



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1205263  
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: \_\_\_\_\_

1205263

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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Carolyn 1-3
Doc ID	1205263

All Electric Logs Run

Dual Induction
Dual Compensated
Microresistivity
Borehole Compensated





## DRILL STEM TEST REPORT

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

250 N Water STE #300  
Wichita, KS 67202

ATTN: Ken Wallace

### **Carolyn #1-3**

#### **3-1s-37w Cheyenne,KS**

Start Date: 2014.02.10 @ 00:43:00

End Date: 2014.02.10 @ 06:43:30

Job Ticket #: 53388                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.02.19 @ 14:03:51



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N Water STE #300  
Wichita, KS 67202  
ATTN: Ken Wallace

**3-1s-37w Cheyenne,KS**

**Carolyn #1-3**

Job Ticket: 53388

**DST#: 1**

Test Start: 2014.02.10 @ 00:43:00

## GENERAL INFORMATION:

Formation: **Foraker**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:47:30

Time Test Ended: 06:43:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

**Interval: 3575.00 ft (KB) To 3627.00 ft (KB) (TVD)**

Total Depth: 3627.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 3087.00 ft (KB)

3077.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8874 Inside**

Press@RunDepth: 129.66 psig @ 3576.00 ft (KB)

Start Date: 2014.02.10

End Date:

2014.02.10

Start Time: 00:44:00

End Time:

06:43:30

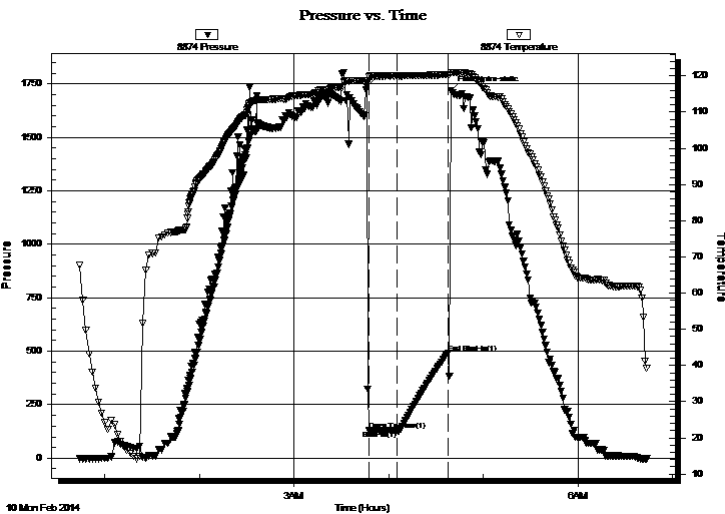
Capacity: 8000.00 psig

Last Calib.: 2014.02.10

Time On Btm: 2014.02.10 @ 03:46:00

Time Off Btm: 2014.02.10 @ 04:39:30

TEST COMMENT: 30 - IF- Bed off initial surge - Weak surface Blow did not build or die  
30 - ISI- Weak Surface Return did not build or die



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1739.41	118.79	Initial Hydro-static
2	129.67	119.85	Open To Flow (1)
19	129.66	120.02	Shut-In(1)
52	491.05	120.35	End Shut-In(1)
54	1718.08	120.88	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
315.00	Mud 100M	2.72

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
 250 N Water STE #300  
 Wichita, KS 67202  
 ATTN: Ken Wallace

**3-1s-37w Cheyenne,KS**

**Carolyn #1-3**

Job Ticket: 53388

**DST#: 1**

Test Start: 2014.02.10 @ 00:43:00

**GENERAL INFORMATION:**

Formation: **Foraker**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:47:30

Time Test Ended: 06:43:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: **3575.00 ft (KB) To 3627.00 ft (KB) (TVD)**

Reference Elevations: 3087.00 ft (KB)

Total Depth: 3627.00 ft (KB) (TVD)

3077.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 10.00 ft

**Serial #: 8653 Outside**

Press@RunDepth: psig @ 3576.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.10

End Date:

2014.02.10

Last Calib.:

2014.02.10

Start Time: 00:44:00

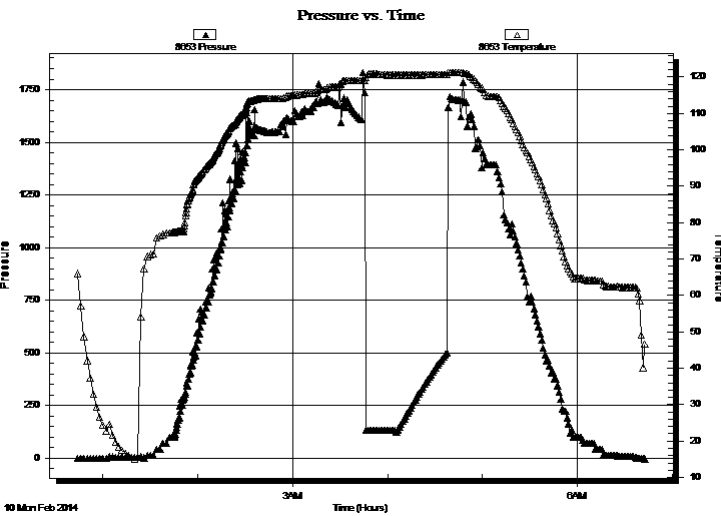
End Time:

06:42:30

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF- Bed off initial surge - Weak surface Blow did not build or die  
 30 - ISI- Weak Surface Return did not build or die



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
315.00	Mud 100M	2.72

**Gas Rates**

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**3-1s-37w Cheyenne,KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 53388

**DST#: 1**

ATTN: Ken Wallace

Test Start: 2014.02.10 @ 00:43:00

## Tool Information

Drill Pipe:	Length: 3371.00 ft	Diameter: 3.80 inches	Volume: 47.29 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 48.20 bbl</u>	Tool Chased 20.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3575.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	80.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: tool hit several bridges and tight spots starting approx 30' above bottom. had to make a connection in mousehole in order to chase tool another 20' to bottom through bridges.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3548.00	
Shut In Tool	5.00			3553.00	
Hydraulic tool	5.00			3558.00	
Jars	5.00			3563.00	
Safety Joint	3.00			3566.00	
Packer	5.00			3571.00	28.00 Bottom Of Top Packer
Packer	4.00			3575.00	
Stubb	1.00			3576.00	
Recorder	0.00	8653	Outside	3576.00	
Recorder	0.00	8874	Inside	3576.00	
Perforations	12.00			3588.00	
Change Over Sub	1.00			3589.00	
Drill Pipe	32.00			3621.00	
Change Over Sub	1.00			3622.00	
Bullnose	5.00			3627.00	52.00 Bottom Packers & Anchor

**Total Tool Length: 80.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co., Inc.

**3-1s-37w Cheyenne,KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 53388

**DST#: 1**

ATTN: Ken Wallace

Test Start: 2014.02.10 @ 00:43:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
315.00	Mud 100M	2.724

Total Length: 315.00 ft      Total Volume: 2.724 bbl

Num Fluid Samples: 0

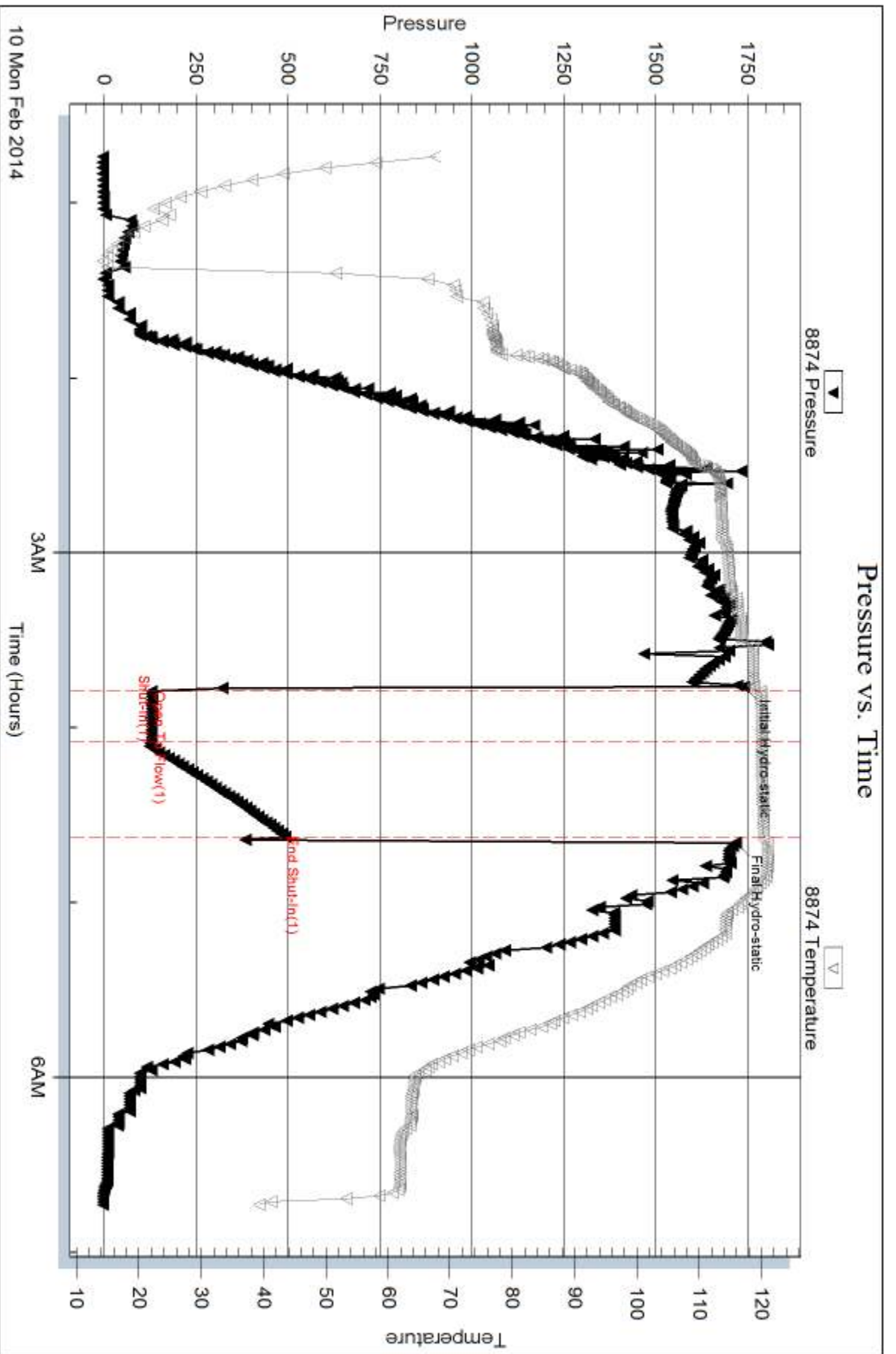
Num Gas Bombs: 0

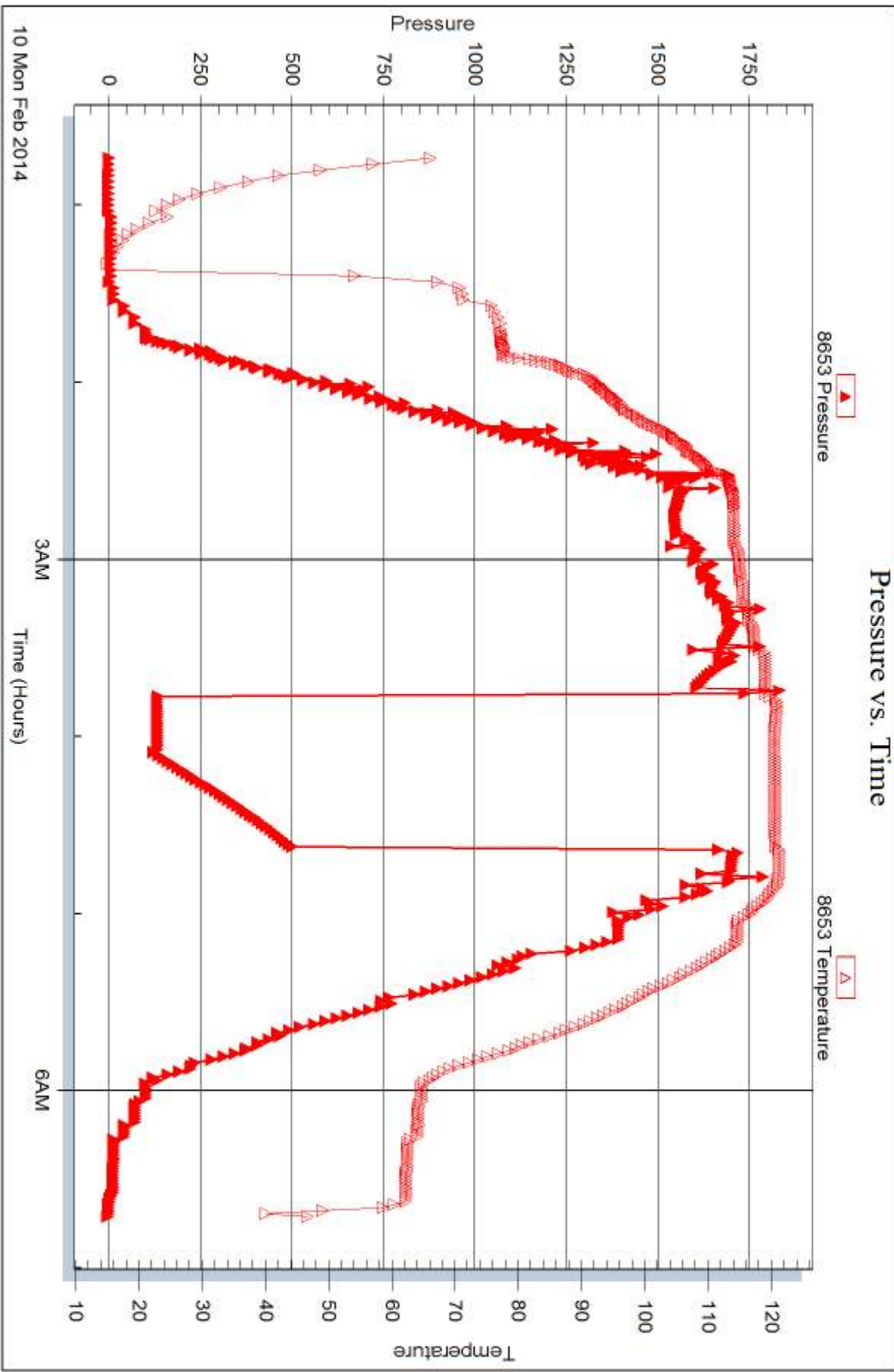
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

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

250 N Water STE #300  
Wichita, KS 67202

ATTN: Ken Wallace

### **Carolyn #1-3**

#### **3-1s-37w Cheyenne,KS**

Start Date: 2014.02.10 @ 14:01:01

End Date: 2014.02.10 @ 21:16:31

Job Ticket #: 53389                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.02.19 @ 14:03:28



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
 250 N Water STE #300  
 Wichita, KS 67202  
 ATTN: Ken Wallace

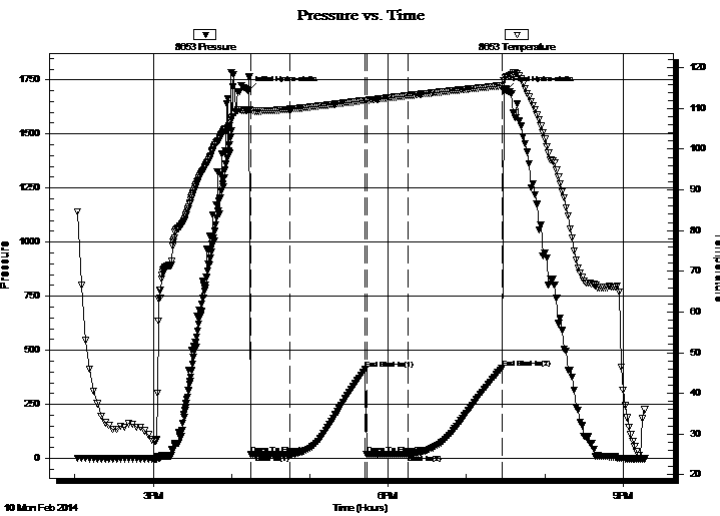
**3-1s-37w Cheyenne, KS**  
**Carolyn #1-3**  
 Job Ticket: 53389 **DST#: 2**  
 Test Start: 2014.02.10 @ 14:01:01

## GENERAL INFORMATION:

Formation: **Foraker**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:15:01  
 Time Test Ended: 21:16:31  
 Interval: **3575.00 ft (KB) To 3627.00 ft (KB) (TVD)**  
 Total Depth: 3627.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Kevin Mack  
 Unit No: 66  
 Reference Elevations: 3087.00 ft (KB)  
 3077.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8653 Outside**  
 Press@RunDepth: 19.07 psig @ 3576.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.02.10 End Date: 2014.02.10 Last Calib.: 2014.02.10  
 Start Time: 14:02:01 End Time: 21:16:31 Time On Btm: 2014.02.10 @ 16:13:01  
 Time Off Btm: 2014.02.10 @ 19:30:31

**TEST COMMENT:** 30 - IF - 1/2" Blow built to 3/4" then died back to 1/2"  
 60 - ISI - No Return  
 30 - FF - No Blow  
 60 - FSI - No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1701.22	109.59	Initial Hydro-static
2	17.93	109.47	Open To Flow (1)
32	18.17	109.83	Shut-In(1)
89	410.98	111.97	End Shut-In(1)
91	18.80	112.00	Open To Flow (2)
122	19.07	113.14	Shut-In(2)
194	419.26	115.61	End Shut-In(2)
198	1701.92	117.78	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100M	0.02

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

250 N Water STE #300  
Wichita, KS 67202

ATTN: Ken Wallace

**3-1s-37w Cheyenne,KS**

**Carolyn #1-3**

Job Ticket: 53389

**DST#: 2**

Test Start: 2014.02.10 @ 14:01:01

## GENERAL INFORMATION:

Formation: **Foraker**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:15:01

Time Test Ended: 21:16:31

Test Type: Conventional Bottom Hole (Reset)

Tester: Kevin Mack

Unit No: 66

**Interval: 3575.00 ft (KB) To 3627.00 ft (KB) (TVD)**

Total Depth: 3627.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3087.00 ft (KB)

3077.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8874 Inside**

Press@RunDepth: psig @ 3576.00 ft (KB)

Start Date: 2014.02.10

End Date:

2014.02.10

Start Time: 14:02:00

End Time:

21:17:30

Capacity: 8000.00 psig

Last Calib.:

2014.02.10

Time On Btm:

Time Off Btm:

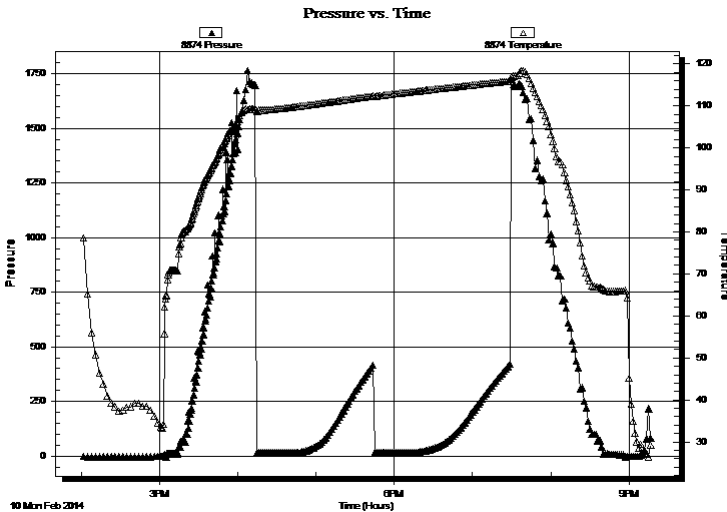
**TEST COMMENT:** 30 - IF - 1/2" Blow built to 3/4" then died back to 1/2"

60 - ISI - No Return

30 - FF - No Blow

60 - FSI - No Return

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100M	0.02

\* 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., Inc.

**3-1s-37w Cheyenne,KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 53389

**DST#: 2**

ATTN: Ken Wallace

Test Start: 2014.02.10 @ 14:01:01

## Tool Information

Drill Pipe:	Length: 3371.00 ft	Diameter: 3.80 inches	Volume: 47.29 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 48.20 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3575.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	80.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3548.00	
Shut In Tool	5.00			3553.00	
Hydraulic tool	5.00			3558.00	
Jars	5.00			3563.00	
Safety Joint	3.00			3566.00	
Packer	5.00			3571.00	28.00 Bottom Of Top Packer
Packer	4.00			3575.00	
Stubb	1.00			3576.00	
Recorder	0.00	8653	Outside	3576.00	
Recorder	0.00	8874	Inside	3576.00	
Perforations	12.00			3588.00	
Change Over Sub	1.00			3589.00	
Drill Pipe	32.00			3621.00	
Change Over Sub	1.00			3622.00	
Bullnose	5.00			3627.00	52.00 Bottom Packers & Anchor

**Total Tool Length: 80.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co., Inc.

**3-1s-37w Cheyenne,KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 53389

**DST#: 2**

ATTN: Ken Wallace

Test Start: 2014.02.10 @ 14:01:01

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100M	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

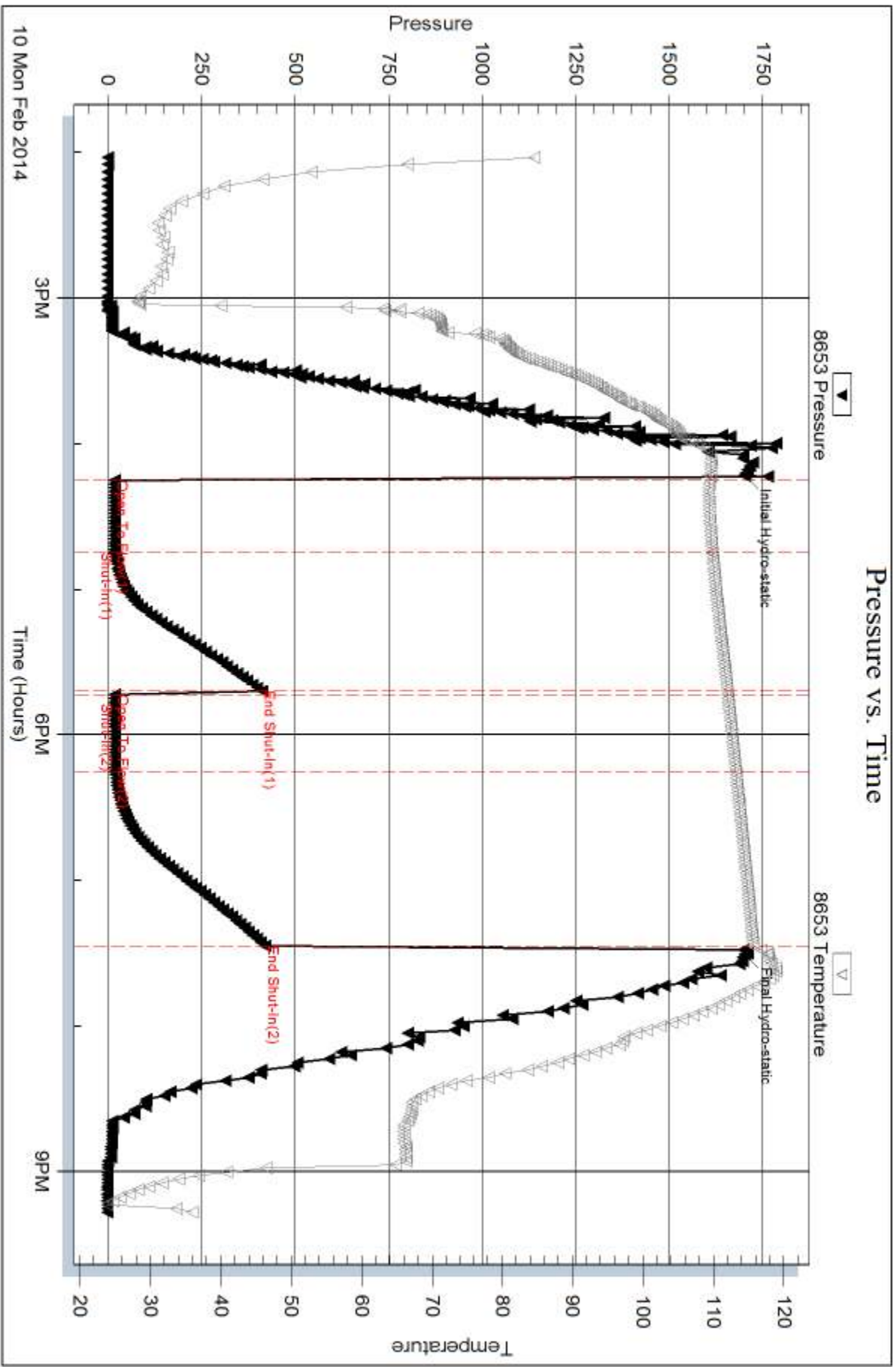
Serial #:

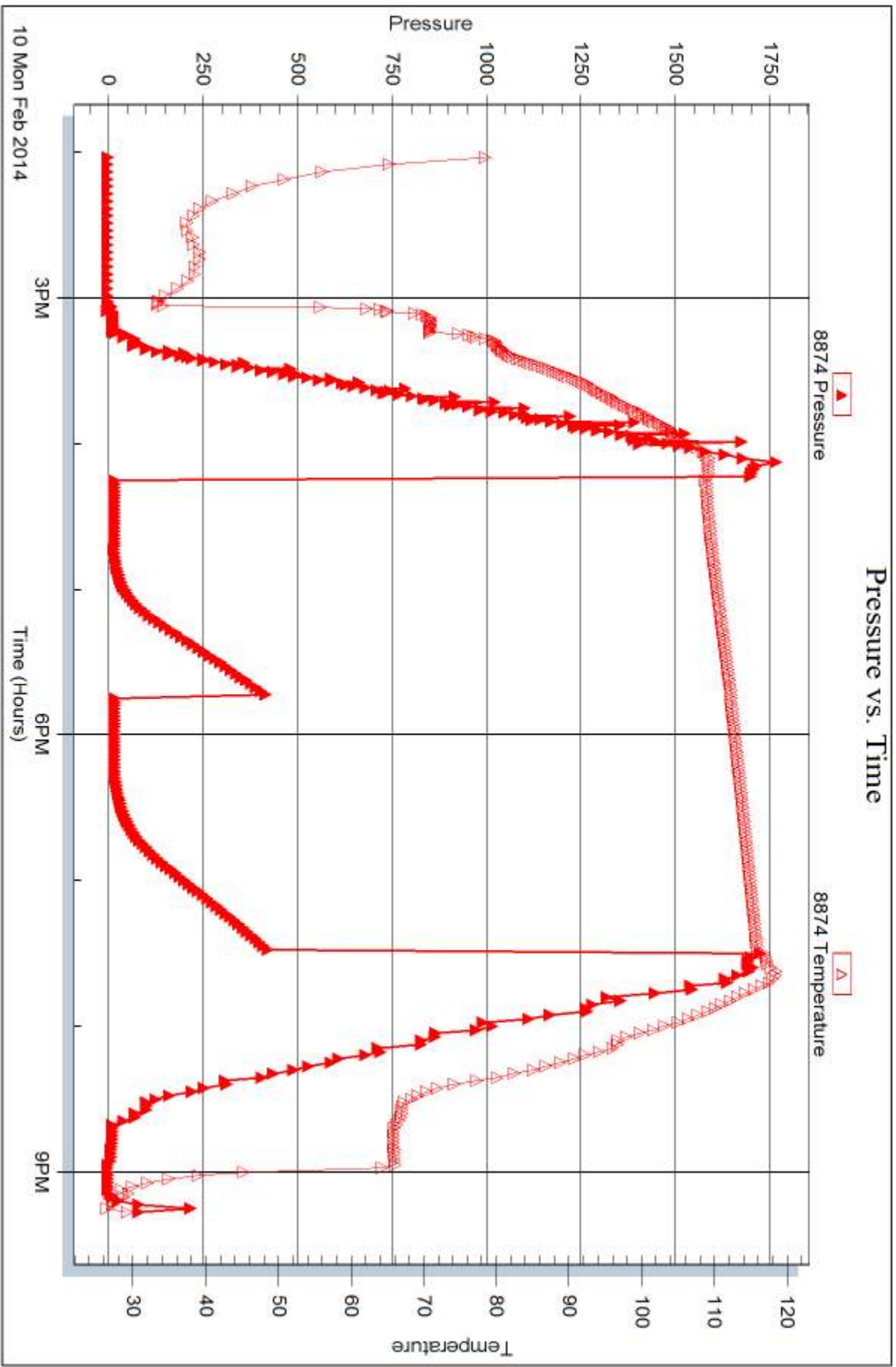
Laboratory Name:

Laboratory Location:

Recovery Comments:









## DRILL STEM TEST REPORT

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

250 N Water STE #300  
Wichita, KS 67202

ATTN: Ken Wallace

### **Carolyn #1-3**

#### **3-1s-37w Cheyenne,KS**

Start Date: 2014.02.12 @ 20:39:00

End Date: 2014.02.13 @ 04:59:00

Job Ticket #: 53390                      DST #: 3

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

Printed: 2014.02.19 @ 14:03:04

Murfin Drilling Co., Inc.  
3-1s-37w Cheyenne,KS  
Carolyn #1-3  
DST # 3  
LKC "A-D"  
2014.02.12



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**3-1s-37w Cheyenne, KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 53390

**DST#: 3**

ATTN: Ken Wallace

Test Start: 2014.02.12 @ 20:39:00

## GENERAL INFORMATION:

Formation: **LKC "A-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:22:50

Time Test Ended: 04:59:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

**Interval: 3996.00 ft (KB) To 4118.00 ft (KB) (TVD)**

Reference Elevations: 3087.00 ft (KB)

Total Depth: 4118.00 ft (KB) (TVD)

3077.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8874 Inside**

Press@RunDepth: 153.43 psig @ 3997.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.12

End Date:

2014.02.13

Last Calib.:

2014.02.13

Start Time: 20:40:00

End Time:

04:59:00

Time On Btm:

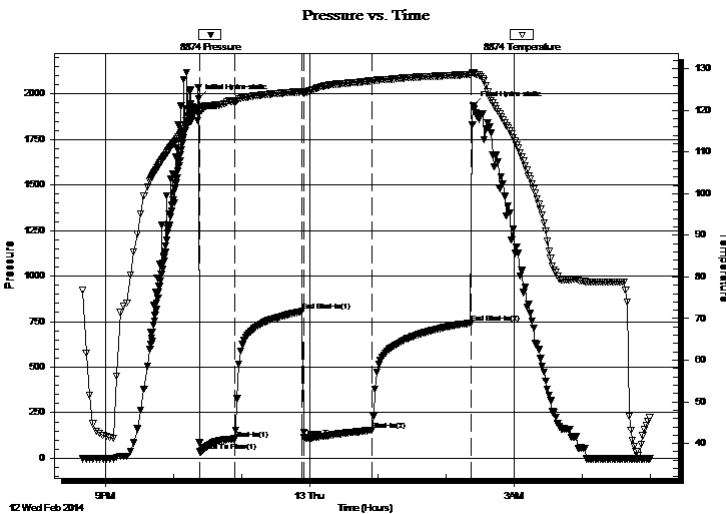
2014.02.12 @ 22:22:20

Time Off Btm:

2014.02.13 @ 02:24:00

**TEST COMMENT:** 30 - IF- 1/2" Blow built to BoB in 17 min.  
60 - IS- Surface Return started at min. Built to 1 1/2"  
60 - FF- Surface Blow built to BoB in 12 min.  
90 - FS- Surface Return built to 7"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1976.67	120.25	Initial Hydro-static
1	35.99	119.80	Open To Flow (1)
32	106.06	122.25	Shut-In(1)
91	806.49	124.51	End Shut-In(1)
93	113.42	124.35	Open To Flow (2)
153	153.43	127.09	Shut-In(2)
240	744.12	128.63	End Shut-In(2)
242	1936.16	129.05	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	OCM 10o 90M	0.59
91.00	GOCM 5G 25o 70M	0.68
123.00	Clean Gassy Oil 10G 90o	1.73
0.00	400' GIP	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**3-1s-37w Cheyenne,KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 53390

**DST#: 3**

ATTN: Ken Wallace

Test Start: 2014.02.12 @ 20:39:00

## GENERAL INFORMATION:

Formation: **LKC "A-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:22:50

Time Test Ended: 04:59:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

**Interval: 3996.00 ft (KB) To 4118.00 ft (KB) (TVD)**

Reference Elevations: 3087.00 ft (KB)

Total Depth: 4118.00 ft (KB) (TVD)

3077.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8653**

**Outside**

Press@RunDepth: psig @ 3997.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.12

End Date:

2014.02.13

Last Calib.:

2014.02.13

Start Time: 20:40:00

End Time:

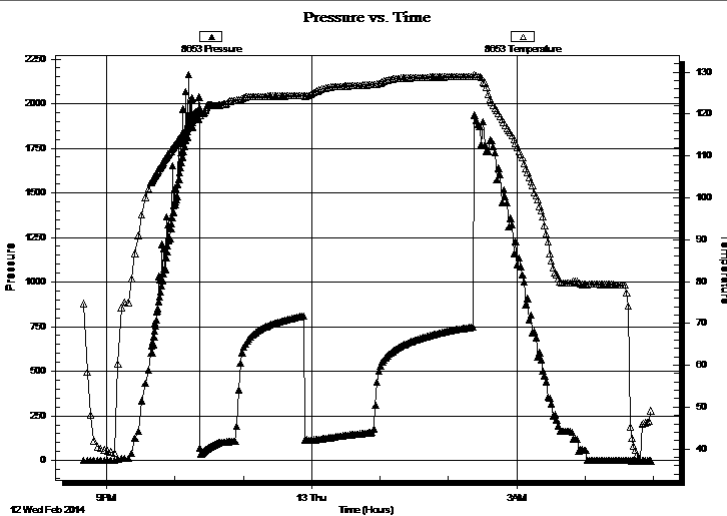
04:57:30

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 30 - IF- 1/2" Blow built to BoB in 17 min.  
60 - IS- Surface Return started at min. Built to 1 1/2"  
60 - FF- Surface Blow built to BoB in 12 min.  
90 - FS- Surface Return built to 7"

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	OCM 10o 90M	0.59
91.00	GOCM 5G 25o 70M	0.68
123.00	Clean Gassy Oil 10G 90o	1.73
0.00	400' GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**3-1s-37w Cheyenne,KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 53390

**DST#: 3**

ATTN: Ken Wallace

Test Start: 2014.02.12 @ 20:39:00

## Tool Information

Drill Pipe:	Length: 3790.00 ft	Diameter: 3.80 inches	Volume: 53.16 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 54.07 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	3996.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	122.00 ft			
Tool Length:	150.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3969.00	
Shut In Tool	5.00			3974.00	
Hydraulic tool	5.00			3979.00	
Jars	5.00			3984.00	
Safety Joint	3.00			3987.00	
Packer	5.00			3992.00	28.00 Bottom Of Top Packer
Packer	4.00			3996.00	
Stubb	1.00			3997.00	
Recorder	0.00	8653	Outside	3997.00	
Recorder	0.00	8874	Inside	3997.00	
Perforations	21.00			4018.00	
Change Over Sub	1.00			4019.00	
Drill Pipe	93.00			4112.00	
Change Over Sub	1.00			4113.00	
Bullnose	5.00			4118.00	122.00 Bottom Packers & Anchor

**Total Tool Length: 150.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**3-1s-37w Cheyenne,KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 53390

**DST#: 3**

ATTN: Ken Wallace

Test Start: 2014.02.12 @ 20:39:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

29 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 90.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
120.00	OCM 10o 90M	0.590
91.00	GOCM 5G 25o 70M	0.675
123.00	Clean Gassy Oil 10G 90o	1.725
0.00	400' GIP	0.000

Total Length: 334.00 ft      Total Volume: 2.990 bbf

Num Fluid Samples: 0

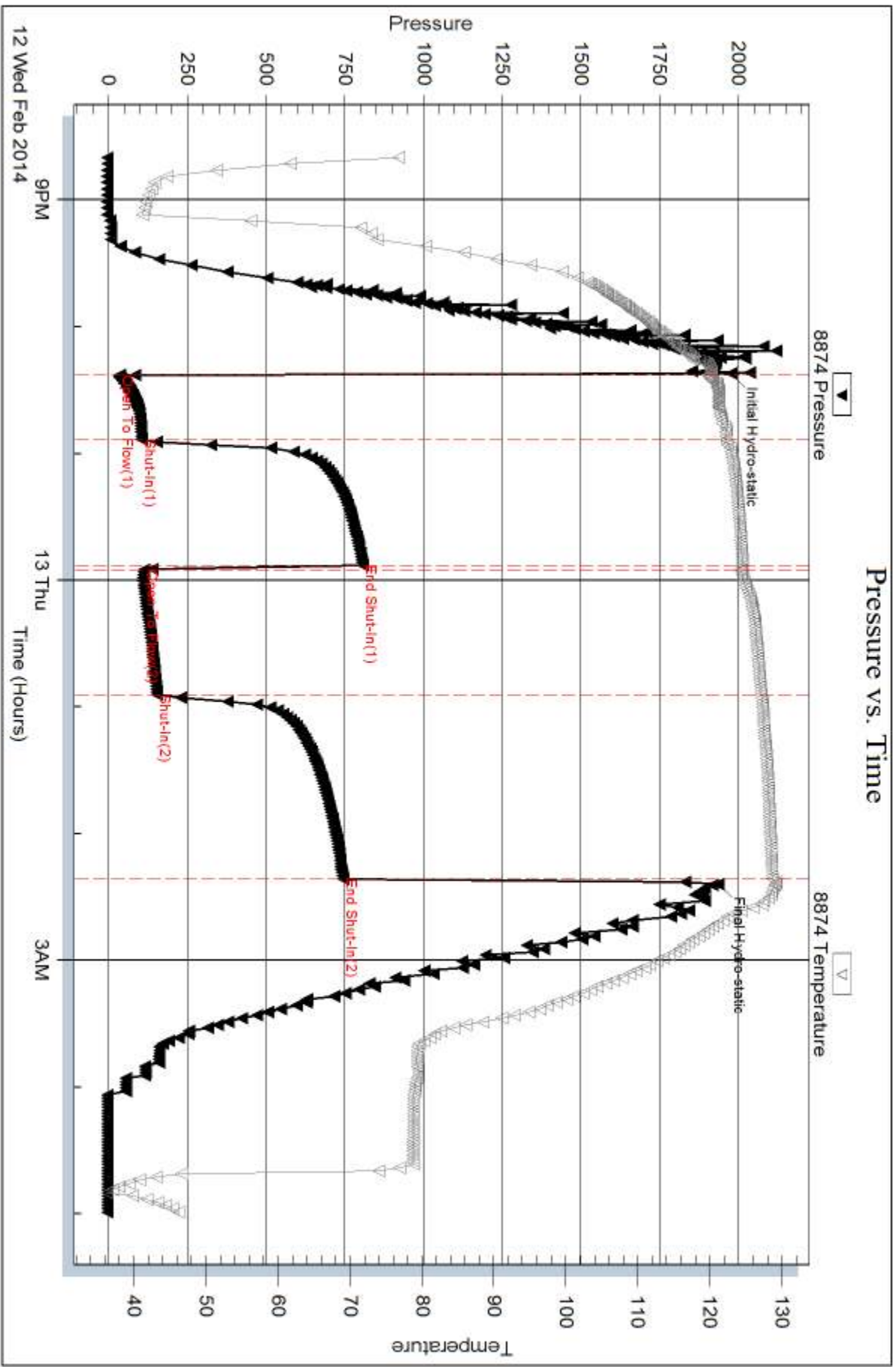
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API = 28 @ 50 deg = 29 corrected



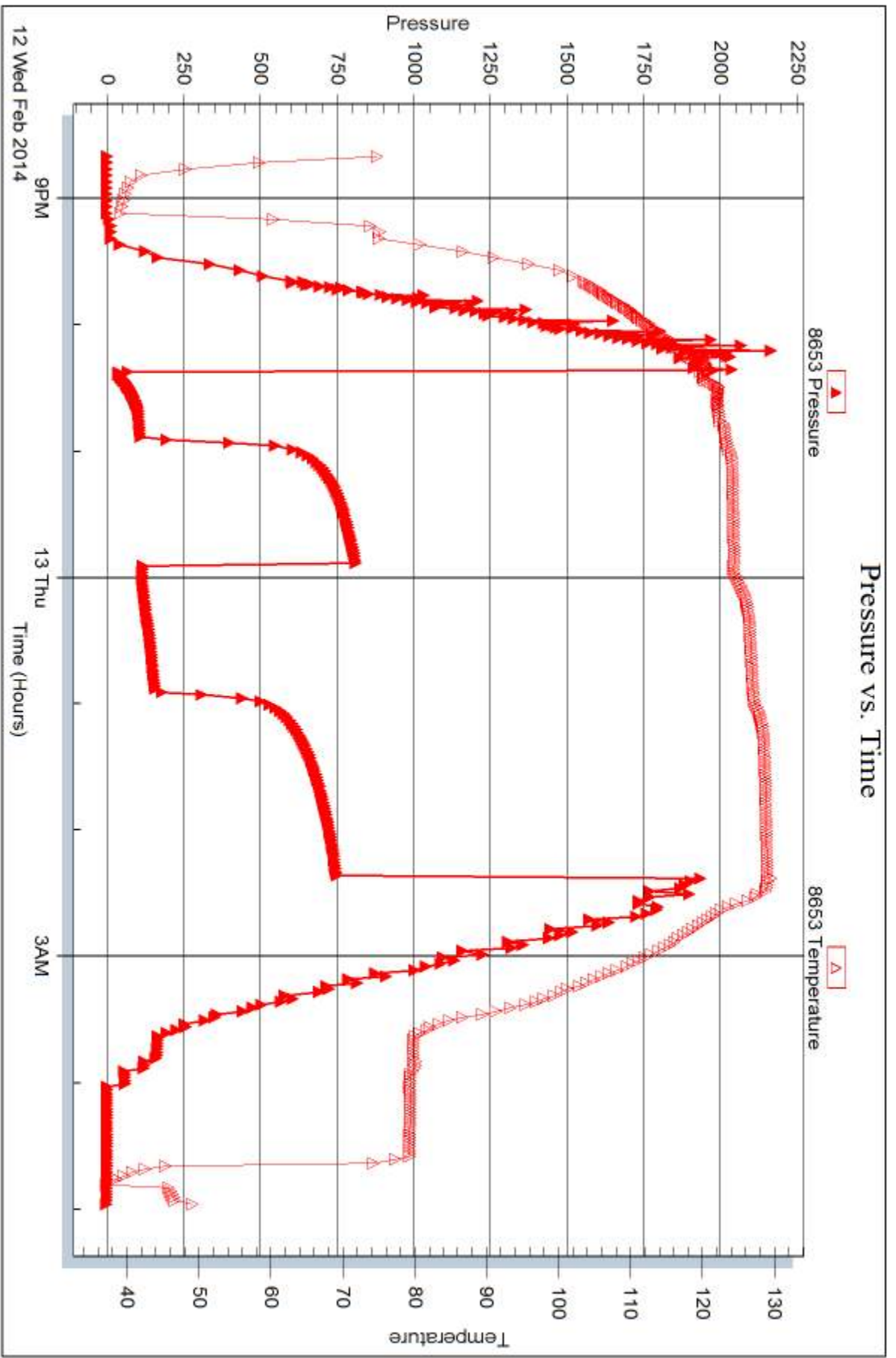


Serial #: 8653

Outside Murfin Drilling Co., Inc.

Carolyn #1-3

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 53390

Printed: 2014.02.19 @ 14:03:07



## DRILL STEM TEST REPORT

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

250 N Water STE #300  
Wichita, KS 67202

ATTN: Ken Wallace

### **Carolyn #1-3**

#### **3-1s-37w Cheyenne,KS**

Start Date: 2014.02.13 @ 15:50:00

End Date: 2014.02.13 @ 22:21:00

Job Ticket #: 53391                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.02.19 @ 14:02:36



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**3-1s-37w Cheyenne, KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 53391

**DST#: 4**

ATTN: Ken Wallace

Test Start: 2014.02.13 @ 15:50:00

## GENERAL INFORMATION:

Formation: **LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:28:40

Time Test Ended: 22:21:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

**Interval: 4130.00 ft (KB) To 4175.00 ft (KB) (TVD)**

Reference Elevations: 3087.00 ft (KB)

Total Depth: 4175.00 ft (KB) (TVD)

3077.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8874**

**Inside**

Press@RunDepth: 17.19 psig @ 4131.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.13

End Date:

2014.02.13

Last Calib.:

2014.02.13

Start Time: 15:51:00

End Time:

22:21:00

Time On Btm:

2014.02.13 @ 17:28:30

Time Off Btm:

2014.02.13 @ 20:33:00

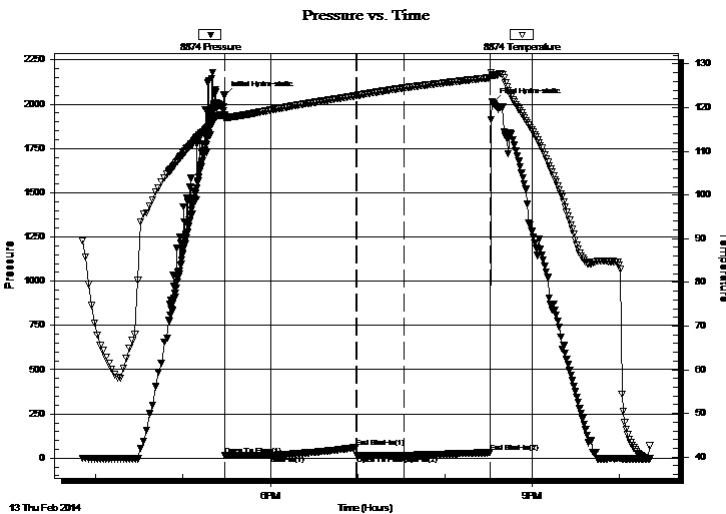
**TEST COMMENT:** 30 - IF- 1/4" Blow built to 1/2" then died back to 1/4"

60 - IS- No Return

30 - FF- No Blow

60 - FS- No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2050.84	118.29	Initial Hydro-static
1	14.91	117.37	Open To Flow (1)
32	15.71	119.44	Shut-In(1)
90	60.13	122.71	End Shut-In(1)
91	16.42	122.78	Open To Flow (2)
123	17.19	124.50	Shut-In(2)
183	32.00	126.85	End Shut-In(2)
185	2007.14	127.42	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100M (oil spots)	0.02

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**3-1s-37w Cheyenne, KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 53391

**DST#: 4**

ATTN: Ken Wallace

Test Start: 2014.02.13 @ 15:50:00

## GENERAL INFORMATION:

Formation: **LKC "G"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 17:28:40  
 Tester: Kevin Mack  
 Time Test Ended: 22:21:00  
 Unit No: 66  
 Interval: **4130.00 ft (KB) To 4175.00 ft (KB) (TVD)**  
 Reference Elevations: 3087.00 ft (KB)  
 Total Depth: 4175.00 ft (KB) (TVD)  
 3077.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Good  
 KB to GR/CF: 10.00 ft

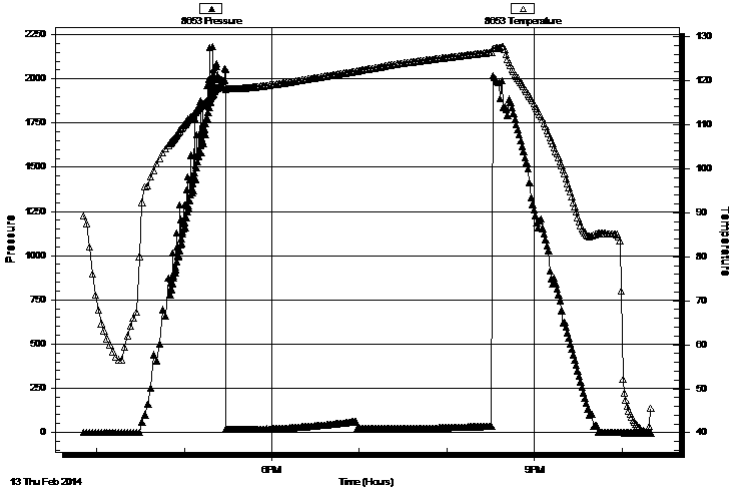
**Serial #: 8653**

**Outside**

Press@RunDepth: psig @ 4131.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.02.13 End Date: 2014.02.13 Last Calib.: 2014.02.13  
 Start Time: 15:51:00 End Time: 22:19:30 Time On Btm:  
 Time Off Btm:

TEST COMMENT: 30 - IF- 1/4" Blow built to 1/2" then died back to 1/4"  
 60 - IS- No Return  
 30 - FF- No Blow  
 60 - FS- No Return

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100M (oil spots)	0.02

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**3-1s-37w Cheyenne,KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 53391

**DST#: 4**

ATTN: Ken Wallace

Test Start: 2014.02.13 @ 15:50:00

## Tool Information

Drill Pipe:	Length: 3949.00 ft	Diameter: 3.80 inches	Volume: 55.39 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose:	72000.00 lb
			<u>Total Volume: 56.30 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial	68000.00 lb
Depth to Top Packer:	4130.00 ft			Final	68000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	45.00 ft				
Tool Length:	73.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4103.00	
Shut In Tool	5.00			4108.00	
Hydraulic tool	5.00			4113.00	
Jars	5.00			4118.00	
Safety Joint	3.00			4121.00	
Packer	5.00			4126.00	28.00 Bottom Of Top Packer
Packer	4.00			4130.00	
Stubb	1.00			4131.00	
Recorder	0.00	8653	Outside	4131.00	
Recorder	0.00	8874	Inside	4131.00	
Perforations	6.00			4137.00	
Change Over Sub	1.00			4138.00	
Drill Pipe	31.00			4169.00	
Change Over Sub	1.00			4170.00	
Bullnose	5.00			4175.00	45.00 Bottom Packers & Anchor

**Total Tool Length: 73.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co., Inc.

**3-1s-37w Cheyenne,KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 53391

**DST#: 4**

ATTN: Ken Wallace

Test Start: 2014.02.13 @ 15:50:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	OSM 100M (oil spots)	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

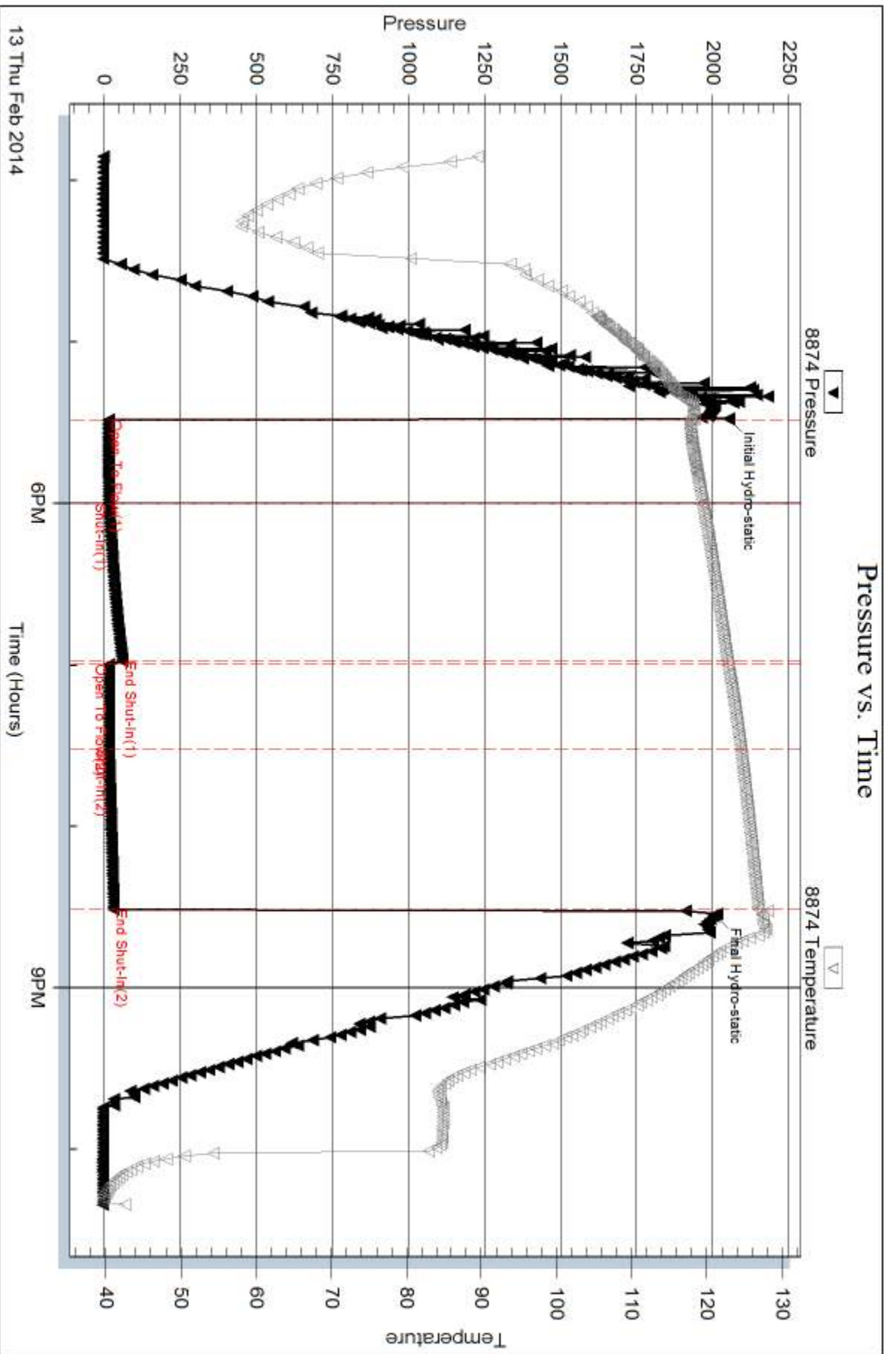
Num Gas Bombs: 0

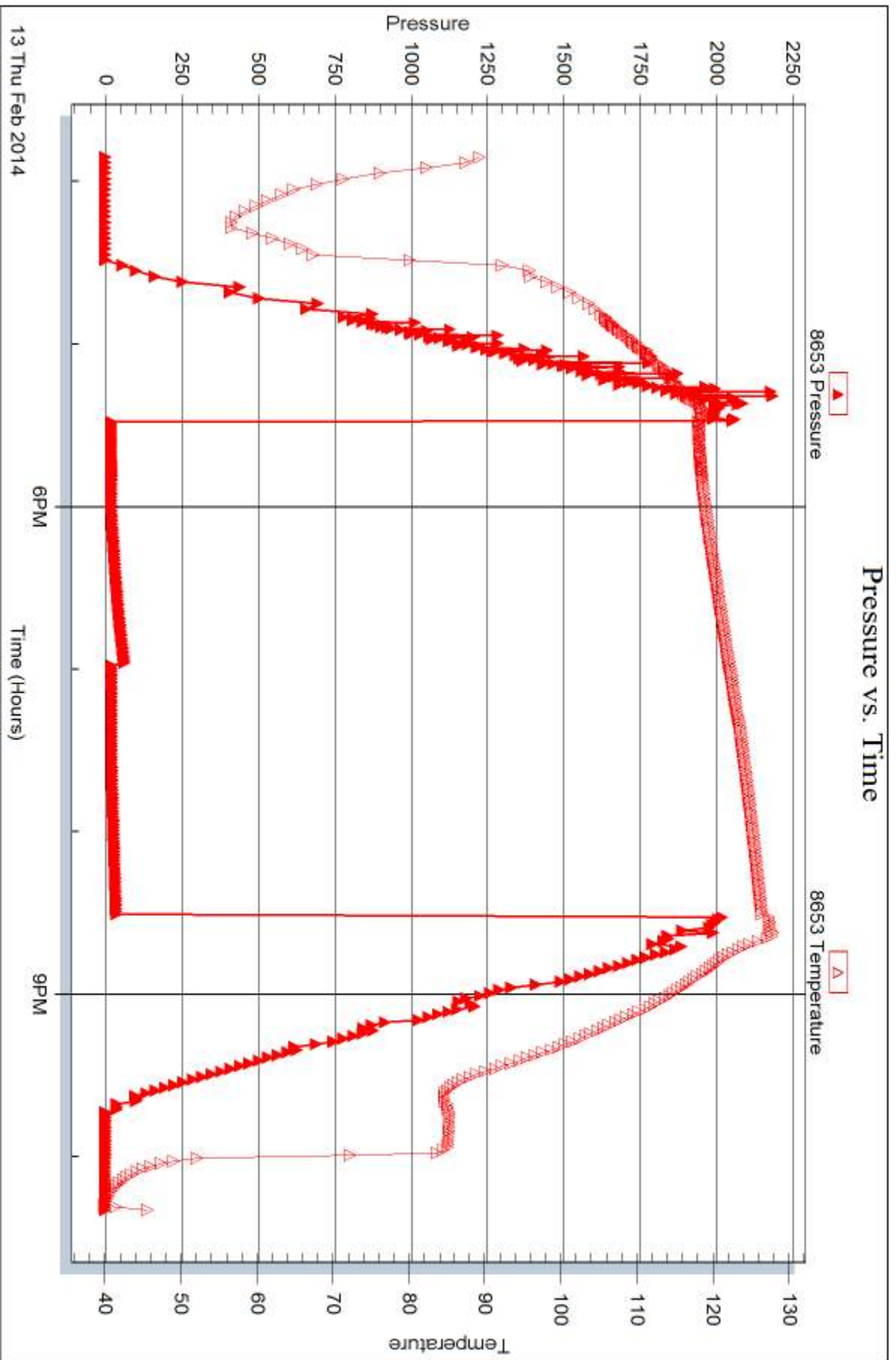
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:









## DRILL STEM TEST REPORT

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

250 N Water STE #300  
Wichita, KS 67202

ATTN: Ken Wallace

### **Carolyn #1-3**

#### **3-1s-37w Cheyenne,KS**

Start Date: 2014.02.15 @ 05:41:54

End Date: 2014.02.15 @ 13:32:54

Job Ticket #: 56751                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.02.19 @ 14:02:03



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N Water STE #300  
Wichita, KS 67202  
ATTN: Ken Wallace

**3-1s-37w Cheyenne,KS**

**Carolyn #1-3**

Job Ticket: 56751

**DST#: 5**

Test Start: 2014.02.15 @ 05:41:54

## GENERAL INFORMATION:

Formation: **Pawnee**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:06:24  
 Time Test Ended: 13:32:54  
 Interval: **4419.00 ft (KB) To 4464.00 ft (KB) (TVD)**  
 Total Depth: 4464.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Robert Zodrow  
 Unit No: 66  
 Reference Elevations: 3087.00 ft (KB)  
 3077.00 ft (CF)  
 KB to GR/CF: 10.00 ft

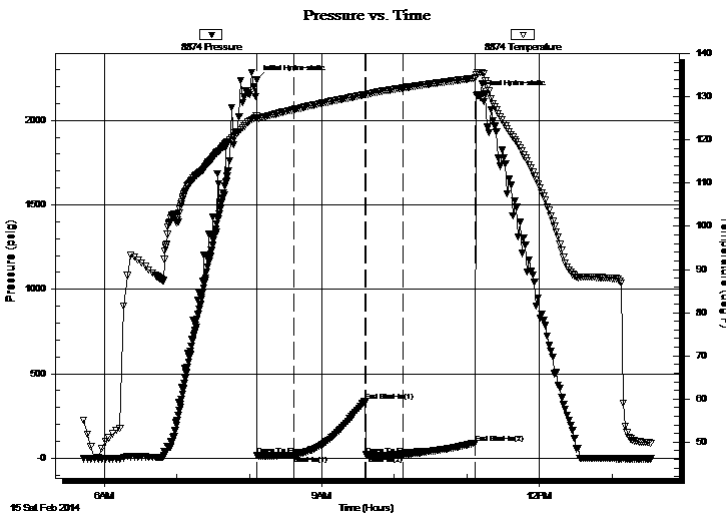
**Serial #: 8874**

**Inside**

Press@RunDepth: 19.51 psig @ 4420.00 ft (KB)  
 Start Date: 2014.02.15 End Date: 2014.02.15  
 Start Time: 05:42:54 End Time: 13:32:54  
 Capacity: 8000.00 psig  
 Last Calib.: 2014.02.15  
 Time On Btm: 2014.02.15 @ 08:05:54  
 Time Off Btm: 2014.02.15 @ 11:08:54

TEST COMMENT: 30-IS- Blow Built To 1/4"  
 60-IS- No Return  
 30-FF- No Blow  
 60-FS- No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2239.46	125.50	Initial Hydro-static
1	15.39	124.97	Open To Flow (1)
31	16.62	127.05	Shut-In(1)
90	335.10	130.48	End Shut-In(1)
91	19.63	130.51	Open To Flow (2)
121	19.51	132.05	Shut-In(2)
181	89.96	134.31	End Shut-In(2)
183	2152.23	135.48	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
18.00	MCO 54%o 45%m 1%g	0.09
2.00	oil 99%o 1%g	0.01

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Murfin Drilling Co., Inc.  
 250 N Water STE #300  
 Wichita, KS 67202  
 ATTN: Ken Wallace

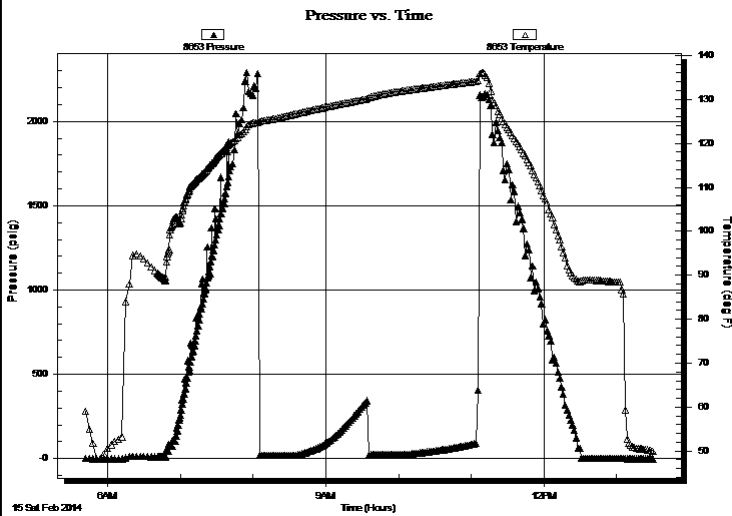
**3-1s-37w Cheyenne, KS**  
**Carolyn #1-3**  
 Job Ticket: 56751 **DST#: 5**  
 Test Start: 2014.02.15 @ 05:41:54

**GENERAL INFORMATION:**

Formation: **Pawnee**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:06:24  
 Time Test Ended: 13:32:54  
**Interval: 4419.00 ft (KB) To 4464.00 ft (KB) (TVD)**  
 Total Depth: 4464.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Robert Zodrow  
 Unit No: 66  
 Reference Elevations: 3087.00 ft (KB)  
 3077.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8653 Outside**  
 Press@RunDepth: psig @ 4420.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.02.15 End Date: 2014.02.15 Last Calib.: 2014.02.15  
 Start Time: 05:42:00 End Time: 13:30:30 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 30-IF- Blow Built To 1/4"  
 60-ISI- No Return  
 30-FF- No Blow  
 60-FSI- No Return



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
18.00	MCO 54%o 45%m 1%g	0.09
2.00	oil 99%o 1%g	0.01

\* Recovery from multiple tests

**Gas Rates**

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**3-1s-37w Cheyenne,KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 56751

**DST#: 5**

ATTN: Ken Wallace

Test Start: 2014.02.15 @ 05:41:54

## Tool Information

Drill Pipe:	Length: 4223.00 ft	Diameter: 3.80 inches	Volume: 59.24 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.15 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4419.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	73.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4392.00	
Shut In Tool	5.00			4397.00	
Hydraulic tool	5.00			4402.00	
Jars	5.00			4407.00	
Safety Joint	3.00			4410.00	
Packer	5.00			4415.00	28.00 Bottom Of Top Packer
Packer	4.00			4419.00	
Stubb	1.00			4420.00	
Recorder	0.00	8653	Outside	4420.00	
Recorder	0.00	8874	Inside	4420.00	
Perforations	6.00			4426.00	
Change Over Sub	1.00			4427.00	
Drill Pipe	31.00			4458.00	
Change Over Sub	1.00			4459.00	
Bullnose	5.00			4464.00	45.00 Bottom Packers & Anchor

**Total Tool Length: 73.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**3-1s-37w Cheyenne,KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 56751

**DST#: 5**

ATTN: Ken Wallace

Test Start: 2014.02.15 @ 05:41:54

## 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:

ppm

Viscosity: 75.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
18.00	MCO 54%o 45%m 1%g	0.089
2.00	oil 99%o 1%g	0.010

Total Length: 20.00 ft      Total Volume: 0.099 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8874

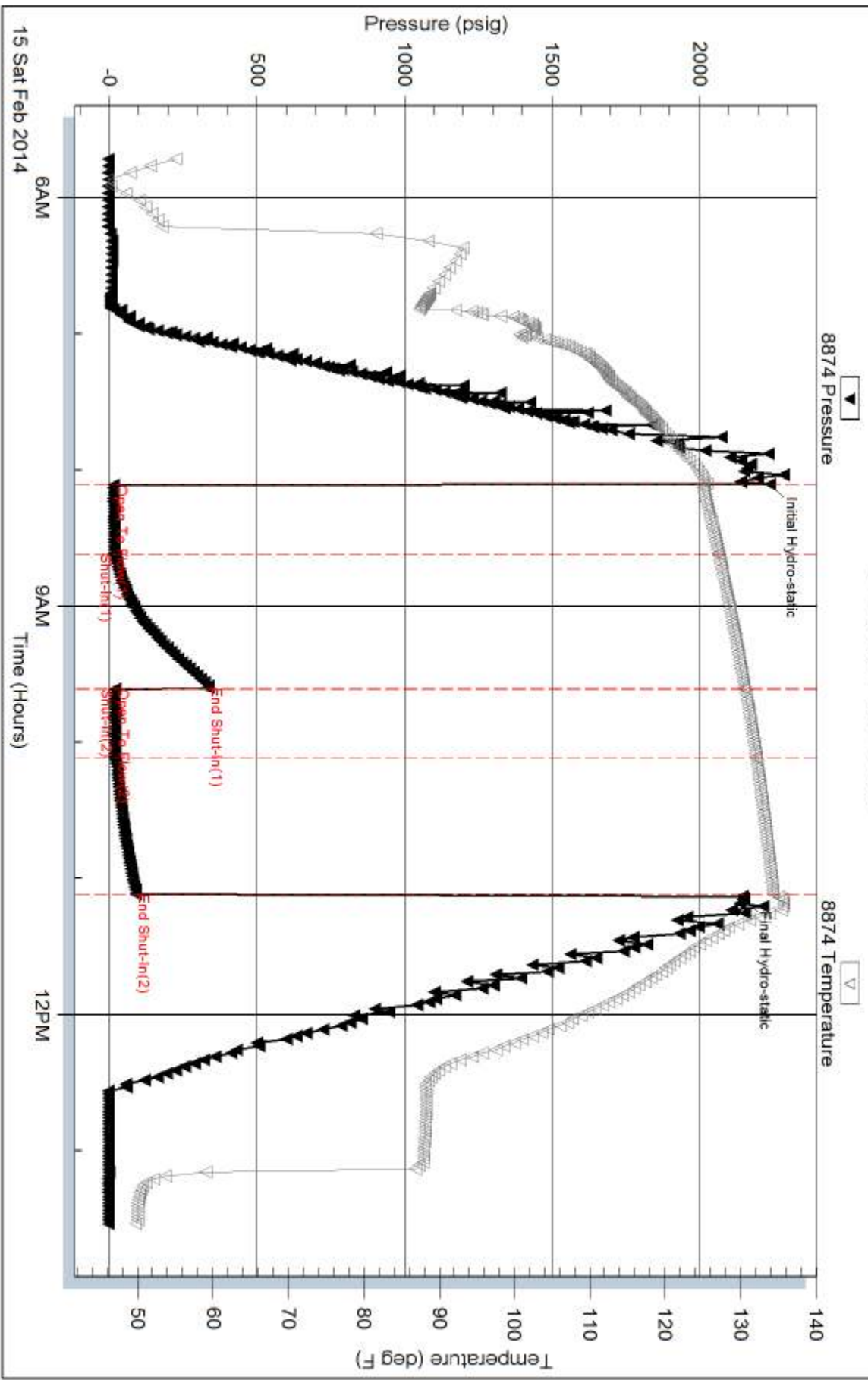
Inside

Murfin Drilling Co., Inc.

Carohn #1-3

DST Test Number: 5

### Pressure vs. Time



15 Sat Feb 2014

9AM Time (Hours)

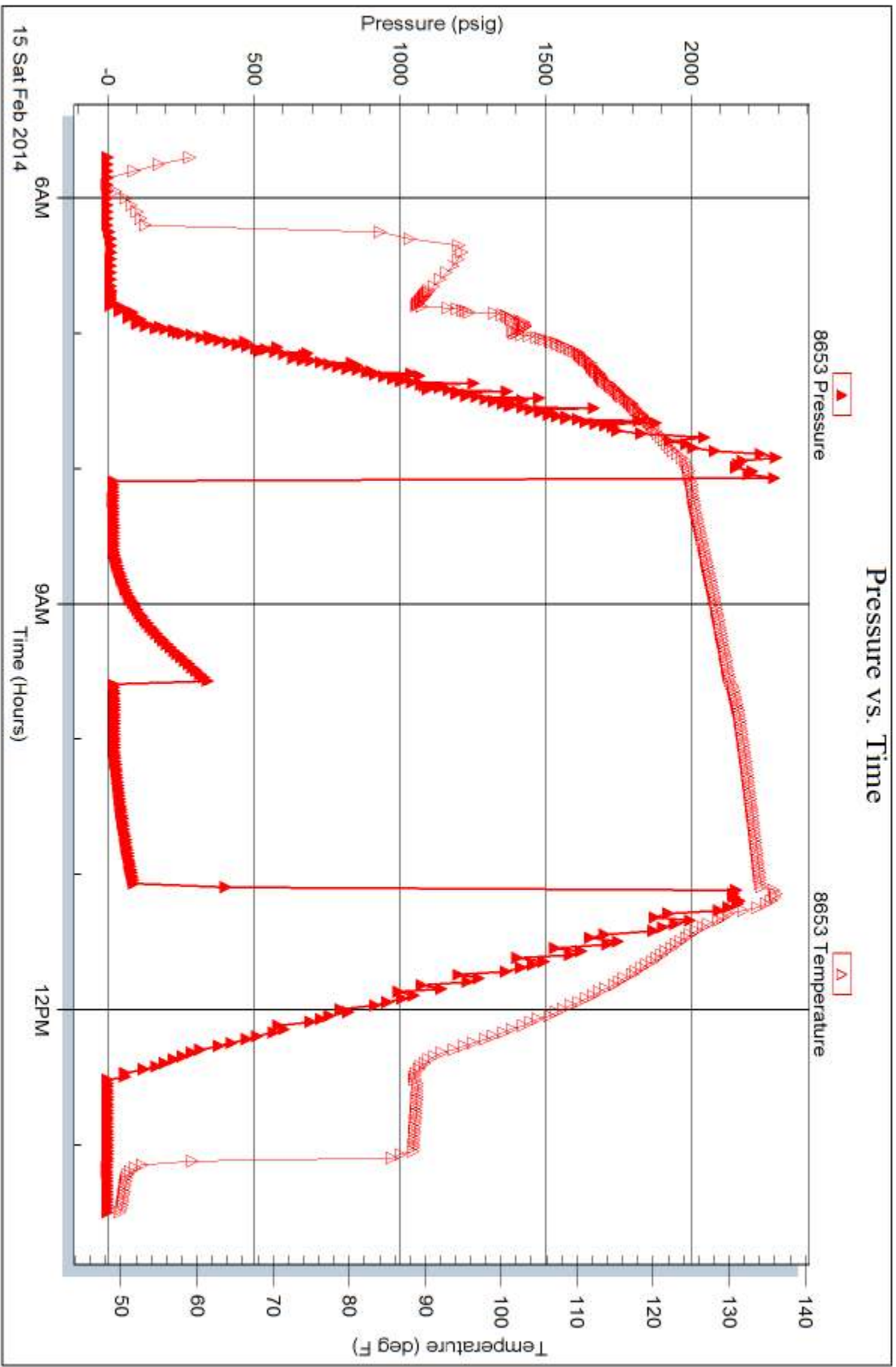
12PM

Serial #: 8653

Outside Murfin Drilling Co., Inc.

Carolyn #1-3

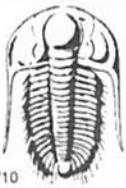
DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 56751

Printed: 2014.02.19 @ 14:02:05



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53388

4/10

Well Name & No. Carolyn #1-3 Test No. 1 Date 2-10-14  
 Company Murfin Drilling Co., Inc. Elevation 3087 KB 3077 GL  
 Address 250 N Water STE #300 Wichita, KS 67202  
 Co. Rep / Geo. Ken Wallace Rig Murfin #20  
 Location: Sec. 3 Twp. 1S Rge. 37W Co. Cheyenne State KS

Interval Tested 3575-3627 Zone Tested Foraker  
 Anchor Length 52' Drill Pipe Run 3371' Mud Wt. 8.8  
 Top Packer Depth 3571 Drill Collars Run 186' Vis 54  
 Bottom Packer Depth 3575 Wt. Pipe Run Ø WL 5.6  
 Total Depth 3627 Chlorides 800 ppm System LCM 4#

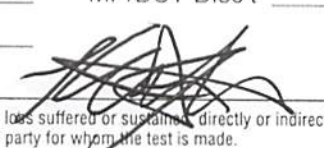
Blow Description IF- Bled-off initial surge - weak surface blow did not build or die  
ISI- weak surface return did not build or die  
FF- Pulled tools after initial shut in.  
FSC-

Rec	Feet of	%gas	%oil	%water	%mud
<u>315</u>	<u>Mud</u>			<u>100%</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 315 BHT 120 Gravity - API RW - @ - ° F Chlorides - ppm

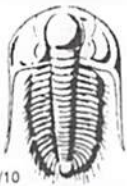
(A) Initial Hydrostatic 1739  Test 1150 T-On Location 12:00 AM  
 (B) First Initial Flow 129  Jars 250 T-Started 12:43 AM  
 (C) First Final Flow 129  Safety Joint 75 T-Open 3:35 AM  
 (D) Initial Shut-In 491  Circ Sub N/C T-Pulled 4:35 AM  
 (E) Second Initial Flow -  Hourly Standby - T-Out 6:45 AM  
 (F) Second Final Flow -  Mileage ~~1000~~ 162 RT 251.10 Comments Tool hit several  
 (G) Final Shut-In -  Sampler - bridges starting approx  
 (H) Final Hydrostatic 1718  Straddle - 30' above bottom (chased tool  
 Shale Packer - approx 20' to bottom.  
 Ruined Shale Packer -  
 Ruined Packer -  
 Extra Copies -

Initial Open 30 Sub Total 0  
 Initial Shut-In 30 Total 1726.10  
 Final Flow - MP/DST Disc't -  
 Final Shut-In - Sub Total 1726.10

Approved By \_\_\_\_\_ 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 or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53389

Well Name & No. Carolyn #1-3 Test No. 2 Date 2-10-14  
 Company Murfin Drilling Co., Inc Elevation 3087 KB 3077 GL  
 Address 250 N Water STE #300 Wichita, KS 67202  
 Co. Rep / Geo. Ken Wallace Rig Murfin #20  
 Location: Sec. 3 Twp. 1S Rge. 37W Co. Cheyenne State KS

Interval Tested 3575-3627 Zone Tested Foraker  
 Anchor Length 52 Drill Pipe Run 3371 Mud Wt. 8.8  
 Top Packer Depth 3571 Drill Collars Run 186 Vis 54  
 Bottom Packer Depth 3575 Wt. Pipe Run Ø WL 5.6  
 Total Depth 3627 Chlorides 800 ppm System LCM 4#  
 Blow Description IF- 1/2" Blow built to 3/4" Then died back to 1/2"  
ISI- No Return  
FF- No Blow  
FSI- No Return

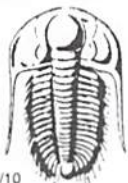
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>mud</u>			<u>100%</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 116 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>1701</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>12:00 AM</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2:01 PM</u>
(C) First Final Flow <u>18</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>4:25 PM</u>
(D) Initial Shut-In <u>410</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>7:15 PM</u>
(E) Second Initial Flow <u>18</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>9:20 PM</u>
(F) Second Final Flow <u>19</u>	<input checked="" type="checkbox"/> Mileage <u>162 RT</u>	Comments
(G) Final Shut-In	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic	<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>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>1475</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1475</u>	

Approved By \_\_\_\_\_ Our Representative

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53390

Well Name & No. Carolyn #1-3 Test No. 3 Date 2-12-14  
 Company Murfin Drilling Co., Inc Elevation 3087 KB 3077 GL  
 Address 250 N Water STE #300 Wichita, KS 67202  
 Co. Rep / Geo. Ken Wallace Rig Murfin #20  
 Location: Sec. 3 Twp. 1S Rge. 37W Co. Cheyenne State KS

Interval Tested 3996-4118 Zone Tested LKL "A-D"  
 Anchor Length 122' Drill Pipe Run 3790 Mud Wt. 9.3  
 Top Packer Depth 3992 Drill Collars Run 186 Vis 90  
 Bottom Packer Depth 3996 Wt. Pipe Run 0 WL 5.2  
 Total Depth 4118 Chlorides 400 ppm System LCM 6#

Blow Description IF - 1/2" Blow built to B.O.B in 17 min.  
ISI - Surface Return built to 1 1/2"  
FF - Surface Blow built to BoB in 12 min.  
FSI - Surface Return built to 7"

Rec	Feet of	%gas	%oil	%water	%mud
<u>123</u>	<u>Clean Gassy Oil</u>	<u>10</u>	<u>90</u>		
<u>91</u>	<u><del>GOCM</del> GOCM</u>	<u>5</u>	<u><del>25</del> 25</u>	<u><del>70</del> 70</u>	
<u>120</u>	<u><del>GOCM</del> OCM</u>		<u>10</u>		<u>90</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec Total <u>334</u>	BHT <u>129</u>	Gravity <u>29</u>	API RW <u>-</u>	@ <u>-</u> ° F	Chlorides <u>-</u> ppm

(A) Initial Hydrostatic 1976  Test 1250 T-On Location 8:30 PM  
 (B) First Initial Flow 35  Jars 250 T-Started 8:39 PM  
 (C) First Final Flow 106  Safety Joint 75 T-Open 10:25 PM  
 (D) Initial Shut-In 806  Circ Sub NIC T-Pulled 2:25 AM  
 (E) Second Initial Flow 113  Hourly Standby \_\_\_\_\_ T-Out 5:00 AM  
 (F) Second Final Flow 153  Mileage 162 RT 251.10 Comments 400' GIP  
 (G) Final Shut-In 744  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1936  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90  
 Day Standby 1d 23.25  
 Accessibility \_\_\_\_\_  
 Sub Total 1826.10  
 Sub Total 775  
 Total 2601.10  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53391

Well Name & No. Carolyn #1-3 Test No. 4 Date 2-13-14  
 Company Murfin Drilling Co., Inc. Elevation 3087 KB 3077 GL  
 Address 250 N Water STE #300 Wichita, KS 67202  
 Co. Rep / Geo. Ken Wallace Rig Murfin #20  
 Location: Sec. 3 Twp. 1S Rge. 37 W Co. Cherokee State KS

Interval Tested 4130-4175 Zone Tested LKC "G"  
 Anchor Length 45' Drill Pipe Run 3949 Mud Wt. 9.4  
 Top Packer Depth 4126 Drill Collars Run 186 Vis 60  
 Bottom Packer Depth 4130 Wt. Pipe Run 0 WL 6.0  
 Total Depth 4175 Chlorides 400 ppm System LCM 7#

Blow Description IF - 1/4" Blow built to 1/2" then died back to 1/4"  
ISF - No Return  
FF - No Blow  
FSL - No Return

Rec	Feet of	%gas	spots	%oil	%water	%mud
5	OSM				1000	
Rec	Feet of	%gas		%oil	%water	%mud
Rec	Feet of	%gas		%oil	%water	%mud
Rec	Feet of	%gas		%oil	%water	%mud
Rec	Feet of	%gas		%oil	%water	%mud

Rec Total 5 BHT 127 Gravity - API RW - @ - °F Chlorides - ppm

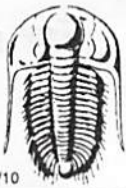
(A) Initial Hydrostatic <u>2050</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>2:45 PM</u>
(B) First Initial Flow <u>14</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>3:50 PM</u>
(C) First Final Flow <u>15</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>5:30 PM</u>
(D) Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>8:30 PM</u>
(E) Second Initial Flow <u>16</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>10:30 PM</u>
(F) Second Final Flow <u>17</u>	<input checked="" type="checkbox"/> Mileage <u>162 RT</u> 251.10	Comments
(G) Final Shut-In <u>32</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2007</u>	<input type="checkbox"/> Straddle	

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

Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 1826.10  
 MP/DST Disc't

Sub Total 1826.10

Approved By \_\_\_\_\_ Our Representative



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 56751

4/10

Well Name & No. Carolyn #1-3 Test No. 5 Date 2-15-14  
 Company Murfin Drilling CO, Inc. Elevation 3087 KB 3077 GL  
 Address 250 N Water STE #300 Wichita, KS 67202  
 Co. Rep / Geo. Ken Wallace Rig Murfin #20  
 Location: Sec. 3 Twp. 1S Rge. 37W Co. Cheyenne State KS

Interval Tested 4419 - 4464 Zone Tested Pownee  
 Anchor Length 45 Drill Pipe Run 4223 Mud Wt. 9.4  
 Top Packer Depth 4419 Drill Collars Run 186 Vis 75  
 Bottom Packer Depth 4419 Wt. Pipe Run 0 WL 6.4  
 Total Depth 4464 Chlorides 500 ppm System LCM 8  
 Blow Description IF - blow built to 1/4"  
ISI - no return  
FF - no blow  
FSI - no return

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>OIL</u>	<u>1</u>	<u>99</u>		
<u>18</u>	<u>MCO</u>	<u>1</u>	<u>54</u>		<u>45</u>

Rec Total 20 BHT 134 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2239  Test 1250 T-On Location 5:30 AM  
 (B) First Initial Flow 15  Jars 250 T-Started 5:41 AM  
 (C) First Final Flow 16  Safety Joint 75 T-Open 8:05 AM  
 (D) Initial Shut-In 335  Circ Sub N/C T-Pulled 11:05 AM  
 (E) Second Initial Flow 20  Hourly Standby \_\_\_\_\_ T-Out 1:30 PM  
 (F) Second Final Flow 20  Mileage 162 RT 251.10 Comments \_\_\_\_\_  
 (G) Final Shut-In 90  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2152  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 300  
 Day Standby \_\_\_\_\_ Total 2126.10  
 Accessibility 1d 9h MP/DST Disc't \_\_\_\_\_  
 Sub Total 1826.10

Approved By Ken Wallace Our Representative Robert Zedeno

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# GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY Murfin Drilling Co., Inc

LEASE Carolyn #1-3

FIELD Jones Canyon SE

LOCATION 660' FSL + 640' FNL

SEC 3 TWP 1 RGE 37 W

COUNTY Cheyenne STATE K5

CONTRACTOR Murfin Drilling Rig #20

SPUD 01/29/14 COMP 02/18/14

RTD 4615' LTD 4614'

MUD UP 3300' TYPE MUD chem

SAMPLES SAVED FROM 3400'

DRILLING TIME KEPT FROM 3400'

SAMPLES EXAMINED FROM 3400'

GEOLOGICAL SUPERVISION FROM 3400'

GEOLOGIST ON WELL Ken Wallace

ELEVATIONS

KB 3097'

DF

GL 3086'

Measurements Are All From KB

CASING SURFACE 8 7/8 @ 225'

PRODUCTION 5 1/2 @ 4612'

ELECTRICAL SURVEYS DI, CN/CDL, MEL, BHCS

FORMATION TOPS

LOG

SAMPLES

FORMATION TOPS	LOG	SAMPLES
Anhydrite	3049 (+46)	3055 (+42)
Neva	3502 (-405)	3498 (-401)
Forker	3614 (-517)	3610 (-513)
Tapeka	3834 (-737)	3832 (-735)
Lansing	4050 (-953)	4049 (-952)
Stark	4266 (-1169)	4265 (-1168)
B/KC	4321 (-1224)	4323 (-1226)
Pawnee	4441 (-1344)	4444 (-1347)
Cherokee	4529 (-1432)	4533 (-1435)
RTD	4614 (-1517)	4615 (-1518)

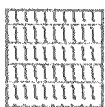
REMARKS Production casing set to further evaluate KC & Pawnee zones,

Ken Wallace

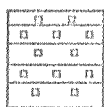
1/29/14: Spud @ 5:30 pm  
 1/30/14: Depth 225'  
 1/31/14: Depth 1375'  
 2/1/14: off-weather  
 2/2/14: start up  
 2/3/14: Depth 2200'  
 2/4/14: Depth 3400'  
 2/5/14: Depth 3600'  
 2/6 thru 2/8/14: off-weather  
 2/9/14: start up  
 2/10/14: Depth 3627'  
 2/11/14: Depth 3710'  
 2/12/14: Depth 4015'  
 2/13/14: Depth 4118'

2/14/14: Depth 4235'  
 2/15/14: Depth 4464'  
 2/16/14: RTD 4615'  
 2/17/14: Logging  
 2/18/14: complete

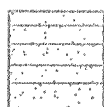
## LEGEND



Anhydrite



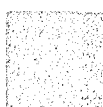
Salt



Sandstone



Shale



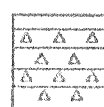
Carb sh



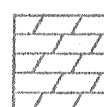
Limestone



Ool. Lima



Chert



Dolomite

SCALE " = 100'

9702 9

DEPTH

Lithology

Depth

DRILLING TIME - Minutes Per Foot  
Rate of Penetration Decreases

SAMPLE DESCRIPTIONS

REMARKS

3030

50

70

90

3110

3400

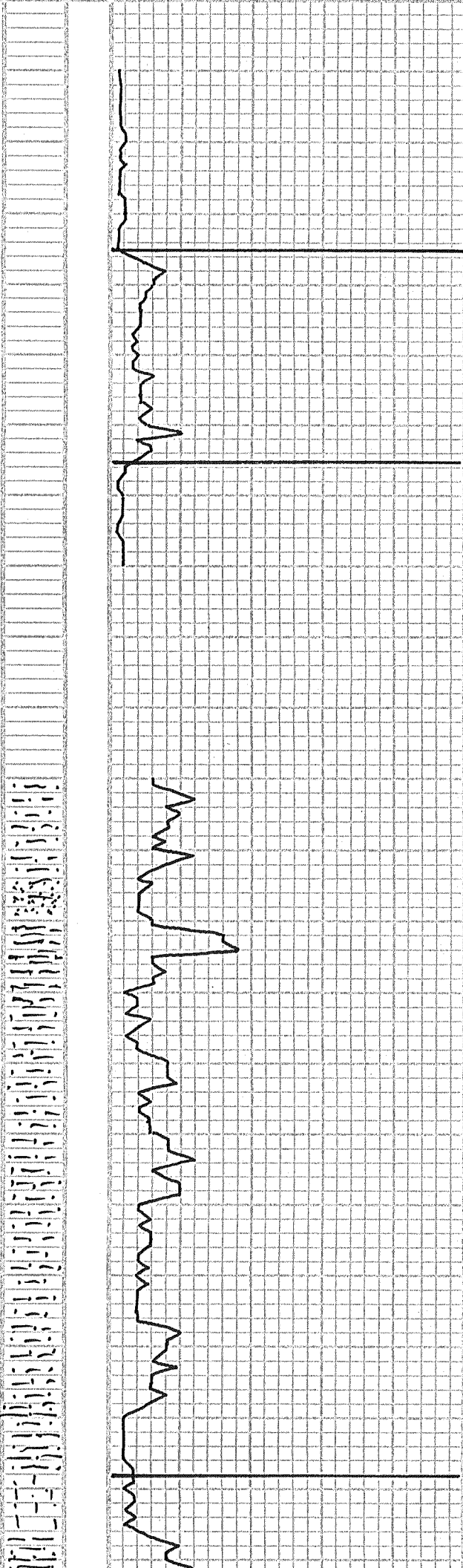
20

40

60

80

3500



Anhydrite 3055 (+42)

B/Anhydrite 3085 (+12)

slst, rd, argl; sm vfg ss; NS

ss, ltgy, vfg, much slst a.a.

sh, gy, sm ltgy (waxy), sm dkgy

sh, rd, sm slst, soft

sh, rd, fissl, hard w/ slst a.a.

sh, rd w/ tan lamina, slty

sh, rd, sm brick rd, slty

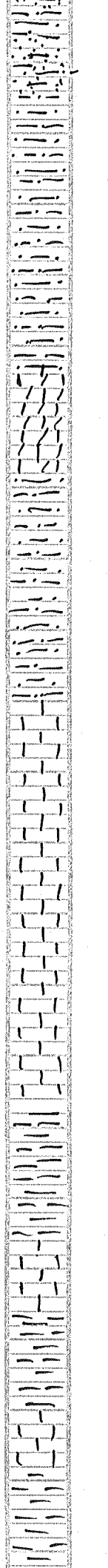
Ls, ltgy-tan, sl dolomitic, v foss, sm sd grns, NS, NO, NF

sh, gy, calc impart, s vfg ss

Morgan Mud: 3499'  
2/4/14  
Wt. 8.8, vis 62, LCM 5

Neva 3498 (-40)

20  
40  
60  
80  
3600  
20  
40  
60  
80  
3700  
20



sh, rd, v sandy, fg sd

sh, dkgy, calc, much rd sh/slst

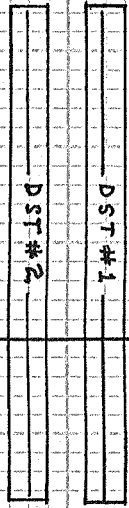
Dol, buff, t snccr, foss, pp, tr org  
Δ, NS

Red Eagle 3563 (-466)

sh, lt grn, sdy, sm lt grn fg ss

sh, red, sm lt grn, gy, slst

Morgan Mud: 3600'  
2/9/14  
wt. 8.8, vis 54, LCM 4



Foraker 3610 (-513)

Ls, lt gy-wh, ool, foss, sl salt t  
pepr ten, g I G & ug φ, g sfb,  
g sptd - sat stn, sm dk stn,  
tr FL, NO

Dol, mgy-vlt purpl, argl, snccr,  
NS, abd red sh

Morgan Mud: 3627'  
2/10/14  
wt. 9, vis 65, LCM 5

Ls, m-lt gy-tan, sl foss, xln,  
slcky, NS

Pipe Strap @ 3627'  
Strap 0.45' short

Ls, tan, ool, poolmd φ, sm xln,  
dse, slcky, NS

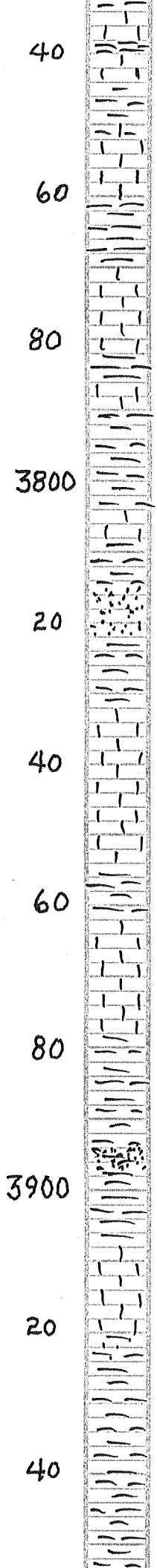
sh, gg, calc

Ls, lt gy, fxln-dse, slcky,  
NS vis φ, NS

sh, red, gummy

Ls, offwh, granl, foss, ool, NS

sh, lt red, calc



Ls, buff, fxl - dse, NS

sh, red, slty

Ls, tan, fxl - dse sl cky,  
sl foss, ppt/vg φ, fspdt str, SSFO  
asph + globs, NO

sh, red, slty

Ls, lt gy, ool (crse oolts), p φ,  
NS, NO

○ Ls, off wh, ool, foss, pv φ, asph  
str, tr to, NO

sh, red, slty

Ls, off wh, ool, foss, NS

sh, red, slty / sdy

ss, red, fgd, orgl

sh, red, sm brn, slty, sdy

Morgan Mud: 3772'  
2/11/14  
wt. 9.3, vis 50, LCM 8

Topeka 3832 (-735)

Ls, tan, fxl, dse, sl foss,  
cky, NS

Ls, lt gy - tan, ool in pt, mstly  
fxl - dse, cky, NS, sl Δ

Ls, tan, dse, v Δ ty, interbd  
w/ red sh, NS

Ls, tan, ool in pt, less Δ,  
foss, cky, NS

sh, red, slty, sm grn sh

ss, lt grn, v fg, arg, fsortd,  
sh, red, gy, grn

Ls, wh - lt gy, sl ool, mstly  
fxl - dse, NS

sh, red, slty, sdy, sm purple,  
calc

sh, red brown, calc

40

60

80

3800

20

40

60

80

3900

20

40



a.a., sm lt grn, calc, sst

Oread 3968(-871)

60

80

4000

20

40

60

80

4100

20

40

60

Ls, wh-ltgy, ool in pt, xln, sm dse, pug φ, sptd bl stn, fplc pigg, psto, NO, NF

Ls, tan, ool, pigg, ssfo, sl foss, psptd bl stn, NO, NF

Ls, tan, dse, cky, sl foss, tr bl stn, NFO, NO

ss, ltgy, vfg, w/rd & sortd, friable, sat gilsonite stn, NFO, NO

sh, red, gy, brn

Lansing 4049(-952)

Ls, off wh-ltgy, mxln-dse, ool in pt, sl foss, p-f vg φ, psto on bk, sptd blk stn, sm frac φ, NO, NF

Ls, ltgy-tan, fxln-dse, tr asph stn, Nfo, NO, Nvix φ, NF

sh, red-brn w/gy ss, ltgy, vfg, friable, calc, NS

ss, brn, vfg, argl, calc, hard, NS  
sh, red, slty

Ls, wh-ltgy, ool, sm xln-dse, sl cky, pug φ, scat sptd stn, mstly barren, NFO, NO

15"- Ls, ltgy, fxln, foss, p-fvg φ, foss φ, GSFO & GB, sptd stn, NO, NF

sh, red, gy, grn

Ls, ltgy, f-mxln, dse, tr vg φ, tr asph stn, ool in pt, NFO, NO

sh, red, brn, sm grn, hard & slty

Ls, ltgy-wh, ool, sm fxln-dse, foss, f-g IG & vg φ, GSFO & GB, f sptd stn, NO, NF

Ls, ltgy-tan, mstly dse-fxln,

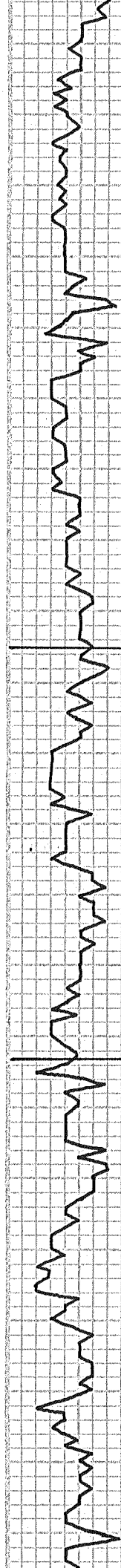
Morgan Mud: 4079'  
2/12/14  
wt. 9.3, vis 90, LCM 6

Morgan Mud: 4118'  
2/3/14  
wt. 9.4, vis 60, LCM 7

DST # 3

DST # 4

80  
4200  
20  
40  
60  
80  
4300  
20  
40  
60  
80



ckly, NS  
 sh, red, sm grn, calc  
 a.a. sdy w/ lt grn, argl, Ls  
 Ls, off wh - mgy, fass, fxln, cky in pt, tr ugφ, scat dō stn, NFO, NO, NF  
 sh, red, brn  
 Ls, gy - tan, ool in pt, fxln - dse, tr dō stn, Nvisφ, NFO, NO  
 sh, brn, red, slty  
 Ls, off wh - lt gy, sl ool, mstly xln, fass, frhd φ w/ red clay fill, 1pc USSPO, Nstn, NO  
 Ls, lt gy, fxln - dse, sl fass, Nvisφ, NS, NO, cky  
 sh, gy, red, sm grn  
 ss, red-tan, vfg, friable, calc, NS  
 Ls, lt gy - tan, ool, xln - cky in pt, fass, NS  
 sh, red, grn, gy; sm lt grn argl, Ls  
 Ls, lt tan, ool, fass, sm fxln, NS  
 sh, red, gy  
 Ls, lt gy, sm tan, ool in pt, fxln, sm dse, fass, Nvisφ, NS  
 sh, red, grn, sm lt yello.  
 Ls, gy, sl ool, fxln - dse, sm clay, NS  
 sh, brn, red, sm grn  
 ss, red/brn, vfg, argl; sh,

Morgan Mud: 4243'  
2/14/14  
wt. 9.4, vis 75, LCM B

Stark 4265(-1168)

BKC 4323(-1226)

4400

20

40

60

80

4500

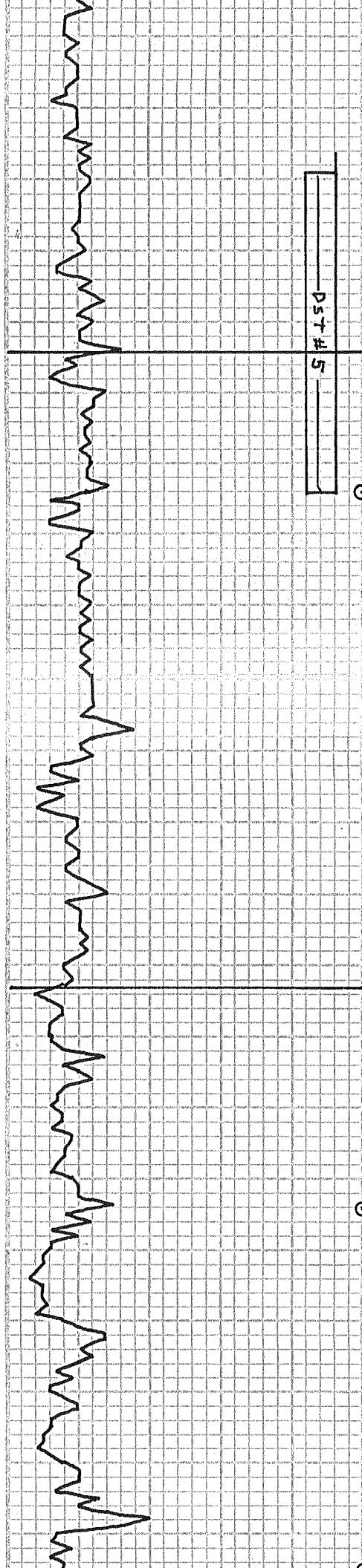
20

40

60

80

4600



DST # 5

red/brn  
 Ls, tan-1+gy, sl ool, foss,  
 mstly dse, NS

sh, gy, sm red, cak

sh, brn, red

Pawnee 4444(-1347)

Ls, wh-1+gy, ool, foss, sl cky,  
 f I G/Vg φ, SSFO, scat 1+ d  
 m stn, NO, NF

Morgan Mud: 4464'  
 2/15/14  
 wt. 9.4, vis 90, LCM 9

Ls, mgy, fxln, cky, NS

sh, gy - dk gy

Ls, gy, fxln, dse in pt. & cky,  
 sl granlr, NS

Ls, gy fxln, sm granlr, cky,  
 NS

sh, dkgy - b)

Ls, tan, ool, foss, dse, NS

Ls, tan-gy, stool, fxln, cky,  
 NS

Cherokee 4533(-1435)

sh, bl

Ls, tan-1+gy, ool, dse, cky,  
 sl foss, NS

Ls, aa. w/ red, gy sh

Ls, tan, ool, cky, tr sd grns  
 in bedded in Ls

sh, red, gy, grn

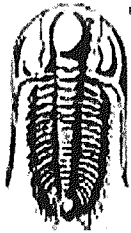
Ls, off wh, dse, cky, N vis φ, NS

sh, red, gy w/ tr sd grns

vc sh; ss, cl, fg, psortd, sm  
 large indiv sd grains; sm  
 off wh, dse, Ls

Morgan Mud: 4615'  
 2/16/14

SS, red, vfg, argl, cak; sm SS,  
 sl pink cl, fg w/ vc sh



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

Murfin Drilling Co., Inc.

**3-1S-37W Cheyenne, KS**

250 N Water STE #300  
Wichita, KS 67202

**Carolyn #1-3**

Job Ticket: 53388

**DST#: 1**

ATTN: Ken Wallace

Test Start: 2014.02.10 @ 00:43:00

**GENERAL INFORMATION:**

Formation: **Foraker**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:47:30

Time Test Ended: 06:43:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: **3575.00 ft (KB) To 3627.00 ft (KB) (TVD)**

Reference Elevations: 3087.00 ft (KB)

Total Depth: 3627.00 ft (KB) (TVD)

3077.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 10.00 ft

**Serial #: 8874** Inside

Press@RunDepth: 129.66 psig @ 3576.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.10

End Date: 2014.02.10

Last Calib.: 2014.02.10

Start Time: 00:44:00

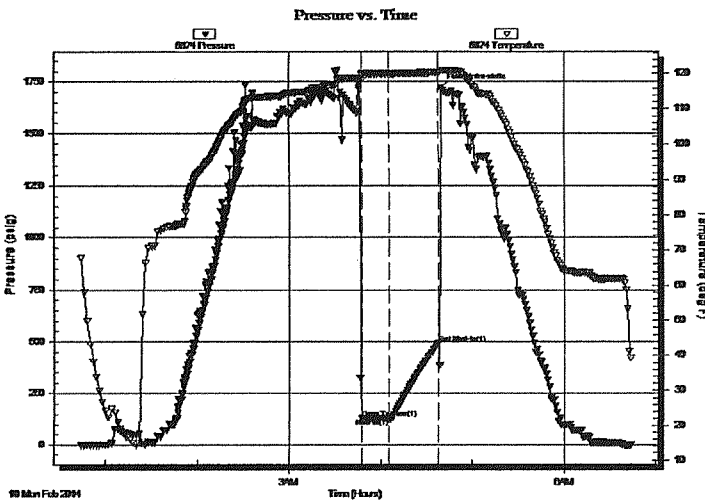
End Time: 06:43:30

Time On Btm: 2014.02.10 @ 03:46:00

Time Off Btm: 2014.02.10 @ 04:39:30

TEST COMMENT: 30 - IF- Bed off initial surge - Weak surface Blow did not build or die  
30 - IS- Weak Surface Return did not build or die

*Hit bridge - tool opened - misran*



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1739.41	118.79	Initial Hydro-static
2	129.67	119.85	Open To Flow (1)
19	129.66	120.02	Shut-in (1)
52	491.05	120.35	End Shut-in (1)
54	1718.08	120.88	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
315.00	Mud 100M	2.72

**Gas Rates**

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

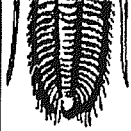


**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

Murfin Drilling Co., Inc.

**3-1S-37W Cheyenne, KS**



TESTING, INC.

250 N Water STE #300  
Wichita, KS 67202

ATTN: Ken Wallace

Carolyn #1-3

Job Ticket: 53389

DST#: 2

Test Start: 2014.02.10 @ 14:01:01

GENERAL INFORMATION:

Formation: Foraker

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:15:01

Time Test Ended: 21:16:31

Test Type: Conventional Bottom Hole (Reset)

Tester: Kevin Mack

Unit No: 66

Interval: 3575.00 ft (KB) To 3627.00 ft (KB) (TVD)

Total Depth: 3627.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3087.00 ft (KB)

3077.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8653

Outside

Press@RunDepth: 19.07 psig @ 3576.00 ft (KB)

Start Date: 2014.02.10

End Date: 2014.02.10

Start Time: 14:02:01

End Time: 21:16:31

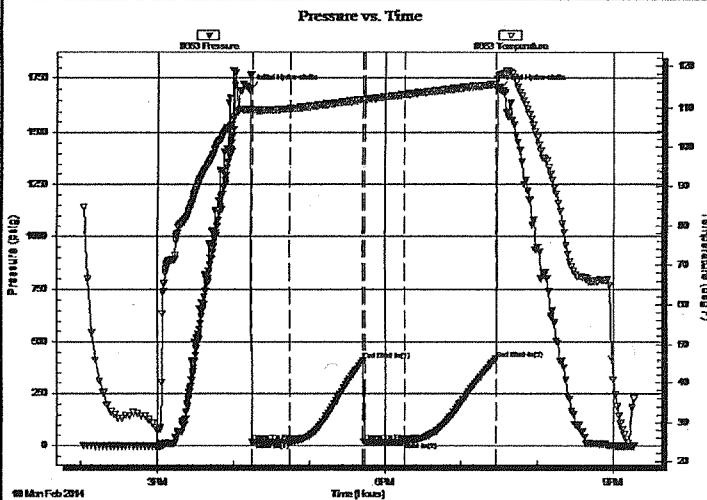
Capacity: 8000.00 psig

Last Calib.: 2014.02.10

Time On Btm: 2014.02.10 @ 16:13:01

Time Off Btm: 2014.02.10 @ 19:30:31

TEST COMMENT: 30 - IF - 1/2" Blow built to 3/4" then died back to 1/2"  
60 - ISI - No Return  
30 - FF - No Blow  
60 - FSI - No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1701.22	109.59	Initial Hydro-static
2	17.93	109.47	Open To Flow (1)
32	18.17	109.83	Shut-In(1)
89	410.98	111.97	End Shut-In(1)
91	18.80	112.00	Open To Flow (2)
122	19.07	113.14	Shut-In(2)
194	419.26	115.61	End Shut-In(2)
198	1701.92	117.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100M	0.02

\* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

3-1S-37W Cheyenne, KS

250 N Water STE #300  
Wichita, KS 67202

Carolyn #1-3

Job Ticket: 53390

DST#: 3

ATTN: Ken Wallace

Test Start: 2014.02.12 @ 20:39:00

GENERAL INFORMATION:

Formation: LKC "A-D"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:22:50

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Time Test Ended: 04:59:00

Unit No: 66

Interval: 3996.00 ft (KB) To 4118.00 ft (KB) (TVD)

Reference Elevations: 3087.00 ft (KB)

Total Depth: 4118.00 ft (KB) (TVD)

3077.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8874 Inside

Press@RunDepth: 153.43 psig @ 3997.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.12

End Date: 2014.02.13

Last Calib.: 2014.02.13

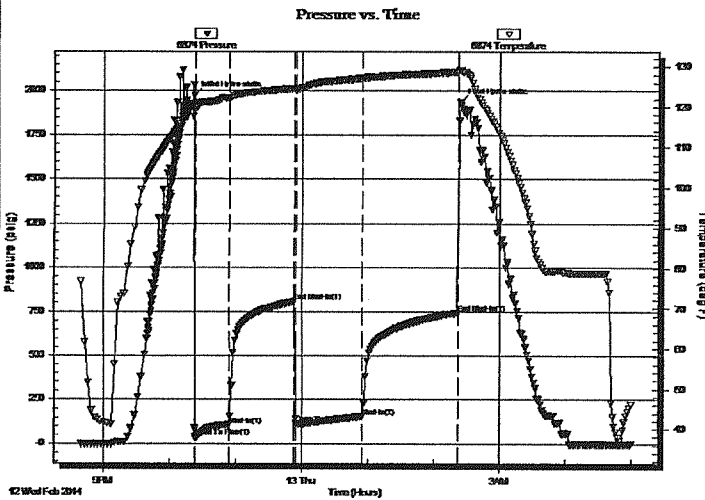
Start Time: 20:40:00

End Time: 04:59:00

Time On Btm: 2014.02.12 @ 22:22:20

Time Off Btm: 2014.02.13 @ 02:24:00

TEST COMMENT: 30 - IF- 1/2" Blow built to BoB in 17 min.  
60 - IS- Surface Return started at min. Built to 1 1/2"  
60 - FF- Surface Blow built to BoB in 12 min.  
90 - FS- Surface Return built to 7"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1976.67	120.25	Initial Hydro-static
1	35.99	119.80	Open To Flow (1)
32	106.06	122.25	Shut-In (1)
91	806.49	124.51	End Shut-In (1)
93	113.42	124.35	Open To Flow (2)
153	153.43	127.09	Shut-In (2)
240	744.12	128.63	End Shut-In (2)
242	1936.16	129.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCO 10o 90M	0.59
91.00	GMCO 5G 25o 70M	0.68
123.00	Clean Gassy Oil 10G 90o	1.73
0.00	400' GIP	0.00

Gas Rates

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



**TRILOBITE TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

3-1S-37W Cheyenne, KS

250 N Water STE#300  
Wichita, KS 67202

Carolyn #1-3

ATTN: Ken Wallace

Job Ticket: 53391

DST#: 4

Test Start: 2014.02.13 @ 15:50:00

GENERAL INFORMATION:

Formation: LKC "G"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:28:40

Time Test Ended: 22:21:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: 4130.00 ft (KB) To 4175.00 ft (KB) (TVD)

Reference Elevations: 3087.00 ft (KB)

Total Depth: 4175.00 ft (KB) (TVD)

3077.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8874 Inside

Press@RunDepth: 17.19 psig @ 4131.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.13

End Date: 2014.02.13

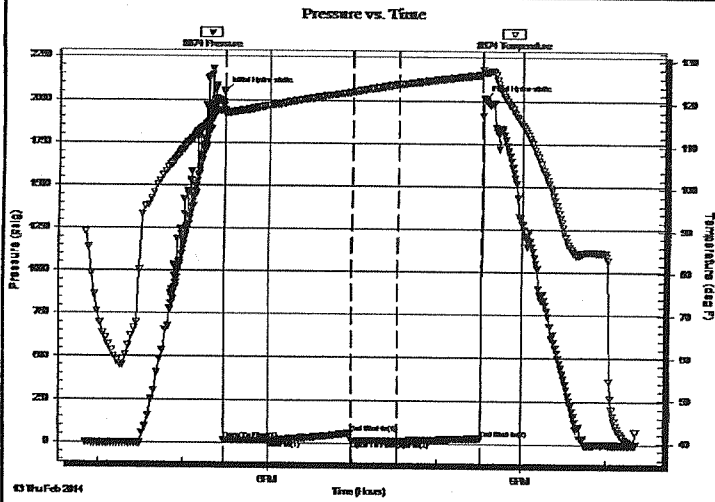
Last Calib.: 2014.02.13

Start Time: 15:51:00

End Time: 22:21:00

Time On Btm: 2014.02.13 @ 17:28:30

TEST COMMENT: 30 - IF- 1/4" Blow built to 1/2" then died back to 1/4"  
 60 - ISI- No Return  
 30 - FF- No Blow  
 60 - FSI- No Return



**PRESSURE SUMMARY**

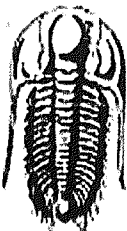
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2050.84	118.29	Initial Hydro-static
1	14.91	117.37	Open To Flow (1)
32	15.71	119.44	Shut-In(1)
90	60.13	122.71	End Shut-In(1)
91	16.42	122.78	Open To Flow (2)
123	17.19	124.50	Shut-In(2)
183	32.00	126.85	End Shut-In(2)
185	2007.14	127.42	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
5.00	OSM 100M (oil spots)	0.02

**Gas Rates**

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



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

Murfin Drilling Co., Inc.  
 250 N Water STE #300  
 Wichita, KS 67202  
 ATTN: Ken Wallace

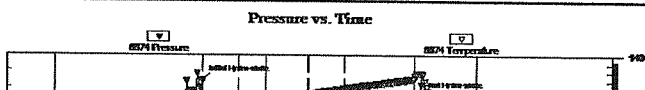
**3-1s-37w Cheyenne, KS**  
**Carolyn #1-3**  
 Job Ticket: 56751      DST#: 5  
 Test Start: 2014.02.15 @ 05:41:54

**GENERAL INFORMATION:**

Formation: **Pawnee**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:06:24  
 Time Test Ended: 13:32:54  
 Interval: **4419.00 ft (KB) To 4464.00 ft (KB) (TVD)**  
 Total Depth: 4464.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Robert Zodrow  
 Unit No: 66  
 Reference Elevations: 3087.00 ft (KB)  
 3077.00 ft (CF)  
 KB to GR/CF: 10.00 ft

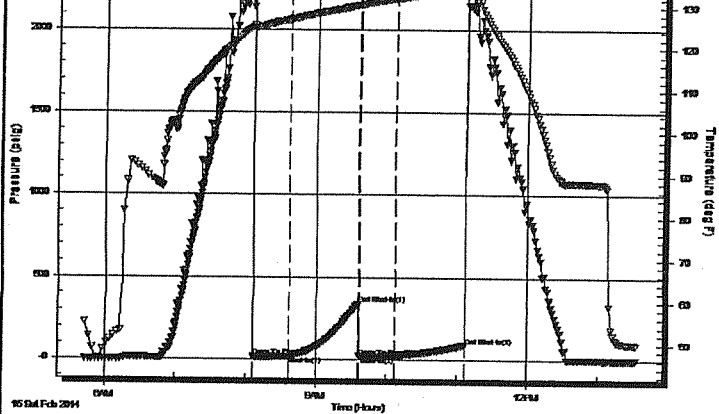
**Serial #: 8874 Inside**  
 Press@RunDepth: 19.51 psig @ 4420.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.02.15 End Date: 2014.02.15 Last Calib.: 2014.02.15  
 Start Time: 05:42:54 End Time: 13:32:54 Time On Btm: 2014.02.15 @ 08:05:54  
 Time Off Btm: 2014.02.15 @ 11:08:54

TEST COMMENT: 30-IF- Blow Built To 1/4"  
 60-ISI- No Return  
 30-FF- No Blow  
 60-FSI- No Return



**PRESSURE SUMMARY**

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



0	2239.46	125.50	Initial Hydro-static
1	15.39	124.97	Open To Flow (1)
31	16.62	127.05	Shut-In(1)
90	335.10	130.48	End Shut-In(1)
91	19.63	130.51	Open To Flow (2)
121	19.51	132.05	Shut-In(2)
181	89.96	134.31	End Shut-In(2)
183	2152.23	135.48	Final Hydro-static

15 Feb 2014

### Recovery

Length (ft)	Description	Volume (bbl)
18.00	MCO 54%o 45%m 1%g	0.09
2.00	oil 99%o 1%g	0.01

\* Recovery from multiple tests

### Gas Rates

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





**CONSOLIDATED**  
Oil Well Services, LLC

**REMIT TO**  
Consolidated Oil Well Services, LLC  
Dept. 970  
P.O. Box 4346  
Houston, TX 77210-4346

*MEMO*  
**MAIN OFFICE**  
P.O. Box 884  
Chanute, KS 66720  
620/431-9210 • 1-800/467-8676  
Fax 620/431-0012

*Prod-LH*

**INVOICE**

Invoice # 265707

Invoice Date: 01/30/2014 Terms: 10/10/30,n/30

Page 1

MURFIN DRILLING  
P.O. BOX 288  
RUSSELL KS 67665  
( ) -

CAROLYN 1-3  
38192  
3-1S-37W  
01-29-2014  
KS

USED FOR \_\_\_\_\_

APPROVED \_\_\_\_\_

**OPERATOR PAY MDC**

LEASE: Carolyn  
*1-3*

Part Number	Description	Qty	Unit Price	Total
1102	CALCIUM CHLORIDE (50#)	606.00	.9400	569.64
1104S	CLASS "A" CEMENT (SALE)	215.00	18.5500	3988.25

Sublet Performed	Description	Total
9996-130	CEMENT MATERIAL DISCOUNT	-455.79
9995-130	CEMENT EQUIPMENT DISCOUNT	-332.83

Description	Hours	Unit Price	Total
399 CEMENT PUMP (SURFACE)	1.00	1150.00	1150.00
399 EQUIPMENT MILEAGE (ONE WAY)	95.00	5.25	498.75
460 TON MILEAGE DELIVERY	1.00	1679.60	1679.60

Amount Due 8257.71 if paid after 03/01/2014

Parts:	4557.89	Freight:	.00	Tax:	334.32	AR	7431.94
Labor:	.00	Misc:	.00	Total:	7431.94		
Sublt:	-788.62	Supplies:	.00	Change:	.00		

Signed \_\_\_\_\_

Date \_\_\_\_\_

BARTLESVILLE, OK 918/338-0808    EL DORADO, KS 316/322-7022    EUREKA, KS 620/583-7664    PONCA CITY, OK 580/762-2303    OAKLEY, KS 785/672-8822    OTTAWA, KS 785/242-4044    THAYER, KS 620/839-5269    GILLETTE, WY 307/686-4914    CUSHING, OK 918/225-2650



265707

TICKET NUMBER 38192  
 LOCATION Oakley KS  
 FOREMAN Miles Shaw

PO Box 884, Chanute, KS 66720  
 620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT  
 CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
1-29-14	5406	Carolyn # 1-3	3	15	37W	Cheyenne
CUSTOMER <u>Martin Drilling</u>			Birdcity ks N to Aft E to Dnd 3 N to Sgr E + N into			
MAILING ADDRESS			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY			460	Cody R		
STATE						
ZIP CODE						

JOB TYPE Surface HOLE SIZE 12 1/4" HOLE DEPTH 225' CASING SIZE & WEIGHT 8 5/8 23#  
 CASING DEPTH 225' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 14.8 SLURRY VOL 1.24 WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING 20'  
 DISPLACEMENT 12 1/2 DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting and rig upon Martin Drilling rig #222 circulate casing mix 2155 lbs class A cement with 58 lbs calcium chloride 12 1/2 bbls water shut in cement did circulate 5 bbls to pit

Thanks Miles & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
54015	1	PUMP CHARGE	1150.00	1150.00 ✓
5406	95	MILEAGE	5.25	498.75 ✓
5407A	10.1 Tons	Ton Mileage delivery	1.75	1679.60 ✓
1102	600 #	Calcium Chloride	.94	569.64 ✓
1104S	215 SKS	Class A Cement	18.55	3988.25 ✓
<input checked="" type="checkbox"/> completed				
Subtotal				7886.24 ✓
less AB discount				788.62 ✓
Subtotal				7097.62 ✓
SALES TAX 8.15				334.32 ✓
ESTIMATED TOTAL				7431.94 ✓

Ravin 3737

AUTHORIZATION Greg Cochran TITLE Poolmaster DATE 1-29-14

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



P. O. Box 466  
Ness City, KS 67560  
Off: 785-798-2300

Acety —  
cc: W1  
cc: L2  
cc: L1

# Invoice

DATE	INVOICE #
2/16/2014	25292

BILL TO
Murfin Drilling Co Inc PO Box 661 Colby, KS 67701-0661
USED FOR <u>IC 103</u>
APPROVED <u>JM</u> <u>FHR</u>

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-3	Carolyn	Cheyenne		Oil	Development	5-1/2" Top To B...	Josh
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				160	Miles	6.00	960.00
579D	Pump Charge - Top To Bottom LongString				1	Job	2,000.00	2,000.00
221	Liquid KCL (Clayfix)				4	Gallon(s)	25.00	100.00T
281	Mud Flush				500	Gallon(s)	1.25	625.00T
290	D-Air				5	Gallon(s)	42.00	210.00T
403-5	5 1/2" Cement Basket				3	Each	300.00	900.00T
406-5	5 1/2" Latch Down Plug & Baffle				1	Each	275.00	275.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill				1	Each	375.00	375.00T
409-5	5 1/2" Turbolizer				15	Each	90.00	1,350.00T
413-5	5 1/2" Roto Wall Scratcher				5	Each	40.00	200.00T
419-5	5 1/2" Rotating Head Rental				1	Each	200.00	200.00T
325	Standard Cement				200	Sacks	14.50	2,900.00T
330	Swift Multi-Density Standard (MIDCON II)				300	Sacks	18.50	5,550.00T
276	Flocele				125	Lb(s)	2.50	312.50T
283	Salt				1,000	Lb(s)	0.20	200.00T
284	Calseal				9	Sack(s)	35.00	315.00T
285	CFR-1				150	Lb(s)	4.50	675.00T
581D	Service Charge Cement				500	Sacks	2.00	1,000.00
583D	Drayage				4,068.5	Ton Miles	1.00	4,068.50
	Subtotal							22,216.00
	Sales Tax Cheyenne County						8.15%	1,156.28
<b>We Appreciate Your Business!</b>							<b>Total</b>	<b>\$23,372.28</b>



Services, Inc.

CHARGE TO: Mrs. Lisa  
 ADDRESS \_\_\_\_\_  
 CITY, STATE, ZIP CODE \_\_\_\_\_

TICKET 25292

PAGE 1 OF 2

SERVICE LOCATIONS  
 1. Hays, KS WELPROJECT NO. 1-3 LEASE Carolyn COUNTY/PARISH Cheyenne STATE KS CITY \_\_\_\_\_ DATE 2-16-14 OWNER \_\_\_\_\_  
 2. Ness City, KS TICKET TYPE  SERVICE CONTRACTOR \_\_\_\_\_ RIG NAME/NO. \_\_\_\_\_ SHIPPED VIA CT DELIVERED TO Location ORDER NO. \_\_\_\_\_  
 3. \_\_\_\_\_ WEL TYPE  SALES WELL CATEGORY \_\_\_\_\_ WELL PURPOSE Development JOB PURPOSE 5 1/2 Twp to Station Longstrmy WELL PERMIT NO. \_\_\_\_\_ WELL LOCATION Sec 3, Twp 15, R 27w  
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE # 112	160	mi.			6.00	960.00
579					Pump Charge Top to Bottom	1	ea			2000.00	2000.00
221					Logwood KCL	4	gal			25.00	100.00
281					Mod Plush	500	gal			1.25	625.00
290					O-Air	5	gal			42.00	210.00
403					Cement Buckets	3	ea			300.00	900.00
406					Latch Down Plug & Baffle	1	ea			275.00	275.00
407					Insect Plant Shoe w/Auto Fill	1	ea			375.00	375.00
409					Turbulizers	15	ea			90.00	1350.00
413					Rotowall Scrapers	5	ea			40.00	200.00
419					Rotating Head Rental	1	ea			200.00	200.00

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.  
 MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS  
 X \_\_\_\_\_  
 DATE SIGNED 2-16-14 TIME SIGNED 2:30  A.M.  P.M.

REMIT PAYMENT TO:  
 SWIFT SERVICES, INC.  
 P.O. BOX 466  
 NESS CITY, KS 67560  
 785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	TOTAL
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				01	7195.00
WE UNDERSTOOD AND MET YOUR NEEDS?				02	15021.00
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				01	22,216.00
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				01	22,216.00
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO		01	1156.28
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				TOTAL	23,372.28

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.  
 SWIFT OPERATOR John Dull APPROVAL \_\_\_\_\_  
 Thank You!



PO Box 466  
Ness City, KS 67560  
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 282242

CUSTOMER *Murphy* WELL *Carolyn* 1-3 DATE 2-16-14 PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL		UNIT PRICE	AMOUNT
		LOC	ACCT	DT			QTY	U/M		
325						Standard Cement EA2	200	SKS	14.50	2900.00
330						Swift Mult. Density	300	SKS	18.50	5550.00
276						Flucelr	125	LBS	2.50	312.50
283						Salt	1000	LBS	2.00	2000.00
284						Calseal	9	SKS	35.00	315.00
285						CFR-1	150	LBS	4.50	675.00
581						SERVICE CHARGE			2.00	1050.00
583						MILEAGE CHARGE			1.00	4068.50
TOTAL WEIGHT							50855			
LOADED MILES							160			
CUBIC FEET							500			
TON MILES							4068.5			
CONTINUATION TOTAL										15021.00

JOB LOG

SWIFT Services, Inc.

DATE 2-16-14 PAGE NO.

CUSTOMER Murkin WELL NO. 1-3 LEASE Carolyn JOB TYPE 5 1/2 up no bottom TICKET NO. 25292

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2230							on location
								TD 4615 SS 21
								TP 4612 Insert 4591
								5 1/2 x 15.5#
								Centralizers 1-10, 12, 14, 16, 37, 62
								Baskets 15, 38.63
	0020							Start Pipe
	0330							circulate on 5, 65
	0440							Finish Running Pipe
	0500							Drop Ball circulate rotate
	0600	5	12				300	Start mud flush
		5	20				300	Start KLL flush
		5	138				200	Start SMD 250 sks
		5	48				200	Start EA-2 200 sks
	0718							Drop Plug wash out Pump + lines
	0720	6	20					Start Displacement w 20 bbl 14CL
		6						loose circulation
			60/70				300	Finish with 420
		4	90				800	loose circulation get circulation back
								hard circulate cement
		4	109.2				1100/1500	land plug 25 sks to PST
								Release Dry
	0745							Plug BH 30 sks MH 20 sks
	0845							wash up pack up
								Job complete
								Thank You
								Josh, Brian, Doug, John

Carolyn #1-3  
 Daily Drilling Report  
 Page Three

MDCI Carolyn #1-3 660' FSL 640' FWL Sec. 3-T1S-R37W 3097' KB							MDCI Patti #1-10 1820' FNL 660' FWL Sec. 10-T1S-R37W 3200' KB	
Formation	Sample top	Datum	Ref	Log Top	Datum	Ref	Log Top	Datum
Anhydrite	3055	+42	-10	3049	+48	-4	3148	+52
B/Anhydrite	3085	+12	-8	3080	+17	-3	3180	+20
Neva	3498	-401	Flat	3502	-405	-4	3601	-401
Red Eagle	3563	-466	+1	3565	-468	-3	3665	-465
Foraker	3610	-513	-2	3614	-517	-2	3715	-515
Topeka	3832	-735	Flat	3834	-737	-2	3935	-735
Oread	3968	-871	-1	3967	-870	Flat	4070	-870
Lansing	4049	-952	-1	4050	-953	-2	4151	-951
Stark	4265	-1168	+1	4266	-1169	Flat	4369	-1169
BKC	4323	-1226	-2	4321	-1224	Flat	4424	-1224
Pawnee	4444	-1347	Flat	4441	-1344	+3	4547	-1347
Cherokee	4533	-1435	Flat	4529	-1432	+3	4635	-1435
Mississippi								
RTD	4615	-1518					4735	-1535
LTD				4614	-1517		4736	-1536