



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1082789  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx)      (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1082789

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Ward Loyd, Commissioner  
Thomas E. Wright, Commissioner

Sam Brownback, Governor

May 30, 2012

Leon Rodak  
Murfin Drilling Co., Inc.  
250 N WATER STE 300  
WICHITA, KS 67202-1216

Re: ACO1  
API 15-191-22642-00-00  
Hilger Unit 1-32  
SW/4 Sec.32-30S-03W  
Sumner County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Leon Rodak

Hilger Unit #1-32 600 FSL 2000 FWL Sec. 32-T30S-R3W 1406' KB							Hilger #1 SE NW NW SW Sec. 32-10S-3W 1391' KB	
Formation	Sample tops	Datum	Ref	Log Tops	Datum	Ref	Log Tops	Datum
Douglas				2818	-1412	+4	2807	-1416
Stalnaker SD	3038	-1632	+9	3032	-1626	+15	3032	-1641
Lansing H	3344	-938	+8	3346	-1940	-6	3337	-1946
Stark	3463	-2057	Flat	3465	-2059	-2	3448	-2057
BKC	3550	-2144	-3	3550	-2144	-3	3532	-2141
Marmaton	3630	-2224	+1	3632	-2226	-1	3616	-2225
Pawnee	3714	-2308	flat	3734	-2318	-10	3699	-2308
Cherokee	3802	-2396	-7	3807	-2401	-12	3780	-2389
Mississippian	3948	-2542	-5	3946	-2540	-3	3928	-2537
Kinderhook	4288	-2882	-7	4293	-2887	-12	4266	-2875
Simpson SD	4367	-2961	-6	4372	-2966	-11	4346	-2955
RTD	4450	-3044					4378	
LTD				4454	-3048			





## DRILL STEM TEST REPORT

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

250 N.Water,Ste.300  
Wichita KS 67202

ATTN: Jeff Christian

### **Hilger Unit #1-32**

#### **32-30s-3w Sumner,KS**

Start Date: 2012.02.17 @ 10:00:41

End Date: 2012.02.17 @ 18:18:20

Job Ticket #: 45738                      DST #: 1

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

Printed: 2012.02.28 @ 16:11:46



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

ATTN: Jeff Christian

Job Ticket: 45738

**DST#: 1**

Test Start: 2012.02.17 @ 10:00:41

## GENERAL INFORMATION:

Formation: **Stalnaker**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:50:51

Time Test Ended: 18:18:20

Test Type: Conventional Bottom Hole (Initial)

Tester: Gary Pevoteaux

Unit No: 56

**Interval: 3040.00 ft (KB) To 3055.00 ft (KB) (TVD)**

Reference Elevations: 1406.00 ft (KB)

Total Depth: 3055.00 ft (KB) (TVD)

1397.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

**Serial #: 8370 Outside**

Press @RunDepth: 1208.02 psig @ 3041.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.17

End Date:

2012.02.17

Last Calib.:

2012.02.17

Start Time: 10:00:41

End Time:

18:18:20

Time On Btm:

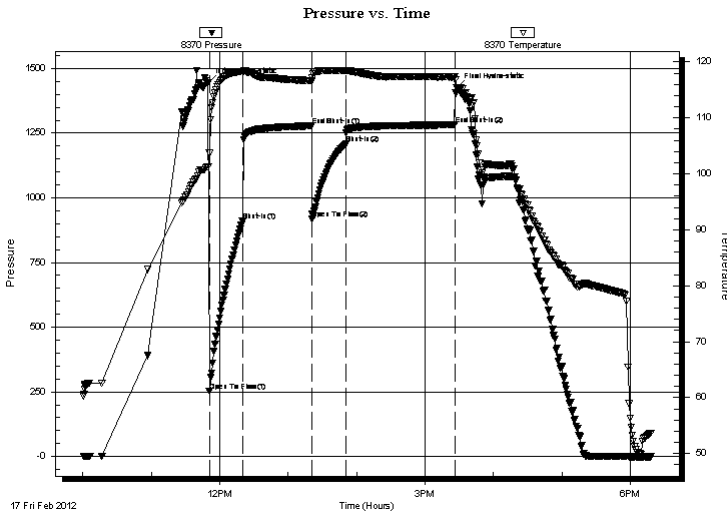
2012.02.17 @ 11:50:06

Time Off Btm:

2012.02.17 @ 15:27:50

**TEST COMMENT:** IF:Strong blow . B.O.B. in 1 min.  
IS:Weak blow . 1/2 - 1 1/2".  
FF:Strong blow . B.O.B. in 65 secs.  
FS:No blow .

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1444.05	101.28	Initial Hydro-static
1	252.29	103.69	Open To Flow (1)
30	909.77	118.34	Shut-In(1)
91	1278.06	116.70	End Shut-In(1)
91	917.97	117.20	Open To Flow (2)
121	1208.02	118.48	Shut-In(2)
217	1282.14	117.32	End Shut-In(2)
218	1424.56	115.48	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
180.00	MW 20%w 80%w	2.52
2285.00	SW	32.05

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drlg.Co.Inc.  
250 N.Water,Ste.300  
Wichita KS 67202  
ATTN: Jeff Christian

**32-30s-3w Sumner,KS**

**Hilger Unit #1-32**

Job Ticket: 45738

**DST#: 1**

Test Start: 2012.02.17 @ 10:00:41

## GENERAL INFORMATION:

Formation: **Stalnaker**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:50:51  
 Time Test Ended: 18:18:20  
 Interval: **3040.00 ft (KB) To 3055.00 ft (KB) (TVD)**  
 Total Depth: 3055.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Gary Pevoteaux  
 Unit No: 56  
 Reference Elevations: 1406.00 ft (KB)  
 1397.00 ft (CF)  
 KB to GR/CF: 9.00 ft

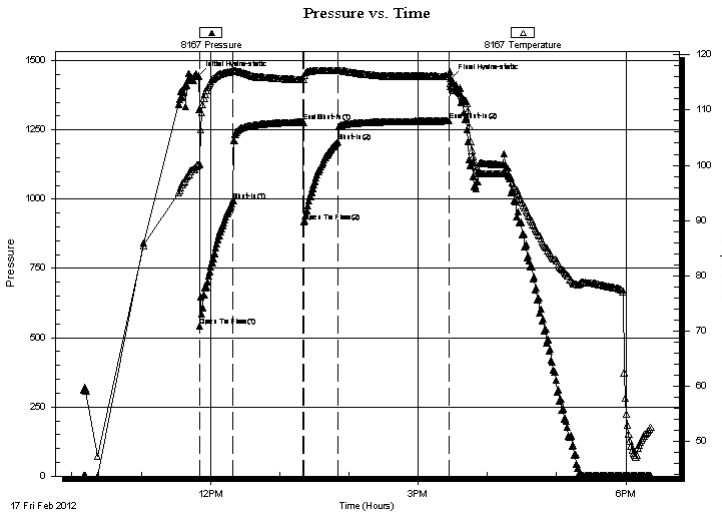
## Serial #: 8167

Inside

Press @ Run Depth: 1282.61 psig @ 3041.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.02.17 End Date: 2012.02.17 Last Calib.: 2012.02.17  
 Start Time: 10:10:08 End Time: 18:22:07 Time On Btm: 2012.02.17 @ 11:49:37  
 Time Off Btm: 2012.02.17 @ 15:28:07

TEST COMMENT: IF: Strong blow . B.O.B. in 1 min.  
 IS: Weak blow . 1/2 - 1 1/2".  
 FF: Strong blow . B.O.B. in 65 secs.  
 FS: No blow .

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1444.81	100.06	Initial Hydro-static
1	542.10	100.25	Open To Flow (1)
30	995.45	116.97	Shut-In(1)
91	1278.45	115.55	End Shut-In(1)
92	918.82	115.48	Open To Flow (2)
121	1208.89	117.16	Shut-In(2)
217	1282.61	116.13	End Shut-In(2)
219	1434.67	114.34	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
180.00	MW 20% m 80% w	2.52
2285.00	SW	32.05

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45738

**DST#: 1**

ATTN: Jeff Christian

Test Start: 2012.02.17 @ 10:00:41

## Tool Information

Drill Pipe:	Length: 3050.00 ft	Diameter: 3.80 inches	Volume: 42.78 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 71000.00 lb
			<u>Total Volume: 42.78 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3040.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	35.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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C.O. Sub	1.00			3021.00	
Shut in tool	5.00			3026.00	
HMV	5.00			3031.00	
Packer	4.00			3035.00	20.00 Bottom Of Top Packer
Packer	5.00			3040.00	
Stubb	1.00			3041.00	
Recorder	0.00	8167	Inside	3041.00	
Recorder	0.00	8370	Outside	3041.00	
Perforations	9.00			3050.00	
Bullnose	5.00			3055.00	15.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>35.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45738

**DST#: 1**

ATTN: Jeff Christian

Test Start: 2012.02.17 @ 10:00:41

## 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:

119000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.16 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	MW 20%m 80%w	2.525
2285.00	SW	32.053

Total Length: 2465.00 ft      Total Volume: 34.578 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

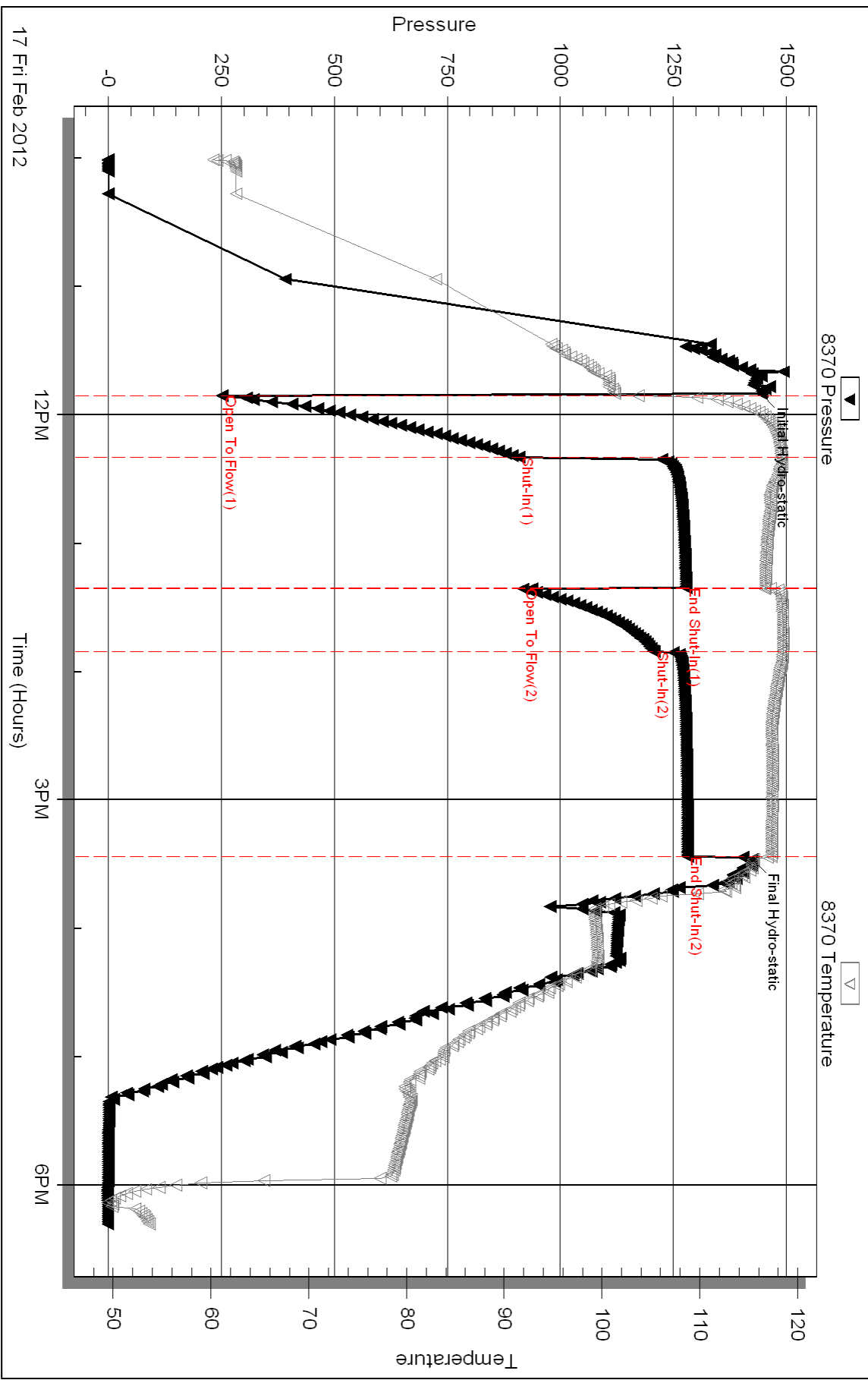
Serial #: none

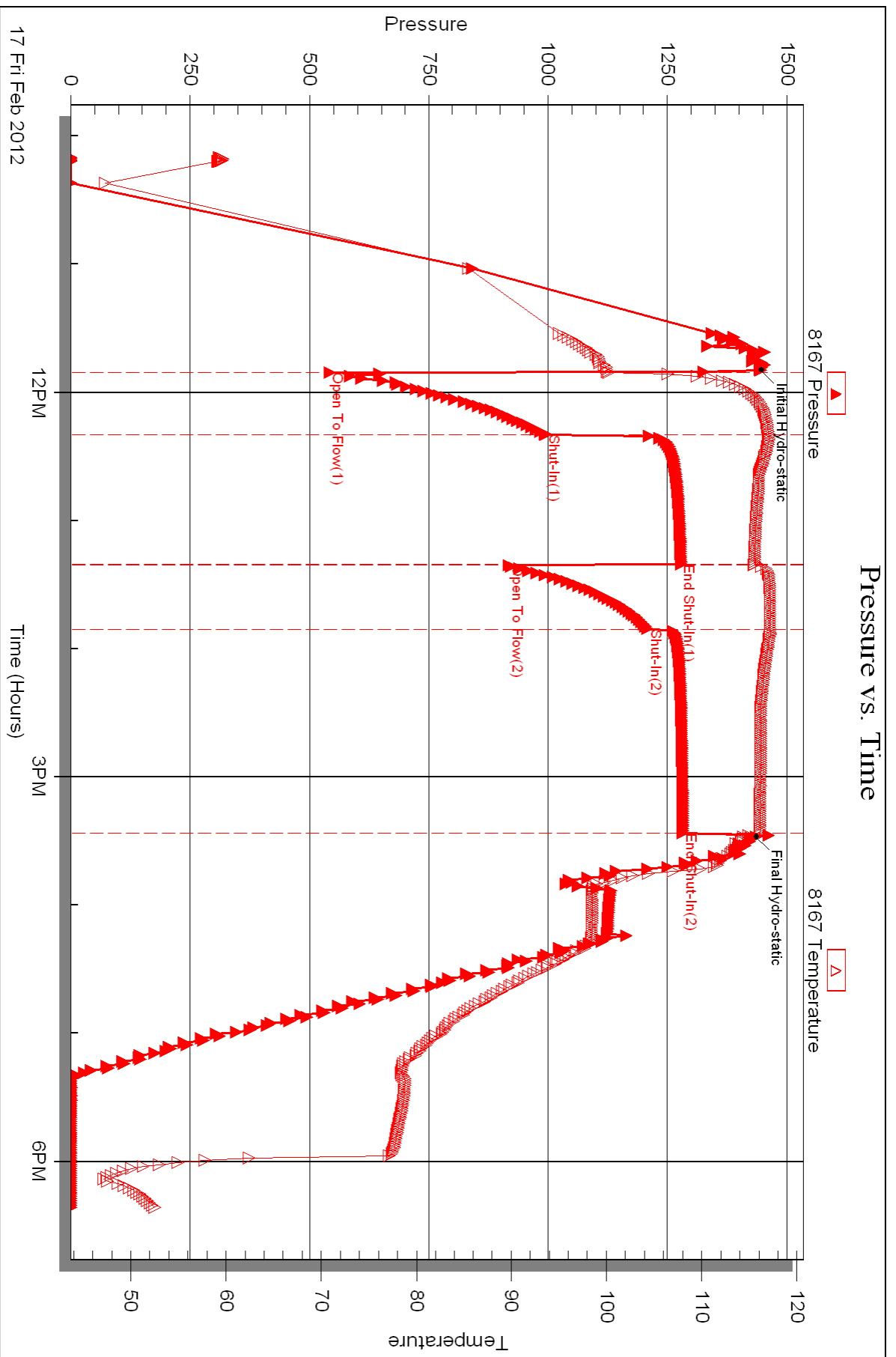
Laboratory Name:

Laboratory Location:

Recovery Comments: Rw .09ohms @54 deg

### Pressure vs. Time







## DRILL STEM TEST REPORT

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

250 N.Water,Ste.300  
Wichita KS 67202

ATTN: Jeff Christian

### **Hilger Unit #1-32**

#### **32-30s-3w Sumner,KS**

Start Date: 2012.02.18 @ 11:34:56

End Date: 2012.02.18 @ 19:17:41

Job Ticket #: 45739                      DST #: 2

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

Printed: 2012.02.28 @ 16:10:46



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drlg.Co.Inc.  
 250 N.Water,Ste.300  
 Wichita KS 67202  
 ATTN: Jeff Christian

**32-30s-3w Sumner,KS**

**Hilger Unit #1-32**

Job Ticket: 45739

**DST#: 2**

Test Start: 2012.02.18 @ 11:34:56

## GENERAL INFORMATION:

Formation: **L-KC H**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 13:02:56  
 Time Test Ended: 19:17:41  
 Interval: **3334.00 ft (KB) To 3356.00 ft (KB) (TVD)**  
 Total Depth: 3356.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Gary Pevoteaux  
 Unit No: 56  
 Reference Elevations: 1406.00 ft (KB)  
 1397.00 ft (CF)  
 KB to GR/CF: 9.00 ft

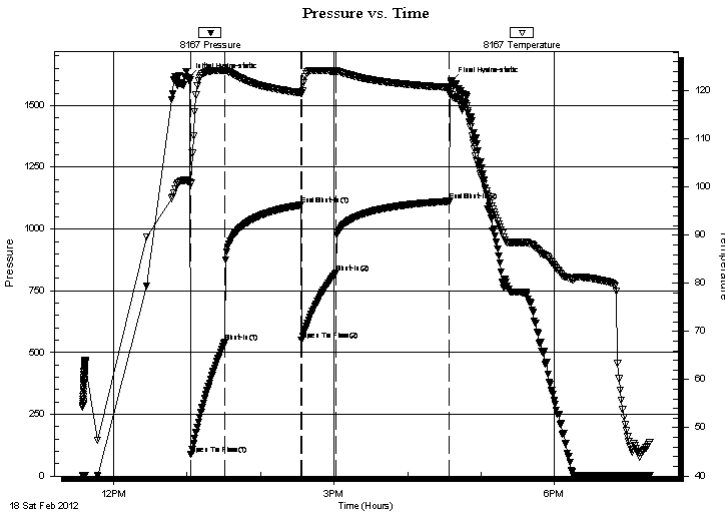
## Serial #: 8167

Inside

Press @RunDepth: 822.22 psig @ 3335.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.02.18 End Date: 2012.02.18 Last Calib.: 2012.02.18  
 Start Time: 11:34:57 End Time: 19:17:41 Time On Btm: 2012.02.18 @ 13:01:41  
 Time Off Btm: 2012.02.18 @ 16:35:41

TEST COMMENT: IF:Strong blow . B.O.B. in 2 1/4 mins.  
 IS:Weak blow . 1/2 - 1".  
 FF:Strong blow . B.O.B. in 2 1/2 mins.  
 FS:No blow .

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1613.54	101.11	Initial Hydro-static
2	87.24	100.56	Open To Flow (1)
30	541.57	124.18	Shut-In(1)
92	1097.05	119.55	End Shut-In(1)
92	552.00	119.40	Open To Flow (2)
120	822.22	124.08	Shut-In(2)
213	1112.62	120.73	End Shut-In(2)
214	1598.44	119.83	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
125.00	MW 37%w 63%w	1.75
1500.00	SW	21.04

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45739

**DST#: 2**

ATTN: Jeff Christian

Test Start: 2012.02.18 @ 11:34:56

## Tool Information

Drill Pipe:	Length: 3334.00 ft	Diameter: 3.80 inches	Volume: 46.77 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 46.77 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3334.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	42.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

C.O. Sub	1.00			3315.00	
Shut in tool	5.00			3320.00	
HMV	5.00			3325.00	
Packer	4.00			3329.00	20.00 Bottom Of Top Packer
Packer	5.00			3334.00	
Stubb	1.00			3335.00	
Recorder	0.00	8167	Inside	3335.00	
Recorder	0.00	8370	Outside	3335.00	
Perforations	16.00			3351.00	
Bullnose	5.00			3356.00	22.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>42.00</b>				





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45739

**DST#: 2**

ATTN: Jeff Christian

Test Start: 2012.02.18 @ 11:34:56

## 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:

122000 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.96 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
125.00	MW 37% <sub>m</sub> 63% <sub>w</sub>	1.753
1500.00	SW	21.041

Total Length: 1625.00 ft      Total Volume: 22.794 bbl

Num Fluid Samples: 0

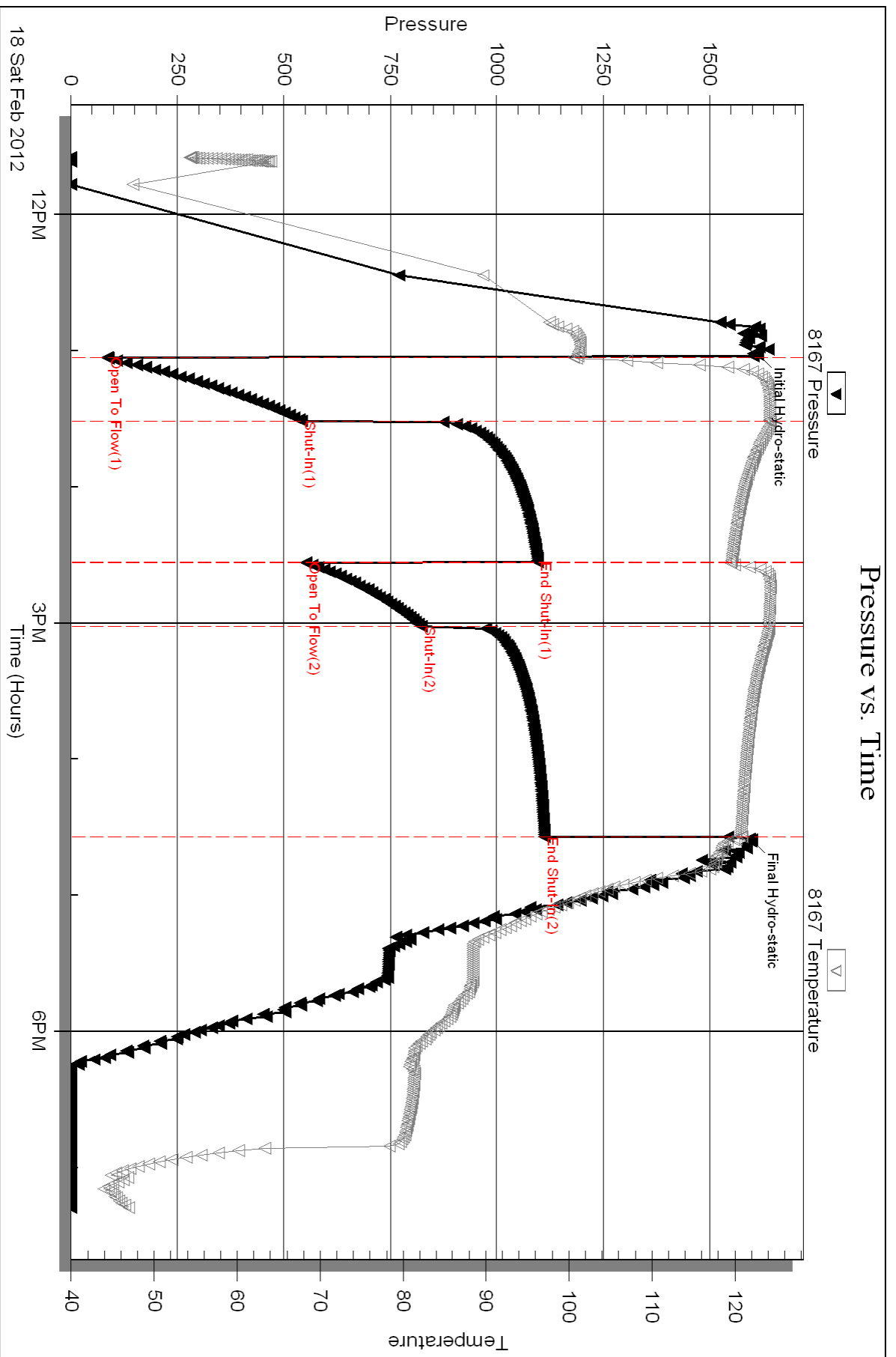
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments: Rw .10ohms @49 deg

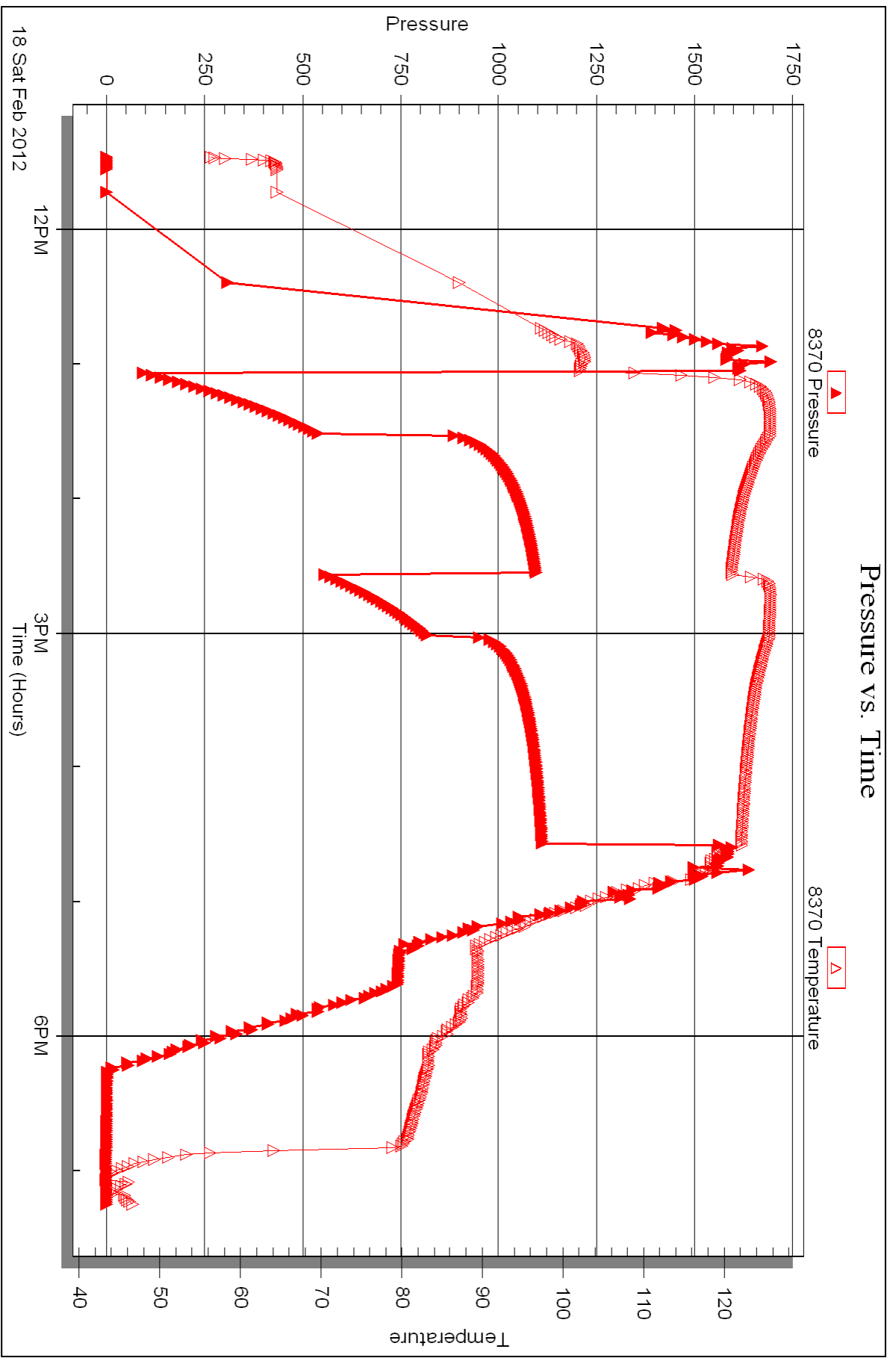


Serial #: 8370

Outside Murfin Drty. Co. Inc.

Hilger Unit #1-32

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 45739

Printed: 2012.02.28 @ 16:10:48



## DRILL STEM TEST REPORT

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

250 N.Water,Ste.300  
Wichita KS 67202

ATTN: Jeff Christian

### **Hilger Unit #1-32**

#### **32-30s-3w Sumner,KS**

Start Date: 2012.02.19 @ 07:42:40

End Date: 2012.02.19 @ 14:45:25

Job Ticket #: 45740                      DST #: 3

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

Printed: 2012.02.28 @ 16:10:13



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drlg.Co.Inc.  
 250 N.Water,Ste.300  
 Wichita KS 67202  
 ATTN: Jeff Christian

**32-30s-3w Sumner,KS**

**Hilger Unit #1-32**

Job Ticket: 45740

**DST#: 3**

Test Start: 2012.02.19 @ 07:42:40

## GENERAL INFORMATION:

Formation: **L-KC K**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 09:19:40  
 Time Test Ended: 14:45:25  
 Interval: **3460.00 ft (KB) To 3487.00 ft (KB) (TVD)**  
 Total Depth: 3487.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Gary Pevoteaux  
 Unit No: 56  
 Reference Elevations: 1406.00 ft (KB)  
 1397.00 ft (CF)  
 KB to GR/CF: 9.00 ft

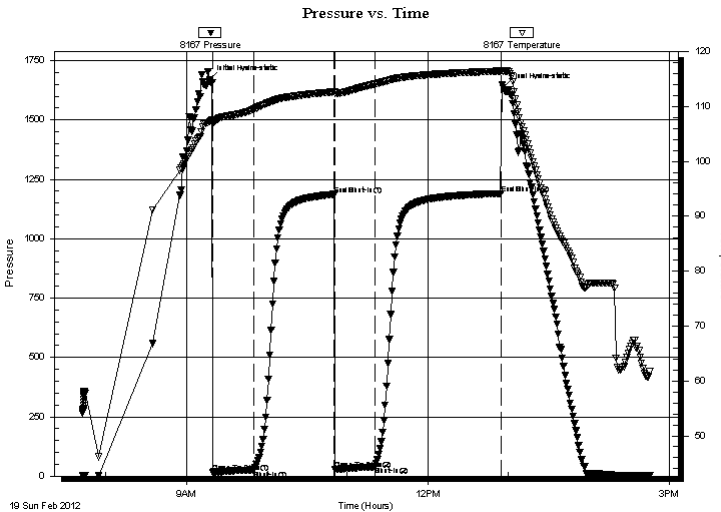
## Serial #: 8167

Inside

Press @ Run Depth: 39.92 psig @ 3461.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.02.19 End Date: 2012.02.19 Last Calib.: 2012.02.19  
 Start Time: 07:42:41 End Time: 14:45:25 Time On Btm: 2012.02.19 @ 09:17:10  
 Time Off Btm: 2012.02.19 @ 12:56:10

TEST COMMENT: IF:Strong blow . B.O.B. in 14 mins.  
 IS:No blow .  
 FF:Strong blow . B.O.B. in 12 mins.  
 FS:No blow .

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1669.03	107.29	Initial Hydro-static
3	16.32	107.08	Open To Flow (1)
33	26.35	109.48	Shut-In(1)
93	1186.75	112.66	End Shut-In(1)
94	27.92	112.43	Open To Flow (2)
123	39.92	114.08	Shut-In(2)
218	1190.23	116.46	End Shut-In(2)
219	1635.10	116.48	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
61.00	GOCWM 20%g 18%o 20%w 42%m	0.86
0.00	430 ft.of 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 Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45740

**DST#: 3**

ATTN: Jeff Christian

Test Start: 2012.02.19 @ 07:42:40

### Tool Information

Drill Pipe:	Length: 3458.00 ft	Diameter: 3.80 inches	Volume: 48.51 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 68000.00 lb
			<u>Total Volume: 48.51 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3460.00 ft			Final 55500.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

C.O. Sub	1.00			3441.00	
Shut in tool	5.00			3446.00	
HMV	5.00			3451.00	
Packer	4.00			3455.00	20.00 Bottom Of Top Packer
Packer	5.00			3460.00	
Stubb	1.00			3461.00	
Recorder	0.00	8167	Inside	3461.00	
Recorder	0.00	8370	Outside	3461.00	
Perforations	21.00			3482.00	
Bullnose	5.00			3487.00	27.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>47.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45740

**DST#: 3**

ATTN: Jeff Christian

Test Start: 2012.02.19 @ 07:42:40

## 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:

23500 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.16 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
61.00	GOCWM 20%g 18%o 20%w 42%m	0.856
0.00	430 ft.of GIP	0.000

Total Length: 61.00 ft      Total Volume: 0.856 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments: Rw .38ohms @ 52 deg



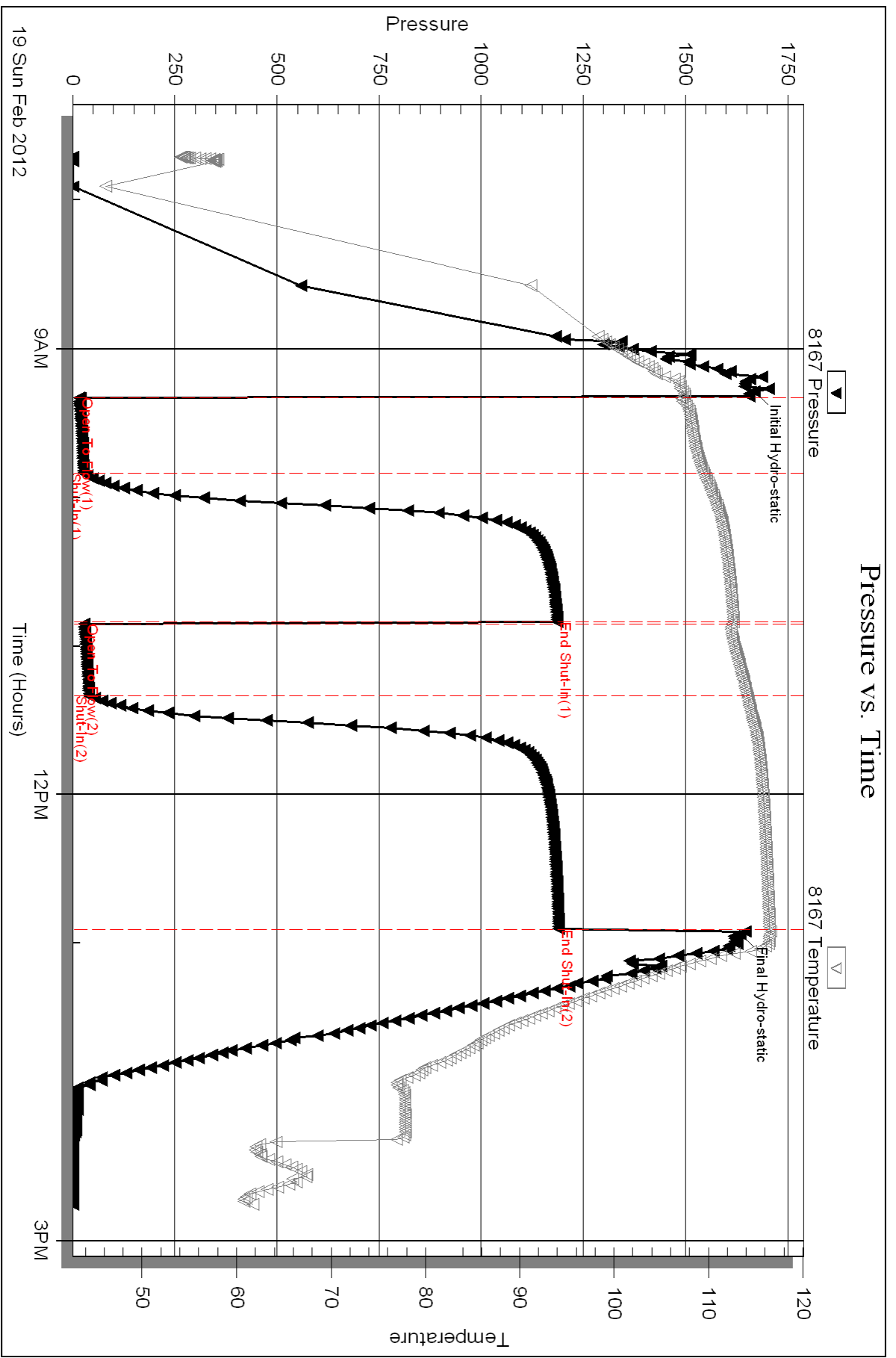
Serial #: 8167

Inside

Murfin Drilling Co. Inc.

Hilger Unit #1-32

DST Test Number: 3

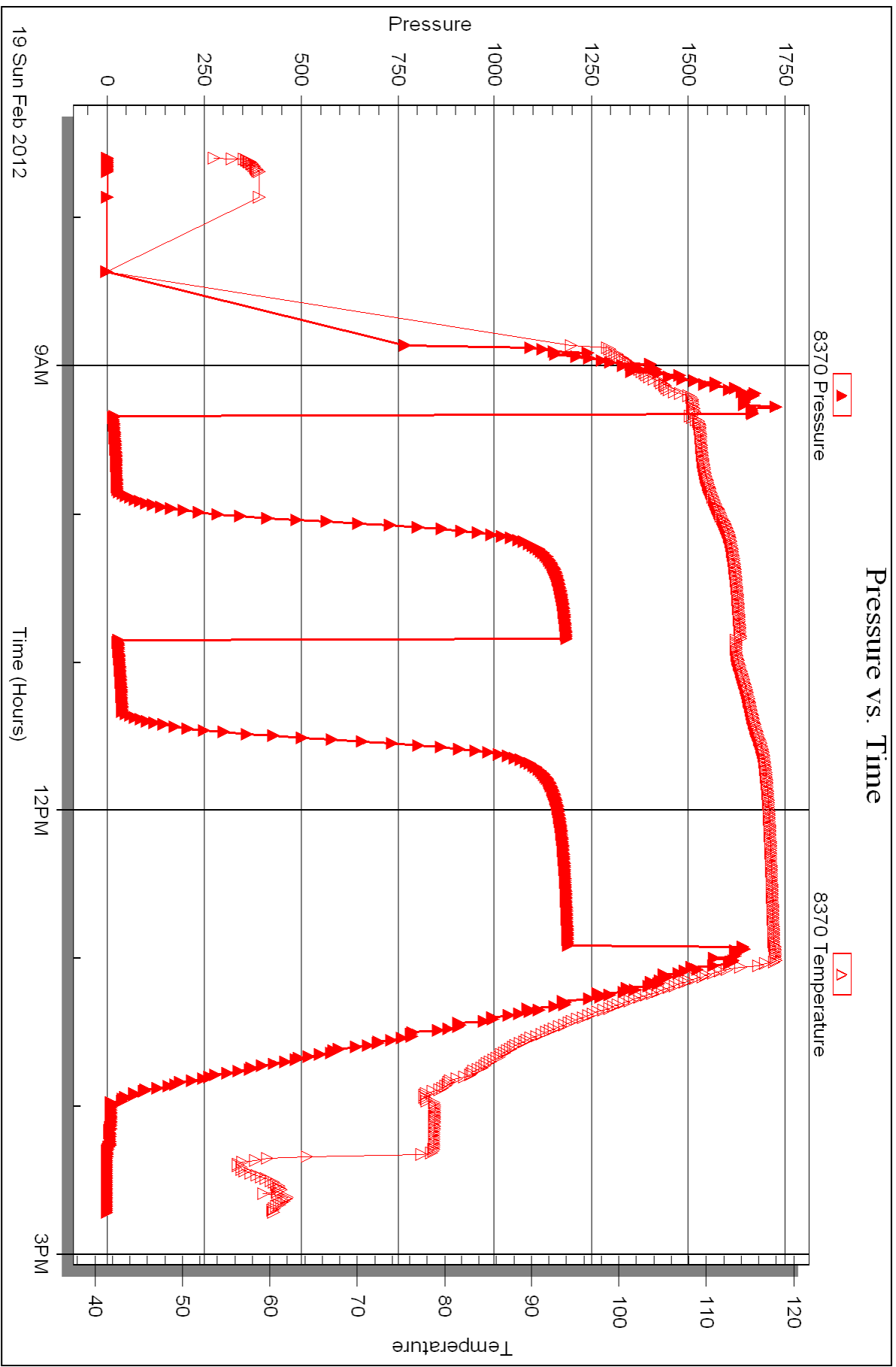


Serial #: 8370

Outside Murfin Drilling Co. Inc.

Hilger Unit #1-32

DST Test Number: 3





## DRILL STEM TEST REPORT

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

250 N.Water,Ste.300  
Wichita KS 67202

ATTN: Jeff Christian

### **Hilger Unit #1-32**

#### **32-30s-3w Sumner,KS**

Start Date: 2012.02.21 @ 23:27:48

End Date: 2012.02.22 @ 06:45:33

Job Ticket #: 45741                      DST #: 4

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

Printed: 2012.02.28 @ 16:09:24



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drlg.Co.Inc.  
 250 N.Water,Ste.300  
 Wichita KS 67202  
 ATTN: Jeff Christian

**32-30s-3w Sumner,KS**

**Hilger Unit #1-32**

Job Ticket: 45741

**DST#: 4**

Test Start: 2012.02.21 @ 23:27:48

## GENERAL INFORMATION:

Formation: **Simpson Sd**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:36:33

Time Test Ended: 06:45:33

Test Type: Conventional Bottom Hole (Reset)

Tester: Gary Pevoteaux

Unit No: 56

**Interval: 4360.00 ft (KB) To 4370.00 ft (KB) (TVD)**

Reference Elevations: 1406.00 ft (KB)

Total Depth: 4370.00 ft (KB) (TVD)

1397.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

**Serial #: 8167**

**Inside**

Press@RunDepth: 22.11 psig @ 4361.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.21

End Date:

2012.02.22

Last Calib.:

2012.02.22

Start Time: 23:27:49

End Time:

06:45:33

Time On Btm:

2012.02.22 @ 01:35:18

Time Off Btm:

2012.02.22 @ 04:37:03

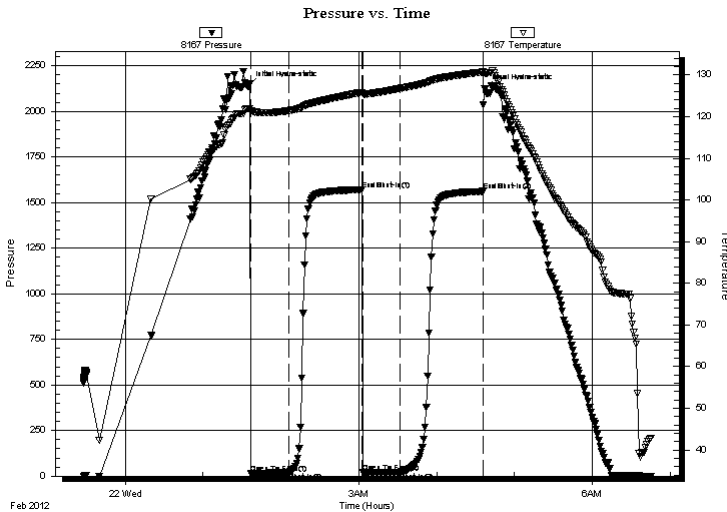
TEST COMMENT: IF:Weak blow . 1/2".

IS:No blow .

FF:Weak blow . 1/4" decreasing.

FS:No blow .

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2139.61	121.91	Initial Hydro-static
2	15.12	121.37	Open To Flow (1)
31	19.47	121.45	Shut-In(1)
88	1571.44	125.82	End Shut-In(1)
88	19.02	125.45	Open To Flow (2)
117	22.11	126.77	Shut-In(2)
181	1561.87	130.72	End Shut-In(2)
182	2123.30	130.49	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Drlg.mud	0.21

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45741

**DST#: 4**

ATTN: Jeff Christian

Test Start: 2012.02.21 @ 23:27:48

### Tool Information

Drill Pipe:	Length: 4359.00 ft	Diameter: 3.80 inches	Volume: 61.15 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 73000.00 lb
			<u>Total Volume: 61.15 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4360.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	30.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4341.00	
Shut in tool	5.00			4346.00	
HMV	5.00			4351.00	
Packer	4.00			4355.00	20.00 Bottom Of Top Packer
Packer	5.00			4360.00	
Stubb	1.00			4361.00	
Recorder	0.00	8167	Inside	4361.00	
Recorder	0.00	8370	Outside	4361.00	
Perforations	4.00			4365.00	
Bullnose	5.00			4370.00	10.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>30.00</b>				



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45741

**DST#: 4**

ATTN: Jeff Christian

Test Start: 2012.02.21 @ 23:27:48

**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:

4000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.20 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
15.00	Drlg.mud	0.210

Total Length: 15.00 ft      Total Volume: 0.210 bbl

Num Fluid Samples: 0

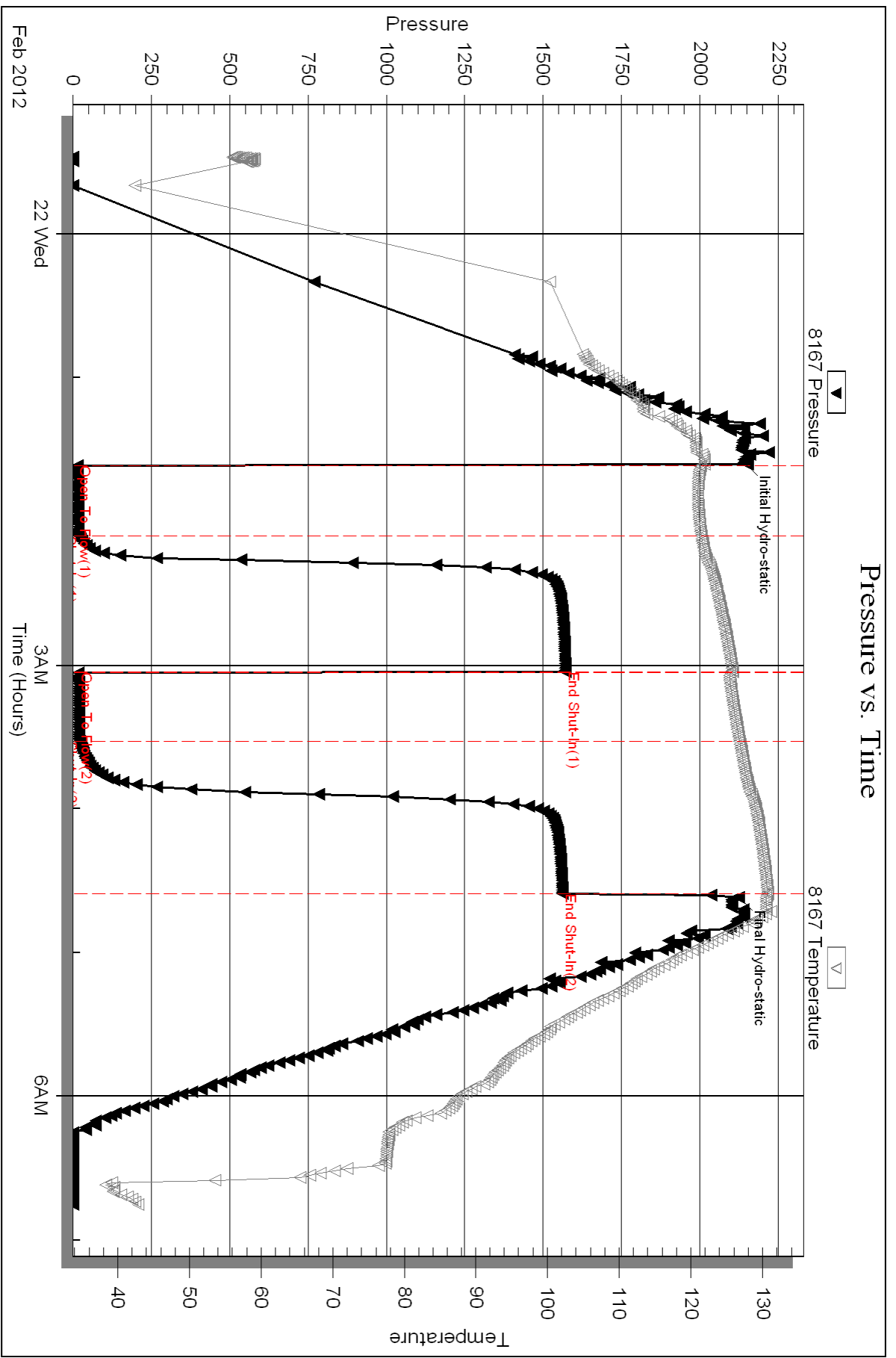
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:



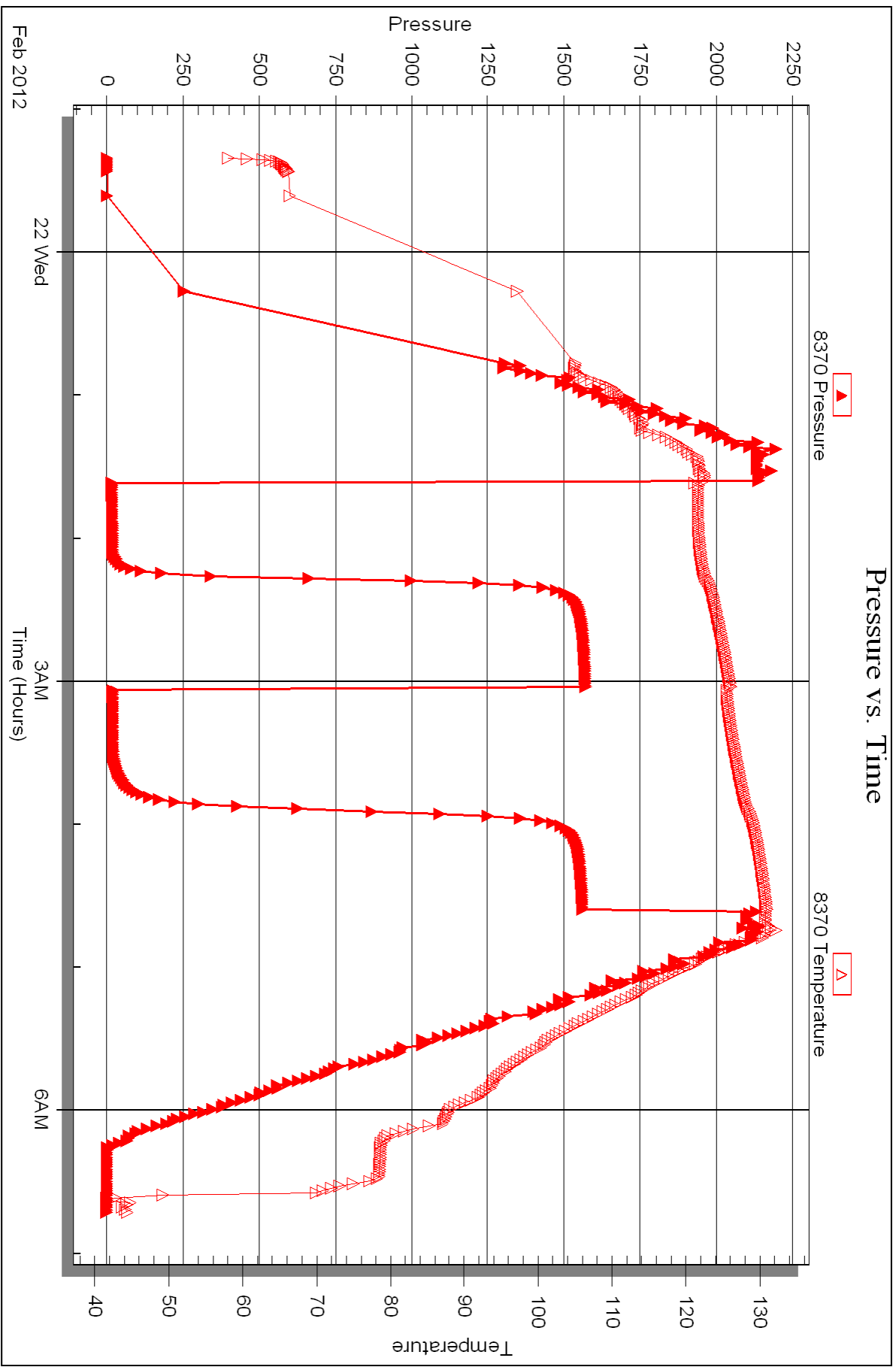


Serial #: 8370

Outside Murfin Drty. Co. Inc.

Hilger Unit #1-32

DST Test Number: 4





## DRILL STEM TEST REPORT

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

250 N.Water,Ste.300  
Wichita KS 67202

ATTN: Jeff Christian

### **Hilger Unit #1-32**

#### **32-30s-3w Sumner,KS**

Start Date: 2012.02.22 @ 15:45:19

End Date: 2012.02.22 @ 22:22:04

Job Ticket #: 45742                      DST #: 5

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

Printed: 2012.02.28 @ 16:08:37

Murfin Drlg.Co.Inc.  
32-30s-3w Sumner,KS  
Hilger Unit #1-32  
DST # 5  
Simpson Sd  
2012.02.22



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45742

**DST#: 5**

ATTN: Jeff Christian

Test Start: 2012.02.22 @ 15:45:19

## GENERAL INFORMATION:

Formation: **Simpson Sd**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:24:19

Time Test Ended: 22:22:04

Test Type: Conventional Bottom Hole (Reset)

Tester: Gary Pevoteaux

Unit No: 56

**Interval: 4363.00 ft (KB) To 4373.00 ft (KB) (TVD)**

Reference Elevations: 1406.00 ft (KB)

Total Depth: 4373.00 ft (KB) (TVD)

1397.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

**Serial #: 8167 Inside**

Press @RunDepth: 22.94 psig @ 4364.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.22 End Date: 2012.02.22

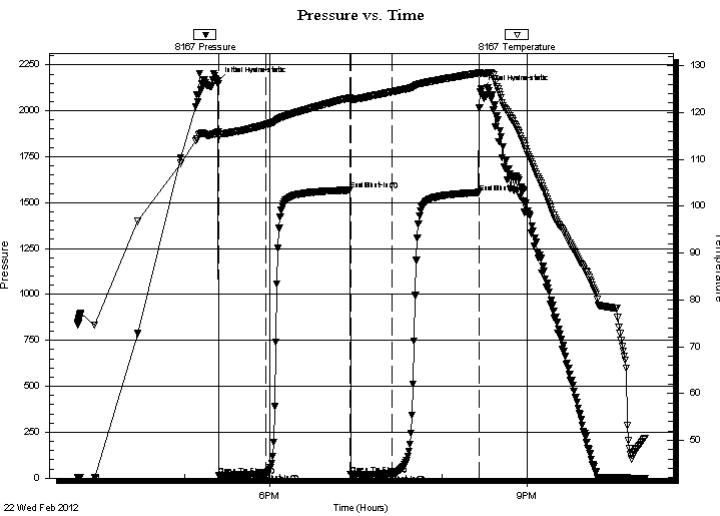
Last Calib.: 2012.02.22

Start Time: 15:45:20 End Time: 22:22:04

Time On Btm: 2012.02.22 @ 17:23:04

Time Off Btm: 2012.02.22 @ 20:27:49

**TEST COMMENT:** IF:Weak blow . 1/2".  
IS:No blow .  
FF:Weak blow . (surface)  
FS:No blow .



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2158.16	115.73	Initial Hydro-static
2	14.03	114.80	Open To Flow (1)
34	23.58	117.42	Shut-In(1)
93	1568.48	123.11	End Shut-In(1)
94	20.64	122.75	Open To Flow (2)
123	22.94	124.42	Shut-In(2)
183	1555.48	128.40	End Shut-In(2)
185	2117.50	128.30	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
12.00	WM 18%w 82%m	0.17
0.00	Good odor	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 Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45742

**DST#: 5**

ATTN: Jeff Christian

Test Start: 2012.02.22 @ 15:45:19

## Tool Information

Drill Pipe:	Length: 4359.00 ft	Diameter: 3.80 inches	Volume: 61.15 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 61.15 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4363.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	30.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4344.00	
Shut in tool	5.00			4349.00	
HMV	5.00			4354.00	
Packer	4.00			4358.00	20.00 Bottom Of Top Packer
Packer	5.00			4363.00	
Stubb	1.00			4364.00	
Recorder	0.00	8167	Inside	4364.00	
Recorder	0.00	8370	Outside	4364.00	
Perforations	4.00			4368.00	
Bullnose	5.00			4373.00	10.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>30.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45742

**DST#: 5**

ATTN: Jeff Christian

Test Start: 2012.02.22 @ 15:45:19

## 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:

9400 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
12.00	WM 18%w 82%m	0.168
0.00	Good odor	0.000

Total Length: 12.00 ft      Total Volume: 0.168 bbl

Num Fluid Samples: 0

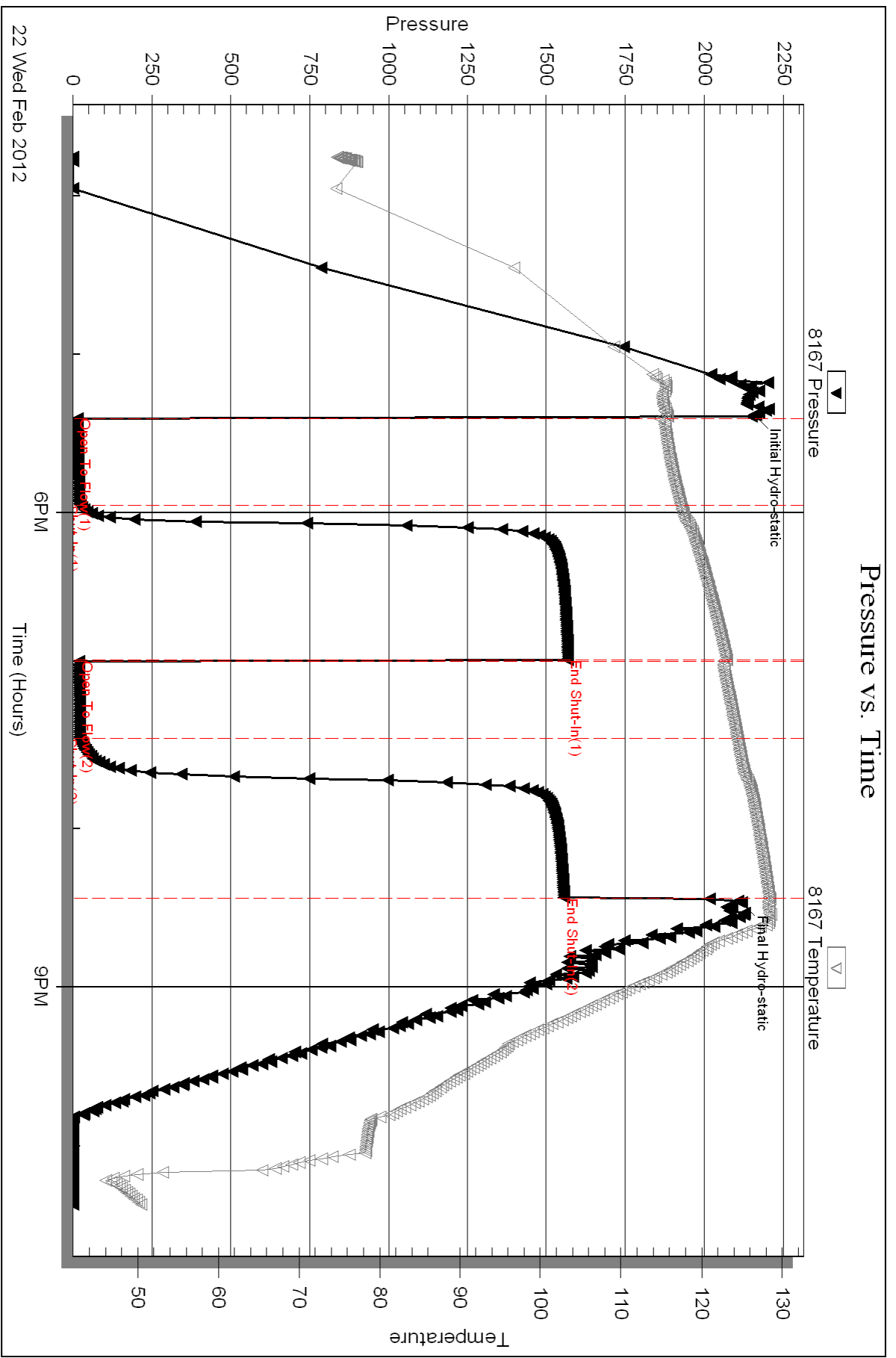
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments: Rw .75ohms @60deg

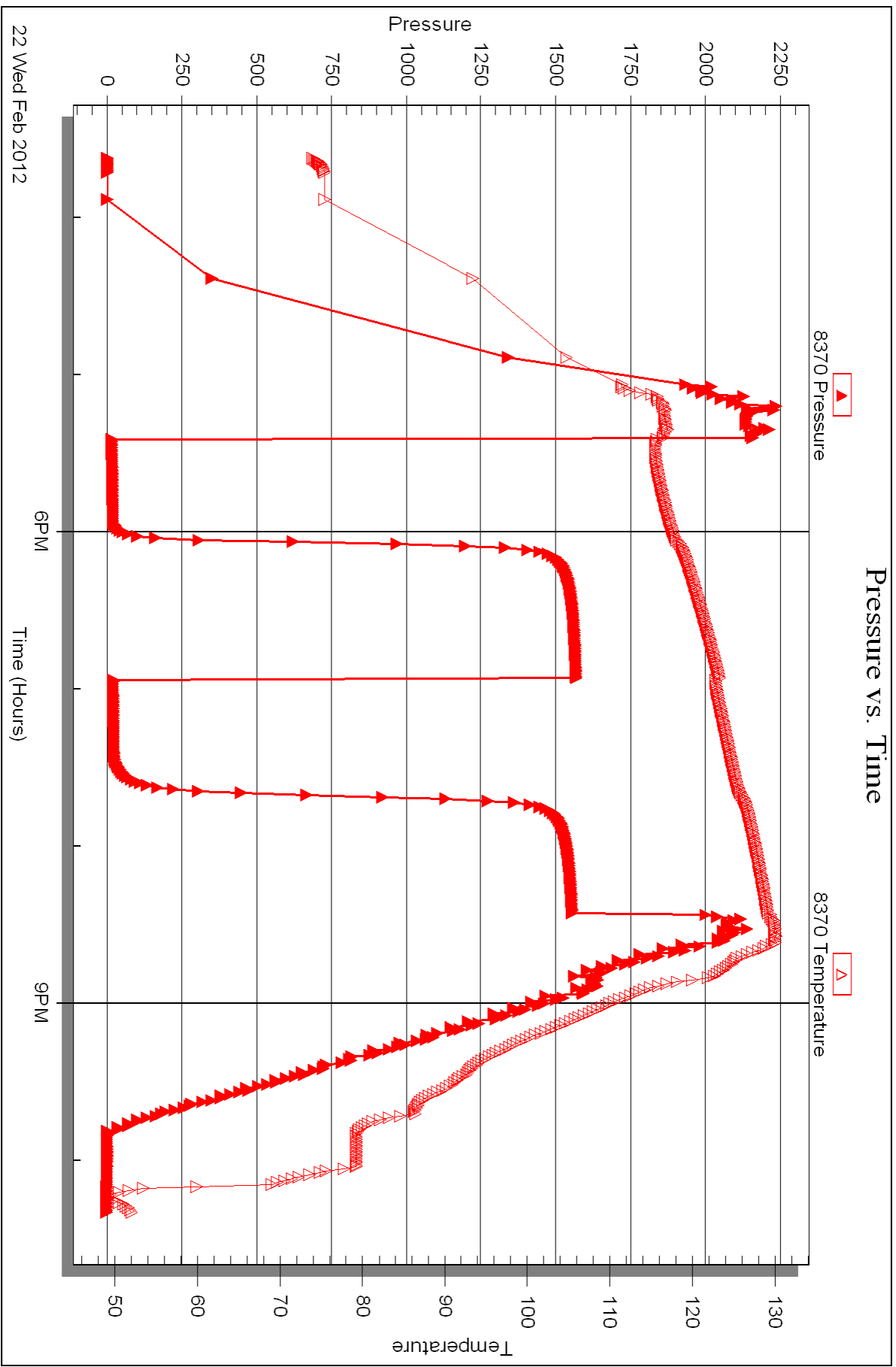


Serial #: 8370

Outside Murfin Drtg. Co. Inc.

Hilger Unit #1-32

DST Test Number: 5



Triobite Testing, Inc

Ref. No: 45742

Printed: 2012.02.28 @ 16:08:40





## DRILL STEM TEST REPORT

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

250 N.Water,Ste.300  
Wichita KS 67202

ATTN: Jeff Christian

### **Hilger Unit #1-32**

#### **32-30s-3w Sumner,KS**

Start Date: 2012.02.23 @ 04:48:11

End Date: 2012.02.23 @ 12:14:56

Job Ticket #: 45743                      DST #: 6

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

Printed: 2012.02.28 @ 16:07:59



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drlg.Co.Inc.  
 250 N.Water,Ste.300  
 Wichita KS 67202  
 ATTN: Jeff Christian

**32-30s-3w Sumner,KS**  
**Hilger Unit #1-32**  
 Job Ticket: 45743 **DST#: 6**  
 Test Start: 2012.02.23 @ 04:48:11

## GENERAL INFORMATION:

Formation: **Simpson Sd**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 07:14:26  
 Time Test Ended: 12:14:56  
 Interval: **4366.00 ft (KB) To 4376.00 ft (KB) (TVD)**  
 Total Depth: 4376.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Gary Pevoteaux  
 Unit No: 56  
 Reference Elevations: 1406.00 ft (KB)  
 1397.00 ft (CF)  
 KB to GR/CF: 9.00 ft

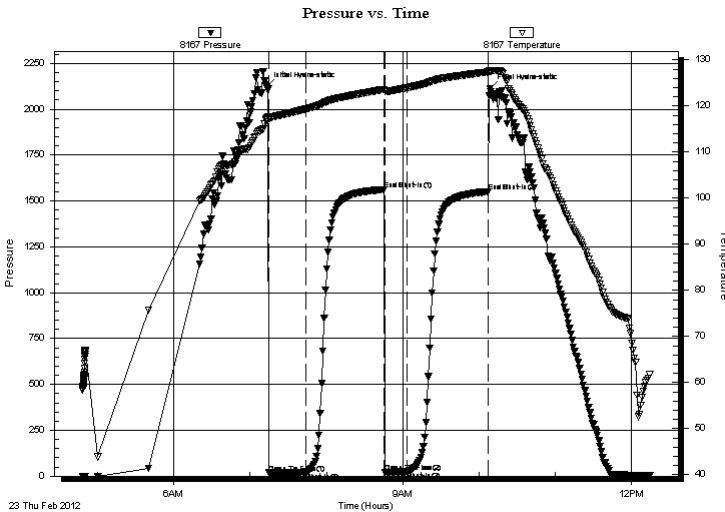
## Serial #: 8167

Inside

Press @ Run Depth: 24.18 psig @ 4367.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.02.23 End Date: 2012.02.23 Last Calib.: 2012.02.23  
 Start Time: 04:48:12 End Time: 12:14:56 Time On Btm: 2012.02.23 @ 07:12:41  
 Time Off Btm: 2012.02.23 @ 10:08:41

TEST COMMENT: IF:Weak blow . 1/4 - 1/2".  
 IS:No blow .  
 FF:No blow .  
 FS:No blow .

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2124.58	117.16	Initial Hydro-static
2	17.55	117.16	Open To Flow (1)
31	20.35	119.31	Shut-In(1)
93	1562.49	123.62	End Shut-In(1)
94	21.34	123.25	Open To Flow (2)
111	24.18	123.94	Shut-In(2)
175	1551.63	127.39	End Shut-In(2)
176	2111.44	127.60	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	WM28%w 72%m	0.14

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45743

**DST#: 6**

ATTN: Jeff Christian

Test Start: 2012.02.23 @ 04:48:11

## Tool Information

Drill Pipe:	Length: 4359.00 ft	Diameter: 3.80 inches	Volume: 61.15 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 76000.00 lb
			<u>Total Volume: 61.15 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4366.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	30.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4347.00	
Shut in tool	5.00			4352.00	
HMV	5.00			4357.00	
Packer	4.00			4361.00	20.00 Bottom Of Top Packer
Packer	5.00			4366.00	
Stubb	1.00			4367.00	
Recorder	0.00	8167	Inside	4367.00	
Recorder	0.00	8370	Outside	4367.00	
Perforations	4.00			4371.00	
Bullnose	5.00			4376.00	10.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>30.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45743

**DST#: 6**

ATTN: Jeff Christian

Test Start: 2012.02.23 @ 04:48:11

## 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:

33000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	WM28%w 72%m	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

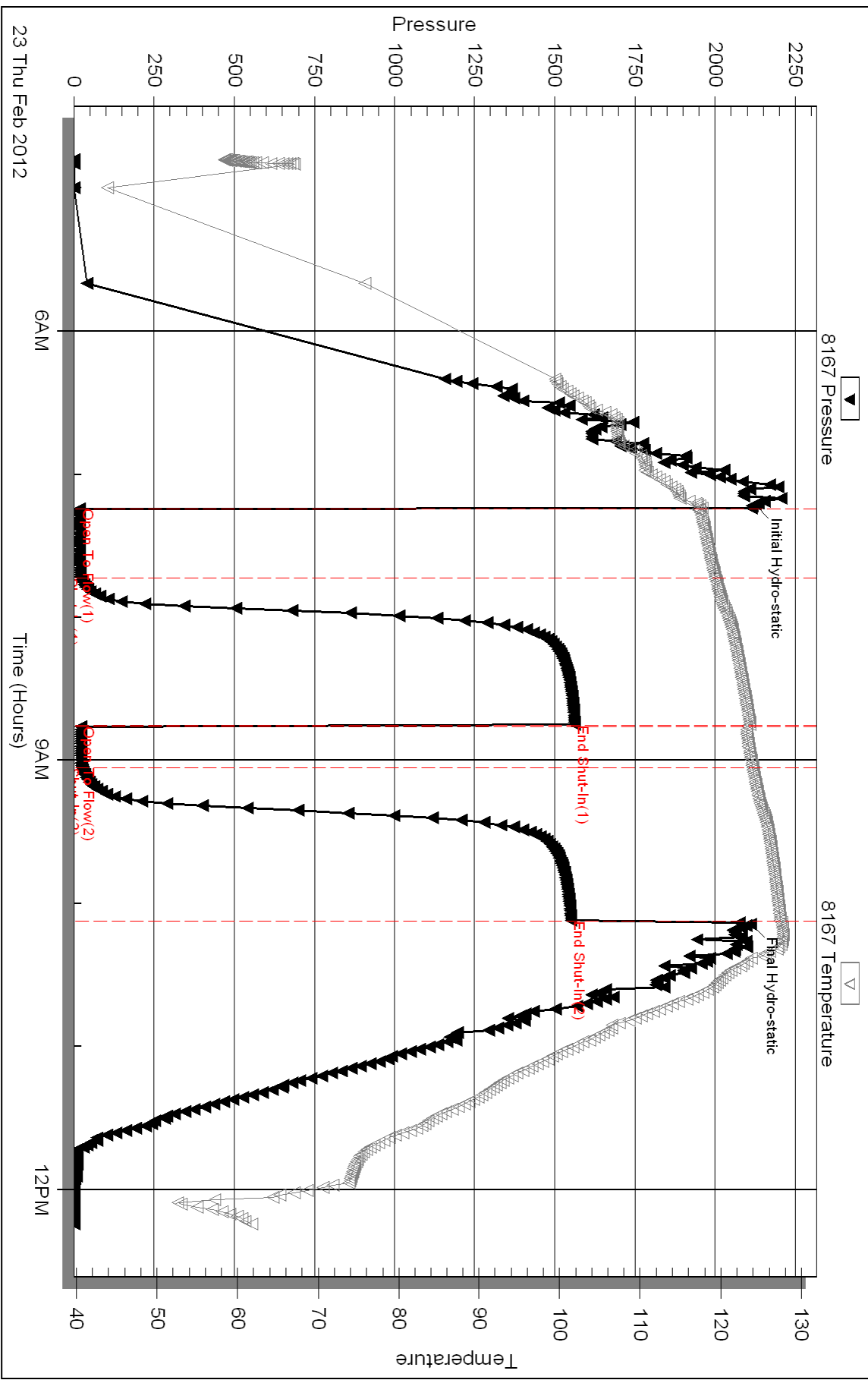
Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments: Rw .25ohms @61deg

### Pressure vs. Time

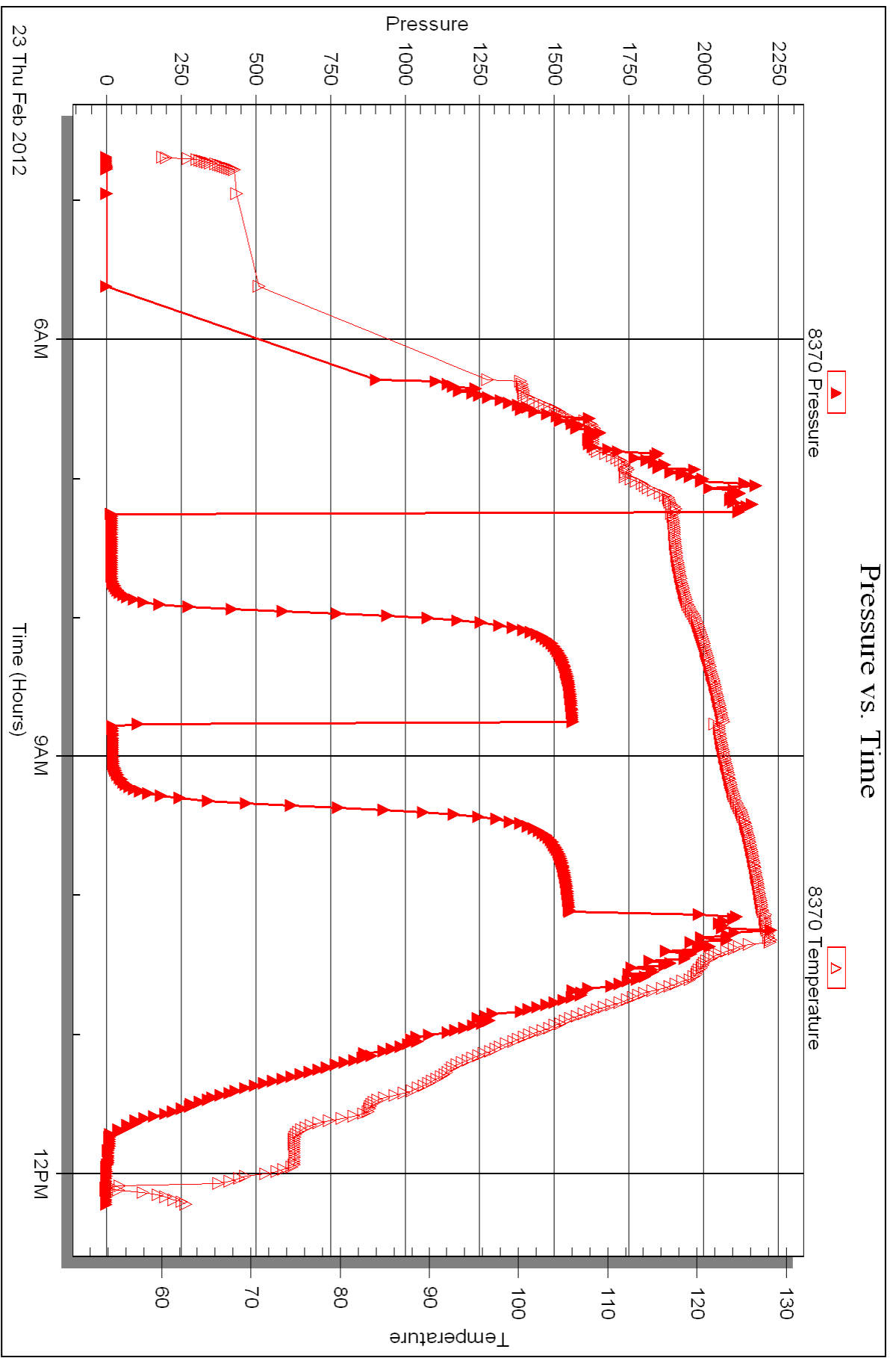


Serial #: 8370

Outside Murfin Drty.Co.Inc.

Hilger Unit #1-32

DST Test Number: 6





## DRILL STEM TEST REPORT

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

250 N.Water,Ste.300  
Wichita KS 67202

ATTN: Jeff Christian

### **Hilger Unit #1-32**

#### **32-30s-3w Sumner,KS**

Start Date: 2012.02.23 @ 20:54:54

End Date: 2012.02.24 @ 03:31:54

Job Ticket #: 45744                      DST #: 7

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

Printed: 2012.02.28 @ 16:07:11

Murfin Drlg.Co.Inc. 32-30s-3w Sumner,KS Hilger Unit #1-32 DST # 7 Simpson Sd 2012.02.23





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drlg.Co.Inc.  
250 N.Water,Ste.300  
Wichita KS 67202  
ATTN: Jeff Christian

**32-30s-3w Sumner,KS**

**Hilger Unit #1-32**

Job Ticket: 45744

**DST#: 7**

Test Start: 2012.02.23 @ 20:54:54

## GENERAL INFORMATION:

Formation: **Simpson Sd**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:38:54

Time Test Ended: 03:31:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Gary Pevoteaux

Unit No: 56

**Interval: 4376.00 ft (KB) To 4386.00 ft (KB) (TVD)**

Reference Elevations: 1406.00 ft (KB)

Total Depth: 4386.00 ft (KB) (TVD)

1397.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

**Serial #: 8167**

**Inside**

Press @ Run Depth: 18.36 psig @ 4377.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.23

End Date:

2012.02.24

Last Calib.:

2012.02.24

Start Time: 20:54:55

End Time:

03:31:54

Time On Btm:

2012.02.23 @ 22:36:54

Time Off Btm:

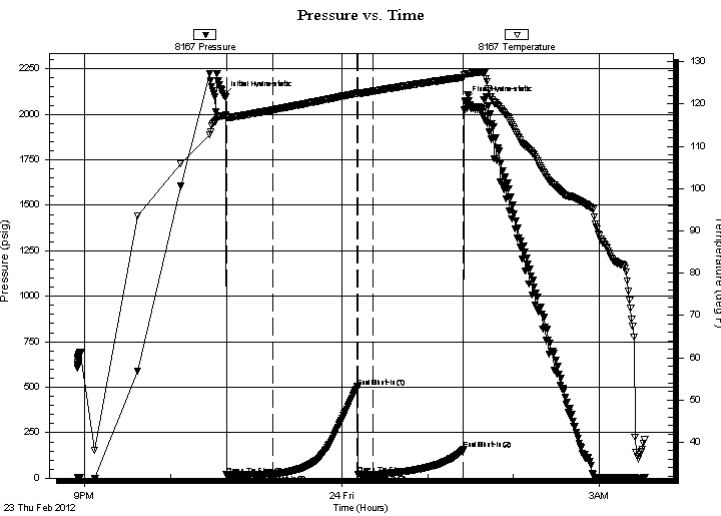
2012.02.24 @ 01:26:09

TEST COMMENT: IF:Weak blow . 1/4".

IS:No blow .

FF:No blow .

FS:No blow .



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2101.92	117.26	Initial Hydro-static
2	17.93	116.79	Open To Flow (1)
35	21.10	118.60	Shut-In(1)
94	502.28	122.54	End Shut-In(1)
95	19.94	122.41	Open To Flow (2)
105	18.36	123.01	Shut-In(2)
168	156.23	126.32	End Shut-In(2)
170	2074.62	126.97	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Drlg.mud	0.07

## Gas Rates

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

\* Recovery from multiple tests





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TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45744

**DST#: 7**

ATTN: Jeff Christian

Test Start: 2012.02.23 @ 20:54:54

### Tool Information

Drill Pipe:	Length: 4359.00 ft	Diameter: 3.80 inches	Volume: 61.15 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 61.15 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4376.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	30.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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C.O. Sub	1.00			4357.00	
Shut in tool	5.00			4362.00	
HMV	5.00			4367.00	
Packer	4.00			4371.00	20.00 Bottom Of Top Packer
Packer	5.00			4376.00	
Stubb	1.00			4377.00	
Recorder	0.00	8167	Inside	4377.00	
Recorder	0.00	8370	Outside	4377.00	
Perforations	4.00			4381.00	
Bullnose	5.00			4386.00	10.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>30.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drlg.Co.Inc.

**32-30s-3w Sumner,KS**

250 N.Water,Ste.300  
Wichita KS 67202

**Hilger Unit #1-32**

Job Ticket: 45744

**DST#: 7**

ATTN: Jeff Christian

Test Start: 2012.02.23 @ 20:54:54

## 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:

4000 ppm

Viscosity: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Drlg.mud	0.070

Total Length: 5.00 ft      Total Volume: 0.070 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

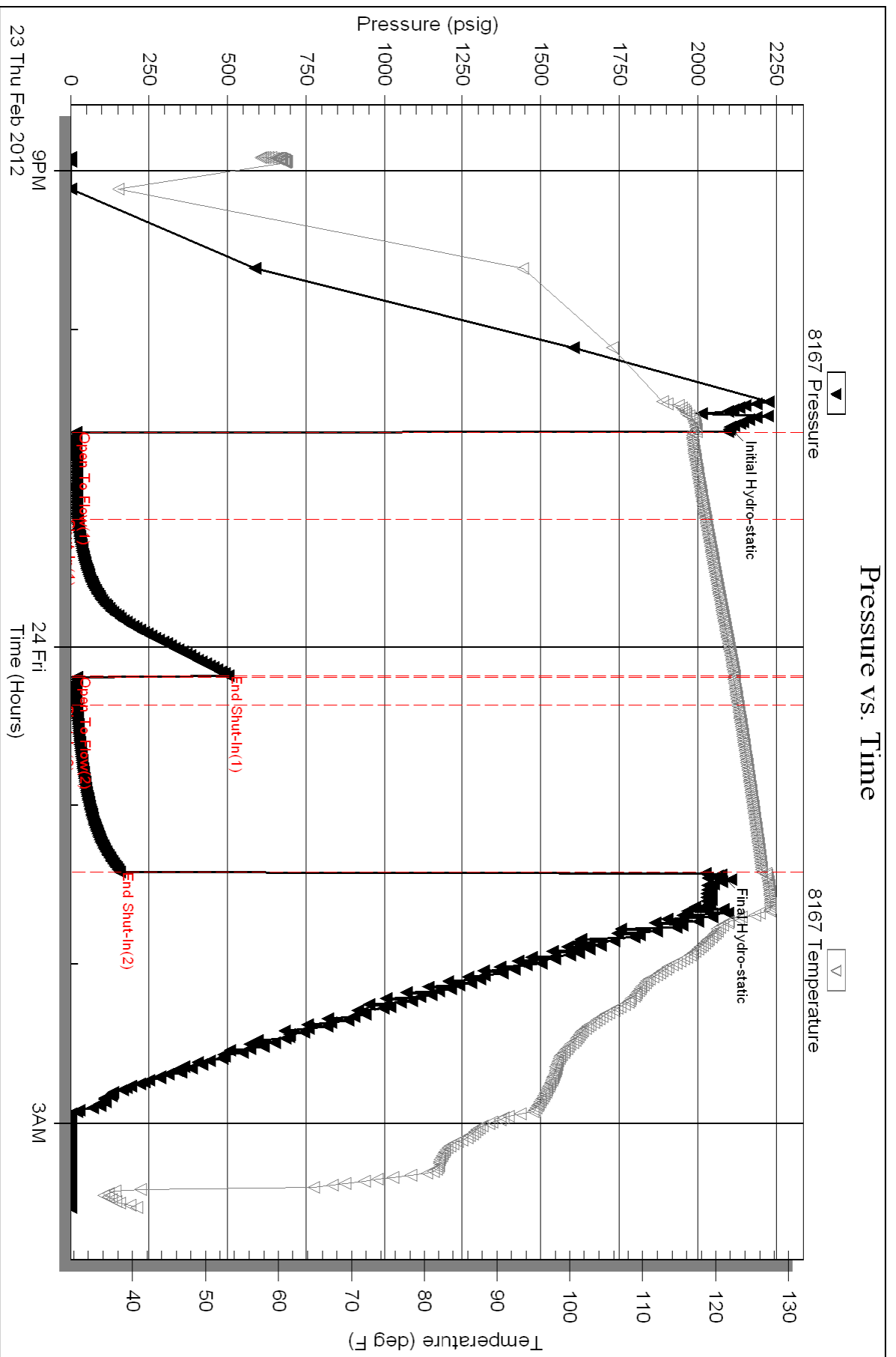
Serial #: 8167

Inside

Murfin Drilg. Co. Inc.

Hilger Unit #1-32

DST Test Number: 7



Triobite Testing, Inc

Ref. No: 45744

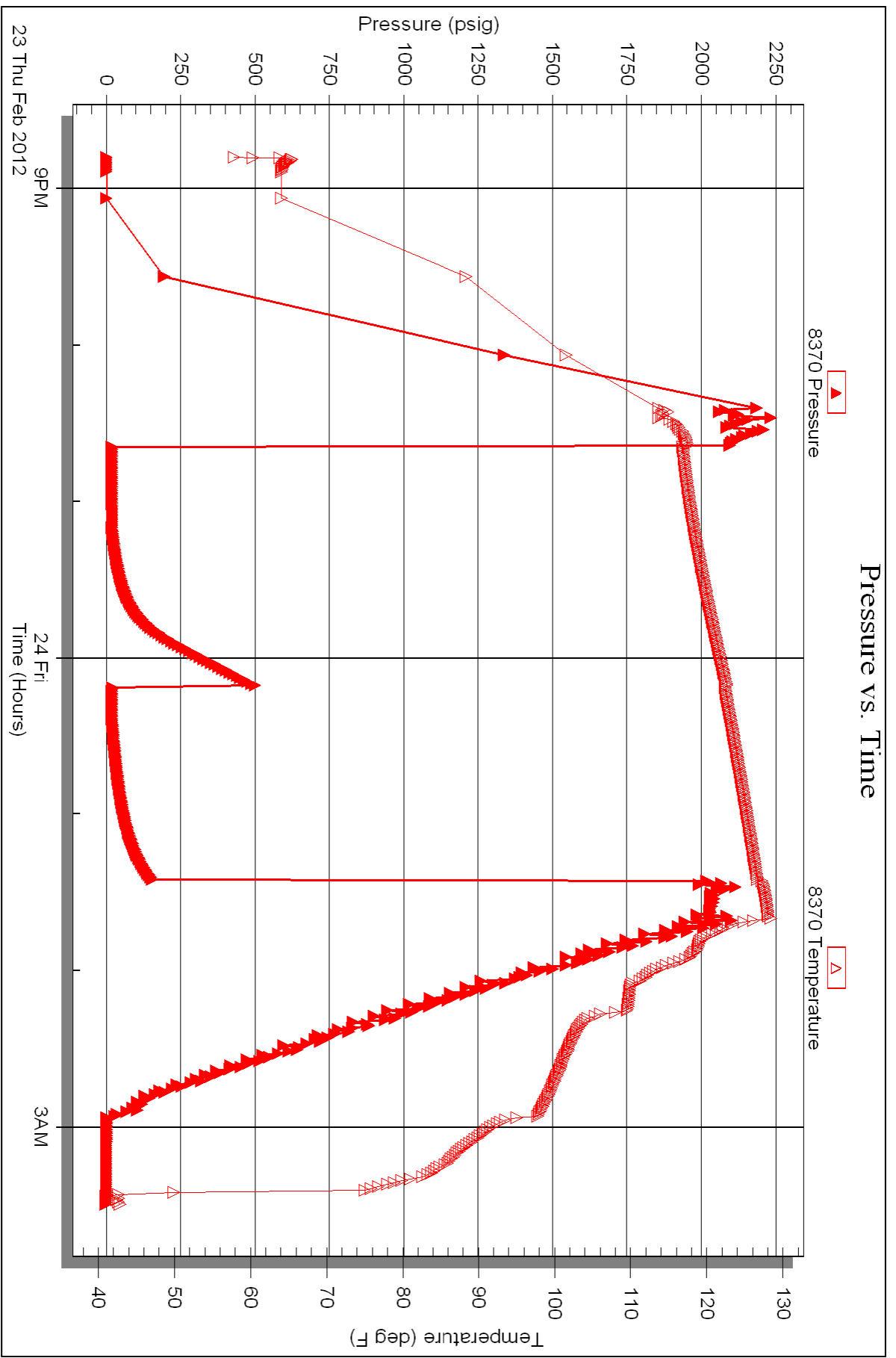
Printed: 2012.02.28 @ 16:07:13

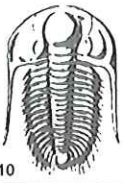
Serial #: 8370

Outside Murfin Drig. Co. Inc.

Hilger Unit #1-32

DST Test Number: 7





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
FEB 27 2012  
BY: \_\_\_\_\_

## Test Ticket

NO. 45738

Well Name & No. HILGER Unit # 1-32 Test No. 1 Date 2-17-12  
 Company MURFEN DRUG CO INC. Elevation 1406 KB 1397 GL  
 Address 250 N. WATER, STE 300, WICHITA KS. 67202  
 Co. Rep / Geo. JEFF CHRISTIAN Rig MAVERICK DRUG #106  
 Location: Sec. 32 Twp. 30S Rge. 3W Co. SUMNER State Ks.

Interval Tested 3040 ~ 3055' Zone Tested STALNAKER  
 Anchor Length 15' Drill Pipe Run 3050' Mud Wt. 9.1  
 Top Packer Depth 3035' Drill Collars Run 0 Vis 50  
 Bottom Packer Depth 3040' Wt. Pipe Run 0 WL 9.2cc  
 Total Depth 3055' Chlorides 4000 ppm System LCM 0  
 Blow Description IF: Strong blow. B.O.B. in 1 min. ISF: Weak blow 1/2 - 1 1/2".

FF: Strong blow. B.O.B. in 65 secs. FSI: No blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>180</u>	<u>MW</u>			<u>80%</u>	<u>20</u>
<u>2285</u>	<u>SW</u>				

Rec Total 2465 BHT 116° Gravity N/A API RW 009 @ 54 °F Chlorides 119,000 ppm

(A) Initial Hydrostatic 1445  Test 1125' T-On Location 0853  
 (B) First Initial Flow 542  Jars \_\_\_\_\_ T-Started 1010  
 (C) First Final Flow 995  Safety Joint \_\_\_\_\_ T-Open 1150  
 (D) Initial Shut-In 1278  Circ Sub \_\_\_\_\_ T-Pulled 1525  
 (E) Second Initial Flow 919  Hourly Standby 1/4 hr 25' T-Out 1822  
 (F) Second Final Flow 1209  Mileage 1641 229.60 Comments \_\_\_\_\_  
 (G) Final Shut-In 1283  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1435  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer 250'  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 60  Day Standby \_\_\_\_\_ Total 11629.60  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 90 Sub Total 11629.60

Approved By \_\_\_\_\_ Our Representative Craig Pawotiansky  
 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.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
FEB 27 2012

## Test Ticket

NO. 45739

Well Name & No. HELGER UNIT # 1-32 BY:                      Test No. 2 Date 2-18-12  
 Company MURFIN DRILLING CO. INC. Elevation 1406 KB 1397 GL  
 Address 250 N. WATER, STE. 300, WICHITA KS. 67202  
 Co. Rep / Geo. JEFF CHRISTIAN Rig MAVERICK DRILL # 106  
 Location: Sec. 32 Twp. 30<sup>s</sup> Rge. 3<sup>w</sup> Co. SUMNER State KS.

Interval Tested 3334 - 3356' Zone Tested LKC 'H'  
 Anchor Length 22' Drill Pipe Run 3334' Mud Wt. 9.2  
 Top Packer Depth 3329' Drill Collars Run 0 Vis 49  
 Bottom Packer Depth 3334' Wt. Pipe Run 0 WL 9.0cc  
 Total Depth 3356' Chlorides 4000 ppm System LCM 0  
 Blow Description FF: Strong blow. B.O.B. in 2 1/4 mins. ISI: Weak blow. 1/2 - 1"

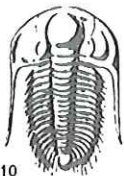
FF: Strong blow. B.O.B. in 2 1/2 mins. FSI: No blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>125</u>	<u>Feet of MW</u>		<u>63</u>	<u>37</u>	
<u>1500</u>	<u>Feet of SW</u>				

Rec Total 1625 Fluid BHT 121 Gravity N/A API RW :10 @ 49 °F Chlorides 122000 ppm  
 (A) Initial Hydrostatic 1614  Test 1125' T-On Location 1038  
 (B) First Initial Flow 87  Jars                      T-Started 1134  
 (C) First Final Flow 542  Safety Joint                      T-Open 1302  
 (D) Initial Shut-In 1097  Circ Sub                      T-Pulled 1634  
 (E) Second Initial Flow 352  Hourly Standby                      T-Out 1917  
 (F) Second Final Flow 822  Mileage (164) 229.60 Comments                       
 (G) Final Shut-In 1113  Sampler                       
 (H) Final Hydrostatic 1598  Straddle                       Ruined Shale Packer                       
 Shale Packer                       Ruined Packer                       
 Extra Packer                       Extra Copies                       
 Extra Recorder                      Sub Total 0  
 Day Standby                      Total 1354.60  
 Accessibility                      MP/DST Disc't                       
 Sub Total 1354.60

Approved By                      Our Representative Gay Pivota  
 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.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
FEB 27 2012

## Test Ticket

NO. 45740

Well Name & No. HILGER UNIT # 1-32 BY: \_\_\_\_\_ Test No. 3 Date 2-19-12  
 Company MURFIN DRILG. Co. Inc. Elevation 1406 KB 1397 GL  
 Address 950N, WATER, STE. 300, WICHITA Ks.  
 Co. Rep / Geo. JEFF CHRISTIAN Rig MAVERICK DRILG. #106  
 Location: Sec. 32 Twp. 30<sup>S</sup> Rge. 3W Co. SUMNER State Ks.

Interval Tested 3460 - 3487' Zone Tested L-KC "K"  
 Anchor Length 27' Drill Pipe Run 3458' Mud Wt. 9.2  
 Top Packer Depth 3455' Drill Collars Run 0 Vis 49  
 Bottom Packer Depth 3460' Wt. Pipe Run 0 WL 9.2 cc  
 Total Depth 3487 Chlorides 5,000 ppm System LCM 0  
 Blow Description IF: Strong blow. B.O.B. in 14 mins. FSI: No blow.

EF: Strong blow. B.O.B. in 12 mins. FSI: No blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>430</u>	<u>Gas in pipe</u>				
<u>61</u>	<u>GOCWM</u>	<u>20</u>	<u>18</u>	<u>20</u>	<u>42</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 61 Fluid BHT 128 Gravity N/A API RW 38 @ 52 °F Chlorides 23,500 ppm  
 (A) Initial Hydrostatic 1669  Test 1125 T-On Location 0711  
 (B) First Initial Flow 16  Jars T-Started 0742  
 (C) First Final Flow 26  Safety Joint T-Open 0919  
 (D) Initial Shut-In 1187  Circ Sub T-Pulled 1252  
 (E) Second Initial Flow 28  Hourly Standby T-Out 1445  
 (F) Second Final Flow 40  Mileage 164 229.160 Comments \_\_\_\_\_  
 (G) Final Shut-In 1190  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1635  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 60  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 30  Day Standby \_\_\_\_\_ Total 1354.160  
 Final Shut-In 90  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1354.160

Approved By Jeff Christian Our Representative Gary Pivotaux

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
FEB 27 2012  
BY: \_\_\_\_\_

## Test Ticket

NO. 45742

Well Name & No. HILGER UNIT # 1-32 Test No. 5 Date 2-22-12  
 Company MURFIN DRUG. CO. INC. Elevation 1406 KB 1397 GL  
 Address WICHITA KS, 67202  
 Co. Rep / Geo. JEFF CHRISTIAN Rig MAVERICK DRUG. #106  
 Location: Sec. 32 Twp. 30S Rge. 3W Co. SUMNER State KS

Interval Tested 4363 ~ 4373' Zone Tested SIMPSON SD.  
 Anchor Length 10' Drill Pipe Run 4359' Mud Wt. 9.1  
 Top Packer Depth 4358' Drill Collars Run 0 Vis 47  
 Bottom Packer Depth 4363' Wt. Pipe Run 0 WL 9.0  
 Total Depth 4373' Chlorides 4000 ppm System LCM 4#  
 Blow Description FF: Weak below, 1/2". FSI: No blow.

FF: Weak below, (surface) FSI: No blow.

Rec	Feet of	WM	Good	ORDER!	%gas	%oil	%water	%mud
12							18	82

Rec Total 12 BHT 128° Gravity N/A API RW .75 @ 60 °F Chlorides 9400 ppm  
 (A) Initial Hydrostatic 2158  Test 1225' T-On Location 1445  
 (B) First Initial Flow 14  Jars \_\_\_\_\_ T-Started 1545  
 (C) First Final Flow 24  Safety Joint \_\_\_\_\_ T-Open 1724  
 (D) Initial Shut-In 1568  Circ Sub \_\_\_\_\_ T-Pulled 2030  
 (E) Second Initial Flow 21  Hourly Standby \_\_\_\_\_ T-Out 2222  
 (F) Second Final Flow 23  Mileage (111) 229.60 Comments \_\_\_\_\_  
 (G) Final Shut-In 1555  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2118  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer 250'  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 60  Day Standby \_\_\_\_\_ Total 1704.60  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 1704.60

Approved By \_\_\_\_\_ Our Representative Jeff Christian  
 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.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
FEB 27 2012

## Test Ticket

NO. 45743

4/10

BY: \_\_\_\_\_

Well Name & No. HILGER UNIT # 1-32 Test No. 6 Date 2-23-12  
 Company MUREN DRLG. Co. Inc. Elevation 1406 KB 1397 GL  
 Address WICHITA Ks. 67202  
 Co. Rep / Geo. JEFF CHRISTIAN Rig MAVERICK DRLG. #106  
 Location: Sec. 32 Twp. 30<sup>S</sup> Rge. 3<sup>W</sup> Co. SUMNER State Ks.

Interval Tested 4366 - 4376' Zone Tested SIMPSON SD.  
 Anchor Length 10' Drill Pipe Run 4359' Mud Wt. 9.4  
 Top Packer Depth 4361' Drill Collars Run 0 Vis 53  
 Bottom Packer Depth 4366' Wt. Pipe Run 0 WL 88  
 Total Depth 4376 Chlorides 4000 ppm System LCM 4<sup>#</sup>  
 Blow Description IF: Weak blow. 1/4 - 1/2". FSI: No blow.

FF: No blow. FSI: No blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>WM</u>		<u>28</u>	<u>72</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 10 BHT 127° Gravity N/A API RW .25 @ 61 °F Chlorides 33,000 ppm

(A) Initial Hydrostatic 2125  Test 1225' T-On Location 0420  
 (B) First Initial Flow 18  Jars \_\_\_\_\_ T-Started 0448  
 (C) First Final Flow 20  Safety Joint \_\_\_\_\_ T-Open 0714  
 (D) Initial Shut-In 1562  Circ Sub \_\_\_\_\_ T-Pulled 1008  
 (E) Second Initial Flow 21  Hourly Standby \_\_\_\_\_ T-Out 1214  
 (F) Second Final Flow 24  Mileage 1104 229.60 Comments \_\_\_\_\_  
 (G) Final Shut-In 1552  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2111  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1454.60  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1454.60

Approved By \_\_\_\_\_ Our Representative Cory Pivota

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
FEB 27 2012

## Test Ticket

NO. 45744

4/10

BY: \_\_\_\_\_

Well Name & No. HILGER UNIT # 1-32 Test No. 7 Date 2-23-12  
 Company MURFIN DRUG CO. INC. Elevation 1406 KB 1397 GL  
 Address WICHITA KS 67202  
 Co. Rep / Geo. JEFF CHRISTIAN Rig MAVERICK DRUG #106  
 Location: Sec. 32 Twp. 30<sup>S</sup> Rge. 3<sup>W</sup> Co. SUMNER State KS.

Interval Tested 4376 - 4386' Zone Tested SIMPSON SD.  
 Anchor Length 10' Drill Pipe Run 4359' Mud Wt. 9.3  
 Top Packer Depth 4371' Drill Collars Run 0 Vis 63  
 Bottom Packer Depth 4376' Wt. Pipe Run 0 WL 8.8 cc  
 Total Depth 4386' Chlorides 4,000 ppm System LCM 4#  
 Blow Description IF: Weak blow. 1/4". ISI: No blow.

FF: No blow. FSI: No blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Dry Mud</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 126 Gravity N/A API RW N.C. @ ~ ° F Chlorides 4,000 ppm

(A) Initial Hydrostatic 2102  Test 1225' T-On Location 2030  
 (B) First Initial Flow 18  Jars \_\_\_\_\_ T-Started 2054  
 (C) First Final Flow 21  Safety Joint \_\_\_\_\_ T-Open 2238  
 (D) Initial Shut-In 502  Circ Sub \_\_\_\_\_ T-Pulled 0124  
 (E) Second Initial Flow 20  Hourly Standby \_\_\_\_\_ T-Out 0332  
 (F) Second Final Flow 18  Mileage 164 22160' Comments \_\_\_\_\_  
 (G) Final Shut-In 156  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2075  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 60  Day Standby \_\_\_\_\_ Total 1454.00  
 Final Flow 10  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 1454.00

Approved By \_\_\_\_\_ Our Representative Cory Potlump  
 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.



PO Box 93999  
Southlake, TX 76092

Voice: (817) 546-7282  
Fax: (817) 246-3361

**Bill To:**  
Murfin Drig. Co., Inc.  
250 N. WWater  
STE #300  
Wichita, KS 67202

# INVOICE

Invoice Number: 130173

Invoice Date: Feb 16, 2012

Page:

**PROD COPY**  
Federal Tax I.D.#: 20-8651475

Customer ID	Well Name# or Customer P.O.	Payment Terms
Murfin	Hilger Uni#1-32	Net 30 Days
Job Location	Camp Location	Service Date
KS2-01	Medicine Lodge	Feb 16, 2012
		Due Date
		3/17/12

Quantity	Item	Description	Unit Price	Amount
190.00	MAT	Class A Common	16.25	3,087.50
4.00	MAT	Gel	21.25	85.00
7.00	MAT	Chloride	58.20	407.40
201.00	SER	Handling	2.25	452.25
30.00	SER	Mileage	22.11	663.30
1.00	SER	Surface	1,125.00	1,125.00
60.00	SER	Heavy Vehicle Mileage	7.00	420.00
60.00	SER	Light Vehicle Mileage	4.00	240.00
1.00	CEMENTER	Lucas Wisner		
1.00	CEMENTER	Darin Franklin		
1.00	OPER ASSIST	George Wright		
ACCOUNT				
IDR03				
4455.77 Amount S. (sg) = 1-32				
3.344.0001				

Subtotal	6,480.45
Sales Tax	243.43
Total Invoice Amount	6,723.88
Payment/Credit Applied	
<b>TOTAL</b>	<b>6,723.88</b>

ALL PRICES ARE NET, PAYABLE  
30 DAYS FOLLOWING DATE OF  
INVOICE. 1 1/2% CHARGED  
THEREAFTER. IF ACCOUNT IS  
CURRENT, TAKE DISCOUNT OF

**\$2268.16**

ONLY IF PAID ON OR BEFORE  
Mar 12, 2012

(3368.16)

4455.72

# ALLIED CEMENTING CO., LLC. 037938

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:

*Medicine Lodge, KS*

DATE <i>2-14-2012</i>	SEC. <i>32</i>	TWP. <i>30S</i>	RANGE <i>3W</i>	CALLED OUT <i>11:00 AM</i>	ON LOCATION <i>12:30 PM</i>	JOB START COUNTY <i>Sommer</i>	JOB FINISH STATE <i>KS</i>
LEASE # <i>A-198-Unit</i>		WELL # <i>1-32</i>		LOCATION <i>Census Spr. nss for</i>			
OLD OR NEW (Circle one) <i>NEW</i> <i>3/4 west-north</i>							

CONTRACTOR *Muskerick Hole* OWNER *Muskerick Drilling*

TYPE OF JOB *Service*

HOLE SIZE *12 1/4* T.D. *263'*

CASING SIZE *8 3/8* DEPTH *263'*

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX. MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. *261*

PERFS.

DISPLACEMENT *1.5 bbls fresh water*

EQUIPMENT

- PUMP TRUCK CEMENTER *Dean F*
- #518 HELPER *Beto, Lessy, Virsi*
- BULK TRUCK DRIVER *George L*
- #324
- BULK TRUCK DRIVER

REMARKS:  
*Pipe on bottom & broer circulation pump 3 bbls water, sand, mix 1800 cement, replace 15 bbls fresh water, cement & water to cellar*

CEMENT AMOUNT ORDERED *190 sacks Class A at 2926.01*

*3 bbls*

COMMON CLASS <i>B</i>	190 SF	@	16.25	3,087.50
POZ MIX		@		
GEL	4.5x	@	21.25	95.00
CHLORIDE	7.5x	@	58.20	467.40
ASC		@		
HANDLING	201	@	2.25	452.25
MILEAGE	201/11/30	@		663.30
TOTAL				4698.45

DEPTH OF JOB	263'
PUMP TRUCK CHARGE	1125.00
EXTRA FOOTAGE	
MILEAGE	60 @ 7.00 = 420.00
MANIFOLD SWAGLE + DRIVE	
Light vehicle	60 @ 4.00 = 240.00
TOTAL	1785.00

CHARGE TO: *Muskerick Drilling*

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PLUG & FLOAT EQUIPMENT

ITEM	QTY	PRICE	TOTAL

To Allied Cementing Co., LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (if Any)	
TOTAL CHARGES	6480.45
DISCOUNT	

PRINTED NAME *George L. Muskerick*

SIGNATURE *George L. Muskerick*

Net *95,184.36*

IF PAID IN 30 DAYS



PO Box 93999  
Southlake, TX 76092

Voice: (817) 546-7282  
Fax: (817) 246-3361

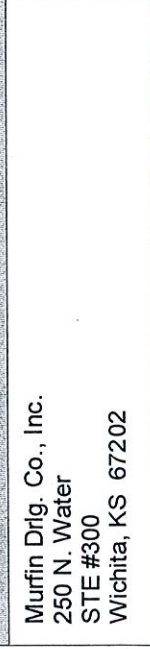
**Bill To:**

Murfin Drig. Co., Inc.  
250 N. Water  
STE #300  
Wichita, KS 67202

*acct  
Sig. H.*

# INVOICE

Invoice Number: 130244  
Invoice Date: Feb 25, 2012  
Page: 1



Federal Tax I.D.#: 20-8651475

Customer ID	Well Name # or Customer P.O.	Payment Terms
Murfin	Hilger Unit # 1-32	Net 30 Days
Job Location	Camp Location	Service Date
KS2-02	Medicine Lodge	Feb 25, 2012
		Due Date
		3/26/12

Quantity	Item	Description	Unit Price	Amount
220.00	MAT	Class A Common	16.25	3,575.00
20.00	MAT	Pozmix	8.50	170.00
2.00	MAT	Gel	21.25	42.50
950.00	MAT	Gilsonite	0.89	845.50
53.00	MAT	FL160	17.20	911.60
2.00	MAT	Defoamer	8.90	17.80
500.00	MAT	ASF	1.27	635.00
286.00	SER	Handling	2.25	643.50
30.00	SER	Mileage	31.46	943.80
1.00	SER	Production	2,405.00	2,405.00
30.00	SER	Heavy Vehicle Mileage	7.00	210.00
1.00	SER	Manifold Head Rental	200.00	200.00
30.00	SER	Light Vehicle Mileage	4.00	120.00
1.00	EQP	5 1/2 AFU Float Shoe	349.00	349.00
1.00	EQP	5 1/2 Latch Down Plug	277.00	277.00
1.00	EQP	5 1/2 Basket	337.00	337.00
10.00	EQP	5 1/2 Scratchers	118.00	1,180.00
10.00	EQP	5 1/2 Turbolizers	80.00	800.00
1.00	CEMENTER	Darin Franklin		
1.00	EQUIP OPER	Jason Thimesch		
1.00	OPER ASSIST	Derek Gibbons		

Subtotal	13,662.70
Sales Tax	621.55
Total Invoice Amount	14,284.25
Payment/Credit Applied	
<b>TOTAL</b>	<b>14,284.25</b>

ALL PRICES ARE NET, PAYABLE  
30 DAYS FOLLOWING DATE OF  
INVOICE. 1 1/2% CHARGED  
THEREAFTER. IF ACCOUNT IS  
CURRENT, TAKE DISCOUNT OF  
**\$ 4981.95**  
ONLY IF PAID ON OR BEFORE  
**Mar 21, 2012**

*Q (LW)*



# ALLIED CEMENTING CO., LLC. 037941

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:

Med. C. W. Lodge Jr

DATE	22252012	SEC	32	TWP.	30S	RANGE	3W	CALLED OUT	ON LOCATION	4:00pm	JOB START	8:45pm	JOB FINISH	9:30pm
HIGHER LEASE	Ch. 7	WELL #	1-32	LOCATION Conway Springs & Pgr 911e1				COUNTY	Sumner	STATE	KS			
OLD OR NEW	(Circle one)	3/4 water, n/in +												

CONTRACTOR Mqvericic #106

OWNER Murkin Drilling

TYPE OF JOB Production  
HOLE SIZE 7 7/8 T.D. 4450'  
CASING SIZE 5 7/8 15.5# DEPTH 4445'  
TUBING SIZE DEPTH  
DRILL PIPE DEPTH  
TOOL DEPTH  
PRES. MAX MINIMUM  
MEAS. LINE SHOE JOINT 21'  
CEMENT LEFT IN CSG.  
PERFS.  
DISPLACEMENT 107 bbls of fresh water

EQUIPMENT

PUMP TRUCK CEMENTER Darrin F.  
#360-265 HELPER Jenson T.  
BULK TRUCK  
#356-290 DRIVER Derik G.  
BULK TRUCK  
# DRIVER

REMARKS:

Pipe on bottom & brock circulation pump  
Shut water, 500gals ASF 5 bbls water,  
mix 500g for Rest mouse holes, mix 200g  
Cement, shut down, wash pump & lines  
Release plug, start displacement, lift  
Pressure to 20 bbls, slow rate to 3 bpm  
to 95 bbls, bump plug & 107 bbls 900-1500  
psi float & hold

COMMON	Class A 220	@	16.25	3,575.00
POZMIX	20sr	@	5.50	170.00
GEL	2sr	@	21.25	42.50
CHLORIDE		@		
ASC		@		
G. Isonite	950#	@	0.89	845.50
Fl 160	53#	@	17.20	911.60
Defosmer	2#	@	8.90	17.80
ASF	500gals	@	1.27	635.00
		@		
		@		
		@		
HANDLING	286	@	2.25	643.50
MILEAGE	286/11/30			943.80
			TOTAL	7,784.70

SERVICE

DEPTH OF JOB	4445'			2405
PUMP TRUCK CHARGE				
EXTRA FOOTAGE				
MILEAGE	30	@	7.00	210.00
MANIFOLD HESS RENTAL		@		200.00
L. SH. VEHICLE	30	@	4.00	120.00
		@		

CHARGE TO: Murkin Drilling  
STREET 3490 W. Jones Ave  
COPARDEH CITY STATE KS ZIP 67840

TOTAL 2,935.00

PLUG & FLOAT EQUIPMENT

1-AFU Float Shoe	@	349.00
1-Latch Down Plug	@	272.00
1-BSS ket	@	337.00
KS -Scratchers	@	1,180.00
16-Tur bell zers	@	800.00
		TOTAL 2,943.00

To Allied Cementing Co., LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (if Any) \_\_\_\_\_  
TOTAL CHARGES 13,663.70

PRINTED NAME James Esquivel  
SIGNATURE James Esquivel

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

Net 8,886.76