



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1120639  
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: \_\_\_\_\_



1120639

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

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

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

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

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

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

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

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

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

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

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  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> _____	<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  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

March 01, 2013

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

Re: ACO1  
API 15-153-20912-00-00  
Frisbie 1-23  
NW/4 Sec.23-02S-36W  
Rawlins 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

MDCI Frisbie #1-23 2310' FNL 2310'FWL Sec. 23-2S-36W 3305' KB					MDCI PTL #1-22 1550' FSL 2210'FEL Sec. 22-2S-36W 3344' KB			
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	3165	+140	+4	3156	+149	+13	3208	+136
B/Anhydrite	3195	+110	+13	3194	+111	+14	3247	+97
Neva	3659	-354	+12	3661	-356	+10	3710	-366
Stotler	3934	-629	+11				3984	-640
Topeka	4006	-701	+10	4002	-697	+14	4055	-711
Heebner	4168	-863	+8	4164	-859	+12	4215	-871
Lansing	4218	-913	+8	4214	-909	+12	4265	-921
Stark	4443	-1138	+8	4439	-1134	+12	4490	-1146
BKC	4492	-1187	+8	4488	-1183	+12	4538	-1195
Pawnee	4616	-1311	+13	4613	-1308	+16	4668	-1324
Cherokee	4690	-1385	+9	4686	-1381	+13	4738	-1394
Mississippi	4891	-1586	+20	4890	-1585	+21	4950	-1606
RTD	4990	-1685					5060	
LTD				4986			5060	

# Robert L. Milford

PETROLEUM GEOLOGIST  
Wichita, Kansas

## GEOLOGISTS' REPORT

DRILLING TIME AND SAMPLE LOGS

OPERATOR  
Murfin Drilling Company, Inc.

LEASE  
Frisbie #1-23

LOC. SPOT  
C SE SE NW

LOC. FOOTAGE  
2,310' FNL 2,310' FWL

SEC  
23 TWP  
25

COUNTY  
Rawlins

STATE  
KANSAS

APR  
15-153-20912-00-00

CONTRACTOR  
Murfin Drilling Co., Inc.

DRILLING STARTED  
11-19-2012

DRILLING STOPPED  
11-30-2012

DRILLING TIME PER HOUR  
3:303

DRILLING TIME PER FOOT  
3:570

SAMPLES SAVED FROM  
3:570

SAFETY SUPERVISOR  
R. M. 3:525

FORMATION NAME  
TOP DATUM

LOGS  
DATE TIME TOP DATUM

BASE Stone Corral  
3:776 -471

Foraker  
4:002 -697

Topoka  
4:119 -814

Ordred  
4:214 -909

Loring  
4:488 -1183

B/KC  
4:613 -1308

Pawnee  
4:686 -1381

Cherokee  
4:890 -1585

Mississippian  
4:986 -1681

Total Depth  
4:986 -1681

MEASUREMENTS  
CASINO RECORD

CONDUCTOR  
8:5/8" @ 91'

Surface  
8:5/8" @ 91'

Production  
5.2/21 @ 4975'

ELEVATIONS  
KB 3,305'

GL 3,255'

Surface  
8:5/8" @ 91'

Production  
5.2/21 @ 4975'

DATE	7:00 AM DEPTH	REMARKS
11-19-12	0'	Spud @ 5:45 pm. Plug down @ 1:30 am on 11-20-12. Dev. 0.5' @ 394'
11-20-12	394'	Cut 394' in last 24 hrs. Drilling out plug @ 9:30 am w/ PDC bit. Dev. 0.5' @ 1209'
11-21-12	2,575'	Cut 2,181' in last 24 hrs; 20.5 hrs drlg. Bit trip @ 3525' (took off PDC). Dev. 0.5' @ 3525'
11-22-12	3,660'	Cut 1,085' in last 24 hrs; 18.25 hrs drlg. DST #1 @ 3975'
11-23-12	3,975'	Cut 315' in last 24 hrs; 15.25 hrs drlg. DST #2 @ 4040'
11-24-12	4,040'	Cut 65' in last 24 hrs; 6.25 hrs drlg. DST #3 @ 4147'
11-25-12	4,160'	Cut 120' in last 24 hrs; 9 hrs drlg. DST #4 @ 4245'
11-26-12	4,318'	Cut 158' in last 24 hrs; 9 hrs drlg. DST #5 @ 4318', DST #6 @ 4345'
11-27-12	4,345'	Cut 27' in last 24 hrs; 1.5 hrs drlg. DST #7 @ 4443'
11-28-12	4,443'	Cut 98' in last 24 hrs; 6 hrs drlg. DST #8 @ 4665'
11-29-12	4,665'	Cut 222' in last 24 hrs; 12.5 hrs drlg.
11-30-12	4,920'	Cut 255' in last 24 hrs; 13.5 hrs drlg. RTD 4990' @ 10:47 am
12-1-12	4,990'	Cut 70' in last 24 hrs; 3.75 hrs drlg. Ran production casing.

Remarks

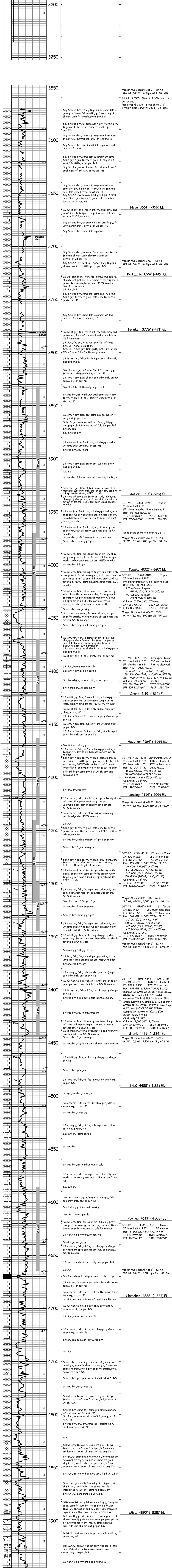
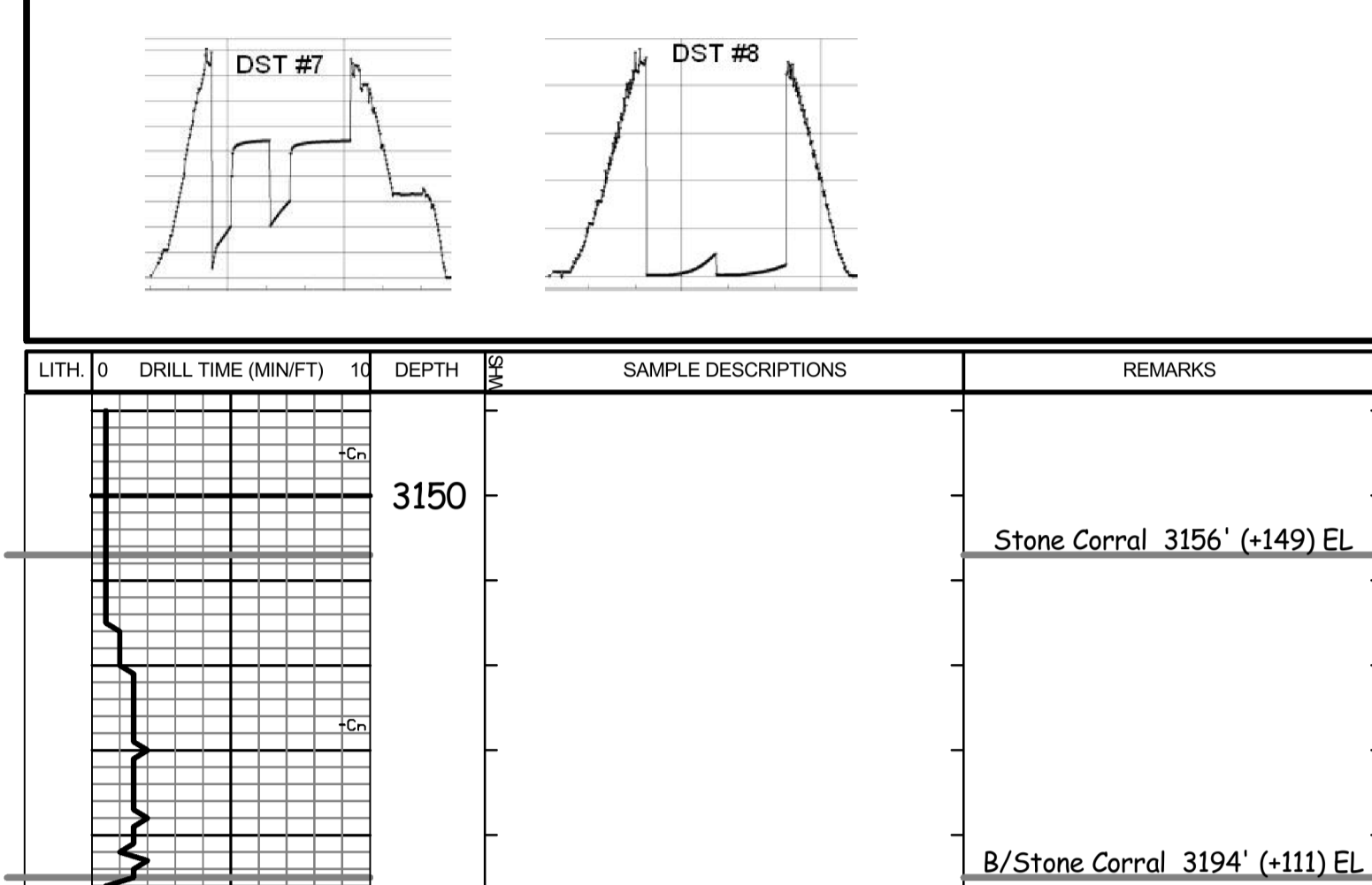
The electric log measurements correlate from 1' to 4' higher to the drilling measurements.

Formation tops and lithology on this report have been connected to the electric log.

The drilling samples were deposited at the Kansas Geological Survey office in Wichita.

Respectfully submitted,

Robert L. Milford





## DRILL STEM TEST REPORT

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

250 N Water Ste 300  
Wichita KS 67202

ATTN: Rocky Milford

### **Frisbe #1-23**

#### **23-2s-36w Rawlins,KS**

Start Date: 2012.11.23 @ 05:56:00

End Date: 2012.11.23 @ 14:06:30

Job Ticket #: 48167                      DST #: 1

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

Printed: 2012.12.03 @ 09:50:03



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
 250 N Water Ste 300  
 Wichita KS 67202  
 ATTN: Rocky Milford

**23-2s-36w Rawlins, KS**

**Frisbe #1-23**

Job Ticket: 48167

**DST#: 1**

Test Start: 2012.11.23 @ 05:56:00

## GENERAL INFORMATION:

Formation: **Stotler**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:15:30

Time Test Ended: 14:06:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Nichols - James

Unit No: 63

**Interval: 3833.00 ft (KB) To 3975.00 ft (KB) (TVD)**

Reference Elevations: 3305.00 ft (KB)

Total Depth: 3975.00 ft (KB) (TVD)

3295.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 6719**

**Inside**

Press @ Run Depth: 63.68 psig @ 3834.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.23

End Date:

2012.11.23

Last Calib.:

2012.11.23

Start Time: 05:56:05

End Time:

14:06:29

Time On Btm:

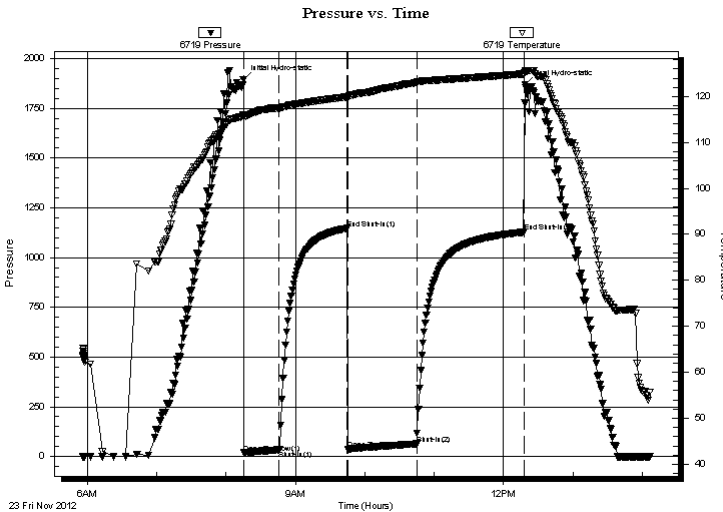
2012.11.23 @ 08:15:00

Time Off Btm:

2012.11.23 @ 12:19:00

**TEST COMMENT:** 30 IF - 1/4" blow built to 2"  
 60 ISI - No return  
 60 FF - Surface blow started 27 mins. in built to 1"  
 90 FSI - No return

## PRESSURE SUMMARY



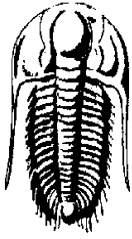
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1895.51	116.04	Initial Hydro-static
1	18.65	115.91	Open To Flow (1)
31	33.37	117.44	Shut-In(1)
90	1146.79	119.90	End Shut-In(1)
91	37.41	120.03	Open To Flow (2)
150	63.68	123.04	Shut-In(2)
243	1127.49	124.91	End Shut-In(2)
244	1867.79	125.53	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
92.00	Mud - 100%	0.45

## 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: Rocky Milford

**23-2s-36w Rawlins,KS**

**Frisbe #1-23**

Job Ticket: 48167

**DST#: 1**

Test Start: 2012.11.23 @ 05:56:00

## GENERAL INFORMATION:

Formation: **Stotler**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:15:30

Time Test Ended: 14:06:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Nichols - James

Unit No: 63

**Interval: 3833.00 ft (KB) To 3975.00 ft (KB) (TVD)**

Total Depth: 3975.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3305.00 ft (KB)

3295.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8320**

**Outside**

Press @ RunDepth: psig @ 3834.00 ft (KB)

Start Date: 2012.11.23

End Date:

2012.11.23

Start Time: 05:56:05

End Time:

14:05:59

Capacity: 8000.00 psig

Last Calib.:

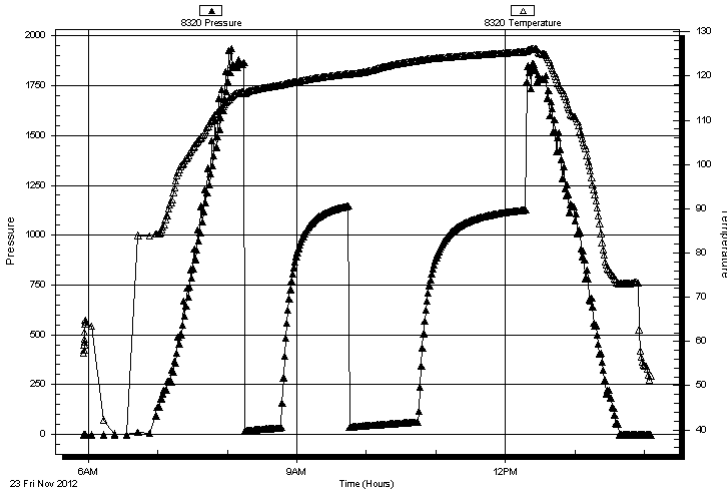
2012.11.23

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 30 IF - 1/4" blow built to 2"  
60 ISI - No return  
60 FF - Surface blow started 27 mins. in built to 1"  
90 FSI - No return

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
92.00	Mud - 100%	0.45

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48167

**DST#: 1**

ATTN: Rocky Milford

Test Start: 2012.11.23 @ 05:56:00

## Tool Information

Drill Pipe:	Length: 3300.00 ft	Diameter: 3.80 inches	Volume: 46.29 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 48.92 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 67000.00 lb
Depth to Top Packer:	3833.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	142.00 ft			
Tool Length:	170.00 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			3810.00	
Hydraulic tool	5.00			3815.00	
Jars	5.00			3820.00	
Safety Joint	3.00			3823.00	
Packer	5.00			3828.00	28.00 Bottom Of Top Packer
Packer	5.00			3833.00	
Packer - Shale	0.00			3833.00	
Stubb	1.00			3834.00	
Recorder	0.00	6719	Inside	3834.00	
Recorder	0.00	8320	Outside	3834.00	
Perforations	10.00			3844.00	
Blank Spacing	128.00			3972.00	
Bullnose	3.00			3975.00	142.00 Bottom Packers & Anchor

**Total Tool Length: 170.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48167

**DST#: 1**

ATTN: Rocky Milford

Test Start: 2012.11.23 @ 05:56:00

## 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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.94 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
92.00	Mud - 100%	0.452

Total Length: 92.00 ft      Total Volume: 0.452 bbl

Num Fluid Samples: 0

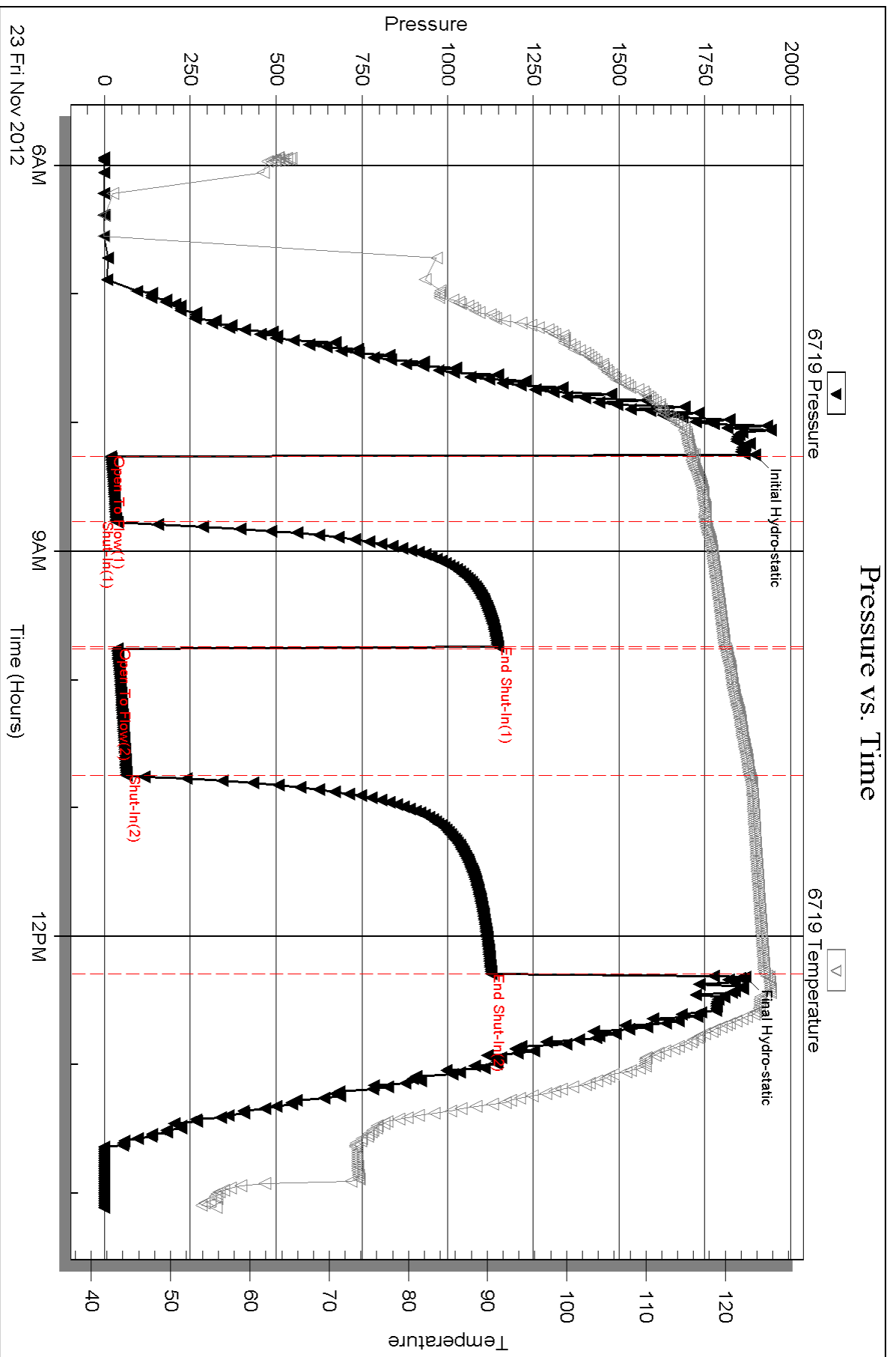
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

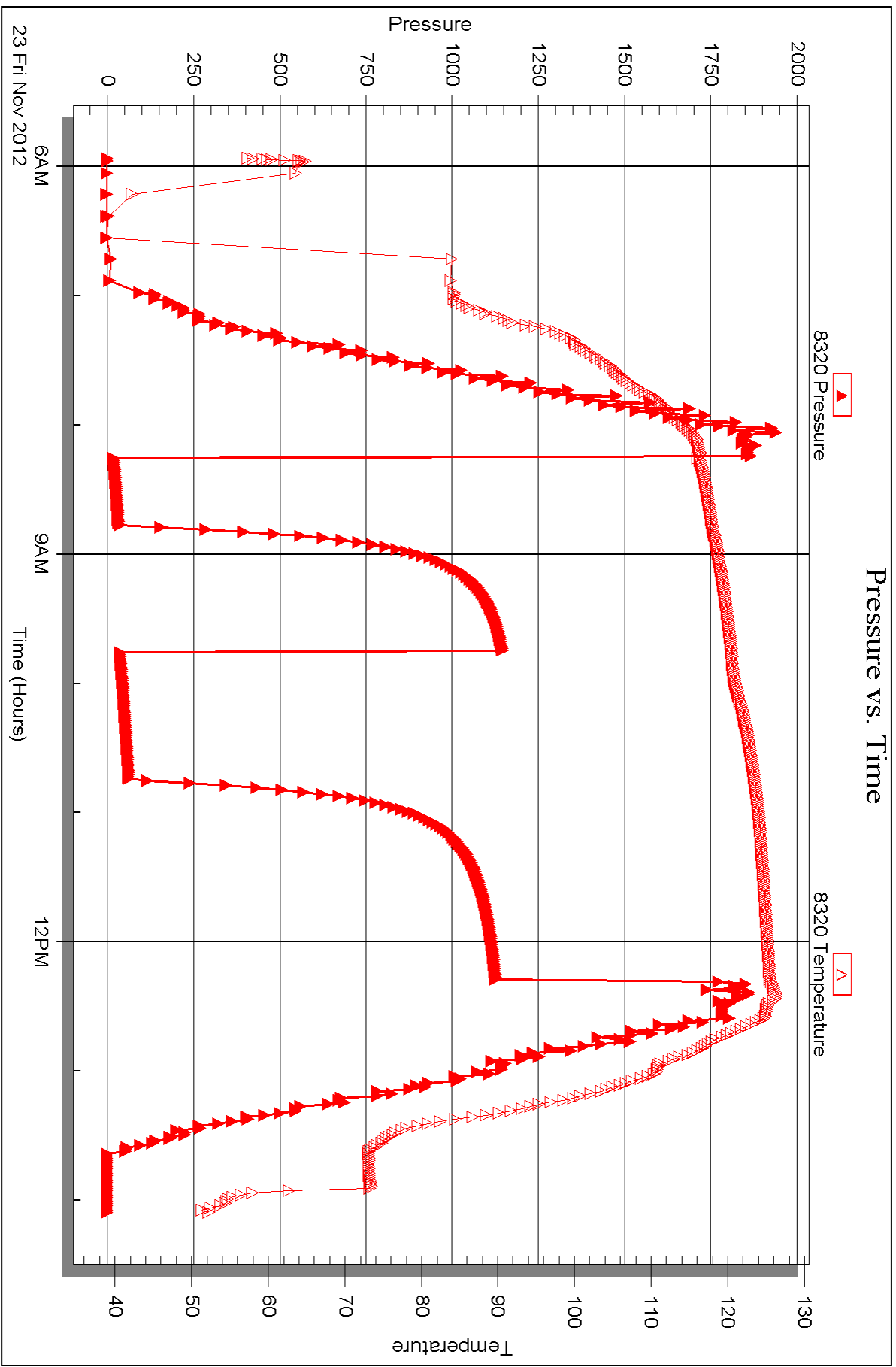


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Frisbe #1-23

DST Test Number: 1





## DRILL STEM TEST REPORT

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

250 N Water Ste 300  
Wichita KS 67202

ATTN: Rocky Milford

### **Frisbe #1-23**

#### **23-2s-36w Rawlins,KS**

Start Date: 2012.11.23 @ 23:15:00

End Date: 2012.11.24 @ 06:54:30

Job Ticket #: 48168                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.12.03 @ 09:49:16



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
 250 N Water Ste 300  
 Wichita KS 67202  
 ATTN: Rocky Milford

**23-2s-36w Rawlins, KS**

**Frisbe #1-23**

Job Ticket: 48168

**DST#: 2**

Test Start: 2012.11.23 @ 23:15:00

## GENERAL INFORMATION:

Formation: **Topeka**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 01:05:00  
 Time Test Ended: 06:54:30  
 Interval: **3970.00 ft (KB) To 4040.00 ft (KB) (TVD)**  
 Total Depth: 4040.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Nichols - James  
 Unit No: 57  
 Reference Elevations: 3305.00 ft (KB)  
 3295.00 ft (CF)  
 KB to GR/CF: 10.00 ft

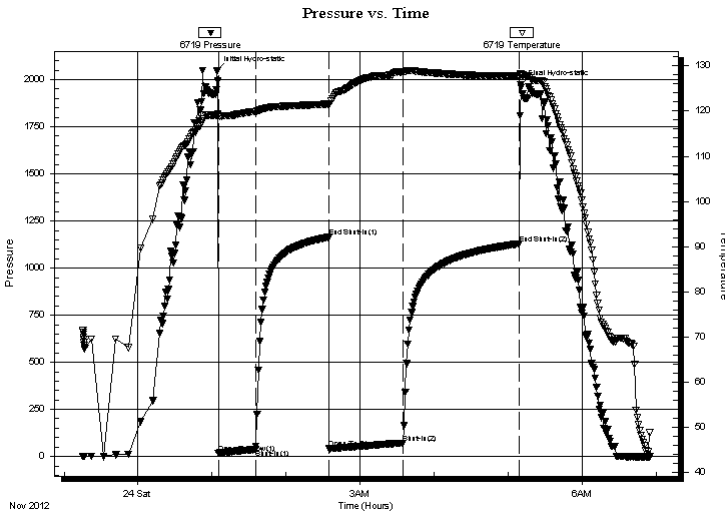
## Serial #: 6719

Inside

Press @ Run Depth: 71.77 psig @ 3971.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.11.23 End Date: 2012.11.24 Last Calib.: 2012.11.24  
 Start Time: 23:15:05 End Time: 06:54:29 Time On Btm: 2012.11.24 @ 01:04:00  
 Time Off Btm: 2012.11.24 @ 05:10:00

TEST COMMENT: 30 IF - Surface blow built to 2 1/8"  
 60 ISI - No return  
 60 FF - Surface return started @ 10 mins. built to 2 1/8"  
 90 FSI - No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2046.01	119.19	Initial Hydro-static
1	17.91	119.01	Open To Flow (1)
31	37.16	119.88	Shut-In(1)
91	1163.65	121.56	End Shut-In(1)
91	41.40	121.48	Open To Flow (2)
151	71.77	128.53	Shut-In(2)
245	1128.41	127.74	End Shut-In(2)
246	1974.69	128.16	Final Hydro-static

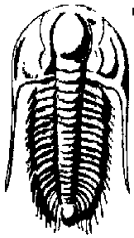
## Recovery

Length (ft)	Description	Volume (bbl)
90.00	WCM W/OS 84%M - 15%W - 1%o	0.44
25.00	WCM W/OS 70%M - 23%W - 5%G - 2%o	0.12

\* 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.

23-2s-36w Rawlins, KS

250 N Water Ste 300  
Wichita KS 67202

Frisbe #1-23

Job Ticket: 48168

DST#: 2

ATTN: Rocky Milford

Test Start: 2012.11.23 @ 23:15:00

### GENERAL INFORMATION:

Formation: **Topeka**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:05:00

Time Test Ended: 06:54:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols - James

Unit No: 57

Interval: **3970.00 ft (KB) To 4040.00 ft (KB) (TVD)**

Reference Elevations: 3305.00 ft (KB)

Total Depth: 4040.00 ft (KB) (TVD)

3295.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: **8320** Outside

Press @ Run Depth: psig @ 3971.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.23

End Date:

2012.11.24

Last Calib.: 2012.11.24

Start Time: 23:15:05

End Time:

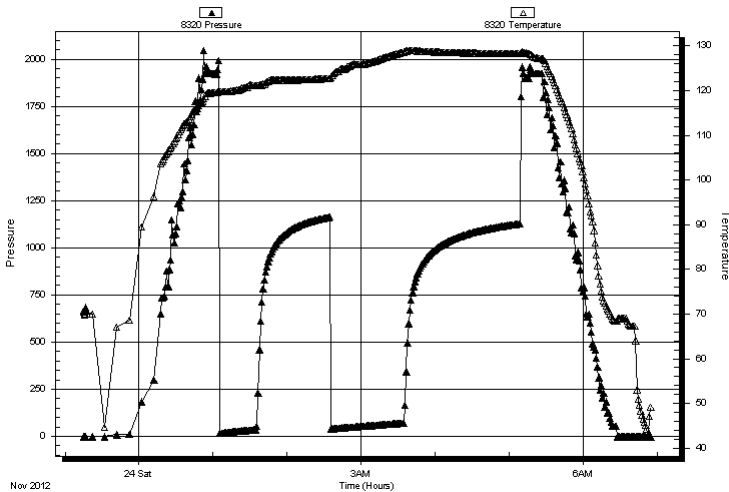
06:54:29

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 30 IF - Surface blow built to 2 1/8"  
60 ISI - No return  
60 FF - Surface return started @ 10 mins. built to 2 1/8"  
90 FSI - No return

Pressure vs. Time



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
90.00	WCM W/OS 84%M - 15%W - 1%o	0.44
25.00	WCM W/OS 70%M - 23%W - 5%G - 2%o	0.12

\* 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.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48168

**DST#: 2**

ATTN: Rocky Milford

Test Start: 2012.11.23 @ 23:15:00

## Tool Information

Drill Pipe:	Length: 3427.00 ft	Diameter: 3.80 inches	Volume: 48.07 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: 50.70 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	3970.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	98.00 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			3947.00	
Hydraulic tool	5.00			3952.00	
Jars	5.00			3957.00	
Safety Joint	3.00			3960.00	
Packer	5.00			3965.00	28.00 Bottom Of Top Packer
Packer	5.00			3970.00	
Packer - Shale	0.00			3970.00	
Stubb	1.00			3971.00	
Recorder	0.00	6719	Inside	3971.00	
Recorder	0.00	8320	Outside	3971.00	
Perforations	28.00			3999.00	
Blank Spacing	33.00			4032.00	
Perforations	5.00			4037.00	
Bullnose	3.00			4040.00	70.00 Bottom Packers & Anchor

**Total Tool Length: 98.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48168

**DST#: 2**

ATTN: Rocky Milford

Test Start: 2012.11.23 @ 23:15:00

### 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:

17500 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.94 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
90.00	WCM W/OS 84%M - 15%W - 1%o	0.443
25.00	WCM W/OS 70%M - 23%W - 5%G - 2%o	0.123

Total Length: 115.00 ft      Total Volume: 0.566 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .427 ohms @ 64.9 Deg F

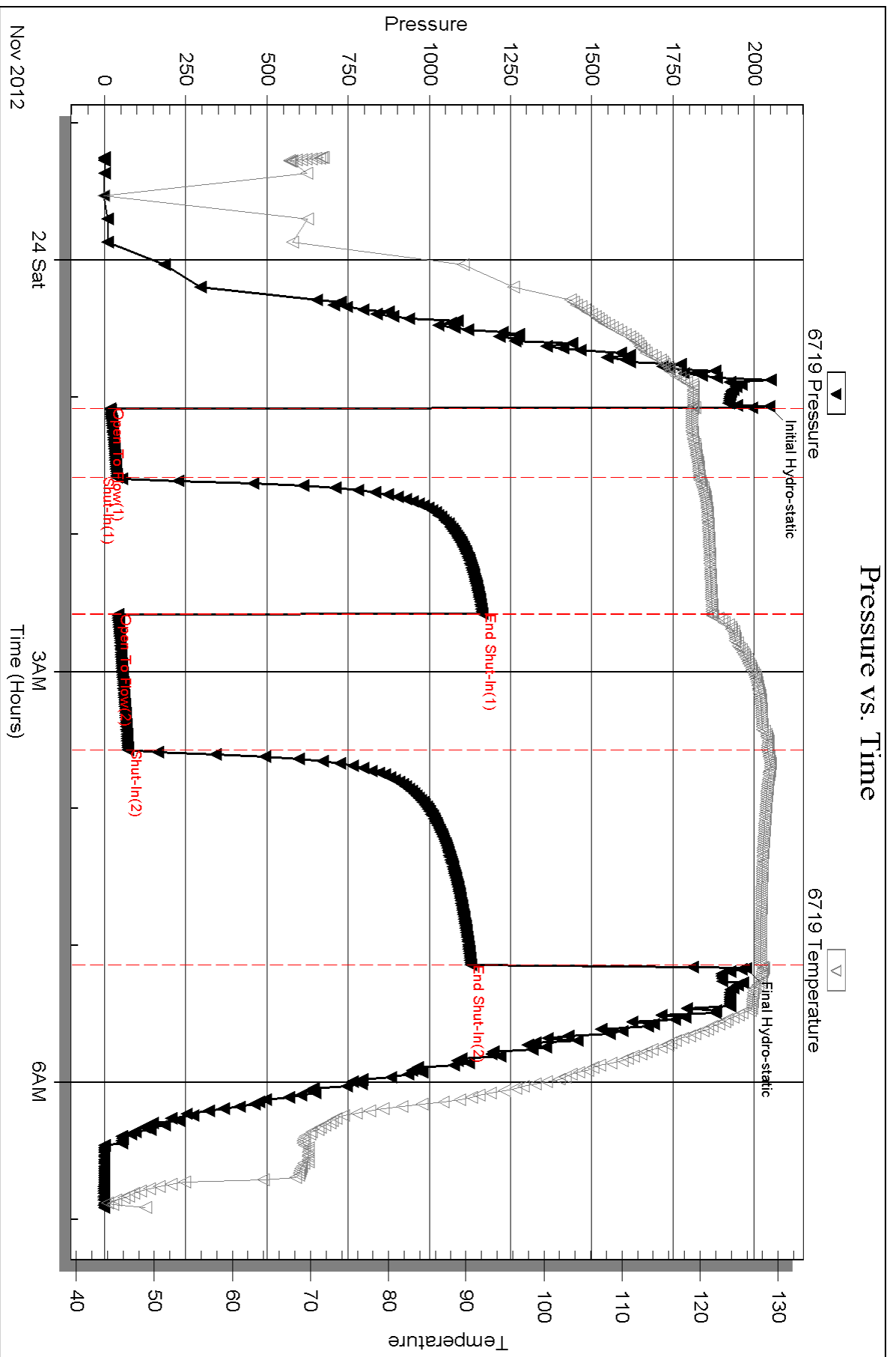
Serial #: 6719

Inside

Murfin Drilling Co., Inc.

Frisbe #1-23

DST Test Number: 2

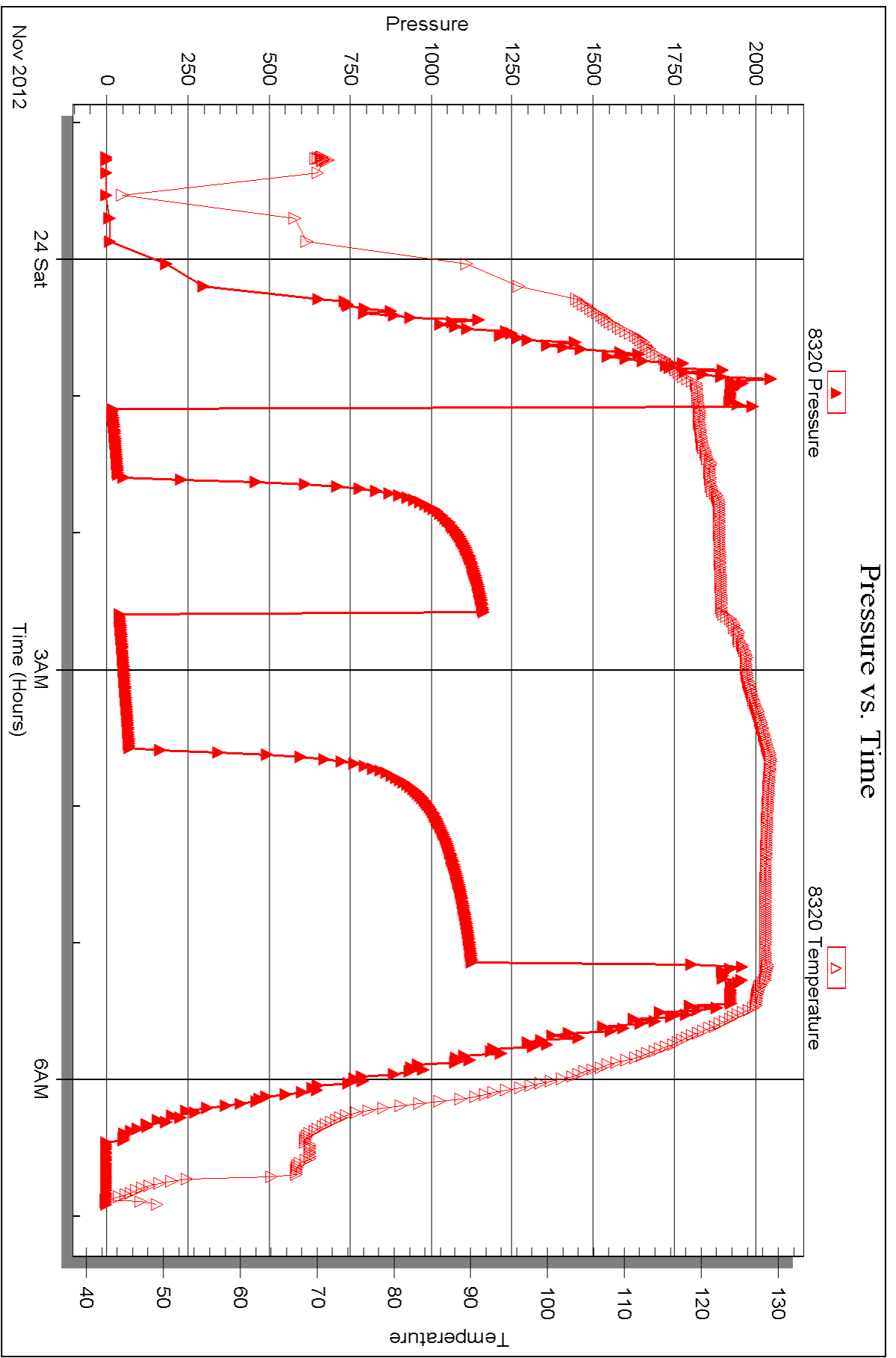


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Frisbe #1-23

DST Test Number: 2





## DRILL STEM TEST REPORT

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

250 N Water Ste 300  
Wichita KS 67202

ATTN: Rocky Milford

### **Frisbe #1-23**

#### **23-2s-36w Rawlins,KS**

Start Date: 2012.11.24 @ 18:50:00

End Date: 2012.11.25 @ 03:04:00

Job Ticket #: 48169                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.12.03 @ 09:48:32



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
 250 N Water Ste 300  
 Wichita KS 67202  
 ATTN: Rocky Milford

**23-2s-36w Rawlins, KS**

**Frisbe #1-23**

Job Ticket: 48169

**DST#: 3**

Test Start: 2012.11.24 @ 18:50:00

## GENERAL INFORMATION:

Formation: **Lecompton - Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:02:30

Time Test Ended: 03:04:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

**Interval: 4070.00 ft (KB) To 4147.00 ft (KB) (TVD)**

Reference Elevations: 3305.00 ft (KB)

Total Depth: 4147.00 ft (KB) (TVD)

3295.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 6719**

**Inside**

Press @ Run Depth: 221.14 psig @ 4071.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.24

End Date:

2012.11.25

Last Calib.: 2012.11.25

Start Time: 18:50:05

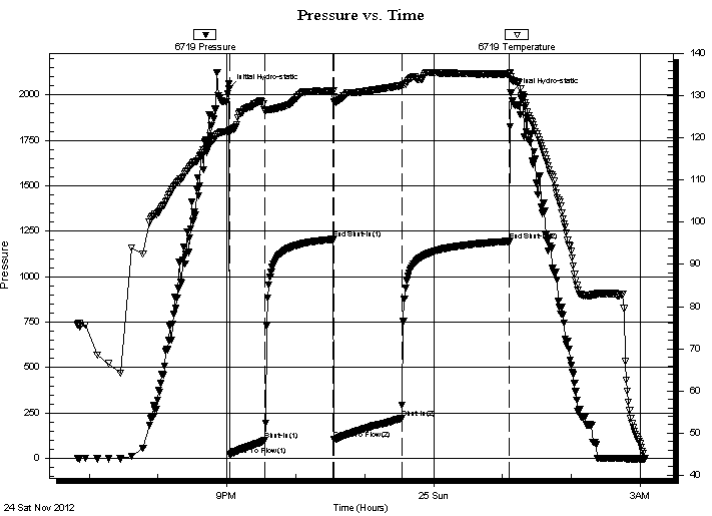
End Time:

03:03:59

Time On Btm: 2012.11.24 @ 21:02:00

Time Off Btm: 2012.11.25 @ 01:07:00

**TEST COMMENT:** 30 - IF: Blow built to 6 1/2"  
 60 - IS: Bled off, No blow back  
 60 - FF: Blow started at 7 min., built to 8 1/2"  
 90 - FS: Bled off, No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2034.05	121.63	Initial Hydro-static
1	20.34	121.53	Open To Flow (1)
31	100.50	126.50	Shut-In(1)
91	1206.28	131.08	End Shut-In(1)
91	104.67	129.67	Open To Flow (2)
150	221.14	132.38	Shut-In(2)
244	1194.73	135.23	End Shut-In(2)
245	2012.41	134.61	Final Hydro-static

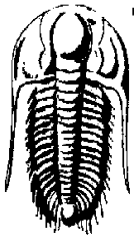
## Recovery

Length (ft)	Description	Volume (bbl)
267.00	WCM w/trace oil 66% m, 32% w, 2% g	1.31
89.00	SOWCM 93% m, 4% w, 2% g, 1% o	0.44
84.00	Mud w/trace oil 100% m	0.41

## 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.

**23-2s-36w Rawlins, KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48169

**DST#: 3**

ATTN: Rocky Milford

Test Start: 2012.11.24 @ 18:50:00

## GENERAL INFORMATION:

Formation: **Lecompton - Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:02:30

Time Test Ended: 03:04:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

**Interval: 4070.00 ft (KB) To 4147.00 ft (KB) (TVD)**

Total Depth: 4147.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3305.00 ft (KB)

3295.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8320 Outside**

Press @ Run Depth: psig @ 4071.00 ft (KB)

Start Date: 2012.11.24

End Date: 2012.11.25

Capacity: 8000.00 psig

Last Calib.: 2012.11.25

Start Time: 18:50:05

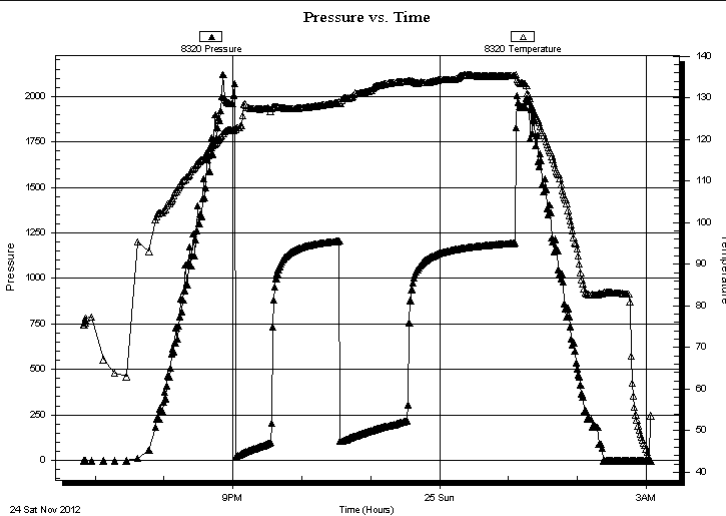
End Time: 03:03:29

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 30 - IF: Blow built to 6 1/2"  
60 - IS: Bled off, No blow back  
60 - FF: Blow started at 7 min., built to 8 1/2"  
90 - FS: Bled off, No blow back

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
267.00	WCM w /trace oil 66% m, 32% w, 2% g	1.31
89.00	SOWCM 93% m, 4% w, 2% g, 1% o	0.44
84.00	Mud w /trace oil 100% m	0.41

## 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., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48169

**DST#: 3**

ATTN: Rocky Milford

Test Start: 2012.11.24 @ 18:50:00

## Tool Information

Drill Pipe:	Length: 3523.00 ft	Diameter: 3.80 inches	Volume: 49.42 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 52.05 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 69000.00 lb
Depth to Top Packer:	4070.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	77.00 ft			
Tool Length:	105.00 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			4047.00	
Hydraulic tool	5.00			4052.00	
Jars	5.00			4057.00	
Safety Joint	3.00			4060.00	
Packer	5.00			4065.00	28.00 Bottom Of Top Packer
Packer	5.00			4070.00	
Packer - Shale	0.00			4070.00	
Stubb	1.00			4071.00	
Recorder	0.00	6719	Inside	4071.00	
Recorder	0.00	8320	Outside	4071.00	
Perforations	10.00			4081.00	
Blank Spacing	33.00			4114.00	
Perforations	30.00			4144.00	
Bullnose	3.00			4147.00	77.00 Bottom Packers & Anchor

**Total Tool Length: 105.00**



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48169

**DST#: 3**

ATTN: Rocky Milford

Test Start: 2012.11.24 @ 18:50:00

**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:

29000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.94 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
267.00	WCM w/trace oil 66% <i>m</i> , 32% <i>w</i> , 2% <i>g</i>	1.313
89.00	SOWCM 93% <i>m</i> , 4% <i>w</i> , 2% <i>g</i> , 1% <i>o</i>	0.438
84.00	Mud w/trace oil 100% <i>m</i>	0.413

Total Length: 440.00 ft      Total Volume: 2.164 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

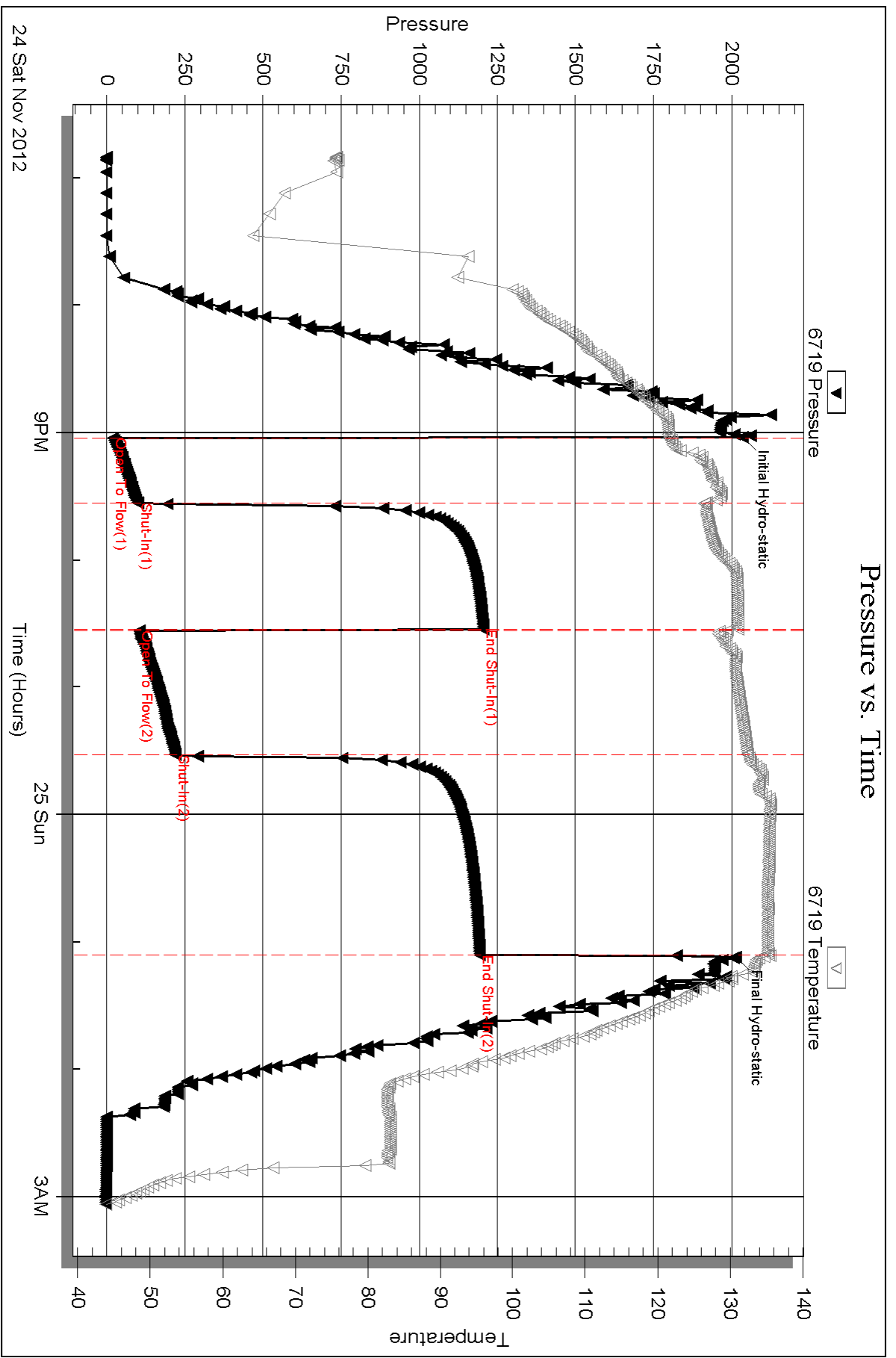
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .302 ohms @ 55.3 deg F



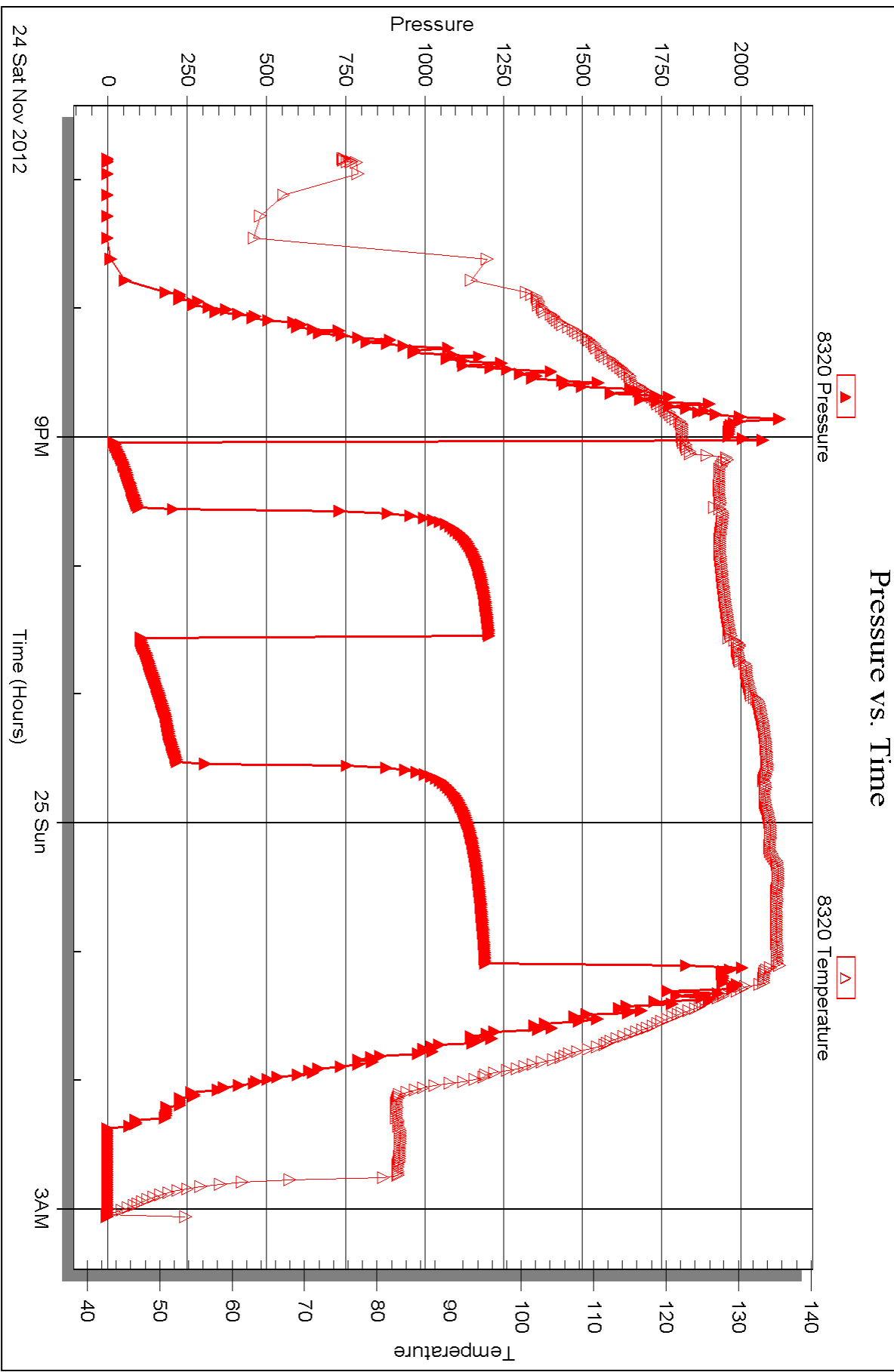


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Frisbe #1-23

DST Test Number: 3





## DRILL STEM TEST REPORT

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

250 N Water Ste 300  
Wichita KS 67202

ATTN: Rocky Milford

### **Frisbe #1-23**

#### **23-2s-36w Rawlins,KS**

Start Date: 2012.11.25 @ 14:26:00

End Date: 2012.11.25 @ 22:16:30

Job Ticket #: 48170                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.12.03 @ 09:47:47



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N Water Ste 300  
Wichita KS 67202  
ATTN: Rocky Milford

**23-2s-36w Rawlins, KS**

**Frisbe #1-23**

Job Ticket: 48170

**DST#: 4**

Test Start: 2012.11.25 @ 14:26:00

## GENERAL INFORMATION:

Formation: **Leavenworth - LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:16:00

Time Test Ended: 22:16:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

**Interval: 4163.00 ft (KB) To 4245.00 ft (KB) (TVD)**

Total Depth: 4245.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3305.00 ft (KB)

3295.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 6719**

**Inside**

Press @ Run Depth: 70.27 psig @ 4164.00 ft (KB)

Start Date: 2012.11.25

End Date:

2012.11.25

Start Time: 14:26:05

End Time:

22:16:29

Capacity: 8000.00 psig

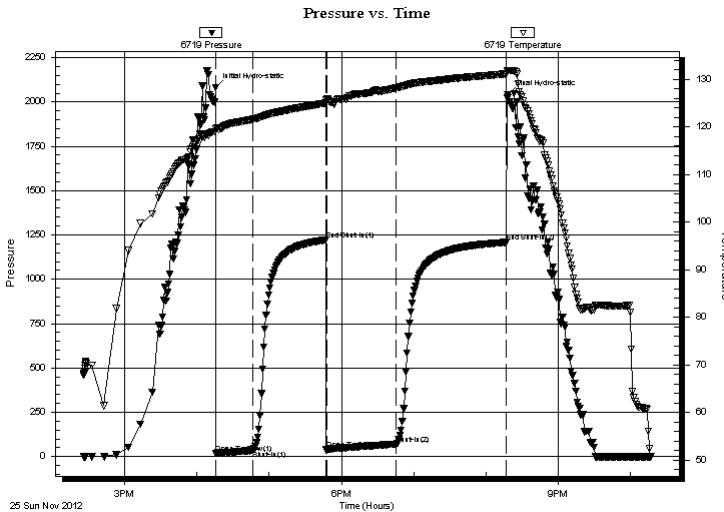
Last Calib.: 2012.11.25

Time On Btm: 2012.11.25 @ 16:15:30

Time Off Btm: 2012.11.25 @ 20:18:00

**TEST COMMENT:** 30 - IF: Blow built to 3 1/2"  
60 - IS: Bled off, No blow back  
60 - FF: Blow started at 5 min., built to 5"  
90 - FS: Bled off, No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2080.41	119.62	Initial Hydro-static
1	18.15	119.63	Open To Flow (1)
31	34.92	121.61	Shut-In(1)
92	1222.00	125.02	End Shut-In(1)
93	41.26	125.94	Open To Flow (2)
150	70.27	128.20	Shut-In(2)
241	1208.55	131.14	End Shut-In(2)
243	2040.65	131.88	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
70.00	GOM 45% <sub>m</sub> , 44% <sub>o</sub> , 11% <sub>g</sub>	0.34
20.00	MCO 60% <sub>o</sub> , 37% <sub>m</sub> , 3% <sub>g</sub>	0.10
30.00	MCO 75% <sub>o</sub> , 20% <sub>m</sub> , 5% <sub>g</sub>	0.15
0.00	GIP = 60'	0.00

\* 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.

23-2s-36w Rawlins,KS

250 N Water Ste 300  
Wichita KS 67202

Frisbe #1-23

Job Ticket: 48170

DST#: 4

ATTN: Rocky Milford

Test Start: 2012.11.25 @ 14:26:00

### GENERAL INFORMATION:

Formation: **Leavenworth - LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:16:00

Time Test Ended: 22:16:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: **4163.00 ft (KB) To 4245.00 ft (KB) (TVD)**

Reference Elevations: 3305.00 ft (KB)

Total Depth: 4245.00 ft (KB) (TVD)

3295.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8320** Outside

Press @ RunDepth: psig @ 4164.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.25 End Date: 2012.11.25

Last Calib.: 2012.11.25

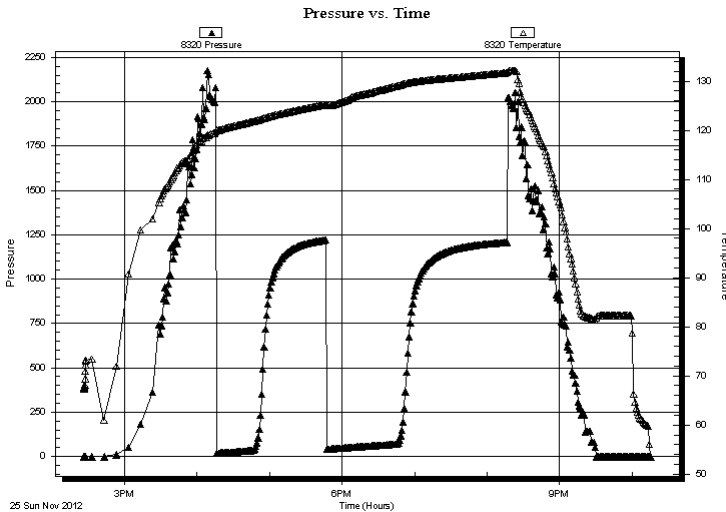
Start Time: 14:26:05 End Time: 22:15:59

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to 3 1/2"  
60 - IS: Bled off, No blow back  
60 - FF: Blow started at 5 min., built to 5"  
90 - FS: Bled off, No blow back

### PRESSURE SUMMARY



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

### Recovery

Length (ft)	Description	Volume (bbl)
70.00	GOM 45% <sub>m</sub> , 44% <sub>o</sub> , 11% <sub>g</sub>	0.34
20.00	MCO 60% <sub>o</sub> , 37% <sub>m</sub> , 3% <sub>g</sub>	0.10
30.00	MCO 75% <sub>o</sub> , 20% <sub>m</sub> , 5% <sub>g</sub>	0.15
0.00	GIP = 60'	0.00

### 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., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48170

**DST#: 4**

ATTN: Rocky Milford

Test Start: 2012.11.25 @ 14:26:00

## Tool Information

Drill Pipe:	Length: 3618.00 ft	Diameter: 3.80 inches	Volume: 50.75 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 86000.00 lb
			<u>Total Volume: 53.38 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4163.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	82.00 ft			
Tool Length:	110.00 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			4140.00	
Hydraulic tool	5.00			4145.00	
Jars	5.00			4150.00	
Safety Joint	3.00			4153.00	
Packer	5.00			4158.00	28.00 Bottom Of Top Packer
Packer	5.00			4163.00	
Stubb	1.00			4164.00	
Recorder	0.00	6719	Inside	4164.00	
Recorder	0.00	8320	Outside	4164.00	
Perforations	10.00			4174.00	
Blank Spacing	65.00			4239.00	
Perforations	3.00			4242.00	
Bullnose	3.00			4245.00	82.00 Bottom Packers & Anchor

**Total Tool Length: 110.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48170

**DST#: 4**

ATTN: Rocky Milford

Test Start: 2012.11.25 @ 14:26:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

26.8 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 72.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.57 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
70.00	GOM 45% <i>m</i> , 44% <i>o</i> , 11% <i>g</i>	0.344
20.00	MCO 60% <i>o</i> , 37% <i>m</i> , 3% <i>g</i>	0.098
30.00	MCO 75% <i>o</i> , 20% <i>m</i> , 5% <i>g</i>	0.148
0.00	GIP = 60'	0.000

Total Length: 120.00 ft      Total Volume: 0.590 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

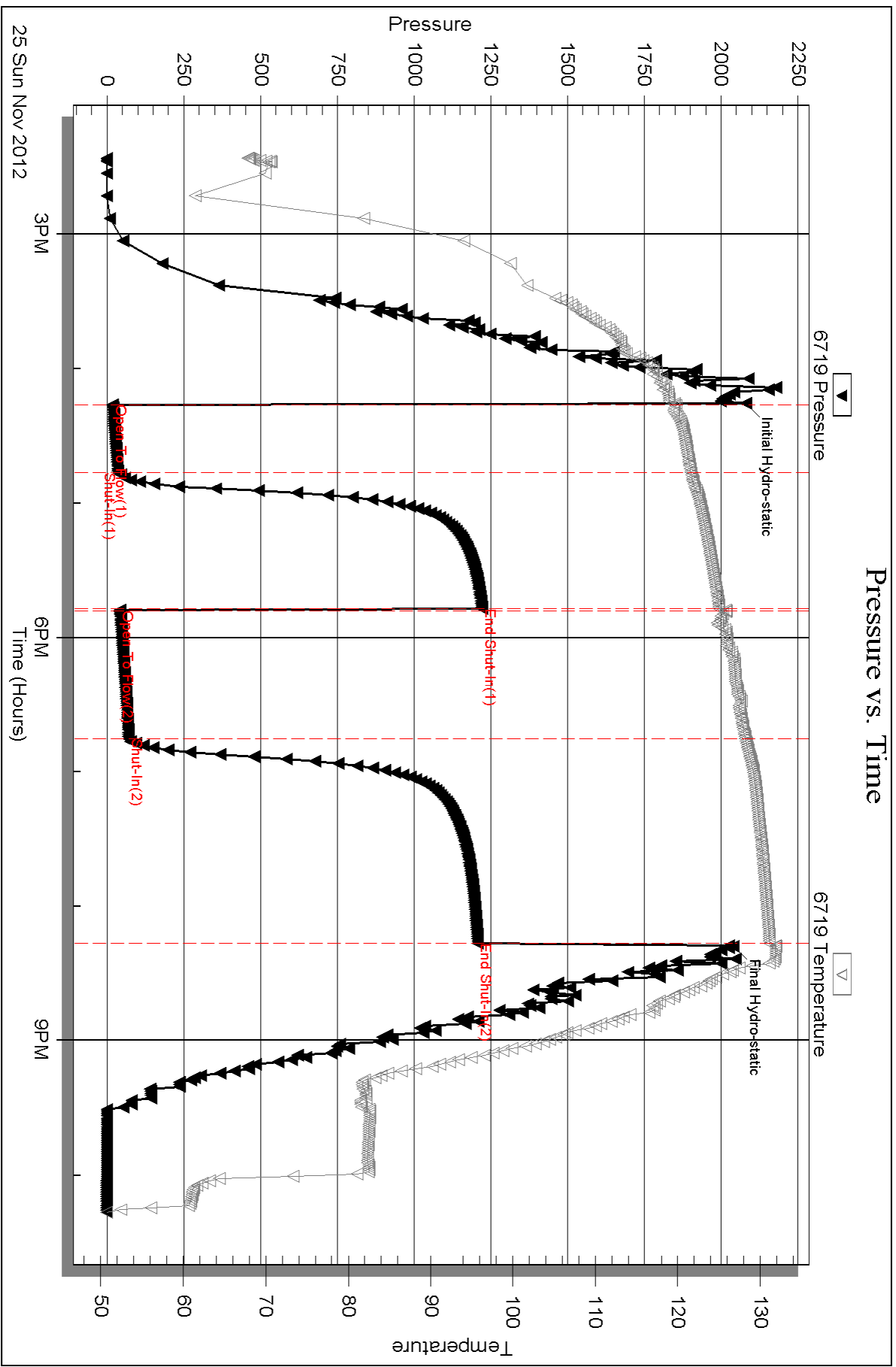
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: gravity = 24.8 api @ 40 deg F

Corrected Gravity = 26.8 api



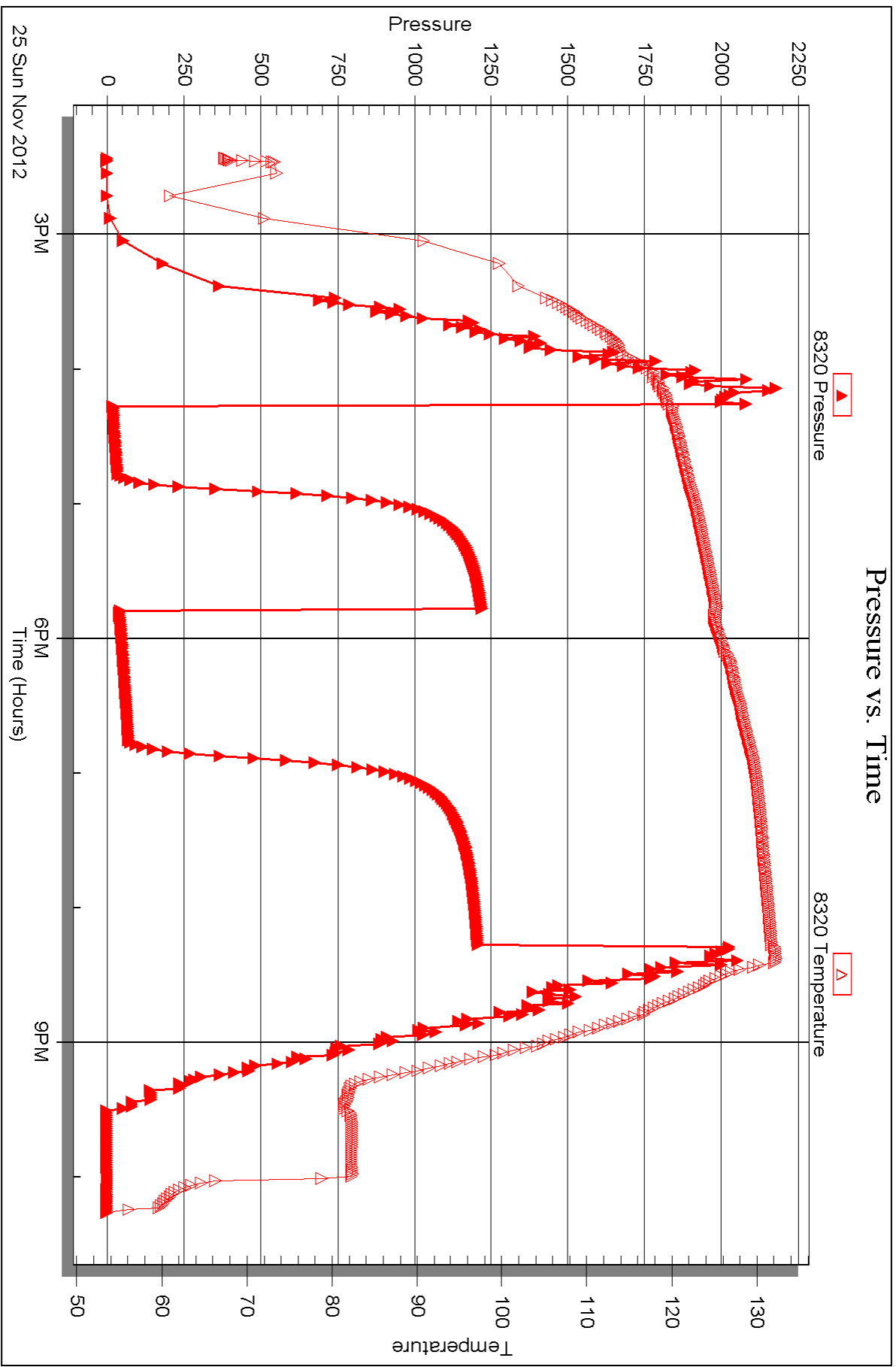


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Frisbe #1-23

DST Test Number: 4





## DRILL STEM TEST REPORT

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

250 N Water Ste 300  
Wichita KS 67202

ATTN: Rocky Milford

### **Frisbe #1-23**

#### **23-2s-36w Rawlins,KS**

Start Date: 2012.11.26 @ 09:25:00

End Date: 2012.11.26 @ 17:44:00

Job Ticket #: 48171                      DST #: 5

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

Printed: 2012.12.03 @ 09:46:59



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
 250 N Water Ste 300  
 Wichita KS 67202  
 ATTN: Rocky Milford

**23-2s-36w Rawlins, KS**

**Frisbe #1-23**

Job Ticket: 48171

**DST#: 5**

Test Start: 2012.11.26 @ 09:25:00

## GENERAL INFORMATION:

Formation: **LKC "A" sand - "E"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:27:00  
 Time Test Ended: 17:44:00  
 Interval: **4240.00 ft (KB) To 4318.00 ft (KB) (TVD)**  
 Total Depth: 4318.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 57  
 Reference Elevations: 3305.00 ft (KB)  
 3295.00 ft (CF)  
 KB to GR/CF: 10.00 ft

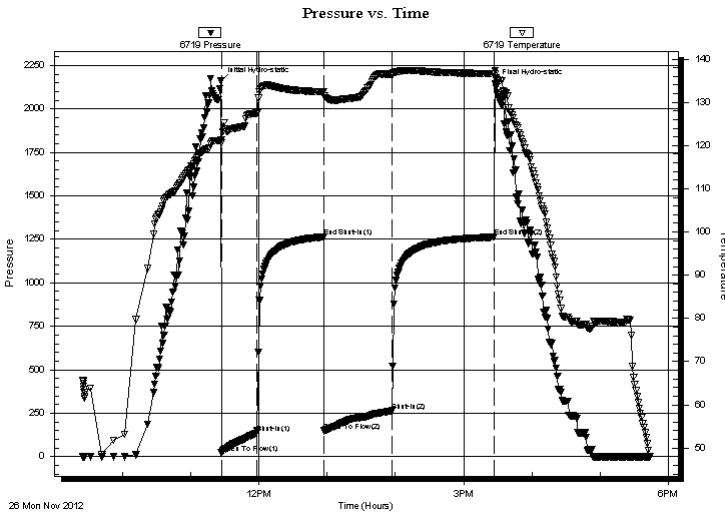
## Serial #: 6719

Inside

Press @ Run Depth: 263.38 psig @ 4241.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.11.26 End Date: 2012.11.26 Last Calib.: 2012.11.26  
 Start Time: 09:25:05 End Time: 17:43:59 Time On Btm: 2012.11.26 @ 11:26:30  
 Time Off Btm: 2012.11.26 @ 15:28:00

TEST COMMENT: 30 - IF: Blow built to BOB (11") in 15 1/2 min.  
 60 - IS: Bled off, Blow back built to 3"  
 60 - FF: Blow built to BOB in 24 1/2 min.  
 90 - FS: Bled off, Blow back built to 2"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2160.47	121.23	Initial Hydro-static
1	21.77	120.61	Open To Flow (1)
32	134.98	127.49	Shut-In(1)
91	1264.35	132.42	End Shut-In(1)
91	148.12	131.55	Open To Flow (2)
151	263.38	136.41	Shut-In(2)
240	1263.37	136.65	End Shut-In(2)
242	2146.32	135.73	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
150.00	GOCM 65% <sub>m</sub> , 24% <sub>g</sub> , 11% <sub>o</sub>	0.74
30.00	MCO 75% <sub>o</sub> , 18% <sub>m</sub> , 7% <sub>g</sub>	0.15
450.00	CGO 77% <sub>o</sub> , 20% <sub>g</sub> , 3% <sub>m</sub>	3.09
10.00	CO 96% <sub>o</sub> , 3% <sub>g</sub> , 1% <sub>m</sub>	0.14
0.00	GIP = 365'	0.00

\* Recovery from multiple tests

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N Water Ste 300  
Wichita KS 67202  
ATTN: Rocky Milford

**23-2s-36w Rawlins, KS**

**Frisbe #1-23**

Job Ticket: 48171

**DST#: 5**

Test Start: 2012.11.26 @ 09:25:00

### GENERAL INFORMATION:

Formation: **LKC "A" sand - "E"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 11:27:00  
Time Test Ended: 17:44:00

Test Type: Conventional Bottom Hole (Reset)  
Tester: James Winder  
Unit No: 57

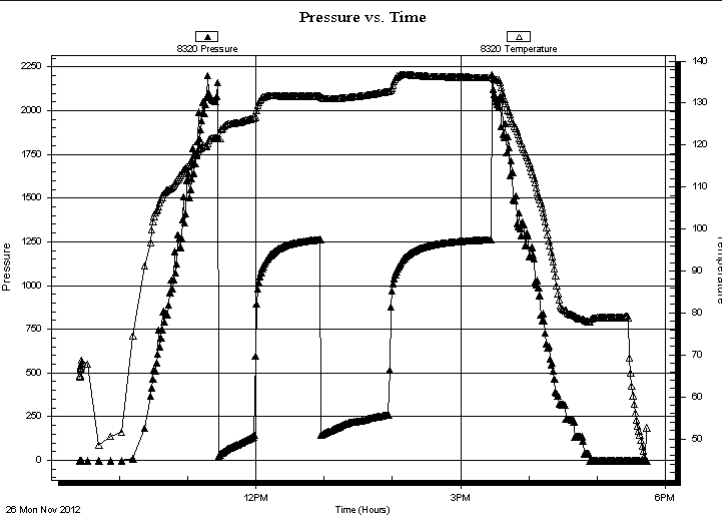
**Interval: 4240.00 ft (KB) To 4318.00 ft (KB) (TVD)**  
Total Depth: 4318.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches  
Hole Condition: Good

Reference Elevations: 3305.00 ft (KB)  
3295.00 ft (CF)  
KB to GR/CF: 10.00 ft

**Serial #: 8320 Outside**

Press @ RunDepth:                                  psig @                                  4241.00 ft (KB)	Capacity:    8000.00 psig
Start Date:    2012.11.26    End Date:    2012.11.26	Last Calib.:    2012.11.26
Start Time:    09:25:05    End Time:    17:43:29	Time On Btm: Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to BOB (11") in 15 1/2 min.  
60 - IS: Bled off, Blow back built to 3"  
60 - FF: Blow built to BOB in 24 1/2 min.  
90 - FS: Bled off, Blow back built to 2"



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
150.00	GOCM 65% <sub>m</sub> , 24% <sub>g</sub> , 11% <sub>o</sub>	0.74
30.00	MCO 75% <sub>o</sub> , 18% <sub>m</sub> , 7% <sub>g</sub>	0.15
450.00	CGO 77% <sub>o</sub> , 20% <sub>g</sub> , 3% <sub>m</sub>	3.09
10.00	CO 96% <sub>o</sub> , 3% <sub>g</sub> , 1% <sub>m</sub>	0.14
0.00	GIP = 365'	0.00

\* Recovery from multiple tests

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48171

**DST#: 5**

ATTN: Rocky Milford

Test Start: 2012.11.26 @ 09:25:00

## Tool Information

Drill Pipe:	Length: 3713.00 ft	Diameter: 3.80 inches	Volume: 52.08 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 86000.00 lb
			<u>Total Volume: 54.71 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	35.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4240.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	78.00 ft			
Tool Length:	106.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4217.00	
Hydraulic tool	5.00			4222.00	
Jars	5.00			4227.00	
Safety Joint	3.00			4230.00	
Packer	5.00			4235.00	28.00 Bottom Of Top Packer
Packer	5.00			4240.00	
Stubb	1.00			4241.00	
Recorder	0.00	6719	Inside	4241.00	
Recorder	0.00	8320	Outside	4241.00	
Perforations	9.00			4250.00	
Blank Spacing	65.00			4315.00	
Bullnose	3.00			4318.00	78.00 Bottom Packers & Anchor

**Total Tool Length: 106.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48171

**DST#: 5**

ATTN: Rocky Milford

Test Start: 2012.11.26 @ 09:25:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

29.2 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.93 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
150.00	GOCM 65% <i>m</i> , 24% <i>g</i> , 11% <i>o</i>	0.738
30.00	MCO 75% <i>o</i> , 18% <i>m</i> , 7% <i>g</i>	0.148
450.00	CGO 77% <i>o</i> , 20% <i>g</i> , 3% <i>m</i>	3.088
10.00	CO 96% <i>o</i> , 3% <i>g</i> , 1% <i>m</i>	0.140
0.00	GIP = 365'	0.000

Total Length: 640.00 ft      Total Volume: 4.114 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

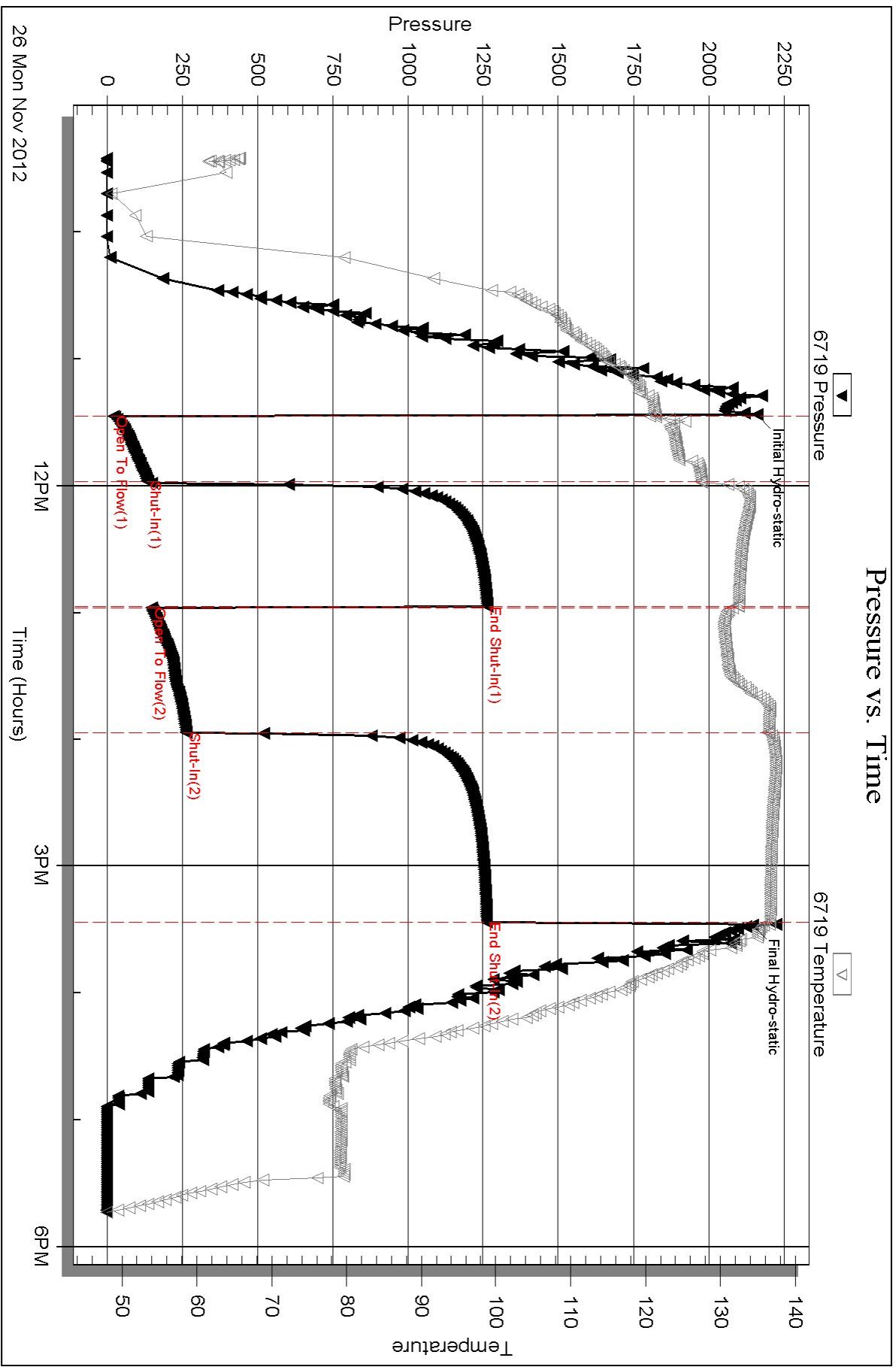
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: gravity = 27 api @ 38 deg F

Corrected Gravity = 29.2 api

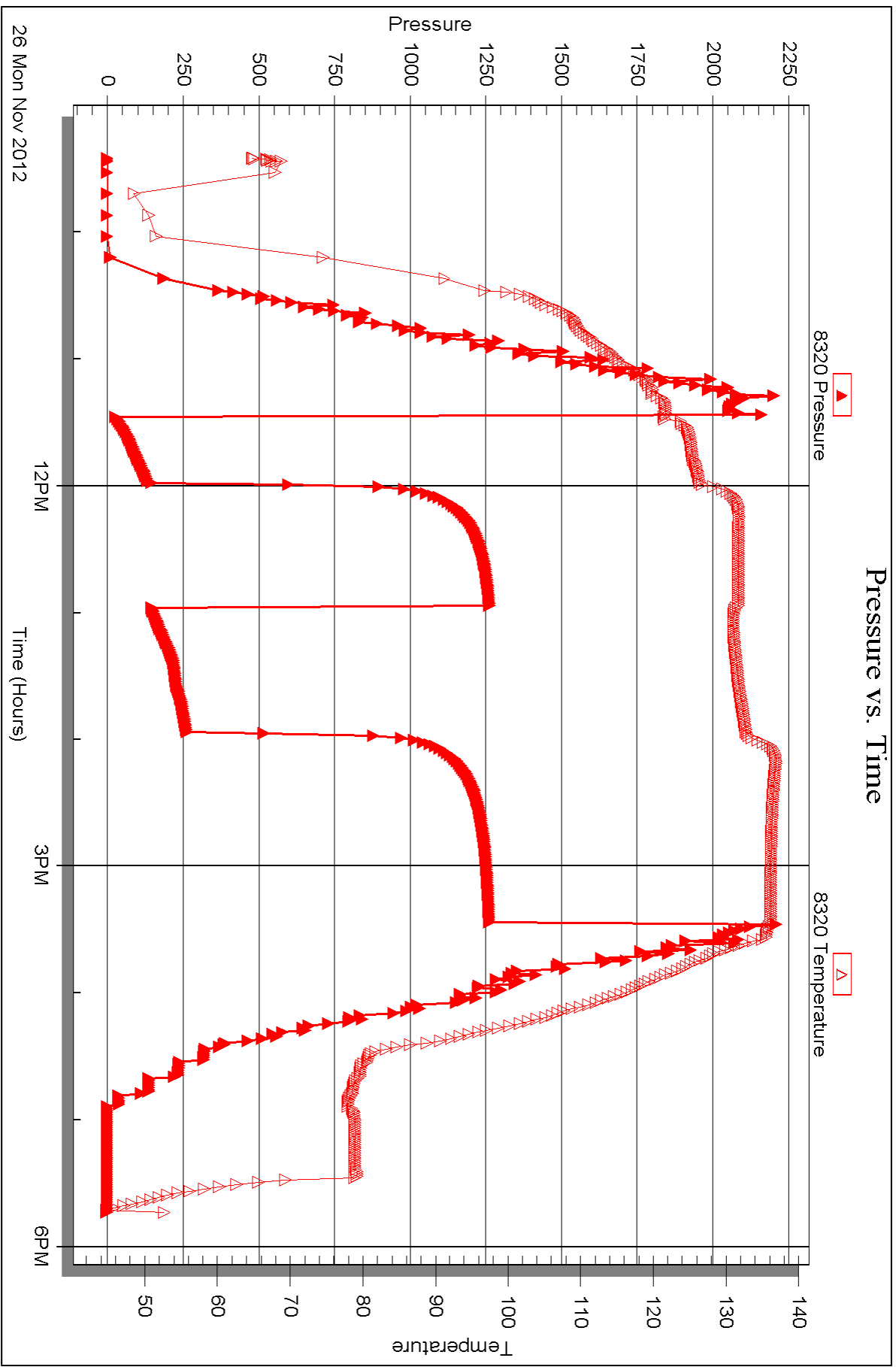


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Frisbe #1-23

DST Test Number: 5



Triobite Testing, Inc

Ref. No: 48171

Printed: 2012.12.03 @ 09:47:04





## DRILL STEM TEST REPORT

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

250 N Water Ste 300  
Wichita KS 67202

ATTN: Rocky Milford

### **Frisbe #1-23**

#### **23-2s-36w Rawlins,KS**

Start Date: 2012.11.27 @ 00:55:00

End Date: 2012.11.27 @ 09:46:30

Job Ticket #: 48172                      DST #: 6

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

Printed: 2012.12.03 @ 09:46:15



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N Water Ste 300  
Wichita KS 67202  
ATTN: Rocky Milford

**23-2s-36w Rawlins, KS**

**Frisbe #1-23**

Job Ticket: 48172

**DST#: 6**

Test Start: 2012.11.27 @ 00:55:00

## GENERAL INFORMATION:

Formation: **LKC "G"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 03:21:30  
 Time Test Ended: 09:46:30  
 Interval: **4298.00 ft (KB) To 4345.00 ft (KB) (TVD)**  
 Total Depth: 4345.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 57  
 Reference Elevations: 3305.00 ft (KB)  
 3295.00 ft (CF)  
 KB to GR/CF: 10.00 ft

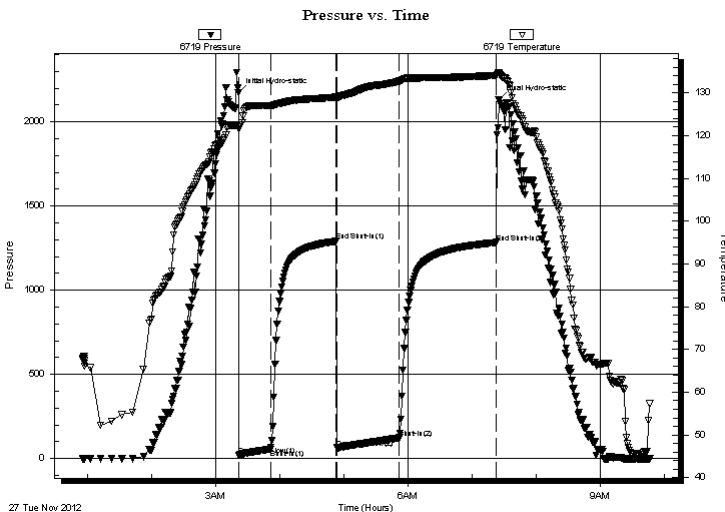
## Serial #: 6719

Inside

Press @ Run Depth: 123.23 psig @ 4299.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.11.27 End Date: 2012.11.27 Last Calib.: 2012.11.27  
 Start Time: 00:55:05 End Time: 09:46:30 Time On Btm: 2012.11.27 @ 03:21:00  
 Time Off Btm: 2012.11.27 @ 07:25:00

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 30 min. (Diesel in bucket)  
 60 - IS: Bled off, Blow back built to 1/4"  
 60 - FF: Blow built to BOB in 35 min.  
 90 - FS: Bled off, Blow back built to 1/4"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2172.71	122.08	Initial Hydro-static
1	20.69	121.97	Open To Flow (1)
30	56.25	126.99	Shut-In(1)
92	1290.71	129.00	End Shut-In(1)
93	63.32	128.81	Open To Flow (2)
151	123.23	132.77	Shut-In(2)
242	1283.58	134.09	End Shut-In(2)
244	2132.41	134.63	Final Hydro-static

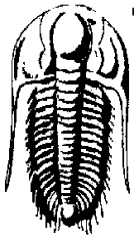
## Recovery

Length (ft)	Description	Volume (bbl)
45.00	GOCM 65%o, 20%o, 15%g	0.22
45.00	MCO 77%o, 20%m, 3%g	0.22
180.00	CGO 73%o, 25%g, 2%m	0.89
30.00	CO 94%o, 5%g, 1%m	0.15
0.00	GIP = 240'	0.00

\* 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: Rocky Milford

**23-2s-36w Rawlins, KS**

**Frisbe #1-23**

Job Ticket: 48172

**DST#: 6**

Test Start: 2012.11.27 @ 00:55:00

## GENERAL INFORMATION:

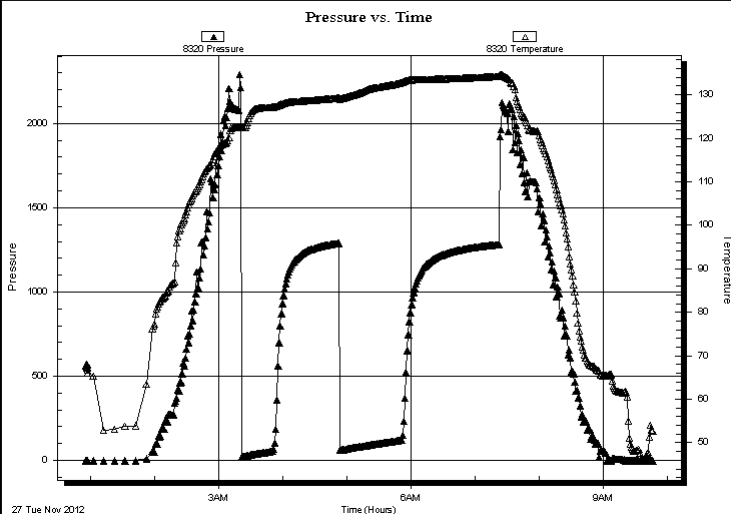
Formation: **LKC "G"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 03:21:30  
 Tester: James Winder  
 Time Test Ended: 09:46:30  
 Unit No: 57  
 Interval: **4298.00 ft (KB) To 4345.00 ft (KB) (TVD)**  
 Reference Elevations: 3305.00 ft (KB)  
 Total Depth: 4345.00 ft (KB) (TVD)  
 3295.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Good  
 KB to GR/CF: 10.00 ft

**Serial #: 8320**

**Outside**

Press @ Run Depth: psig @ 4299.00 ft (KB)  
 Capacity: 8000.00 psig  
 Start Date: 2012.11.27  
 End Date: 2012.11.27  
 Last Calib.: 2012.11.27  
 Start Time: 00:55:05  
 End Time: 09:47:00  
 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:**  
 30 - IF: Blow built to BOB (11") at 30 min. (Diesel in bucket)  
 60 - IS: Bled off, Blow back built to 1/4"  
 60 - FF: Blow built to BOB in 35 min.  
 90 - FS: Bled off, Blow back built to 1/4"



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
45.00	GOCM 65% <sub>m</sub> , 20% <sub>o</sub> , 15% <sub>g</sub>	0.22
45.00	MCO 77% <sub>o</sub> , 20% <sub>m</sub> , 3% <sub>g</sub>	0.22
180.00	CGO 73% <sub>o</sub> , 25% <sub>g</sub> , 2% <sub>m</sub>	0.89
30.00	CO 94% <sub>o</sub> , 5% <sub>g</sub> , 1% <sub>m</sub>	0.15
0.00	GIP = 240'	0.00

## 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., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48172

**DST#: 6**

ATTN: Rocky Milford

Test Start: 2012.11.27 @ 00:55:00

## Tool Information

Drill Pipe:	Length: 3744.00 ft	Diameter: 3.80 inches	Volume: 52.52 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 55.15 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4298.00 ft			Final 71000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	75.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4275.00	
Hydraulic tool	5.00			4280.00	
Jars	5.00			4285.00	
Safety Joint	3.00			4288.00	
Packer	5.00			4293.00	28.00 Bottom Of Top Packer
Packer	5.00			4298.00	
Packer - Shale	0.00			4298.00	
Stubb	1.00			4299.00	
Recorder	0.00	6719	Inside	4299.00	
Recorder	0.00	8320	Outside	4299.00	
Perforations	9.00			4308.00	
Blank Spacing	33.00			4341.00	
Perforations	1.00			4342.00	
Bullnose	3.00			4345.00	47.00 Bottom Packers & Anchor

**Total Tool Length: 75.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48172

**DST#: 6**

ATTN: Rocky Milford

Test Start: 2012.11.27 @ 00:55:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31.2 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.94 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
45.00	GOCM 65% <i>m</i> , 20% <i>o</i> , 15% <i>g</i>	0.221
45.00	MCO 77% <i>o</i> , 20% <i>m</i> , 3% <i>g</i>	0.221
180.00	CGO 73% <i>o</i> , 25% <i>g</i> , 2% <i>m</i>	0.885
30.00	CO 94% <i>o</i> , 5% <i>g</i> , 1% <i>m</i>	0.148
0.00	GIP = 240'	0.000

Total Length: 300.00 ft      Total Volume: 1.475 bbl

Num Fluid Samples: 0

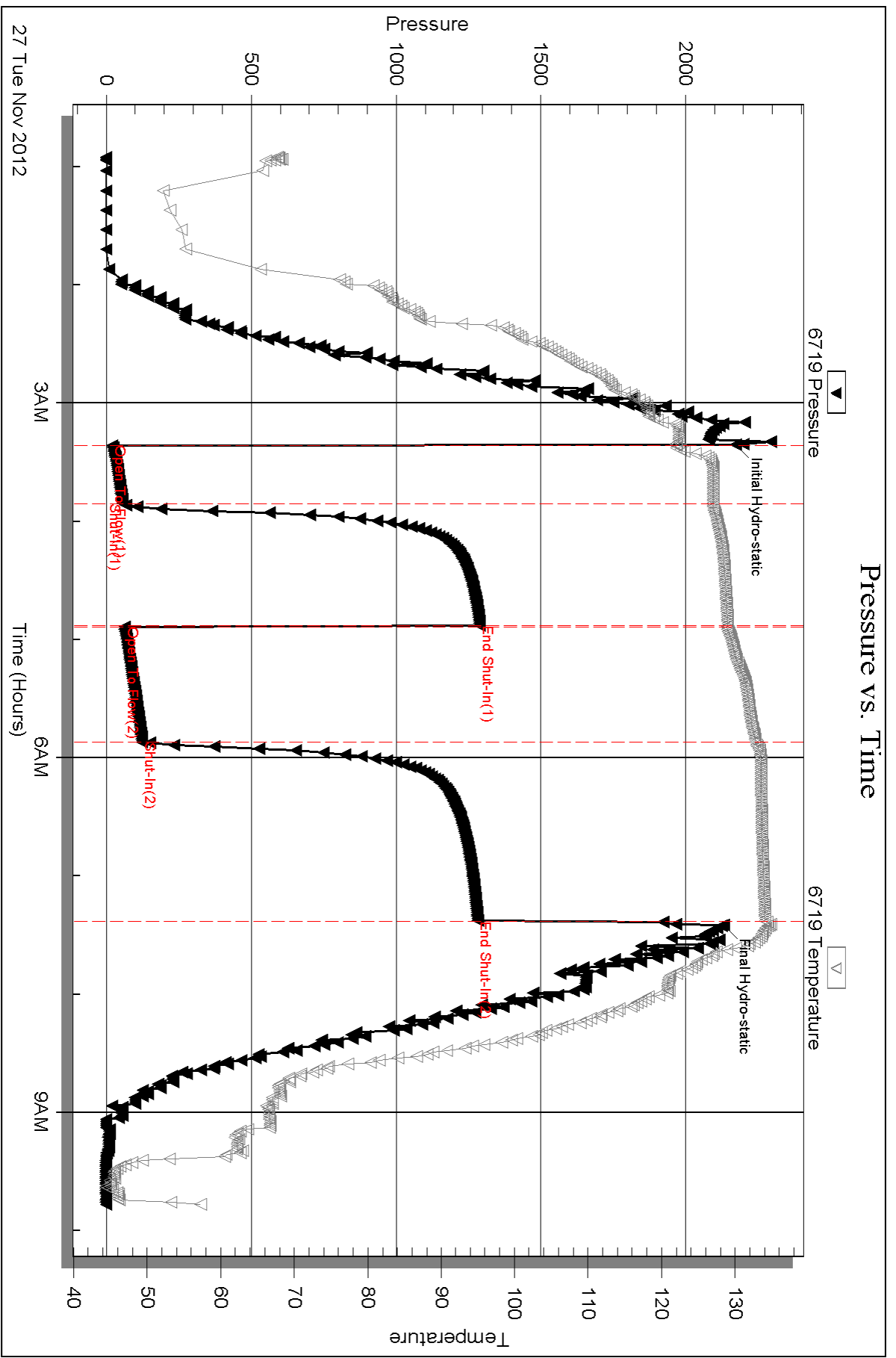
Num Gas Bombs: 0

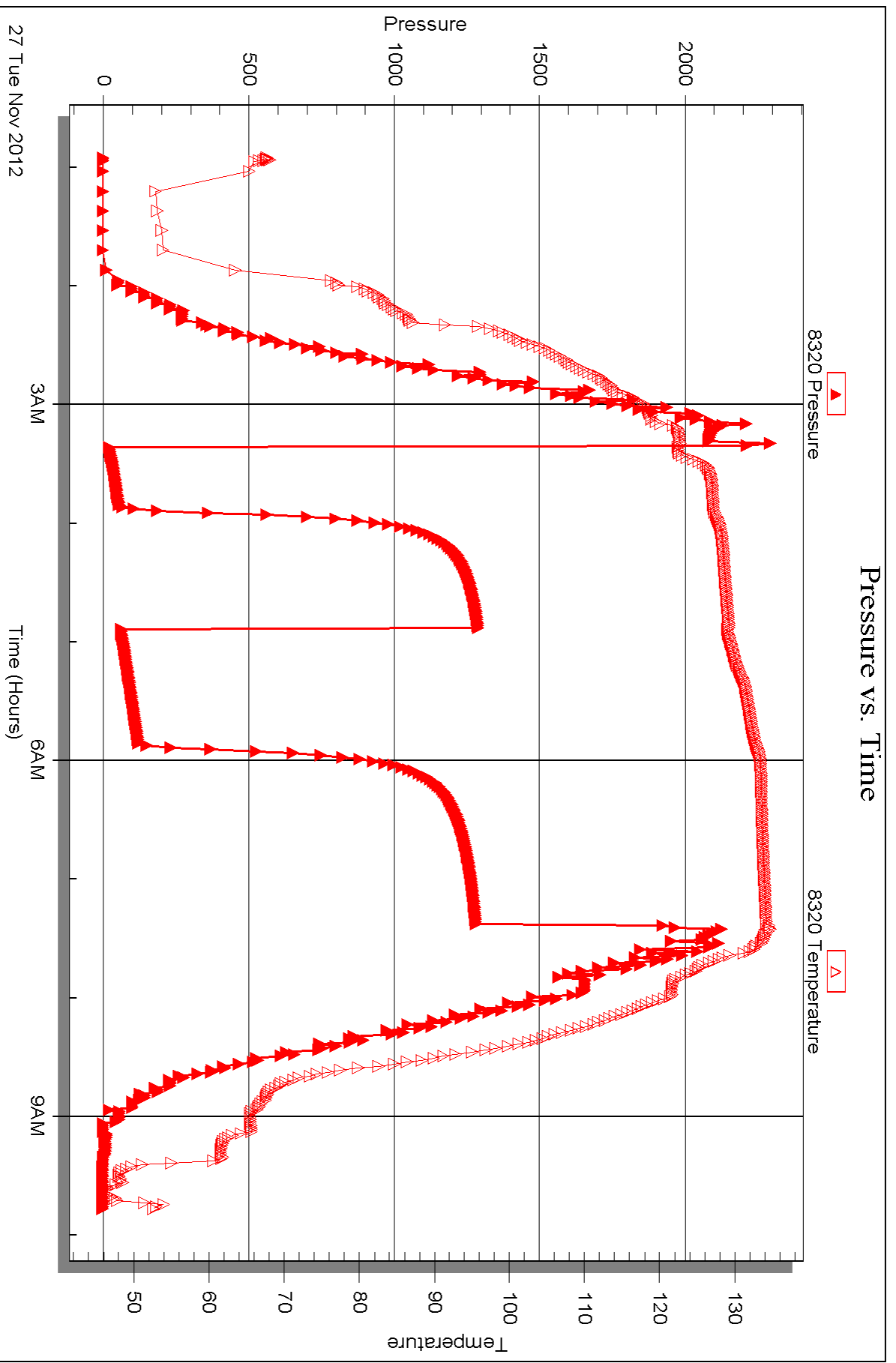
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 30 api @ 48 deg F







## DRILL STEM TEST REPORT

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

250 N Water Ste 300  
Wichita KS 67202

ATTN: Rocky Milford

### **Frisbe #1-23**

#### **23-2s-36w Rawlins,KS**

Start Date: 2012.11.28 @ 00:10:00

End Date: 2012.11.28 @ 09:18:30

Job Ticket #: 48173                      DST #: 7

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.12.03 @ 09:45:32





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
 250 N Water Ste 300  
 Wichita KS 67202  
 ATTN: Rocky Milford

**23-2s-36w Rawlins, KS**

**Frisbe #1-23**

Job Ticket: 48173

**DST#: 7**

Test Start: 2012.11.28 @ 00:10:00

## GENERAL INFORMATION:

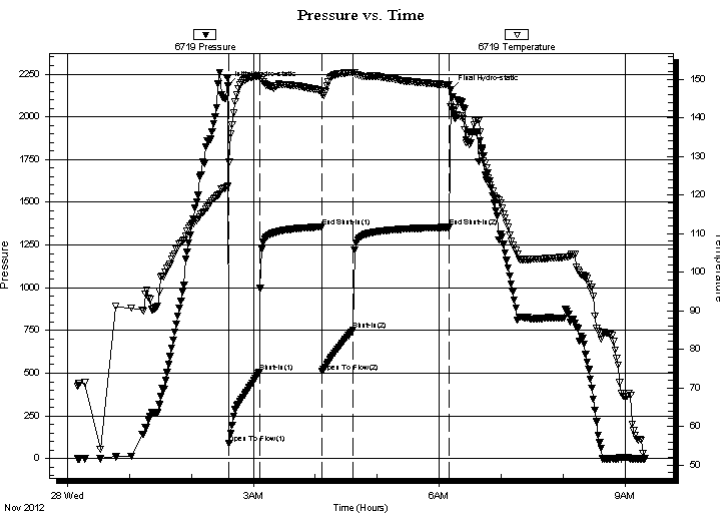
Formation: **LKC "J"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 02:36:30  
 Tester: James Winder  
 Time Test Ended: 09:18:30  
 Unit No: 57  
 Interval: **4396.00 ft (KB) To 4443.00 ft (KB) (TVD)**  
 Reference Elevations: 3305.00 ft (KB)  
 Total Depth: 4443.00 ft (KB) (TVD)  
 3295.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Good  
 KB to GR/CF: 10.00 ft

## Serial #: 6719

Inside

Press @ Run Depth: 751.99 psig @ 4397.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.11.28 End Date: 2012.11.28 Last Calib.: 2012.11.28  
 Start Time: 00:10:05 End Time: 09:18:30 Time On Btm: 2012.11.28 @ 02:35:30  
 Time Off Btm: 2012.11.28 @ 06:11:00

**TEST COMMENT:** 30 - IF: Blow built to BOB (11") in 2 1/2 min. (Diesel in bucket)  
 60 - IS: Bled off, Blow back built to 8 1/2"  
 30 - FF: Blow built to BOB in 2 3/4 min.  
 90 - FS: Bled off, Blow back built to 6"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2182.77	122.49	Initial Hydro-static
1	90.25	128.51	Open To Flow (1)
31	507.31	150.88	Shut-In(1)
91	1355.47	147.07	End Shut-In(1)
91	508.37	146.16	Open To Flow (2)
121	751.99	151.78	Shut-In(2)
214	1353.31	148.60	End Shut-In(2)
216	2157.54	142.89	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	SO/MCW 76%w, 22%m, 2%o (below circ0.44)	
1587.00	Rev Out: 7 bbl samples every 5 min.	18.22
0.00	5 - 15 min. GMOW 36%w, 24%o, 21%m, 0.00g	
0.00	20 min. 60%o, 38%w, 22%m	0.00
33.00	GMWCO 44%o, 20%g, 18%w, 8%m	0.46
0.00	GIP = 345'	0.00

\* 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: Rocky Milford

**23-2s-36w Rawlins,KS**

**Frisbe #1-23**

Job Ticket: 48173      **DST#: 7**  
Test Start: 2012.11.28 @ 00:10:00

### GENERAL INFORMATION:

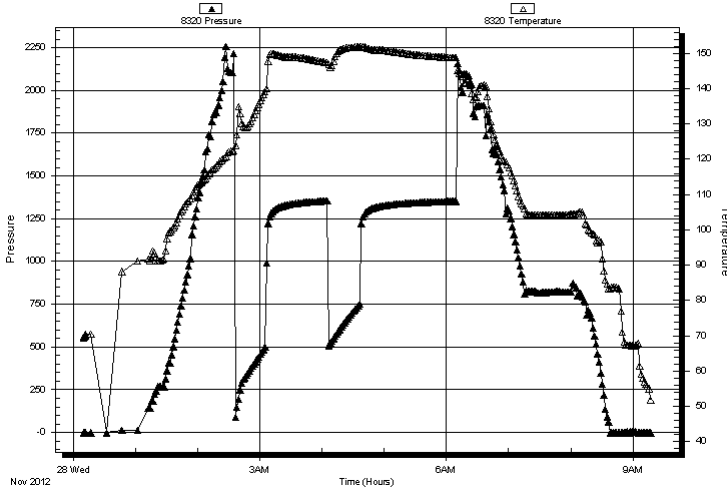
Formation: **LKC "J"**  
 Deviated: No Whipstock:      ft (KB)      Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 02:36:30      Tester: James Winder  
 Time Test Ended: 09:18:30      Unit No: 57  
**Interval: 4396.00 ft (KB) To 4443.00 ft (KB) (TVD)**  
 Total Depth: 4443.00 ft (KB) (TVD)      Reference Elevations: 3305.00 ft (KB)  
 Hole Diameter: 7.88 inches      Hole Condition: Good      3295.00 ft (CF)  
 KB to GR/CF: 10.00 ft

### Serial #: 8320      Outside

Press @ RunDepth:	psig @	4397.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2012.11.28	End Date:	2012.11.28	Last Calib.:	2012.11.28
Start Time:	00:10:05	End Time:	09:18:00	Time On Btm:	
			Time Off Btm:		

**TEST COMMENT:** 30 - IF: Blow built to BOB (11") in 2 1/2 min. (Diesel in bucket)  
 60 - IS: Bled off, Blow back built to 8 1/2"  
 30 - FF: Blow built to BOB in 2 3/4 min.  
 90 - FS: Bled off, Blow back built to 6"

Pressure vs. Time



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
90.00	SO/MCW 76%w, 22%m, 2%o (below circ0.44)	
1587.00	Rev Out: 7 bbl samples every 5 min.	18.22
0.00	5 - 15 min. GMOW 36%w, 24%o, 21%m, 0.00g	
0.00	20 min. 60%o, 38%w, 22%m	0.00
33.00	GMWCO 44%o, 20%g, 18%w, 8%m	0.46
0.00	GIP = 345'	0.00

### 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., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48173

**DST#: 7**

ATTN: Rocky Milford

Test Start: 2012.11.28 @ 00:10:00

## Tool Information

Drill Pipe:	Length: 3839.00 ft	Diameter: 3.80 inches	Volume: 53.85 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 56.48 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4396.00 ft			Final 90000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	75.00 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			4373.00	
Hydraulic tool	5.00			4378.00	
Jars	5.00			4383.00	
Safety Joint	3.00			4386.00	
Packer	5.00			4391.00	28.00 Bottom Of Top Packer
Packer	5.00			4396.00	
Packer - Shale	0.00			4396.00	
Stubb	1.00			4397.00	
Recorder	0.00	6719	Inside	4397.00	
Recorder	0.00	8320	Outside	4397.00	
Perforations	9.00			4406.00	
Blank Spacing	33.00			4439.00	
Perforations	1.00			4440.00	
Bullnose	3.00			4443.00	47.00 Bottom Packers & Anchor

**Total Tool Length: 75.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48173

**DST#: 7**

ATTN: Rocky Milford

Test Start: 2012.11.28 @ 00:10:00

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 56.00 sec/qt  
Water Loss: 6.38 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 1100.00 ppm  
Filter Cake: 2.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: 39 deg API  
Water Salinity: 22500 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	SO/MCW 76%w , 22%m, 2%o (below circ sul	0.443
1587.00	Rev Out: 7 bbl samples every 5 min.	18.217
0.00	5 - 15 min. GMOW 36%w , 24%o, 21%m, 19%	0.000
0.00	20 min. 60%o, 38%w , 22%m	0.000
33.00	GMWCO 44%o, 20%g, 18%w , 8%m	0.463
0.00	GIP = 345'	0.000

Total Length: 1710.00 ft      Total Volume: 19.123 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: Gravity = 36.2 api @ 32 deg F      RW = .358 ohms @ 60 deg F  
Truck driver estimated 7 bbl in his truck after reversing out

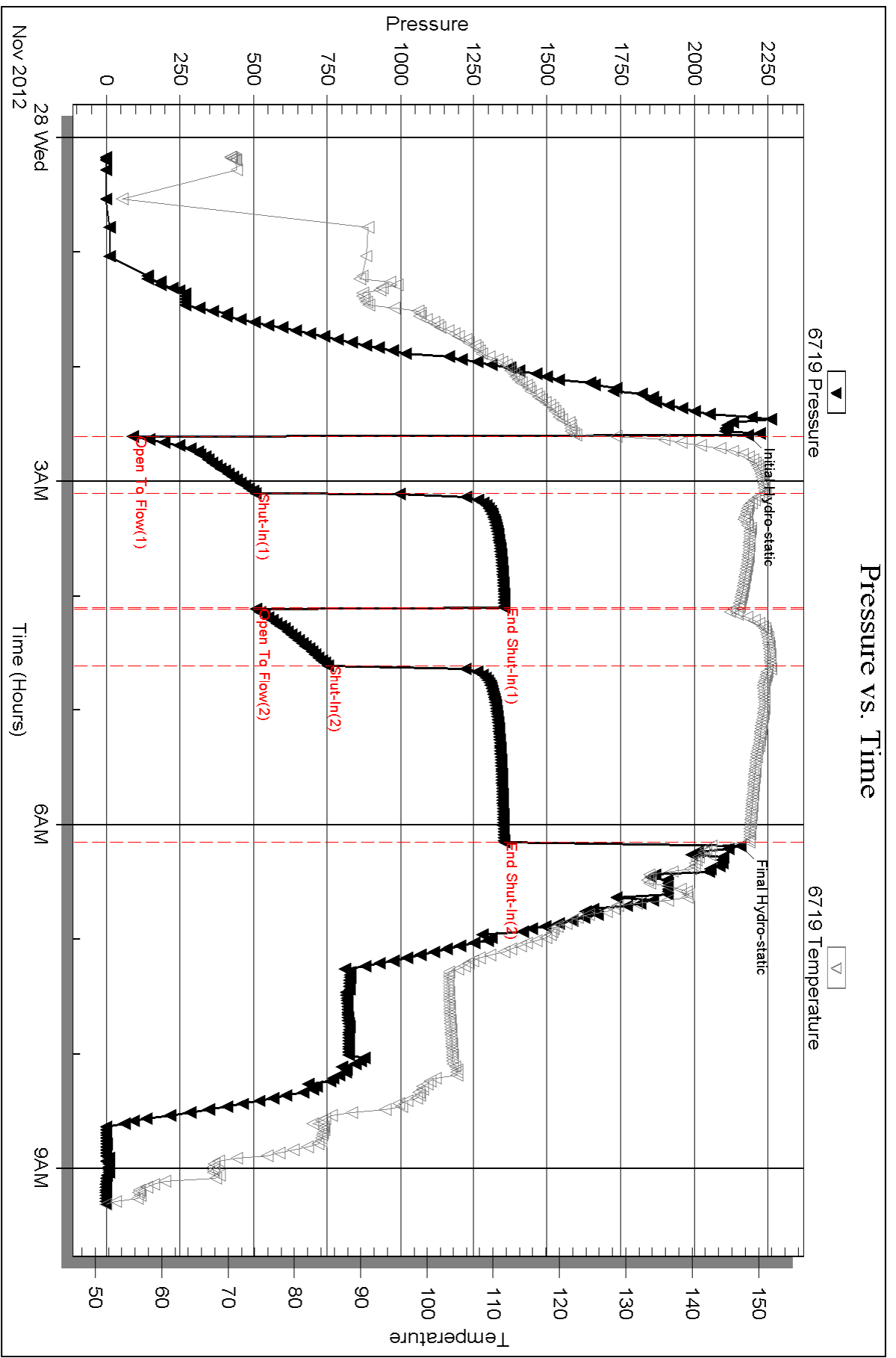
Serial #: 6719

Inside

Murfin Drilling Co., Inc.

Frisbe #1-23

DST Test Number: 7

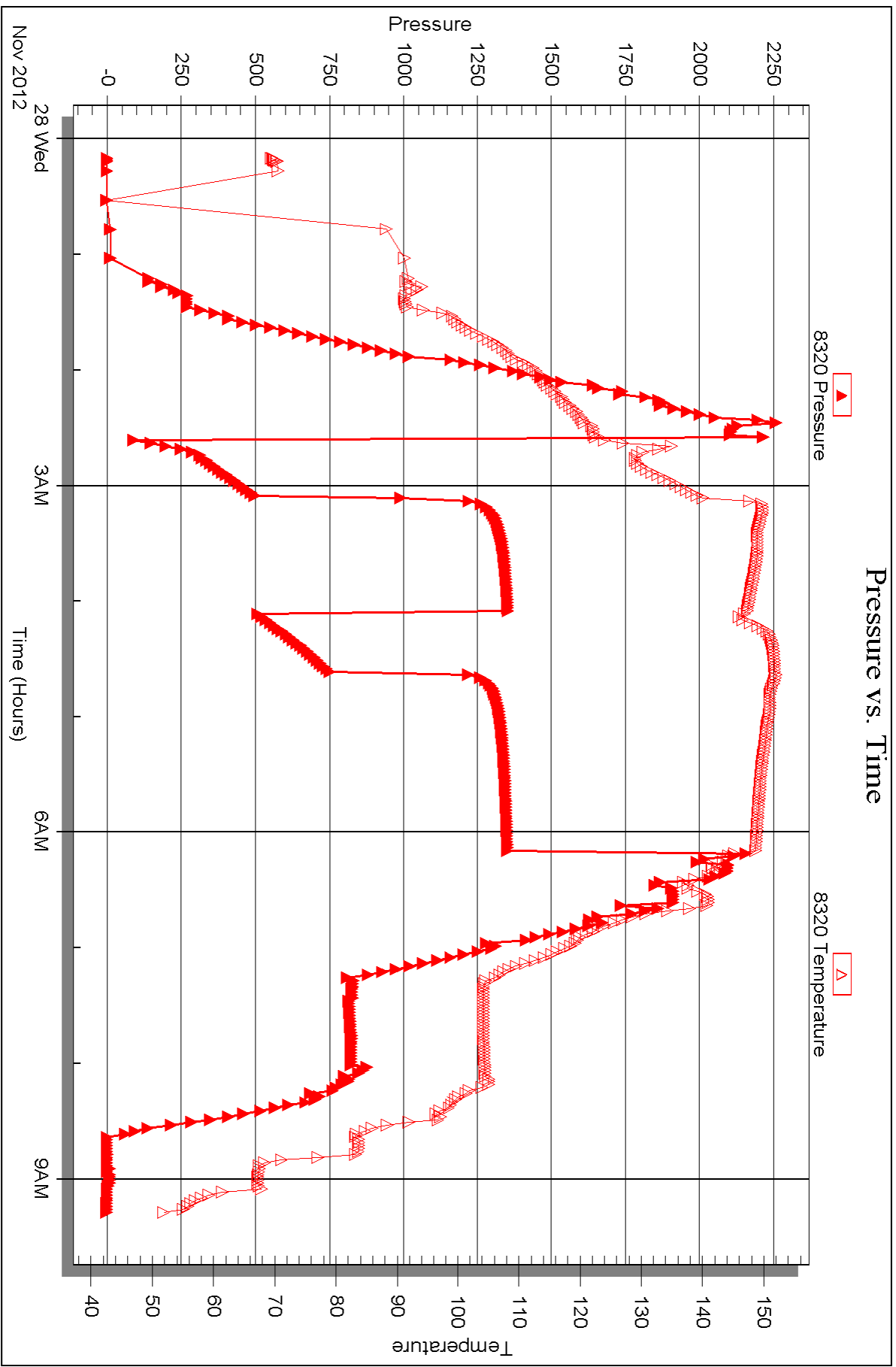


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Frisbe #1-23

DST Test Number: 7





## DRILL STEM TEST REPORT

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

250 N Water Ste 300  
Wichita KS 67202

ATTN: Rocky Milford

### **Frisbe #1-23**

#### **23-2s-36w Rawlins,KS**

Start Date: 2012.11.29 @ 05:12:00

End Date: 2012.11.29 @ 13:01:30

Job Ticket #: 48174                      DST #: 8

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

Printed: 2012.12.03 @ 09:44:42



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
 250 N Water Ste 300  
 Wichita KS 67202  
 ATTN: Rocky Milford

**23-2s-36w Rawlins, KS**

**Frisbe #1-23**

Job Ticket: 48174

**DST#: 8**

Test Start: 2012.11.29 @ 05:12:00

## GENERAL INFORMATION:

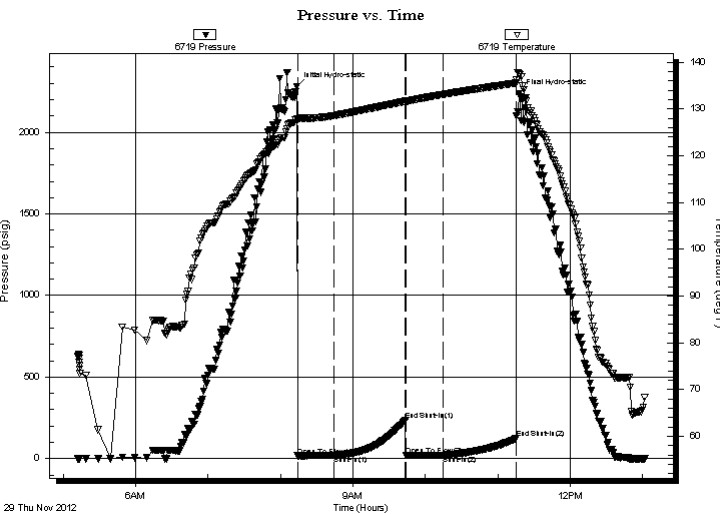
Formation: **Pawnee**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:14:00  
 Time Test Ended: 13:01:30  
 Interval: **4586.00 ft (KB) To 4665.00 ft (KB) (TVD)**  
 Total Depth: 4665.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 57  
 Reference Elevations: 3305.00 ft (KB)  
 3295.00 ft (CF)  
 KB to GR/CF: 10.00 ft

## Serial #: 6719

Inside

Press @ Run Depth: 20.34 psig @ 4587.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.11.29 End Date: 2012.11.29 Last Calib.: 2012.11.29  
 Start Time: 05:12:05 End Time: 13:01:29 Time On Btm: 2012.11.29 @ 08:13:30  
 Time Off Btm: 2012.11.29 @ 11:17:30

TEST COMMENT: 30 - IF: 3/4" blow at open, built to 1 1/4", dying back at 25 min., 3/4" blow at close  
 60 - IS: Bled off, No blow back  
 30 - FF: No blow  
 60 - FS: No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2278.89	127.94	Initial Hydro-static
1	17.01	127.77	Open To Flow (1)
31	19.07	128.59	Shut-In(1)
90	235.02	131.67	End Shut-In(1)
91	19.29	131.62	Open To Flow (2)
121	20.34	133.11	Shut-In(2)
182	123.03	135.56	End Shut-In(2)
184	2236.86	137.61	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	SOCM 94% m, 4% o, 2% 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: Rocky Milford

**23-2s-36w Rawlins,KS**

**Frisbe #1-23**

Job Ticket: 48174

**DST#: 8**

Test Start: 2012.11.29 @ 05:12:00

**GENERAL INFORMATION:**

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:14:00

Time Test Ended: 13:01:30

**Interval: 4586.00 ft (KB) To 4665.00 ft (KB) (TVD)**

Total Depth: 4665.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Reference Elevations: 3305.00 ft (KB)

3295.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8320 Outside**

Press @RunDepth: psig @ 4587.00 ft (KB)

Start Date: 2012.11.29

End Date: 2012.11.29

Capacity: 8000.00 psig

Last Calib.: 2012.11.29

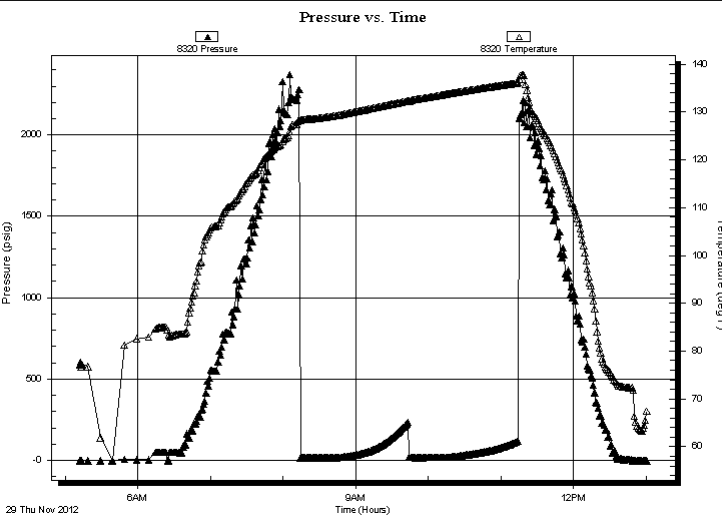
Start Time: 05:12:05

End Time: 13:00:59

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 30 - IF: 3/4" blow at open, built to 1 1/4", dying back at 25 min., 3/4" blow at close  
 60 - IS: Bled off, No blow back  
 30 - FF: No blow  
 60 - FS: No blow back



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
2.00	SOCM 94% m, 4% o, 2% g	0.01

**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., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48174

**DST#: 8**

ATTN: Rocky Milford

Test Start: 2012.11.29 @ 05:12:00

## Tool Information

Drill Pipe:	Length: 4029.00 ft	Diameter: 3.80 inches	Volume: 56.52 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose:	100000.0 lb
			<u>Total Volume: 59.15 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial	80000.00 lb
Depth to Top Packer:	4586.00 ft			Final	80000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	79.00 ft				
Tool Length:	107.00 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			4563.00	
Hydraulic tool	5.00			4568.00	
Jars	5.00			4573.00	
Safety Joint	3.00			4576.00	
Packer	5.00			4581.00	28.00 Bottom Of Top Packer
Packer	5.00			4586.00	
Packer - Shale	0.00			4586.00	
Stubb	1.00			4587.00	
Recorder	0.00	6719	Inside	4587.00	
Recorder	0.00	8320	Outside	4587.00	
Perforations	9.00			4596.00	
Blank Spacing	65.00			4661.00	
Perforations	1.00			4662.00	
Bullnose	3.00			4665.00	79.00 Bottom Packers & Anchor

**Total Tool Length: 107.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**23-2s-36w Rawlins,KS**

250 N Water Ste 300  
Wichita KS 67202

**Frisbe #1-23**

Job Ticket: 48174

**DST#: 8**

ATTN: Rocky Milford

Test Start: 2012.11.29 @ 05:12:00

## 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: 62.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	SOCM 94%m, 4%o, 2%g	0.010

Total Length: 2.00 ft      Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

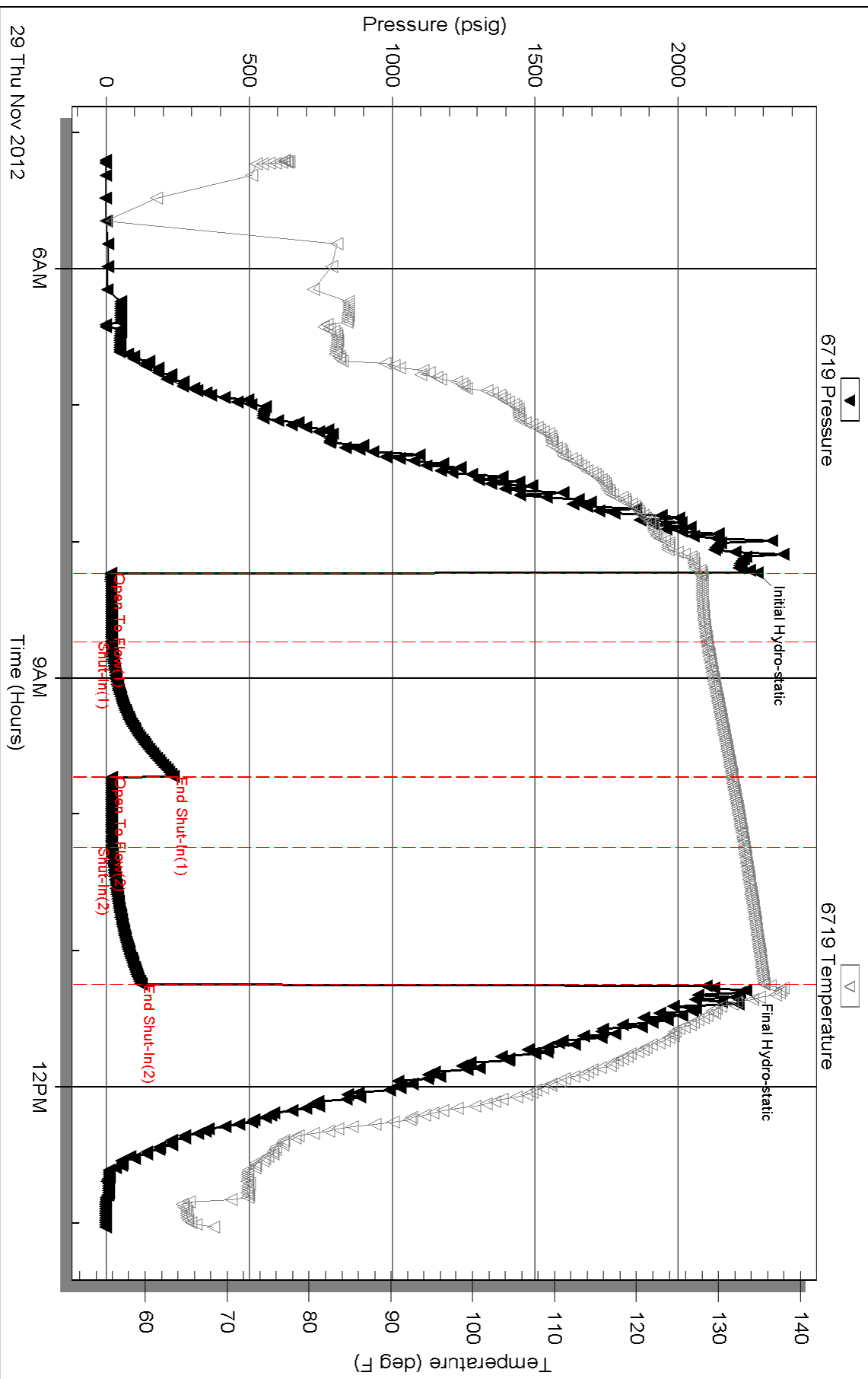
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

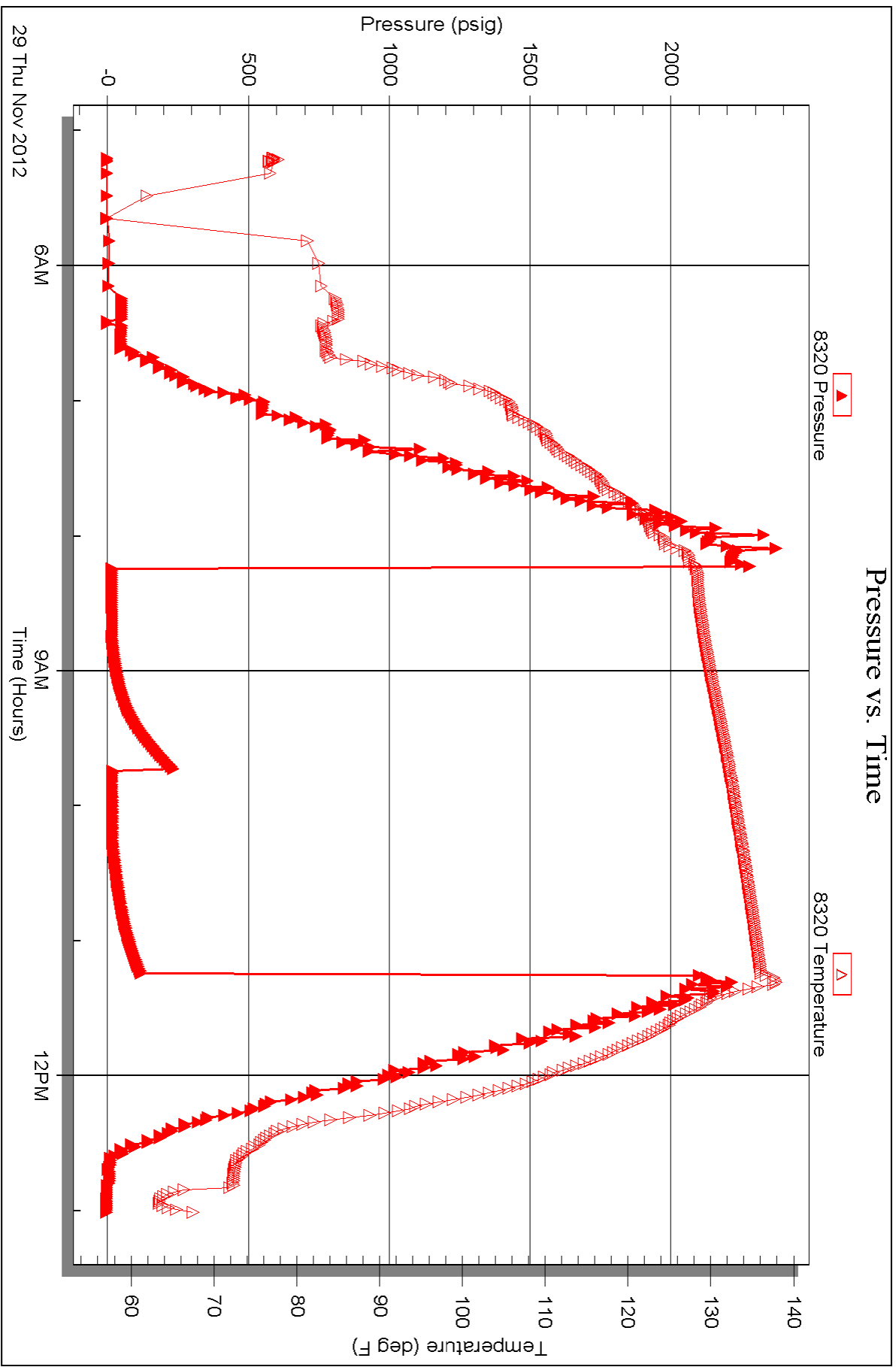


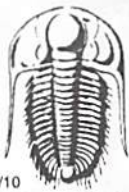
Serial #: 8320

Outside Murfin Drilling Co., Inc.

Frisbe #1-23

DST Test Number: 8





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48167

Well Name & No. Frisbe # 1-23 Test No. 1 Date 11/23/12  
 Company Martin Drilling Co. Inc Elevation 3305 KB 3295 GL  
 Address 250 N Walter St 300 Wichita KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Martin 14  
 Location: Sec. 23 Twp. 25 Rge. 36W Co. Rawlins State KS

Interval Tested 3833-3975 Zone Tested Stotter  
 Anchor Length 142' Anchor Drill Pipe Run 3300 Mud Wt. 9.1  
 Top Packer Depth 3828 Drill Collars Run 534 Vis 57  
 Bottom Packer Depth 3833 Shale Wt. Pipe Run 0 WL 6.0  
 Total Depth 3975 Chlorides 700 ppm System LCM 5  
 Blow Description IF - 1/4" blow built to 2"  
ISI - No return  
FF - 27 mins. in surface blow, <sup>started</sup> built to 1"  
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
92'	Mud			100%	

Rec Total 92' BHT 125° Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic <u>1896</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>5:15 AM</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>5:56 AM</u>
(C) First Final Flow <u>33</u>	<input checked="" type="checkbox"/> Safety <u>75</u>	T-Open <u>08:15</u>
(D) Initial Shut-In <u>1147</u>	<input checked="" type="checkbox"/> Circ Sub <u>NC</u>	T-Pulled <u>12:17</u>
(E) Second Initial Flow <u>37</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>014:05</u>
(F) Second Final Flow <u>64</u>	<input checked="" type="checkbox"/> Mileage <u>102RT</u> 158.10	Comments
(G) Final Shut-In <u>1127</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1868</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer
	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input checked="" type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>60</u>	<input checked="" type="checkbox"/> Day Standby	Total <u>1883.10</u>
Final Shut-In <u>90</u>	<input checked="" type="checkbox"/> Accessibility	MP/DST Disc't <u>Spl: + 50/50</u>
	Sub Total <u>1883.10</u>	

Approved By Rocky Milford Our Representative Rocky Milford  
 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

## Test Ticket

NO. 48168

Well Name & No. Frisbe # 1-23 Test No. 2 Date 11/23/12  
 Company Murfin Drilling Co. Inc Elevation 3305 KB 3295 GL  
 Address 250 N Walter Ste 300 Wichita KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin # 14  
 Location: Sec. 23 Twp. 25 Rge. 36W Co. ~~Rawlins~~ Rawlins State KS

Interval Tested 3970-4040 Zone Tested Topeka  
 Anchor Length 70' Anchor Drill Pipe Run 3427 Mud Wt. 9.1  
 Top Packer Depth 3965 Drill Collars Run 534 Vis 57  
 Bottom Packer Depth 3970 Shale Wt. Pipe Run 0 WL 6.0  
 Total Depth 4040 Chlorides 700 ppm System LCM 5  
 Blow Description IF - Surface blow built to 2 1/8"  
ISI - No return  
FF - Surface blow started @ 10 mins built to 2 1/8"  
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>WCM w/trace oil spots</u>	<u>5</u>	<u>2</u>	<u>23</u>	<u>70</u>
<u>90</u>	<u>WCM w/trace oil spots</u>	<u>-</u>	<u>1</u>	<u>15</u>	<u>84</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 115 BHT 128 Gravity - API RW 427 @ 84.9° F Chlorides 17,500 ppm

(A) Initial Hydrostatic <u>2046</u>	<input type="checkbox"/> Test <u>A</u> 1250	T-On Location <u>23:00</u>
(B) First Initial Flow <u>18</u>	<input type="checkbox"/> Jars <u>A</u> 250	T-Started <u>23:15</u>
(C) First Final Flow <u>37</u>	<input type="checkbox"/> Safety Joint <u>A</u> 75	T-Open <u>01:05</u>
(D) Initial Shut-In <u>1164</u>	<input checked="" type="checkbox"/> Circ Sub <u>NA</u>	T-Pulled <u>05:05</u>
(E) Second Initial Flow <u>41</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>6:55 1/24</u>
(F) Second Final Flow <u>72</u>	<input type="checkbox"/> Mileage <u>A</u> 102 RT 158.10	Comments
(G) Final Shut-In <u>1128</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1975</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer <u>A</u> 250	<input checked="" type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>60</u>	<input checked="" type="checkbox"/> Day Standby	Total <u>1983.10</u>
Final Shut-In <u>90</u>	<input checked="" type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1983.10</u>	<u>split 50/50</u>

Approved By Rocky Milford

Our Representative James W. Winkler

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48169

Well Name & No. Frisbe # 1-23 Test No. 3 Date 11-24-12  
 Company Murfin Drilling Co. Inc Elevation 3305 KB 3295 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #14  
 Location: Sec. 23 Twp. 2s Rge. 36w Co. Rawlins State KS

Interval Tested 4070 - 4147 Zone Tested Lecompton - Oread  
 Anchor Length 77 Drill Pipe Run 3523 Mud Wt. 9.2  
 Top Packer Depth 4065 Drill Collars Run 534 Vis 56  
 Bottom Packer Depth 4070 (shale) Wt. Pipe Run - WL 6.0  
 Total Depth 4147 Chlorides 800 ppm System LCM 4  
 Blow Description IF: Blow built to 6 1/2"  
ISI: Bled off, No blowback  
FF: Blow started at 7 min., built to 8 1/2"  
FSI: Bled off, No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>84</u>	<u>Mud w/trace oil</u>	<u>-</u>	<u>trace</u>	<u>-</u>	<u>100</u>
<u>89</u>	<u>sowcm</u>	<u>2</u>	<u>1</u>	<u>4</u>	<u>93</u>
<u>267</u>	<u>wcm w/trace oil</u>	<u>2</u>	<u>trace</u>	<u>32</u>	<u>66</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 440 BHT 135 Gravity - API RW .302 @ 55.3 °F Chlorides 29,000 ppm

(A) Initial Hydrostatic <u>2034</u>	<input type="checkbox"/> Test <u>*</u> 1250	T-On Location <u>18:25</u>
(B) First Initial Flow <u>20</u>	<input type="checkbox"/> Jars <u>*</u> 250	T-Started <u>18:50</u>
(C) First Final Flow <u>101</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>21:02</u>
(D) Initial Shut-In <u>1206</u>	<input checked="" type="checkbox"/> Circ Sub <u>XNA</u>	T-Pulled <u>1:06</u>
(E) Second Initial Flow <u>105</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>3:00 11:25</u>
(F) Second Final Flow <u>221</u>	<input type="checkbox"/> Mileage <u>102 RT</u> 158.10	Comments
(G) Final Shut-In <u>1195</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2012</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer <u>*</u> 250	<input checked="" type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>60</u>	<input checked="" type="checkbox"/> Day Standby	Total <u>1983.10</u>
Final Shut-In <u>90</u>	<input checked="" type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1983.10</u>	

Approved By Rocky Milford Our Representative James Winder  
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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48170

Well Name & No. Frisbe #1-23 Test No. 4 Date 11-25-12  
 Company Murfin Drilling Co. Inc Elevation 3305 KB 3295 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #14  
 Location: Sec. 23 Twp. 2s Rge. 36w Co. Rawlins State KS

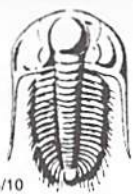
Interval Tested 4163 - 4245 Zone Tested Leavenworth - LKC "A"  
 Anchor Length 82 Drill Pipe Run 3618 Mud Wt. 9.1  
 Top Packer Depth 4158 Drill Collars Run 534 Vis 99 72  
 Bottom Packer Depth 4163 Wt. Pipe Run - WL 5.6  
 Total Depth 4245 Chlorides 1000 ppm System LCM 6.0  
 Blow Description IF: Blow built to 3 1/2"  
ISI: Bled off, No blowback  
FF: Blow started at 5 min., built to 5"  
FSI: Bled off, No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u><del>20</del> mco</u>	<u>5</u>	<u>75</u>	<u>-</u>	<u>20</u>
<u>20</u>	<u>mco</u>	<u>3</u>	<u>60</u>	<u>-</u>	<u>37</u>
<u>70</u>	<u>GOM</u>	<u>11</u>	<u>44</u>	<u>-</u>	<u>45</u>
<u>Rec</u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>
<u>Rec</u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>

Rec Total 120 BHT 131 Gravity 26.8 API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 2080  Test ★ 1250 T-On Location 13:55  
 (B) First Initial Flow 18  Jars ★ 250 T-Started 14:26  
 (C) First Final Flow 35  Safety Joint ★ 75 T-Open 16:16  
 (D) Initial Shut-In 1222  Circ Sub ★ NA T-Pulled 20:16  
 (E) Second Initial Flow 41  Hourly Standby \_\_\_\_\_ T-Out 22:10  
 (F) Second Final Flow 70  Mileage 102 RT 158.10 Comments \_\_\_\_\_  
 (G) Final Shut-In 1209  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2041  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1733.10  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1733.10

Approved By Rocky Milford Our Representative James Winder  
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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48171

Well Name & No. Frisbe #1-23 Test No. 5 Date 11-26-12  
 Company Murfin Drilling Co. Inc Elevation 3305 KB 3295 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #14  
 Location: Sec. 23 Twp. 2s Rge. 36w Co. Rawlins State KS

Interval Tested 4240 - 4318 Zone Tested LKC "A sand" - "E"  
 Anchor Length 78 Drill Pipe Run 3713 Mud Wt. 9.2  
 Top Packer Depth 4235 Drill Collars Run 534 Vis 69  
 Bottom Packer Depth 4240 Wt. Pipe Run - WL 6.0  
 Total Depth 4318 Chlorides 1000 ppm System LCM 6

Blow Description IF: Blow built to BOB (11") in 15 1/2 min.  
ISI: Bled off, Blowback built to 3"  
FF: Blow built to BOB in 24 1/2 min.  
FSI: Bled off, Blowback built to 2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>CO</u>	<u>3</u>	<u>96</u>	<u>-</u>	<u>1</u>
<u>450</u>	<u>CGO</u>	<u>20</u>	<u>77</u>	<u>-</u>	<u>3</u>
<u>30</u>	<u>MCO</u>	<u>7</u>	<u>75</u>	<u>-</u>	<u>18</u>
<u>150</u>	<u>GOCM</u>	<u>24</u>	<u>11</u>	<u>-</u>	<u>65</u>
<u>Rec</u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>

Rec Total 640 Fluid 365 Gas BHT 137 Gravity 29.2 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2160  Test ★ 1250 T-On Location 9:00  
 (B) First Initial Flow 22  Jars ★ 250 T-Started 9:25  
 (C) First Final Flow 135  Safety Joint ★ 75 T-Open 11:27  
 (D) Initial Shut-In 1264  Circ Sub ★ T-Pulled 15:26  
 (E) Second Initial Flow 148  Hourly Standby T-Out 17:40  
 (F) Second Final Flow 263  Mileage 102 158.10  
 (G) Final Shut-In 1263  Sampler  
 (H) Final Hydrostatic 2146  Straddle  
 Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility

Initial Open 30  Ruined Shale Packer  
 Initial Shut-In 60  Ruined Packer  
 Final Flow 60  Extra Copies  
 Final Shut-In 90 Sub Total 0  
 Total 1733.10  
 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1733.10

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48172

Well Name & No. Frisbe #1-23 Test No. 6 Date 11-27-12  
 Company Murfin Drilling Co. INC Elevation 3305 KB 3295 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #14  
 Location: Sec. 23 Twp. 2s Rge. 36w Co. Rawlins State KS

Interval Tested 4298 - 4345 Zone Tested LKC "G"  
 Anchor Length 47 Drill Pipe Run 3744 Mud Wt. 9.2  
 Top Packer Depth 4293 Drill Collars Run 534 Vis 69  
 Bottom Packer Depth 4298 (shale) Wt. Pipe Run - WL 6.0  
 Total Depth 4345 Chlorides 1000 ppm System LCM 6

Blow Description IF: Blow built to BOB(11") at 30 min. (Diesel in bucket)  
ISF: Bled off, Blowback built to 1/4"  
FF: Blow built to BOB in 35 min.  
FSI: Bled off, Blowback built to 1/4"

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>CO</u>	<u>5</u>	<u>94</u>	<u>-</u>	<u>1</u>
<u>180</u>	<u>CGO</u>	<u>25</u>	<u>73</u>	<u>-</u>	<u>2</u>
<u>45</u>	<u>MCO</u>	<u>3</u>	<u>77</u>	<u>-</u>	<u>20</u>
<u>45</u>	<u>GOCM</u>	<u>15</u>	<u>20</u>	<u>-</u>	<u>65</u>
<u>Rec</u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>
	<u>GIP = 240'</u>				

Rec Total 300 Fluid 240 GIP BHT 134 Gravity 31.2 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2173  
 (B) First Initial Flow 21  
 (C) First Final Flow 56  
 (D) Initial Shut-In 1291  
 (E) Second Initial Flow 63  
 (F) Second Final Flow 123  
 (G) Final Shut-In 1284  
 (H) Final Hydrostatic 2132  
 Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90

Test \* 1250  
 Jars \* 250  
 Safety Joint \* 75  
 Circ Sub \*NA  
 Hourly Standby  
 Mileage 102 RT 158.10  
 Sampler  
 Straddle  
 Shale Packer \* 250  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility  
 Sub Total 1983.10

T-On Location 00:05  
 T-Started 00:55  
 T-Open 3:21  
 T-Pulled 7:23  
 T-Out 9:30  
 Comments \_\_\_\_\_  
 Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 1983.10  
 MP/DST Disc't \_\_\_\_\_

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48173

Well Name & No. Frisbe #1-23 Test No. 7 Date 11-28-12  
 Company Murfin Drilling Co. Inc Elevation 3305 KB 3295 GL  
 Address 250 N. Water Suite 300 Wichita KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #14  
 Location: Sec. 23 Twp. 2S Rge. 36w Co. Rawlins State KS

Interval Tested 4396 - 4443 Zone Tested LKC "J"  
 Anchor Length 47 Drill Pipe Run 3839 Mud Wt. 9.2  
 Top Packer Depth ~~4396~~ 4391 Drill Collars Run 534 Vis 56  
 Bottom Packer Depth 4396 (shale) Wt. Pipe Run - WL 6.4  
 Total Depth 4443 Chlorides 1100 ppm System LCM 7  
 Blow Description IF: Blow built to BOB (11") in 2 1/2 min. (Diesel in bucket)  
ISI: Bled off, Blowback built to ~~2 1/2~~ min 8 1/2"  
FF: Blow built to BOB in 2 3/4 min.  
FSI: Bled off, Blowback built to 6"

Rec	Feet of	%gas	%oil	%water	%mud
33	6 MWCO	20	44	18	8
1587	Rev out for 20 min	19	24	36	21
	Feet of 20 min sample Truck drive said 7661 Total	-	60	38	22
90	Below Circ Sub	-	2	76	22
	Feet of GIP = 345'				

Rec Total 1710 Fluid BHT 149 Gravity 39 API RW .358 @ 60 °F Chlorides 22,500 ppm

(A) Initial Hydrostatic 2183  Test \* 1250 T-On Location 23:40 "1/27  
 (B) First Initial Flow 90  Jars \* 250 T-Started 00:10 "1/28  
 (C) First Final Flow 507  Safety Joint \* 75 T-Open 2:36  
 (D) Initial Shut-In 1355  Circ Sub \* dropped Bar 50 T-Pulled 6:09  
 (E) Second Initial Flow 508  Hourly Standby \_\_\_\_\_ T-Out 9:15  
 (F) Second Final Flow 752  Mileage 102 RT 158.10 Comments \_\_\_\_\_  
 (G) Final Shut-In 1353  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2158  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \* 250  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 2033.10  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 2033.10

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48174

Well Name & No. Frisbe #1-23 Test No. 8 Date 11-29-12  
 Company Murfin Drilling Co. Inc Elevation 3305 KB 3295 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #14  
 Location: Sec. 23 Twp. 2S Rge. 36w Co. Rawlins State KS

Interval Tested 4586 - 4665 Zone Tested Pawnee  
 Anchor Length 79 Drill Pipe Run 4029 Mud Wt. 9.2  
 Top Packer Depth 4581 Drill Collars Run 534 Vis 62  
 Bottom Packer Depth 4586 (shale) Wt. Pipe Run - WL 5.6  
 Total Depth 4665 Chlorides 1400 ppm System LCM 6  
 Blow Description IF: 3/4" blow at open, built to 1/4", dieing back at 25 min., 3/4" at close  
ISI: Bled off, No blowback, (Diesel in bucket)  
FF: No blow  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>SOCM</u>	<u>2</u>	<u>4</u>	<u>-</u>	<u>94</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 2 BHT 136 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>2279</u>	<input type="checkbox"/> Test <u>*</u> 1250	T-On Location <u>4:30</u>
(B) First Initial Flow <u>17</u>	<input type="checkbox"/> Jars <u>*</u> 250	T-Started <u>5:12</u>
(C) First Final Flow <u>19</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>8:14</u>
(D) Initial Shut-In <u>235</u>	<input checked="" type="checkbox"/> Circ Sub <u>*NA</u>	T-Pulled <u>11:15</u>
(E) Second Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>12:55</u>
(F) Second Final Flow <u>20</u>	<input type="checkbox"/> Mileage <u>102 RTx2</u> 158.10	Comments _____
(G) Final Shut-In <u>123</u>	<input checked="" type="checkbox"/> Sampler	_____
(H) Final Hydrostatic <u>2237</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u>*</u> 250	<input checked="" type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input checked="" type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input checked="" type="checkbox"/> Day Standby	Total <u>1983.10</u>
	<input checked="" type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>1983.10</u>	

Approved By Rocky Milford Our Representative James Winder

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PO Box 93999  
Southlake, TX 76092

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

acct  
Prod-LizH

# INVOICE

Invoice Number: 133696

Invoice Date: Nov 19, 2012

Page: 1

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

PROD COPY



Customer ID	Well Name/# or Customer P.O.	Payment Terms	
Murfin	Frisbie #1-23	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Nov 19, 2012	12/19/12

Quantity	Item	Description	Unit Price	Amount
350.00	MAT	Class A Common	17.90	6,265.00
12.00	MAT	Chloride	64.00	768.00
367.50	SER	Cubic Feet	2.48	911.40
1,267.50	SER	Ton Mileage	2.60	3,295.50
1.00	SER	Surface	1,512.25	1,512.25
75.00	SER	Pump Truck Mileage	7.70	577.50
1.00	SER	Manifold Head Rental	275.00	275.00
75.00	SER	Light Vehicle Mileage	4.40	330.00
1.00	EQP	8.5/8 Surface Plug	107.64	107.64
1.00	CEMENTER	Andrew Forslund		
1.00	EQUIP OPER	Dane Retzloff		
1.00	OPER ASSIST	Brandon Wilkinson		

Account	Unit Rig	W L	No.	Amount	Description
FD203	3			9421.47	Coment S
				2410.0001	

CSg.  
#1-23

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

\$ 5,195.64

ONLY IF PAID ON OR BEFORE

Dec 14, 2012

Subtotal	14,042.29
Sales Tax	574.82
Total Invoice Amount	14,617.11
Payment/Credit Applied	
<b>TOTAL</b>	<b>14,617.11</b>

(5195.64)

9421.47

# ALLIED OIL & GAS SERVICES, LLC 050975

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 93999  
SOUTH LAKE, TEXAS 76092

SERVICE POINT:  
ca/kbx

DATE <u>11-19-12</u>	SEC <u>23</u>	TWP <u>2</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION	JOB START <u>1:00 PM</u>	JOB FINISH <u>1:30 PM</u>
LEASE <u>Pasbrite</u>	WELL # <u>1-23</u>	LOCATION <u>McDonald 28 LN</u>		COUNTY <u>Rowlins</u>	STATE <u>TX</u>		
OLD OR NEW (Circle one) <u>NEW</u>		<u>28 LN</u>					

CONTRACTOR <u>Murfin 14</u>	OWNER <u>same</u>	
TYPE OF JOB <u>Surface</u>		
HOLE SIZE <u>12 1/4</u>	T.D. <u>394'</u>	CEMENT AMOUNT ORDERED <u>350 slts com</u>
CASING SIZE <u>8 5/8</u>	DEPTH <u>394'</u>	<u>3 place</u>
TUBING SIZE	DEPTH	
DRILL PIPE	DEPTH	
TOOL	DEPTH	
PRES. MAX	MINIMUM	COMMON <u>350 slts @ 12.90 6265.00</u>
MEAS. LINE	SHOE JOINT	POZMIX @
CEMENT LEFT IN CSO. <u>15'</u>		GEL @
PERFS.		CHLORIDE <u>12 slts @ 64.00 768.00</u>
DISPLACEMENT <u>24.14 2276</u>		ASC @

EQUIPMENT		
PUMP TRUCK # <u>431</u>	CEMENTER <u>Andrew Jozefiak</u>	
BULK TRUCK # <u>540</u>	HELPER <u>Gene Jozefiak</u>	
BULK TRUCK #	DRIVER <u>Brandon Wilkin</u>	
BULK TRUCK #	DRIVER	
	HANDLING <u>2625 cu/ft @ 2.18 911.40</u>	
	MILEAGE <u>2.12 to site 4.9 to 7.0 329.55</u>	
	TOTAL <u>11239.90</u>	

REMARKS:

Cement Job Circulate

thank you

CHARGE TO: Murfin  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

To: Allied Oil & Gas Services, 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 Greg Chubb  
SIGNATURE Greg Chubb

SERVICE	
DEPTH OF JOB <u>394</u>	
PUMP TRUCK CHARGE <u>1517.25</u>	
EXTRA FOOTAGE @	
MILEAGE <u>25 miles @ 2.22 522.50</u>	
MANIFOLD <u>Head @ 225.00</u>	
<u>Light vehicle @ 4.40 330.00</u>	
TOTAL <u>2694.25</u>	

PLUG & FLOAT EQUIPMENT	
<u>8 5/8</u>	
<u>1 surface plug @ 102.64</u>	
@	
@	
@	
TOTAL <u>102.64</u>	

SALES TAX (if Any) 541.82  
TOTAL CHARGES 14,042.29  
DISCOUNT 5195.64 IF PAID IN 30 DAYS  
37% 8416.65

Accts —

cc: WF  
cc: Lins  
cc: L-L-11



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



# Invoice

DATE	INVOICE #
12/12/2012	22949

BILL TO
Murfin Drilling Co Inc PO Box 661 Colby, KS 67701-0661

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-23	Frisbie	Rawlins		Oil	Development	Cement Port Collar	Don
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				120	Miles	6.00	720.00
576D-D	Pump Charge - Port Collar - 3174 Feet				1	Job	1,250.00	1,250.00
290	D-Air				3	Gallon(s)	35.00	105.00T
330	Swift Multi-Density Standard (MIDCON II)				225	Sacks	16.50	3,712.50T
276	Flocele				57	Lb(s)	2.00	114.00T
581D	Service Charge Cement				350	Sacks	2.00	700.00
583D	Drayage				2,089.74	Ton Miles	1.00	2,089.74
	Subtotal							8,691.24
	Sales Tax Rawlins County						8.05%	316.49
USED FOR <u>IC 104</u> APPROVED <u>JTC</u>								

<b>Thank You For Your Business &amp; Best Wishes For A Wonderful Holiday Season!!</b>	<b>Total</b>	<b>\$9,007.73</b>
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CHARGE TO: Merfloe Drilling Co  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE, ZIP CODE: \_\_\_\_\_

TICKET  
 No 22949

PAGE 1 OF 1

SERVICE LOCATIONS: 1. Haystack WELL/PROJECT NO. \_\_\_\_\_ LEASE Enisbie COUNTY/PARISH Russell STATE KS CITY \_\_\_\_\_ DATE 12-12-12 OWNER \_\_\_\_\_  
 2. Ness City, KS TICKET TYPE R-SERVICE CONTRACTOR Ca RIG NAME/NO. \_\_\_\_\_ SHIPPED VIA 110 DELIVERED TO NE/NE Drilling ORDER NO. \_\_\_\_\_  
 3. \_\_\_\_\_ WELL TYPE \_\_\_\_\_ WELL CATEGORY \_\_\_\_\_ JOB PURPOSE \_\_\_\_\_ WELL PERMIT NO. \_\_\_\_\_  
 4. \_\_\_\_\_ REFERRAL LOCATION \_\_\_\_\_ INVOICE INSTRUCTIONS VOID CEMENT BIT BOLLER 3174' WELL LOCATION \_\_\_\_\_

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	DF								
5795		1			#110	120	MI				6220	720.00
576 ID		1			Heavy Charge-out-Portular	100		3124	ft		135000	135000
290		1			D-Air	300					3500	10500
330		2			SWD Cement	225	SKS				1650	3712.50
276		2			Flocele	57	lbs				200	11400
581		2			Service Charge - Cement	350	SKS	34839	lbs		300	72000
583		2			Service Charge - Cement	120	mi	3089.74	mi	34839	100	2089.74

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

DATE SIGNED: 12-12-12 TIME SIGNED: 11:00  A.M.  P.M.

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

SURVEY:  OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?  WE UNDERSTOOD AND MET YOUR NEEDS?  OUR SERVICE WAS PERFORMED WITHOUT DELAY?  WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?  ARE YOU SATISFIED WITH OUR SERVICE?  YES  NO

PAGE TOTAL: 8691.24

TOTAL: 9007.73

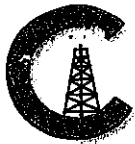
CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR: Ben Janner APPROVAL: \_\_\_\_\_

Thank You!

CUSTOMER *Production Drilling Co* WELL NO. *1-23* LEASE *Frisbie* JOB TYPE *Cement Port Collar* TICKET NO. *22949*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	10:30							Re-location with 350 SKS SMD cut
	11:00					1200	1200	Set up Tks - P.C @ 3174
		3	3			700	700	Tst P.C closed - OK
						700	700	Open P.C est. Rate
		3	6			700	700	Hook to tbg
		3	15			700	700	Start H <sub>2</sub> O ahead
			110			600	600	Start SMD cut @ 11.2 #/gal
			120			500	400	Have CIA 6 + 9 = 15
						500	400	Cut cir @ 200 SKS - 1.62 #/gal
						500	400	for 25 SKS to 13 #/gal
						C	C	Fin cut - Displ 11 BBL H <sub>2</sub> O
						C	1200	Close P.C of Tst - OK
			18					Rig run to 275 tbg
			15				250	Re-out 2 flags
			30					Fin Re-out - 30 BBL
								Job complete
								Washup & Breakup
								Thanks
								Don't Brian & Fleet
	13:00							200 SKS @ 11.2 #/gal 3.11 <sup>3</sup> / <sub>4</sub> SK-CIR
								25 SKS @ 13 # 1.92 <sup>17</sup> / <sub>8</sub>
								225 Total SMD cut used



**CONSOLIDATED**  
Oil Well Services, LLC

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

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

INVOICE

Invoice # 255070

Invoice Date: 12/07/2012 Terms: 10/10/30,n/30

Page 1

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

FRISBIE 1-23  
39193  
23-25-36  
12-01-2012  
KS

USED FOR IC103  
APPROVED JT

Part Number	Description	Qty	Unit Price	Total
1126	OIL WELL CEMENT	225.00	22.5500	5073.75
1102	CALCIUM CHLORIDE (50#)	240.00	.8900	213.60
1111A	SODIUM METASILICATE	200.00	2.4000	480.00
1215	KCL SUB MB6875 CC3107	2.00	35.7000	71.40
4159	FLOAT SHOE AFU 5 1/2"	1.00	413.0000	413.00
4454	5 1/2" LATCH DOWN PLUG	1.00	303.0000	303.00
4130	CENTRALIZER 5 1/2"	15.00	58.0000	870.00
4315	ROTATING SCRATCHERS	15.00	90.0000	1350.00
4285	5 1/2" PORT COLLAR	1.00	2075.0000	2075.00
4104	CEMENT BASKET 5 1/2"	2.00	276.0000	552.00

Sublet Performed	Description	Total
9996-130	CEMENT MATERIAL DISCOUNT	-1133.04
9996-130	CEMENT MATERIAL DISCOUNT	-7.14
9995-130	CEMENT EQUIPMENT DISCOUNT	-431.02

Description	Hours	Unit Price	Total
399 CEMENT PSI CHARGES	1.00	2950.00	2950.00
399 EQUIPMENT MILEAGE (ONE WAY)	60.00	5.00	300.00
460 TON MILEAGE DELIVERY	1.00	1060.20	1060.20

Amount Due 16624.06 if paid after 01/06/2013

Parts:	11401.75	Freight:	.00	Tax:	820.90	AR	14961.65
Labor:	.00	Misc:	.00	Total:	14961.65		
Sublt:	-1571.20	Supplies:	.00	Change:	.00		

Signed \_\_\_\_\_

Date \_\_\_\_\_



**CONSOLIDATED**  
Oil Well Services, L.L.C.

TICKET NUMBER 39193  
LOCATION Galtus MS  
FOREMAN Miles Shaw  
Walt Dinkel

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

**FIELD TICKET & TREATMENT REPORT**  
**CEMENT**

KS

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
12-1-14	5406	Frisbie # 1-23	23	25	36W	Rawlins
CUSTOMER <u>Murdin</u>			McDonald Eastbays ON 10 D. 11 1/2 S. 11 W.			
MAILING ADDRESS			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY			STATE	ZIP CODE		
			399	Damon M		
			400	Jordan L		

JOB TYPE Port Collar HOLE SIZE 7 7/8 HOLE DEPTH 4970' CASING SIZE & WEIGHT 5 1/2" 15.5#  
CASING DEPTH 4975' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER Port Collar @ 3183'  
SLURRY WEIGHT 14.2 SLURRY VOL 1.4 WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING 20.4'  
DISPLACEMENT 11.8% DISPLACEMENT PSI 800 psi MIX PSI 1500 psi RATE \_\_\_\_\_

REMARKS: Safety Meeting and rig up on Murdin Drilling #14. Float Equipment Centralizers on 1, 3, 5, 7, 9, 11, 13, 14, 15, 16, 17, 18, 19, 41, Baskets on bottoms of 41, 42. Port collar at top of 42 @ 3183'. Run casing string joint 50 circulate casing 15 min Run casing to bottom. Circulate casing with rotary head for 1 hr. Pump 5 bbls water. Hochwell 5 bbls water mix 175 lbs cwc down casing. Shut down mix 305 lbs RH 205 lbs MH. Clear pump & lines released. Plug displace Plug down with 11.8% bbls water 800 psi. 1.1 ft plug landed with 1500 psi. First 20 bbls displacement KCl water.

Thank Miles & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401P	1	PUMP CHARGE	2950. <sup>00</sup>	2950. <sup>00</sup>
5406P	60	MILEAGE	5. <sup>00</sup>	300. <sup>00</sup>
5407A	10.58 Tons	Tonnage & delivery	1.67	1060.20
1126	225 S/S	OWC	22.55	5073.75
1102	240 #	Calcium Chloride	.89	213.60
1111A	200 #	Metasilicate	2.40	480. <sup>00</sup>
1215	2 gal	KCl	35.70	71.40
4159	1	5 1/2" APG Float shoe	413. <sup>00</sup>	413. <sup>00</sup>
4454	1	5 1/2" Latch down / Plug	303. <sup>00</sup>	303. <sup>00</sup>
4130	15	Centralizers	58. <sup>00</sup>	870. <sup>00</sup>
4315	15	Rotating Scratchers	90. <sup>00</sup>	1350. <sup>00</sup>
4285	1	5 1/2" Port Collar	2075. <sup>00</sup>	2075. <sup>00</sup>
4104	2	5 1/2" Baskets	276. <sup>00</sup>	552. <sup>00</sup>
			Subtotal	15711.95
			less 10% discount	1571.20
			Subtotal	14140.75
			SALES TAX	820.90
			ESTIMATED	
			TOTAL	14961.65

Rawin 3737

AUTHORIZATION Bruce Sales TITLE \_\_\_\_\_ DATE \_\_\_\_\_

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.

255070