



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling co.**

250 N. Water Suite 300 Wichita KS. 67202

ATTN: Jeff Christian / Sco

### **Coppen #1-7**

#### **7-9s-27w Sheridan,KS**

Start Date: 2014.01.22 @ 14:42:00

End Date: 2014.01.22 @ 22:44:30

Job Ticket #: 56687                      DST #: 1

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

Printed: 2014.01.27 @ 15:22:10



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling co.  
 250 N. Water Suite 300 Wichita KS. 67202  
 ATTN: Jeff Christian / Sco

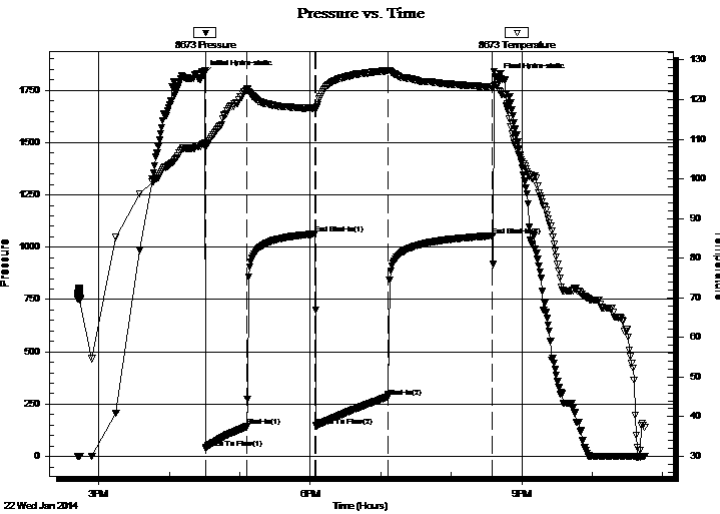
**7-9s-27w Sheridan,KS**  
**Coppen #1-7**  
 Job Ticket: 56687 **DST#: 1**  
 Test Start: 2014.01.22 @ 14:42:00

## GENERAL INFORMATION:

Formation: **Toronto-LKC "A"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:31:00  
 Time Test Ended: 22:44:30  
 Interval: **3741.00 ft (KB) To 3800.00 ft (KB) (TVD)**  
 Total Depth: 3800.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Bob Hamel  
 Unit No: 61  
 Reference Elevations: 2653.00 ft (KB)  
 2648.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8673 Inside**  
 Press@RunDepth: 285.19 psig @ 3778.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.22 End Date: 2014.01.22 Last Calib.: 2014.01.22  
 Start Time: 14:42:01 End Time: 22:44:30 Time On Btm: 2014.01.22 @ 16:29:00  
 Time Off Btm: 2014.01.22 @ 20:38:30

**TEST COMMENT:** I.F. - 30 - BOB in 30 min  
 I.S.I - 60 - No blow back  
 F.F - 60 - BOB in 28 min  
 F.S.I. - 90 - No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1823.96	108.88	Initial Hydro-static
2	38.09	107.84	Open To Flow (1)
37	142.59	122.37	Shut-In(1)
95	1063.34	117.80	End Shut-In(1)
96	145.97	117.81	Open To Flow (2)
157	285.19	127.28	Shut-In(2)
246	1054.60	123.21	End Shut-In(2)
250	1811.61	123.76	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
126.00	S,M,C,W 10%MUD 90% WATER	1.48
451.00	S,W,C,M, 5% WATER 95%MUD	6.33

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling co.

**7-9s-27w Sheridan,KS**

250 N. Water Suite 300 Wichita KS. 67202

**Coppen #1-7**

Job Ticket: 56687

**DST#: 1**

ATTN: Jeff Christian / Sco

Test Start: 2014.01.22 @ 14:42:00

## Tool Information

Drill Pipe:	Length: 3701.00 ft	Diameter: 3.80 inches	Volume: 51.92 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: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 52.08 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	3741.00 ft			Final	57000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	59.00 ft				
Tool Length:	87.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3718.00	
Hydraulic tool	5.00			3723.00	
Jars	5.00			3728.00	
Safety Joint	3.00			3731.00	
Packer	5.00			3736.00	28.00 Bottom Of Top Packer
Packer	5.00			3741.00	
Stubb	1.00			3742.00	
Perforations	2.00			3744.00	
Change Over Sub	1.00			3745.00	
Drill Pipe	32.00			3777.00	
Change Over Sub	1.00			3778.00	
Recorder	0.00	8673	Inside	3778.00	
Recorder	0.00	8651	Outside	3778.00	
Perforations	19.00			3797.00	
Bullnose	3.00			3800.00	59.00 Bottom Packers & Anchor

**Total Tool Length: 87.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling co.

**7-9s-27w Sheridan,KS**

250 N. Water Suite 300 Wichita KS. 67202

**Coppen #1-7**

Job Ticket: 56687

**DST#: 1**

ATTN: Jeff Christian / Sco

Test Start: 2014.01.22 @ 14:42:00

## 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:

23000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
126.00	S,M,C,W 10%MUD 90% WATER	1.476
451.00	S,W,C,M, 5% WATER 95%MUD	6.326

Total Length: 577.00 ft Total Volume: 7.802 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

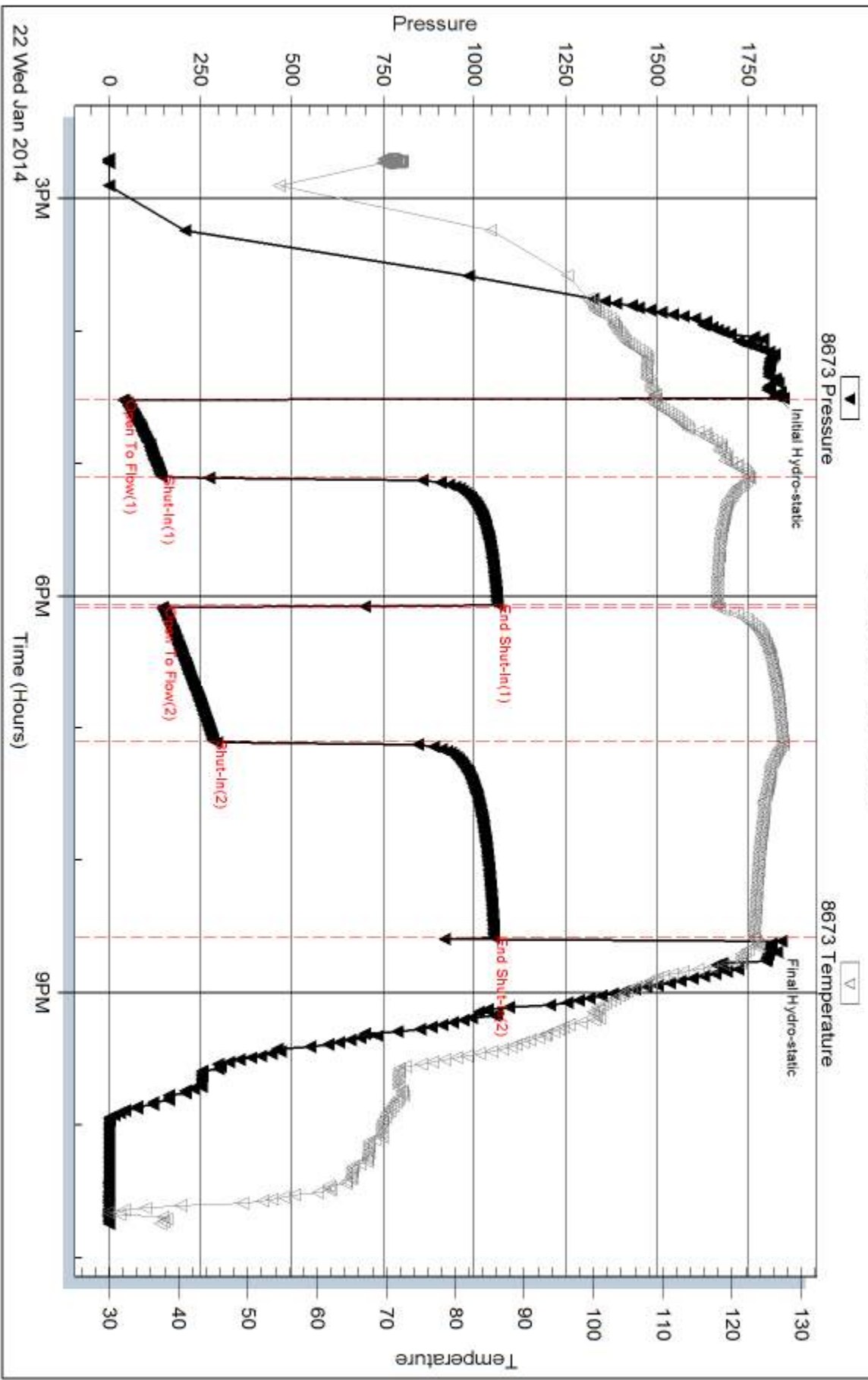
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 0.6 OHMS @ 35 DEG.

### Pressure vs. Time



22 Wed Jan 2014 3PM

6PM Time (Hours)

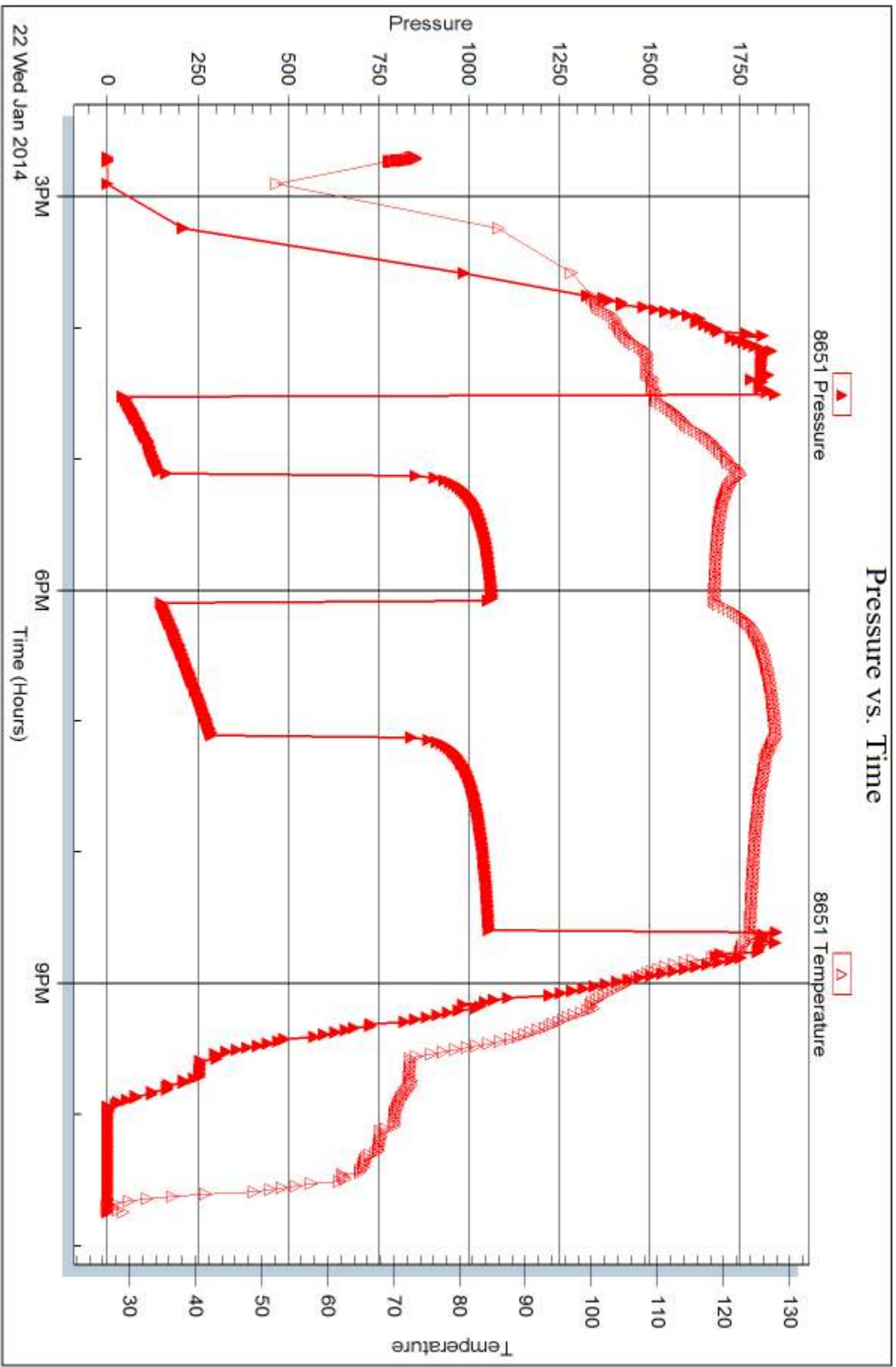
9PM

Serial #: 8651

Outside Murfin Drilling co.

Coppen #1-7

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 56687

Printed: 2014.01.27 @ 15:22:13



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling co.**

250 N. Water Suite 300 Wichita KS. 67202

ATTN: Jeff Christian / Sco

### **Coppen #1-7**

#### **7-9s-27w Sheridan,KS**

Start Date: 2014.01.23 @ 17:38:01

End Date: 2014.01.24 @ 03:16:30

Job Ticket #: 56688                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.01.27 @ 15:20:41





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling co.  
250 N. Water Suite 300 Wichita KS. 67202  
ATTN: Jeff Christian / Sco

**7-9s-27w Sheridan,KS**  
**Coppen #1-7**  
Job Ticket: 56688 **DST#: 2**  
Test Start: 2014.01.23 @ 17:38:01

## GENERAL INFORMATION:

Formation: **LKC "H-J"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 20:17:00  
Time Test Ended: 03:16:30  
Interval: **3895.00 ft (KB) To 3968.00 ft (KB) (TVD)**  
Total Depth: 3968.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Reference Elevations: 2653.00 ft (KB)  
2648.00 ft (CF)  
KB to GR/CF: 5.00 ft  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Bob Hamel  
Unit No: 61

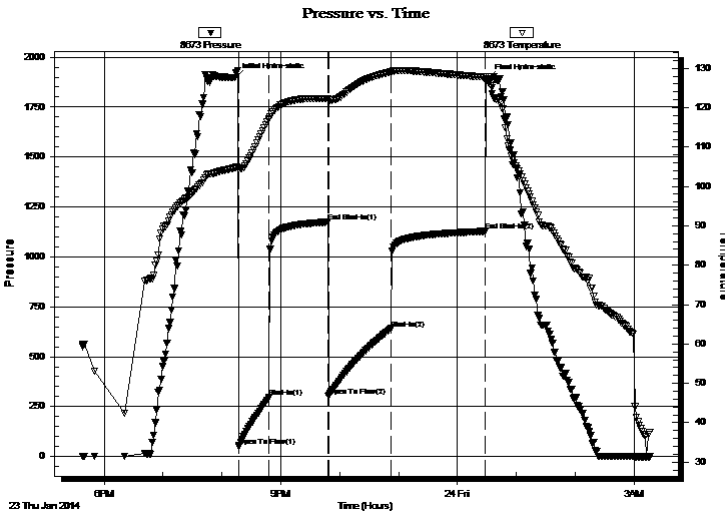
## Serial #: 8673

Inside

Press@RunDepth: 640.63 psig @ 3902.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2014.01.23 End Date: 2014.01.24 Last Calib.: 2014.01.23  
Start Time: 17:38:01 End Time: 03:16:30 Time On Btm: 2014.01.23 @ 20:13:30  
Time Off Btm: 2014.01.24 @ 00:31:30

TEST COMMENT: I.F. - 30 - BOB in 4 min  
I.S.I. - 60 - Weak surface blow started at 40 min  
F.F. - 60 - BOB in 6 min  
F.S.I. - 90 - No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1897.63	104.77	Initial Hydro-static
4	50.56	104.32	Open To Flow (1)
35	295.08	117.23	Shut-In(1)
94	1174.24	122.27	End Shut-In(1)
95	302.83	121.96	Open To Flow (2)
159	640.63	129.09	Shut-In(2)
255	1127.98	127.75	End Shut-In(2)
258	1890.92	126.49	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
504.00	W,C,M, 20% WATER 80% MUD	6.78
315.00	S,M,C,W, 5% MUD 95% WATER	4.42
1134.00	WATER 100%	15.91

\* 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.

**7-9s-27w Sheridan,KS**

250 N. Water Suite 300 Wichita KS. 67202

**Coppen #1-7**

Job Ticket: 56688

**DST#: 2**

ATTN: Jeff Christian / Sco

Test Start: 2014.01.23 @ 17:38:01

## Tool Information

Drill Pipe:	Length: 3862.00 ft	Diameter: 3.80 inches	Volume: 54.17 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: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 76000.00 lb
			<u>Total Volume: 54.33 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3895.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	73.00 ft			
Tool Length:	101.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3872.00	
Hydraulic tool	5.00			3877.00	
Jars	5.00			3882.00	
Safety Joint	3.00			3885.00	
Packer	5.00			3890.00	28.00 Bottom Of Top Packer
Packer	5.00			3895.00	
Stubb	1.00			3896.00	
Perforations	5.00			3901.00	
Change Over Sub	1.00			3902.00	
Recorder	0.00	8673	Inside	3902.00	
Recorder	0.00	8651	Outside	3902.00	
Drill Pipe	62.00			3964.00	
Change Over Sub	1.00			3965.00	
Bullnose	3.00			3968.00	73.00 Bottom Packers & Anchor

**Total Tool Length: 101.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling co.

**7-9s-27w Sheridan,KS**

250 N. Water Suite 300 Wichita KS. 67202

**Coppen #1-7**

Job Ticket: 56688

**DST#: 2**

ATTN: Jeff Christian / Sco

Test Start: 2014.01.23 @ 17:38:01

### 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:

46000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
504.00	W,C,M, 20% WATER 80% MUD	6.778
315.00	S,M,C,W, 5% MUD 95% WATER	4.419
1134.00	WATER 100%	15.907

Total Length: 1953.00 ft      Total Volume: 27.104 bbl

Num Fluid Samples: 0

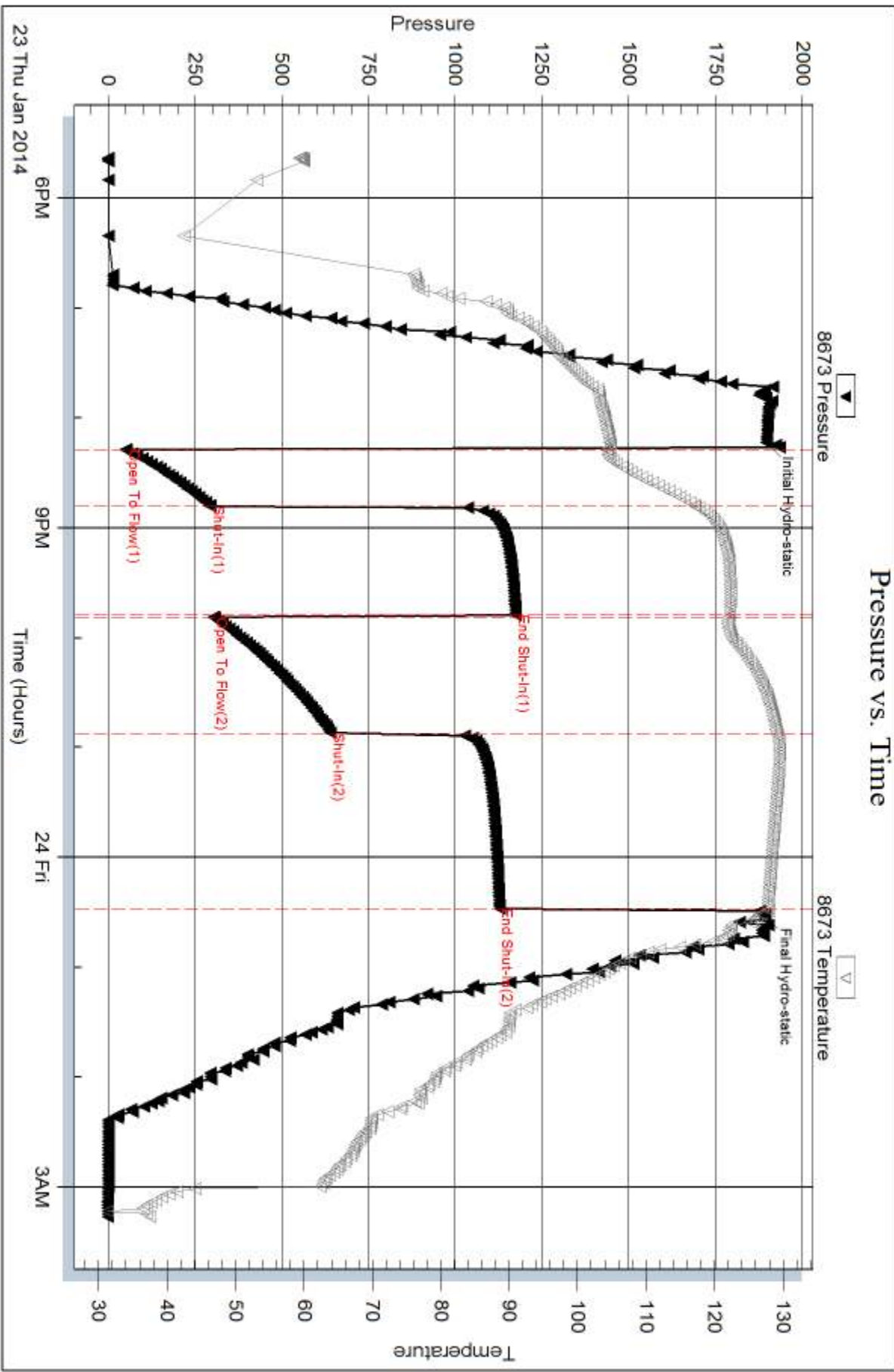
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 0.3 OHMS @ 37 DEG

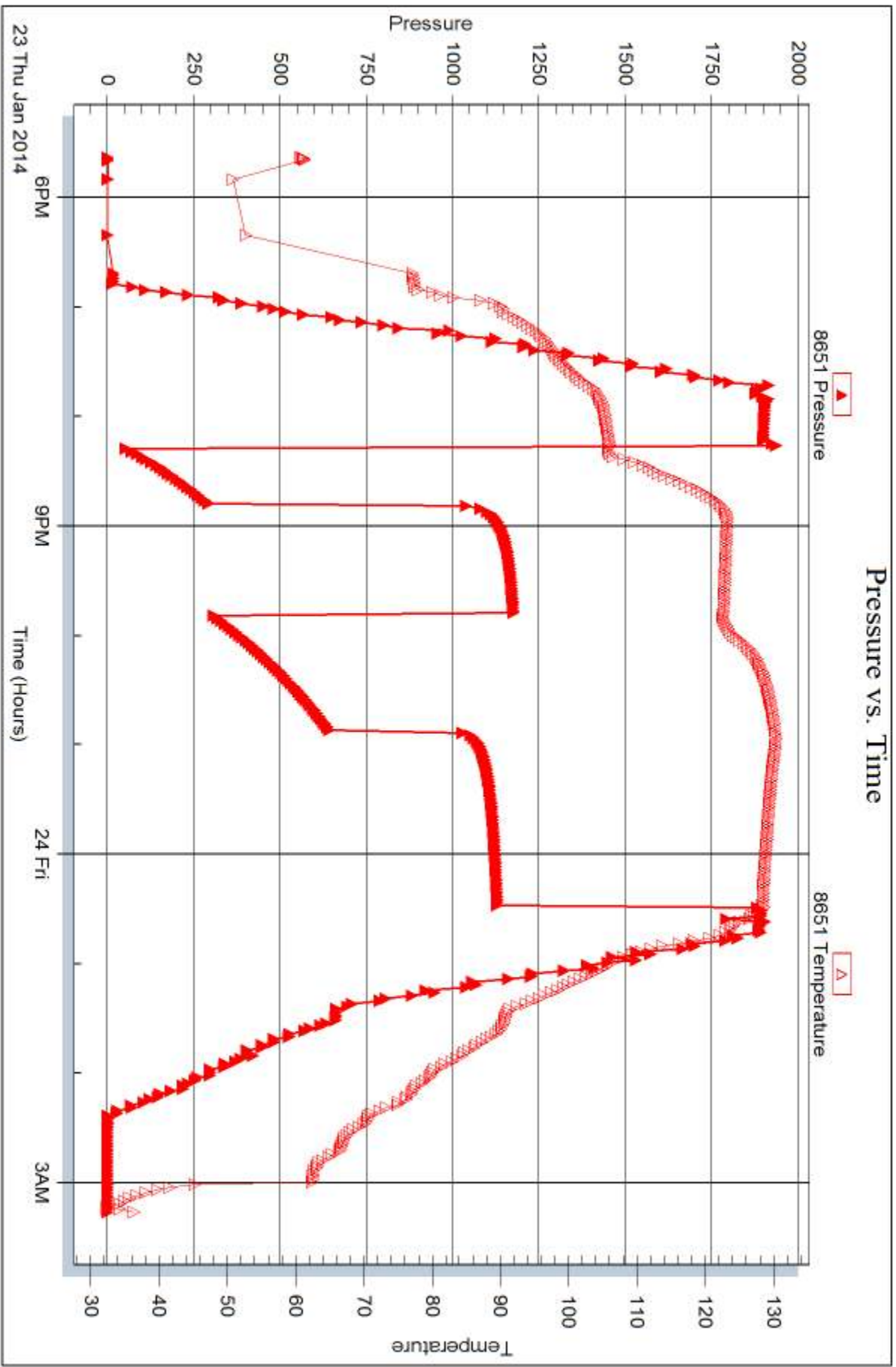


Serial #: 8651

Outside Murfin Drilling co.

Coppen #1-7

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling co.**

250 N. Water Suite 300 Wichita KS. 67202

ATTN: Jeff Christian / Sco

### **Coppen #1-7**

#### **7-9s-27w Sheridan,KS**

Start Date: 2014.01.24 @ 10:20:00

End Date: 2014.01.24 @ 16:29:00

Job Ticket #: 56776                      DST #: 3

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

Printed: 2014.01.27 @ 15:17:27



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling co.  
 250 N. Water Suite 300 Wichita KS. 67202  
 ATTN: Jeff Christian / Sco

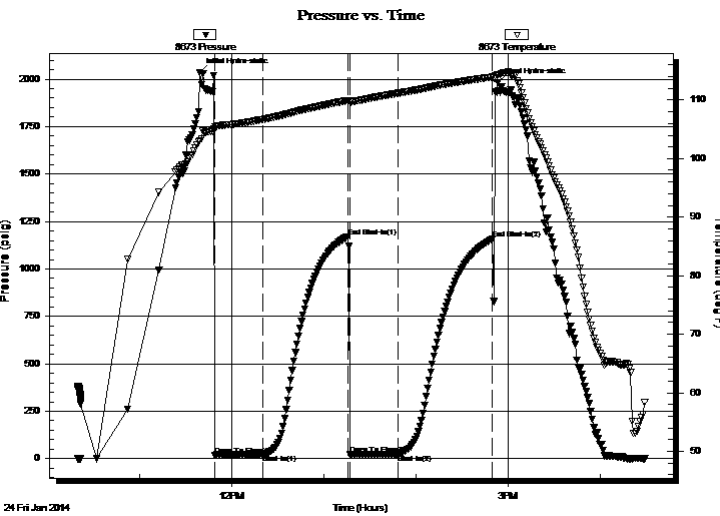
**7-9s-27w Sheridan,KS**  
**Coppen #1-7**  
 Job Ticket: 56776 **DST#: 3**  
 Test Start: 2014.01.24 @ 10:20:00

## GENERAL INFORMATION:

Formation: **LKC-K**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:49:00  
 Time Test Ended: 16:29:00  
 Interval: **3962.00 ft (KB) To 3990.00 ft (KB) (TVD)**  
 Total Depth: 3990.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Kreuzer Jr.  
 Unit No: 61  
 Reference Elevations: 2653.00 ft (KB)  
 2648.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8673 Inside**  
 Press@RunDepth: 23.90 psig @ 3963.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.24 End Date: 2014.01.24 Last Calib.: 2014.01.24  
 Start Time: 10:20:01 End Time: 16:29:00 Time On Btm: 2014.01.24 @ 11:39:30  
 Time Off Btm: 2014.01.24 @ 14:53:00

**TEST COMMENT:** -----Slid 10 ft. to bottom.  
 IF: Weak blow, Built to 1 in. over 15 mins. Died back to surface over 30 mins.  
 IS: No blow back over 60 mins..  
 FF: Weak surface blow over 30 mins.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2035.43	103.02	Initial Hydro-static
10	19.12	105.03	Open To Flow (1)
41	21.60	106.69	Shut-In(1)
96	1170.08	109.93	End Shut-In(1)
98	21.97	109.65	Open To Flow (2)
129	23.90	111.14	Shut-In(2)
190	1156.53	113.93	End Shut-In(2)
194	1982.41	114.30	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
3.00	mud w ith oil specs	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.

**7-9s-27w Sheridan,KS**

250 N. Water Suite 300 Wichita KS. 67202

**Coppen #1-7**

Job Ticket: 56776

**DST#: 3**

ATTN: Jeff Christian / Sco

Test Start: 2014.01.24 @ 10:20:00

## Tool Information

Drill Pipe:	Length: 3927.00 ft	Diameter: 3.80 inches	Volume: 55.09 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: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 55.25 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3962.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	56.00 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			3939.00	
Hydraulic tool	5.00			3944.00	
Jars	5.00			3949.00	
Safety Joint	3.00			3952.00	
Packer	5.00			3957.00	28.00 Bottom Of Top Packer
Packer	5.00			3962.00	
Stubb	1.00			3963.00	
Recorder	0.00	8673	Inside	3963.00	
Recorder	0.00	8651	Outside	3963.00	
Perforations	24.00			3987.00	
Bullnose	3.00			3990.00	28.00 Bottom Packers & Anchor

**Total Tool Length: 56.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling co.

**7-9s-27w Sheridan,KS**

250 N. Water Suite 300 Wichita KS. 67202

**Coppen #1-7**

Job Ticket: 56776

**DST#: 3**

ATTN: Jeff Christian / Sco

Test Start: 2014.01.24 @ 10:20:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbf

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

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

#### Recovery Table

Length ft	Description	Volume bbf
3.00	mud w ith oil specs	0.015

Total Length: 3.00 ft      Total Volume: 0.015 bbf

Num Fluid Samples: 0

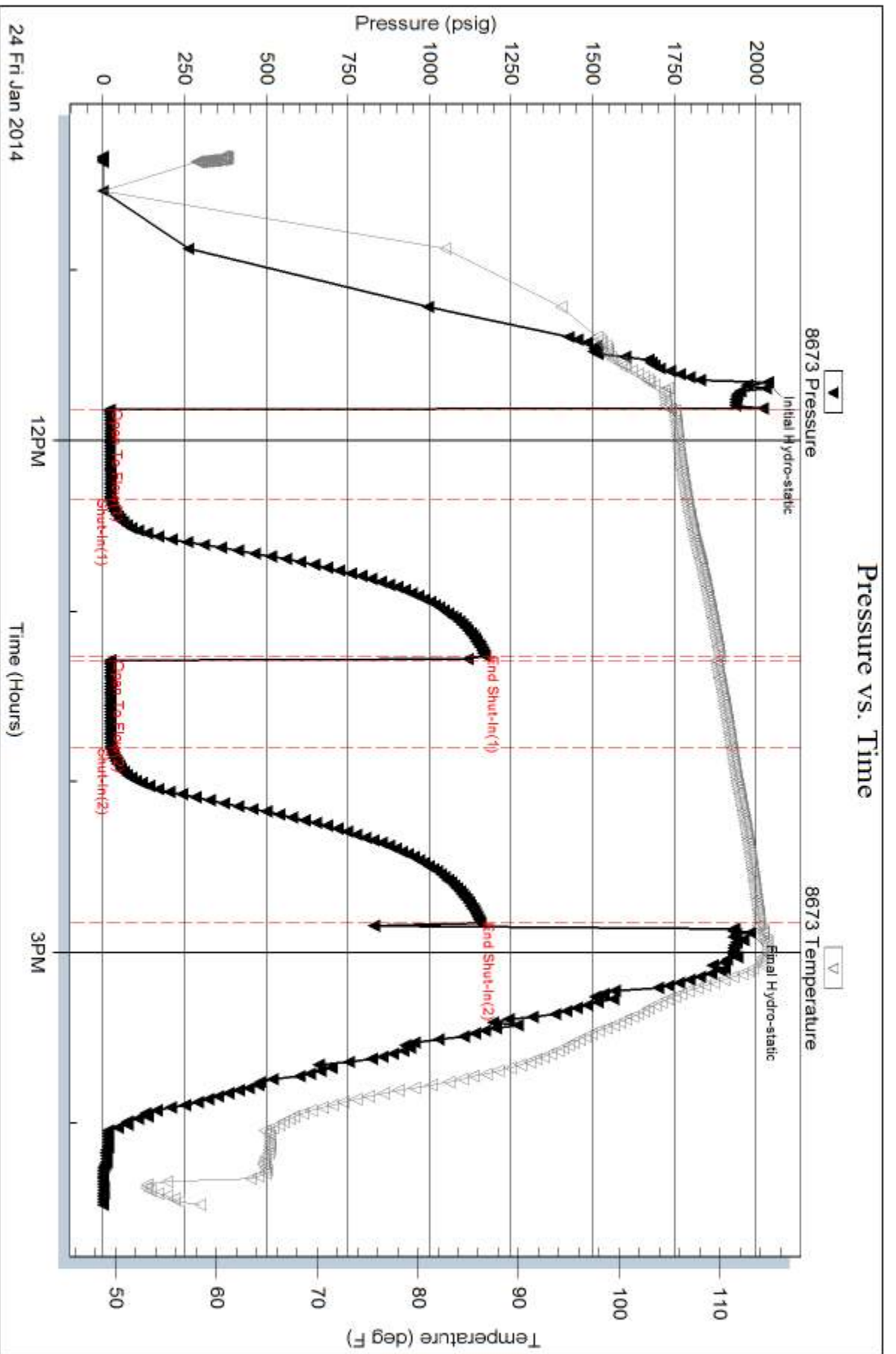
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

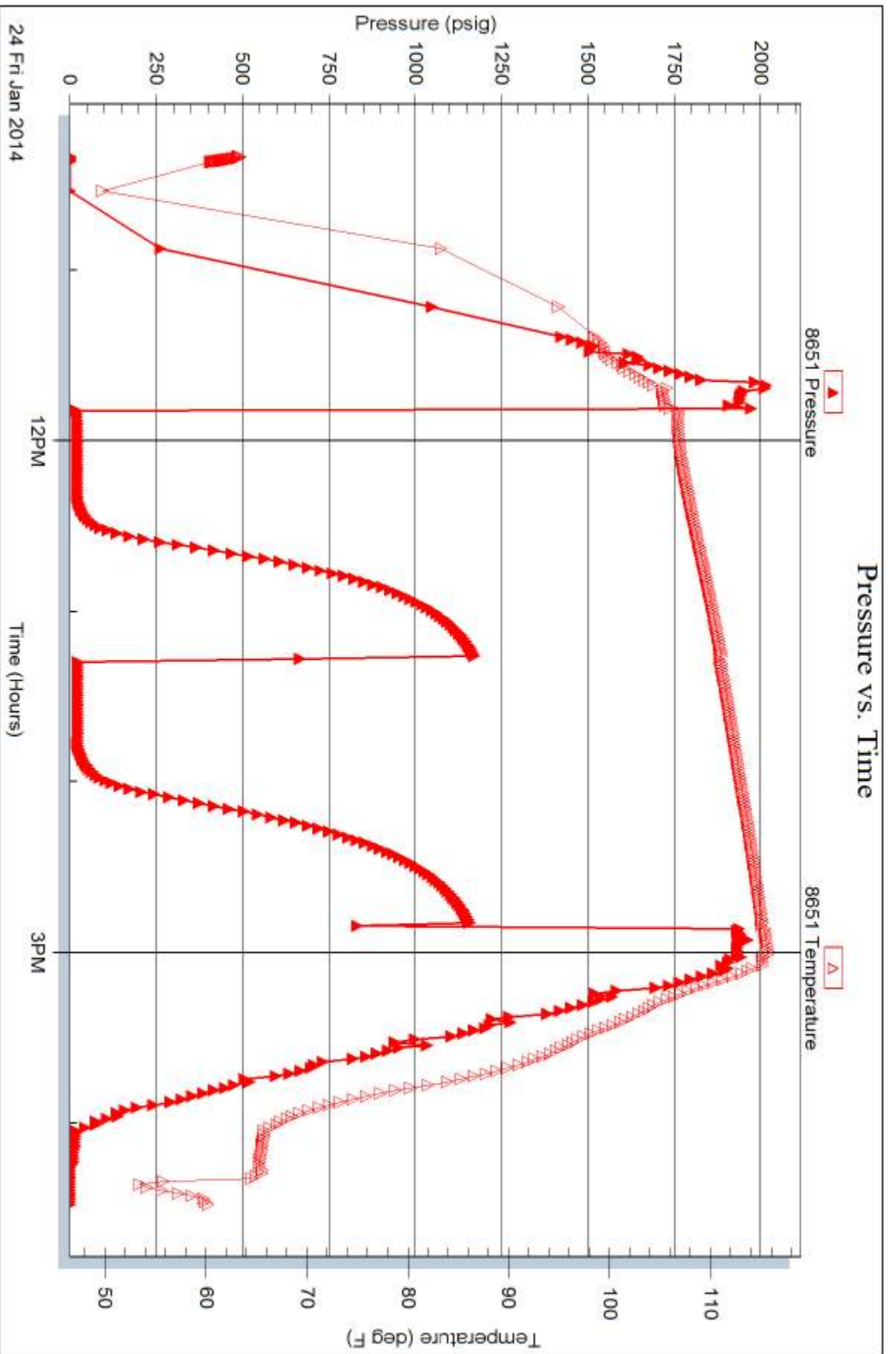


Serial #: 8651

Outside Murfin Drilling co.

Coppen #1-7

DST Test Number: 3





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 56687

Well Name & No. Copper #1-7 Test No. 1 Date 1-22-14  
 Company Murfin Drilling Co. Elevation 2653 KB 2648 GL  
 Address 250 N. Water Suite 300 Wichita KS. 67202  
 Co. Rep / Geo. Jeff Christian Rig Murfin Rig #14  
 Location: Sec. 7 Twp. 9-5 Rge. 27-W Co. Sheridan State KS.

Interval Tested 3,741 - 3800 Zone Tested toronto-LKC "A"  
 Anchor Length 59' Drill Pipe Run 3,701 Mud Wt. 9.0  
 Top Packer Depth 3,736 Drill Collars Run 32' Vis 56  
 Bottom Packer Depth 3,741 Wt. Pipe Run --- WL 5.6  
 Total Depth 3,800 Chlorides 4,200 ppm System LCM 2

Blow Description IF-30-W.S.B. (Died for 15 Min) then (B.O.B. ± N 30 Min.)  
I.S.I-60-No B.B.  
E.F-60-W.S.B. @ 2 min. Built to (B.O.B. in 28 Min.)  
E.S.I-90-No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <del>500</del>	Feet of				
Rec <u>451</u>	Feet of <u>S,W,C,M</u>			<u>5</u>	<u>95</u>
Rec <u>126</u>	Feet of <u>S,M,C,W</u>			<u>90</u>	<u>10</u>
Rec	Feet of				
Rec	Feet of				

Rec Total 577 BHT 123 Gravity --- API RW 0.6 @ 35° F Chlorides 23,000 ppm

(A) Initial Hydrostatic 1,824  Test 1150 T-On Location 13:25:00  
 (B) First Initial Flow 39  Jars 250 T-Started 14:42:00  
 (C) First Final Flow 143  Safety Joint 75 T-Open 16:33:00  
 (D) Initial Shut-In 1,063  Circ Sub \_\_\_\_\_ T-Pulled 20:33:00  
 (E) Second Initial Flow 146  Hourly Standby \_\_\_\_\_ T-Out 22:44:00  
 (F) Second Final Flow 285  Mileage 96 Mi. R.T. 148.80  
 (G) Final Shut-In 1,055  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,812  Straddle \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  
 Initial Shut-In 60  Extra Packer \_\_\_\_\_  
 Final Flow 60  Extra Recorder \_\_\_\_\_  
 Final Shut-In 90  Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1623.80

Approved By \_\_\_\_\_ Our Representative Bob Howard

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. **56688**

4/10

Well Name & No. Coppen #1-7 Test No. 2 Date 1-23-14  
 Company Murfin Drilling Co. Elevation 2,653 KB 2,648 GL  
 Address 250 N. Water suite 300 Wichita KS. 67202  
 Co. Rep / Geo. Jeff Christian / Scott Robinson Rig Murfin Rig #16  
 Location: Sec. 7 Twp. 9-S. Rge. 27-W Co. Sheridan State KS.

Interval Tested 3,895 - 3,968 Zone Tested h.k.c. "H-I-J"  
 Anchor Length 73' Drill Pipe Run 3,862 Mud Wt. 9.1  
 Top Packer Depth 3,890 Drill Collars Run 32' Vis 51  
 Bottom Packer Depth 3,895 Wt. Pipe Run --- WL 6.0  
 Total Depth 3,968 Chlorides 1,000 ppm System LCM 2

Blow Description I.F.-30-1/2 INT. Blow Built to (B.O.B. in 4 Min.)  
I.S.I-60-~~---~~ Weak Surface @ 40 Min. Buil  
E.F.-60-1/4 INT Blow Built to (B.O.B. in 6 min.)  
F.S.I-90- No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
<u>504</u>	<u>W, C, M</u>		<u>20</u>	<u>80</u>	
<u>315</u>	<u>S, M, C, W,</u>		<u>95</u>	<u>5</u>	
<u>1,134</u>	<u>W</u>		<u>100</u>		

Rec Total 1,953 BHT 126 Gravity --- API RW 0.3 @ 37° F Chlorides 96,000 ppm  
 (A) Initial Hydrostatic ~~1,898~~ 1,898  Test 1150 T-On Location 16:15:00  
 (B) First Initial Flow 51  Jars 250 T-Started 17:38:00  
 (C) First Final Flow 295  Safety Joint 75 T-Open 20:20:00  
 (D) Initial Shut-In 1,174  Circ Sub \_\_\_\_\_ T-Pulled 00:20:00  
 (E) Second Initial Flow 303  Hourly Standby \_\_\_\_\_ T-Out 03:16:00  
 (F) Second Final Flow 641  Mileage 96 RT 148.80 Comments \_\_\_\_\_  
 (G) Final Shut-In 1,128  Sampler \_\_\_\_\_ "Thank-you"  
 (H) Final Hydrostatic 1,891  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Initial Shut-In 60  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Final Flow 60  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Shut-In 90  Day Standby \_\_\_\_\_ Total 1623.80  
 Accessibility \_\_\_\_\_ MP/DST Disc'n \_\_\_\_\_  
 Sub Total 1623.80

Approved By \_\_\_\_\_ Our Representative B. Ham

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. 56776

Well Name & No. Copper # 1-7 Test No. 3 Date 1-24-2013  
 Company Murfin # 1-7 Elevation 2653 KB 2648 GL  
 Address 250 N. Water St. 300 Wichita Ks. 67202  
 Co. Rep / Geo. Jeff Christensen Rig Murfin # 16  
 Location: Sec. 7 Twp. 9S Rge. 27W Co. Sheridan State Ks

Interval Tested 3962 3990 Zone Tested LKC-K  
 Anchor Length 28 Drill Pipe Run 3927 Mud Wt. 9.0  
 Top Packer Depth 3957 Drill Collars Run 32 Vis SS  
 Bottom Packer Depth 3962 Wt. Pipe Run -0- WL 5.6  
 Total Depth 3990 Chlorides 1,500 ppm System LCM 1#

Blow Description IF: Work blow, built to 1 in over 15 mins. Died back to surface over 30 mins  
IST: No blow back over 60 mins.  
FF: Work surface over 30 mins.  
FST: No blow over 60 mins.

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

Rec Total 3 BHT 111 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2035</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>10:16</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>10:20</u>
(C) First Final Flow <u>22</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>11:44</u>
(D) Initial Shut-In <u>1170</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>14:50</u>
(E) Second Initial Flow <u>22</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>16:29</u>
(F) Second Final Flow <u>24</u>	<input checked="" type="checkbox"/> Mileage <u>55 x 2 = 110 x 1.55 = 170.50 = 341</u>	Comments <u>loaded tools 1/25 10:00</u>
(G) Final Shut-In <u>1157</u>	<input type="checkbox"/> Sampler <u>297.60</u> <u>Load tools</u>	
(H) Final Hydrostatic <u>1482</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>66</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1772.60</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1772.60</u>	

Approved By \_\_\_\_\_ Our Representative Chris Hoge

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.