



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N. Water Ste 300  
Wichita KS. 67202

ATTN: Steve Miller

### **Berry #1-3**

#### **3-1s-36w Rawlins,KS**

Start Date: 2013.09.20 @ 15:45:00

End Date: 2013.09.20 @ 22:36:09

Job Ticket #: 54852                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.26 @ 09:23:25



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co  
 250 N. Water Ste 300  
 Wichita KS. 67202  
 ATTN: Steve Miller

**3-1s-36w Rawlins,KS**  
**Berry #1-3**  
 Job Ticket: 54852      **DST#: 1**  
 Test Start: 2013.09.20 @ 15:45:00

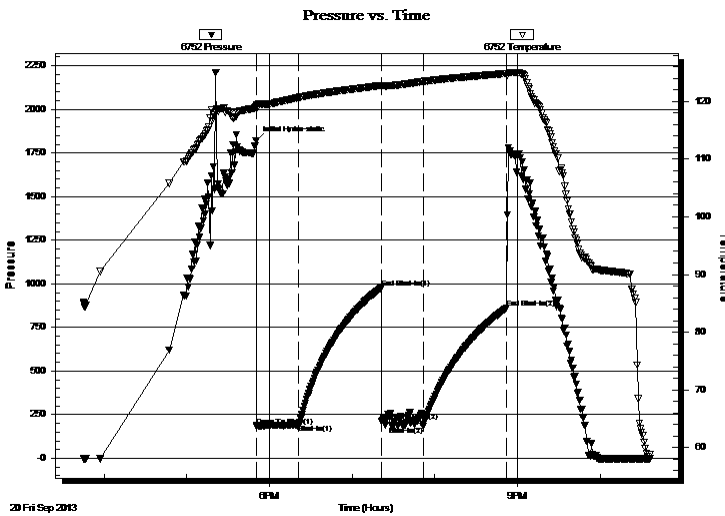
## GENERAL INFORMATION:

Formation: **Foraker**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 17:50:49  
 Tester: Bob Hamel  
 Time Test Ended: 22:36:09  
 Unit No: 41  
 Interval: **3116.00 ft (KB) To 3126.00 ft (KB) (TVD)**  
 Reference Elevations: 3126.00 ft (KB)  
 Total Depth: 3666.00 ft (KB) (TVD)  
 3116.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Good  
 KB to GR/CF: 10.00 ft

**Serial #: 6752      Inside**  
 Press @ Run Depth: 185.64 psig @ 3157.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2013.09.20      End Date: 2013.09.20      Last Calib.: 2013.09.20  
 Start Time: 15:45:00      End Time: 22:36:09      Time On Btm: 2013.09.20 @ 17:50:39  
 Time Off Btm:

**TEST COMMENT:** 30 - IF - W.S.B. Died in 18 min  
 60 - ISI - No B.B.  
 30 - FF - No blow  
 60 - FSI - No B.B.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1819.28	119.35	Initial Hydro-static
1	182.59	118.71	Open To Flow (1)
31	193.31	120.65	Shut-In(1)
91	977.31	122.74	End Shut-In(1)
91	211.55	122.58	Open To Flow (2)
121	185.64	123.43	Shut-In(2)
182	859.45	124.83	End Shut-In(2)

## Recovery

Length (ft)	Description	Volume (bbl)
311.00	MUD 100% FEW OIL SPECS.	1.53

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co

**3-1s-36w Rawlins,KS**

250 N. Water Ste 300  
Wichita KS. 67202

**Berry #1-3**

Job Ticket: 54852

**DST#: 1**

ATTN: Steve Miller

Test Start: 2013.09.20 @ 15:45:00

## Tool Information

Drill Pipe:	Length: 2576.00 ft	Diameter: 3.80 inches	Volume: 36.13 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 76000.00 lb
			<u>Total Volume: 38.76 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3116.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	71.00 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			3090.00	
Shut In Tool	5.00			3095.00	
Hydraulic tool	5.00			3100.00	
Jars	5.00			3105.00	
Safety Joint	2.00			3107.00	
Packer	5.00			3112.00	27.00 Bottom Of Top Packer
Packer	4.00			3116.00	
Stubb	1.00			3117.00	
Change Over Sub	1.00			3118.00	
Drill Pipe	31.00			3149.00	
Change Over Sub	1.00			3150.00	
Perforations	7.00			3157.00	
Recorder	0.00	6752	Inside	3157.00	
Recorder	0.00	8322	Outside	3157.00	
Bullnose	3.00			3160.00	44.00 Bottom Packers & Anchor

**Total Tool Length: 71.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co

**3-1s-36w Rawlins,KS**

250 N. Water Ste 300  
Wichita KS. 67202

**Berry #1-3**

Job Ticket: 54852

**DST#: 1**

ATTN: Steve Miller

Test Start: 2013.09.20 @ 15:45:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 67.70 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
311.00	MUD 100% FEW OIL SPECS.	1.529

Total Length: 311.00 ft      Total Volume: 1.529 bbl

Num Fluid Samples: 0

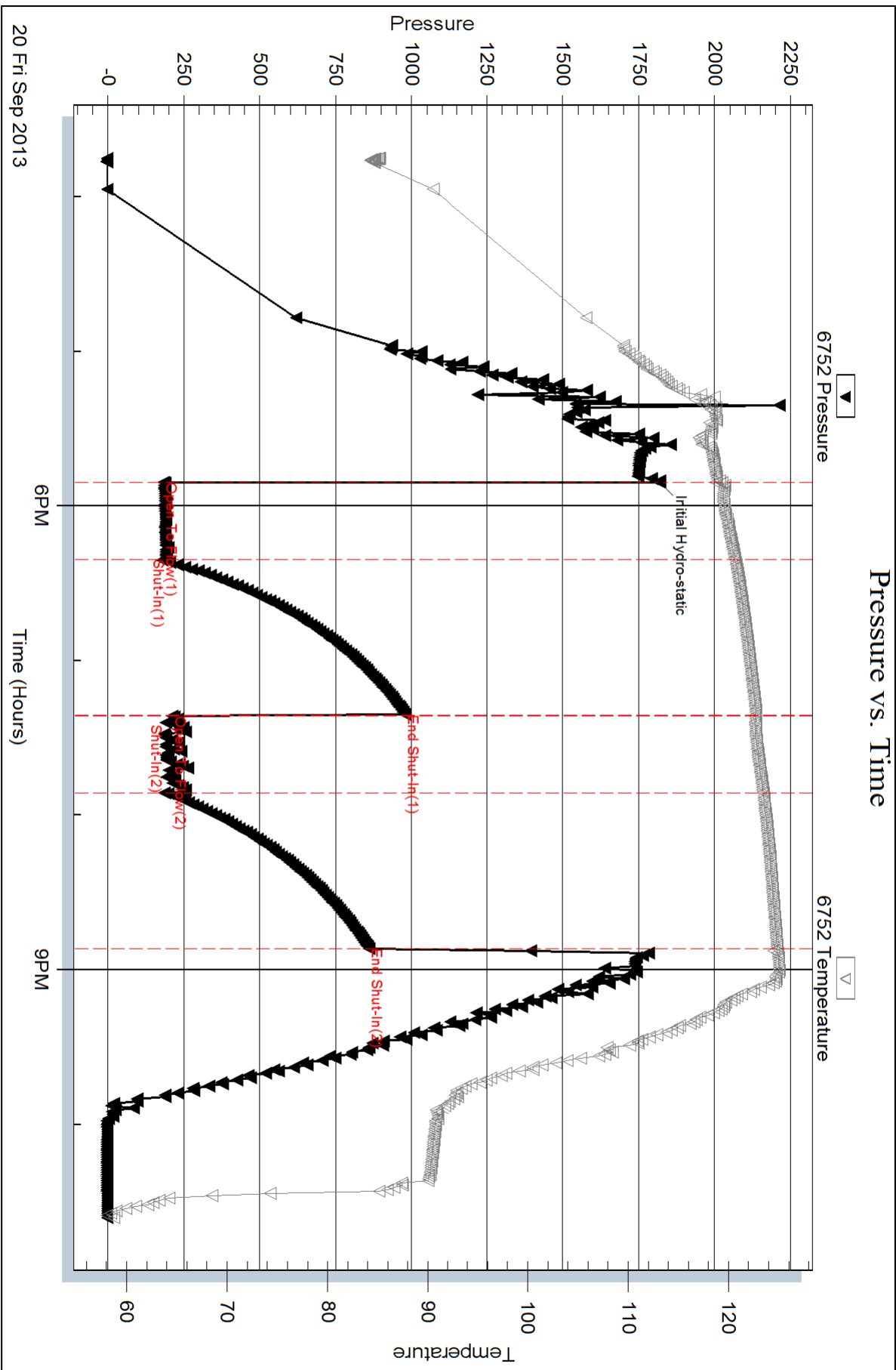
Num Gas Bombs: 0

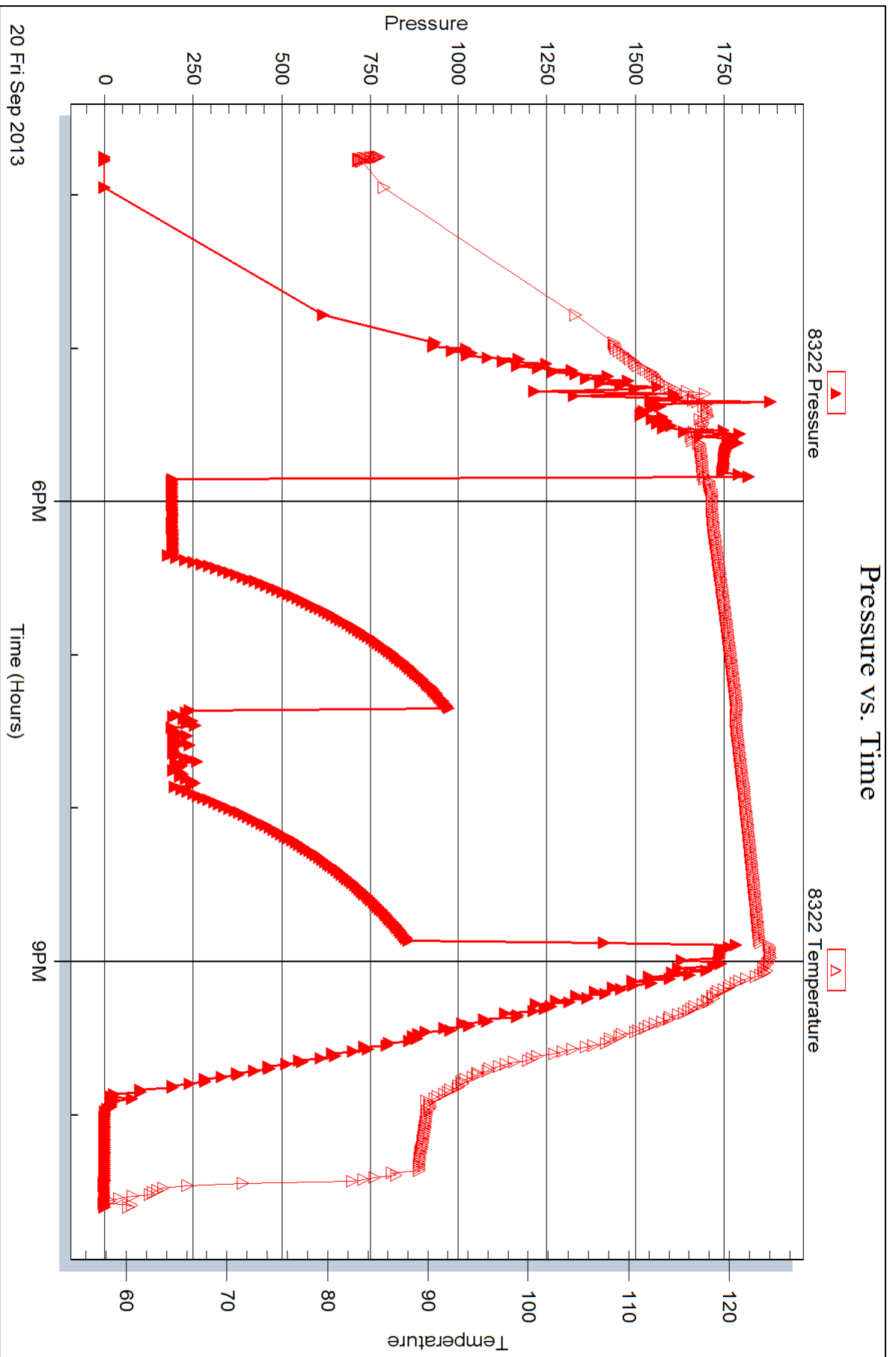
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N. Water Ste 300  
Wichita KS. 67202

ATTN: Steve Miller

### **Berry #1-3**

#### **3-1s-36w Rawlins,KS**

Start Date: 2013.09.21 @ 19:50:00

End Date: 2013.09.22 @ 02:34:50

Job Ticket #: 54853                      DST #: 2

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

Printed: 2013.09.26 @ 09:24:03





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co  
250 N. Water Ste 300  
Wichita KS. 67202  
ATTN: Steve Miller

**3-1s-36w Rawlins,KS**  
**Berry #1-3**  
Job Ticket: 54853      **DST#: 2**  
Test Start: 2013.09.21 @ 19:50:00

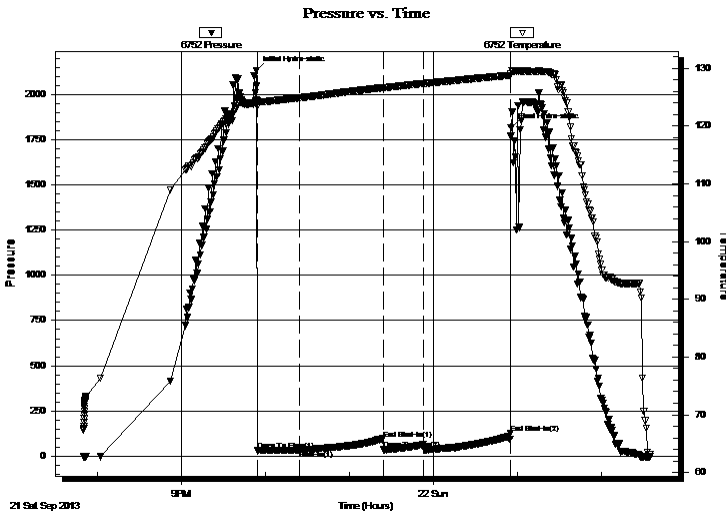
## GENERAL INFORMATION:

Formation: **Oread**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 21:54:00  
Time Test Ended: 02:34:50  
Interval: **3953.00 ft (KB) To 3999.00 ft (KB) (TVD)**  
Total Depth: 3999.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Bob Hamel  
Unit No: 41  
Reference Elevations: 3126.00 ft (KB)  
3116.00 ft (CF)  
KB to GR/CF: 10.00 ft

**Serial #: 6752      Inside**  
Press @ RunDepth: 64.66 psig @ 3996.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2013.09.21      End Date: 2013.09.22      Last Calib.: 2013.09.22  
Start Time: 19:50:01      End Time: 02:34:50      Time On Btm: 2013.09.21 @ 21:53:20  
Time Off Btm: 2013.09.22 @ 00:55:20

**TEST COMMENT:** 30 - IFI - W.S.B. Died in 10 min  
60 - ISI - NO B.B.  
30 - FF - No blow  
60 - FSI - NO B.B.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2131.78	124.37	Initial Hydro-static
1	31.32	123.36	Open To Flow (1)
31	33.96	124.89	Shut-In(1)
91	96.64	126.64	End Shut-In(1)
91	39.51	126.64	Open To Flow (2)
120	64.66	127.37	Shut-In(2)
182	128.42	128.81	End Shut-In(2)
182	1816.22	129.18	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
3.00	MUD 100%	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

**3-1s-36w Rawlins,KS**

250 N. Water Ste 300  
Wichita KS. 67202

**Berry #1-3**

Job Ticket: 54853

**DST#: 2**

ATTN: Steve Miller

Test Start: 2013.09.21 @ 19:50:00

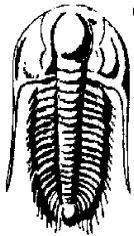
## Tool Information

Drill Pipe:	Length: 3400.00 ft	Diameter: 3.80 inches	Volume: 47.69 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 50.32 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	3953.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.00 ft			
Tool Length:	73.00 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			3927.00	
Shut In Tool	5.00			3932.00	
Hydraulic tool	5.00			3937.00	
Jars	5.00			3942.00	
Safety Joint	2.00			3944.00	
Packer	5.00			3949.00	27.00 Bottom Of Top Packer
Packer	4.00			3953.00	
Stubb	1.00			3954.00	
Perforations	1.00			3955.00	
Change Over Sub	1.00			3956.00	
Drill Pipe	31.00			3987.00	
Change Over Sub	1.00			3988.00	
Perforations	8.00			3996.00	
Recorder	0.00	6752	Inside	3996.00	
Recorder	0.00	8322	Outside	3996.00	
Bullnose	3.00			3999.00	46.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>73.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co

**3-1s-36w Rawlins,KS**

250 N. Water Ste 300  
Wichita KS. 67202

**Berry #1-3**

Job Ticket: 54853

**DST#: 2**

ATTN: Steve Miller

Test Start: 2013.09.21 @ 19:50:00

## 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: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	MUD 100%	0.015

Total Length: 3.00 ft      Total Volume: 0.015 bbl

Num Fluid Samples: 0

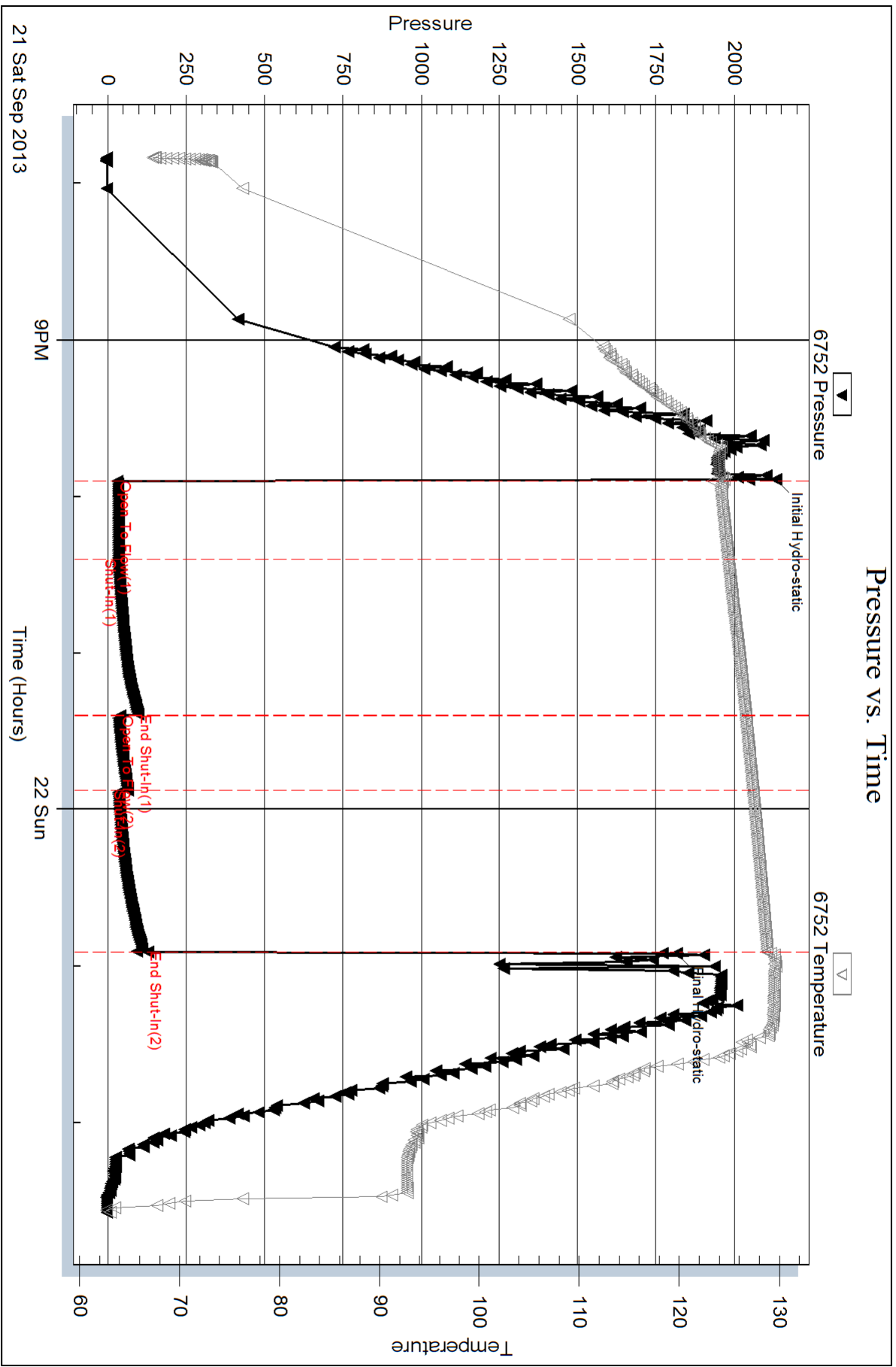
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

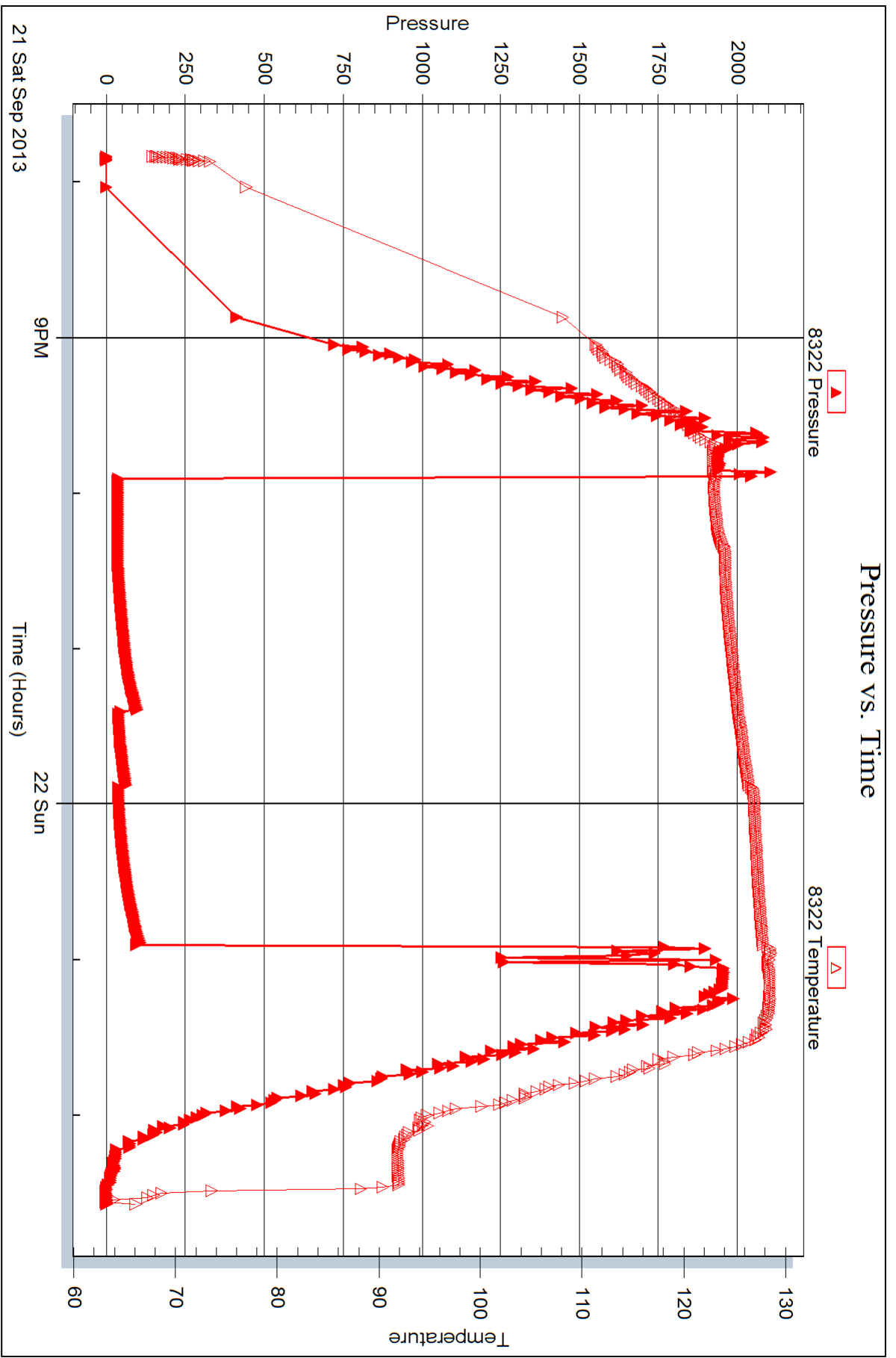


Serial #: 8322

Outside Murfin Drilling Co

Berry #1-3

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 54853

Printed: 2013.09.26 @ 09:24:05



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N. Water Ste 300  
Wichita KS. 67202

ATTN: Steve Miller

### **Berry #1-3**

#### **3-1s-36w Rawlins,KS**

Start Date: 2013.09.22 @ 18:10:00

End Date: 2013.09.23 @ 00:38:30

Job Ticket #: 54854                      DST #: 3

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

Printed: 2013.09.26 @ 09:20:00

Murfin Drilling Co  
3-1s-36w Rawlins,KS  
Berry #1-3  
DST # 3  
LKC "A - D"  
2013.09.22



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co  
 250 N. Water Ste 300  
 Wichita KS. 67202  
 ATTN: Steve Miller

**3-1s-36w Rawlins,KS**  
**Berry #1-3**  
 Job Ticket: 54854      **DST#: 3**  
 Test Start: 2013.09.22 @ 18:10:00

## GENERAL INFORMATION:

Formation: **LKC "A - D"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 19:56:10  
 Time Test Ended: 00:38:30  
 Interval: **4032.00 ft (KB) To 4154.00 ft (KB) (TVD)**  
 Total Depth: 4154.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Bob Hamel  
 Unit No: 41  
 Reference Elevations: 3126.00 ft (KB)  
 3116.00 ft (CF)  
 KB to GR/CF: 10.00 ft

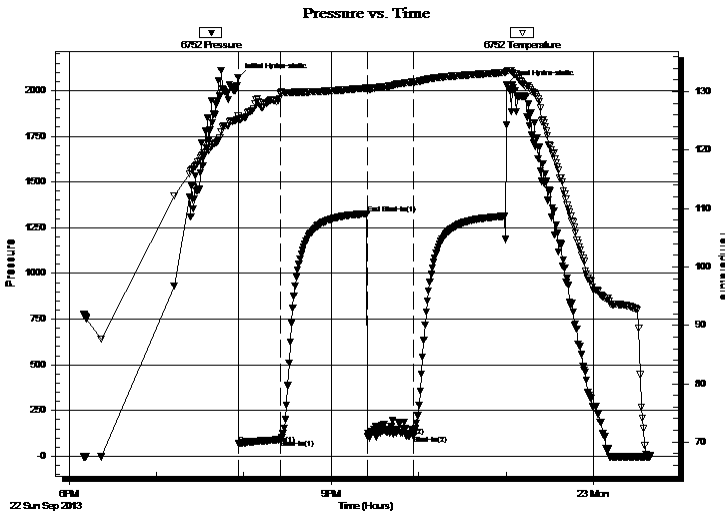
## Serial #: 6752

Inside

Press @ Run Depth: 91.52 psig @ 4133.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2013.09.22      End Date: 2013.09.23      Last Calib.: 2013.09.23  
 Start Time: 18:10:01      End Time: 00:38:30      Time On Btm: 2013.09.22 @ 19:56:00  
 Time Off Btm: 2013.09.22 @ 23:00:20

TEST COMMENT: 30 - IF - W.S.B. Built to 2"  
 60 - ISI - NO B.B.  
 30 - FF - No blow  
 60 - FSI - NO B.B.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2069.91	125.79	Initial Hydro-static
1	67.57	125.39	Open To Flow (1)
30	91.52	129.79	Shut-In(1)
89	1326.05	130.61	End Shut-In(1)
89	106.67	130.25	Open To Flow (2)
121	112.07	131.61	Shut-In(2)
185	2033.03	133.45	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
93.00	OCM 10% OIL 90% MUD	0.46

\* 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

**3-1s-36w Rawlins,KS**

250 N. Water Ste 300  
Wichita KS. 67202

**Berry #1-3**

Job Ticket: 54854

**DST#: 3**

ATTN: Steve Miller

Test Start: 2013.09.22 @ 18:10:00

## Tool Information

Drill Pipe:	Length: 3490.00 ft	Diameter: 3.80 inches	Volume: 48.96 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	22000.00 lb
Drill Collar:	Length: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 51.59 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	70000.00 lb
Depth to Top Packer:	4032.00 ft			Final	70000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	122.00 ft				
Tool Length:	149.00 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			4006.00	
Shut In Tool	5.00			4011.00	
Hydraulic tool	5.00			4016.00	
Jars	5.00			4021.00	
Safety Joint	2.00			4023.00	
Packer	5.00			4028.00	27.00 Bottom Of Top Packer
Packer	4.00			4032.00	
Stubb	1.00			4033.00	
Perforations	3.00			4036.00	
Change Over Sub	1.00			4037.00	
Drill Pipe	95.00			4132.00	
Change Over Sub	1.00			4133.00	
Recorder	0.00	6752	Inside	4133.00	
Recorder	0.00	8322	Outside	4133.00	
Perforations	18.00			4151.00	
Bullnose	3.00			4154.00	122.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>149.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co

**3-1s-36w Rawlins,KS**

250 N. Water Ste 300  
Wichita KS. 67202

**Berry #1-3**

Job Ticket: 54854

**DST#: 3**

ATTN: Steve Miller

Test Start: 2013.09.22 @ 18:10:00

## 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: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 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
93.00	OCM 10% OIL 90% MUD	0.457

Total Length: 93.00 ft      Total Volume: 0.457 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

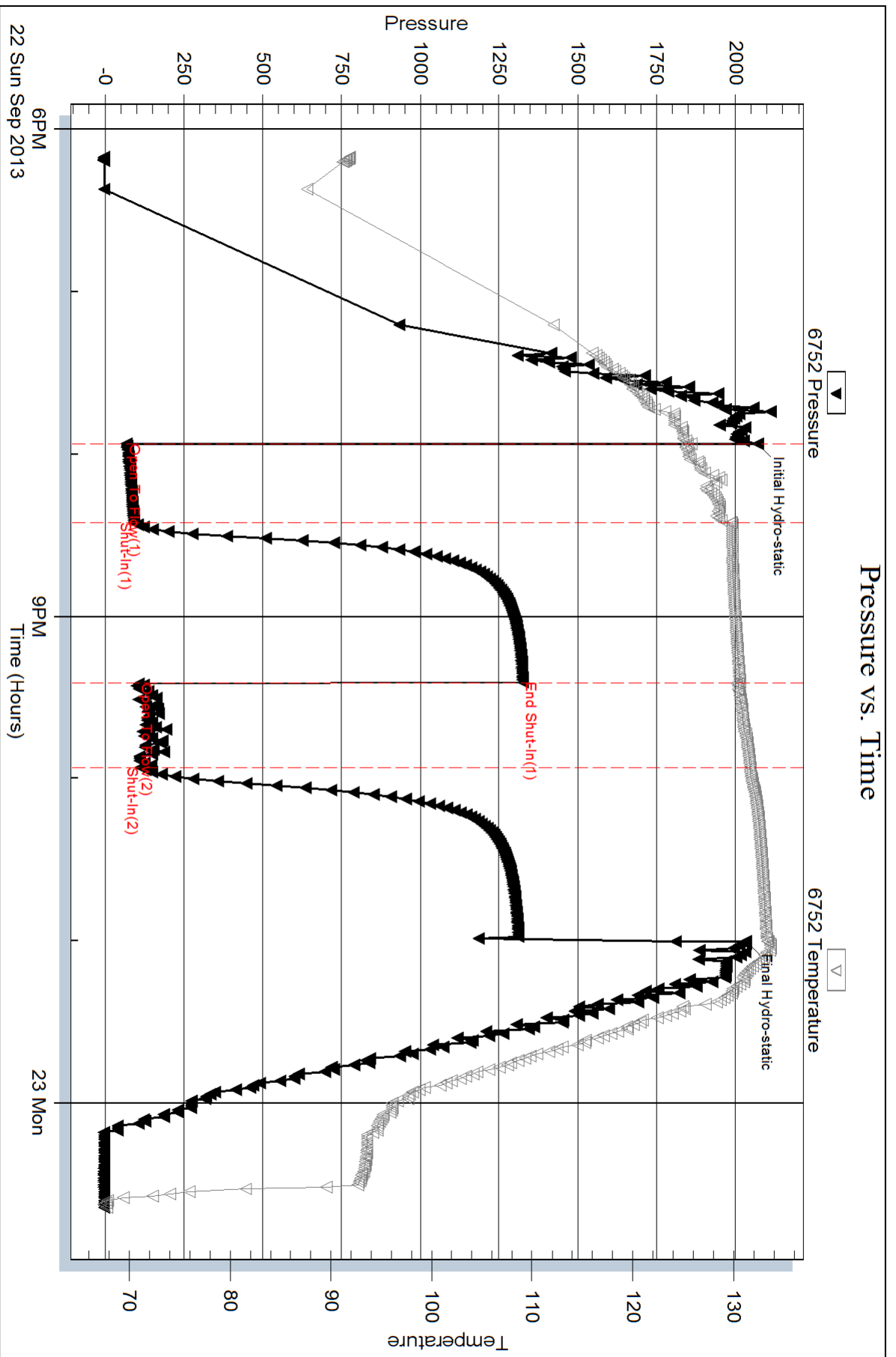
Serial #: 6752

Inside

Murfin Drilling Co

Berry #1-3

DST Test Number: 3





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N. Water Ste 300  
Wichita KS. 67202

ATTN: Steve Miller

### **Berry #1-3**

#### **3-1s-36w Rawlins,KS**

Start Date: 2013.09.24 @ 12:36:00

End Date: 2013.09.24 @ 18:50:09

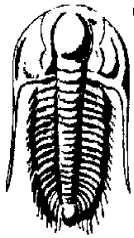
Job Ticket #: 53524                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.26 @ 09:18:29



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co  
250 N. Water Ste 300  
Wichita KS. 67202  
ATTN: Steve Miller

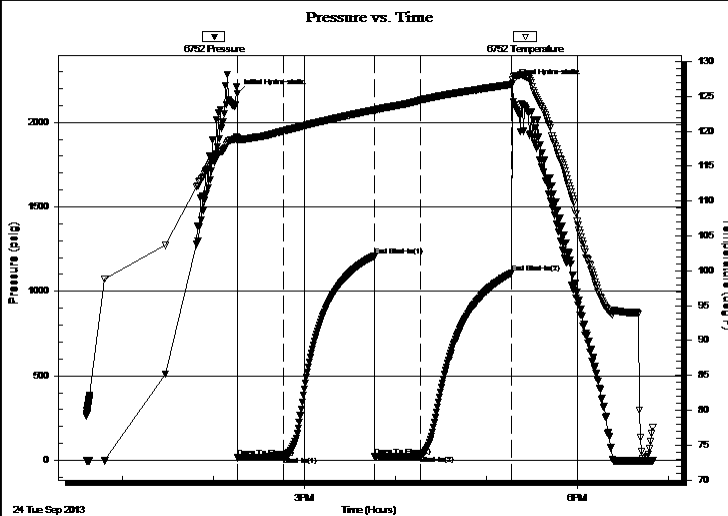
**3-1s-36w Rawlins,KS**  
**Berry #1-3**  
Job Ticket: 53524      **DST#: 5**  
Test Start: 2013.09.24 @ 12:36:00

## GENERAL INFORMATION:

Formation: **LKC " J - K "**  
Deviated: No Whipstock: ft (KB)      Test Type: Conventional Bottom Hole (Reset)  
Time Tool Opened: 14:15:50      Tester: Ryan Nichols  
Time Test Ended: 18:50:09      Unit No: 41  
**Interval: 4255.00 ft (KB) To 4306.00 ft (KB) (TVD)**      Reference Elevations: 3126.00 ft (KB)  
Total Depth: 4306.00 ft (KB) (TVD)      3116.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Good      KB to GR/CF: 10.00 ft

**Serial #: 6752      Inside**  
Press @ Run Depth: 27.82 psig @ 4256.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2013.09.24      End Date: 2013.09.24      Last Calib.: 2013.09.24  
Start Time: 12:36:01      End Time: 18:50:10      Time On Btm: 2013.09.24 @ 14:15:40  
Time Off Btm: 2013.09.24 @ 17:17:00

**TEST COMMENT:** 30 IF - Surface blow built to 1/4"  
60 ISI - No return  
30 FF - No blow  
60 FSI - No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2172.98	119.02	Initial Hydro-static
1	15.67	118.71	Open To Flow (1)
31	20.80	120.04	Shut-In(1)
91	1208.83	123.05	End Shut-In(1)
91	23.08	122.84	Open To Flow (2)
121	27.82	124.46	Shut-In(2)
181	1108.58	126.73	End Shut-In(2)
182	2229.06	127.40	Final Hydro-static

## Recovery

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

## 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

**3-1s-36w Rawlins,KS**

250 N. Water Ste 300  
Wichita KS. 67202

**Berry #1-3**

Job Ticket: 53524

**DST#: 5**

ATTN: Steve Miller

Test Start: 2013.09.24 @ 12:36:00

## Tool Information

Drill Pipe:	Length: 3714.00 ft	Diameter: 3.80 inches	Volume: 52.10 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 78000.00 lb
			Total Volume: 54.73 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4255.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4229.00	
Shut In Tool	5.00			4234.00	
Hydraulic tool	5.00			4239.00	
Jars	5.00			4244.00	
Safety Joint	2.00			4246.00	
Packer	5.00			4251.00	27.00 Bottom Of Top Packer
Packer	4.00			4255.00	
Stubb	1.00			4256.00	
Recorder	0.00	6752	Inside	4256.00	
Recorder	0.00	8322	Outside	4256.00	
Perforations	14.00			4270.00	
Change Over Sub	1.00			4271.00	
Drill Pipe	31.00			4302.00	
Change Over Sub	1.00			4303.00	
Bullnose	3.00			4306.00	51.00 Bottom Packers & Anchor

**Total Tool Length: 78.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co

**3-1s-36w Rawlins,KS**

250 N. Water Ste 300  
Wichita KS. 67202

**Berry #1-3**

Job Ticket: 53524

**DST#: 5**

ATTN: Steve Miller

Test Start: 2013.09.24 @ 12:36:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 75.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w / oil spots 100%M	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

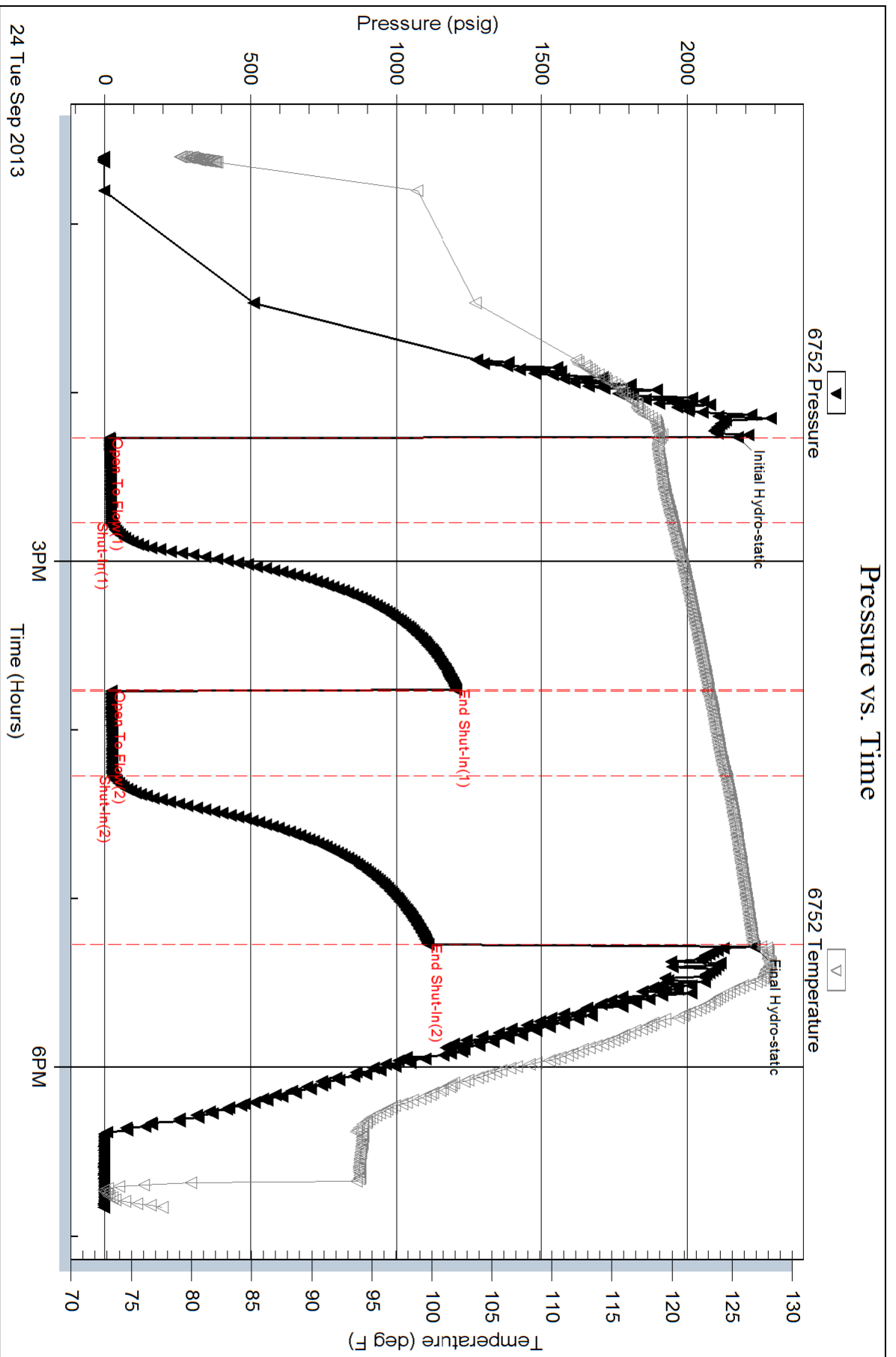
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



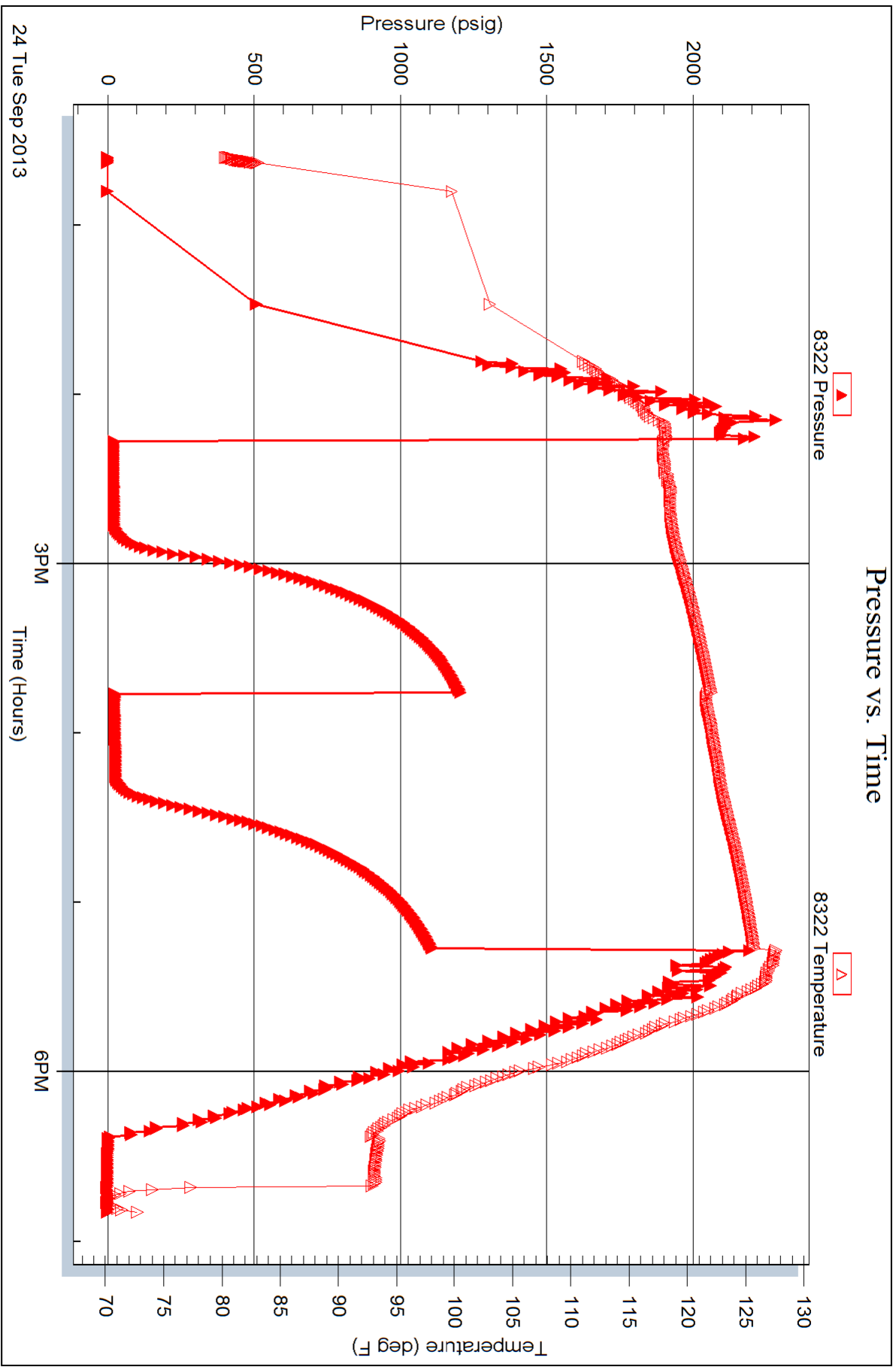


Serial #: 8322

Outside Murfin Drilling Co

Berry #1-3

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 53524

Printed: 2013.09.26 @ 09:18:31



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **54852**

Well Name & No. Berry #1-3 Test No. 1 Date 9-20-13  
 Company Muffin drilling company Elevation 3,126 KB 3,116 GL  
 Address 250 N. Water Ste. 300  
 Co. Rep / Geo. Steve Miller Rig Muffin Rig #14  
 Location: Sec. 3 Twp. 1 Rge. 36 Co. Rawlins State KS

Interval Tested 3622- 3666 Zone Tested 4 acre  
 Anchor Length 44' Drill Pipe Run 2576 Mud Wt. 8.8  
 Top Packer Depth 3617 Drill Collars Run 535 Vis 58  
 Bottom Packer Depth 3622 Wt. Pipe Run \_\_\_\_\_ WL 68  
 Total Depth 3666 Chlorides 1,000 ppm System LCM 5.0

Blow Description 30-Initial Flow - w.s.B. Died in 18 min.  
60-Initial Shut in - No B.B.  
30-Final Flow - No Blow  
60-Final Shut in - NO B.B.

Rec	Feet of	%gas	%oil	%water	%mud
<u>311</u>	<u>Mud few oil specs</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 311 BHT 125 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1,819  Test 1150 T-On Location 14:52:00  
 (B) First Initial Flow 183  Jars 250 T-Started 15:45:00  
 (C) First Final Flow 193  Safety Joint 75 T-Open 16:50:00  
 (D) Initial Shut-In 977  Circ Sub \_\_\_\_\_ T-Pulled 19:50:00  
 (E) Second Initial Flow 212  Hourly Standby \_\_\_\_\_ T-Out 22:35:00  
 (F) Second Final Flow 186  Mileage 138 R.T. 106rt 164.38 Hit a bridge @ 473'  
 (G) Final Shut-In 859  Sampler \_\_\_\_\_ of bottom  
 (H) Final Hydrostatic 1,772  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1639.30  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 30  
 Final Shut-In 60  
 Sub Total 1639.30

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. 54853

Well Name & No. Berry # 1-3 Test No. 2 Date 9-21-13  
 Company Murfin Drilling Company Elevation 3126 KB 3116 GL  
 Address 250 N. water site 300 Wichita KS. 67202  
 Co. Rep / Geo. Steve Miller Rig Murfin Rig #14  
 Location: Sec. 3 Twp. 1 Rge. 36 Co. Rawlins State KS.

Interval Tested 3953-3999 Zone Tested Oread  
 Anchor Length 46' Drill Pipe Run 3400 Mud Wt. 9.0  
 Top Packer Depth 3948 Drill Collars Run 535 Vis 63  
 Bottom Packer Depth 3953 Wt. Pipe Run \_\_\_\_\_ WL 6.8  
 Total Depth 3999 Chlorides 1,100 ppm System LCM 5.0

Blow Description 30-Initial Blow - W.S.B. Died in 10 min.  
60-Initial Shut in - No B.B  
30-Final Flow - No Blow  
60-Final Shut in - No B.B

Rec	Feet of	%gas	%oil	%water	%mud
3	Feet of <u>mud 100%</u>			<u>100</u>	
	Feet of	%gas	%oil	%water	%mud
	Feet of	%gas	%oil	%water	%mud
	Feet of	%gas	%oil	%water	%mud
	Feet of	%gas	%oil	%water	%mud

Rec Total 3 BHT 130 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2,132  Test 1150 T-On Location 19:00:00  
 (B) First Initial Flow 31  Jars 250 T-Started 19:50:00  
 (C) First Final Flow 34  Safety Joint 74 T-Open 20:55:00  
 (D) Initial Shut-In 97  Circ Sub \_\_\_\_\_ T-Pulled 23:55:00  
 (E) Second Initial Flow 40  Hourly Standby \_\_\_\_\_ T-Out 01:35:00  
 (F) Second Final Flow 65  Mileage 138 Rt. 164.30 Comments \_\_\_\_\_  
 (G) Final Shut-In 128  Sampler \_\_\_\_\_ Changed Ruined  
 (H) Final Hydrostatic 1,816  Straddle \_\_\_\_\_ Packer (9-22-13)  
 Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer 320

Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 60  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 30  Day Standby \_\_\_\_\_ Total 1959.30  
 Final Shut-In 60  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1639.30

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. 54854

Well Name & No. Berry # 1-3 Test No. 3 Date 9-22-13  
 Company Murfin Drilling Company Elevation 3,126 KB 3116 GL  
 Address 250 N. Water Suite 300 Wichita KS. 67202  
 Co. Rep / Geo. Steve Miller Rig Murfin Rig # 14  
 Location: Sec. 3 Twp. 1 Rge. 36 Co. Rawlins State KS.

Interval Tested 4,032 - 4154 Zone Tested Lans. "A-D"  
 Anchor Length 122 Drill Pipe Run 3,490 Mud Wt. 9.1  
 Top Packer Depth 4,027 Drill Collars Run 535 Vis 69  
 Bottom Packer Depth 4,032 Wt. Pipe Run \_\_\_\_\_ WL 6.0  
 Total Depth 4,154 Chlorides 1000 ppm System LCM 4.0

Blow Description 30-Initial flow - W.S.B Built to 2" in 30 min.  
60-Initial shut in - No B.B.  
30-Final flow - No Blow  
60-Final shut in - No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
<u>93</u>	<u>OCM</u>		<u>10</u>		<u>90</u>
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

Rec Total 93 BHT 133° Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2,070</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>17:45:00</u>
(B) First Initial Flow <u>68</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>18:10:00</u>
(C) First Final Flow <u>130</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>19:55:00</u>
(D) Initial Shut-In <u>1,326</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>22:55:00</u>
(E) Second Initial Flow <u>107</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>00:38:00</u>
(F) Second Final Flow <u>112</u>	<input checked="" type="checkbox"/> Mileage <u>138 R.T</u> 164.30	Comments <u>"Thank-you"</u>
(G) Final Shut-In <u>1,312</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2,033</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____

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

Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1639.30  
 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1639.30

Approved By \_\_\_\_\_ Our Representative Bob Stone

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. 53523

Well Name & No. Berry # 1-3 Test No. 4 Date 9/23/13  
 Company Murfin Drilling Co. Elevation 3126 KB 3116 GL  
 Address 250 N. Water STE 300 Wichita KS 67202  
 Co. Rep / Geo. Steve Miller Rig Murfin #14  
 Location: Sec. 3 Twp. 15 Rge. 36W Co. Rawlins State KS

Interval Tested 4154-4270 Zone Tested LKC "E-I"  
 Anchor Length 116' Drill Pipe Run 3617' Mud Wt. 9.1  
 Top Packer Depth 4149 Drill Collars Run 535' Vis 74  
 Bottom Packer Depth 4154 Wt. Pipe Run 0' WL 5.6  
 Total Depth 4270 Chlorides 1000 ppm System LCM 6  
 Blow Description IF - Surface blow built to 1 1/4"  
ISI - No return  
FF - No blow  
FST - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>15'</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 15' BHT 133° Gravity — API RW — @ —° F Chlorides — ppm

(A) Initial Hydrostatic <u>2047</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>17:30</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>22:08</u>
(C) First Final Flow <u>27</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>00:16</u>
(D) Initial Shut-In <u>1178</u>	<input checked="" type="checkbox"/> Circ Sub <u>NC</u>	T-Pulled <u>03:16</u>
(E) Second Initial Flow <u>40</u>	<input checked="" type="checkbox"/> Hourly Standby <u>1 1/4</u> 125	T-Out <u>04:48</u>
(F) Second Final Flow <u>37</u>	<input checked="" type="checkbox"/> Mileage <u>130 RT</u> 164.30	Comments <u>waited on wind TOWB</u>
(G) Final Shut-In <u>1084</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>2136</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Total <u>1864.30</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1864.30</u>	

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. 53524

Well Name & No. Berry # 1-3 Test No. 5 Date 9/24/13  
 Company Martin Drilling Co. Elevation 3126 KB 3116 GL  
 Address 250 N. Water STE 300 Wichita KS 67202  
 Co. Rep / Geo. Steve Miller Rig Martin #14  
 Location: Sec. 3 Twp. 15 Rge. 36W Co. Rawlins State K5

Interval Tested 4255-4306 Zone Tested 2LK "J-K"  
 Anchor Length 91' Drill Pipe Run 3714' Mud Wt. 9.2  
 Top Packer Depth 4250 Drill Collars Run 535' Vis 75  
 Bottom Packer Depth 4255 Wt. Pipe Run 0' WL 5.6  
 Total Depth 4306 Chlorides 700 ppm System LCM 4

Blow Description IF - Surface blow built to 1/4"  
ISI - No return  
FF - No blow  
FST - No return

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

Rec Total 5' BHT 127° Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2173  Test 1250 T-On Location 12:30  
 (B) First Initial Flow 16  Jars 250 T-Started 12:36  
 (C) First Final Flow 21  Safety Joint 75 T-Open 14:17  
 (D) Initial Shut-In 1209  Circ Sub NC T-Pulled 17:17  
 (E) Second Initial Flow 23  Hourly Standby T-Out 18:50  
 (F) Second Final Flow 28  Mileage 130 RT 328.60 Comments loaded tools  
 (G) Final Shut-In 1109  Sampler \_\_\_\_\_ @ 20:00 9/25/13  
 (H) Final Hydrostatic 2229  Straddle \_\_\_\_\_

Initial Open 30  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 60  Ruined Packer \_\_\_\_\_  
 Final Flow 30  Extra Copies \_\_\_\_\_  
 Final Shut-In 60  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1903.60  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1903.60

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.