



## DRILL STEM TEST REPORT

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

250 N Water STE 300  
Wichita KS 67202-1216

ATTN: Bob Stolzle

### **Sharp "A" #1-3**

### **3-18s-30w Lane,KS**

Start Date: 2014.01.19 @ 08:32:00

End Date: 2014.01.19 @ 15:37:45

Job Ticket #: 54604                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.01.24 @ 10:30:51



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

**3-18s-30w Lane, KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54604

**DST#: 1**

ATTN: Bob Stolzle

Test Start: 2014.01.19 @ 08:32:00

## GENERAL INFORMATION:

Formation: **Kansas City "H,I,J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:25:15

Time Test Ended: 15:37:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Jace McKinney

Unit No: 46

**Interval: 4085.00 ft (KB) To 4210.00 ft (KB) (TVD)**

Reference Elevations: 2878.00 ft (KB)

Total Depth: 4210.00 ft (KB) (TVD)

2868.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

**Serial #: 8675**

**Inside**

Press@RunDepth: 997.51 psig @ 4086.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.01.19

End Date:

2014.01.19

Last Calib.:

2014.01.19

Start Time: 08:32:15

End Time:

15:37:45

Time On Btm:

2014.01.19 @ 10:24:45

Time Off Btm:

2014.01.19 @ 12:56:15

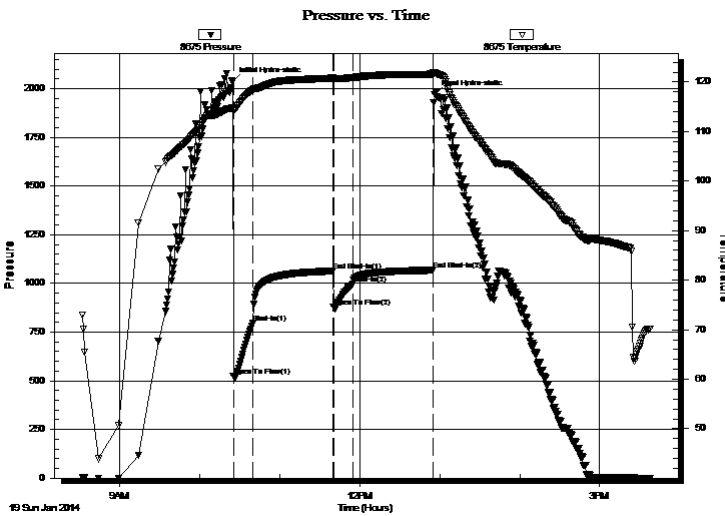
TEST COMMENT: B.O.B. in 45 sec.

Bled off for 5 min. No return blow

B.O.B. in 1 1/4 min.

Bled off for 5 min. No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2034.89	114.78	Initial Hydro-static
1	523.08	114.37	Open To Flow (1)
16	797.26	118.46	Shut-In(1)
76	1063.90	120.81	End Shut-In(1)
76	877.79	120.75	Open To Flow (2)
91	997.51	120.92	Shut-In(2)
151	1067.82	121.59	End Shut-In(2)
152	1970.67	121.95	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1692.00	100% Water	21.23
252.00	mcw 30%M 70%W	3.53
356.00	mcw 50%M 50%W	4.99

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Company, Inc.

**3-18s-30w Lane,KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54604

**DST#: 1**

ATTN: Bob Stolzle

Test Start: 2014.01.19 @ 08:32:00

## Tool Information

Drill Pipe:	Length: 3800.89 ft	Diameter: 3.80 inches	Volume: 53.32 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: 30000.00 lb
Drill Collar:	Length: 274.74 ft	Diameter: 2.25 inches	Volume: 1.35 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 54.67 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.13 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4085.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	125.00 ft			
Tool Length:	152.50 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			4058.50	
Shut In Tool	5.00			4063.50	
Hydraulic tool	5.00			4068.50	
Jars	5.00			4073.50	
Safety Joint	2.50			4076.00	
Packer	5.00			4081.00	27.50 Bottom Of Top Packer
Packer	4.00			4085.00	
Stubb	1.00			4086.00	
Recorder	0.00	8675	Inside	4086.00	
Recorder	0.00	8650	Outside	4086.00	
Perforations	22.00			4108.00	
Change Over Sub	1.00			4109.00	
Drill Pipe	97.00			4206.00	
Change Over Sub	1.00			4207.00	
Bullnose	3.00			4210.00	125.00 Bottom Packers & Anchor

**Total Tool Length: 152.50**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Company, Inc.

**3-18s-30w Lane,KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54604

**DST#: 1**

ATTN: Bob Stolzle

Test Start: 2014.01.19 @ 08:32:00

### 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: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.53 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1692.00	100% Water	21.232
252.00	mcw 30%M 70%W	3.535
356.00	mcw 50%M 50%W	4.994

Total Length: 2300.00 ft      Total Volume: 29.761 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .18 @ 82 F = 30,000

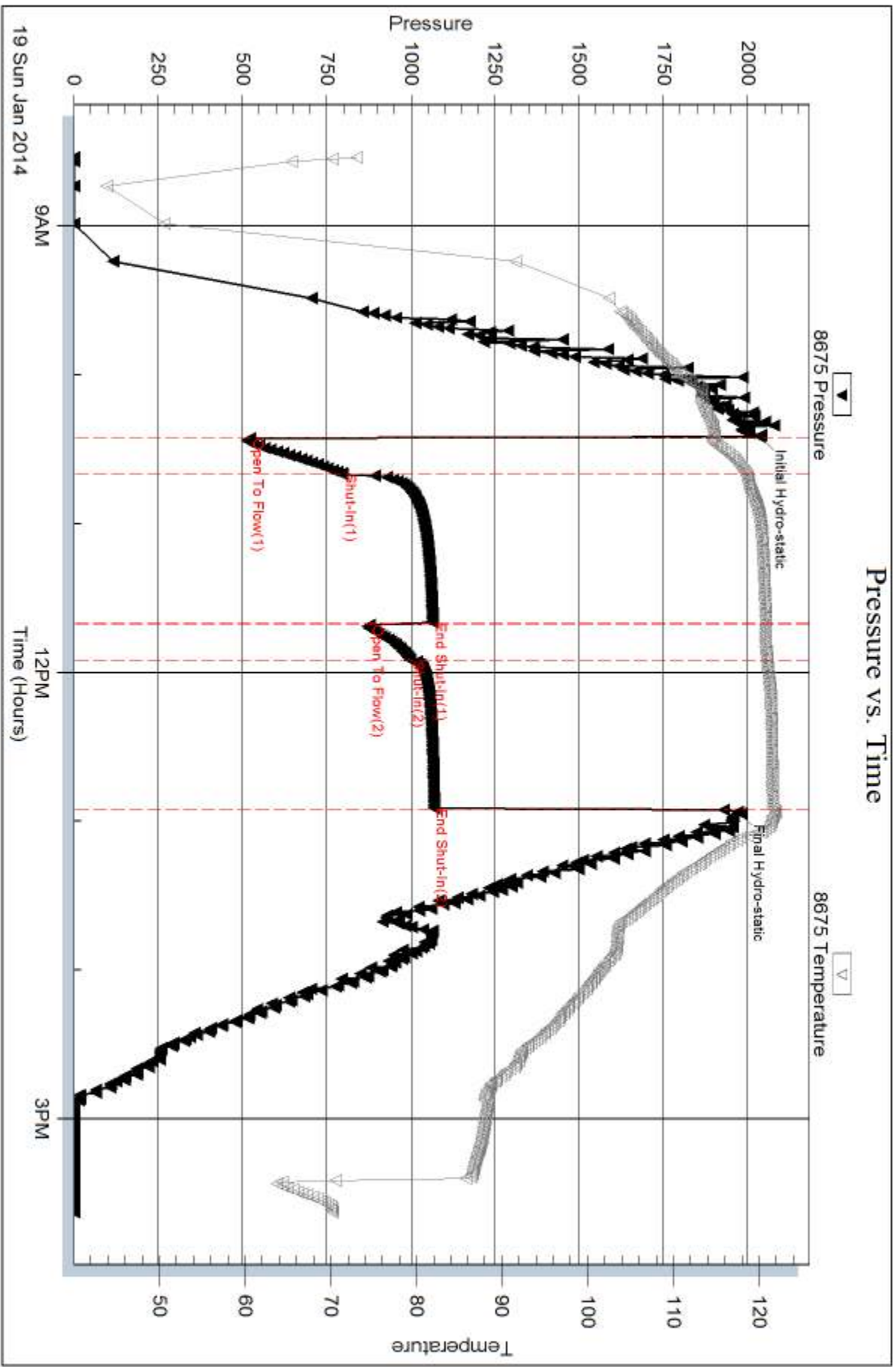
Serial #: 8675

Inside

Murfin Drilling Company, Inc.

Sharp "A" #1-3

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 54604

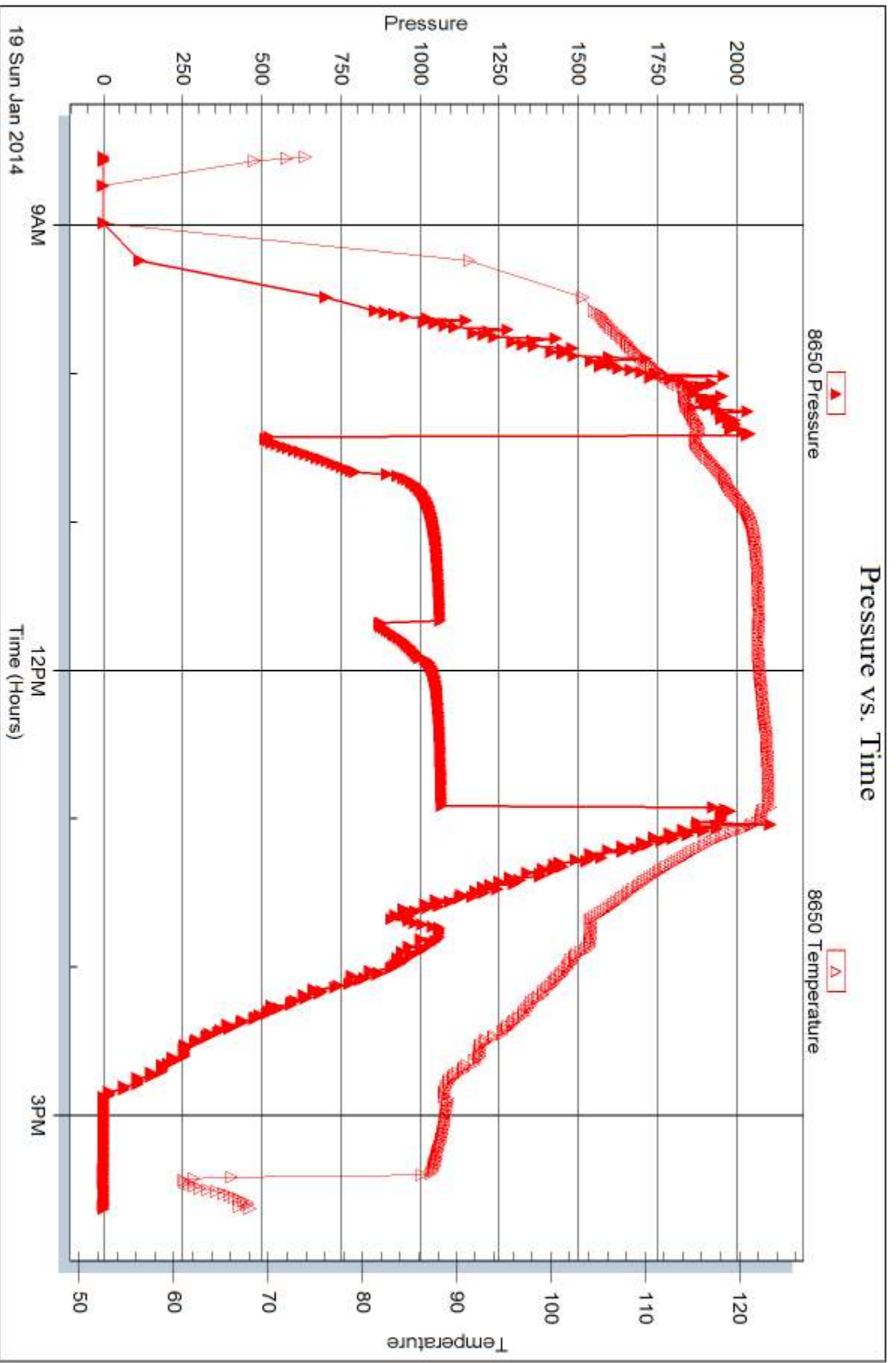
Printed: 2014.01.24 @ 10:30:53

Serial #: 8650

Outside Murfin Drilling Company, Inc.

Sharp "A" #1-3

DST Test Number: 1





## DRILL STEM TEST REPORT

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

250 N Water STE 300  
Wichita KS 67202-1216

ATTN: Bob Stolzle

### **Sharp "A" #1-3**

### **3-18s-30w Lane,KS**

Start Date: 2014.01.20 @ 05:40:00

End Date: 2014.01.20 @ 15:55:15

Job Ticket #: 54570                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.01.24 @ 10:30:13





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

**3-18s-30w Lane, KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54570

**DST#: 2**

ATTN: Bob Stolzle

Test Start: 2014.01.20 @ 05:40:00

## GENERAL INFORMATION:

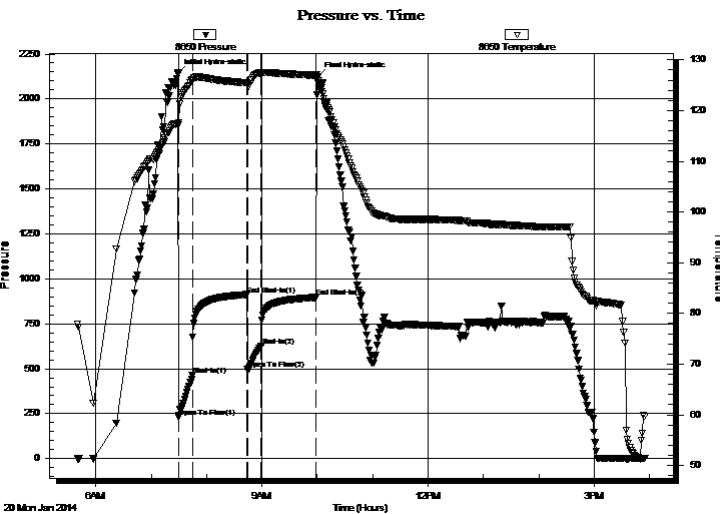
Formation: **KC "L & X- Line**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 07:29:30  
 Time Test Ended: 15:55:15  
 Interval: **4252.00 ft (KB) To 4320.00 ft (KB) (TVD)**  
 Total Depth: 4320.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Cornelio Landa III  
 Unit No: 46  
 Reference Elevations: 2878.00 ft (KB)  
 2868.00 ft (CF)  
 KB to GR/CF: 10.00 ft

## Serial #: 8650

**Outside**

Press@RunDepth: 626.82 psig @ 4254.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.20 End Date: 2014.01.20 Last Calib.: 2014.01.20  
 Start Time: 05:40:15 End Time: 15:55:15 Time On Btm: 2014.01.20 @ 07:29:00  
 Time Off Btm: 2014.01.20 @ 10:00:15

**TEST COMMENT:** IF: BOB in 1 min. 15 secs.  
 IS: Bled off in 2 1/2 mins.-BOB in 14 mins.  
 FF: BOB Immediately  
 FS: Bled off in 2 mins.- 4 1/2 in. of Blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2142.58	117.44	Initial Hydro-static
1	231.05	117.19	Open To Flow (1)
16	464.41	126.03	Shut-In(1)
75	912.03	125.46	End Shut-In(1)
76	499.46	125.33	Open To Flow (2)
90	626.82	127.41	Shut-In(2)
150	896.54	126.94	End Shut-In(2)
152	2123.99	126.60	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
126.00	Cog 40o 60g	0.62
1380.50	6 Samples @ 5 min.	18.02
123.50	Gocm 20g 40o 40m	1.73
0.00	GIP=723	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 Company, Inc.

**3-18s-30w Lane,KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54570

**DST#: 2**

ATTN: Bob Stolzle

Test Start: 2014.01.20 @ 05:40:00

## Tool Information

Drill Pipe:	Length: 3966.00 ft	Diameter: 3.80 inches	Volume: 55.63 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: 30000.00 lb
Drill Collar:	Length: 274.00 ft	Diameter: 2.25 inches	Volume: 1.35 bbl	Weight to Pull Loose: 86000.00 lb
			<u>Total Volume: 56.98 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4252.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	95.00 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			4226.00	
Shut In Tool	5.00			4231.00	
Hydraulic tool	5.00			4236.00	
Jars	5.00			4241.00	
Safety Joint	2.00			4243.00	
Packer	5.00			4248.00	27.00 Bottom Of Top Packer
Packer	4.00			4252.00	
Stubb	1.00			4253.00	
Perforations	1.00			4254.00	
Recorder	0.00	8675	Inside	4254.00	
Recorder	0.00	8650	Outside	4254.00	
Perforations	30.00			4284.00	
Change Over Sub	1.00			4285.00	
Drill Pipe	31.00			4316.00	
Change Over Sub	1.00			4317.00	
Bullnose	3.00			4320.00	68.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>95.00</b>				



**TRILOBITE  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Company, Inc.

**3-18s-30w Lane,KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54570

**DST#: 2**

ATTN: Bob Stolzle

Test Start: 2014.01.20 @ 05:40:00

## 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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.54 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
126.00	Cog 40o 60g	0.620
1380.50	6 Samples @ 5 min.	18.017
123.50	Gocm 20g 40o 40m	1.732
0.00	GIP=723	0.000

Total Length: 1630.00 ft      Total Volume: 20.369 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

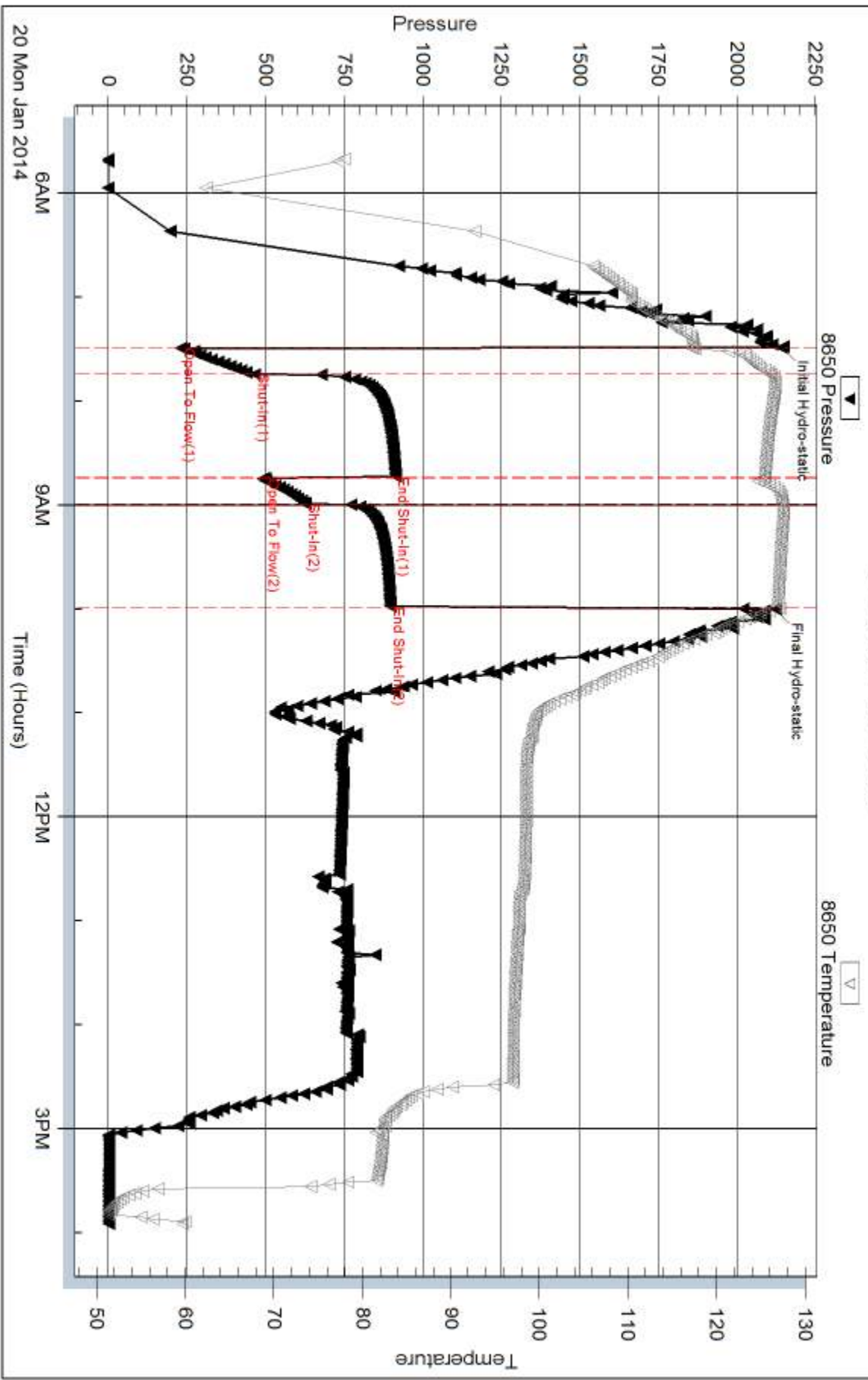
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 5 & 10 min samples=10g 90o 15 & 20 min. samples=20g 80o  
25 & 30 min. samples= 30g 70o Calculated @ sample every 230'  
Dropped bar-Reversed fluid into truck- 15 bbls

### Pressure vs. Time



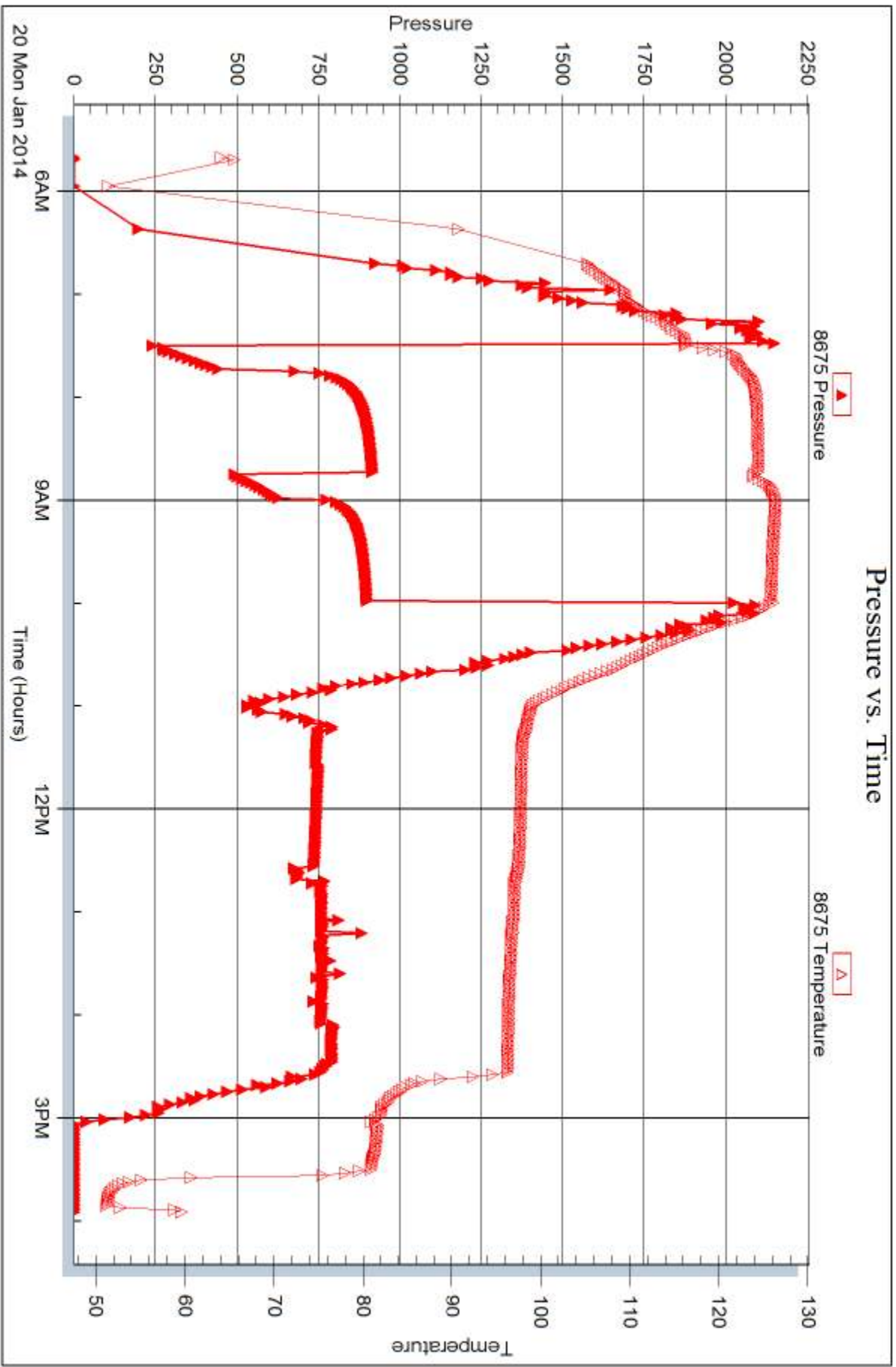
Serial #: 8675

Inside

Murfin Drilling Company, Inc.

Sharp "A" #1-3

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 54570

Printed: 2014.01.24 @ 10:30:15



## DRILL STEM TEST REPORT

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

250 N Water STE 300  
Wichita KS 67202-1216

ATTN: Bob Stolzle

### **Sharp "A" #1-3**

### **3-18s-30w Lane,KS**

Start Date: 2014.01.21 @ 04:20:00

End Date: 2014.01.21 @ 13:56:15

Job Ticket #: 54571                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.01.24 @ 10:29:49



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

**3-18s-30w Lane, KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54571

**DST#: 3**

ATTN: Bob Stolzle

Test Start: 2014.01.21 @ 04:20:00

## GENERAL INFORMATION:

Formation: **Marmaton A-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:39:15

Time Test Ended: 13:56:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Cornelio Landa III

Unit No: 46

**Interval: 4342.00 ft (KB) To 4410.00 ft (KB) (TVD)**

Reference Elevations: 2878.00 ft (KB)

Total Depth: 4410.00 ft (KB) (TVD)

2868.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

**Serial #: 8650 Outside**

Press@RunDepth: 444.81 psig @ 4344.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.01.21

End Date: 2014.01.21

Last Calib.: 2014.01.21

Start Time: 04:20:15

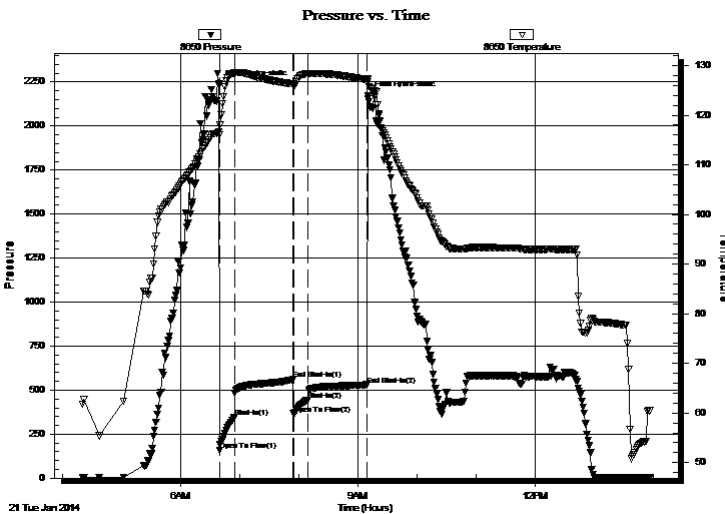
End Time: 13:56:15

Time On Btm: 2014.01.21 @ 06:38:45

Time Off Btm: 2014.01.21 @ 09:10:00

**TEST COMMENT:** IF: BOB in 1 1/2 mins.  
IS: Bled off in 3 mins.-BOB in 8 1/2 mins.  
FF: BOB Immediately  
FS: Bled off in 2 min.- 2 1/2 Return Blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2233.90	116.61	Initial Hydro-static
1	156.30	116.02	Open To Flow (1)
16	345.23	128.50	Shut-In(1)
75	560.06	126.27	End Shut-In(1)
76	365.44	126.20	Open To Flow (2)
90	444.81	128.35	Shut-In(2)
150	530.13	127.18	End Shut-In(2)
152	2172.96	126.72	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
123.00	Gocm 10g 40o 50m	0.60
907.00	Cgo see comments	11.35
108.00	Cgo 50g 50o	1.51

\* 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 Company, Inc.

**3-18s-30w Lane, KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54571

**DST#: 3**

ATTN: Bob Stolzle

Test Start: 2014.01.21 @ 04:20:00

## Tool Information

Drill Pipe:	Length: 4059.00 ft	Diameter: 3.80 inches	Volume: 56.94 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: 30000.00 lb
Drill Collar:	Length: 274.00 ft	Diameter: 2.25 inches	Volume: 1.35 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 58.29 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4342.00 ft			Final 71000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	95.00 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			4316.00	
Shut In Tool	5.00			4321.00	
Hydraulic tool	5.00			4326.00	
Jars	5.00			4331.00	
Safety Joint	2.00			4333.00	
Packer	5.00			4338.00	27.00 Bottom Of Top Packer
Packer	4.00			4342.00	
Stubb	1.00			4343.00	
Perforations	1.00			4344.00	
Recorder	0.00	8675	Inside	4344.00	
Recorder	0.00	8650	Outside	4344.00	
Perforations	30.00			4374.00	
Change Over Sub	1.00			4375.00	
Drill Pipe	31.00			4406.00	
Change Over Sub	1.00			4407.00	
Bullnose	3.00			4410.00	68.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>95.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Company, Inc.

**3-18s-30w Lane,KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54571

**DST#: 3**

ATTN: Bob Stolzle

Test Start: 2014.01.21 @ 04:20:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

35 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.56 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
123.00	Gocm 10g 40o 50m	0.605
907.00	Cgo see comments	11.347
108.00	Cgo 50g 50o	1.515

Total Length: 1138.00 ft      Total Volume: 13.467 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 5 min. samples= Cgo 50g 50o

10 & 15 min. samples= Cgo 20g 80o

20min. samples=Cgo 10g 90o

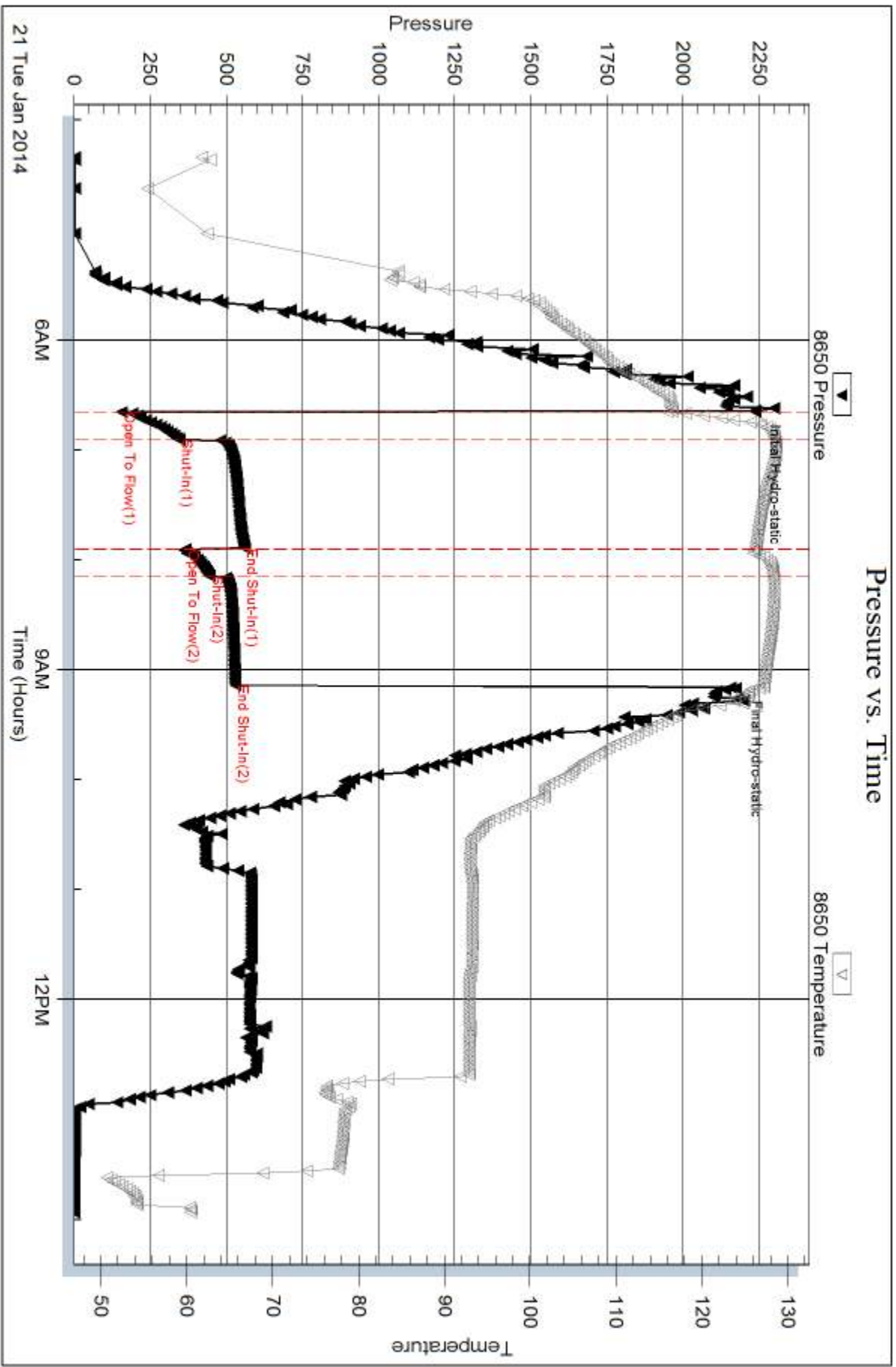
Reversed fluid onto truck= 15bbbls Clean oil

Serial #: 8650

Outside Murfin Drilling Company, Inc.

Sharp "A" #1-3

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 54571

Printed: 2014.01.24 @ 10:29:51

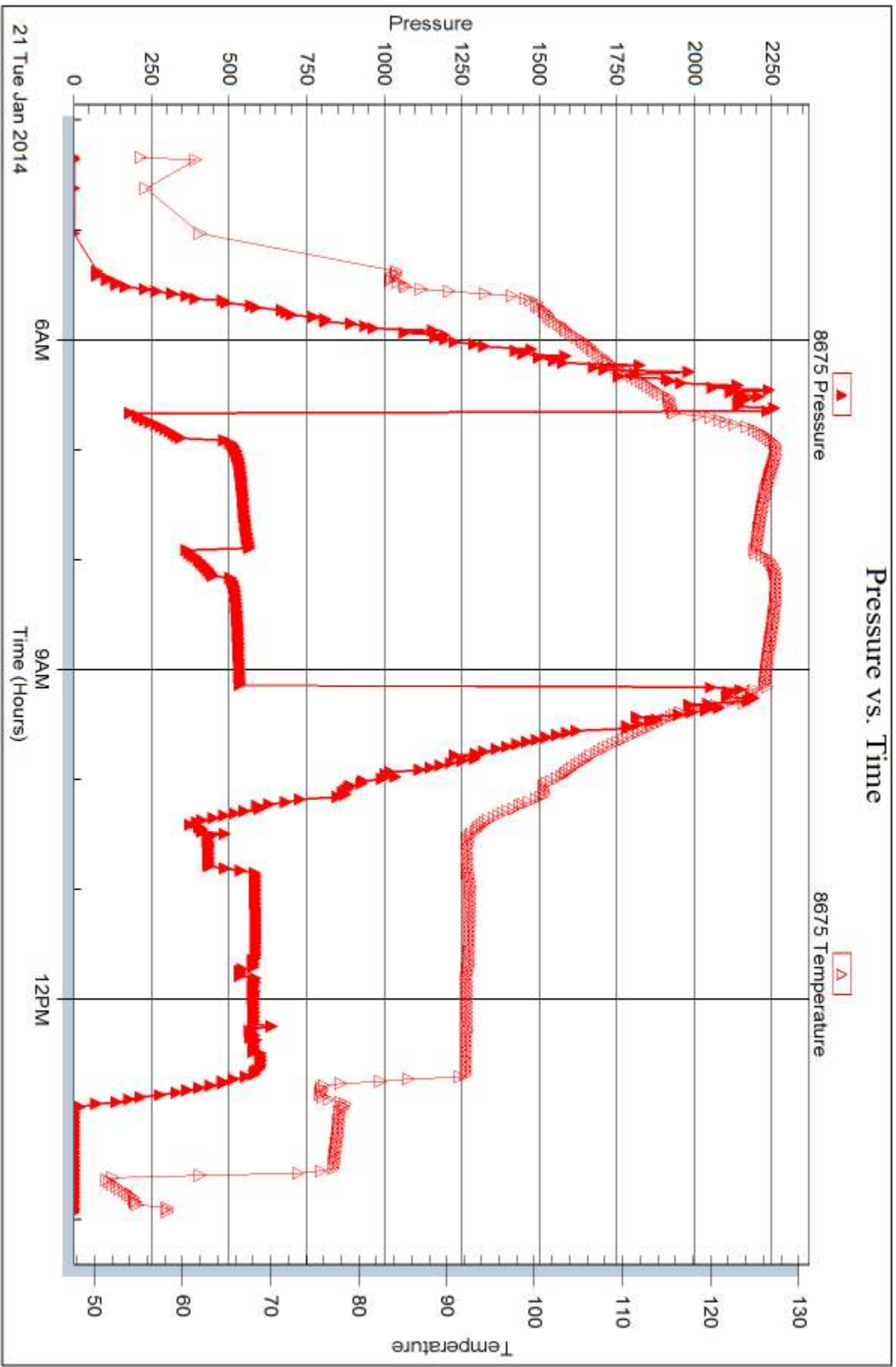
Serial #: 8675

Inside

Murfin Drilling Company, Inc.

Sharp "A" #1-3

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 54571

Printed: 2014.01.24 @ 10:29:51



## DRILL STEM TEST REPORT

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

250 N Water STE 300  
Wichita KS 67202-1216

ATTN: Bob Stolzle

### **Sharp "A" #1-3**

### **3-18s-30w Lane,KS**

Start Date: 2014.01.22 @ 03:04:00

End Date: 2014.01.22 @ 12:51:30

Job Ticket #: 54573                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.01.24 @ 10:29:08



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

**3-18s-30w Lane, KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54573

**DST#: 4**

ATTN: Bob Stolzle

Test Start: 2014.01.22 @ 03:04:00

## GENERAL INFORMATION:

Formation: **Pawnee-Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:12:00

Time Test Ended: 12:51:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Cornelio Landa III

Unit No: 46

**Interval: 4402.00 ft (KB) To 4485.00 ft (KB) (TVD)**

Reference Elevations: 2878.00 ft (KB)

Total Depth: 4485.00 ft (KB) (TVD)

2868.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

**Serial #: 8650 Outside**

Press@RunDepth: 115.21 psig @ 4404.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.01.22 End Date: 2014.01.22

Last Calib.: 2014.01.22

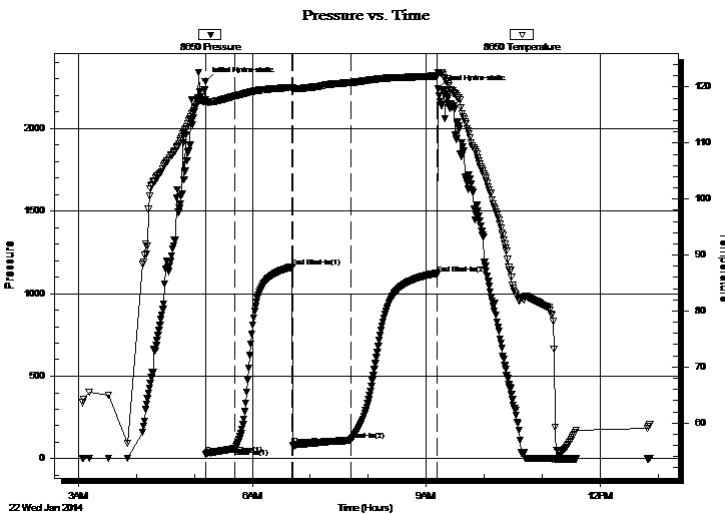
Start Time: 03:04:15 End Time: 12:51:30

Time On Btm: 2014.01.22 @ 05:11:45

Time Off Btm: 2014.01.22 @ 09:12:15

**TEST COMMENT:** IF: BOB. in 22 min.  
IS: Bled off in 2 min.- No return  
FF: BOB in 33 min.  
FS: Bled off in 2 min.- 5 in. blow back after 1 min. shut-in

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2284.26	117.83	Initial Hydro-static
1	29.28	117.20	Open To Flow (1)
31	61.62	118.38	Shut-In(1)
90	1162.28	119.95	End Shut-In(1)
91	81.75	119.75	Open To Flow (2)
151	115.21	120.80	Shut-In(2)
240	1116.29	121.97	End Shut-In(2)
241	2238.16	122.63	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	Cgo 10g 90o	0.15
0.00	269 GIP	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 Company, Inc.

**3-18s-30w Lane,KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54573

**DST#: 4**

ATTN: Bob Stolzle

Test Start: 2014.01.22 @ 03:04:00

## Tool Information

Drill Pipe:	Length: 4126.00 ft	Diameter: 3.80 inches	Volume: 57.88 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: 274.00 ft	Diameter: 2.25 inches	Volume: 1.35 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 59.23 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4402.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	83.00 ft			
Tool Length:	105.00 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			4381.00	
Shut In Tool	5.00			4386.00	
Hydraulic tool	5.00			4391.00	
Safety Joint	2.00			4393.00	
Packer	5.00			4398.00	22.00 Bottom Of Top Packer
Packer	4.00			4402.00	
Stubb	1.00			4403.00	
Perforations	1.00			4404.00	
Recorder	0.00	8675	Inside	4404.00	
Recorder	0.00	8650	Outside	4404.00	
Perforations	13.00			4417.00	
Change Over Sub	1.00			4418.00	
Drill Pipe	63.00			4481.00	
Change Over Sub	1.00			4482.00	
Bullnose	3.00			4485.00	83.00 Bottom Packers & Anchor

**Total Tool Length: 105.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Company, Inc.

**3-18s-30w Lane,KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54573

**DST#: 4**

ATTN: Bob Stolzle

Test Start: 2014.01.22 @ 03:04:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

43 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Cgo 10g 90o	0.148
0.00	269 GIP	0.000

Total Length: 30.00 ft      Total Volume: 0.148 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

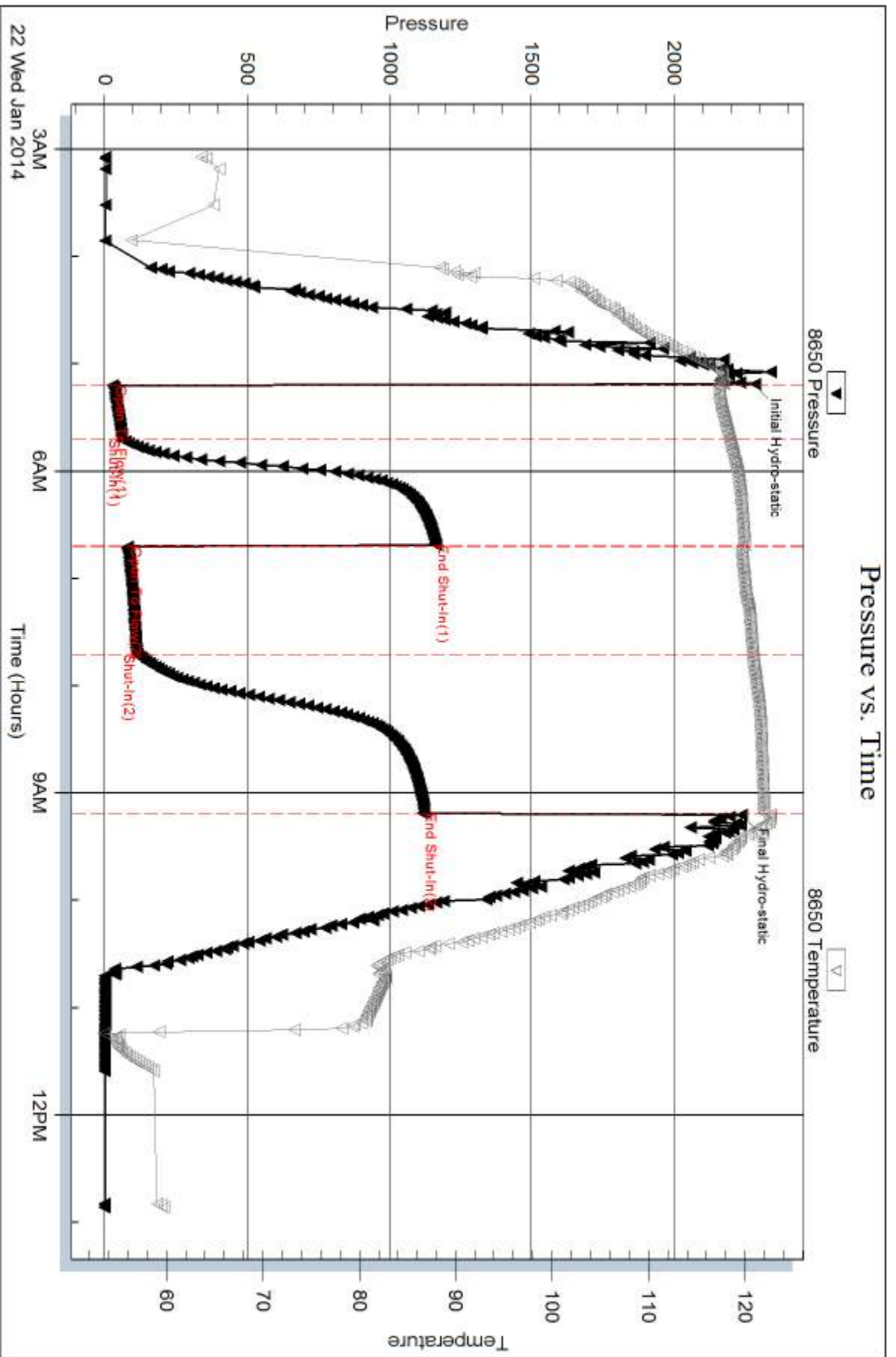
Recovery Comments:

Serial #: 8650

Outside Murfin Drilling Company, Inc.

Sharp "A" #1-3

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 54573

Printed: 2014.01.24 @ 10:29:10

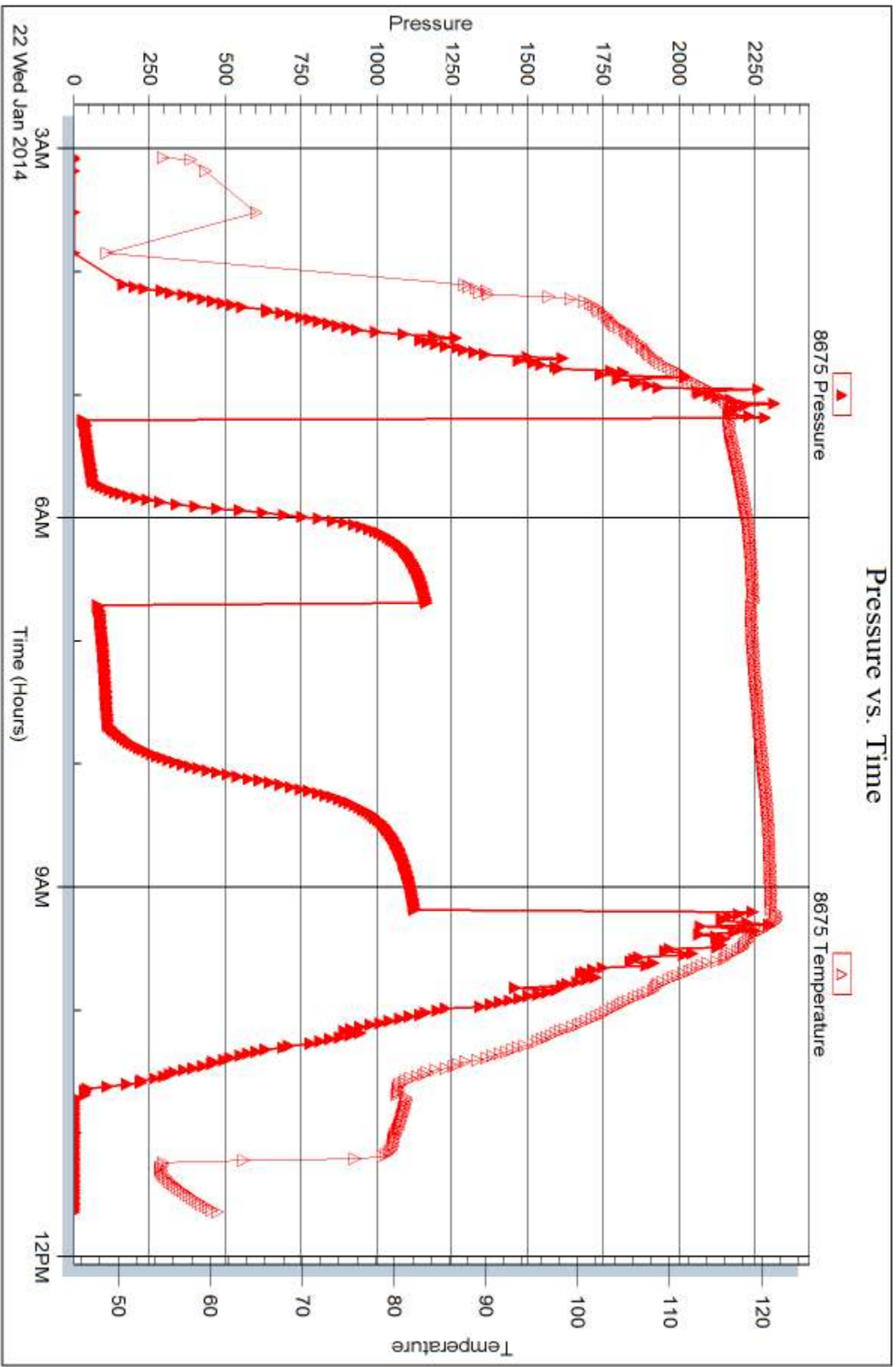
Serial #: 8675

Inside

Murfin Drilling Company, Inc.

Sharp "A" #1-3

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 54573

Printed: 2014.01.24 @ 10:29:10



## DRILL STEM TEST REPORT

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

250 N Water STE 300  
Wichita KS 67202-1216

ATTN: Bob Stolzle

### **Sharp "A" #1-3**

#### **3-18s-30w Lane,KS**

Start Date: 2014.01.23 @ 00:06:00

End Date: 2014.01.23 @ 10:38:45

Job Ticket #: 54574                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.01.24 @ 10:28:33



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

**3-18s-30w Lane, KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54574

**DST#: 5**

ATTN: Bob Stolzle

Test Start: 2014.01.23 @ 00:06:00

## GENERAL INFORMATION:

Formation: **Cherokee LS-Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:37:30

Time Test Ended: 10:38:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Cornelio Landa III

Unit No: 46

**Interval: 4469.00 ft (KB) To 4540.00 ft (KB) (TVD)**

Reference Elevations: 2878.00 ft (KB)

Total Depth: 4540.00 ft (KB) (TVD)

2868.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

**Serial #: 8650 Outside**

Press@RunDepth: 507.68 psig @ 4474.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.01.23

End Date:

2014.01.23

Last Calib.:

2014.01.23

Start Time: 00:06:15

End Time:

10:38:45

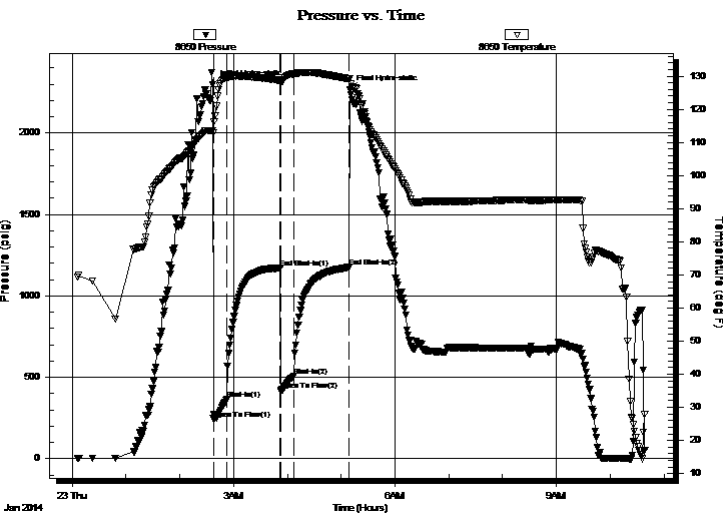
Time On Btm:

2014.01.23 @ 02:37:15

Time Off Btm:

2014.01.23 @ 05:09:30

**TEST COMMENT:** IF: BOB in 1 min.  
IS: Bled off in 5 min.-Surface blow back Immediately-Built to BOB in 6 min.  
FF: BOB Immediately  
FS: Bled off in 3 min.- BOB. in 6 min.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2298.66	113.53	Initial Hydro-static
1	244.86	112.99	Open To Flow (1)
16	363.71	129.46	Shut-In(1)
75	1173.71	128.70	End Shut-In(1)
76	421.10	128.50	Open To Flow (2)
90	507.68	130.63	Shut-In(2)
151	1175.29	129.23	End Shut-In(2)
153	2267.44	129.21	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
137.00	Gocm 5g 35o 60m	0.67
1145.00	Cgo see comments	14.81
63.00	Cgo 20g 80o	0.88

## 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 Company, Inc.

**3-18s-30w Lane,KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54574

**DST#: 5**

ATTN: Bob Stolzle

Test Start: 2014.01.23 @ 00:06:00

## Tool Information

Drill Pipe:	Length: 4184.00 ft	Diameter: 3.80 inches	Volume: 58.69 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: 274.00 ft	Diameter: 2.25 inches	Volume: 1.35 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 60.04 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 69000.00 lb
Depth to Top Packer:	4469.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	71.00 ft			
Tool Length:	93.00 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			4448.00	
Shut In Tool	5.00			4453.00	
Hydraulic tool	5.00			4458.00	
Safety Joint	2.00			4460.00	
Packer	5.00			4465.00	22.00 Bottom Of Top Packer
Packer	4.00			4469.00	
Stubb	1.00			4470.00	
Perforations	4.00			4474.00	
Recorder	0.00	8675	Inside	4474.00	
Recorder	0.00	8650	Outside	4474.00	
Perforations	30.00			4504.00	
Change Over Sub	1.00			4505.00	
Drill Pipe	31.00			4536.00	
Change Over Sub	1.00			4537.00	
Bullnose	3.00			4540.00	71.00 Bottom Packers & Anchor

**Total Tool Length: 93.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Company, Inc.

**3-18s-30w Lane,KS**

250 N Water STE 300  
Wichita KS 67202-1216

**Sharp "A" #1-3**

Job Ticket: 54574

**DST#: 5**

ATTN: Bob Stolzle

Test Start: 2014.01.23 @ 00:06:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

40 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
137.00	Gocm 5g 35o 60m	0.674
1145.00	Cgo see comments	14.813
63.00	Cgo 20g 80o	0.884

Total Length: 1345.00 ft      Total Volume: 16.371 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 5 min.= 50g 50o

10 & 15 min.= 30g 70o

20 min. = 15g 85o

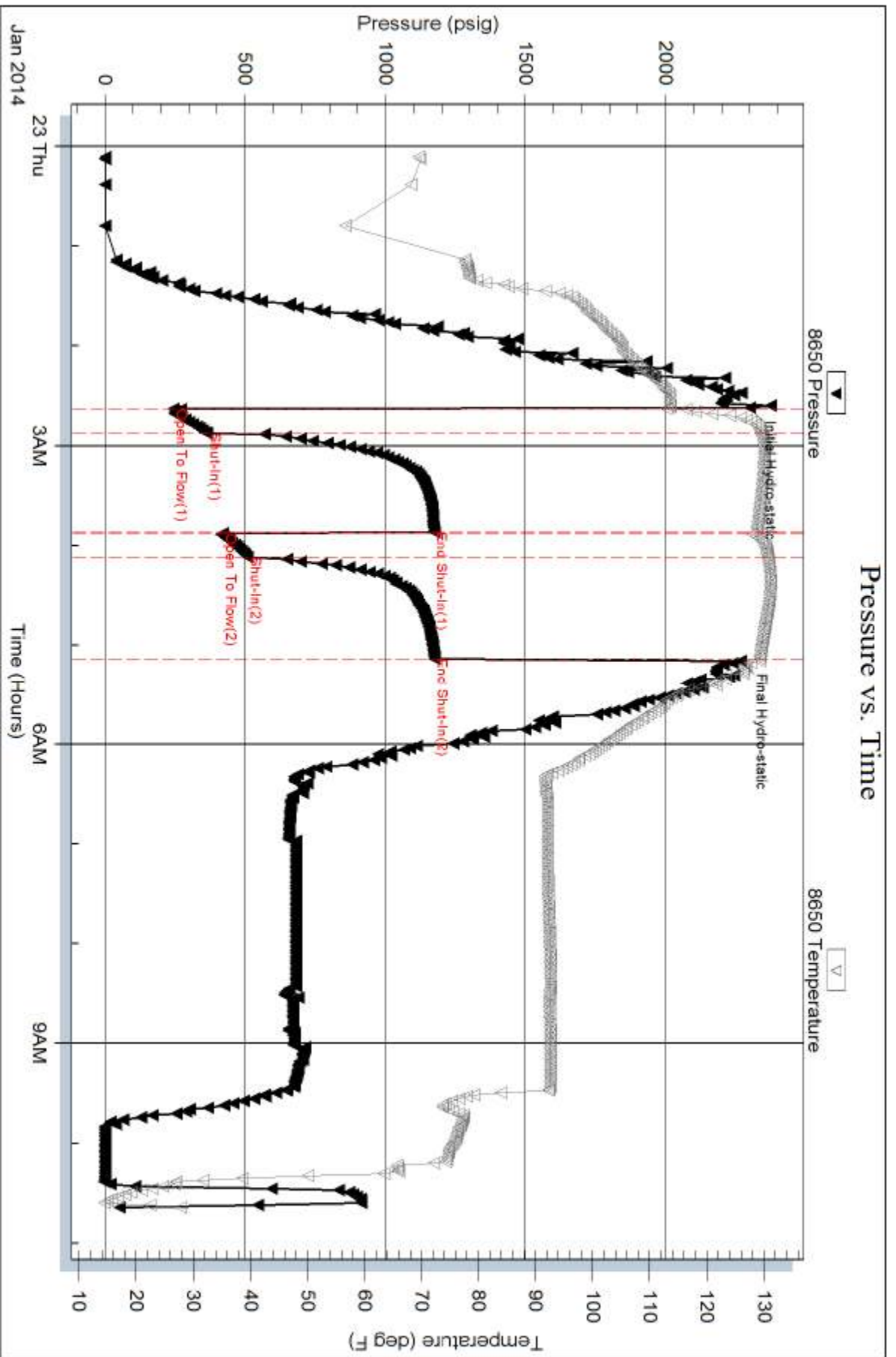
calculated sample every 302'

Serial #: 8650

Outside Murfin Drilling Company, Inc.

Sharp "A" #1-3

DST Test Number: 5



Triobite Testing, Inc

Ref. No: 54574

Printed: 2014.01.24 @ 10:28:36

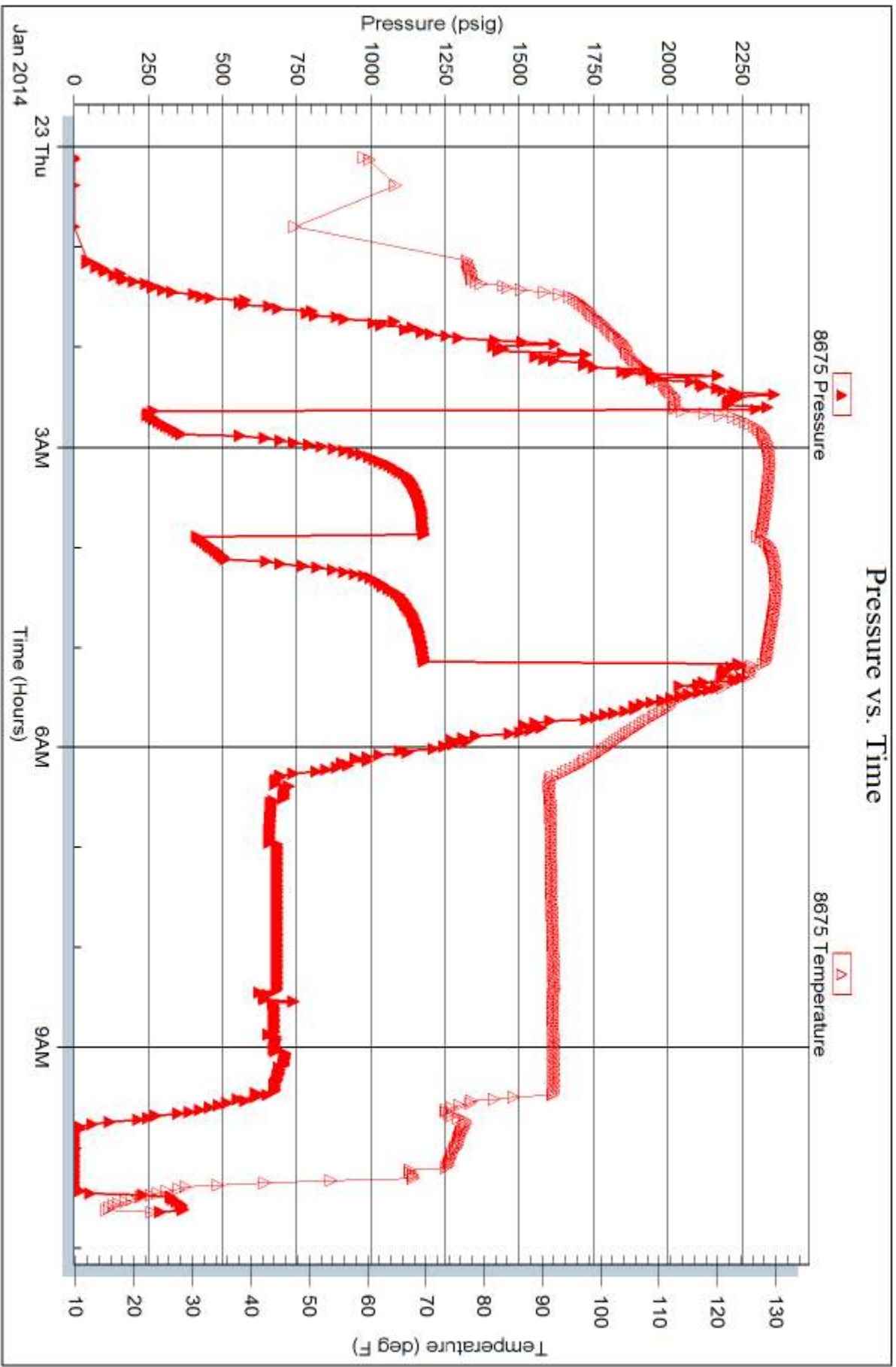
Serial #: 8675

Inside

Murfin Drilling Company, Inc.

Sharp "A" #1-3

DST Test Number: 5



Tribble Testing, Inc

Ref. No: 54574

Printed: 2014.01.24 @ 10:28:36



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **54604**

Well Name & No. Sharp "A" #1-3 Test No. 1 Date 1/19/14  
 Company Martin Drilling Company, Inc. Elevation 2878 KB 2868 GL  
 Address 250 W Water STE 300 Wichita KS 67202-1216  
 Co. Rep / Geo. Bob Stolze Rig Martin Drilling Rig 21  
 Location: Sec. 3 Twp. 18S Rge. 30W Co. Lane County State KS

Interval Tested 4085-4210 Zone Tested Kansas City "H, I, J" Zone  
 Anchor Length 125 Drill Pipe Run 3800.89 Mud Wt. 9.3  
 Top Packer Depth 4081 Drill Collars Run 4 1/2 stands 274.74 Vis 64  
 Bottom Packer Depth 4085 Wt. Pipe Run \_\_\_\_\_ WL 5.6  
 Total Depth 4210 Chlorides 1,600 ppm System LCM 2#

Blow Description B.O.B. in 45 sec.  
Bled off for 5 min. No return below  
B.O.B. in 1 1/4 min

Bled off for 5 min. No return below

Rec	Feet of	%gas	%oil	%water	%mud
<u>356</u>	<u>mcw</u>		<u>50</u>	<u>50</u>	
<u>252</u>	<u>mcw</u>		<u>70</u>	<u>30</u>	
<u>1692</u>	<u>water</u>		<u>100</u>		
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

Rec Total 2,300 BHT 121 Gravity \_\_\_\_\_ API RW 18 @ 82 °F Chlorides 30,000 ppm  
 (A) Initial Hydrostatic 2,035  Test 1250 T-On Location 08:00  
 (B) First Initial Flow 523  Jars 250 T-Started 08:32  
 (C) First Final Flow 797  Safety Joint 75 T-Open 10:25  
 (D) Initial Shut-In 1,064  Circ Sub N/C T-Pulled 12:55  
 (E) Second Initial Flow 878  Hourly Standby \_\_\_\_\_ T-Out 15:37  
 (F) Second Final Flow 998  Mileage 46 BT 71.30  
 (G) Final Shut-In 1,068  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,971  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_

Initial Open 15  
 Initial Shut-In 60  
 Final Flow 15  
 Final Shut-In 60  
 Sub Total 0  
 Total 1646.30  
 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1646.30

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. 54570

Well Name & No. Sharp "A" #1-3 Test No. 2 Date 1-20-14  
 Company Murfin Drilling Co Inc. Elevation 2878 KB 2868 GL  
 Address 250 N. Water St #300 - Wichita KS 67202  
 Co. Rep / Geo. Bob Stozle Rig Murfin #21  
 Location: Sec. 3 Twp. 18-S Rge. 30-W Co. Lane State KS

Interval Tested 4252-4320 Zone Tested KC "L & E" Line"  
 Anchor Length 68' Drill Pipe Run 3966 Mud Wt. 9.3  
 Top Packer Depth 4248 Drill Collars Run ~~3000~~ 274 Vis 55  
 Bottom Packer Depth 4252 Wt. Pipe Run Ø WL 5.6  
 Total Depth 4320 Chlorides 1400 ppm System LCM #4

Blow Description IF: B.o.b. in 1 min. 15 sec.  
ISF: Bled off in 2 1/2 mins. - B.o.b. in 14 mins.  
FF: B.o.b. Immediately  
FSI: Bled off in 2 mins. - 4 1/2 ins. of Blowback

Rec	Feet of	COG	1st 10 min	%gas	%oil	%water	%mud
126	COG	1540 min	60	40			
1380.5	6 samples @ 5 min	KG 10g 90					
123.5	600 min	1st 20 min CG 20g 80	20	40		40	
		25 & 30 min CG 30g 70					
Ø	GIP-723						

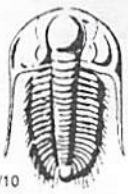
Rec Total 11630 BHT 127 Gravity 34 API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic 2143  Test 1250 T-On Location 5:10  
 (B) First Initial Flow 231  Jars 250 T-Started 5:40  
 (C) First Final Flow 464  Safety Joint 75 T-Open 7:30  
 (D) Initial Shut-In 912  Circ Sub MIC 50 T-Pulled 10:00  
 (E) Second Initial Flow 499  Hourly Standby 1 hr. 25h 25 T-Out 15:58  
 (F) Second Final Flow 627  Mileage 71.30 Comments Dropped Bar reversed  
 (G) Final Shut-In 897  Sampler Fluid 15 bbls  
 (H) Final Hydrostatic 2124  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer

Initial Open 15  Extra Packer  Extra Copies  
 Initial Shut-In 60  Extra Recorder Sub Total 0  
 Final Flow 15  Day Standby Total 1721.30  
 Final Shut-In 60  Accessibility MP/DST Disc't  
 Sub Total 1721.30

Approved By Robert Stozle Agent Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54571

Well Name & No. Sharp "A" #1-3 Test No. 3 Date 1-21-14  
 Company Murfin Drilling Co. Inc. Elevation 2878 KB 2868 GL  
 Address 250 N. Water Ste # 300 - Wichita, KS 67202  
 Co. Rep / Geo. Bob Stolzle Rig Murfin #21  
 Location: Sec. 3 Twp. 18-5 Rge. 30-w Co. Lane State KS

Interval Tested 4342-4410 Zone Tested Normaton "A & B" & C  
 Anchor Length 68 Drill Pipe Run 4059' Mud Wt. 9.3  
 Top Packer Depth 4338 Drill Collars Run 274 Vis 56  
 Bottom Packer Depth ~~4338~~ 4342 Wt. Pipe Run Ø WL 5.6  
 Total Depth ~~4338~~ 4410 Chlorides 2000 ppm System LCM #4

Blow Description ~~Ø~~ IF: Bob. in 1/2 mins. -  
DST: Bled off in 3 mins. - Bob in 8 1/2 mins  
FF: Bob. Immediately  
FSD: Bled off in 2 min. - 2 1/2" Return Blowback

Rec	Feet of	%gas	%oil	%water	%mud
<del>108</del> <u>108</u>	<u>CGO</u>	<u>50</u>	<u>50</u>		
<del>108</del> <u>108</u>	<u>CGO 5min Sample</u>	<u>50</u>	<u>50</u>		
<del>108</del> <u>108</u>	<u>CGO = 10 + 15 min</u>	<u>20</u>	<u>80</u>		
<u>907</u>	<u>CGO 20 min</u>	<u>10</u>	<u>90</u>		
<u>123</u>	<u>CGO cm</u>	<u>10</u>	<u>40</u>		<u>50</u>

Rec Total 1138.00 BHT 129 Gravity 35 API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic 2234  Test 1250 T-On Location 04:05  
 (B) First Initial Flow 156  Jars 250 T-Started 4:20  
 (C) First Final Flow 345  Safety Joint 75 T-Open 6:39  
 (D) Initial Shut-In 560  Circ Sub N/C T-Pulled 9:09  
 (E) Second Initial Flow 365  Hourly Standby \_\_\_\_\_ T-Out 13:56  
 (F) Second Final Flow 445  Mileage 71.30 Comments Reserved Fluid  
 (G) Final Shut-In 530  Sampler \_\_\_\_\_ into track - 15 bbls  
 (H) Final Hydrostatic 2173  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_

Initial Open 15  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 60  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 15  Day Standby \_\_\_\_\_ Total 1646.30  
 Final Shut-In 60  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1646.30

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **54573**

Well Name & No. Sharp A' #1-3 Test No. 4 Date 1-22-14  
 Company Murfin Drilling Co. Inc. Elevation 2878 KB 2868 GL  
 Address 250 N. Water. Ste #300 - Wichita, KS - 67202  
 Co. Rep / Geo. Bob Stolze Rig Murfin #21  
 Location: Sec. 3 Twp. 18-S Rge. 30-W Co. Lane State KS

Interval Tested 4402-4485 Zone Tested Dawnee - Ft. Scott  
 Anchor Length 83' Drill Pipe Run 4121 Mud Wt. 9.3  
 Top Packer Depth 4398 Drill Collars Run 274 Vis 57  
 Bottom Packer Depth 4402 Wt. Pipe Run Ø WL 6.0  
 Total Depth 4485 Chlorides 2,000 ppm System LCM #4

Blow Description IF: Bob in 22 min.  
ISI: Bled off in 2 min. - No Return  
FF: Bob in 33 min.  
ISI: Bled off in 2 min - 5" Return Blow back after 1 min. shut-in.

Rec	Feet of	%gas	%oil	%water	%mud
<u>244</u>	<u>60 CM</u>	<u>10</u>	<u>20</u>	<u>70</u>	<u>0</u>
<u>30</u>	<u>CGO</u>	<u>10</u>	<u>90</u>	<u>0</u>	<u>0</u>
<u>269</u>	<u>GIP=269</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>    </u>	<u>    </u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>    </u>	<u>    </u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Rec Total 274 BHT 127 Gravity 43 API RW      @      °F Chlorides      ppm

(A) Initial Hydrostatic 2284  Test 1250 T-On Location 2:35  
 (B) First Initial Flow 29  Jars      T-Started 3:04  
 (C) First Final Flow 62  Safety Joint 75 T-Open 05:12  
 (D) Initial Shut-In 1162  Circ Sub NIC T-Pulled 9:12  
 (E) Second Initial Flow 82  Hourly Standby      T-Out 11:38  
 (F) Second Final Flow 115  Mileage 71.30 Comments       
 (G) Final Shut-In 1116  Sampler       
 (H) Final Hydrostatic 2238  Straddle       Ruined Shale Packer       
 Shale Packer       Ruined Packer       
 Extra Packer       Extra Copies       
 Extra Recorder      Sub Total 0  
 Day Standby      Total 1396.30  
 Accessibility      MP/DST Disc't       
 Sub Total 1396.30

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. 54574

Well Name & No. Sharp A' #1-3 Test No. 5 Date 1-22-14  
 Company Murfin Drilling Co. Inc. Elevation 2878 KB 2868 GL  
 Address 250 N Water St #300 - Wichita KS 67202  
 Co. Rep / Geo. Bob Stolzle Rig Murfin #22  
 Location: Sec. 3 Twp. 18-S Rge. 30-W Co. Lane State KS

Interval Tested 4469-4540 Zone Tested Chester LS + Johnson  
 Anchor Length 71' Drill Pipe Run 4184 Mud Wt. 9.34  
 Top Packer Depth 4465 Drill Collars Run 274 Vis 57  
 Bottom Packer Depth 4469 Wt. Pipe Run Ø WL 6.0  
 Total Depth 4540 Chlorides 2000 ppm System LCM #4

Blow Description IF: Bob in 1 min.  
FSI Bled off in 5 min - surface blowdown immediately - Built to B.O.B. in 6 min.  
FF: B.O.B. Immediately  
FSI: Bled off in 3 min. Bob in 6 mins.

Rec	Feet of	%gas	%oil	%water	%mud
<u>63</u>	<u>CGO</u>	<u>20%</u>	<u>80%</u>		
<u>1145</u>	<u>CGO</u>				
<u>137</u>	<u>GOCM</u>	<u>5%</u>	<u>35%</u>		<u>60%</u>
	<u>5 min = 30, 50, 10, 15, 30, 70</u>				
	<u>20 min = 15, 8, 5</u>				

Rec Total 1345 BHT 129 Gravity 40 API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic 2299  Test 1250 T-On Location 23:45  
 (B) First Initial Flow 245  Jars — T-Started 00:06  
 (C) First Final Flow 364  Safety Joint 75 T-Open 2:38  
 (D) Initial Shut-In 1174  Circ Sub NK T-Pulled 5:08  
 (E) Second Initial Flow 421  Hourly Standby 1 hr standby .5h 50 T-Out 1038  
 (F) Second Final Flow 508  Mileage 142.60 Comments Reverse into  
 (G) Final Shut-In 1175  Sampler — truck total = 20 bbls  
 (H) Final Hydrostatic 2267  Straddle — loaded on 1-23-14 @ 18:20  
 Shale Packer —  Ruined Shale Packer — got done @ 19:15  
 Shale Packer —  Ruined Packer —  
 Extra Packer —  Extra Copies —  
 Extra Recorder — Sub Total 0  
 Day Standby — Total 1517.60  
 Accessibility — MP/DST Disc't —

Initial Open 15  
 Initial Shut-In 60  
 Final Flow 15  
 Final Shut-In 60  
 Sub Total 1517.60

Approved By Robert Stolzle, Agent Our Representative Robert Stolzle

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