

## DRILL STEM TEST REPORT

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

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Wes Hansen

### **Frisbie #2-23**

#### **23-2s-36w Rawlins KS**

Start Date: 2013.07.06 @ 08:20:00

End Date: 2013.07.06 @ 16:52:15

Job Ticket #: 52758                      DST #: 1

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

Printed: 2013.07.11 @ 16:18:08



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**23-2s-36w Rawlins KS**

**Frisbie #2-23**

Job Ticket: 52758

**DST#: 1**

Test Start: 2013.07.06 @ 08:20:00

## GENERAL INFORMATION:

Formation: **LeCompton - Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:29:00

Time Test Ended: 16:52:15

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 57

Interval: **4029.00 ft (KB) To 4140.00 ft (KB) (TVD)**

Reference Elevations: 3294.00 ft (KB)

Total Depth: 4140.00 ft (KB) (TVD)

3284.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8671**

**Inside**

Press @ Run Depth: 475.28 psig @ 4030.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.07.06

End Date: 2013.07.06

Last Calib.: 2013.07.06

Start Time: 08:20:05

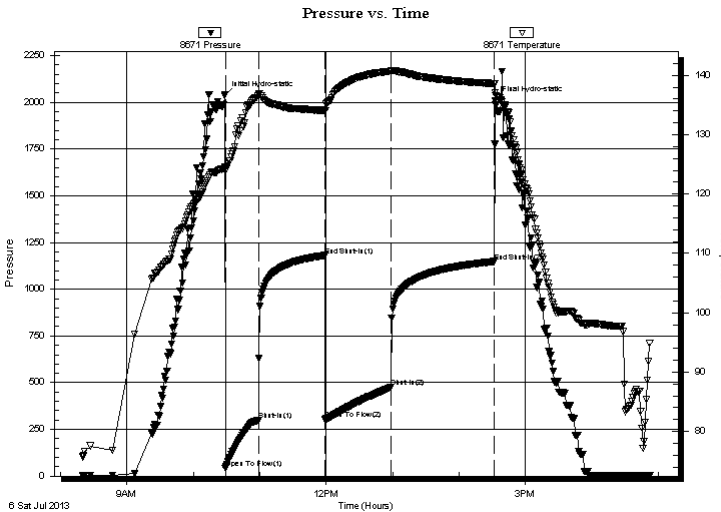
End Time: 16:52:15

Time On Btm: 2013.07.06 @ 10:28:30

Time Off Btm: 2013.07.06 @ 14:32:45

**TEST COMMENT:** 30 - IF: Blow built to BOB (11") in 11 min.  
 60 - IS: No blow back  
 60 - FF: Blow started at 2 min., built to BOB in 16 min.  
 90 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2038.38	124.47	Initial Hydro-static
1	41.96	124.51	Open To Flow (1)
31	300.67	136.69	Shut-In(1)
91	1181.05	134.09	End Shut-In(1)
91	305.01	134.04	Open To Flow (2)
150	475.28	140.69	Shut-In(2)
244	1148.49	138.61	End Shut-In(2)
245	2008.69	137.10	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
630.00	MCW w/trace oil 81%w, 19%m	3.97
275.00	MW w/oil spots 47%w, 45%m, 5%g, 3%o	3.86
95.00	Mud w/oil spots 96%m, 3%o, 1%g	1.33

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

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

**23-2s-36w Rawlins KS**  
**Frisbie #2-23**  
Job Ticket: 52758 **DST#: 1**  
Test Start: 2013.07.06 @ 08:20:00

**Tool Information**

Drill Pipe:	Length: 3489.00 ft	Diameter: 3.80 inches	Volume: 48.94 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 86000.00 lb
			<u>Total Volume: 51.57 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4029.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	111.00 ft			
Tool Length:	139.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4006.00	
Hydraulic tool	5.00			4011.00	
Jars	5.00			4016.00	
Safety Joint	3.00			4019.00	
Packer	5.00			4024.00	28.00 Bottom Of Top Packer
Packer	5.00			4029.00	
Stubb	1.00			4030.00	
Recorder	0.00	8671	Inside	4030.00	
Recorder	0.00	8320	Outside	4030.00	
Perforations	8.00			4038.00	
Blank Spacing	97.00			4135.00	
Perforations	2.00			4137.00	
Bullnose	3.00			4140.00	111.00 Bottom Packers & Anchor

**Total Tool Length: 139.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**23-2s-36w Rawlins KS**  
**Frisbie #2-23**  
Job Ticket: 52758      **DST#: 1**  
Test Start: 2013.07.06 @ 08:20:00

## 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:	32000 ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.75 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 600.00 ppm			
Filter Cake: 2.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
630.00	MCW w/trace oil 81%w , 19%m	3.973
275.00	MW w/oil spots 47%w , 45%m, 5%g, 3%o	3.858
95.00	Mud w/oil spots 96%m, 3%o, 1%g	1.333

Total Length: 1000.00 ft      Total Volume: 9.164 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: RW = .158 ohms @ 96.6 deg F  
Chlorides = 32,000 ppm

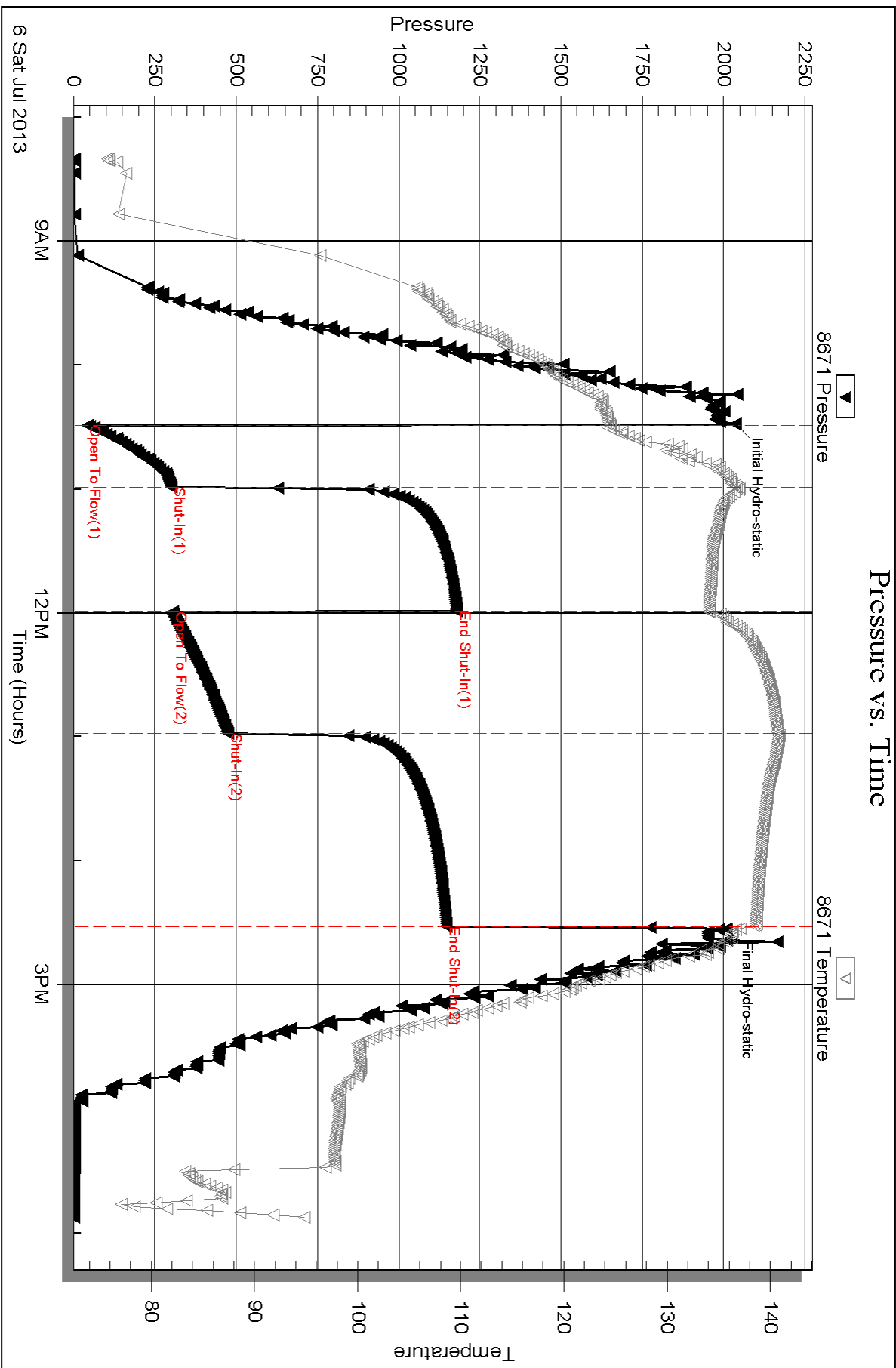
Serial #: 8671

Inside

Murfin Drilling Co., Inc

Frisbie #2-23

DST Test Number: 1

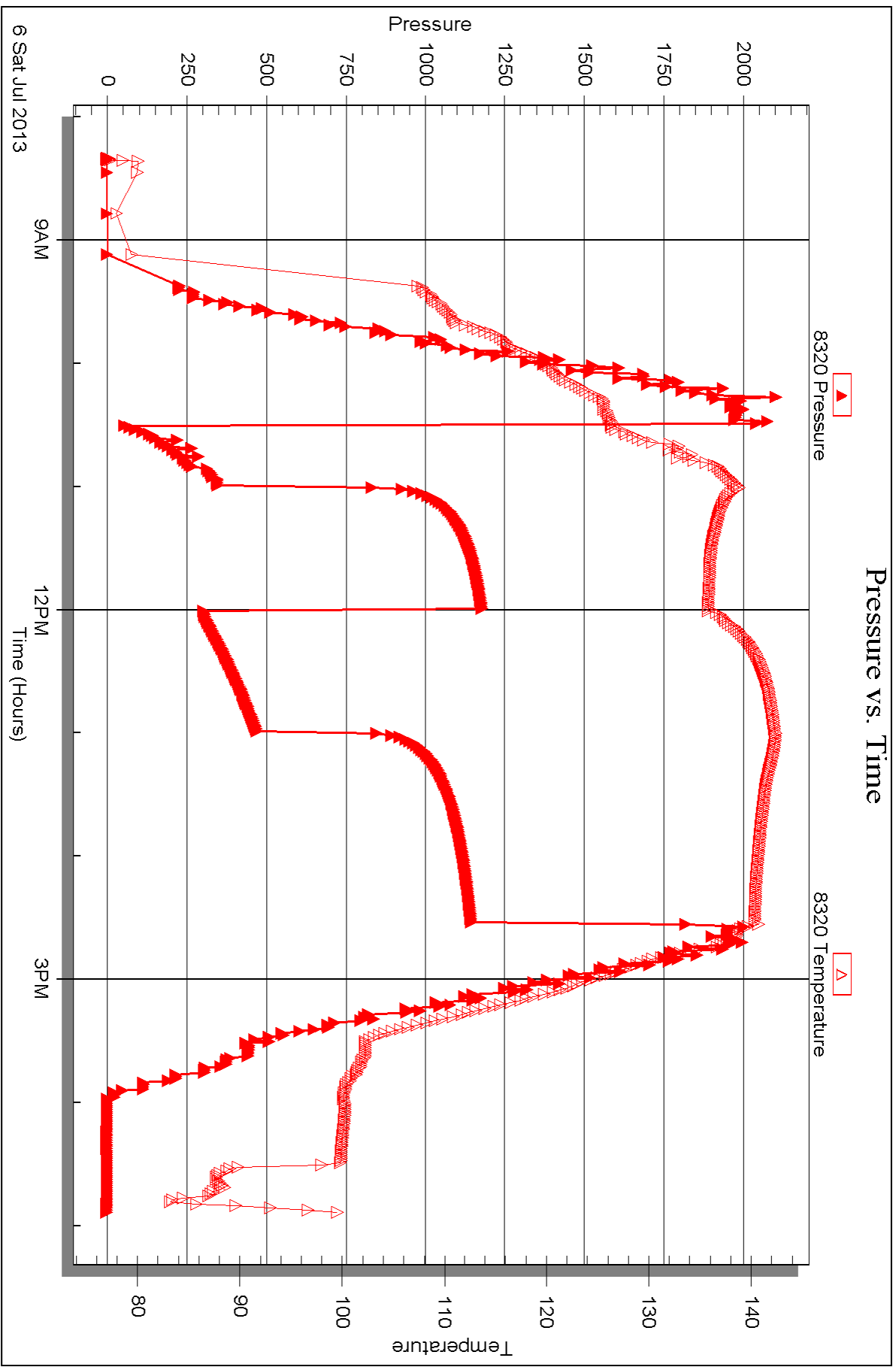


Serial #: 8320

Outside Murfin Drilling Co., Inc

Frisbie #2-23

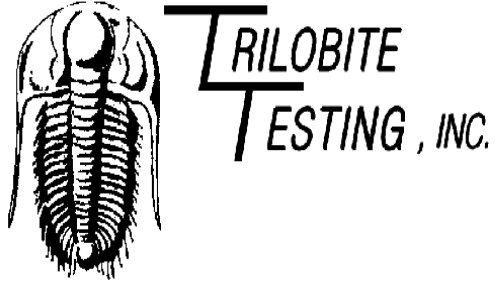
DST Test Number: 1



Triobite Testing, Inc

Ref. No: 52758

Printed: 2013.07.11 @ 16:18:11



## DRILL STEM TEST REPORT

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

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Wes Hansen

### **Frisbie #2-23**

#### **23-2s-36w Rawlins KS**

Start Date: 2013.07.07 @ 05:02:00

End Date: 2013.07.07 @ 12:26:30

Job Ticket #: 52759                      DST #: 2

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

Printed: 2013.07.11 @ 16:17:17





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

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

**23-2s-36w Rawlins KS**

**Frisbie #2-23**

Job Ticket: 52759

**DST#: 2**

Test Start: 2013.07.07 @ 05:02:00

## GENERAL INFORMATION:

Formation: **Douglas - Lans. "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:27:00

Time Test Ended: 12:26:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

**Interval: 4154.00 ft (KB) To 4235.00 ft (KB) (TVD)**

Reference Elevations: 3294.00 ft (KB)

Total Depth: 4235.00 ft (KB) (TVD)

3284.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8671**

**Inside**

Press @ Run Depth: 45.33 psig @ 4155.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.07.07

End Date:

2013.07.07

Last Calib.: 2013.07.07

Start Time: 05:02:05

End Time:

12:26:29

Time On Btm: 2013.07.07 @ 07:26:45

Time Off Btm: 2013.07.07 @ 10:42:15

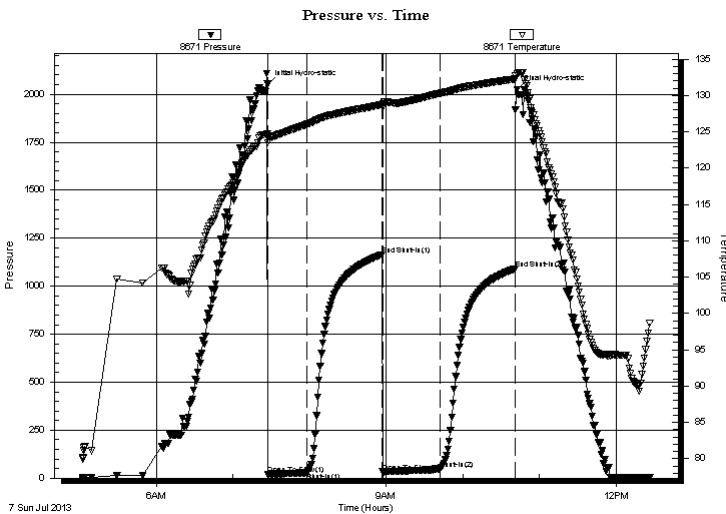
**TEST COMMENT:** 30 - IF: Weak blow, built to 1 1/8"

60 - IS: No blow back

45 - FF: No blow

60 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2052.11	124.71	Initial Hydro-static
1	19.61	123.54	Open To Flow (1)
32	28.97	126.03	Shut-In(1)
90	1164.73	128.73	End Shut-In(1)
91	32.61	128.29	Open To Flow (2)
136	45.33	130.28	Shut-In(2)
194	1091.39	132.26	End Shut-In(2)
196	2025.50	132.97	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	Mud w /oil spots 89%m, 7%o, 4%g	0.30

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

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

**23-2s-36w Rawlins KS**  
**Frisbie #2-23**  
Job Ticket: 52759      **DST#: 2**  
Test Start: 2013.07.07 @ 05:02:00

**Tool Information**

Drill Pipe:	Length: 3616.00 ft	Diameter: 3.80 inches	Volume: 50.72 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 53.35 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4154.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	81.00 ft			
Tool Length:	109.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4131.00	
Hydraulic tool	5.00			4136.00	
Jars	5.00			4141.00	
Safety Joint	3.00			4144.00	
Packer	5.00			4149.00	28.00      Bottom Of Top Packer
Packer	5.00			4154.00	
Stubb	1.00			4155.00	
Recorder	0.00	8671	Inside	4155.00	
Recorder	0.00	8320	Outside	4155.00	
Perforations	10.00			4165.00	
Blank Spacing	65.00			4230.00	
Perforations	2.00			4232.00	
Bullnose	3.00			4235.00	81.00      Bottom Packers & Anchor

**Total Tool Length: 109.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**23-2s-36w Rawlins KS**  
**Frisbie #2-23**  
Job Ticket: 52759      **DST#: 2**  
Test Start: 2013.07.07 @ 05:02:00

## 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: bbl		
Water Loss: 7.15 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: 2.00 inches			

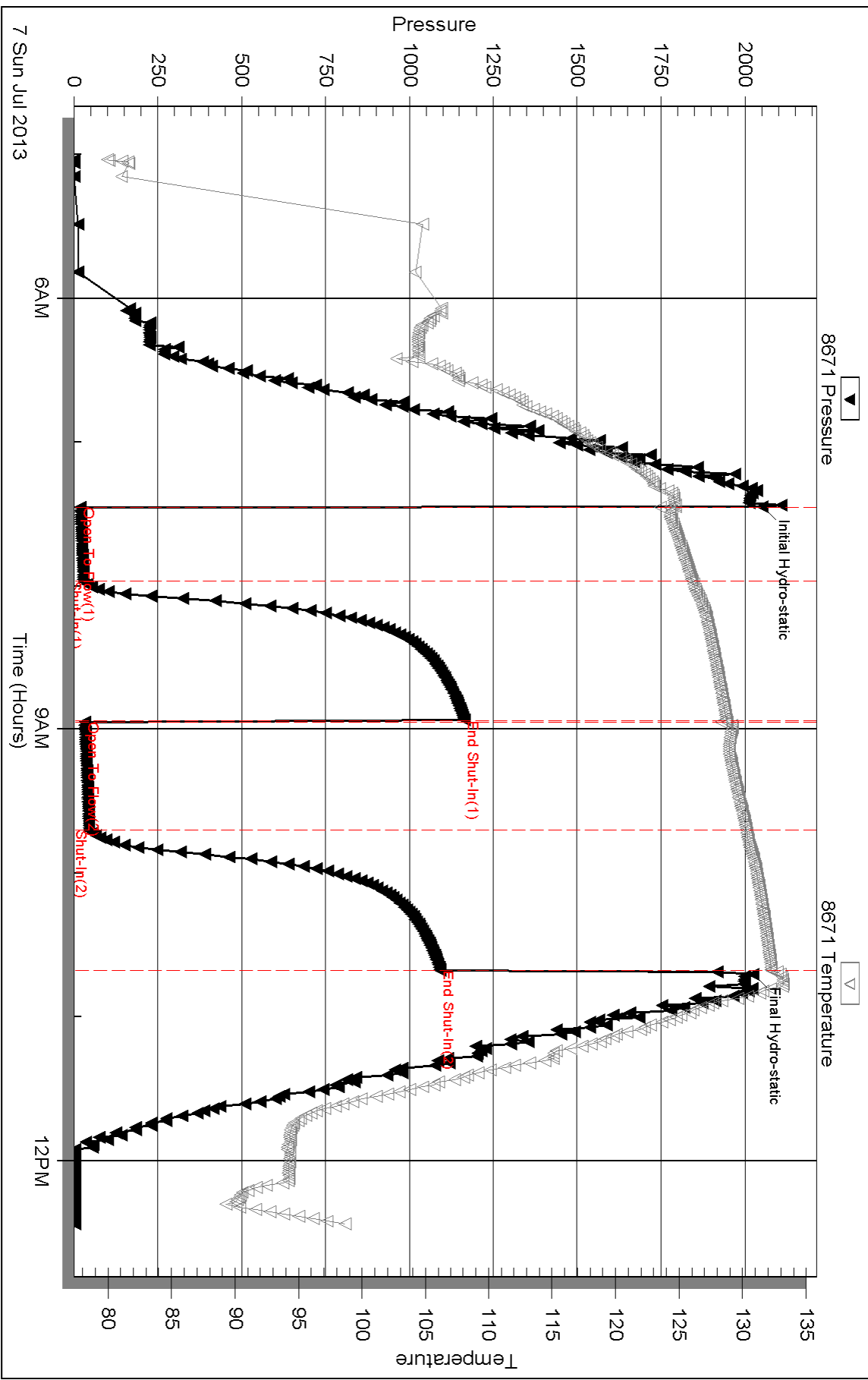
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	Mud w /oil spots 89%m, 7%o, 4%g	0.295

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:

### Pressure vs. Time

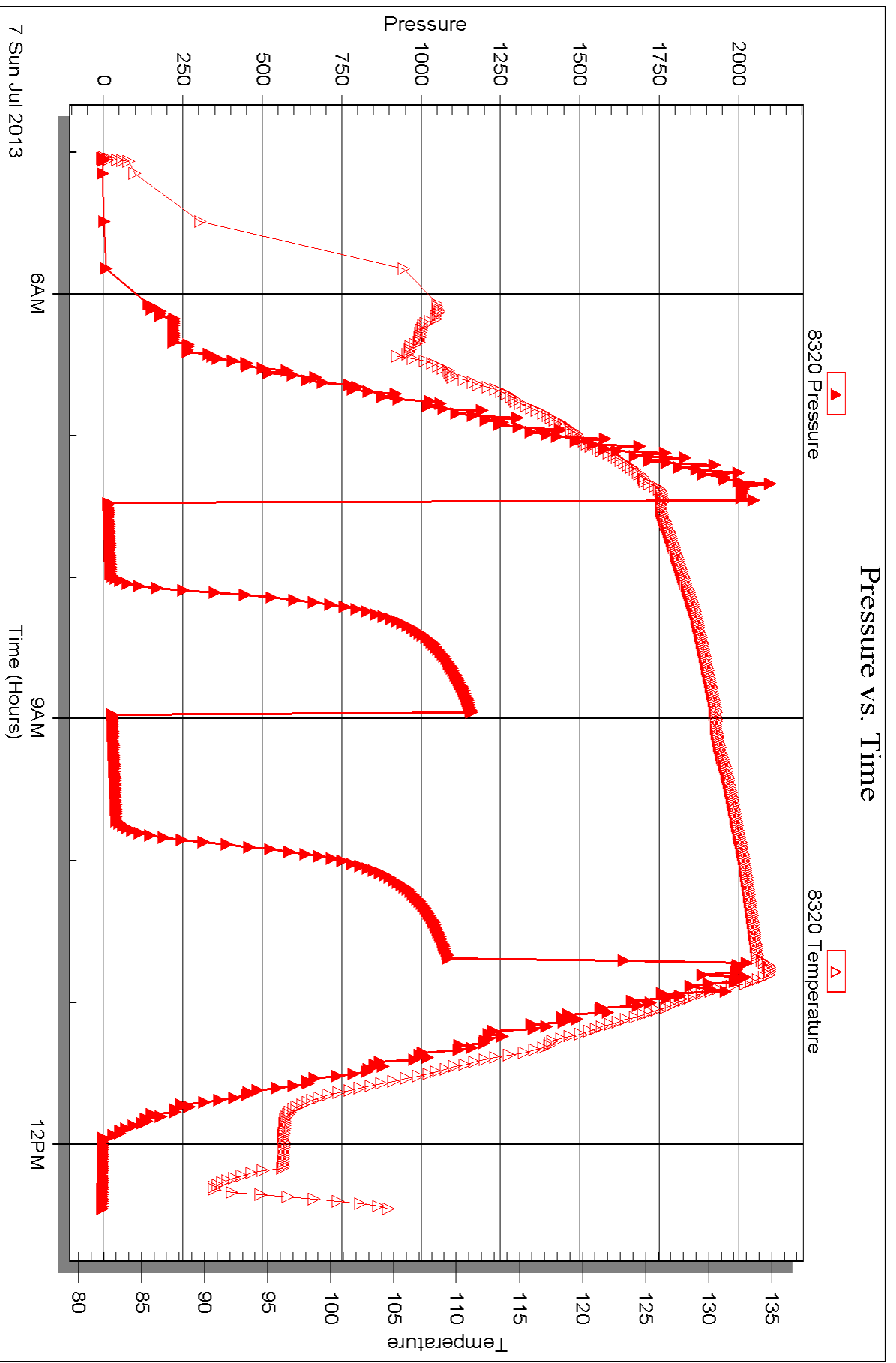


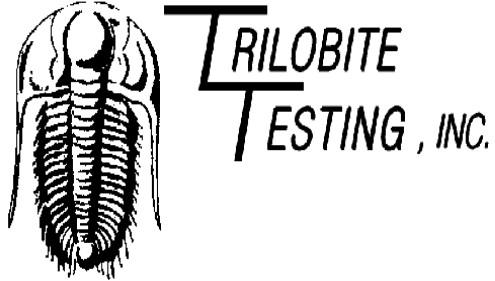
Serial #: 8320

Outside Murfin Drilling Co., Inc

Frisbie #2-23

DST Test Number: 2





## DRILL STEM TEST REPORT

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

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Wes Hansen

### **Frisbie #2-23**

#### **23-2s-36w Rawlins KS**

Start Date: 2013.07.08 @ 00:09:00

End Date: 2013.07.08 @ 08:18:00

Job Ticket #: 52760                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.07.11 @ 16:16:18



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**23-2s-36w Rawlins KS**

**Frisbie #2-23**

Job Ticket: 52760

**DST#: 3**

Test Start: 2013.07.08 @ 00:09:00

## GENERAL INFORMATION:

Formation: **Lans. "D - E"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 02:10:45  
 Tester: James Winder  
 Time Test Ended: 08:18:00  
 Unit No: 57  
 Interval: **4230.00 ft (KB) To 4300.00 ft (KB) (TVD)**  
 Reference Elevations: 3294.00 ft (KB)  
 Total Depth: 4300.00 ft (KB) (TVD)  
 3284.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Fair  
 KB to GR/CF: 10.00 ft

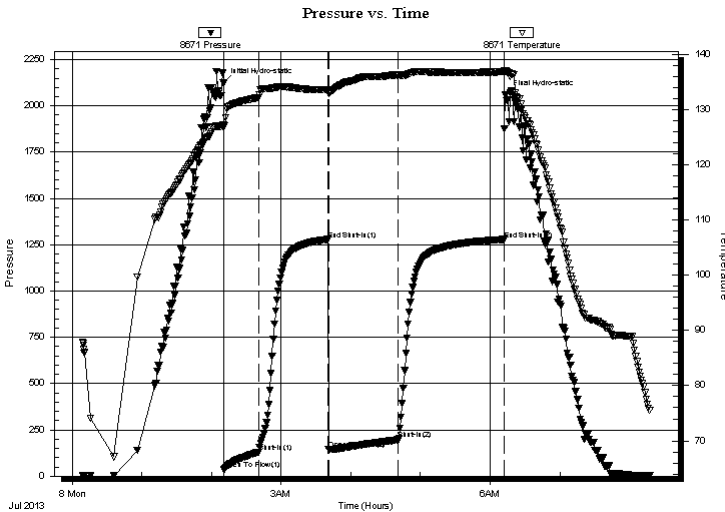
## Serial #: 8671

Inside

Press @ Run Depth: 196.57 psig @ 4231.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.07.08 End Date: 2013.07.08 Last Calib.: 2013.07.08  
 Start Time: 00:09:05 End Time: 08:17:59 Time On Btm: 2013.07.08 @ 02:10:15  
 Time Off Btm: 2013.07.08 @ 06:13:15

**TEST COMMENT:** 30 - IF: Blow built to BOB (11") in 17 min.  
 60 - IS: Blow back built to 1"  
 60 - FF: Blow built to BOB in 47 1/2 min.  
 90 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2123.68	127.25	Initial Hydro-static
1	34.54	126.89	Open To Flow (1)
31	130.28	132.18	Shut-In(1)
90	1279.08	133.59	End Shut-In(1)
91	143.30	133.08	Open To Flow (2)
151	196.57	136.26	Shut-In(2)
242	1278.67	136.85	End Shut-In(2)
243	2058.71	136.98	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
238.00	GMO 38%o, 31%g, 31%m	1.17
205.00	CGO 63%o, 34%g, 3%m	1.01
10.00	CO 95%o, 4%g, 1%m	0.05
0.00	GIP = 180'	0.00

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

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

**23-2s-36w Rawlins KS**  
**Frisbie #2-23**  
Job Ticket: 52760 **DST#: 3**  
Test Start: 2013.07.08 @ 00:09:00

**Tool Information**

Drill Pipe:	Length: 3679.00 ft	Diameter: 3.80 inches	Volume: 51.61 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 88000.00 lb
			<u>Total Volume: 54.24 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4230.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	98.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Shut In Tool	5.00			4207.00	
Hydraulic tool	5.00			4212.00	
Jars	5.00			4217.00	
Safety Joint	3.00			4220.00	
Packer	5.00			4225.00	28.00 Bottom Of Top Packer
Packer	5.00			4230.00	
Stubb	1.00			4231.00	
Recorder	0.00	8671	Inside	4231.00	
Recorder	0.00	8320	Outside	4231.00	
Perforations	29.00			4260.00	
Blank Spacing	33.00			4293.00	
Perforations	4.00			4297.00	
Bullnose	3.00			4300.00	70.00 Bottom Packers & Anchor

**Total Tool Length: 98.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc

**23-2s-36w Rawlins KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Frisbie #2-23**

Job Ticket: 52760

**DST#: 3**

ATTN: Wes Hansen

Test Start: 2013.07.08 @ 00:09:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

29 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.16 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
238.00	GMO 38%o, 31%g, 31%m	1.170
205.00	CGO 63%o, 34%g, 3%m	1.008
10.00	CO 95%o, 4%g, 1%m	0.049
0.00	GIP = 180'	0.000

Total Length: 453.00 ft      Total Volume: 2.227 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 30.6 api @ 76 deg F

Corrected Gravity = 29 api

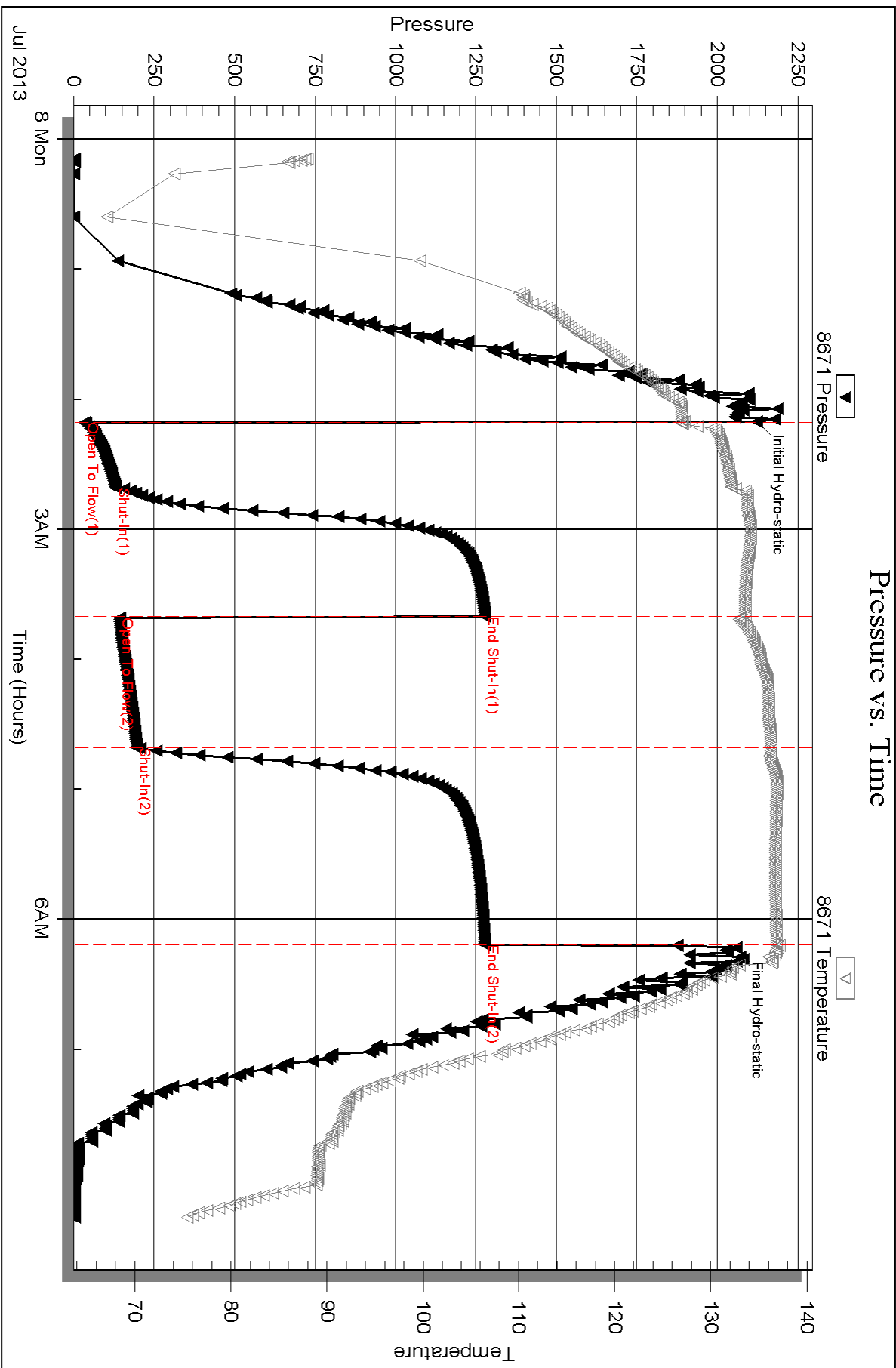
Serial #: 8671

Inside

Murfin Drilling Co., Inc

Frisbie #2-23

DST Test Number: 3

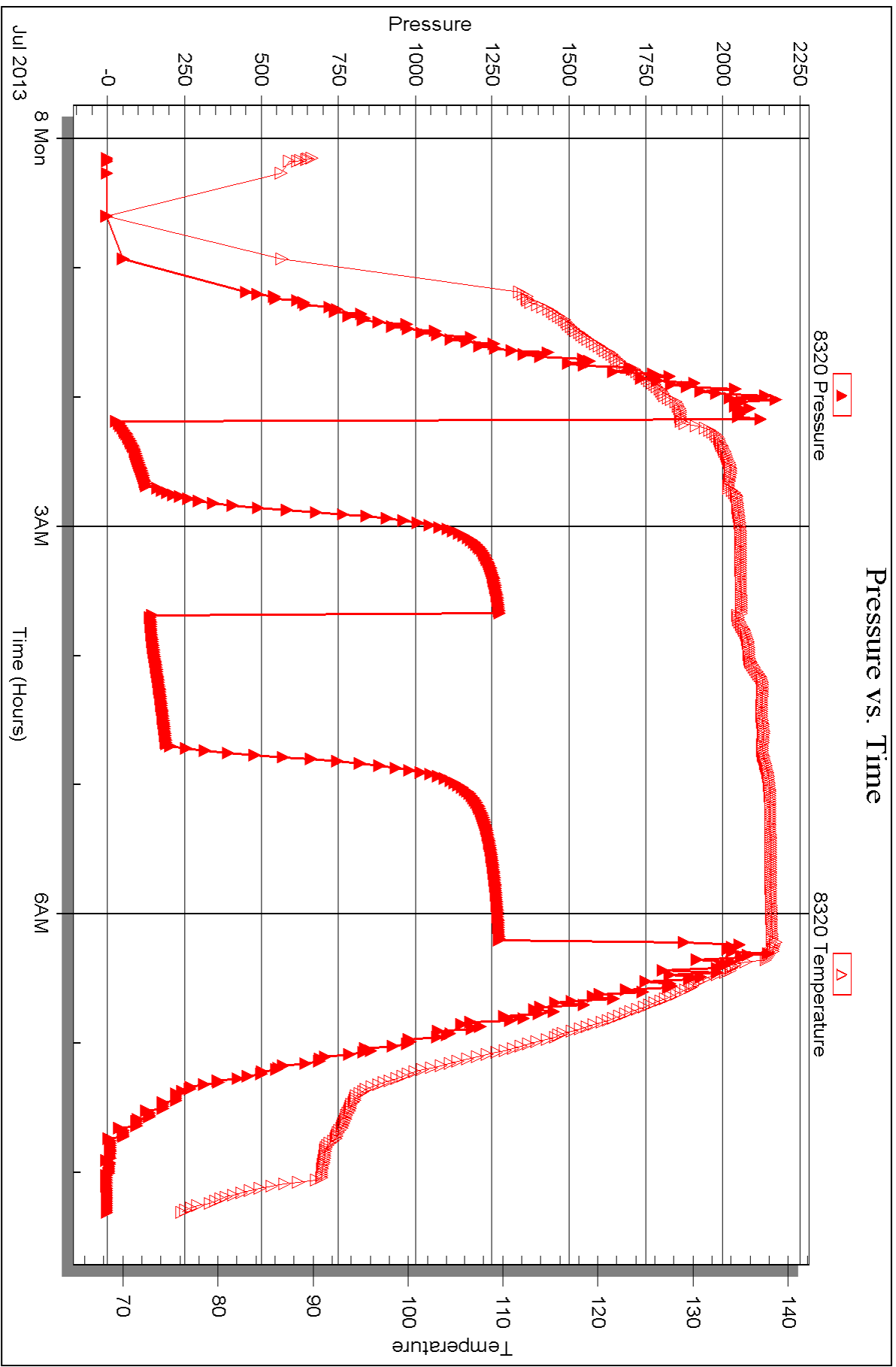


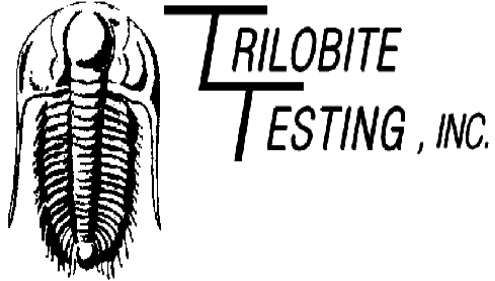
Serial #: 8320

Outside Murfin Drilling Co., Inc

Frisbie #2-23

DST Test Number: 3





## DRILL STEM TEST REPORT

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

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Wes Hansen

### **Frisbie #2-23**

#### **23-2s-36w Rawlins KS**

Start Date: 2013.07.08 @ 16:45:00

End Date: 2013.07.09 @ 01:05:30

Job Ticket #: 52761                      DST #: 4

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

Printed: 2013.07.11 @ 16:14:52



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

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

**23-2s-36w Rawlins KS**

**Frisbie #2-23**

Job Ticket: 52761

**DST#: 4**

Test Start: 2013.07.08 @ 16:45:00

## GENERAL INFORMATION:

Formation: **Lans. "G"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 19:10:30  
 Tester: James Winder  
 Time Test Ended: 01:05:30  
 Unit No: 57  
 Interval: **4299.00 ft (KB) To 4335.00 ft (KB) (TVD)**  
 Reference Elevations: 3294.00 ft (KB)  
 Total Depth: 4335.00 ft (KB) (TVD)  
 3284.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Fair  
 KB to GR/CF: 10.00 ft

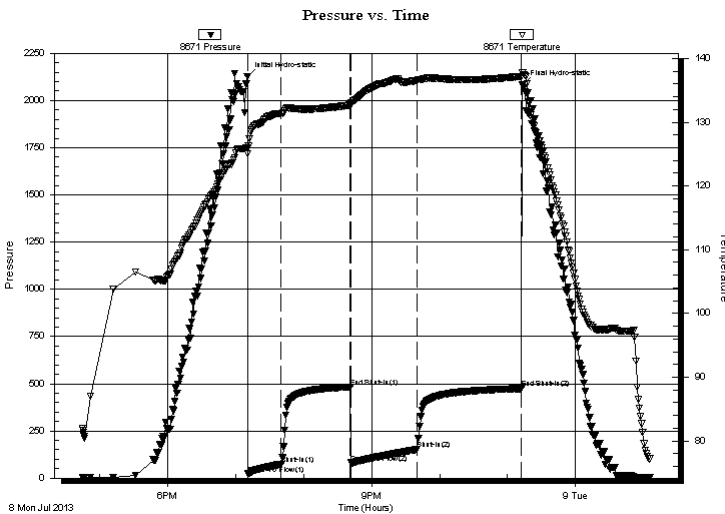
## Serial #: 8671

Inside

Press @ Run Depth: 151.70 psig @ 4300.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.07.08 End Date: 2013.07.09 Last Calib.: 2013.07.09  
 Start Time: 16:45:05 End Time: 01:05:29 Time On Btm: 2013.07.08 @ 19:10:15  
 Time Off Btm: 2013.07.08 @ 23:13:15

**TEST COMMENT:** 30 - IF: Blow built to 9"  
 60 - IS: Blow back built to 1/8"  
 60 - FF: Blow built to BOB (11") in 38 min.  
 90 - FS: Blow back built to 1/8"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2128.28	126.03	Initial Hydro-static
1	21.74	125.09	Open To Flow (1)
30	74.78	131.29	Shut-In(1)
91	483.17	132.68	End Shut-In(1)
92	80.93	132.66	Open To Flow (2)
150	151.70	136.57	Shut-In(2)
242	474.73	137.19	End Shut-In(2)
243	2084.34	137.81	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
89.00	GOM 46% <sub>m</sub> , 30% <sub>o</sub> , 24% <sub>g</sub>	0.44
264.00	CGO 75% <sub>o</sub> , 22% <sub>g</sub> , 3% <sub>m</sub>	1.30
0.00	GIP = 180'+	0.00

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

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

**23-2s-36w Rawlins KS**  
**Frisbie #2-23**  
Job Ticket: 52761 **DST#: 4**  
Test Start: 2013.07.08 @ 16:45:00

## Tool Information

Drill Pipe:	Length: 3742.00 ft	Diameter: 3.80 inches	Volume: 52.49 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose:	82000.00 lb
			<u>Total Volume: 55.12 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial	72000.00 lb
Depth to Top Packer:	4299.00 ft			Final	75000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	36.00 ft				
Tool Length:	64.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

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

Shut In Tool	5.00			4276.00	
Hydraulic tool	5.00			4281.00	
Jars	5.00			4286.00	
Safety Joint	3.00			4289.00	
Packer	5.00			4294.00	28.00 Bottom Of Top Packer
Packer	5.00			4299.00	
Stubb	1.00			4300.00	
Recorder	0.00	8671	Inside	4300.00	
Recorder	0.00	8320	Outside	4300.00	
Perforations	32.00			4332.00	
Bullnose	3.00			4335.00	36.00 Bottom Packers & Anchor

**Total Tool Length: 64.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**23-2s-36w Rawlins KS**  
**Frisbie #2-23**  
Job Ticket: 52761      **DST#: 4**  
Test Start: 2013.07.08 @ 16:45:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 30.4 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 73.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.97 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 1200.00 ppm		
Filter Cake: 2.00 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
89.00	GOM 46% <i>m</i> , 30% <i>o</i> , 24% <i>g</i>	0.438
264.00	CGO 75% <i>o</i> , 22% <i>g</i> , 3% <i>m</i>	1.298
0.00	GIP = 180'+	0.000

Total Length: 353.00 ft      Total Volume: 1.736 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: Gravity = 32.4 api @ 80 deg F  
Corrected Gravity = 30.4 api

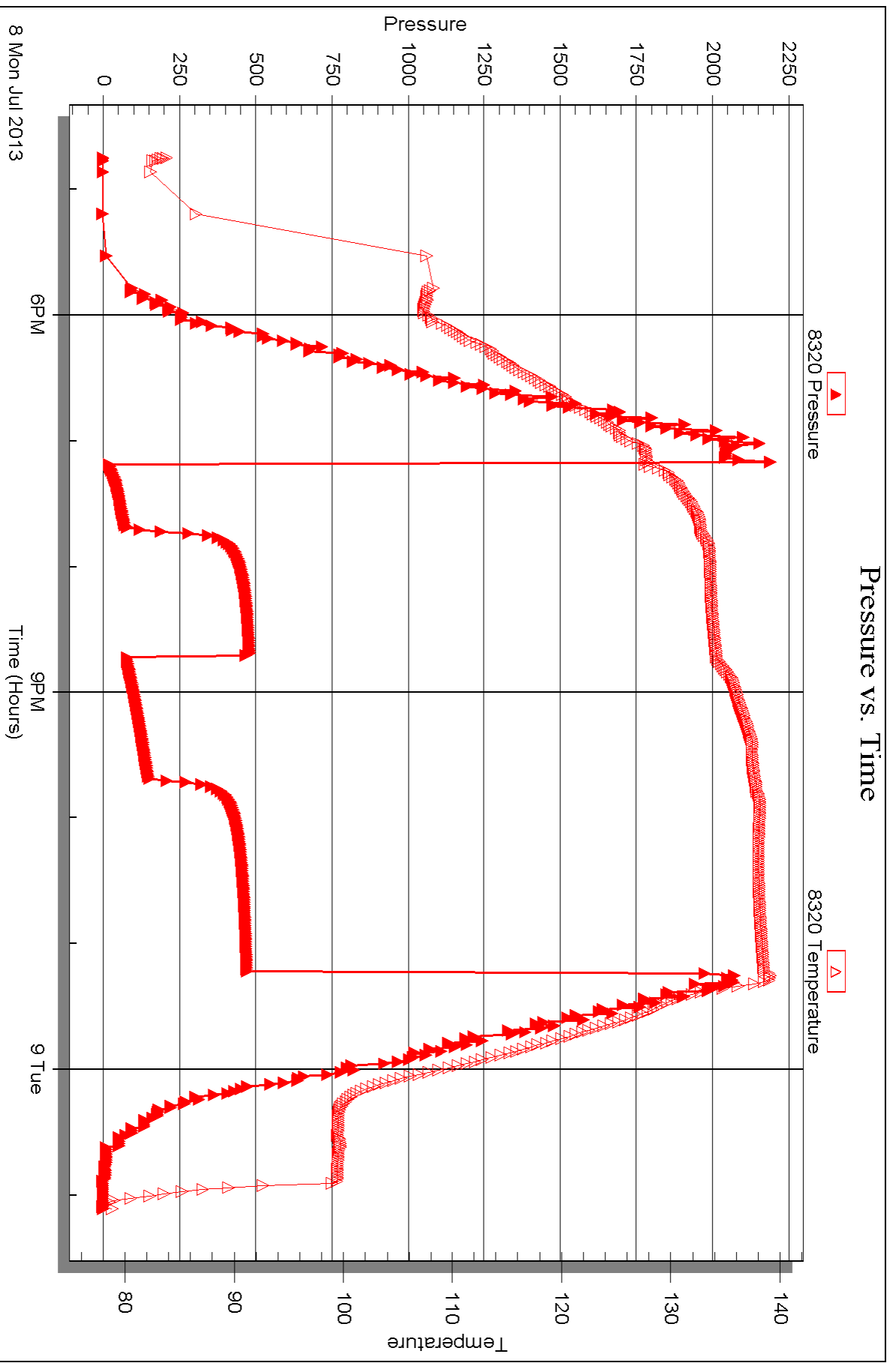


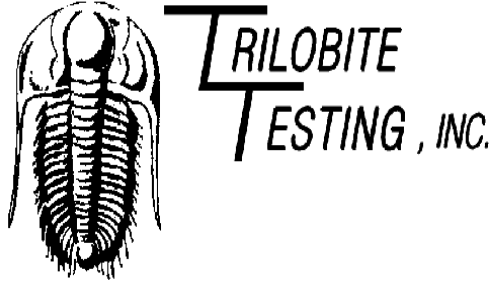
Serial #: 8320

Outside Murfin Drilling Co., Inc

Fisble #2-23

DST Test Number: 4





## DRILL STEM TEST REPORT

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

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Wes Hansen

### **Frisbie #2-23**

#### **23-2s-36w Rawlins KS**

Start Date: 2013.07.09 @ 13:15:00

End Date: 2013.07.10 @ 00:12:15

Job Ticket #: 52762                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.07.11 @ 16:14:05



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**23-2s-36w Rawlins KS**

**Frisbie #2-23**

Job Ticket: 52762

**DST#: 5**

Test Start: 2013.07.09 @ 13:15:00

## GENERAL INFORMATION:

Formation: **Lans. "H - J"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 15:22:45  
 Tester: James Winder  
 Time Test Ended: 00:12:15  
 Unit No: 57  
 Interval: **4376.00 ft (KB) To 4430.00 ft (KB) (TVD)**  
 Reference Elevations: 3294.00 ft (KB)  
 Total Depth: 4430.00 ft (KB) (TVD)  
 3284.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Fair  
 KB to GR/CF: 10.00 ft

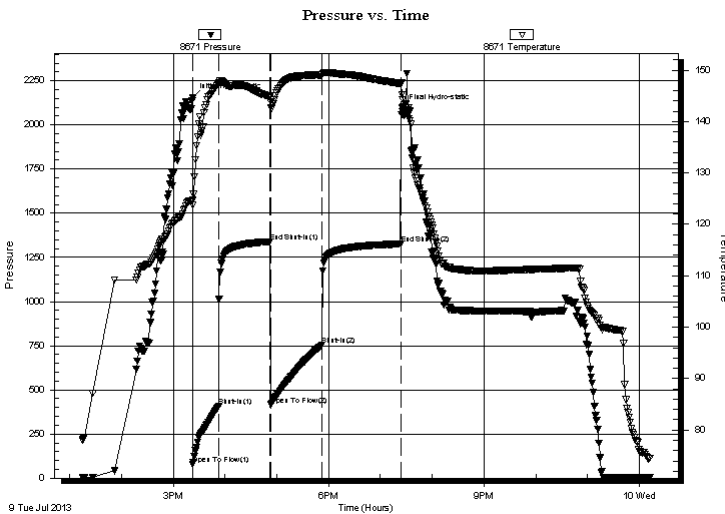
## Serial #: 8671

Inside

Press @ Run Depth: 755.08 psig @ 4377.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.07.09 End Date: 2013.07.10 Last Calib.: 2013.07.10  
 Start Time: 13:15:05 End Time: 00:12:15 Time On Btm: 2013.07.09 @ 15:22:30  
 Time Off Btm: 2013.07.09 @ 19:25:15

**TEST COMMENT:** 30 - IF: Blow built to BOB (11") in 3 1/4 min.  
 60 - IS: Bled off for about 5 min., Blow back built to BOB at 17 1/4 min.  
 60 - FF: Blow built to BOB in 4 min.  
 90 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2151.71	124.68	Initial Hydro-static
1	77.24	123.68	Open To Flow (1)
31	407.83	147.25	Shut-In(1)
90	1339.41	144.84	End Shut-In(1)
91	415.14	143.91	Open To Flow (2)
150	755.08	149.04	Shut-In(2)
242	1326.50	147.37	End Shut-In(2)
243	2094.70	145.25	Final Hydro-static

## Recovery

## Gas Rates

Length (ft)	Description	Volume (bbl)
89.00	SWC/GOM 35%m, 35%g, 25%o, 5%w	0.44
1876.00	Rev - sample at 3 min. intv for 15 min	22.26
0.00	then 5 min. intv - done at 25 min.	0.00
0.00	25 min sample CO 93%o, 4%m, 3%g	0.00
0.00	20 min sample GMCO 65%o, 22%m, 13%g	0.00
0.00	first 15 min CGO 84%o, 11%g, 5%m	0.00

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

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

**23-2s-36w Rawlins KS**

**Frisbie #2-23**

Job Ticket: 52762

**DST#: 5**

Test Start: 2013.07.09 @ 13:15:00

### Tool Information

Drill Pipe:	Length: 3837.00 ft	Diameter: 3.80 inches	Volume: 53.82 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 96000.00 lb
			<u>Total Volume: 56.45 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 74000.00 lb
Depth to Top Packer:	4376.00 ft			Final 84000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	54.00 ft			
Tool Length:	82.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4353.00	
Hydraulic tool	5.00			4358.00	
Jars	5.00			4363.00	
Safety Joint	3.00			4366.00	
Packer	5.00			4371.00	28.00 Bottom Of Top Packer
Packer	5.00			4376.00	
Stubb	1.00			4377.00	
Recorder	0.00	8671	Inside	4377.00	
Recorder	0.00	8320	Outside	4377.00	
Perforations	15.00			4392.00	
Blank Spacing	33.00			4425.00	
Perforations	2.00			4427.00	
Bullnose	3.00			4430.00	54.00 Bottom Packers & Anchor

**Total Tool Length: 82.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**23-2s-36w Rawlins KS**  
**Frisbie #2-23**  
Job Ticket: 52762      **DST#: 5**  
Test Start: 2013.07.09 @ 13:15:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 39.6 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 90.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.38 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 1000.00 ppm		
Filter Cake: 2.00 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
89.00	SWC/GOM 35%m, 35%g, 25%o, 5%w	0.438
1876.00	Rev - sample at 3 min. intv for 15 min	22.262
0.00	then 5 min. intv - done at 25 min.	0.000
0.00	25 min sample CO 93%o, 4%m, 3%g	0.000
0.00	20 min sample GMCO 65%o, 22%m, 13%g	0.000
0.00	first 15 min CGO 84%o, 11%g, 5%m	0.000
125.00	CGO 66%o, 33%g, 1%m	1.753
0.00	GIP = 1205'	0.000

Total Length: 2090.00 ft      Total Volume: 24.453 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: Gravity = 41.2 api @ 76 deg F  
 Truck driver said he gauged 17 bbl of reversed fluid

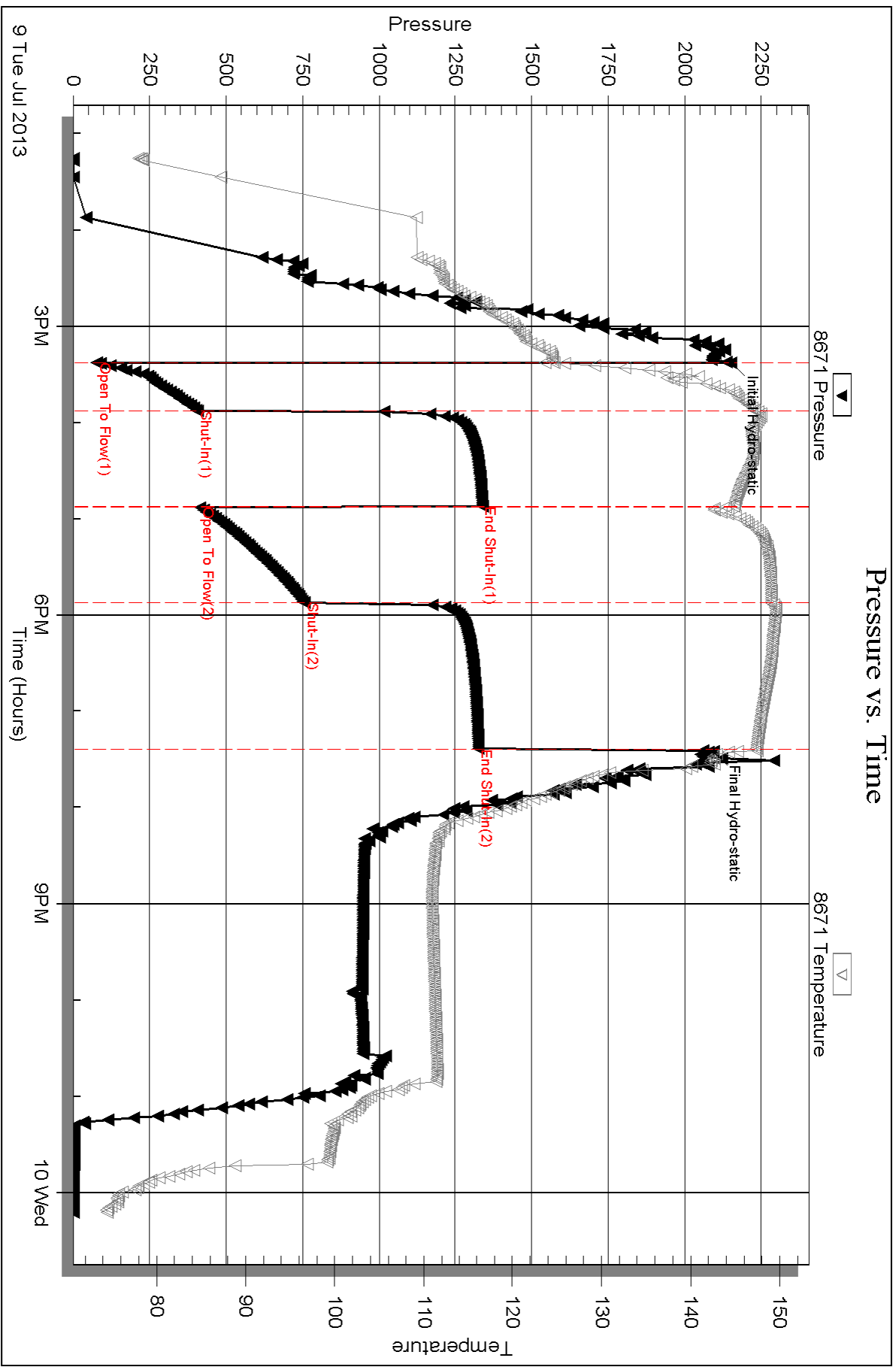
Serial #: 8671

Inside

Murfin Drilling Co., Inc

Frisbie #2-23

DST Test Number: 5

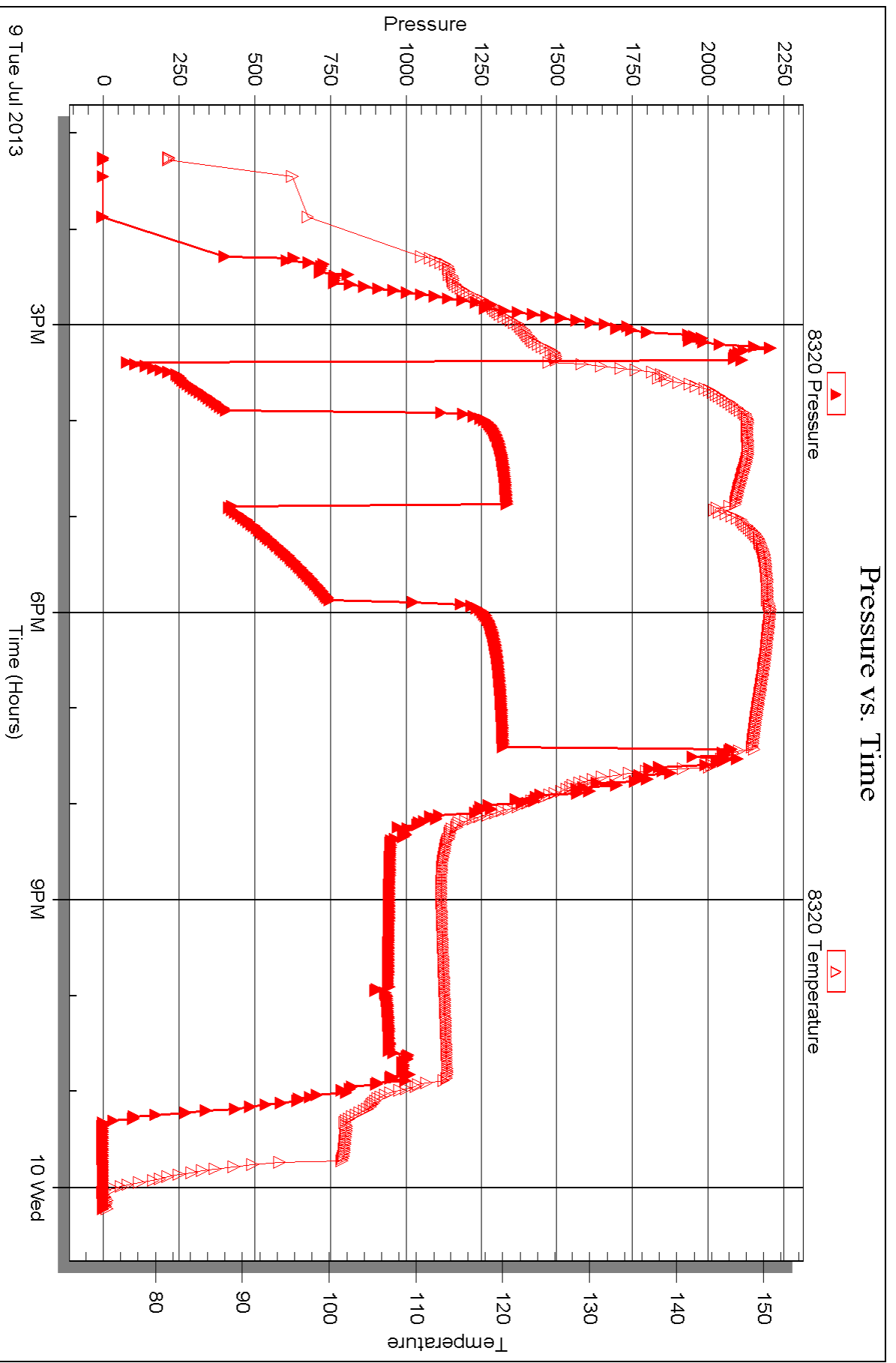


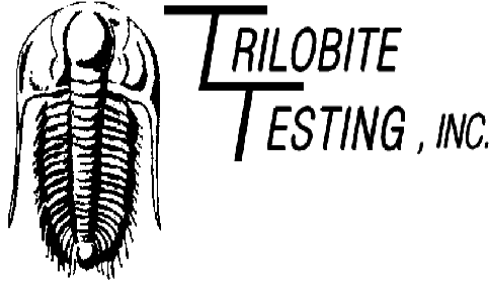
Serial #: 8320

Outside Murfin Drilling Co., Inc

Frisbie #2-23

DST Test Number: 5





## DRILL STEM TEST REPORT

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

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Wes Hansen

### **Frisbie #2-23**

#### **23-2s-36w Rawlins KS**

Start Date: 2013.07.10 @ 21:35:00

End Date: 2013.07.11 @ 04:55:30

Job Ticket #: 52763                      DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.07.11 @ 16:13:21



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

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

**23-2s-36w Rawlins KS**

**Frisbie #2-23**

Job Ticket: 52763

**DST#: 6**

Test Start: 2013.07.10 @ 21:35:00

## GENERAL INFORMATION:

Formation: **Pawnee - Lower Pawne**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:08:45

Time Test Ended: 04:55:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

**Interval: 4584.00 ft (KB) To 4660.00 ft (KB) (TVD)**

Total Depth: 4660.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3294.00 ft (KB)

3284.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8671**

**Inside**

Press @ Run Depth: 22.34 psig @ 4585.00 ft (KB)

Start Date: 2013.07.10

End Date:

2013.07.11

Start Time: 21:35:05

End Time:

04:55:29

Capacity: 8000.00 psig

Last Calib.: 2013.07.11

Time On Btm: 2013.07.11 @ 00:08:30

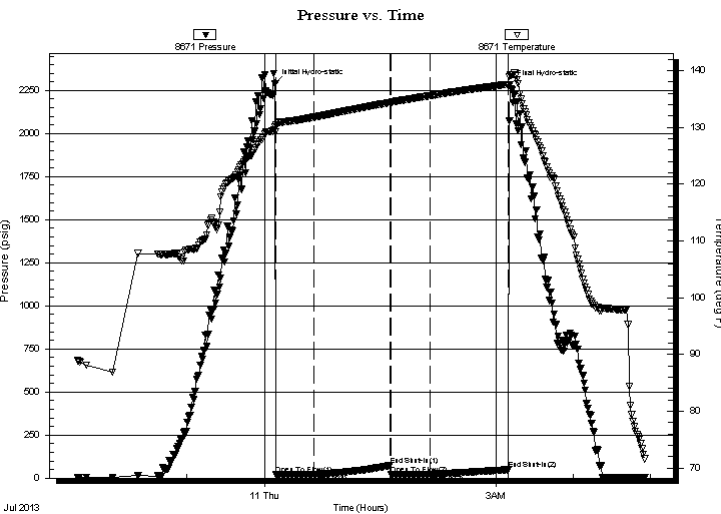
Time Off Btm: 2013.07.11 @ 03:10:45

**TEST COMMENT:** 30 - IF: Blow built to 1/2" then died back, dead at 22 min.

60 - IS: No blow back

30 - FF: No blow

60 - FS: No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2290.65	130.16	Initial Hydro-static
1	19.64	129.20	Open To Flow (1)
30	21.25	131.77	Shut-In(1)
90	73.81	134.37	End Shut-In(1)
90	21.05	134.35	Open To Flow (2)
120	22.34	135.55	Shut-In(2)
181	49.14	137.58	End Shut-In(2)
183	2284.11	139.18	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	SOCM 96%m, 2%o, 2%g	0.01

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

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

**23-2s-36w Rawlins KS**  
**Frisbie #2-23**  
Job Ticket: 52763      **DST#: 6**  
Test Start: 2013.07.10 @ 21:35:00

**Tool Information**

Drill Pipe:	Length: 4028.00 ft	Diameter: 3.80 inches	Volume: 56.50 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 96000.00 lb
			<u>Total Volume: 59.13 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4584.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	76.00 ft			
Tool Length:	104.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Shut In Tool	5.00			4561.00	
Hydraulic tool	5.00			4566.00	
Jars	5.00			4571.00	
Safety Joint	3.00			4574.00	
Packer	5.00			4579.00	28.00      Bottom Of Top Packer
Packer	5.00			4584.00	
Stubb	1.00			4585.00	
Recorder	0.00	8671	Inside	4585.00	
Recorder	0.00	8320	Outside	4585.00	
Perforations	5.00			4590.00	
Blank Spacing	65.00			4655.00	
Perforations	2.00			4657.00	
Bullnose	3.00			4660.00	76.00      Bottom Packers & Anchor

**Total Tool Length: 104.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**23-2s-36w Rawlins KS**  
**Frisbie #2-23**  
Job Ticket: 52763      **DST#: 6**  
Test Start: 2013.07.10 @ 21:35:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 800.00 ppm			
Filter Cake: 2.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	SOCM 96% <i>m</i> , 2% <i>o</i> , 2% <i>g</i>	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:



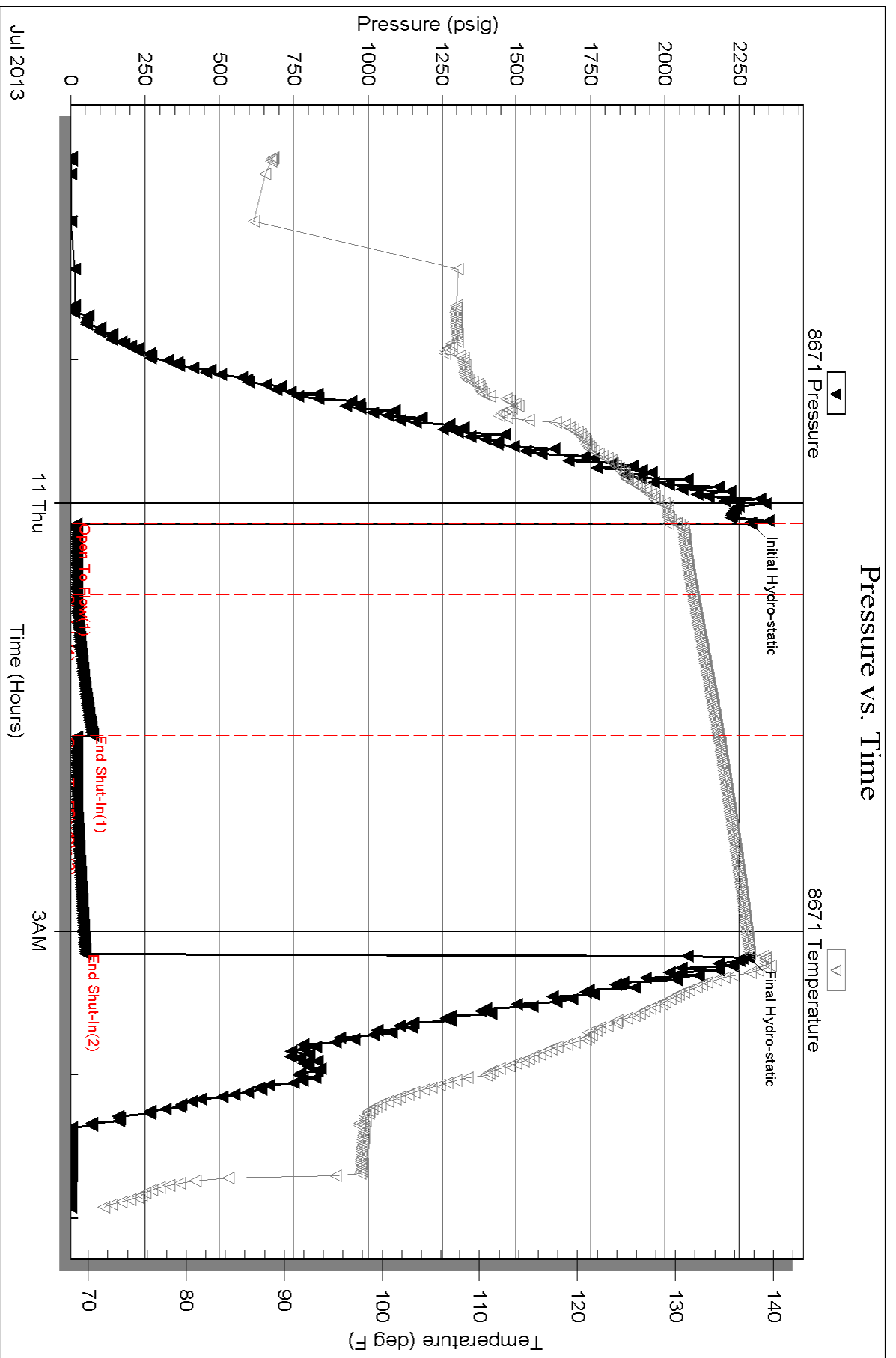
Serial #: 8671

Inside

Murfin Drilling Co., Inc

Frisbie #2-23

DST Test Number: 6

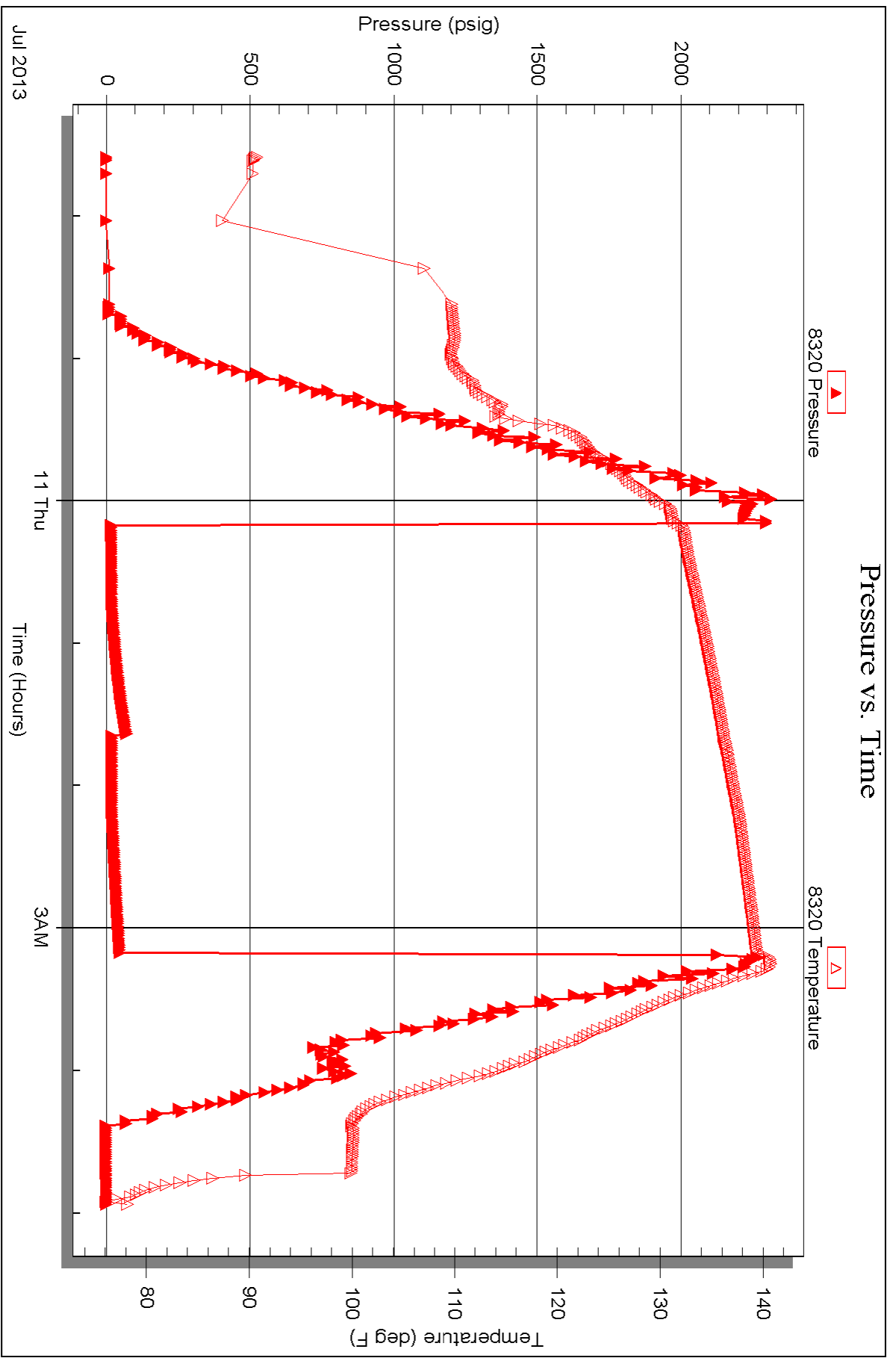


Serial #: 8320

Outside Murfin Drilling Co., Inc

Frisbie #2-23

DST Test Number: 6





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52758

Well Name & No. Frisbie #2-23 Test No. 1 Date 7-6-13  
 Company Murfin Drilling Co. Inc. Elevation 3294 KB 3284 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Wes Hansen Rig Murfin #14  
 Location: Sec. 23 Twp. 2S Rge. 36W Co. ~~Osage~~ Rawlins State KS

Interval Tested 4029 - 4140 Zone Tested Lecompton - Oread  
 Anchor Length 111 Drill Pipe Run 3489 Mud Wt. 9.4  
 Top Packer Depth 4024 Drill Collars Run 534 Vis 60  
 Bottom Packer Depth 4029 Wt. Pipe Run - WL 6.8  
 Total Depth 4140 Chlorides 600 ppm System LCM 5

Blow Description IF: Blow built to BOB (11") in 11min.  
ISI: No blowback  
FF: Blow started at 2min., built to BOB in 16min.  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>95</u>	<u>mud w/oil spots</u>	<u>1</u>	<u>3</u>	<u>-</u>	<u>96</u>
<u>275</u>	<u>Muddy Water w/oil spots</u>	<u>5</u>	<u>3</u>	<u>47</u>	<u>45</u>
<u>630</u>	<u>MCLW w/trace oil</u>	<u>-</u>	<u>trace</u>	<u>81</u>	<u>19</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1000 BHT 139 Gravity - API RW .158 @ 96.6 °F Chlorides 32,000 ppm

(A) Initial Hydrostatic <u>2038</u>	<input type="checkbox"/> Test <u>*</u> 1250	T-On Location <u>7:30</u>
(B) First Initial Flow <u>42</u>	<input type="checkbox"/> Jars <u>*</u> 250	T-Started <u>8:20</u>
(C) First Final Flow <u>301</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>10:29</u>
(D) Initial Shut-In <u>1181</u>	<input type="checkbox"/> Circ Sub <u>*NA</u>	T-Pulled <u>14:31</u>
(E) Second Initial Flow <u>305</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>16:45</u>
(F) Second Final Flow <u>475</u>	<input type="checkbox"/> Mileage <u>108 RT</u> 167.40	Comments
(G) Final Shut-In <u>1148</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2009</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer

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

Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility

Sub Total 1742.40

Sub Total 1742.40

Approved By Wesley Hansen Our Representative James Windes

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. 52759

Well Name & No. Frisbie # 2-23 Test No. 2 Date 7-7-13  
 Company Murfin Drilling Co Inc Elevation 3294 KB 3284 GL  
 Address 250 N Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Wes Hansen Rig Murfin # 14  
 Location: Sec. 23 Twp. 2 S Rge. 36W Co. Rawlins State KS

Interval Tested 4154 - 4235 Zone Tested Douglas - Lans "A"  
 Anchor Length 85 Drill Pipe Run 3616 Mud Wt. 9.3  
 Top Packer Depth 4149 Drill Collars Run 534 Vis 62  
 Bottom Packer Depth 4154 Wt. Pipe Run - WL 7.2  
 Total Depth 4235 Chlorides 1000 ppm System LCM 5

Blow Description IF: Weak blow, built to 1 1/8"  
ISI: No blowback  
FF: No blow  
FSI: No blowback

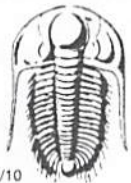
Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>Mud w/oil spots</u>	<u>4</u>	<u>7</u>	<u>-</u>	<u>89</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 60 BHT 132 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>2052</u>	<input type="checkbox"/> Test <u>*</u> 1250	T-On Location <u>4:15</u>
(B) First Initial Flow <u>20</u>	<input type="checkbox"/> Jars <u>*</u> 250	T-Started <u>5:02</u>
(C) First Final Flow <u>29</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>7:27</u>
(D) Initial Shut-In <u>1165</u>	<input checked="" type="checkbox"/> Circ Sub <u>*</u>	T-Pulled <u>10:40</u>
(E) Second Initial Flow <u>33</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>12:20</u>
(F) Second Final Flow <u>45</u>	<input type="checkbox"/> Mileage <u>108RT</u> 167.40	Comments
(G) Final Shut-In <u>1091</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2026</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer
	<input checked="" type="checkbox"/> Shale Packer	<input checked="" type="checkbox"/> Ruined Packer
	<input checked="" type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Extra Copies
	<input checked="" type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
	<input checked="" type="checkbox"/> Day Standby	Total <u>1742.40</u>
	<input checked="" type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1742.40</u>	

Approved By Wesley Hansen Our Representative James Winder

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52760

Well Name & No. Frisbie # 2-23 Test No. 3 Date 7-8-13  
 Company Murfin Drilling Co. Inc Elevation 3294 KB 3284 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Wes Hansen Rig Murfin #14  
 Location: Sec. 23 Twp. 25 Rge. 36w Co. Rawlins State KS

Interval Tested 4230 - 4300 Zone Tested Lans. "D-E"  
 Anchor Length 70 Drill Pipe Run 3679 Mud Wt. 9.3  
 Top Packer Depth 4225 Drill Collars Run 534 Vis 58  
 Bottom Packer Depth 4230 Wt. Pipe Run - WL 7.2  
 Total Depth 4300 Chlorides 1000 ppm System LCM 4

Blow Description IF: Blow built to BOB (11") in 17 min.  
ISI: Blowback built to 1"  
FF: Blow built to BOB in 47 1/2 min  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>CO</u>	<u>4</u>	<u>95</u>	<u>-</u>	<u>1</u>
<u>205</u>	<u>CGO</u>	<u>34</u>	<u>63</u>	<u>-</u>	<u>3</u>
<u>238</u>	<u>GMO</u>	<u>31</u>	<u>38</u>	<u>-</u>	<u>31</u>
	<u>GIP = 180'</u>				

Rec Total 453 BHT 137 Gravity 29 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2124  Test \* 1250 T-On Location 23:40 ~~26:27~~  
 (B) First Initial Flow 35  Jars \* 250 T-Started 00:09 7/8  
 (C) First Final Flow 130  Safety Joint \* 75 T-Open 2:10  
 (D) Initial Shut-In 1279  Circ Sub \*NA T-Pulled 6:11  
 (E) Second Initial Flow 143  Hourly Standby T-Out 8:15  
 (F) Second Final Flow 197  Mileage 108 RT 167.40  
 (G) Final Shut-In 1279  Sampler  
 (H) Final Hydrostatic 2059  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies

Initial Open 30 Sub Total 0  
 Initial Shut-In 60 Total 1742.40  
 Final Flow 60 MP/DST Disc't  
 Final Shut-In 90 Sub Total 1742.40

Approved By Wesley Hanson Our Representative James Windes

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. 52761

Well Name & No. Frisbie #2-23 Test No. 4 Date 7-8-13  
 Company Murfin Drilling Co. Inc Elevation 3294 KB 3284 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Wes Hansen Rig Murfin #14  
 Location: Sec. 23 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4299 - 4335 Zone Tested Lans. "G"  
 Anchor Length 36 Drill Pipe Run 3742 Mud Wt. 9.2  
 Top Packer Depth 4294 Drill Collars Run 534 Vis 73  
 Bottom Packer Depth 4299 Wt. Pipe Run - WL 6.0  
 Total Depth 4335 Chlorides 1200 ppm System LCM 5

Blow Description IF: Blow built to 9"  
ISI: Blowback built to 1/8"  
FF: Blow built to BOB (11") in 38 min.  
FSI: Blowback built to 1/8"

Rec	Feet of	%gas	%oil	%water	%mud
<u>264</u>	<u>CGO</u>	<u>22</u>	<u>75</u>	<u>-</u>	<u>3</u>
<u>89</u>	<u>GOM</u>	<u>24</u>	<u>30</u>	<u>-</u>	<u>46</u>
	<u>GIP = 180+'</u>				

Rec Total 353 BHT 137 Gravity 30.4 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2128  Test ★ 1250 T-On Location 16:15 78  
 (B) First Initial Flow 22  Jars ★ 250 T-Started 16:45  
 (C) First Final Flow 75  Safety Joint ★ 75 T-Open 19:10  
 (D) Initial Shut-In 483  Circ Sub ★ NA T-Pulled 23:12  
 (E) Second Initial Flow 81  Hourly Standby T-Out 1:00 79  
 (F) Second Final Flow 152  Mileage 108 RT 167.40  
 (G) Final Shut-In 475  Sampler  
 (H) Final Hydrostatic 2084  Straddle  Ruined Shale Packer

Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder Sub Total 0  
 Day Standby Total 1742.40  
 Accessibility MP/DST Disc't  
 Sub Total 1742.40

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90  
 Approved By \_\_\_\_\_ Our Representative James Winder

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52762

Well Name & No. Frisbie #2-23 Test No. 5 Date 7-9-13  
 Company Murfin Drilling Co. Inc Elevation 3294 KB 3284 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Wes Hansen Rig Murfin #14  
 Location: Sec. 23 Twp. 2s Rge. 36w Co. Rawlins State KS

Interval Tested 4376 - 4430 Zone Tested Lans. "H-J"  
 Anchor Length 54 Drill Pipe Run 3837 Mud Wt. 9.1  
 Top Packer Depth 4371 Drill Collars Run 534 Vis 90  
 Bottom Packer Depth 4376 Wt. Pipe Run - WL 6.4  
 Total Depth 4430 Chlorides 1000 ppm System LCM 2

Blow Description IF: Blow built to BOB in 3 1/4 min.  
ISI: Bled off about 5 min., Blowback built to BOB at 17 1/4 min.  
FF: Blow built to BOB in 4 min  
FSI: No blowback

Rec <u>125</u> Feet of <u>CGO</u>	33% gas	66% oil	- % water	1 % mud
Rec <u>Rev. First 15 min</u> Feet of <u>CGO</u>	11 % gas	84 % oil	- % water	5 % mud
Rec <u>20 min sample</u> Feet of <u>GMCO</u>	13 % gas	65 % oil	- % water	22 % mud
Rec <u>25 min sample</u> Feet of <u>CO</u>	3 % gas	93 % oil	- % water	4 % mud
Rec <u>Bottom Collar 89'</u> Feet of <u>SWC/60M</u>	35 % gas	25 % oil	5 % water	35 % mud

Rec Total 2090 Fluid 1205 BHT 147° Gravity 39.6 API RW - @ - ° F Chlorides - ppm

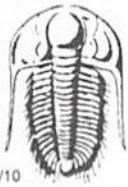
(A) Initial Hydrostatic 2152  Test X 1250 T-On Location 12:30 79  
 (B) First Initial Flow 77  Jars X 250 T-Started 13:15  
 (C) First Final Flow 408  Safety Joint X 75 T-Open 15:22  
 (D) Initial Shut-In 1339  Circ Sub X Dropped Bar 50 T-Pulled 19:23  
 (E) Second Initial Flow 415  Hourly Standby 1 1/2 hr 150 T-Out 00:00 710  
 (F) Second Final Flow 755  Mileage 108 RT 167.40

(G) Final Shut-In 1327  Sampler -  
 (H) Final Hydrostatic 2095  Straddle -  
 Shale Packer -  Ruined Packer -  
 Extra Packer -  Extra Copies -

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90  
 Day Standby -  
 Accessibility -  
 Sub Total 1942.40

Approved By Wesley Hansen Our Representative James Windsor

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. 52763

Well Name & No. Frisbie #2-23 Test No. 6 Date 7-10-13  
 Company Murfin Drilling Co.-Inc Elevation 3294 KB 3284 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Wes Hansen Rig Murfin #14  
 Location: Sec. 23 Twp. 2s Rge. 36w Co. Rawlins State KS

Interval Tested 4584 - 4660 Zone Tested Pawnee - Lwr Pawnee  
 Anchor Length 76 Drill Pipe Run 4028 Mud Wt. 9.0  
 Top Packer Depth 4579 Drill Collars Run 534 Vis 57  
 Bottom Packer Depth 4584 Wt. Pipe Run - WL 5.8  
 Total Depth 4660 Chlorides 800 ppm System LCM 1  
 Blow Description IF: Blow built to 1/2" then died back, dead at 22 min.  
ISI: No blowback  
FF: No blow  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>1000 SOCM</u>	<u>2</u>	<u>2</u>	<u>-</u>	<u>96</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 138 Gravity - API RW - @ - °F Chlorides - ppm  
 (A) Initial Hydrostatic 2291  Test X 1250 T-On Location 21:15 9/10  
 (B) First Initial Flow 20  Jars X 250 T-Started 21:35  
 (C) First Final Flow 21  Safety Joint X 75 T-Open 00:08  
 (D) Initial Shut-In 74  Circ Sub X NH T-Pulled 3:09  
 (E) Second Initial Flow 21  Hourly Standby T-Out 4:50 9/11  
 (F) Second Final Flow 22  Mileage 108RT 167.40  
 (G) Final Shut-In 49  Sampler  
 (H) Final Hydrostatic 2284  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 1742.40  
 Final Flow 30  Accessibility MP/DST Disc't  
 Final Shut-In 60 Sub Total 1742.40

Approved By

Wesley Hansen

Our Representative

Jamer Winder