



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1077208  
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: \_\_\_\_\_

1077208

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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:  Yes  No

Date of First, Resumed Production, SWD or ENHR: \_\_\_\_\_ Producing Method:  Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

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> _____ <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

March 26, 2012

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

Re: ACO1  
API 15-191-22641-00-00  
Hilger Trust 1-32  
NW/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 Trust #1-32 1460 FNL 1950 FWL Sec. 32-T30S-R3W 1383' KB							Hilger #32-3 C NE NW Sec. 32-10S-3W 1382' KB	
Formation	Sample tops	Datum	Ref	Log Tops	Datum	Ref	Log Tops	Datum
Douglas				2782	-1399	-1	2780	-1398
Stalnaker SD	3007	-1624	-5	3006	-1623	-4	3001	-1619
Lansing G	3296	-1913	-4	3294	-1911	-2	3291	-1909
Lansing H	3310	-1927	-7	3306	-1923	-3	3302	-1920
Stark	3425	-2042	-6	3422	-2039	-3	3418	-2036
BKC	3506	-2123	-7	3504	-2121	-5	3498	-2116
Marmaton	3598	-2215	-7	3589	-2206	+2	3590	-2208
Pawnee	3686	-2303	-8	3683	-2300	-5	3677	-2295
Cherokee	3766	-2383	-9	3762	-2379	-5	3756	-2374
Mississippian	3919	-2536	-10	3914	-2531	-5	3908	-2526
Kinderhook	4254	-2871	-11	4250	-2867	-7	4242	-2860
Simpson SD	4332	-2949	-11	4328	-2945	-7	4320	-2938
RTD	4415	-3032					4377	-2995
LTD				4413	-3030			

# Jeff Christian

## PETROLEUM GEOLOGIST

Wichita, Kansas

### GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

OPERATOR: MURETIN DRILLING COMPANY  
 LEASE: HILGER TRUST # 1-32  
 LOCATION: 1460' FWL & 1950' FWL

SEC: 32 TWP: 30 S RANG: 3 W  
 COUNTY: SUMNER STATE: KANSAS  
 FIELD: CONWAY WEST

APR: 15-191-22641  
 CONTRACTOR: MAVERICK DRILLING  
 DRILLING STARTED: 02-01-2012  
 MUD DISPLACED: 29.60 MUD TYPE: CHEMICAL  
 DRILLING TIME KEPT FROM: 2800 TO RTD  
 SAMPLES SAVED FROM: 2800 TO RTD  
 SAMPLES EXAMINED FROM: 2874 TO RTD  
 GEOLOGICAL SUPERVISION FROM: 2874 TO RTD

Surface: B. 8.8' @ 342'  
 W/ 193 SX  
 Production: NONE  
 Completion: NONE

MEASUREMENTS FROM: B.  
 CASING RECORD  
 Condition: NONE

ELEVATIONS  
 RB: 1383'  
 GL: 1374'

FORMATION	LOG	SAMPLE	MEI		
NAME	TOP	DATUM	TOP	DATUM	BKCS
STALNAKER	3013' (-1630)	3015'	(1613)		
KANSAS CITY	3294' (-1911)	3296'	(1913)		
STARK	3482' (-2029)	3485'	(2042)		
BK	3504' (-2121)	3506'	(2133)		
CHEROKEE	3762' (-2379)	3766'	(2383)		
MISSISSIPPIAN	3914' (-2531)	3919'	(2536)		
KINDERHOOK	4250' (-2867)	4254'	(2871)		
SIMPSON SAND	4388' (-2995)	4332'	(2949)		
TOTAL DEPTH	4413' (-3030)	4415'	(3032)		

DATE	7:00 AM DEPTH	REMARKS
4/1/12	0	MIRT
4/2/12	0	SPUD 10:15 am
2/3/12	268'	WOC dev. 3/4 deg.
2/4/12	1540'	DRLG.
2/5/12	2874'	Work on MUD PUMP
2/6/12	3320'	TIH for DST #1 dev. 1/4 deg.
2/7/12	3446'	DST # 2
2/8/12	3750'	DRLG.
2/9/12	3973'	DST # 3
2/10/12	4334'	TOH for DST # 4
2/11/12	4415'	LOGGING RTD 4415' @ 1:30 am dev. 1 1/4 deg.

**Remarks**

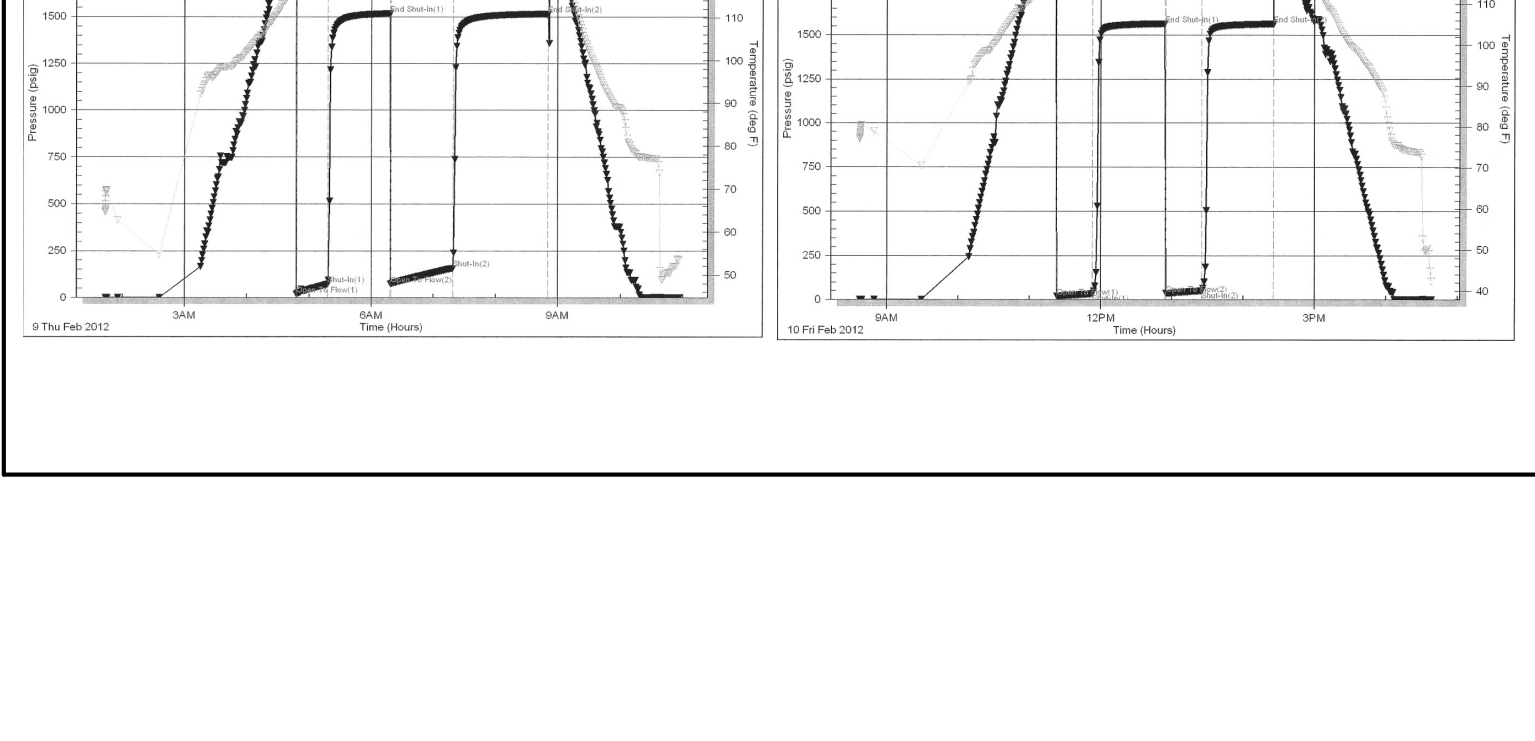
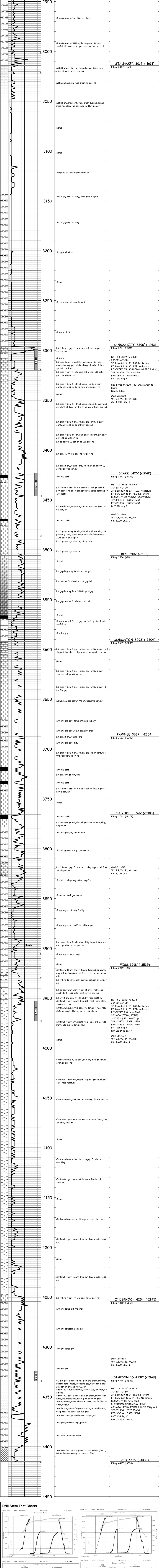
The Hilger Trust # 1-32 was declared dry and abandoned. See Report.

Electric log measurements correlate about 2' to 4' high compared to rotary measurements. Sample tops adjusted to the electric log.

Samples deposited at the Kansas Geological Survey.

Respectfully submitted,

*Jeff Christian*  
 Jeff Christian





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water Ste 300  
Wichita, KS 67202

ATTN: Jeff Christian

### **Hilgers Trust #1-32**

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

Start Date: 2012.02.06 @ 05:38:20

End Date: 2012.02.06 @ 14:18:05

Job Ticket #: 44149                      DST #: 1

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

Printed: 2012.02.15 @ 09:48:57

Murfin Drilling Co  
32-30s-3w Sumner,KS  
Hilgers Trust #1-32  
DST # 1  
LKC "H"  
2012.02.06



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co  
 250 N Water Ste 300  
 Wichita, KS 67202  
 ATTN: Jeff Christian

**32-30s-3w Sumner, KS**  
**Hilgers Trust #1-32**  
 Job Ticket: 44149 **DST#: 1**  
 Test Start: 2012.02.06 @ 05:38:20

## GENERAL INFORMATION:

Formation: **LKC "H"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:28:20  
 Time Test Ended: 14:18:05  
 Interval: **3299.00 ft (KB) To 3320.00 ft (KB) (TVD)**  
 Total Depth: 3320.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Leal Cason  
 Unit No: 45  
 Reference Elevations: 1383.00 ft (KB)  
 1374.00 ft (CF)  
 KB to GR/CF: 9.00 ft

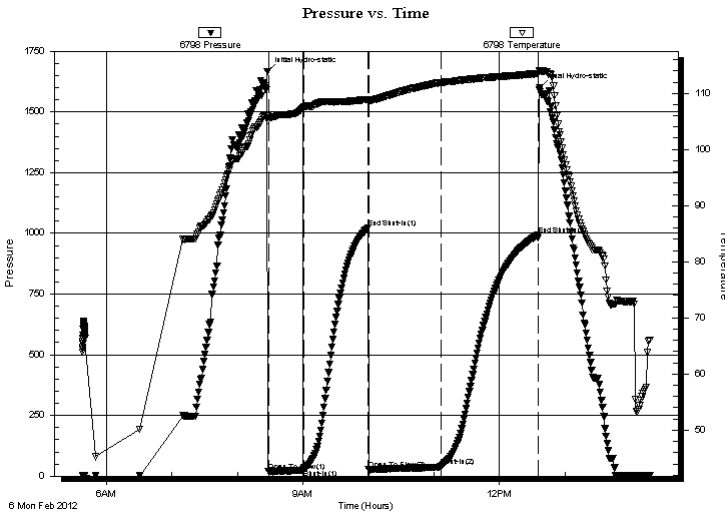
## Serial #: 6798

Inside

Press @ Run Depth: 41.37 psig @ 3300.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.02.06 End Date: 2012.02.06 Last Calib.: 2012.02.06  
 Start Time: 05:38:21 End Time: 14:18:05 Time On Btm: 2012.02.06 @ 08:27:20  
 Time Off Btm: 2012.02.06 @ 12:36:50

TEST COMMENT: IF: Weak Blow, 4 inches  
 IS: No Blow Back  
 FF: Weak Blow, 4 inches  
 FS: No Blow Back

## PRESSURE SUMMARY



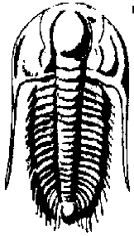
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1667.36	106.05	Initial Hydro-static
1	19.03	105.13	Open To Flow (1)
34	29.60	107.48	Shut-In(1)
93	1023.41	108.93	End Shut-In(1)
93	28.06	108.61	Open To Flow (2)
159	41.37	111.90	Shut-In(2)
248	993.07	113.51	End Shut-In(2)
250	1599.47	114.05	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
35.00	SOGCM 2%G 5%O 93%M	0.49

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

Murfin Drilling Co

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

250 N Water Ste 300  
Wichita, KS 67202

**Hilgers Trust #1-32**

Job Ticket: 44149

**DST#: 1**

ATTN: Jeff Christian

Test Start: 2012.02.06 @ 05:38:20

**GENERAL INFORMATION:**

Formation: **LKC "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:28:20

Time Test Ended: 14:18:05

Interval: **3299.00 ft (KB) To 3320.00 ft (KB) (TVD)**

Total Depth: 3320.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Initial)

Tester: Leal Cason

Unit No: 45

Reference Elevations: 1383.00 ft (KB)

1374.00 ft (CF)

KB to GR/CF: 9.00 ft

**Serial #: 8367 Outside**

Press @ Run Depth: psig @ 3300.00 ft (KB)

Start Date: 2012.02.06

End Date:

2012.02.06

Capacity: 8000.00 psig

Last Calib.:

2012.02.06

Start Time: 05:38:21

End Time:

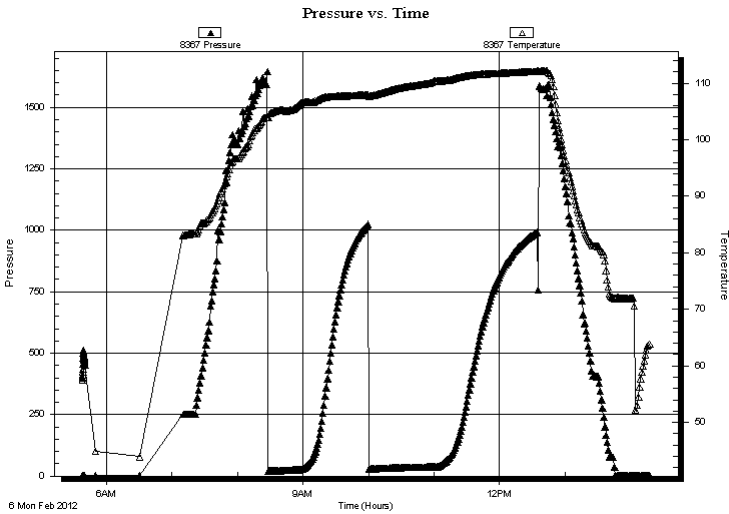
14:18:05

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF: Weak Blow, 4 inches  
IS: No Blow Back  
FF: Weak Blow, 4 inches  
FS: No Blow Back

**PRESSURE SUMMARY**



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

**Recovery**

Length (ft)	Description	Volume (bbl)
35.00	SOGCM 2%G 5%O 93%M	0.49

**Gas Rates**

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co

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

250 N Water Ste 300  
Wichita, KS 67202

**Hilgers Trust #1-32**

Job Ticket: 44149

**DST#: 1**

ATTN: Jeff Christian

Test Start: 2012.02.06 @ 05:38:20

## Tool Information

Drill Pipe:	Length: 3301.00 ft	Diameter: 3.80 inches	Volume: 46.30 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 46.30 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3299.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	48.00 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			3277.00	
Hydraulic tool	5.00			3282.00	
Jars	5.00			3287.00	
Safety Joint	2.00			3289.00	
Packer	5.00			3294.00	27.00 Bottom Of Top Packer
Packer	5.00			3299.00	
Stubb	1.00			3300.00	
Recorder	0.00	6798	Inside	3300.00	
Recorder	0.00	8367	Outside	3300.00	
Perforations	17.00			3317.00	
Bullnose	3.00			3320.00	21.00 Bottom Packers & Anchor

**Total Tool Length: 48.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co

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

250 N Water Ste 300  
Wichita, KS 67202

**Hilgers Trust #1-32**

Job Ticket: 44149

**DST#: 1**

ATTN: Jeff Christian

Test Start: 2012.02.06 @ 05:38:20

## 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: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
35.00	SOGCM2%G 5%O 93%M	0.491

Total Length: 35.00 ft      Total Volume: 0.491 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

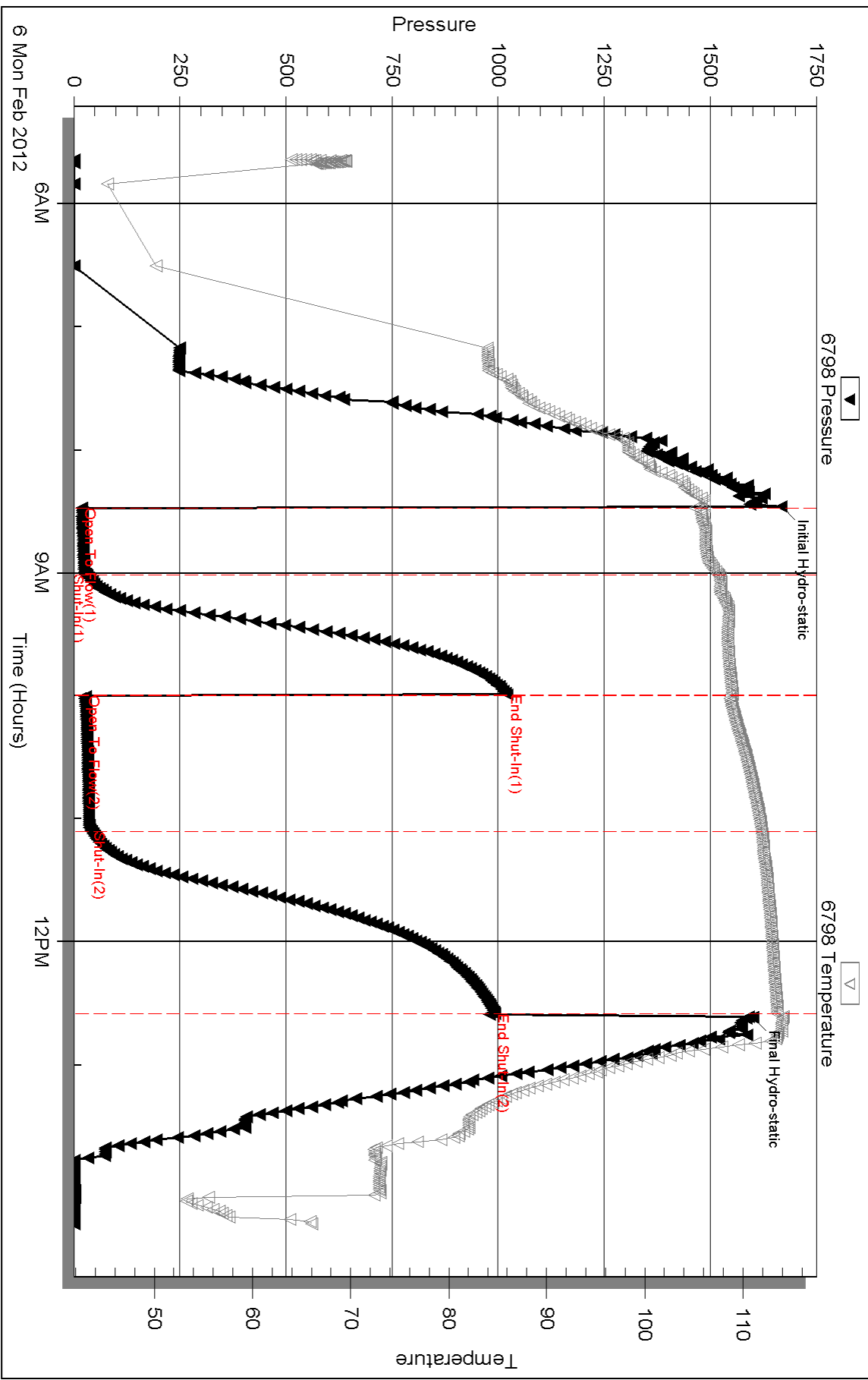
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

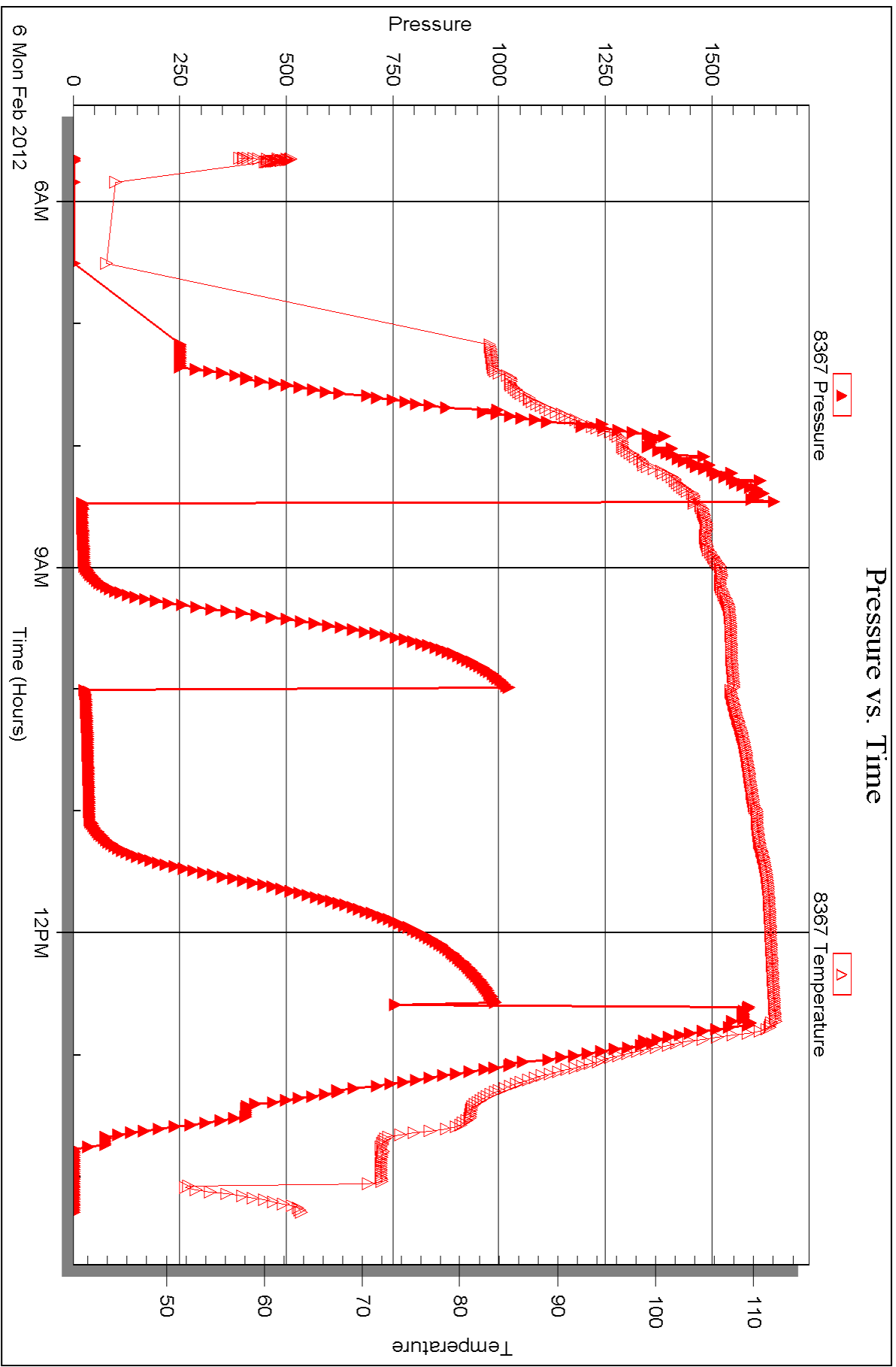


Serial #: 8367

Outside Murfin Drilling Co

Higers Trust #1-32

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 44149

Printed: 2012.02.15 @ 09:48:59



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water Ste 300  
Wichita, KS 67202

ATTN: Jeff Christian

### **Hilgers Trust #1-32**

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

Start Date: 2012.02.07 @ 02:05:09

End Date: 2012.02.07 @ 10:07:54

Job Ticket #: 44150                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.02.15 @ 09:48:19

Murfin Drilling Co  
32-30s-3w Sumner,KS  
Hilgers Trust #1-32  
DST # 2  
LKC "K"  
2012.02.07



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co

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

250 N Water Ste 300  
Wichita, KS 67202

**Hilgers Trust #1-32**

ATTN: Jeff Christian

Job Ticket: 44150

**DST#: 2**

Test Start: 2012.02.07 @ 02:05:09

## GENERAL INFORMATION:

Formation: **LKC "K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:25:09

Time Test Ended: 10:07:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

**Interval: 3423.00 ft (KB) To 3446.00 ft (KB) (TVD)**

Reference Elevations: 1383.00 ft (KB)

Total Depth: 3446.00 ft (KB) (TVD)

1374.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

**Serial #: 6798 Inside**

Press @ Run Depth: 35.57 psig @ 3424.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.07

End Date:

2012.02.07

Last Calib.:

2012.02.07

Start Time: 02:05:10

End Time:

10:07:54

Time On Btm:

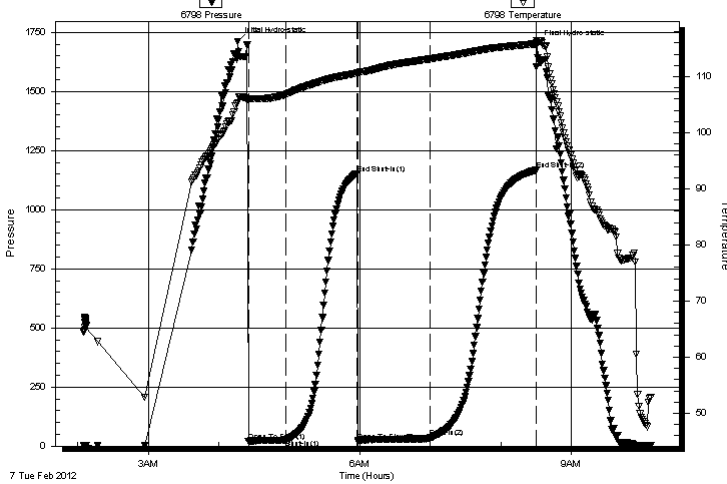
2012.02.07 @ 04:16:09

Time Off Btm:

2012.02.07 @ 08:30:24

**TEST COMMENT:** IF: Weak Blow, 3/4 inch  
IS: No Blow Back  
FF: Weak Blow, 1 inch  
FS: No Blow Back

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1712.49	105.33	Initial Hydro-static
9	20.04	105.75	Open To Flow (1)
41	26.94	106.81	Shut-In(1)
101	1153.26	110.60	End Shut-In(1)
103	21.56	110.70	Open To Flow (2)
164	35.57	113.17	Shut-In(2)
254	1167.36	115.85	End Shut-In(2)
255	1699.03	116.46	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	SOCM 2%O 98%M	0.42

## Gas Rates

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

\* Recovery from multiple tests



# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

Murfin Drilling Co

32-30s-3w Sumner, KS

250 N Water Ste 300  
Wichita, KS 67202

Hilgers Trust #1-32

Job Ticket: 44150

DST#: 2

ATTN: Jeff Christian

Test Start: 2012.02.07 @ 02:05:09

### GENERAL INFORMATION:

Formation: **LKC "K"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 04:25:09  
 Tester: Leal Cason  
 Time Test Ended: 10:07:54  
 Unit No: 45  
 Interval: **3423.00 ft (KB) To 3446.00 ft (KB) (TVD)**  
 Reference Elevations: 1383.00 ft (KB)  
 Total Depth: 3446.00 ft (KB) (TVD)  
 1374.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Good  
 KB to GR/CF: 9.00 ft

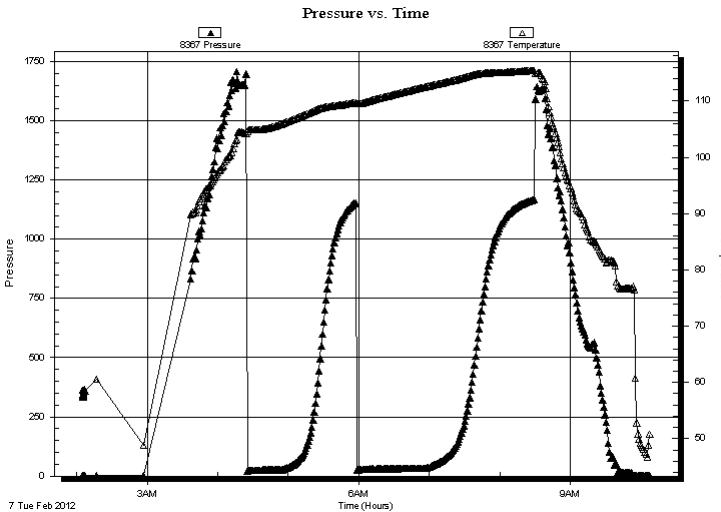
### Serial #: 8367

### Outside

Press@RunDepth: psig @ 3424.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.02.07 End Date: 2012.02.07 Last Calib.: 2012.02.07  
 Start Time: 02:05:10 End Time: 10:07:54 Time On Btm:  
 Time Off Btm:

TEST COMMENT: IF: Weak Blow, 3/4 inch  
 IS: No Blow Back  
 FF: Weak Blow, 1 inch  
 FS: No Blow Back

### PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

### Recovery

Length (ft)	Description	Volume (bbl)
30.00	SOCM 2%O 98%M	0.42

\* 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

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

250 N Water Ste 300  
Wichita, KS 67202

**Hilgers Trust #1-32**

Job Ticket: 44150

**DST#: 2**

ATTN: Jeff Christian

Test Start: 2012.02.07 @ 02:05:09

## Tool Information

Drill Pipe:	Length: 3426.00 ft	Diameter: 3.80 inches	Volume: 48.06 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 48.06 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3423.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	50.00 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			3401.00	
Hydraulic tool	5.00			3406.00	
Jars	5.00			3411.00	
Safety Joint	2.00			3413.00	
Packer	5.00			3418.00	27.00 Bottom Of Top Packer
Packer	5.00			3423.00	
Stubb	1.00			3424.00	
Recorder	0.00	6798	Inside	3424.00	
Recorder	0.00	8367	Outside	3424.00	
Perforations	19.00			3443.00	
Bullnose	3.00			3446.00	23.00 Bottom Packers & Anchor

**Total Tool Length: 50.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co

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

250 N Water Ste 300  
Wichita, KS 67202

**Hilgers Trust #1-32**

Job Ticket: 44150

**DST#: 2**

ATTN: Jeff Christian

Test Start: 2012.02.07 @ 02:05:09

## 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: 48.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4200.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	SOCM2%O 98%M	0.421

Total Length: 30.00 ft      Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

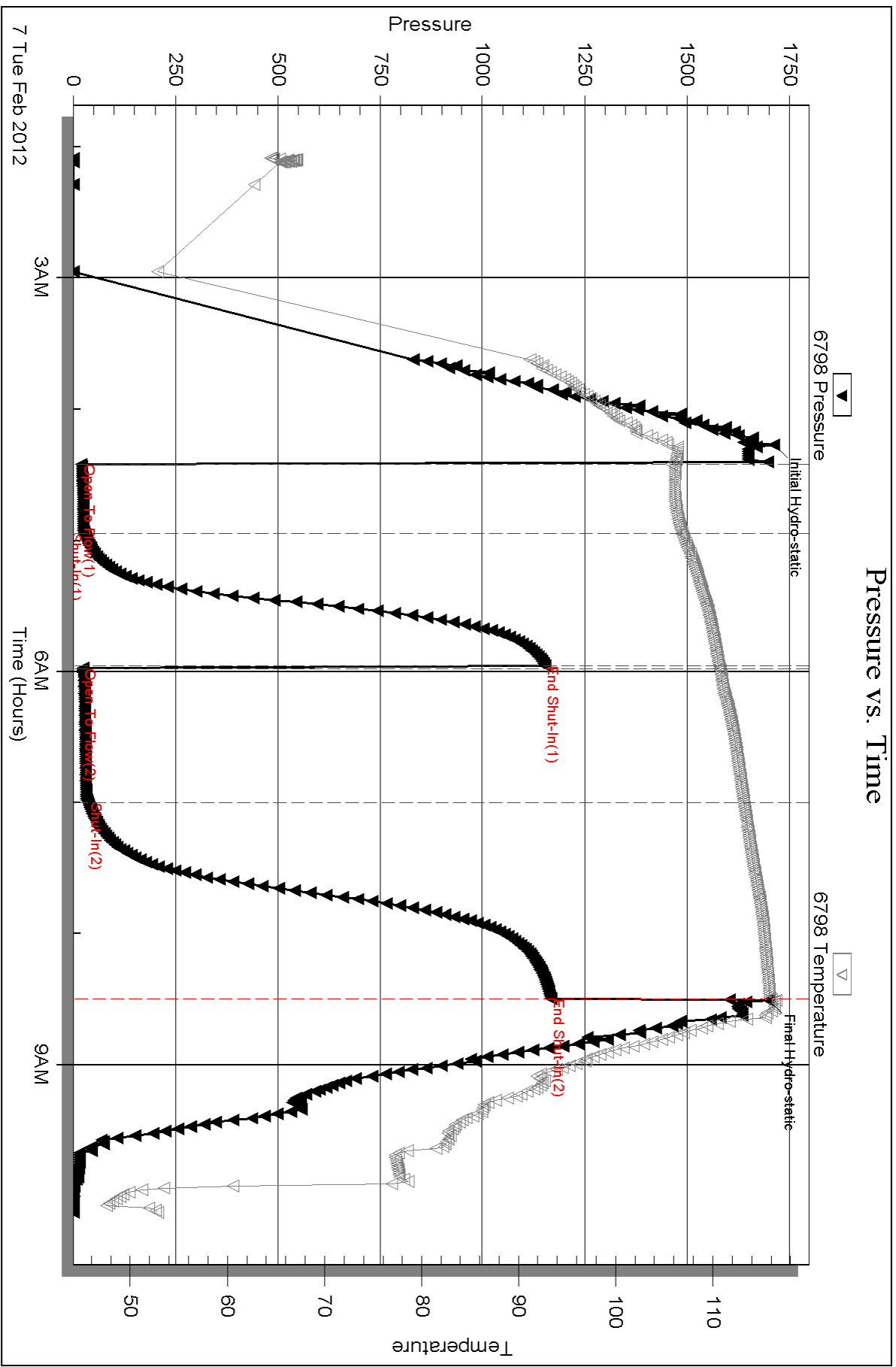
Serial #: 6798

Inside

Murfin Drilling Co

Higers Trust #1-32

DST Test Number: 2

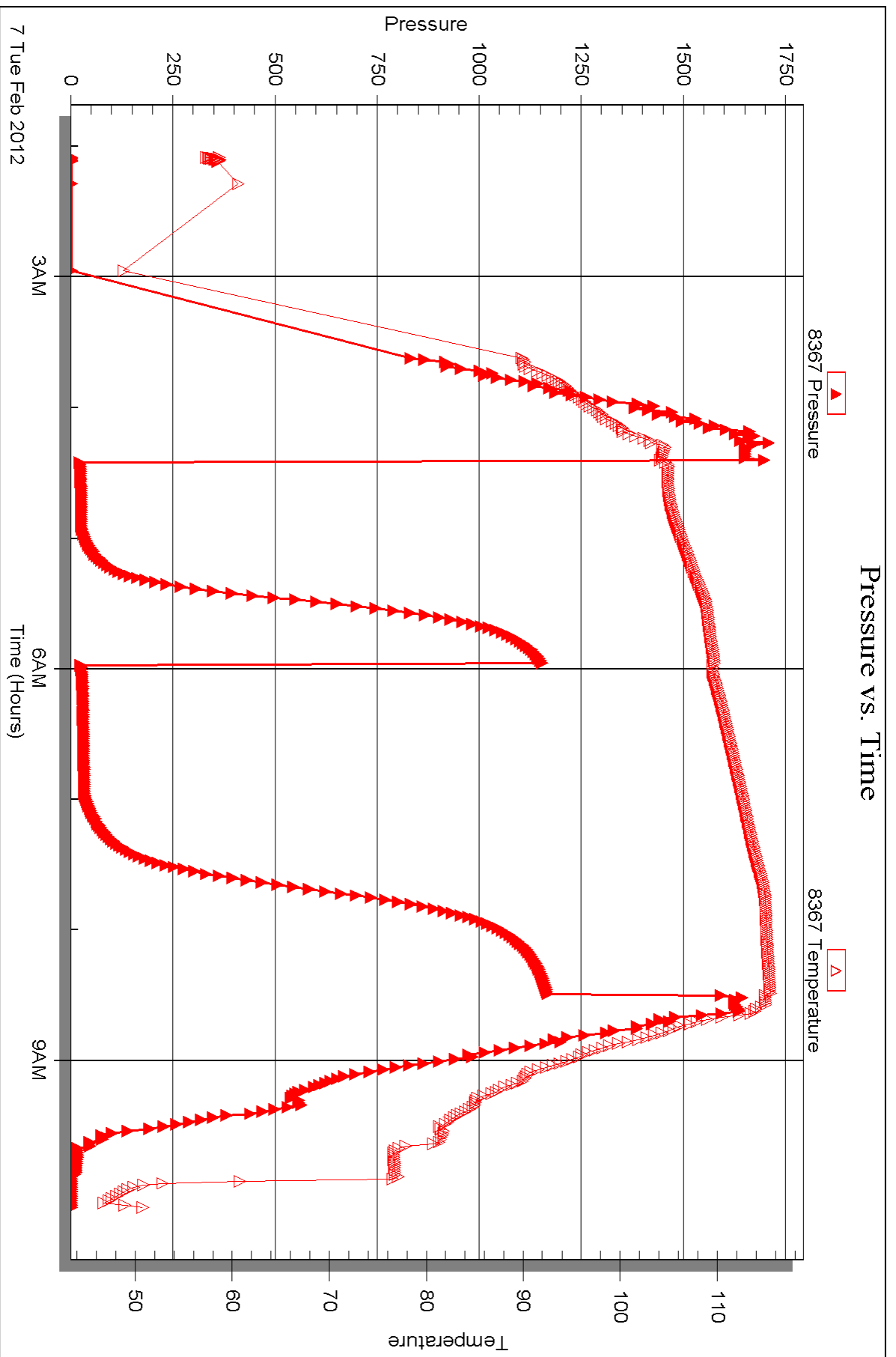


Serial #: 8367

Outside Murfin Drilling Co

Higers Trust #1-32

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water Ste 300  
Wichita, KS 67202

ATTN: Jeff Christian

### **Hilgers Trust #1-32**

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

Start Date: 2012.02.09 @ 01:43:20

End Date: 2012.02.09 @ 10:56:35

Job Ticket #: 44151                      DST #: 3

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

Printed: 2012.02.15 @ 09:47:38



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co

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

250 N Water Ste 300  
Wichita, KS 67202

**Hilgers Trust #1-32**

ATTN: Jeff Christian

Job Ticket: 44151

**DST#: 3**

Test Start: 2012.02.09 @ 01:43:20

## GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:47:35

Time Test Ended: 10:56:35

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

**Interval: 3953.00 ft (KB) To 3973.00 ft (KB) (TVD)**

Reference Elevations: 1383.00 ft (KB)

Total Depth: 3973.00 ft (KB) (TVD)

1374.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

**Serial #: 6798**

**Inside**

Press @ Run Depth: 158.14 psig @ 3954.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.09

End Date:

2012.02.09

Last Calib.:

2012.02.09

Start Time: 01:43:21

End Time:

10:56:35

Time On Btm:

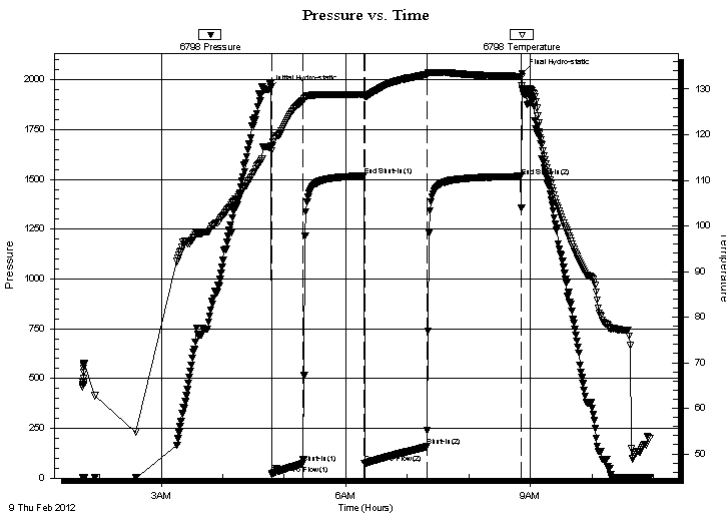
2012.02.09 @ 04:45:20

Time Off Btm:

2012.02.09 @ 08:51:50

**TEST COMMENT:** IF: Fair Blow, 5 inches  
IS: No Blow Back  
FF: Fair Blow, 6 inches  
FS: No Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1950.85	117.26	Initial Hydro-static
3	18.41	116.49	Open To Flow (1)
33	73.53	127.47	Shut-In(1)
93	1516.65	128.82	End Shut-In(1)
94	73.72	128.41	Open To Flow (2)
154	158.14	133.24	Shut-In(2)
246	1514.88	132.77	End Shut-In(2)
247	2032.46	130.78	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	Water	1.68
90.00	M CW 30% M 70% W	1.26

\* Recovery from multiple tests

## Gas Rates

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



# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

Murfin Drilling Co

250 N Water Ste 300  
Wichita, KS 67202

ATTN: Jeff Christian

32-30s-3w Sumner, KS

Hilgers Trust #1-32

Job Ticket: 44151

DST#: 3

Test Start: 2012.02.09 @ 01:43:20

### GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:47:35

Time Test Ended: 10:56:35

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

Interval: **3953.00 ft (KB) To 3973.00 ft (KB) (TVD)**

Total Depth: 3973.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1383.00 ft (KB)

1374.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: **8367** Outside

Press @ Run Depth: psig @ 3954.00 ft (KB)

Start Date: 2012.02.09

End Date:

Start Time: 01:43:21

End Time:

Capacity: 8000.00 psig

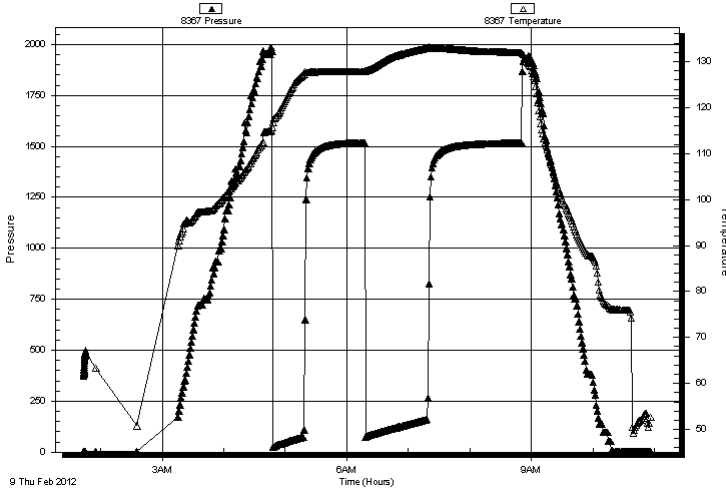
Last Calib.: 2012.02.09

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Fair Blow, 5 inches  
IS: No Blow Back  
FF: Fair Blow, 6 inches  
FS: No Blow Back

Pressure vs. Time



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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### Recovery

Length (ft)	Description	Volume (bbl)
120.00	Water	1.68
90.00	MCW 30%M 70%W	1.26

### Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co

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

250 N Water Ste 300  
Wichita, KS 67202

**Hilgers Trust #1-32**

Job Ticket: 44151

**DST#: 3**

ATTN: Jeff Christian

Test Start: 2012.02.09 @ 01:43:20

## Tool Information

Drill Pipe:	Length: 3953.00 ft	Diameter: 3.80 inches	Volume: 55.45 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 76000.00 lb
			<u>Total Volume: 55.45 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3953.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	40.00 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			3938.00	
Hydraulic tool	5.00			3943.00	
Packer	5.00			3948.00	20.00 Bottom Of Top Packer
Packer	5.00			3953.00	
Stubb	1.00			3954.00	
Recorder	0.00	6798	Inside	3954.00	
Recorder	0.00	8367	Outside	3954.00	
Perforations	16.00			3970.00	
Bullnose	3.00			3973.00	20.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>40.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co

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

250 N Water Ste 300  
Wichita, KS 67202

**Hilgers Trust #1-32**

Job Ticket: 44151

**DST#: 3**

ATTN: Jeff Christian

Test Start: 2012.02.09 @ 01:43:20

## 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: 110000 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	Water	1.683
90.00	MCW 30%M 70%W	1.262

Total Length: 210.00 ft      Total Volume: 2.945 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW was .13 @ 43 degrees



Serial #: 6798

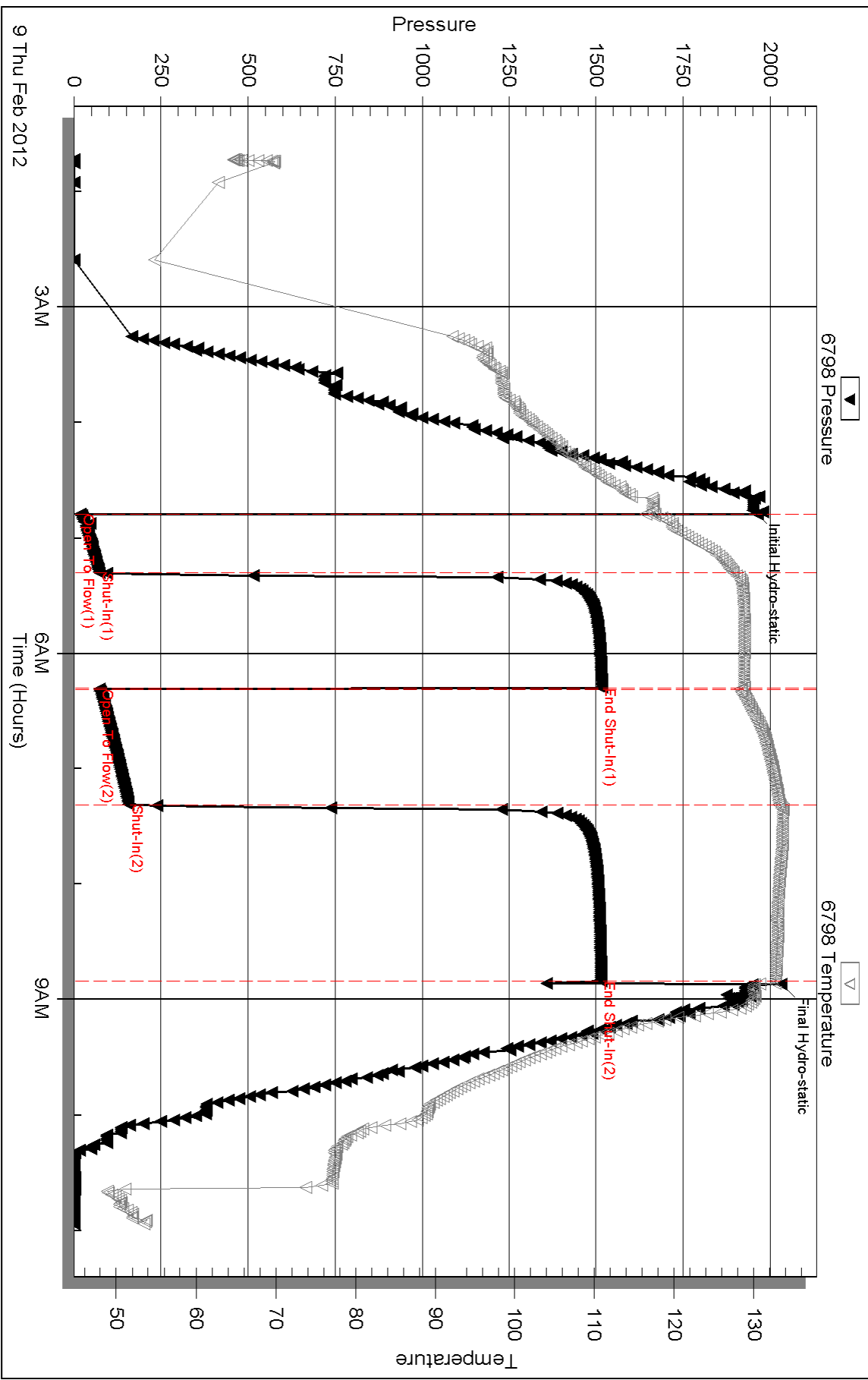
Inside

Murfin Drilling Co

Higers Trust #1-32

DST Test Number: 3

### Pressure vs. Time

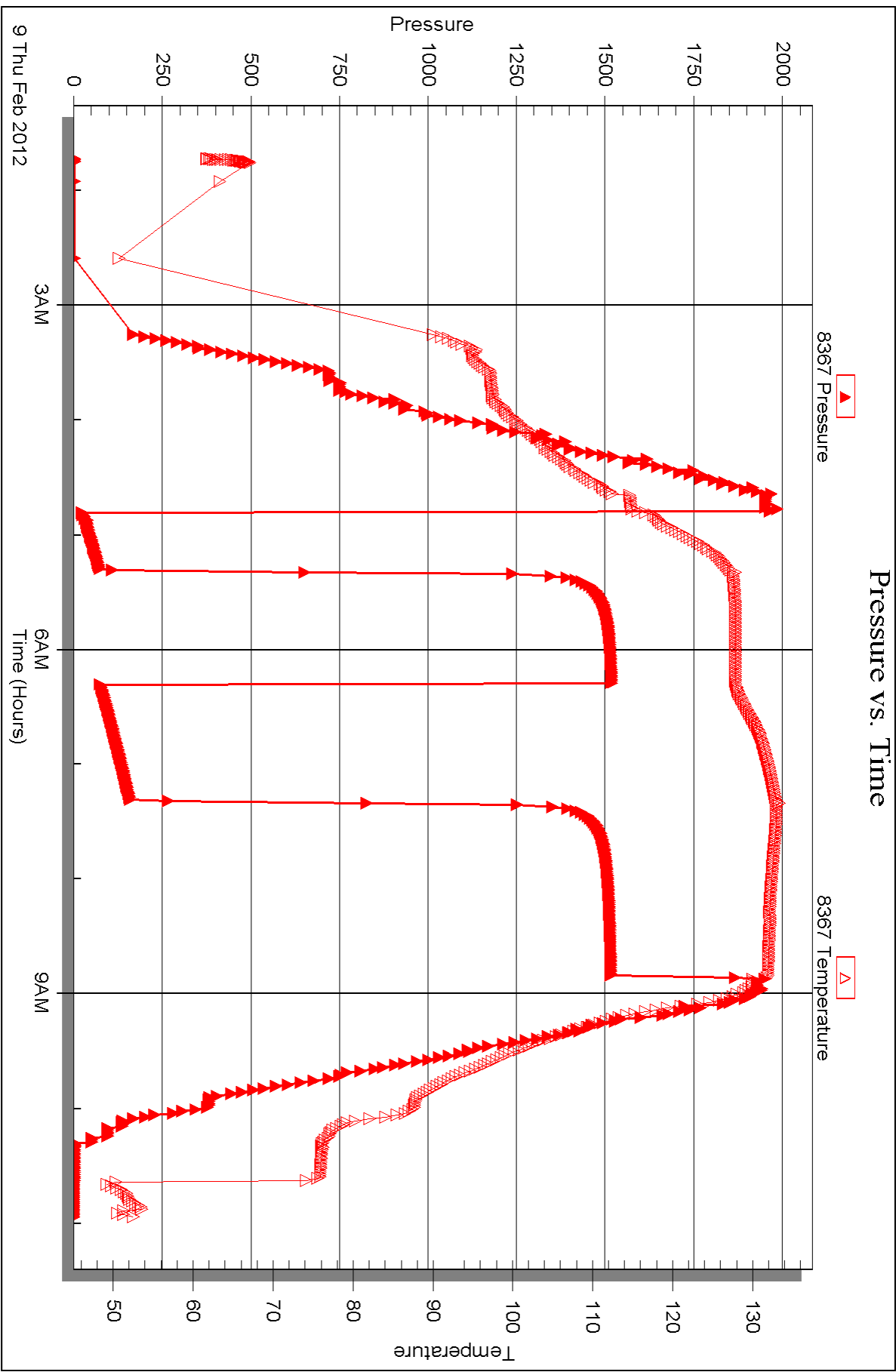


Serial #: 8367

Outside Murfin Drilling Co

Higers Trust #1-32

DST Test Number: 3





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water Ste 300  
Wichita, KS 67202

ATTN: Jeff Christian

### **Hilgers Trust #1-32**

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

Start Date: 2012.02.10 @ 08:36:51

End Date: 2012.02.10 @ 16:38:21

Job Ticket #: 45751                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.02.15 @ 09:47:01



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co

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

250 N Water Ste 300  
Wichita, KS 67202

**Hilgers Trust #1-32**

ATTN: Jeff Christian

Job Ticket: 45751

**DST#: 4**

Test Start: 2012.02.10 @ 08:36:51

## GENERAL INFORMATION:

Formation: **Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:22:51

Time Test Ended: 16:38:21

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

**Interval: 4324.00 ft (KB) To 4334.00 ft (KB) (TVD)**

Reference Elevations: 1383.00 ft (KB)

Total Depth: 4334.00 ft (KB) (TVD)

1374.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

**Serial #: 6798 Inside**

Press @ Run Depth: 50.82 psig @ 4325.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.10

End Date:

2012.02.10

Last Calib.:

2012.02.10

Start Time: 08:36:52

End Time:

16:38:21

Time On Btm:

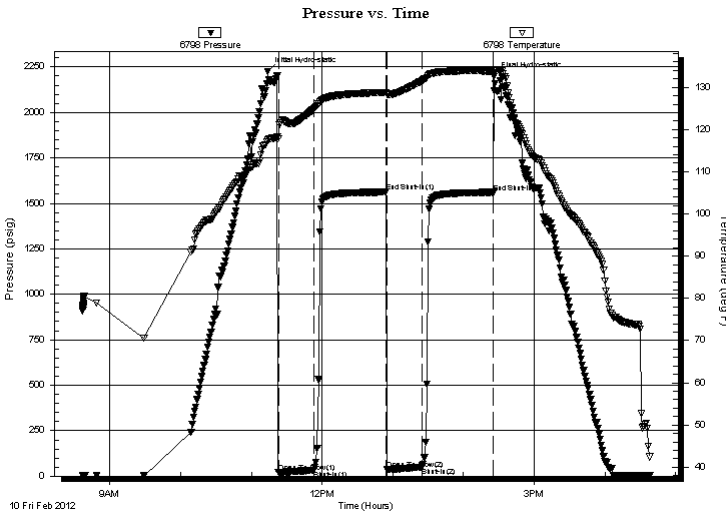
2012.02.10 @ 11:13:51

Time Off Btm:

2012.02.10 @ 14:26:06

**TEST COMMENT:** IF: Weak Blow, 2 inches  
IS: No Blow Back  
FF: Weak Blow, 3/4 Inch  
FS: No Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2226.24	117.42	Initial Hydro-static
9	19.26	117.73	Open To Flow (1)
39	33.45	124.88	Shut-In(1)
101	1562.44	128.82	End Shut-In(1)
101	36.01	128.35	Open To Flow (2)
131	50.82	131.56	Shut-In(2)
192	1561.03	133.86	End Shut-In(2)
193	2198.24	133.98	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	MCW 10%M 90%W	0.84
5.00	V SOMCW 2%O 30%M 68%W	0.07

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co

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

250 N Water Ste 300  
Wichita, KS 67202

**Hilgers Trust #1-32**

ATTN: Jeff Christian

Job Ticket: 45751

**DST#: 4**

Test Start: 2012.02.10 @ 08:36:51

## GENERAL INFORMATION:

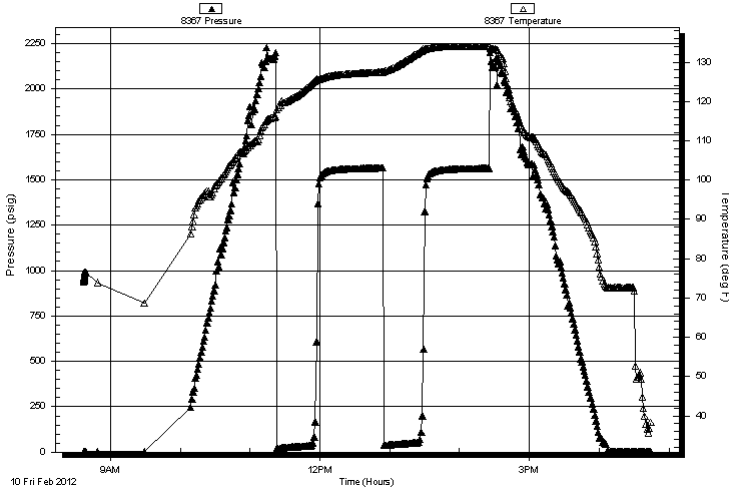
Formation: <b>Simpson</b>			
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Reset)	
Time Tool Opened: 11:22:51		Tester: Leal Cason	
Time Test Ended: 16:38:21		Unit No: 45	
<b>Interval: 4324.00 ft (KB) To 4334.00 ft (KB) (TVD)</b>		Reference Elevations: 1383.00 ft (KB)	
Total Depth: 4334.00 ft (KB) (TVD)		1374.00 ft (CF)	
Hole Diameter: 7.88 inches	Hole Condition: Good	KB to GR/CF: 9.00 ft	

## Serial #: 8367 Outside

Press@RunDepth:	psig @	4325.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2012.02.10	End Date:	2012.02.10	Last Calib.:	2012.02.10
Start Time:	08:37:07	End Time:	16:44:36	Time On Btm:	
				Time Off Btm:	

**TEST COMMENT:** IF: Weak Blow , 2 inches  
IS: No Blow Back  
FF: Weak Blow , 3/4 Inch  
FS: No Blow Back

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
-------------	-----------------	--------------	------------

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	MCW 10%M 90%W	0.84
5.00	V SOMCW 2%O 30%M 68%W	0.07

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co

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

250 N Water Ste 300  
Wichita, KS 67202

**Hilgers Trust #1-32**

Job Ticket: 45751

**DST#: 4**

ATTN: Jeff Christian

Test Start: 2012.02.10 @ 08:36:51

## Tool Information

Drill Pipe:	Length: 4334.00 ft	Diameter: 3.80 inches	Volume: 60.79 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.79 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4324.00 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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4309.00	
Hydraulic tool	5.00			4314.00	
Packer	5.00			4319.00	20.00 Bottom Of Top Packer
Packer	5.00			4324.00	
Stubb	1.00			4325.00	
Recorder	0.00	6798	Inside	4325.00	
Recorder	0.00	8367	Outside	4325.00	
Perforations	6.00			4331.00	
Bullnose	3.00			4334.00	10.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>30.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co

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

250 N Water Ste 300  
Wichita, KS 67202

**Hilgers Trust #1-32**

Job Ticket: 45751

**DST#: 4**

ATTN: Jeff Christian

Test Start: 2012.02.10 @ 08:36:51

## 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:

90000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	MCW 10%M 90%W	0.842
5.00	VSOMCW 2%O 30%M 68%W	0.070

Total Length: 65.00 ft      Total Volume: 0.912 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

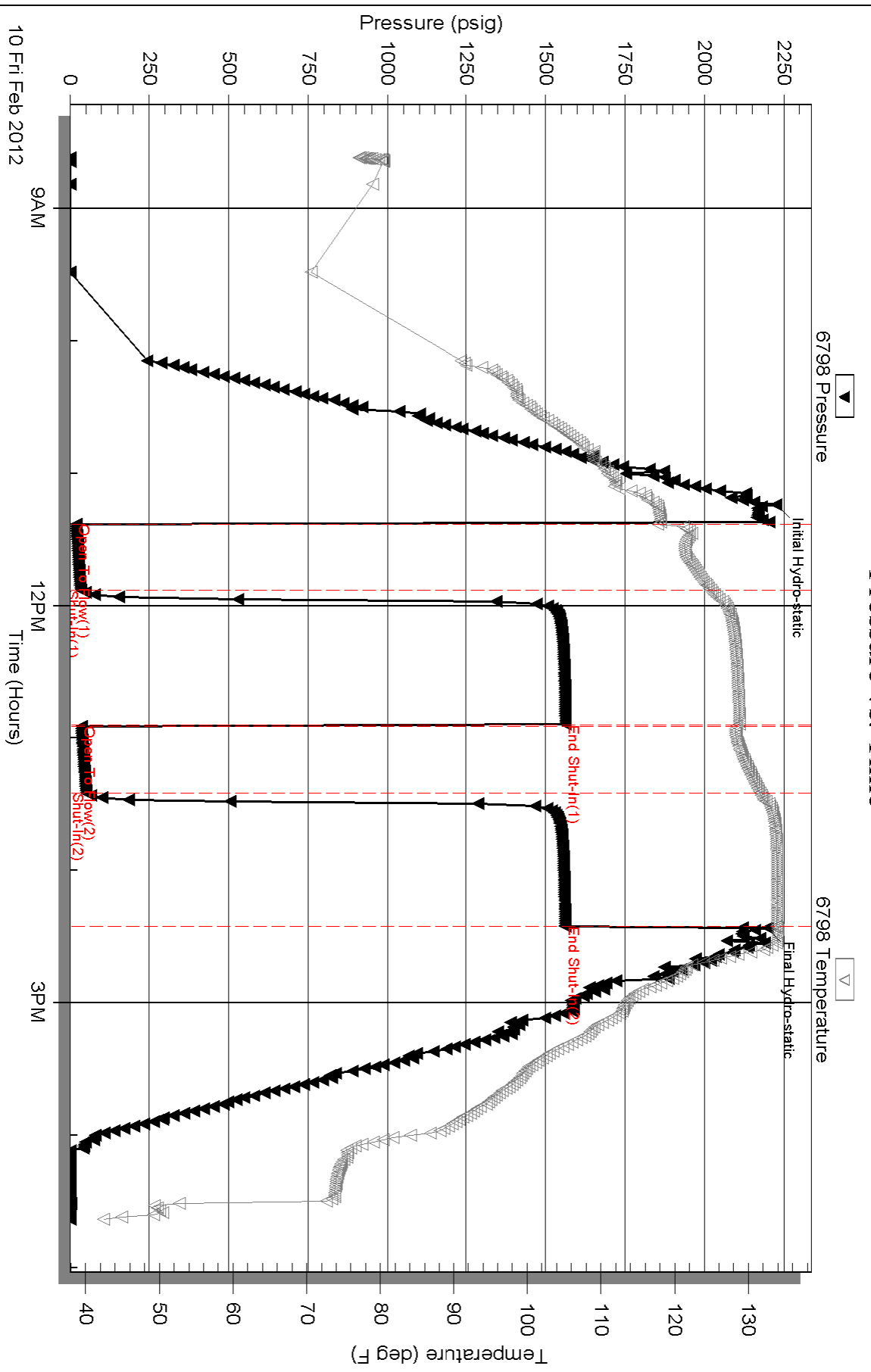
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW was .02 @ 31 degrees

# Pressure vs. Time



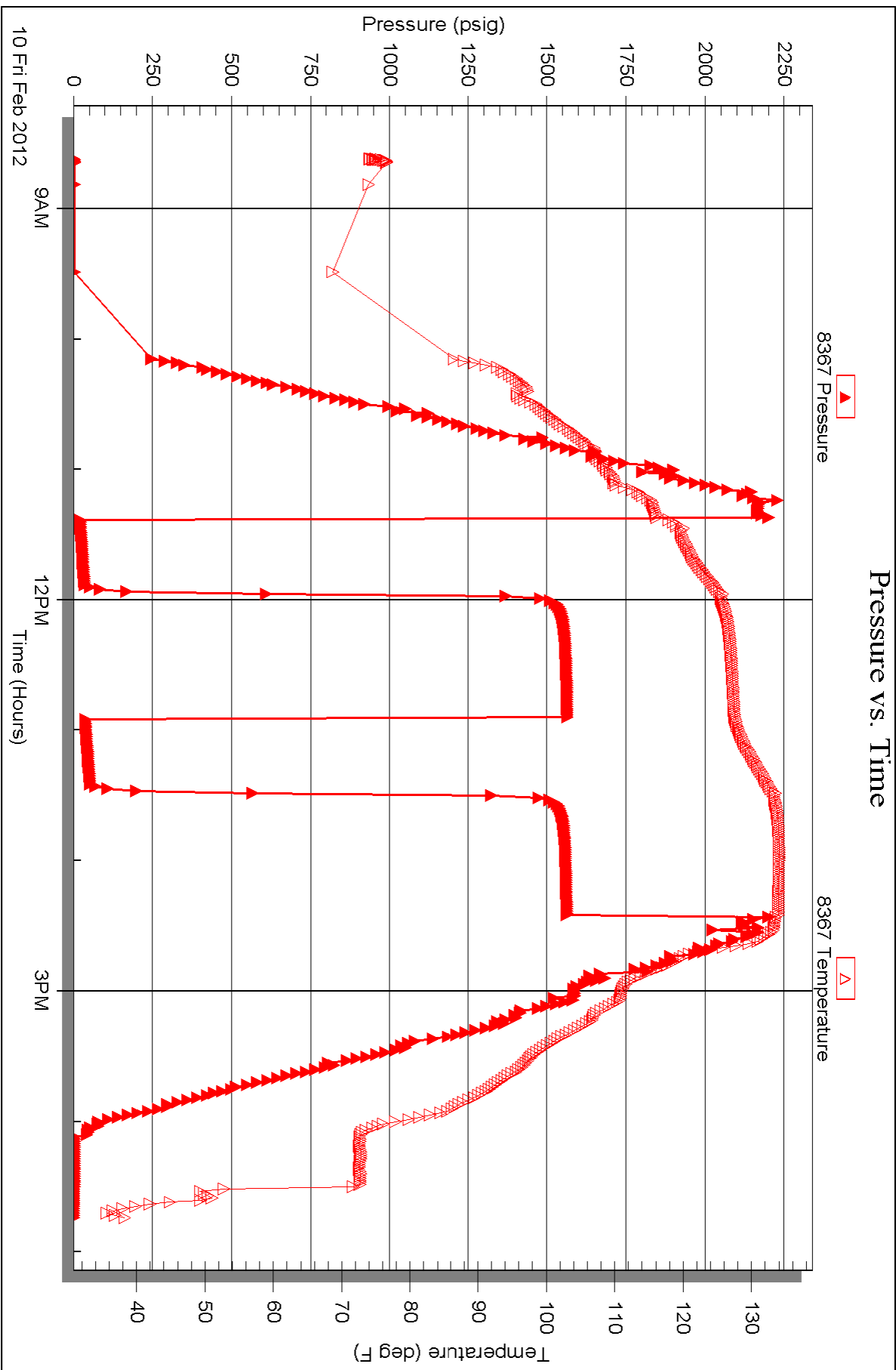


Serial #: 8367

Outside Murfin Drilling Co

Higers Trust #1-32

DST Test Number: 4





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
FEB 10 2012

## Test Ticket

NO. 44149

4/10

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

Well Name & No. Hilgers Trust 1-32 Test No. 1 Date 02/06/12  
 Company Murfin Drilling Co. Elevation 1383 KB 1374 GL  
 Address 250 N. Water Ste 300 Wichita, KS 67202  
 Co. Rep / Geo. Jeff Christian Rig Maverick 106  
 Location: Sec. 32 Twp. 30S Rge. 3W Co. Sumner State KS

Interval Tested 3299 - 3320 Zone Tested L KC "H"  
 Anchor Length 21 Drill Pipe Run 3301 Mud Wt. 9.0  
 Top Packer Depth 3294 Drill Collars Run 0 Vis 48  
 Bottom Packer Depth 3299 Wt. Pipe Run 0 WL 8.0  
 Total Depth 3320 Chlorides 4000 ppm System LCM \_\_\_\_\_

Blow Description IF: weak Blow, 4 inches  
ISI: NO Blow Back  
FF: weak Blow, 4 inches  
FST: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>35</u>	<u>50 GCM</u>	<u>2</u>	<u>5</u>	<u>93</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 35 BHT 112° Gravity N/C API RW N/C @ N/C °F Chlorides N/C ppm

(A) Initial Hydrostatic 1667  Test 1125 T-On Location 04:30  
 (B) First Initial Flow 19  Jars 255 T-Started 05:38  
 (C) First Final Flow 30  Safety Joint 75 T-Open 08:28  
 (D) Initial Shut-In 1023  Circ Sub \_\_\_\_\_ T-Pulled 12:35  
 (E) Second Initial Flow 28  Hourly Standby 3/4 hr 75 T-Out 14:18  
 (F) Second Final Flow 41  Mileage (160) 224 Comments \_\_\_\_\_  
 (G) Final Shut-In 993  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1599  Straddle \_\_\_\_\_

Ruined Shale Packer  
 Ruined Packer  
 Extra Packer  
 Extra Copies  
 Extra Recorder  
 Day Standby  
 Accessibility  
 Sub Total 1749  
 Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90  
 Sub Total 1749

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

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 of 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 10 2012

## Test Ticket

NO. 44150

4/10

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

Well Name & No. Hilgers Trust 1-32 Test No. 2 Date 02/07/12  
 Company Murfin Drilling Co. Elevation 1783 KB 1774 GL  
 Address 250 N. Water Ste 300 Wichita, KS 67202  
 Co. Rep / Geo. Jeff Christian Rig Maverick 106  
 Location: Sec. 32 Twp. 30S Rge. 3W Co. Sumner State KS

Interval Tested 3423 - 3446 Zone Tested LKC "K"  
 Anchor Length 23 Drill Pipe Run 3426 Mud Wt. 9.2  
 Top Packer Depth 3418 Drill Collars Run 0 Vis 48  
 Bottom Packer Depth 3423 Wt. Pipe Run 0 WL 8.8  
 Total Depth 3446 Chlorides 4200 ppm System LCM \_\_\_\_\_

Blow Description IF: weak Blow 3/4 inch  
FS: NO Blow Back  
FF: weak Blow 1 inch  
FS: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
30	500M	2		98	

Rec Total 30 BHT 116° Gravity N/C API RW N/C @ N/C °F Chlorides N/C ppm

(A) Initial Hydrostatic <u>1712</u>	<input checked="" type="checkbox"/> Test <u>1125</u>	T-On Location <u>01:45</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>02:05</u>
(C) First Final Flow <u>27</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>04:25</u>
(D) Initial Shut-In <u>1153</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>08:29</u>
(E) Second Initial Flow <u>21</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>10:07</u>
(F) Second Final Flow <u>35</u>	<input checked="" type="checkbox"/> Mileage <u>(160) 224</u>	Comments _____
(G) Final Shut-In <u>1167</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1699</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>96</u>	<input type="checkbox"/> Day Standby _____	Total <u>1274</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1274</u>	

Approved By [Signature] Our Representative [Signature]

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



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
FEB 10 2012

## Test Ticket

NO. 44151

4/10

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

Well Name & No. Hilgers Trust 1-32 Test No. 3 Date 02/08/12  
 Company Murfin Drilling CO Elevation 1383 KB 1374 GL  
 Address 250 N. Water Ste 300 Wichita, KS 67202  
 Co. Rep / Geo. Jeff Christian Rig Maverick 106  
 Location: Sec. 32 Twp. 30S Rge. 3W Co. Sumner State KS

Interval Tested 3953 - 3973 Zone Tested Mississippi  
 Anchor Length 20 Drill Pipe Run 3953 Mud Wt. 9.3  
 Top Packer Depth 3948 Drill Collars Run 0 Vis 49  
 Bottom Packer Depth 3953 Wt. Pipe Run 0 WL 9.4  
 Total Depth 3973 Chlorides 4000 ppm System LCM 1H

Blow Description IF: Fair Blow, 5 inches  
ISI: NO Blow back  
FF: Fair Blow, 6 inches  
FST: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>MCW</u>			<u>70</u>	<u>30</u>
<u>120</u>	<u>water</u>				

Rec Total 210 BHT 130° Gravity N/C API RW .13 @ 43 °F Chlorides 110,000 ppm

(A) Initial Hydrostatic 1951  Test 1125 T-On Location 23:15  
 (B) First Initial Flow 18  Jars \_\_\_\_\_ T-Started 01:43  
 (C) First Final Flow 73  Safety Joint \_\_\_\_\_ T-Open 04:47  
 (D) Initial Shut-In 1517  Circ Sub \_\_\_\_\_ T-Pulled 08:50  
 (E) Second Initial Flow 73  Hourly Standby 234hr 275 T-Out 10:56  
 (F) Second Final Flow 158  Mileage (160) 224 Comments \_\_\_\_\_  
 (G) Final Shut-In 1515  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2032  Straddle \_\_\_\_\_

Ruined Shale Packer  
 Ruined Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility  
 Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90  
 Sub Total 1624  
 Total 1624  
 MP/DST Disc't \_\_\_\_\_

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

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



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
FEB 13 2012

## Test Ticket

NO. 45751

Well Name & No. Hilgers Trust 1-32 Test No. 4 Date 02/10/12  
 Company Murfin Drilling Co. Elevation 1383 KB 1374 GL  
 Address 250 N. Water Ste 300 Wichita, KS 67202  
 Co. Rep / Geo. Jeff Christian Rig Maverick 106  
 Location: Sec. 32 Twp. 30S Rge. 3W Co. Sumner State KS

Interval Tested 4324 - 4334 Zone Tested Simpson  
 Anchor Length 10 Drill Pipe Run 4334 Mud Wt. 9.3  
 Top Packer Depth 4319 Drill Collars Run 0 Vis 56  
 Bottom Packer Depth 4324 Wt. Pipe Run 0 WL 3.8  
 Total Depth 4334 Chlorides 4000 ppm System LCM 3 #

Blow Description IF: weak Blow, 2 inches  
ISI: NO Blow Back  
FF: weak Blow 3/4 inch  
FSI: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>V50MCW</u>	<u>2</u>	<u>68</u>	<u>30</u>	
<u>60</u>	<u>MCW</u>		<u>90</u>	<u>10</u>	

Rec Total 65 BHT 134° Gravity NIC API RW .02 @ 31 °F Chlorides 90000 ppm

(A) Initial Hydrostatic 2226  Test 1225 T-On Location 05:30  
 (B) First Initial Flow 19  Jars \_\_\_\_\_ T-Started 08:36  
 (C) First Final Flow 33  Safety Joint \_\_\_\_\_ T-Open 11:22  
 (D) Initial Shut-In 1562  Circ Sub \_\_\_\_\_ T-Pulled 14:25  
 (E) Second Initial Flow 36  Hourly Standby 1 1/4 hrs 125 T-Out 16:38  
 (F) Second Final Flow 51  Mileage (160) 224 Comments \_\_\_\_\_  
 (G) Final Shut-In 1561  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2198  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 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 1574  
 Final Shut-In 60  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1574

Approved By Jeff Christian Our Representative [Signature]

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*Sing H. acct.*

# INVOICE

PO Box 93999  
Southlake, TX 76092

Invoice Number: 130099

**PROD COPY**

Invoice Date: Feb 2, 2012

Page: 1

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

Federal Tax I.D.#: 20-8651475

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

Customer ID	Well Name# or Customer P.O.	Payment Terms	
Murfin	Hilgers Trst #1-32	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS2-01	Medicine Lodge	Feb 2, 2012	3/3/12

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	Darin Franklin		
1.00	EQUIP OPER	Matt Thimesch		
1.00	OPER ASSIST	George Wright		
1.00	CEMENTER	David Felio		
1.00	CEMENTER	Virgil Newton		

Account	Unit	W	No	Amount	Description
FD203				4455.72	Cement S. (Sg) #1-32
				3.3243.0001	

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 Feb 27, 2012

2268.16

*2412*

**4455.72**

# ALLIED CEMENTING CO., LLC. 037933

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:  
*Medicine Lodge Jr*

DATE <i>2-2-2012</i>	SEC <i>32</i>	TWP <i>30S</i>	RANGE <i>3W</i>	CALLED OUT	ON LOCATION <i>8:00 pm</i>	JOB START <i>9:00 pm</i>	JOB FINISH <i>9:30 pm</i>
LEASE <i>H. Isers Trust</i>		WELL# <i>1-32</i>	LOCATION <i>2642 Oct, essa to</i>		COUNTY <i>Sumner</i>	STATE <i>Ks</i>	
OLD OR <u>NEW</u> (Circle one)			<i>Miliken Rd, 5 1/2 south, eline</i>				

CONTRACTOR *MGuerric #106*

TYPE OF JOB *SURFACE*

HOLE SIZE *12 1/4* T.D. *2681*

CASING SIZE *8 1/2* DEPTH *262*

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. *20'*

PERFS.

DISPLACEMENT *1 1/2 bbls Fresh water*

EQUIPMENT

OWNER *Murkin Drilling*

CEMENT

AMOUNT ORDERED *190sf Class B + 200sf 3% O.C.C*

COMMON <i>Class B 190</i>	@ <i>16.25</i>	<i>3,087.50</i>
POZMIX	@	
GEL <i>45x</i>	@ <i>21.25</i>	<i>85.00</i>
CHLORIDE <i>75x</i>	@ <i>58.20</i>	<i>407.40</i>
ASC	@	
	@	
	@	
	@	
	@	
	@	
	@	
	@	
HANDLING <i>201</i>	@ <i>2.25</i>	<i>452.25</i>
MILEAGE <i>201/11/30</i>		<i>663.30</i>
TOTAL		<i>4698.45</i>

PUMP TRUCK CEMENTER *Doug F.*

# *521* HELPER *Matt S, Doug F*

BULK TRUCK

# *356-290* DRIVER *George W.*

BULK TRUCK

# *DRIVER Doug F., Varsity*

REMARKS:

*Pipoon bottom & break circulation  
Pump 3 bbls water shear, mix  
190sf cement, displace 1 1/2 bbls  
fresh water, shut in, cement die  
circulate*

CHARGE TO: *Murkin Drilling*

STREET \_\_\_\_\_

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

SERVICE

DEPTH OF JOB *262*

PUMP TRUCK CHARGE *1125.00*

EXTRA FOOTAGE *60* @ \_\_\_\_\_

MILEAGE *875000/1000* @ *7.00* *420.00*

MANIFOLD *Shed at voice* @ \_\_\_\_\_

*Light vehicle 60* @ *4.00* *240.00*

TOTAL *1785.00*

PLUG & FLOAT EQUIPMENT

\_\_\_\_\_ @ \_\_\_\_\_

*NONE* @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

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.

PRINTED NAME  *Cecil E. Farmer*

SIGNATURE  *Cecil E. Farmer*

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES *6,480.45*

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

*Net \$5,184.36*



acct.  
Sig H.

# INVOICE

PO Box 93999  
Southlake, TX 76092

Invoice Number: 130115  
Invoice Date: Feb 11, 2012  
Page: 1

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

**Bill To:**  
Murfin Drlg. Co., Inc.  
*PO Box 661  
Colby, KS 67701*

Federal Tax I.D.#: 20-8651475

Customer ID	Well Name/# or Customer P.O.	Payment Terms	
Murfin	<i>Hilger</i> <del>Hilger</del> Trust #1-32	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS2-03	Medicine Lodge	Feb 11, 2012	3/12/12

Quantity	Item	Description	Unit Price	Amount
96.00	MAT	Class A Common	16.25	1,560.00
64.00	MAT	Pozmix	8.50	544.00
6.00	MAT	Gel	21.25	127.50
166.00	SER	Handling	2.25	373.50
30.00	SER	Mileage	18.00	540.00
1.00	SER	Rotary Plug	1,250.00	1,250.00
60.00	SER	Heavy Vehicle Mileage	7.00	420.00
60.00	SER	Light Vehicle Mileage	4.00	240.00
1.00	CEMENTER	Carl Balding		
1.00	EQUIP OPER	Jason Thimesch		
1.00	EQUIP OPER	Adam Miller		

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

**\$ 1769.00**

ONLY IF PAID ON OR BEFORE  
**Mar 7, 2012**

Subtotal	5,055.00
Sales Tax	343.74
Total Invoice Amount	5,398.74
Payment/Credit Applied	
<b>TOTAL</b>	<b>5,398.74</b>

*04/12*

- 1769.00



# ALLIED CEMENTING CO., LLC. 037693

Federal Tax I.D.# 20-5975804

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

SERVICE POINT: Medicine Lodge

DATE <u>2-11-2012</u>	SEC <u>32</u>	TWP. <u>30S</u>	RANGE <u>3W</u>	CALLED OUT <u>7:00 PM</u>	ON LOCATION <u>8:30 PM</u>	JOB START	JOB FINISH
LEASE <u>Hickens Trust</u>	WELL # <u>1-32</u>		LOCATION <u>2+42 Jct</u>			COUNTY <u>Sumner</u>	STATE <u>KS.</u>
OLD OR <u>NEW</u> (Circle one)			<u>East-10 Millan Rd. 5 1/2 South</u>				

CONTRACTOR Maverick #106

TYPE OF JOB Pottery Plug

HOLE SIZE \_\_\_\_\_ T.D. \_\_\_\_\_

CASING SIZE 8 3/8 DEPTH \_\_\_\_\_

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE 4 1/2 DEPTH 725'

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. \_\_\_\_\_

PERFS. \_\_\_\_\_

DISPLACEMENT Freshwater

OWNER Murfin Drilling

CEMENT AMOUNT ORDERED

160 sk x 60:40:4% Gel

**EQUIPMENT**

PUMP TRUCK CEMENTER Carl Balding

# 471-502 HELPER Jason Thimesch

BULK TRUCK

# 364 DRIVER Adam Miller

BULK TRUCK

# \_\_\_\_\_ DRIVER \_\_\_\_\_

COMMON A	<u>96 sk</u>	@ <u>16.25</u>	<u>2040.00</u>
POZMIX	<u>64 sk</u>	@ <u>8.50</u>	<u>544.00</u>
GEL	<u>6 sk</u>	@ <u>21.25</u>	<u>127.50</u>
CHLORIDE		@	
ASC		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	<u>166</u>	@ <u>2.25</u>	<u>373.50</u>
MILEAGE	<u>166/11/30</u>		<u>547.80</u>
			<b>TOTAL 3632.80</b>

**REMARKS:**

1<sup>st</sup> plug 35 sk - 725'

2<sup>nd</sup> plug 35 sk - 375'

3<sup>rd</sup> plug 35 sk - 315'

4<sup>th</sup> plug 20 sk - 60'

(+ 20 sk - PAT + 15 sk mouse)

**SERVICE**

DEPTH OF JOB	<u>725'</u>		
PUMP TRUCK CHARGE			<u>1250.00</u>
EXTRA FOOTAGE		@	
MILEAGE	<u>60</u>	@ <u>7.00</u>	<u>420.00</u>
MANIFOLD		@	
<u>High Vehicle</u>	<u>60</u>	@ <u>4.00</u>	<u>240.00</u>
		@	
			<b>TOTAL 1910.00</b>

CHARGE TO: Murfin Drilling Co.

STREET \_\_\_\_\_

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

**PLUG & FLOAT EQUIPMENT**

_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____
<b>TOTAL _____</b>		

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 5542.80

DISCOUNT 20% IF PAID IN 30 DAYS

Net 4434.24

PRINTED NAME Recid E. Farmer

SIGNATURE Recid E. Farmer