



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1102952  
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: \_\_\_\_\_



1102952

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
--	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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

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

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

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

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

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

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



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

Mark Sievers, Chairman  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

December 21, 2012

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

Re: ACO1  
API 15-171-20905-00-00  
Welch #1-18  
SW/4 Sec.18-16S-32W  
Scott 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 Welch #1-18 990' FSL 1015' FWL Sec. 18-T16S-R32W 2966' KB						MDCI Schowalter #1-17 1980' FNL 1400' FWL Sec. 17-T16S-R32W 3013' KB	
Formation	sample tops	Datum	Ref	Log Tops	Datum	Ref	Log Tops	Datum
Anhydrite	2324	+642	-15	2324	+642	+32	2356	+657
B/Anhydrite	2343	+623	+28	2344	+622	+27	2418	+595
Topeka	3660	-694	+23	3660	-694	+23	3730	-717
Heebner	3890	-924	+25	3890	-924	+25	3962	-949
Lansing	3930	-964	+26	3931	-965	+25	4003	-990
Stark	4200	-1234	+26	4202	-1236	+24	4273	-1260
Pawnee	4413	-1447	+26	4422	-1456	+17	4486	-1473
Fort Scott	4464	-1498	+18	4466	-1500	+16	4529	-1516
Mississippi	4615	-1649	+9	4616	-1650	+8	4671	-1658
RTD	4715						4770	
LTD				4717			4772	

Thomas J. Funk  
Petroleum Geologist

**Geologists Report**  
**Drilling Time and Sample Log**

OPERATOR **Murfin Drilling Co., Inc**  
LEASE **Welch**  
FIELD **Wildcat**  
LOCATION **990' FSL & 1015' FWL**  
SEC. **18**  
COUNTY **Scott**

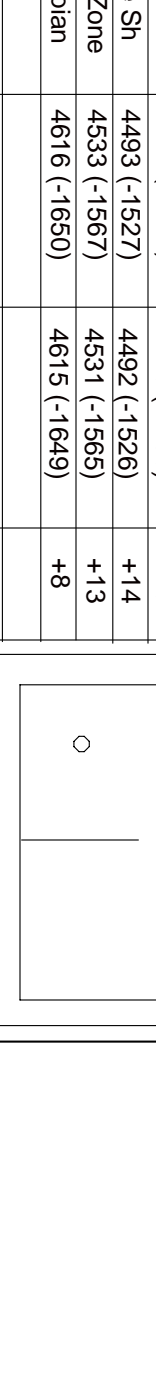
ELEVATION **2966'**  
WELL NO **#1-18**  
API **15-171-20905**  
DF **2965'**  
GL **2965'**  
Measurements Are All **From KB**

CONTRACTOR **Murfin Drilling Co. Rig #21**  
COMM **9/1/2012**  
RTD **4/7/15**  
LOG TD **4/7/15**  
SAMPLES SAVED FROM **3800 TO 4715**  
DRILLING TIME KEPT FROM **3800 TO 4715**  
SAMPLES EXAMINED FROM **3800 TO 4715**

CEOLOGICAL SUPERVISION FROM **3860 TO 4715**  
MUD/UP **3200**  
TYPE MUD **Chemical**

FORMATION	TOP DATUM	SAMPLE TOP DATUM	STRUCT COMP
Anyhrite	2324 (+642)	2324 (+642)	+32
Banyhrite	2344 (+622)	2443 (+623)	+27
Topexa	3860 (-924)	3860 (-924)	+23
Heebner Sh	3890 (-924)	3890 (-924)	+25
Lansing	3931 (-965)	3930 (-964)	+25
Murde Creek	4107 (-1141)	4110 (-1144)	+21
Stark Sh	4202 (-1236)	4200 (-1234)	+24
Marmaton	4316 (-1350)	4316 (-1350)	+24
Pawnee	4422 (-1456)	4419 (-1453)	+18
Cherokee Sh	4493 (-1527)	4492 (-1526)	+14
Johnson Zone	4533 (-1567)	4531 (-1565)	+13
Mississippian	4616 (-1650)	4615 (-1649)	+8

ELECTRICAL SURVEYS  
Pioneer Energy Services  
DIL  
MEL  
DUCP  
BHCS



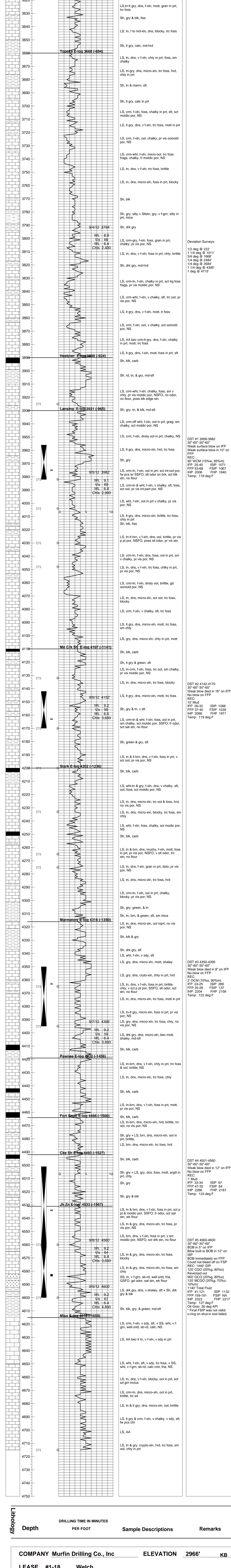
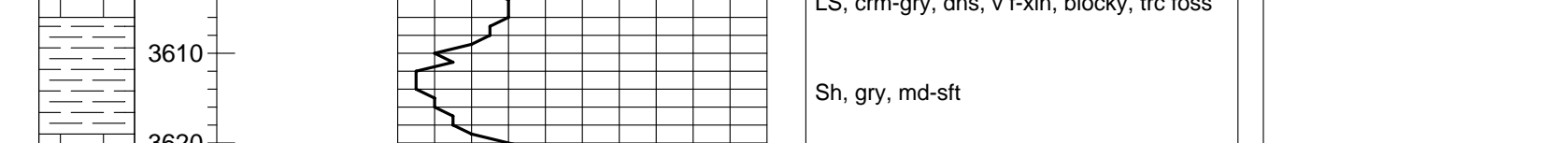
REFERENCE WELL FOR STRUCTURAL COMPARISON: Murfin Drilling Co. #1-17 Schowalter

Date	Daily Progress		NO Size	Make	Type	Depth Out	Feet	Hours
	Depth	Spud						
9/1/12			1 1/2	GMS	RR	222	222	1
9/2/12	535'		2	7 7/8"	Smith	M606	3564	43
9/3/12	2484'		3	7 7/8"	Smith	F27V1	4715	1131
9/4/12	3628'							69
9/5/12	3982'							
9/6/12	4152'							
9/7/12	4292'							
9/8/12	4448'							
9/9/12	4600'							
9/10/12	4715 TD							

CASING RECORD  
SURFACE  
8 5/8" at 222' KB w/175sx  
PRODUCTION

REMARKS AND RECOMMENDATIONS:  
Based upon log analysis, DST recovery, and sample examination, it was recommended to run production casing to further test the #1-18 Welch.  
Thomas Funk  
Petroleum Geologist

**LEGEND**



COMPANY	Murfin Drilling Co., Inc	ELEVATION	2966'	KB
LEASE	#1-18 Welch			
LOCATION	990' FSL & 1015' FWL	Sec 18	TWP 16S	RGE 32W
COUNTY	Scott	STATE	Kansas	



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc**

250 N Water Ste300  
Wichita, KS 67202-1216

ATTN: Tom Funk

**Welch #1-18**

**18-16s-32w Scott,KS**

Start Date: 2012.09.05 @ 08:50:28

End Date: 2012.09.05 @ 15:45:28

Job Ticket #: 48298                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.09.13 @ 15:13:30



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 48298

**DST#: 1**

ATTN: Tom Funk

Test Start: 2012.09.05 @ 08:50:28

## GENERAL INFORMATION:

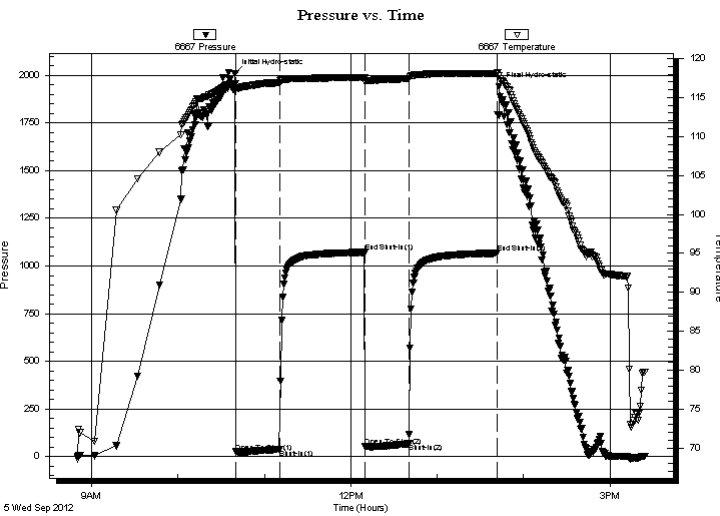
Formation: **B**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 10:40:13  
 Time Test Ended: 15:45:28  
 Interval: **3956.00 ft (KB) To 3982.00 ft (KB) (TVD)**  
 Total Depth: 3982.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Shane McBride  
 Unit No: 55  
 Reference Elevations: 2966.00 ft (KB)  
 2955.00 ft (CF)  
 KB to GR/CF: 11.00 ft

## Serial #: 6667

**Outside**

Press @ Run Depth: 68.81 psig @ 3957.00 ft (KB)  
 Start Date: 2012.09.05 End Date: 2012.09.05  
 Start Time: 08:50:28 End Time: 15:24:28  
 Capacity: 8000.00 psig  
 Last Calib.: 2012.09.05  
 Time On Btm: 2012.09.05 @ 10:39:43  
 Time Off Btm: 2012.09.05 @ 13:42:58

**TEST COMMENT:** Weak surface blow  
 No return  
 No blow, Weak surface blow in 10 min.  
 No return



## PRESSURE SUMMARY

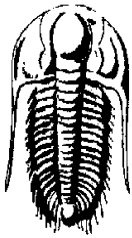
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2006.98	116.82	Initial Hydro-static
1	25.45	116.04	Open To Flow (1)
31	40.37	116.92	Shut-In(1)
90	1071.72	117.59	End Shut-In(1)
90	53.90	117.08	Open To Flow (2)
121	68.81	117.44	Shut-In(2)
182	1067.41	118.12	End Shut-In(2)
184	1940.94	117.79	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	w c m 15%w 85%m	0.44

## Gas Rates

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Murfin Drilling Company Inc  
 250 N Water Ste300  
 Wichita, KS 67202-1216  
 ATTN: Tom Funk

**18-16s-32w Scott,KS**  
**Welch #1-18**  
 Job Ticket: 48298                **DST#: 1**  
 Test Start: 2012.09.05 @ 08:50:28

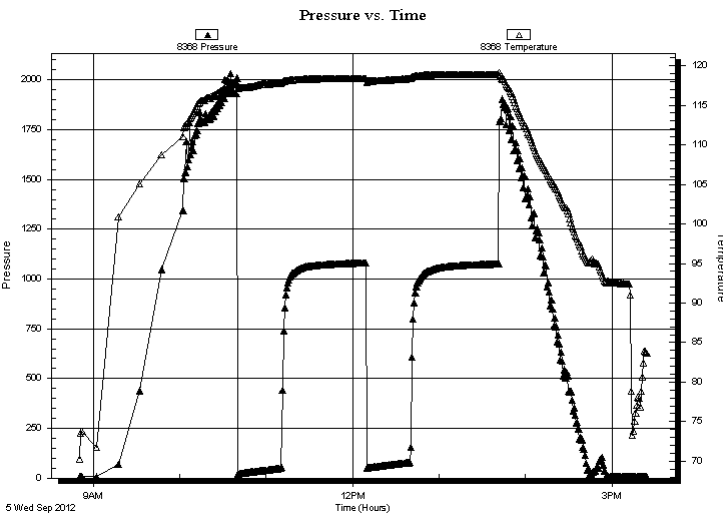
**GENERAL INFORMATION:**

Formation: **B**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 10:40:13  
 Time Test Ended: 15:45:28  
 Interval: **3956.00 ft (KB) To 3982.00 ft (KB) (TVD)**  
 Total Depth: 3982.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Shane McBride  
 Unit No: 55  
 Reference Elevations: 2966.00 ft (KB)  
 2955.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8368 Inside**

Press @RunDepth:                psig @                3957.00 ft (KB)                                Capacity:                                8000.00 psig  
 Start Date:                            2012.09.05                                End Date:                                2012.09.05                                Last Calib.:                                2012.09.05  
 Start Time:                            08:50:36                                End Time:                                15:24:36                                Time On Btm:  
 Time Off Btm:

TEST COMMENT: Weak surface blow  
 No return  
 No blow , Weak surface blow in 10 min.  
 No return



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
90.00	w c m 15%w 85%m	0.44

**Gas Rates**

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 48298

**DST#: 1**

ATTN: Tom Funk

Test Start: 2012.09.05 @ 08:50:28

## Tool Information

Drill Pipe:	Length: 3673.00 ft	Diameter: 3.80 inches	Volume: 51.52 bbl	Tool Weight:	1500.00 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: 266.00 ft	Diameter: 2.25 inches	Volume: 1.31 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 52.83 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial	68000.00 lb
Depth to Top Packer:	3956.00 ft			Final	68000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	26.00 ft				
Tool Length:	46.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3937.00	
Shut In Tool	5.00			3942.00	
Hydraulic tool	5.00			3947.00	
Packer	5.00			3952.00	20.00 Bottom Of Top Packer
Packer	4.00			3956.00	
Stubb	1.00			3957.00	
Recorder	0.00	8368	Inside	3957.00	
Recorder	0.00	6667	Outside	3957.00	
Perforations	20.00			3977.00	
Bullnose	5.00			3982.00	26.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>46.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 48298

**DST#: 1**

ATTN: Tom Funk

Test Start: 2012.09.05 @ 08:50:28

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.36 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	w c m 15%w 85%m	0.443

Total Length: 90.00 ft      Total Volume: 0.443 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

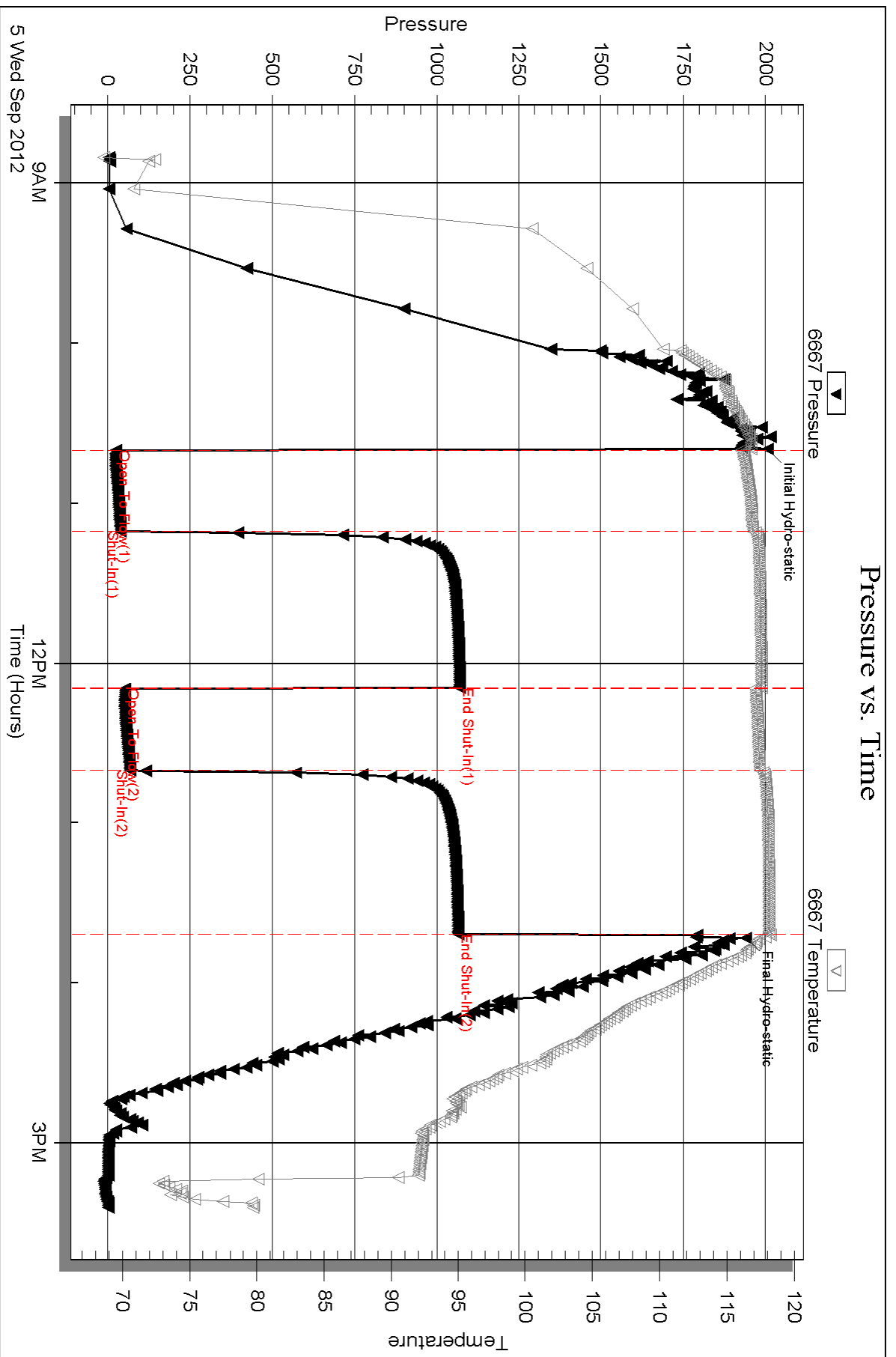
Recovery Comments:

Serial #: 6667

Outside Murfin Drilling Company Inc

Welch #1-18

DST Test Number: 1



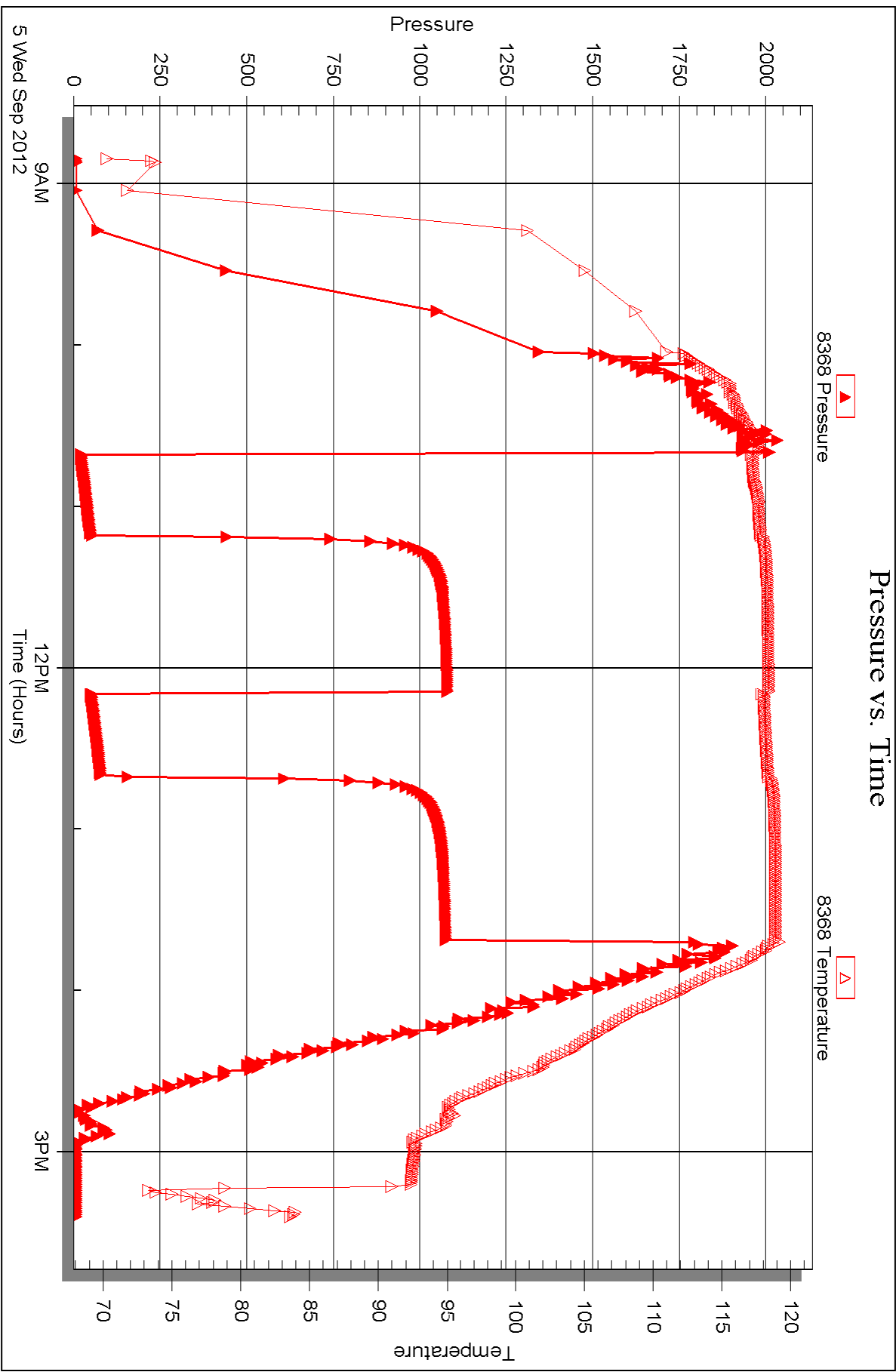
Serial #: 8368

Inside

Murfin Drilling Company Inc

Welch #1-18

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc**

250 N Water Ste300  
Wichita, KS 67202-1216

ATTN: Tom Funk

**Welch #1-18**

**18-16s-32w Scott,KS**

Start Date: 2012.09.06 @ 10:40:30

End Date: 2012.09.06 @ 17:35:45

Job Ticket #: 48299                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.09.13 @ 15:12:41



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 48299

**DST#: 2**

ATTN: Tom Funk

Test Start: 2012.09.06 @ 10:40:30

## GENERAL INFORMATION:

Formation: **I**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 12:41:45  
 Time Test Ended: 17:35:45  
 Interval: **4142.00 ft (KB) To 4170.00 ft (KB) (TVD)**  
 Total Depth: 4170.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Shane McBride  
 Unit No: 55  
 Reference Elevations: 2966.00 ft (KB)  
 2955.00 ft (CF)  
 KB to GR/CF: 11.00 ft

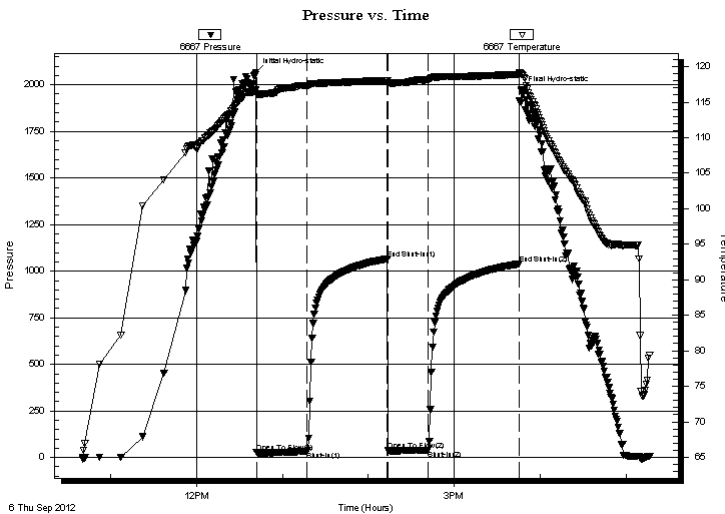
## Serial #: 6667

**Outside**

Press @ Run Depth: 40.79 psig @ 4143.00 ft (KB)  
 Start Date: 2012.09.06 End Date: 2012.09.06  
 Start Time: 10:40:30 End Time: 17:16:45  
 Capacity: 8000.00 psig  
 Last Calib.: 2012.09.06  
 Time On Btm: 2012.09.06 @ 12:41:30  
 Time Off Btm: 2012.09.06 @ 15:46:45

**TEST COMMENT:** Weak blow died in 16 min.  
 No return  
 No blow  
 No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2066.25	116.69	Initial Hydro-static
1	26.88	116.14	Open To Flow (1)
36	32.79	117.33	Shut-In(1)
92	1066.47	118.06	End Shut-In(1)
93	37.59	117.71	Open To Flow (2)
120	40.79	118.13	Shut-In(2)
184	1039.63	118.88	End Shut-In(2)
186	1971.27	118.88	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud 100% m	0.05

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Company Inc

**18-16s-32w Scott, KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 48299

**DST#: 2**

ATTN: Tom Funk

Test Start: 2012.09.06 @ 10:40:30

## GENERAL INFORMATION:

Formation: **I**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 12:41:45

Time Test Ended: 17:35:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

**Interval: 4142.00 ft (KB) To 4170.00 ft (KB) (TVD)**

Reference Elevations: 2966.00 ft (KB)

Total Depth: 4170.00 ft (KB) (TVD)

2955.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8368**

**Inside**

Press @ RunDepth: psig @ 4143.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.06

End Date:

2012.09.06

Last Calib.:

1899.12.30

Start Time: 10:40:39

End Time:

17:16:54

Time On Btm:

Time Off Btm:

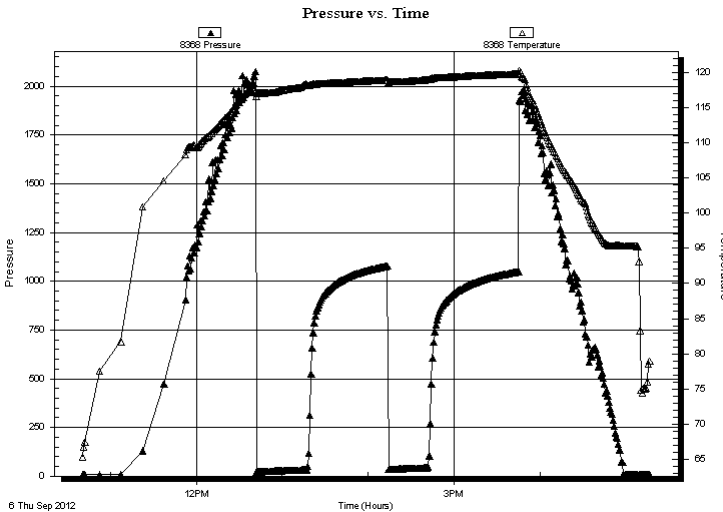
**TEST COMMENT:** Weak blow died in 16 min.

No return

No blow

No return

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud 100% m	0.05

## 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 Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 48299

**DST#: 2**

ATTN: Tom Funk

Test Start: 2012.09.06 @ 10:40:30

### Tool Information

Drill Pipe:	Length: 3860.00 ft	Diameter: 3.80 inches	Volume: 54.15 bbl	Tool Weight:	1500.00 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: 266.00 ft	Diameter: 2.25 inches	Volume: 1.31 bbl	Weight to Pull Loose:	95000.00 lb
			<u>Total Volume: 55.46 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial	73000.00 lb
Depth to Top Packer:	4142.00 ft			Final	73000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	28.00 ft				
Tool Length:	48.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

### Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4123.00	
Shut In Tool	5.00			4128.00	
Hydraulic tool	5.00			4133.00	
Packer	5.00			4138.00	20.00 Bottom Of Top Packer
Packer	4.00			4142.00	
Stubb	1.00			4143.00	
Recorder	0.00	8368	Inside	4143.00	
Recorder	0.00	6667	Outside	4143.00	
Perforations	22.00			4165.00	
Bullnose	5.00			4170.00	28.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>48.00</b>				





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 48299

**DST#: 2**

ATTN: Tom Funk

Test Start: 2012.09.06 @ 10:40:30

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.35 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud 100%m	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

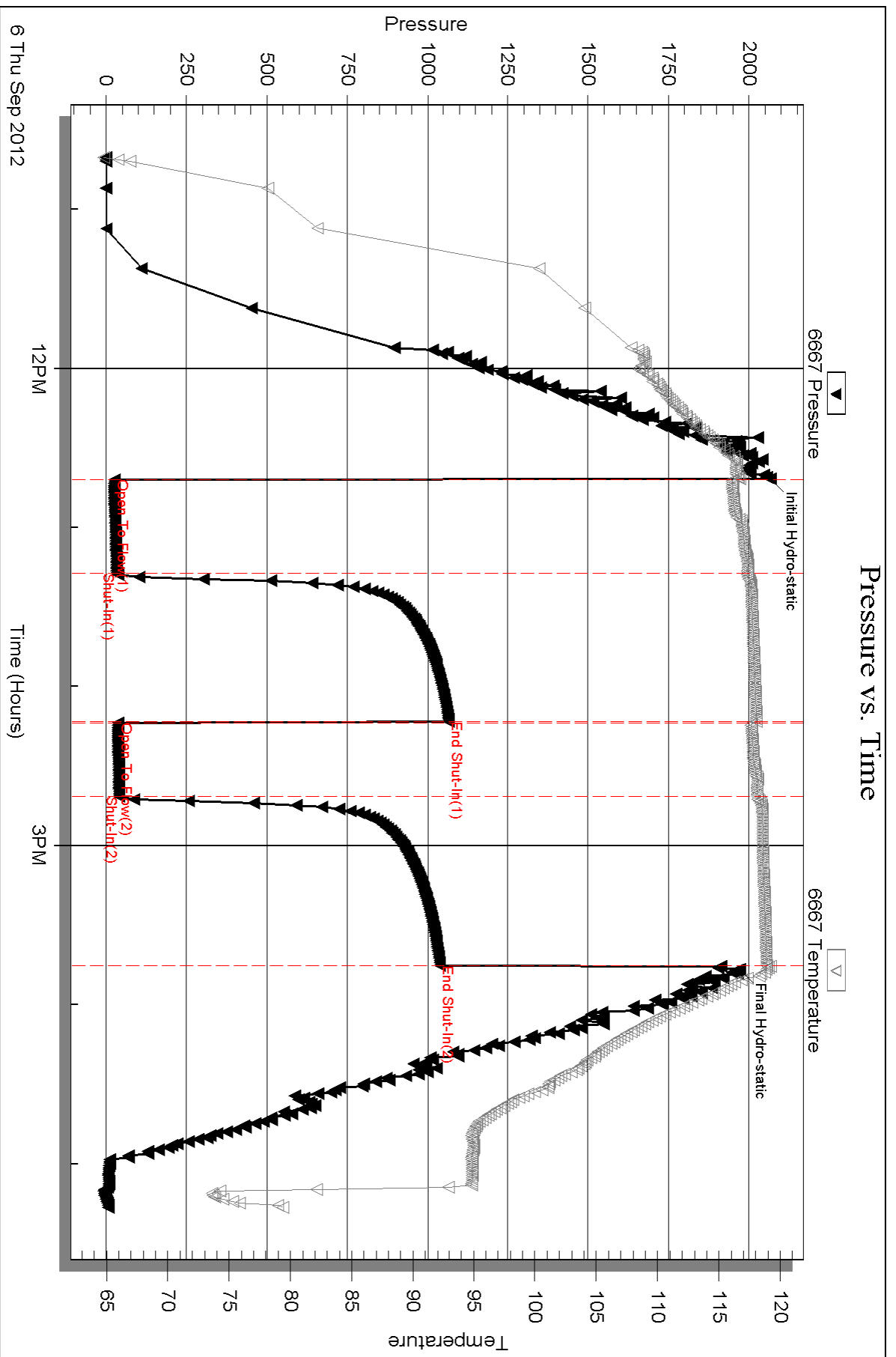
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



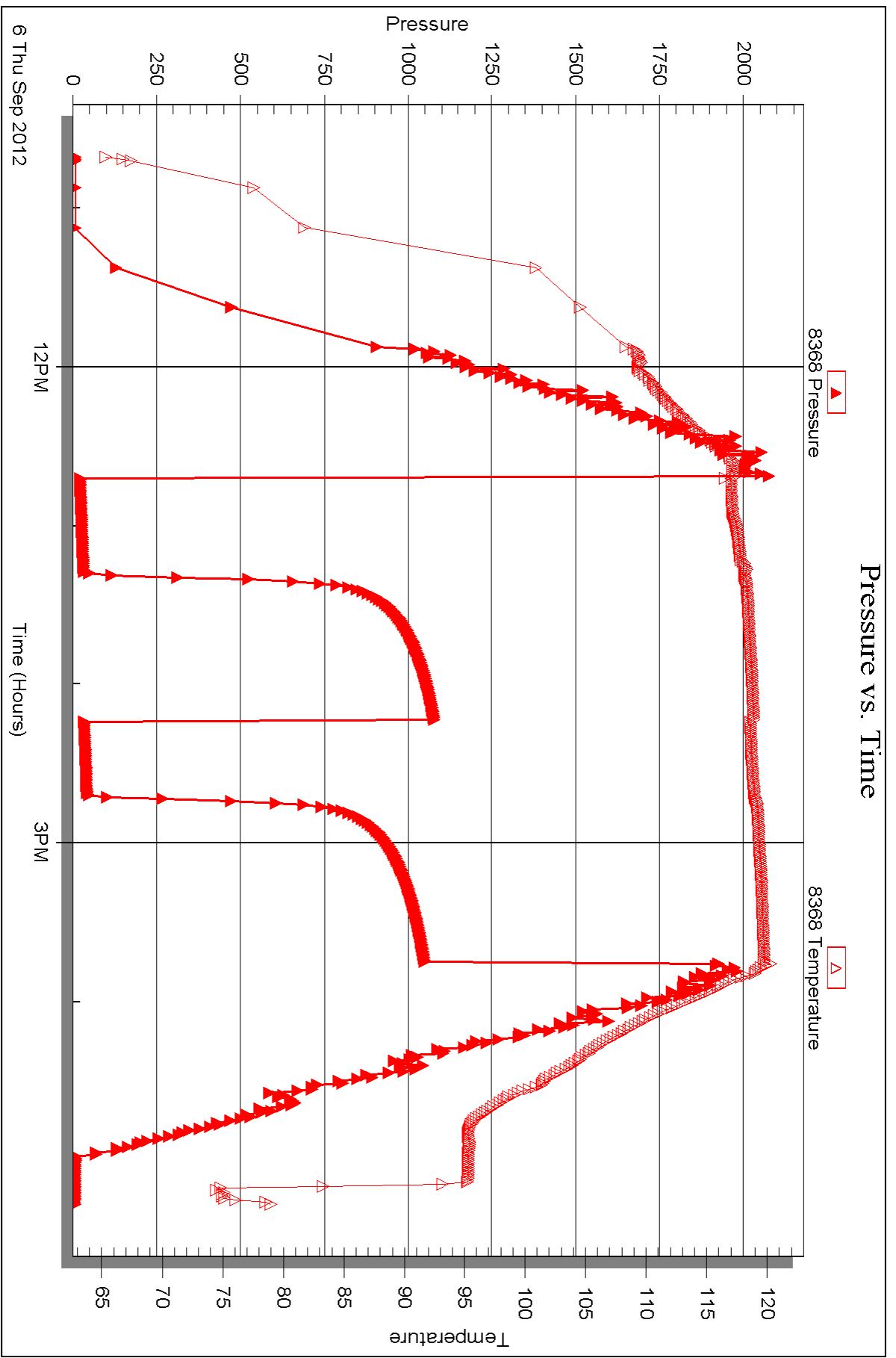
Serial #: 8368

Inside

Murfin Drilling Company Inc

Welch #1-18

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 48299

Printed: 2012.09.13 @ 15:12:46



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc**

250 N Water Ste300  
Wichita, KS 67202-1216

ATTN: Tom Funk

**Welch #1-18**

**18-16s-32w Scott,KS**

Start Date: 2012.09.07 @ 19:01:13

End Date: 2012.09.08 @ 01:50:28

Job Ticket #: 48300                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.09.13 @ 15:10:55



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 48300

**DST#: 3**

ATTN: Tom Funk

Test Start: 2012.09.07 @ 19:01:13

## GENERAL INFORMATION:

Formation: **Altamont**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 20:43:58

Time Test Ended: 01:50:28

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

**Interval: 4350.00 ft (KB) To 4395.00 ft (KB) (TVD)**

Reference Elevations: 2966.00 ft (KB)

Total Depth: 4395.00 ft (KB) (TVD)

2955.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8368 Inside**

Press @ Run Depth: 26.91 psig @ 4351.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.07 End Date: 2012.09.08

Last Calib.: 2012.09.08

Start Time: 19:01:13 End Time: 01:36:28

Time On Btm: 2012.09.07 @ 20:43:43

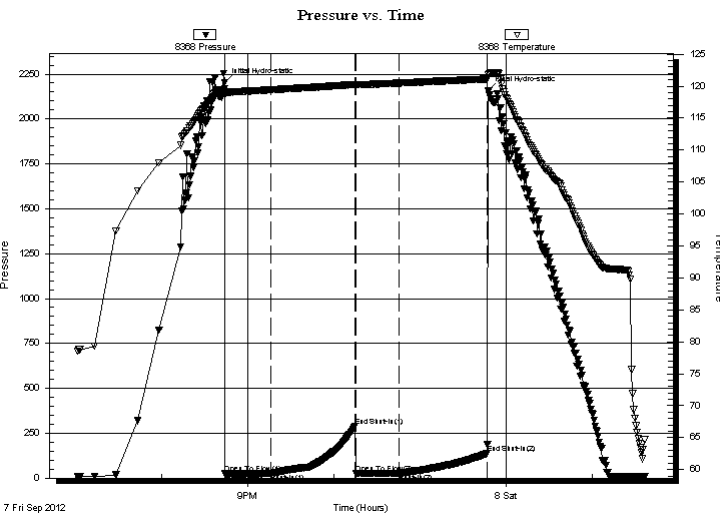
Time Off Btm: 2012.09.07 @ 23:47:28

**TEST COMMENT:** Weak blow died in 8 min.

No return

No blow

No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2204.11	119.60	Initial Hydro-static
1	24.91	118.72	Open To Flow (1)
33	25.86	119.43	Shut-In(1)
91	289.32	120.26	End Shut-In(1)
92	25.55	120.14	Open To Flow (2)
122	26.91	120.48	Shut-In(2)
183	137.98	121.11	End Shut-In(2)
184	2156.55	121.82	Final Hydro-static

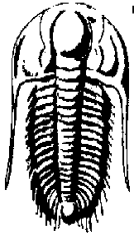
## Recovery

Length (ft)	Description	Volume (bbl)
2.00	o c m 10%o 90%o	0.01

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Company Inc

**18-16s-32w Scott, KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 48300

**DST#: 3**

ATTN: Tom Funk

Test Start: 2012.09.07 @ 19:01:13

### GENERAL INFORMATION:

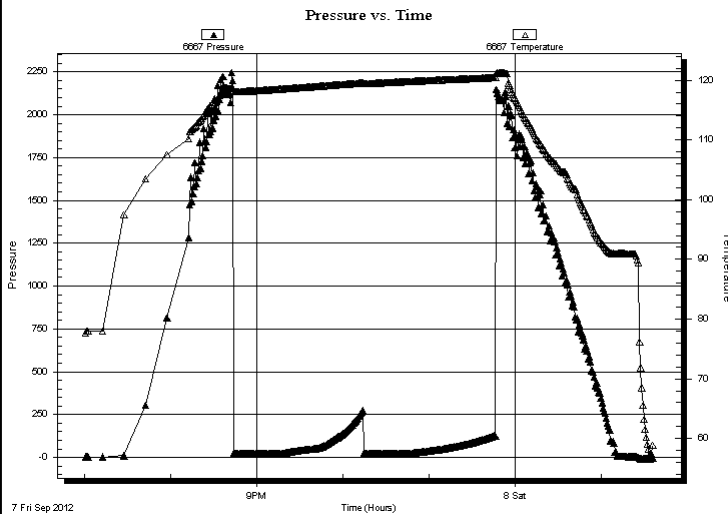
Formation: **Altamont**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 20:43:58  
 Time Test Ended: 01:50:28  
 Interval: **4350.00 ft (KB) To 4395.00 ft (KB) (TVD)**  
 Total Depth: 4395.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Shane McBride  
 Unit No: 55  
 Reference Elevations: 2966.00 ft (KB)  
 2955.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 6667**

**Outside**

Press @RunDepth: psig @ 4351.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.09.07 End Date: 2012.09.08 Last Calib.: 2012.09.08  
 Start Time: 19:00:33 End Time: 01:35:48 Time On Btm:  
 Time Off Btm:

TEST COMMENT: Weak blow died in 8 min.  
 No return  
 No blow  
 No return



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
2.00	o c m 10%o 90%o	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 Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 48300

**DST#: 3**

ATTN: Tom Funk

Test Start: 2012.09.07 @ 19:01:13

## Tool Information

Drill Pipe:	Length: 4081.00 ft	Diameter: 3.80 inches	Volume: 57.25 bbl	Tool Weight:	1500.00 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: 266.00 ft	Diameter: 2.25 inches	Volume: 1.31 bbl	Weight to Pull Loose:	95000.00 lb
			<u>Total Volume: 58.56 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial	73000.00 lb
Depth to Top Packer:	4350.00 ft			Final	73000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	45.00 ft				
Tool Length:	65.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

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

Change Over Sub	1.00			4331.00	
Shut In Tool	5.00			4336.00	
Hydraulic tool	5.00			4341.00	
Packer	5.00			4346.00	20.00 Bottom Of Top Packer
Packer	4.00			4350.00	
Stubb	1.00			4351.00	
Recorder	0.00	8368	Inside	4351.00	
Recorder	0.00	6667	Outside	4351.00	
Perforations	6.00			4357.00	
Change Over Sub	1.00			4358.00	
Drill Pipe	31.00			4389.00	
Change Over Sub	1.00			4390.00	
Bullnose	5.00			4395.00	45.00 Bottom Packers & Anchor

**Total Tool Length: 65.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 48300

**DST#: 3**

ATTN: Tom Funk

Test Start: 2012.09.07 @ 19:01:13

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3800.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	o c m 10%o 90%o	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:



Serial #: 8368

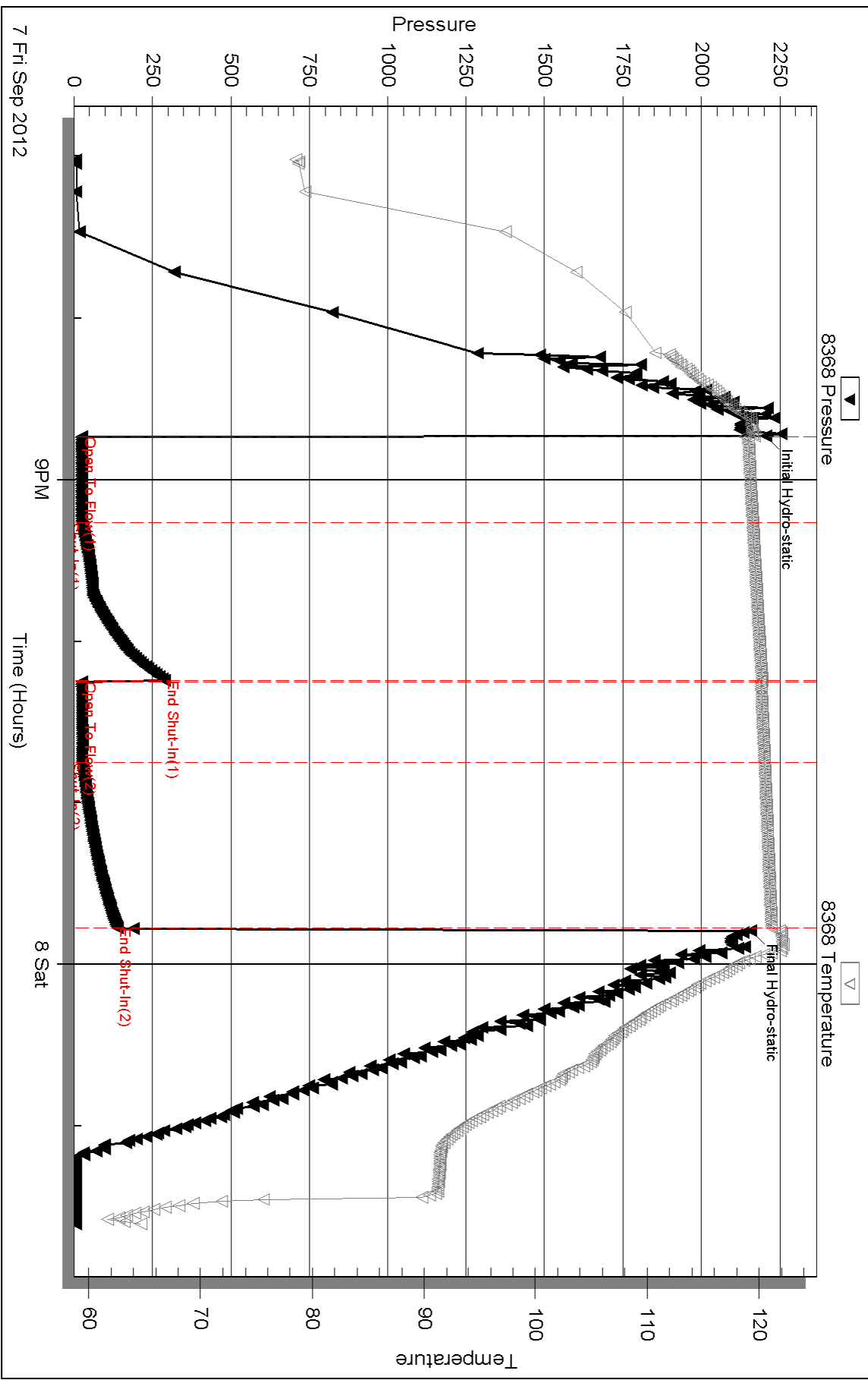
Inside

Murfin Drilling Company Inc

Welch #1-18

DST Test Number: 3

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 48300

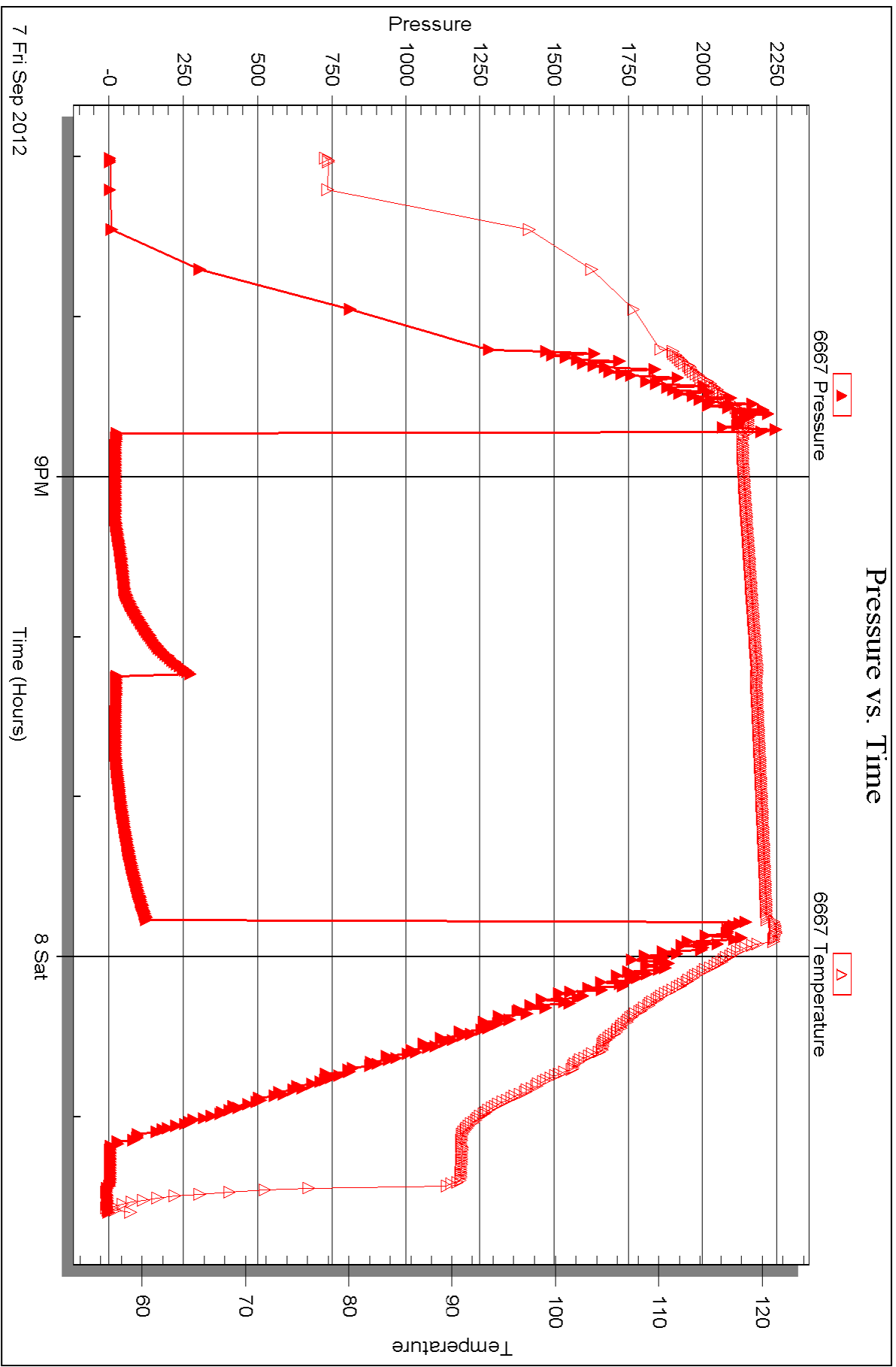
Printed: 2012.09.13 @ 15:11:00

Serial #: 6667

Outside Murfin Drilling Company Inc

Welch #1-18

DST Test Number: 3





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc**

250 N Water Ste300  
Wichita, KS 67202-1216

ATTN: Tom Funk

**Welch #1-18**

**18-16s-32w Scott,KS**

Start Date: 2012.09.08 @ 17:21:04

End Date: 2012.09.09 @ 00:20:04

Job Ticket #: 50151                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.09.13 @ 15:10:09



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfyn Drilling Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 50151

**DST#: 4**

ATTN: Tom Funk

Test Start: 2012.09.08 @ 17:21:04

## GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 19:12:19

Time Test Ended: 00:20:04

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

**Interval: 4501.00 ft (KB) To 4560.00 ft (KB) (TVD)**

Reference Elevations: 2966.00 ft (KB)

Total Depth: 4560.00 ft (KB) (TVD)

2955.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8368**

**Inside**

Press @ RunDepth: 35.13 psig @ 4502.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.08

End Date:

2012.09.09

Last Calib.:

2012.09.09

Start Time:

17:21:04

End Time:

00:06:04

Time On Btm:

2012.09.08 @ 19:11:49

Time Off Btm:

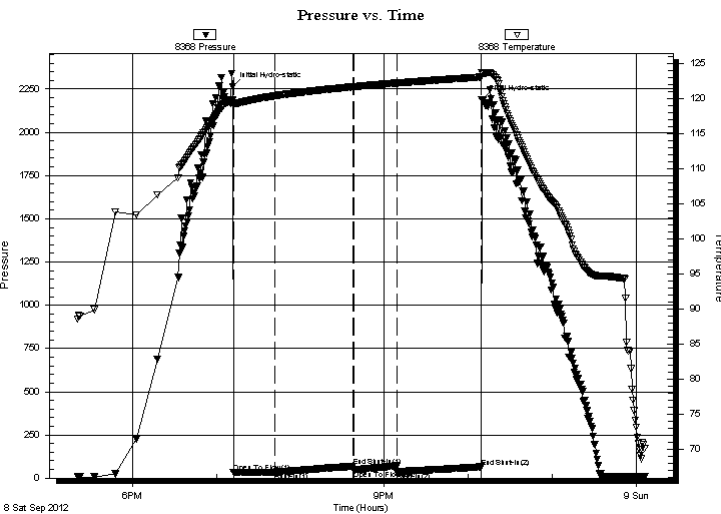
2012.09.08 @ 22:09:34

**TEST COMMENT:** Weak blow died in 12 min.

No return

No blow

No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2266.16	119.76	Initial Hydro-static
1	33.04	118.95	Open To Flow (1)
30	34.97	120.35	Shut-In(1)
86	67.79	121.64	End Shut-In(1)
87	47.47	121.64	Open To Flow (2)
118	35.13	122.16	Shut-In(2)
177	64.95	123.02	End Shut-In(2)
178	2187.68	123.58	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	mud 100% m	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 Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 50151

**DST#: 4**

ATTN: Tom Funk

Test Start: 2012.09.08 @ 17:21:04

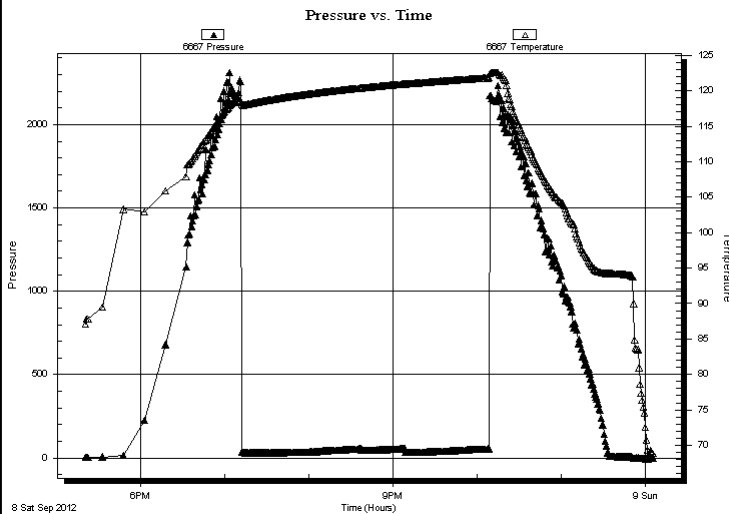
**GENERAL INFORMATION:**

Formation: **Johnson**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 19:12:19  
 Time Test Ended: 00:20:04  
 Interval: **4501.00 ft (KB) To 4560.00 ft (KB) (TVD)**  
 Total Depth: 4560.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Shane McBride  
 Unit No: 55  
 Reference Elevations: 2966.00 ft (KB)  
 2955.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 6667 Outside**

Press @ RunDepth: psig @ 4502.00 ft (KB)  
 Start Date: 2012.09.08 End Date: 2012.09.09  
 Start Time: 17:20:49 End Time: 00:05:34  
 Capacity: 8000.00 psig  
 Last Calib.: 2012.09.09  
 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** Weak blow died in 12 min.  
 No return  
 No blow  
 No return



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
1.00	mud 100% m	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 Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 50151

**DST#: 4**

ATTN: Tom Funk

Test Start: 2012.09.08 @ 17:21:04

## Tool Information

Drill Pipe:	Length: 4238.00 ft	Diameter: 3.80 inches	Volume: 59.45 bbl	Tool Weight: 1500.00 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: 266.00 ft	Diameter: 2.25 inches	Volume: 1.31 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 60.76 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4501.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	59.00 ft			
Tool Length:	79.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			4482.00	
Shut In Tool	5.00			4487.00	
Hydraulic tool	5.00			4492.00	
Packer	5.00			4497.00	20.00 Bottom Of Top Packer
Packer	4.00			4501.00	
Stubb	1.00			4502.00	
Recorder	0.00	8368	Inside	4502.00	
Recorder	0.00	6667	Outside	4502.00	
Perforations	20.00			4522.00	
Change Over Sub	1.00			4523.00	
Drill Pipe	31.00			4554.00	
Change Over Sub	1.00			4555.00	
Bullnose	5.00			4560.00	59.00 Bottom Packers & Anchor

**Total Tool Length: 79.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 50151

**DST#: 4**

ATTN: Tom Funk

Test Start: 2012.09.08 @ 17:21:04

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.36 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 36000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	mud 100%m	0.005

Total Length: 1.00 ft      Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8368

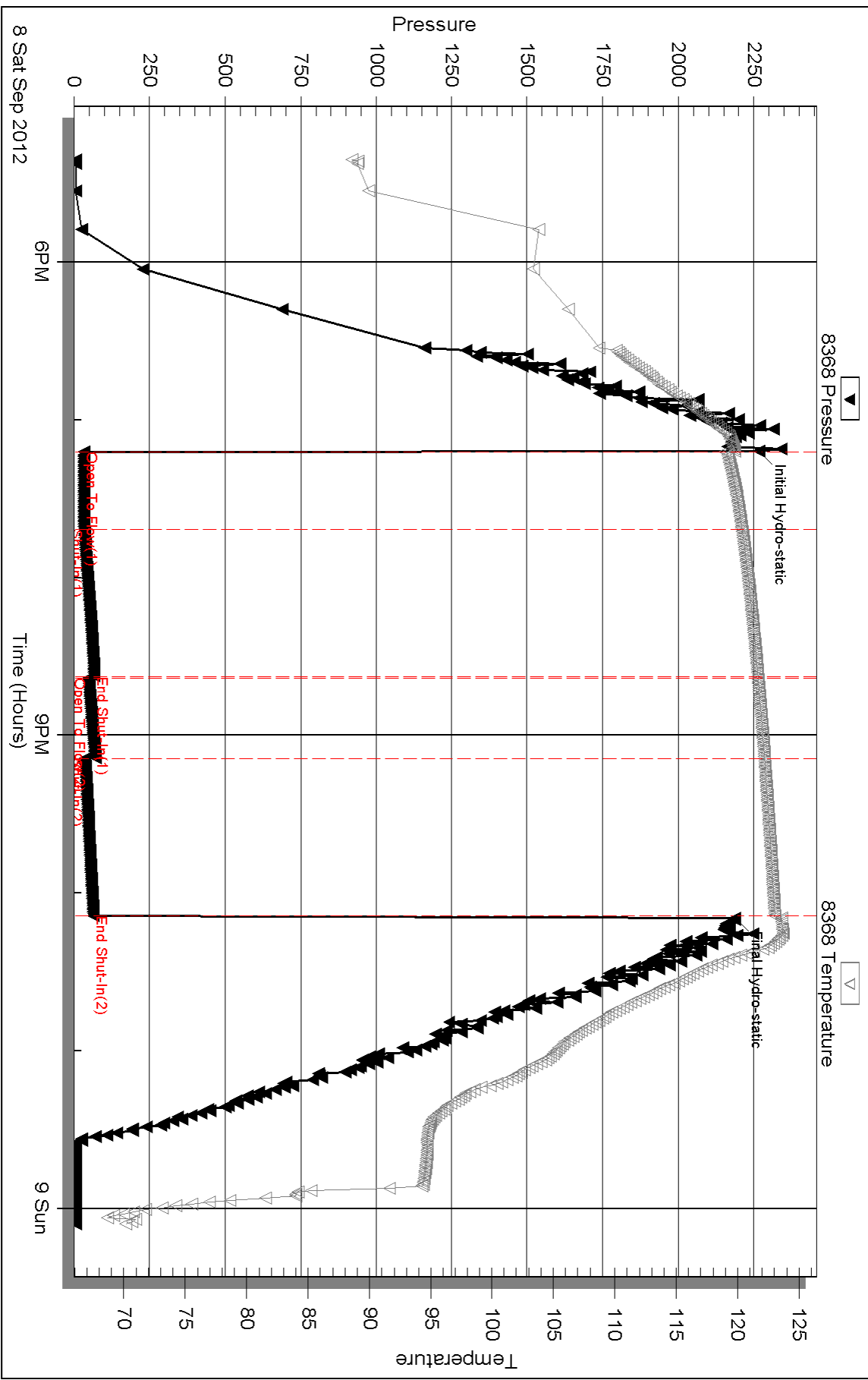
Inside

Murfin Drilling Company Inc

Welch #1-18

DST Test Number: 4

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 50151

Printed: 2012.09.13 @ 15:10:13

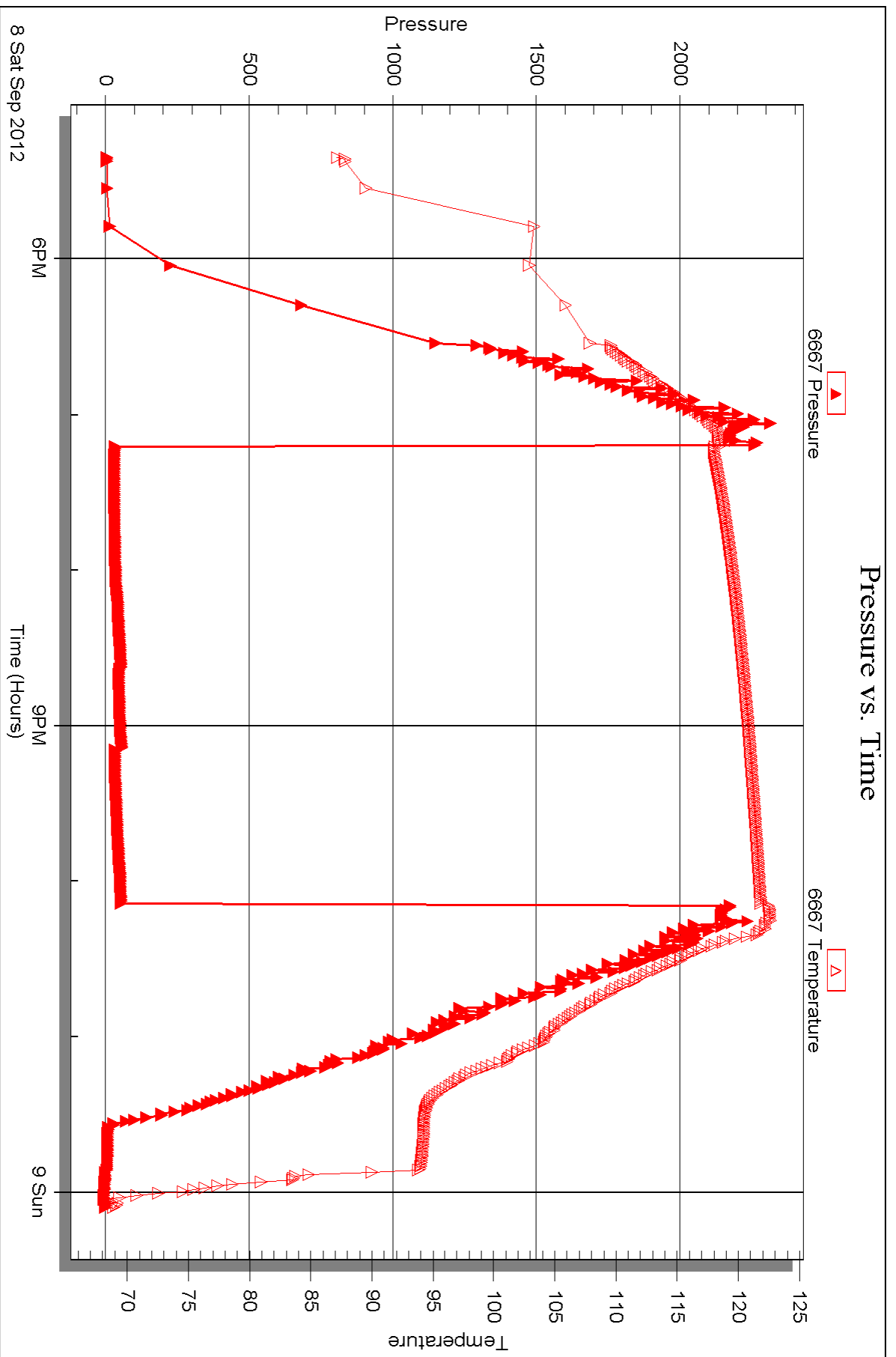


Serial #: 6667

Outside Murfin Drilling Company Inc

Welch #1-18

DST Test Number: 4





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc**

250 N Water Ste300  
Wichita, KS 67202-1216

ATTN: Tom Funk

**Welch #1-18**

**18-16s-32w Scott,KS**

Start Date: 2012.09.09 @ 07:30:25

End Date: 2012.09.09 @ 15:57:40

Job Ticket #: 50152                      DST #: 5

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

Printed: 2012.09.13 @ 15:09:12

Murfin Drilling Company Inc  
18-16s-32w Scott,KS  
Welch #1-18  
DST # 5  
Basal Sand  
2012.09.09



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 50152

**DST#: 5**

ATTN: Tom Funk

Test Start: 2012.09.09 @ 07:30:25

## GENERAL INFORMATION:

Formation: **Basal Sand**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 09:43:10

Time Test Ended: 15:57:40

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

**Interval: 4560.00 ft (KB) To 4600.00 ft (KB) (TVD)**

Reference Elevations: 2966.00 ft (KB)

Total Depth: 4600.00 ft (KB) (TVD)

2955.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 6667 Outside**

Press @ RunDepth: 121.04 psig @ 4561.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.09

End Date: 2012.09.09

Last Calib.: 2012.09.09

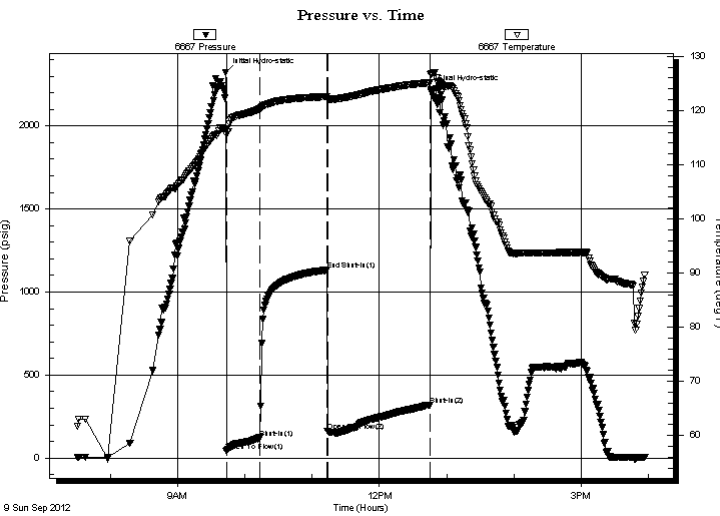
Start Time: 07:30:25

End Time: 15:57:40

Time On Btm: 2012.09.09 @ 09:42:55

Time Off Btm: 2012.09.09 @ 12:46:10

**TEST COMMENT:** B.O.B. in 5 min.  
B.O.B. return in 12 min  
B.O.B. @ open  
Bled off throughout shutin....No final shut in due to bottom o-ring failure in shut in tool



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2323.30	116.71	Initial Hydro-static
1	41.32	115.54	Open To Flow (1)
30	121.04	120.24	Shut-In(1)
90	1132.68	122.58	End Shut-In(1)
91	159.59	122.15	Open To Flow (2)
182	319.44	125.15	Shut-In(2)
184	2217.62	126.72	Final Hydro-static

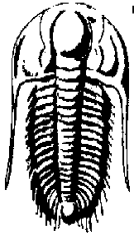
## Recovery

Length (ft)	Description	Volume (bbl)
120.00	s m c g o 10m 20g 70o	0.59
900.00	c g o reversed out 20g 80o	11.29
120.00	c g o 20g 80o	1.68
0.00	1440' gas in pipe	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 Company Inc

18-16s-32w Scott,KS

250 N Water Ste300  
Wichita, KS 67202-1216

Welch #1-18

Job Ticket: 50152

DST#: 5

ATTN: Tom Funk

Test Start: 2012.09.09 @ 07:30:25

### GENERAL INFORMATION:

Formation: Basal Sand

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 09:43:10

Time Test Ended: 15:57:40

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

Interval: 4560.00 ft (KB) To 4600.00 ft (KB) (TVD)

Reference Elevations: 2966.00 ft (KB)

Total Depth: 4600.00 ft (KB) (TVD)

2955.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8368 Inside

Press@RunDepth: psig @ 4561.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.09

End Date:

2012.09.09

Last Calib.:

2012.09.09

Start Time: 07:31:04

End Time:

15:59:04

Time On Btm:

Time Off Btm:

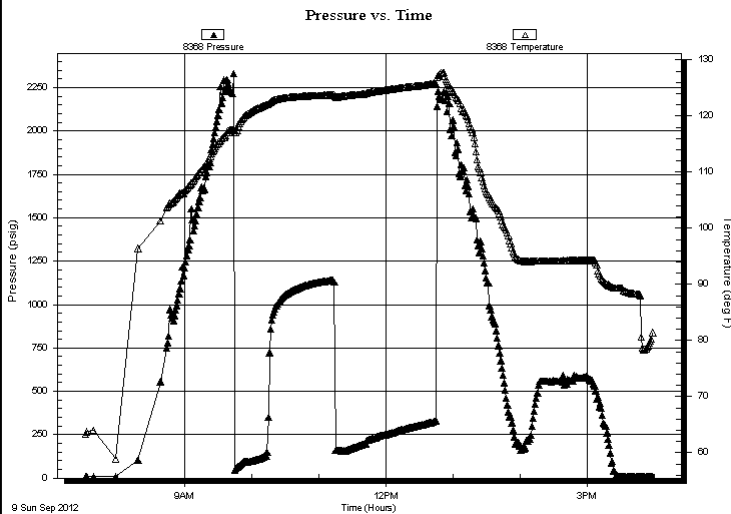
### TEST COMMENT:

B.O.B. in 5 min.

B.O.B. return in 12 min

B.O.B. @ open

Bled off throughout shutin....No final shut in due to bottom o-ring failure in shut in tool



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
120.00	s m c g o 10m 20g 70o	0.59
900.00	c g o reversed out 20g 80o	11.29
120.00	c g o 20g 80o	1.68
0.00	1440' gas in pipe	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 Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 50152

**DST#: 5**

ATTN: Tom Funk

Test Start: 2012.09.09 @ 07:30:25

## Tool Information

Drill Pipe:	Length: 4302.00 ft	Diameter: 3.80 inches	Volume: 60.35 bbl	Tool Weight:	1500.00 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: 266.00 ft	Diameter: 2.25 inches	Volume: 1.31 bbl	Weight to Pull Loose:	98000.00 lb
			<u>Total Volume: 61.66 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial	74000.00 lb
Depth to Top Packer:	4560.00 ft			Final	78000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	40.00 ft				
Tool Length:	60.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

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

Change Over Sub	1.00			4541.00	
Shut In Tool	5.00			4546.00	
Hydraulic tool	5.00			4551.00	
Packer	5.00			4556.00	20.00 Bottom Of Top Packer
Packer	4.00			4560.00	
Stubb	1.00			4561.00	
Recorder	0.00	8368	Inside	4561.00	
Recorder	0.00	6667	Outside	4561.00	
Perforations	34.00			4595.00	
Bullnose	5.00			4600.00	40.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>60.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Company Inc

**18-16s-32w Scott,KS**

250 N Water Ste300  
Wichita, KS 67202-1216

**Welch #1-18**

Job Ticket: 50152

**DST#: 5**

ATTN: Tom Funk

Test Start: 2012.09.09 @ 07:30:25

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

26 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.36 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	s m c g o 10m 20g 70o	0.590
900.00	c g o reversed out 20g 80o	11.295
120.00	c g o 20g 80o	1.683
0.00	1440' gas in pipe	0.000

Total Length: 1140.00 ft

Total Volume: 13.568 bbl

Num Fluid Samples: 0

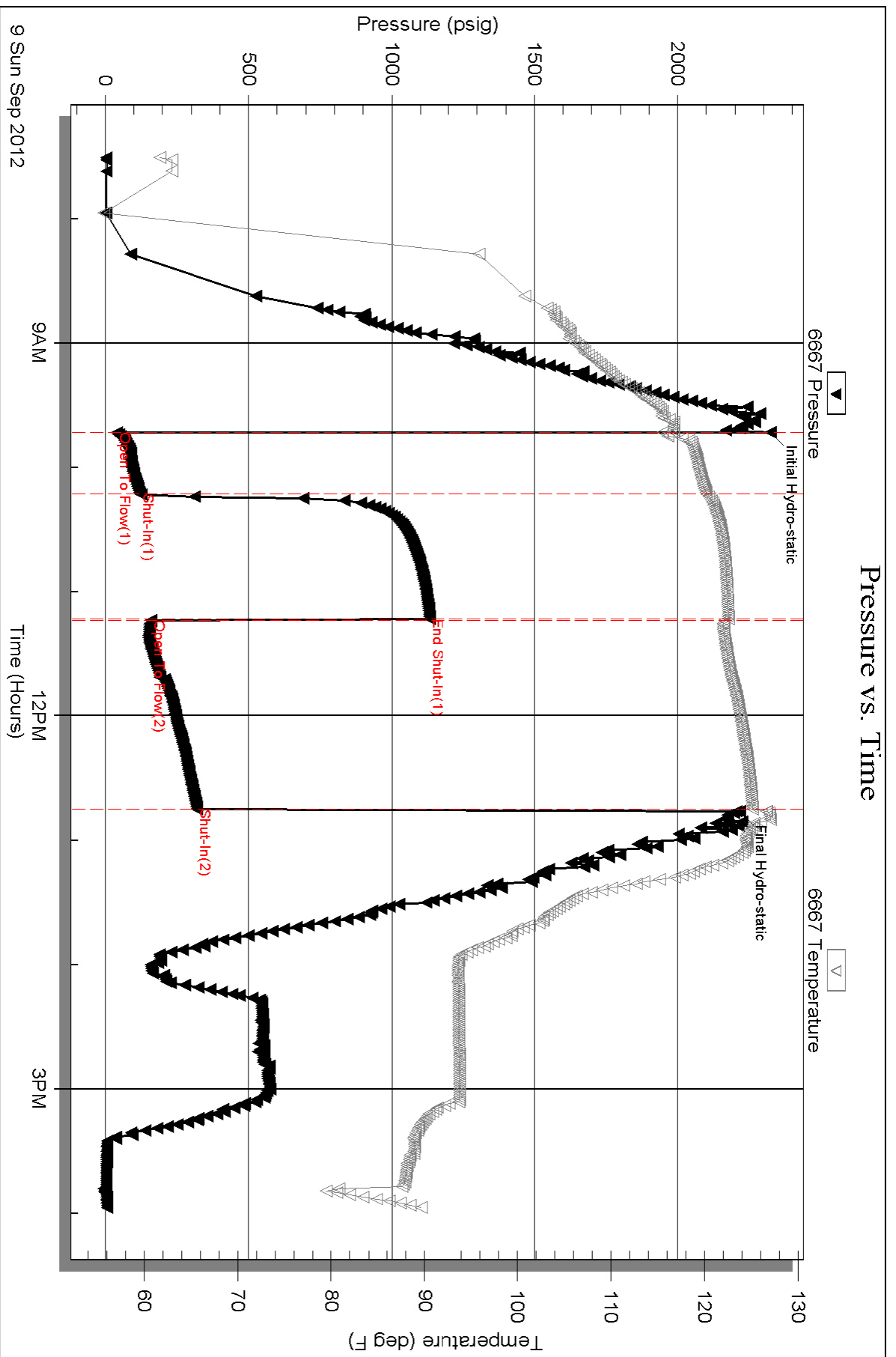
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



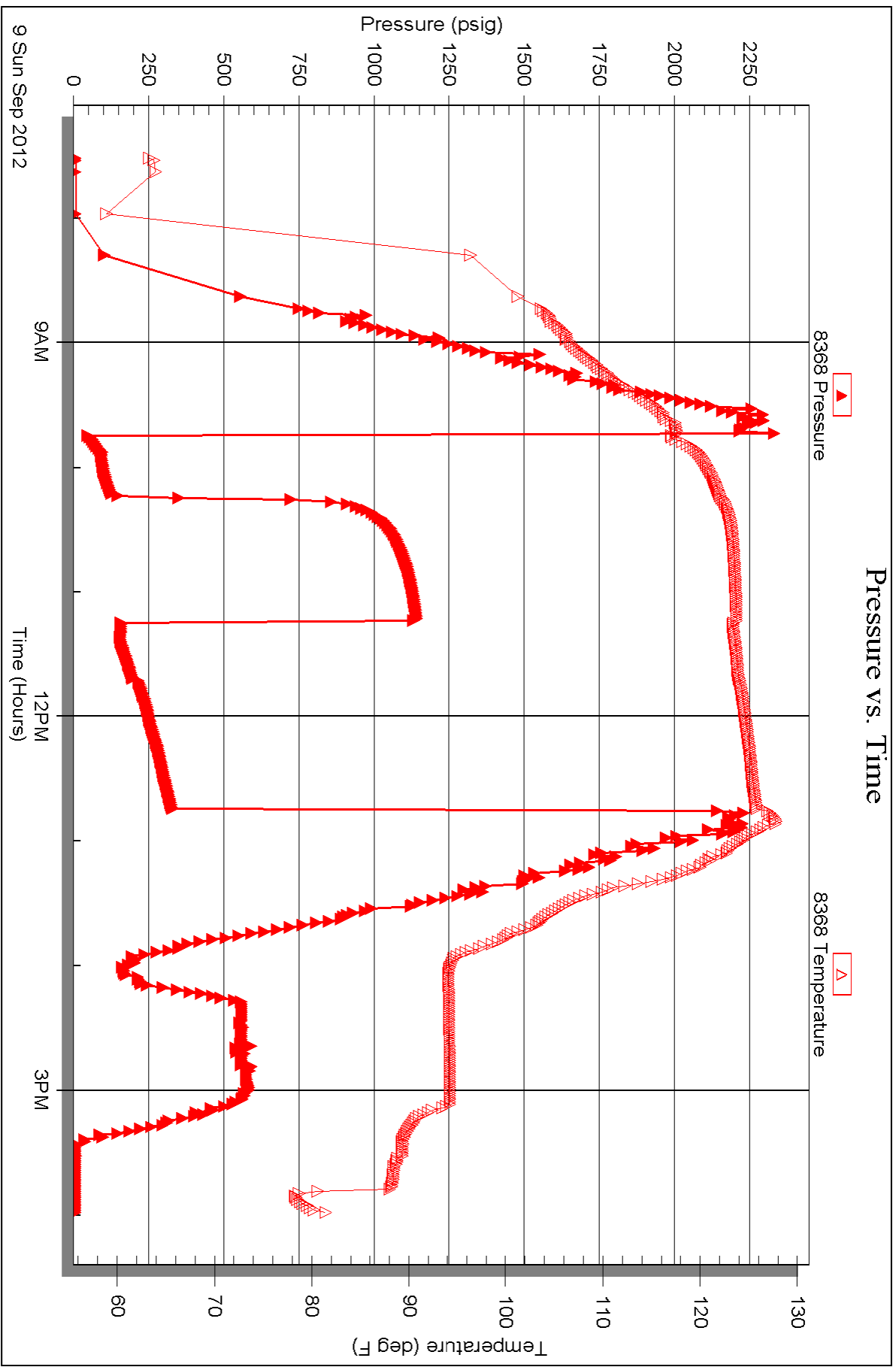
Serial #: 8368

Inside

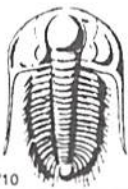
Murfin Drilling Company Inc

Welch #1-18

DST Test Number: 5







# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48298

Well Name & No. Welch # 1-18 Test No. #1 Date 9/5/12  
 Company Plattin Drilling Company Inc Elevation 2966 KB 2955 GL  
 Address 250 N Water Ste 300 Wichita, KS 67202-1214  
 Co. Rep / Geo. Tom Funk Rig Plattin #21  
 Location: Sec. 18 Twp. 16S Rge. 32W Co. Scott State Ks

Interval Tested 3956 3982 Zone Tested "B"  
 Anchor Length 24 Drill Pipe Run 3673' Mud Wt. 9.3  
 Top Packer Depth 3951 Drill Collars Run 266' Vis 55  
 Bottom Packer Depth 3956 Wt. Pipe Run --- WL 6.4  
 Total Depth 3982 Chlorides 2400 ppm System LCM #6

Blow Description Weak Surface blow  
No return  
No blow, Weak Surface blow in 10 min  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>90'</u>	<u>WCM</u>			<u>15</u>	<u>85</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 90' BHT 118° Gravity --- API RW --- @ ---° F Chlorides --- ppm

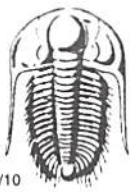
(A) Initial Hydrostatic 2006  Test 1150 T-On Location 07:50  
 (B) First Initial Flow 25  Jars T-Started 08:50  
 (C) First Final Flow 40  Safety Joint T-Open 10:40  
 (D) Initial Shut-In 1071  Circ Sub N/E T-Pulled 13:40  
 (E) Second Initial Flow 53  Hourly Standby T-Out 15:45  
 (F) Second Final Flow 68  Mileage 52.70 Comments \_\_\_\_\_  
 (G) Final Shut-In 1067  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1940  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1202.70  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_

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

Sub Total 1202.70

Approved By [Signature] Our Representative [Signature]

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



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48299

Well Name & No. Welch # 1-18 Test No. #2 Date 9/6/12  
 Company Murkin Drilling Company Inc Elevation 2966 KB 2955 GL  
 Address 250 N. Water Ste 300 Wichita, KS 67202-1216  
 Co. Rep / Geo. Tom Funk Rig Murkin #21  
 Location: Sec. 18 Twp. 16S Rge. 32W Co. Scott State KS

Interval Tested 4142 4170 Zone Tested F  
 Anchor Length 28 Drill Pipe Run 3860' Mud Wt. 9.5  
 Top Packer Depth 4137 Drill Collars Run 266' Vis 50  
 Bottom Packer Depth 4142 Wt. Pipe Run — WL 6.4  
 Total Depth 4170 Chlorides 2900 ppm System LCM #6

Blow Description Weak blow dried in 16 min.  
No return  
No blow  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT 119° Gravity — API RW — @ —° F Chlorides — ppm

(A) Initial Hydrostatic 2066  Test 1250 T-On Location —  
 (B) First Initial Flow 26  Jars — T-Started 10:40  
 (C) First Final Flow 32  Safety Joint — T-Open 12:42  
 (D) Initial Shut-In 1066  Circ Sub N/C T-Pulled 15:42  
 (E) Second Initial Flow 37  Hourly Standby — T-Out 17:35  
 (F) Second Final Flow 40  Mileage 34 RT 52.70 Comments —  
 (G) Final Shut-In 1039  Sampler —  
 (H) Final Hydrostatic 1971  Straddle —  Ruined Shale Packer —  
 Shale Packer —  Ruined Packer —  
 Extra Packer —  Extra Copies —  
 Extra Recorder — Sub Total 0  
 Day Standby — Total 1302.70  
 Accessibility — MP/DST Disc't —  
 Sub Total 1302.70

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

Approved By Tom Funk Our Representative [Signature]

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48300

Well Name & No. Welch # 1-18 Test No. # 3 Date 9/7/12  
 Company Mutual Drilling Company Inc. Elevation 29660 KB 2955 GL  
 Address 250 N. Water Ste 300 Wichita KS 67202-1216  
 Co. Rep / Geo. Tom Funk Rig Mutual # 21  
 Location: Sec. 18 Twp. 16S Rge. 32W Co. Scott State KS

Interval Tested 4350 4395 Zone Tested Attamont  
 Anchor Length 45 Drill Pipe Run 4081' Mud Wt. 9.3  
 Top Packer Depth 4345 Drill Collars Run 266' Vis 52  
 Bottom Packer Depth 4350 Wt. Pipe Run — WL 6.4  
 Total Depth 4395 Chlorides 3800 ppm System LCM # 6

Blow Description Weak blow died in 8 min.  
No return  
No blow  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>2'</u>	<u>0cm</u>		<u>10</u>	<u>90</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 122° Gravity — API RW — @ —° F Chlorides — ppm

- (A) Initial Hydrostatic 2204
- (B) First Initial Flow 24
- (C) First Final Flow 25
- (D) Initial Shut-In 289
- (E) Second Initial Flow 25
- (F) Second Final Flow 26
- (G) Final Shut-In 137
- (H) Final Hydrostatic 2156

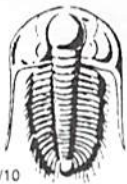
- Test 1250
- Jars
- Safety Joint
- Circ Sub N/C
- Hourly Standby
- Mileage 34RT 52.70
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 1302.70

- T-On Location 18:00
- T-Started 19:00
- T-Open 20:45
- T-Pulled 23:45
- T-Out 01:50
- Comments —
- Ruined Shale Packer
- Ruined Packer
- Extra Copies
- Sub Total 0
- Total 1302.70
- MP/DST Disc't —

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

Approved By [Signature] Our Representative [Signature]

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



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 50151

Well Name & No. Welch # 1-18 Test No. #24 Date 9/8/12  
 Company Musker Drilling Co. Inc. Elevation 2966 KB 2955 GL  
 Address 250 W. Water St. 300 Wichita, KS 67202-1214  
 Co. Rep / Geo. Tom Funk Rig Musker #21  
 Location: Sec. 18 Twp. 16S Rge. 32W Co. Scott State KS

Interval Tested 4501 4560 Zone Tested Johnson  
 Anchor Length 59 Drill Pipe Run 4238' Mud Wt. 9.2  
 Top Packer Depth 4494 Drill Collars Run 2460' Vis SS  
 Bottom Packer Depth 4501 Wt. Pipe Run \_\_\_\_\_ WL Le. 4  
 Total Depth 4560 Chlorides 3600 ppm System LCM #6

Blow Description Weab blow died in 12 min  
No return  
No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>1'</u>	<u>Mud (Heavy)</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

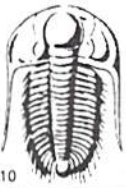
Rec Total 1' BHT 124° Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 22660  Test 1250 T-On Location 16545  
 (B) First Initial Flow 33  Jars \_\_\_\_\_ T-Started 17:20  
 (C) First Final Flow 34  Safety Joint \_\_\_\_\_ T-Open 19:08  
 (D) Initial Shut-In 67  Circ Sub N/C T-Pulled 22:08  
 (E) Second Initial Flow 47  Hourly Standby \_\_\_\_\_ T-Out 00:26  
 (F) Second Final Flow 35  Mileage 34 RT 52.70 Comments \_\_\_\_\_  
 (G) Final Shut-In 64  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2187  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 60  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 30  Day Standby \_\_\_\_\_ Total 1302.70  
 Final Shut-In 60  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1302.70

Approved By [Signature] Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 50152

Well Name & No. Welch #1-18 Test No. #5 Date 9/9/12  
 Company Marked Drilling Co Inc. Elevation 2966 KB 2955 GL  
 Address 250 N. Water Ste 300 Wichita, KS 67202-1216  
 Co. Rep / Geo. Tom Funk Rig Marked #21  
 Location: Sec. 18 Twp. 16S Rge. 32W Co. Scott State Ks

Interval Tested 4560 4600 Zone Tested Basal Sand  
 Anchor Length 40 Drill Pipe Run 4302' Mud Wt. 9.2  
 Top Packer Depth 4555 Drill Collars Run 266 Vis 55  
 Bottom Packer Depth 4560 Wt. Pipe Run — WL 6.1  
 Total Depth 4600 Chlorides 3600 ppm System LCM #60

Blow Description B.O.B. in 5 min.  
B.O.B. return in 12 min.  
B.O.B. @ open  
Bled off throughout section.

Rec	Feet of	%gas	%oil	%water	%mud
<u>120'</u>	<u>C90</u>	<u>20</u>	<u>80</u>		
<u>900</u>	<u>C90 (Reversed out)</u>	<u>20</u>	<u>80</u>		
<u>120'</u>	<u>SMC 90 (under circ sub)</u>	<u>20</u>	<u>70</u>		<u>10</u>
	<u>(1440' GAS IN PIPE)</u>				
Rec Total	<u>1140'</u>				

BHT 127° Gravity 26 API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2323  Test 1250 T-On Location 07:05  
 (B) First Initial Flow 41  Jars — T-Started 07:30  
 (C) First Final Flow 121  Safety Joint — T-Open 09:40  
 (D) Initial Shut-In 1132  Circ Sub — T-Pulled 12:40  
 (E) Second Initial Flow 159  Hourly Standby — T-Out 16:15  
 (F) Second Final Flow 191  Mileage 342 52.70 Comments —  
 (G) Final Shut-In —  Sampler —  
 (H) Final Hydrostatic 2217  Straddle —  Ruined Shale Packer —  
 Shale Packer —  Ruined Packer —  
 Extra Packer —  Extra Copies —  
 Extra Recorder — Sub Total 0  
 Day Standby — Total 1302.70  
 Accessibility — MP/DST Disc't —  
 Sub Total 1302.70

Approved By [Signature] Our Representative [Signature]

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acct. Prod-LizH

# INVOICE

P.O. Box 93999  
Southlake, TX 76092

Invoice Number: 132589

Invoice Date: Sep 1, 2012

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

Page: 1

**PROD COPY**



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

Customer ID	Well Name/# or Customer P.O.	Payment Terms	
Murfin	Welch #1-18	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Sep 1, 2012	10/1/12

Quantity	Item	Description	Unit Price	Amount
175.00	MAT	Class A Common	16.25	2,843.75
6.00	MAT	Chloride	58.20	349.20
183.76	SER	Cubic Feet	2.10	385.90
315.36	SER	Ton Mileage	2.35	741.10
1.00	SER	Surface	1,125.00	1,125.00
36.00	SER	Pump Truck Mileage	7.00	252.00
1.00	SER	Manifold Swedge Rental	200.00	200.00
36.00	SER	Light Vehicle Mileage	4.00	144.00
1.00	CEMENTER	Darren Racette		
1.00	EQUIP OPER	Tyler Flipse		
1.00	OPER ASSIST	Chris Helpingstine		

OK

Account	Unit	W	cc	for
FD203				
3.	8645.0001		4191.63	Consent S. (sg) = 1-18

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

**\$2114.33**

ONLY IF PAID ON OR BEFORE  
Sep 26, 2012

Subtotal	6,040.95
Sales Tax	265.01
Total Invoice Amount	6,305.96
Payment/Credit Applied	
<b>TOTAL</b>	<b>6,305.96</b>

(2114.33)

4191.63

# ALLIED OIL & GAS SERVICES, LLC 056678

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:  
Oakley

DATE <u>9-1-12</u>	SEC. <u>18</u>	TWP. <u>16</u>	RANGE <u>32</u>	CALLED OUT	ON LOCATION <u>6:00 PM</u>	JOB START <u>6:30 PM</u>	JOB FINISH <u>7:00 PM</u>
LEASE <u>Welch</u>	WELL # <u>1-18</u>	LOCATION <u>Oakley 835 To Rd</u>			COUNTY <u>Scott</u>	STATE <u>Mo.</u>	
OLD OR NEW (Circle one)		<u>270-2W - N-W + S into</u>			8.3		

CONTRACTOR Murfin 21 OWNBR Same 1.01

TYPE OF JOB Surface  
HOLE SIZE 12 1/4 T.D. 222'  
CASING SIZE 8 7/8 DEPTH 225'  
TUBING SIZE DEPTH  
DRILL PIPE DEPTH  
TOOL DEPTH  
PRES. MAX MINIMUM  
MEAS. LINE SHOE JOINT

CEMENT AMOUNT ORDERED 175 SKS Com 3% CC  
COMMON 175 SKS @ \$16.25 = \$2843.75  
POZMIX @  
GGL @  
CHLORIDE 6 SKS @ \$58.20 = \$349.20  
ASC @

CEMENT LEFT IN CSO. 15'  
PERFS.  
DISPLACEMENT 13.44  
EQUIPMENT  
PUMP TRUCK CEMENTER Duane Kocetter 1  
# 423-281 HELPER Tyler Flipse 2  
BULK TRUCK  
# 347 DRIVER Chris Helpingstine 3  
BULK TRUCK  
# DRIVER

HANDLING 188.76 CF x @ \$2.20 = \$415.27  
MILEAGE 8.42 x 36 x @ \$2.35 = \$711.72  
315.36 TOTAL \$4319.95

REMARKS:  
Mix 175 SKS Cement  
Displace with water  
Cement Did Circulate

Thank You.

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

SERVICE  
DEPTH OF JOB 225'  
PUMP TRUCK CHARGE \$1125.00  
EXTRA FOOTAGE @  
MILEAGE 36 @ \$7.00 = \$252.00  
MANIFOLD Surge @ \$220.00  
20 mileage @ \$7.00 = \$140.00  
TOTAL \$1721.00

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 Juan Tinoco  
SIGNATURE Juan Tinoco

PLUG & FLOAT EQUIPMENT  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
TOTAL \_\_\_\_\_

SALES TAX (If Any) 265.01  
TOTAL CHARGES 6,040.95  
DISCOUNT 35 2114.33 IF PAID IN 30 DAYS



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



# Invoice

DATE	INVOICE #
9/10/2012	23275

BILL TO
Murfin Drilling Co Inc P. O. Box 130 Hill City, KS 67642-0130

- Acidizing
- Cement
- Tool Rental

USED FOR IC 103  
APPROVED *[Signature]*

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-18	Welch	Scott	Murfin Drilling Ri...	Oil	Development	5-1/2" LongString	Jason

PRICE REF.	DESCRIPTION	QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way	70	Miles	6.00	420.00
578D-L	Pump Charge - Long String - 4715 Feet	1	Job	1,500.00	1,500.00
402-5	5 1/2" Centralizer	10	Each	70.00	700.00T
403-5	5 1/2" Cement Basket	1	Each	250.00	250.00T
404-5	5 1/2" Port Collar - 2346 Feet	1	Each	2,400.00	2,400.00T
406-5	5 1/2" Latch Down Plug & Baffle	1	Each	250.00	250.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill	1	Each	350.00	350.00T
413-5	5 1/2" Roto Wall Scratcher	10	Each	40.00	400.00T
419-5	5 1/2" Rotating Head Rental	1	Each	200.00	200.00T
280	Flocheck 21	500	Gallon(s)	2.50	1,250.00T
221	Liquid KCL (Clayfix)	4	Gallon(s)	25.00	100.00T
276	Flocele	57	Lb(s)	2.00	114.00T
283	Salt	1,150	Lb(s)	0.20	230.00T
284	Calseal	11	Sack(s)	35.00	385.00T
285	CFR-1	150	Lb(s)	4.00	600.00T
290	D-Air	2	Gallon(s)	35.00	70.00T
325	Standard Cement	225	Sacks	13.50	3,037.50T
581D	Service Charge Cement	225	Sacks	2.00	450.00
583D	Drayage	826.24	Ton Miles	1.00	826.24
	Subtotal				13,532.74
	Sales Tax Scott County			8.30%	857.93

**We Appreciate Your Business!**

**Total**

\$14,390.67





CHARGE TO: MURKIN DRILLING  
 ADDRESS  
 CITY, STATE, ZIP CODE

TICKET No 232275

PAGE 1 OF 2

SERVICE LOCATIONS  
 1. NESS CITY, KS  
 2. WELLS PROJECT NO. LEASE WEIGH 1-18 COUNTY/PARTISH SCOTT STATE KS CITY SCOTT CITY, KS. DATE 10 SEP 88 OWNER  
 3. TICKET TYPE CONTRACTOR MURKIN DRILLING RIG # 21 RIG NAME/NO. SHIPPED DELIVERED TO ORDER NO.  
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS WELLS CATEGORY DEVELOPMENT JOB PURPOSE 5 1/2 LONGSTRINGS WELLS PERMIT NO. WELLS LOCATION 11/13/88, N/12/15/88

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.			UNIT PRICE	AMOUNT
		LOC	ACCT	DF		QTY.	UM	QTY.		
575					MILEAGE B110	70	ML		6.10	420.00
578					RAMP CHARGE	1	JOB	4715	FT.	1500.00
402					DESTROYERS	1	IDEA		70.00	70.00
403					CEMENT BASKETS	1	EA		250.00	250.00
404					PORT COLLAR	1	EA	2340	FT.	2400.00
406					LATCH DOWN PLUG & BARGE	1	EA		250.00	250.00
407					TUSKET FLOAT SHAPE W/ AUTO FILL	1	EA		350.00	350.00
413					ROTO WALL SCRATCHERS	1	IDEA		400.00	400.00
419					ROTATING HEADS RENTAL	1	JOB		200.00	200.00
280					FLOCRACK 21	500	QAL		2.50	1250.00
221					L1 DRUID KAL	4	QAL		25.00	100.00

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.  
 MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS  
 X DATE SIGNED 11 Sept 88 TIME SIGNED 0100 P.M.  
 SWIFT OPERATOR [Signature]

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

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	7820
WE UNDERSTOOD AND MET YOUR NEEDS?				2	5712
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				Subtotal	13,532
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				Scott TAX	857.93
ARE YOU SATISFIED WITH OUR SERVICE?	YES	NO		TOTAL	14,390.67

Customer did not wish to respond

Thank You!

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



JOB LOG

SWIFT Services, Inc.

DATE 10 SEP 12 PAGE NO.

CUSTOMER MURFIN DRILLING

WELL NO.

LEASE WELCH 1-18

JOB TYPE 5 1/2 LONG STRING

TICKET NO. 23275

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1900							ON LOCATION
	2010							START PIPE 5 1/2 - 15.5 <sup>B</sup> RTD @ 4715 LTD @ 4717 SHAPE UP 21.60' CENTRALIZERS 1, 2, 3, 4, 6, 8, 10, 12, 14, 56 BASKET # 57 PORT COLLAR TOP OF #57 @ 2346
2240	<del>2010</del>							DROP BALL - CIRCULATE
	2334	6	15		✓		400	Pump 15 BBL KCL
		6	12		✓		400	Pump 500 gal FLOCAECK
		6	5		✓		400	Pump 5 BBL KCL
	2342		7.5					PLUG RH - MA (30sx - 20sx)
	2347	4	42		✓			MIX 175 sx EA2
	0002							WASH OUT Pump & LINES
	0003	7			✓			START DISPLACING PLUG
	0019	Ø	11 1/2		✓		1500	PLUG DOWN PSI up LATCA PLUG IN
	0022							RELEASE PSI - DRY
	0025							WASH TRUCK
	0045							JOB COMPLETE
								THANKS # 110
								JASON JEFF JEREMY



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

Acidizing

cc: WF

cc: Liz

cc: Loan

# Invoice

DATE	INVOICE #
9/21/2012	22833

BILL TO
Murfin Drilling Co Inc P. O. Box 130 Hill City, KS 67642-0130
USED FOR
APPROVED

- Acidizing
- Cement
- Tool Rental

IC 103  
J. R.

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-18	Welch	Scott	Company Tools	Oil	Development	Cement Port Collar	Don

PRICE REF.	DESCRIPTION	QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way	70	Miles	6.00	420.00
576D-D	Pump Charge - Port Collar - 2346 Feet	1	Job	1,250.00	1,250.00
290	D-Air	3	Gallon(s)	35.00	105.00T
503	Pick-Up Mileage - 1 Way F/ Gel Delivery	70	Miles	2.00	140.00
279	Bentonite Gel	20	Sack(s)	25.00	500.00T
330	Swift Multi-Density Standard (MIDCON II)	275	Sacks	16.50	4,537.50T
276	Flocele	69	Lb(s)	2.00	138.00T
581D	Service Charge Cement	275	Sacks	2.00	550.00
583D	Drayage	1,027.81	Ton Miles	1.00	1,027.81
	Subtotal				8,668.31
	Sales Tax Scott County			8.30%	438.28

**We Appreciate Your Business!**

**Total**

\$9,106.59



CHARGE TO: Messman Dig Co  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE, ZIP CODE: \_\_\_\_\_

TICKET  
 No 22833

PAGE 1 OF 1

1. SERVICE LOCATIONS: Hays, KS WELL/PROJECT NO. 1-18 LEASE Welch COUNTY/PARISH Scott STATE KS CITY \_\_\_\_\_ DATE 9-21-12 OWNER \_\_\_\_\_

2. Messman Dig Co TICKET TYPE  SERVICE CONTRACTOR Ca RIG NAME/NO. \_\_\_\_\_ ORDER NO. \_\_\_\_\_

3. WELL TYPE \_\_\_\_\_ WELL CATEGORY \_\_\_\_\_ JOB PURPOSE Remove Top of Blower @ 23346 SHIPPED VIA 1/3 DELIVERED TO SWIFT Services, KS

4. REFERRAL LOCATION \_\_\_\_\_ INVOICE INSTRUCTIONS \_\_\_\_\_ WELL PERMIT NO. \_\_\_\_\_ WELL LOCATION \_\_\_\_\_

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE # 113	70	mi			600	42000
576 D		1			Bump Charge - CUT Top of Blower	1	ea			13500	13500
290		1			D. Air	3	gal			3500	10500
503		2			Retard Material - Top of Blower	70	mi			200	14000
279		2			Reinforce Gel	200	lbs			2500	5000
330		2			Sand Cement	275	sq			1650	4537.50
276		2			Etchate	69	lbs			200	13800
581		2			Service Charge - Cement					2000	2000
583		2			Discharge					200	200

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X [Signature] DATE SIGNED 9-21-12 TIME SIGNED 1300  A.M.  P.M.

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

70 mi SURVEY 275.56 27366.15 29366.15 165 2500 200 13800

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?  YES  NO

WE UNDERSTOOD AND MET YOUR NEEDS?  YES  NO

OUR SERVICE WAS PERFORMED WITHOUT DELAY?  YES  NO

WE OPERATED THE EQUIPMENT AND PERFORMED JOB SATISFACTORILY?  YES  NO

ARE YOU SATISFIED WITH OUR SERVICE?  YES  NO

SCOTT TAX 8.3%

PAGE TOTAL 51688.31

TOTAL 91061.59

SWIFT OPERATOR: [Signature] APPROVAL: \_\_\_\_\_

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

Thank You!

**JOB LOG**

**SWIFT Services, Inc.**

DATE 9-21-12 PAGE NO. 1

CUSTOMER Martin Dufy Co. WELL NO. 1-18 LEASE Welch JOB TYPE Cement Port Well TICKET NO. 22833

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	11:30							DN location - P.T #113 Set up TRK
	1300	2 1/2	10			1200	1200	P.C @ 1246 Test Closed Handles - OK Open P.C. - NO Blow
		2 1/2				600		Hook to thg Start 20 SKS Gel - 2000 lbs NO Blow - Shut down - unplug cut Jet - Pump 5 BBI HD close 8 5/8 -
		3				600		cont Gel Down thg Fin Gel - NO Blow Wash Bell up from thg.
		1 1/2	10					Pump 10 BBI HD - 8 5/8
		3	12			600		Displ Bell out of thg John call in
		3				600		Go ahead & start cement
						500		Mix 25 SKS @ 11.2 then
						350		inc cut to 13# for 20 SKS
						400		and then back to 11.2#/gal
		3	165					Fin cut NO blow (275 SKS cement)
		3	8					Displ 8 BBI HD
	1400					1200		Close P.C & test - OK Run 5-Jts thg.
		3	20					Rev-out 2 plugs - clean Job Complete Washout Tanker Hess Dan Brown, Jeremy Tawson
	1645							



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



# Invoice

DATE	INVOICE #
9/24/2012	23411

BILL TO
Murfin Drilling Co Inc P. O. Box 130 Hill City, KS 67642-0130
USED FOR
APPROVED

- Acidizing
- Cement
- Tool Rental

IC 103  
*[Signature]*

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-18	Welch	Scott	Company Tools	Oil	Development	ReCement Abov...	Jason
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				80	Miles	6.00	480.00
576D-D	Pump Charge - Port Collar				1	Job	1,250.00	1,250.00
276	Flocele				50	Lb(s)	2.00	100.00T
290	D-Air				2	Gallon(s)	35.00	70.00T
410-5	5 1/2" Top Plug				1	Each	100.00	100.00T
330	Swift Multi-Density Standard (MIDCON II)				200	Sacks	16.50	3,300.00T
581D	Service Charge Cement				250	Sacks	2.00	500.00
583D	Drayage				996.52	Ton Miles	1.00	996.52
	Subtotal							6,796.52
	Sales Tax Scott County						8.30%	296.31
<b>ss!</b>							<b>Total</b>	\$7,092.83

Acchy -

cc: WF

cc: Lri

cc: brown 1



Services, Inc.

CHARGE TO: MURFIN DRILLING  
 ADDRESS  
 CITY, STATE, ZIP CODE

TICKET No 23411

PAGE 1 OF 1

SERVICE LOCATIONS: 1. Ness City, KS

WELL/PROJECT NO. LEASE: WELCHA 1-18 COUNTY/PARISH: SCOTT STATE: KS CITY: SCOTT CITY, KS DATE: 24 Sep 12 OWNER:

TICKET TYPE:  SERVICE CONTRACTOR: Co. Tools RIG NAME/NO. ORDER NO.

SALES:  WELL TYPE: OIL WELL CATEGORY: DEVELOPMENT JOB PURPOSE: Re cement Above part wear WELL PERMIT NO. WELL LOCATION: 1DN/1uy/1w/15TD

REFERRAL LOCATION: INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC.	ACCT							
575				MILEAGE \$/110	80	mi			6.00	480.00
576D				Pump charge	1				1850.00	1850.00
276				<del>BAR</del> EDGE CE	50	lbs			2.00	100.00
290				D-AIR	2	sq			35.00	70.00
41D				TOP PLUG	1	EA			100.00	100.00
33D				SWIFT MULTI DENSITY	200	bx			1.60	330.00
581				SERVICE CHARGE CEMENT	250	sx			2.00	500.00
583				DRAPAGE	2491.3	lbs			996.52	2491.30

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: 24 Sep 12 TIME SIGNED: 10 45 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

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL: 6796.52

TOTAL: 7092.83

SWIFT OPERATOR: [Signature]

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

APPROVAL: [Signature]

Thank You!



JOB LOG

SWIFT Services, Inc.

DATE 24 Sep 12 PAGE NO.

CUSTOMER MURPHY DRILLING

WELL NO.

LEASE

WELCH 1-18

JOB TYPE

RECEMENT PORT COLLAR

TICKET NO.

23411

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0830							ON LOCATION
	0918	2			✓		800	TAKE INJECTION RATE - ANNULUS BLOWS
	0926	3	104		✓		1000	MIX 200sx SMD LAST 25sx @ 14.5ppg
	1003							WASH OUT PUMP & LINES
	1005	3			✓		800	START DISPLACING FLUG.
	1020	8	39 1/2		✓		400	SHUT WELL IN - CIRCULATE 70sx TO PIT
	1022							WASH TRUCK
	1045							JOB COMPLETE
								JAWKS # 110
								JASON JEFF JEREMY