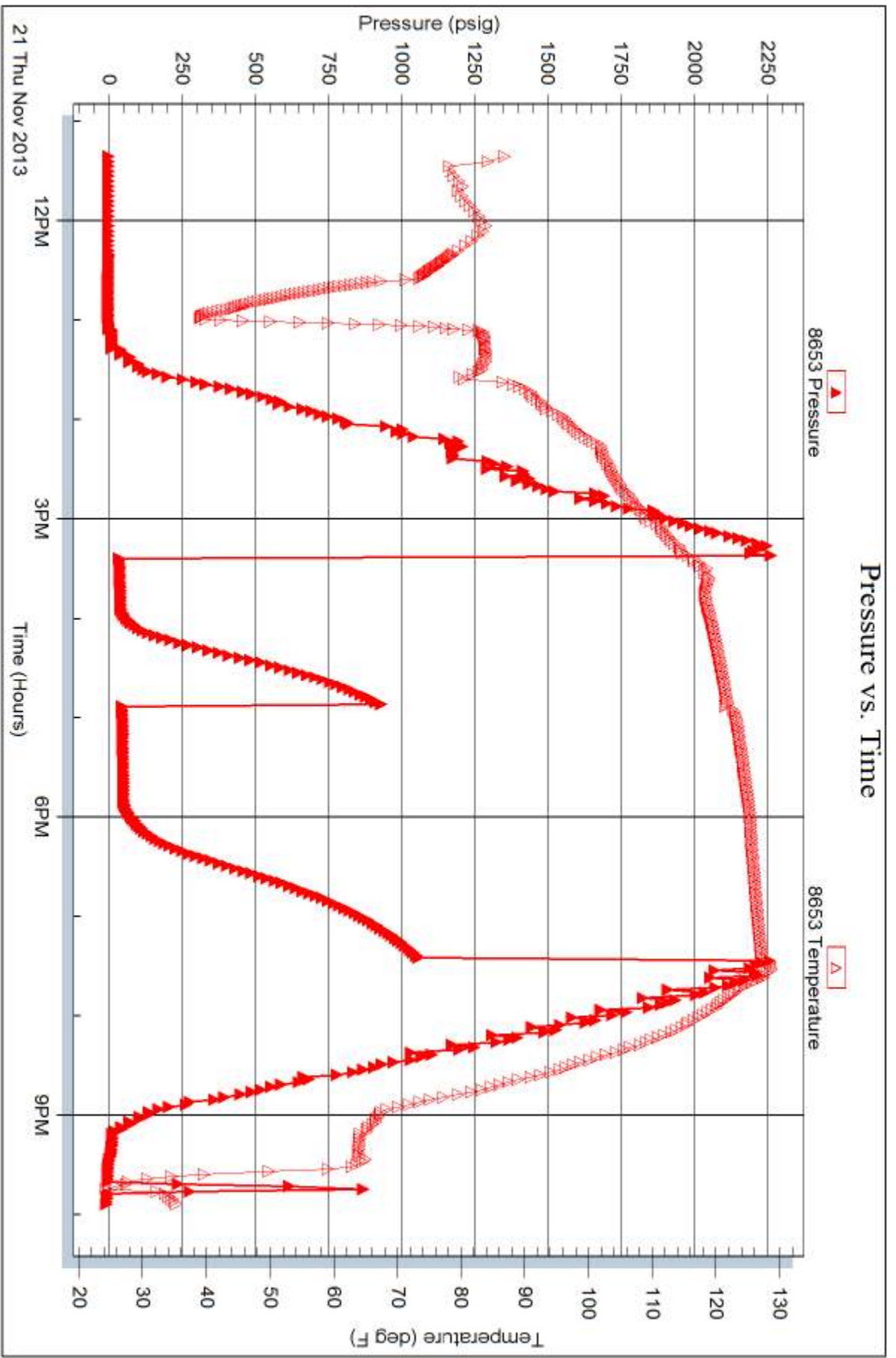


Serial #: 8653

Outside Murfin Drilling Co Inc.

Burke Trust B' 1-14

DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 53553

Printed: 2013.11.25 @ 16:19:15



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54663

Well Name & No. Burke Trust B 1-14 Test No. #1 Date 11/26/13  
 Company Murphy Drilling Co Inc. Elevation 3280 KB 3285 GL  
 Address 250 N. Water St 300 W. 1st St Hays KS 67702-1214  
 Co. Rep / Geo. Brad Rine Rig Murphy #8  
 Location: Sec. 14 Twp. 15 Rge. 36w Co. Rawlins State Ks

Interval Tested 3757 3815 Zone Tested Fowler  
 Anchor Length 58 Drill Pipe Run 3552 Mud Wt. 8.9  
 Top Packer Depth 3752 Drill Collars Run 180' Vis 57  
 Bottom Packer Depth 3757 Wt. Pipe Run --- WL 61°  
 Total Depth 3815 Chlorides 900 ppm System LCM #6

Blow Description 4" w blow good on 24 min.  
No return  
No blow  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5'</u>	<u>HMCO</u>	<u>50</u>		<u>50</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 1190° Gravity --- API RW --- @ --- ° F Chlorides --- ppm

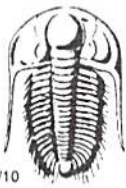
(A) Initial Hydrostatic <u>1842</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>04:00</u>
(B) First Initial Flow <u>23</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>07:55</u>
(C) First Final Flow <u>27</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>10:34</u>
(D) Initial Shut-In <u>1119</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>13:34</u>
(E) Second Initial Flow <u>32</u>	<input checked="" type="checkbox"/> Hourly Standby <u>3 1/4 hrs</u> <u>325</u>	T-Out <u>16:10</u>
(F) Second Final Flow <u>38</u>	<input checked="" type="checkbox"/> Mileage <u>254 RT</u> <u>114rt 176.70</u>	Comments <u>---</u>
(G) Final Shut-In <u>1080</u>	<input type="checkbox"/> Sampler <u>---</u>	
(H) Final Hydrostatic <u>1718</u>	<input type="checkbox"/> Straddle <u>---</u>	<input type="checkbox"/> Ruined Shale Packer <u>---</u>

Initial Open 30  Shale Packer 250  Ruined Packer ---  
 Initial Shut-In 60  Extra Packer ---  Extra Copies ---  
 Final Flow 30  Extra Recorder --- Sub Total 0  
 Final Shut-In 60  Day Standby --- Total 2226.70  
 Accessibility --- MP/DST Disc't ---  
 Sub Total 2226.70

Approved By Brad Rine Our Representative [Signature]

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. 55198

Well Name & No. Burke Trust 'B' #1227 1-14 Test No. 2 Date 11-17-13  
 Company Murfin Drilling Co, Inc Elevation 3280 KB 3275 GL  
 Address 250 N Webster STE #3000 Wichita, KS 67202  
 Co. Rep / Geo. Brad Rine Rig Murfin #8  
 Location: Sec. 14 Twp. 1S Rge. 36 W Co. Rawlins State KS

Interval Tested 4078 - 4122 Zone Tested Oread  
 Anchor Length 49' Drill Pipe Run 3874 Mud Wt. 9.1  
 Top Packer Depth 4074 Drill Collars Run 186' Vis 62  
 Bottom Packer Depth 4078 Wt. Pipe Run 0 WL 5.6  
 Total Depth 4127 Chlorides 1,100 ppm System LCM 5#

Blow Description IE - Bleed off initial surge - surface blow built to 3"  
FSE - NO Return  
FF - Surface Blow started at 5 min. Built to 5 1/4"  
FSE - NO Return

Rec	Feet of	%gas	SPOTS	%oil	%water	%mud
<u>60</u>	<u>OS UM</u>			<u>10</u>	<u>90</u>	
<u>60</u>	<u>OS UM</u>			<u>30</u>	<u>70</u>	
<u>60</u>	<u>OS UM</u>			<u>50</u>	<u>50</u>	
<u>60</u>	<u>OS MW</u>			<u>60</u>	<u>40</u>	
Rec	Feet of	%gas		%oil	%water	%mud

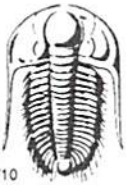
Rec Total 140 BHT 1308 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2043  Test 1250 T-On Location 1:00 PM  
 (B) First Initial Flow 40  Jars 250 T-Started 3:04 PM  
 (C) First Final Flow 86  Safety Joint 75 T-Open 6:08 PM  
 (D) Initial Shut-In 1151  Circ Sub N/C T-Pulled 10:08 PM  
 (E) Second Initial Flow 91  Hourly Standby T-Out 1:15 AM  
 (F) Second Final Flow 130  Mileage 114 RT 176.70 Comments \_\_\_\_\_  
 (G) Final Shut-In 1137  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2007  Straddle \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 60  Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Final Flow 60  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Shut-In 90  Day Standby \_\_\_\_\_ Total 1751.70  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1751.70

Approved By \_\_\_\_\_ Our Representative

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. 55199

Well Name & No. Borke Trust 'B' #1-14 Test No. 3 Date 11-18-13  
 Company Muffin Drilling Co., Inc. Elevation 3280 KB 3275 GL  
 Address 250 N Water STE #300 Wichita, KS 67202  
 Co. Rep / Geo. Brod Rine Rig Muffin #8  
 Location: Sec. 14 Twp. 15 Rge. 36W Co. Rawlins State KS

Interval Tested 4158-4250 Zone Tested L1K "A"  
 Anchor Length 92' Drill Pipe Run 3964 Mud Wt. 9.1  
 Top Packer Depth 4154 Drill Collars Run 186 Vis 600  
 Bottom Packer Depth 4158 Wt. Pipe Run 0 WL 5.6  
 Total Depth 4250 Chlorides \_\_\_\_\_ ppm System LCM 6#

Blow Description IF-1/2" Blow built to 1 1/4"  
ISI-NO Return  
FF-NO Blow  
FSI-NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>100</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 100 BHT 128 Gravity - API RW - @ - ° F Chlorides - ppm

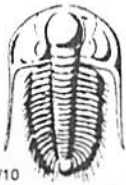
(A) Initial Hydrostatic 2058  Test 1250 T-On Location 5:15 PM  
 (B) First Initial Flow 17  Jars 250 T-Started 5:38 PM  
 (C) First Final Flow 22  Safety Joint 75 T-Open 8:45 PM  
 (D) Initial Shut-In 1038  Circ Sub NIC T-Pulled 11:45 PM  
 (E) Second Initial Flow 24  Hourly Standby X 2 200 T-Out 5:40 AM  
 (F) Second Final Flow 25  Mileage 114RT 176.70  
 (G) Final Shut-In 975  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2036  Straddle \_\_\_\_\_

Initial Open 30  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 600  Ruined Packer \_\_\_\_\_  
 Final Flow 30  Extra Packer \_\_\_\_\_  
 Final Shut-In 600  Extra Recorder \_\_\_\_\_  
 Sub Total 0  
 Total 1951.70  
 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1951.70

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

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. **55200**

Well Name & No. Burke Truss 'B' #1-14 Test No. 4 Date 11-19-13  
 Company Murfin Drilling Co., Inc. Elevation 3280 KB 3275 GL  
 Address 258 N Water STE #3000 Wichita, KS 67202  
 Co. Rep / Geo. Bruce Rine Rig Murfin #8  
 Location: Sec. 14 Twp. 15 Rge. 36W Co. Rawlins State KS

Interval Tested 4236-4293 Zone Tested LKC "D"  
 Anchor Length 57' Drill Pipe Run 4030' Mud Wt. 9.3  
 Top Packer Depth 4232 Drill Collars Run 186' Vis 53  
 Bottom Packer Depth 4236 Wt. Pipe Run 0 WL 6.0  
 Total Depth 4293 Chlorides 1,100 ppm System LCM 6#

Blow Description IF - Bleed off initial surge - Surface Blow built to 1"  
ISI - No Return  
FF - Surface Blow started at 10 min. Built to 1"  
FSI - No Return

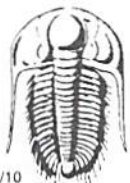
Rec	Feet of	%gas	%oil	%water	%mud
<u>122</u>	<u>Mud</u>			<u>1000</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	<u>0</u>	<u>Show up oil spots in tool</u>		<u>%gas SPOTS</u>	%oil %water %mud
Rec Total	<u>122</u>	BHT	<u>129</u>	Gravity	API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 2094  Test 1250 T-On Location 2:20 PM  
 (B) First Initial Flow 64  Jars 250 T-Started 3:10 PM  
 (C) First Final Flow 74  Safety Joint 75 T-Open 6:00 PM  
 (D) Initial Shut-In 1204  Circ Sub NIC T-Pulled 10:00 PM  
 (E) Second Initial Flow 83  Hourly Standby T-Out 1:15 AM  
 (F) Second Final Flow 84  Mileage 114 RT 176.70 Comments Chased tool  
 (G) Final Shut-In 1192  Sampler a approx 10' to bottom  
 (H) Final Hydrostatic 2082  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder Sub Total 0  
 Day Standby Total 1751.70  
 Accessibility MP/DST Disc't

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90  
 Sub Total 1751.70

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53552

Well Name & No. Burke Trust B # 1-14 Test No. 5 Date 11-20-13  
 Company Murfin Drilling Co., Inc. Elevation 3280 KB 3275 GL  
 Address 250 N Webster STE # 300 Wichita, KS 67202  
 Co. Rep / Geo. Broad Rine Rig Murfin #8  
 Location: Sec. 14 Twp. 1S Rge. 36 W Co. Rawlins State KS

Interval Tested 4287-4402 Zone Tested LKC "A, G, H, I"  
 Anchor Length 115' Drill Pipe Run 4090 Mud Wt. 9.2  
 Top Packer Depth 4283 Drill Collars Run 186 Vis 67  
 Bottom Packer Depth 4287 Wt. Pipe Run 0 WL 6.4  
 Total Depth 4402 Chlorides 1200 ppm System LCM 6#

Blow Description IF-BoB in 22 min.  
ISI- No Return  
FF-BoB in 15 min.  
FSI- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>Clean Oil</u>				
<u>62</u>	<u>OSM MCO</u>		<u>40</u>	<u>60</u>	<u>40</u>
<u>62</u>	<u>OSM MCO</u>		<u>50</u>	<u>50</u>	<u>50</u>
<u>62</u>	<u>OCM</u>		<u>30</u>	<u>70</u>	<u>70</u>

Rec Total 226 BHT 127 Gravity 34 API RW -@ - ° F Chlorides - ppm

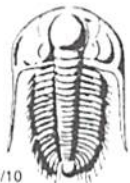
(A) Initial Hydrostatic 2226  Test 1250 T-On Location 2:15 PM  
 (B) First Initial Flow 36  Jars 250 T-Started 4:00 PM  
 (C) First Final Flow 75  Safety Joint 75 T-Open 6:45 PM  
 (D) Initial Shut-In 1059  Circ Sub NIC T-Pulled 10:45 PM  
 (E) Second Initial Flow 88  Hourly Standby NIC T-Out 2:00 AM  
 (F) Second Final Flow 103  Mileage 114RT 176.70  
 (G) Final Shut-In 968  Sampler  
 (H) Final Hydrostatic 2175  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder  
 Sub Total 0  
 Total 1751.70  
 MP/DST Disc't

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90  
 Sub Total 1751.70

Approved By \_\_\_\_\_ Our Representative

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53553

Well Name & No. Burke Trust 'B' #1-14 Test No. 6 Date 11-21-13  
 Company Murfin Drilling Co., Inc Elevation 3280 KB 3275 GL  
 Address 2508 N Water STE # 3000 Wichita, KS 67202  
 Co. Rep / Geo. Brad Rine Rig Murfin #8  
 Location: Sec. 14 Twp. 1S Rge. 36 W Co. Rawlins State KS

Interval Tested 4391-4440 Zone Tested LKC "J"  
 Anchor Length 49' Drill Pipe Run 4192' Mud Wt. 9.2  
 Top Packer Depth 4387 Drill Collars Run 186' Vis 67  
 Bottom Packer Depth 4391 Wt. Pipe Run 0 WL 6.4  
 Total Depth 4440 Chlorides 10000 ppm System LCM 6#

Blow Description IF - 1/2" Blow built to 2"  
ISI - NO Return  
FF - Surface Blow started at 5 min. Built to 3/4" then died in 40 min  
FSI - NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>600</u>	<u>OSM</u>	<u>SPOTS</u>		<u>1000</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 600 BHT 129° Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>2262</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>11:00 AM</u>
(B) First Initial Flow <u>32</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>11:20 AM</u>
(C) First Final Flow <u>37</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>3:25 PM</u>
(D) Initial Shut-In <u>930</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>7:25 PM</u>
(E) Second Initial Flow <u>43</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>10:00 PM</u>
(F) Second Final Flow <u>49</u>	<input checked="" type="checkbox"/> Mileage <u>114 RT</u> 353.40	Comments <u>Show of free oil in test</u>
(G) Final Shut-In <u>1056</u>	<input type="checkbox"/> Sampler	<u>Lowered tools 1:30 PM</u>
(H) Final Hydrostatic <u>2233</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer <u>11-23-13</u>
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>300</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>600</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>800</u>
Final Flow <u>600</u>	<input checked="" type="checkbox"/> Day Standby <u>1d 15.5h</u>	Total <u>2728.40</u>
Final Shut-In <u>900</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1928.40</u>	

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

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