



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1159569  
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: \_\_\_\_\_



1159569

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

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

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

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

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

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

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

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

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

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

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

September 24, 2013

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

Re: ACO1  
API 15-039-21180-00-00  
Gassmann 1-25  
SW/4 Sec.25-05S-26W  
Decatur 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 Gassmann #1-25 1730' FSL 870' FWL Sec. 25-T5S-R26W 2469' KB				MDCI Ryser #1-24 760' FSL 1010' FEL Sec. 24-T5S-R26W 2468' KB			MDCI SKRM #1-23 1930' FSL 390' FWL Sec. 23-T5S-R26W 2534' KB			
Formation	Sample top	Datum	Log tops	Datum	Ref	Log Tops	Datum	Ref	Log tops	Datum	
Anhydrite	2075	+394	2068	+401	+4	2071	+397	Flat	2133	+401	
B/Anhydrite	2100	+369	2102	+367	+3	2104	+364	-1	2166	+368	
Topeka	3302	-833	3303	-834	-4	3299	-830	-18	3350	-816	
Heebner	3503	-1034	3502	-1033	+1	3502	-1034	-13	3554	-1020	
Toronto	3526	-1057	3527	-1058	+1	3527	-1059	-14	3578	-1044	
Lansing	3552	-1073	3543	-1074	-1	3541	-1073	-12	3596	-1062	
Stark	3695	-1226			-6	3688	-1220	-19	3741	-1207	
BKC	3736	-1267	3734	-1265	-3	3730	-1262	-19	3780	-1246	
RTD	3840					3835			4065		
LTD			3840			3834			4056		



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling**

250 N. Water Ste 300  
Wichita KS 67202

ATTN: Robert Hendrix

### **Gassmann #1-25**

#### **25 5s 26w Decatur,KS**

Start Date: 2013.06.04 @ 10:20:00

End Date: 2013.06.04 @ 18:16:00

Job Ticket #: 51135                      DST #: 1

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

Printed: 2013.06.11 @ 10:30:34



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling  
250 N. Water Ste 300  
Wichita KS 67202  
ATTN: Robert Hendrix

**25 5s 26w Decatur, KS**  
**Gassmann #1-25**  
Job Ticket: 51135      **DST#: 1**  
Test Start: 2013.06.04 @ 10:20:00

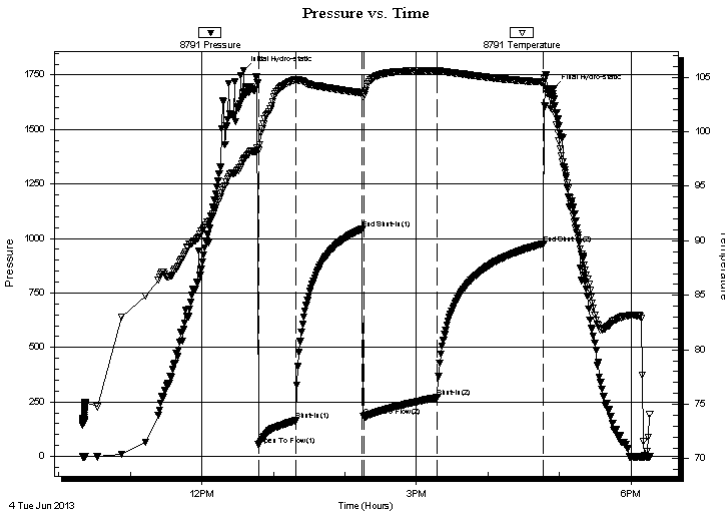
## GENERAL INFORMATION:

Formation: **Toronto-LKC A**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 12:47:30  
 Time Test Ended: 18:16:00  
 Interval: **3500.00 ft (KB) To 3553.00 ft (KB) (TVD)**  
 Total Depth: 3553.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Chuck Kreuzer Jr.  
 Unit No: 61  
 Reference Elevations: 2469.00 ft (KB)  
 2458.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8791**      **Inside**  
 Press @ Run Depth: 270.78 psig @ 3501.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2013.06.04      End Date: 2013.06.04      Last Calib.: 2013.06.04  
 Start Time: 10:20:01      End Time: 18:16:00      Time On Btm: 2013.06.04 @ 12:35:00  
 Time Off Btm: 2013.06.04 @ 16:55:00

**TEST COMMENT:** IF: Fair blow , Built to B.O.B in 10 mins.  
 IS!: No blow back  
 FF: Fair blow , Built to B.O.B in 15 mins.  
 FS!: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1771.34	97.41	Initial Hydro-static
13	53.10	98.29	Open To Flow (1)
44	164.31	104.78	Shut-In(1)
100	1043.91	103.56	End Shut-In(1)
101	183.89	103.19	Open To Flow (2)
163	270.78	105.63	Shut-In(2)
252	976.83	104.54	End Shut-In(2)
260	1689.13	102.95	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
240.00	MCW-10%M 90%W	1.24
120.00	MCW-30%M 70%W	1.75
120.00	WCM- 20%W 80%W	1.75

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling

**25 5s 26w Decatur,KS**

250 N. Water Ste 300  
Wichita KS 67202

**Gassmann #1-25**

Job Ticket: 51135

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2013.06.04 @ 10:20:00

## Tool Information

Drill Pipe:	Length: 3249.00 ft	Diameter: 3.88 inches	Volume: 47.51 bbl	Tool Weight:	26000.00 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: 234.00 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose:	65000.00 lb
			<u>Total Volume: 48.66 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3500.00 ft			Final	62000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	53.00 ft				
Tool Length:	81.00 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			3477.00	
Hydraulic tool	5.00			3482.00	
Jars	5.00			3487.00	
Safety Joint	3.00			3490.00	
Packer	5.00			3495.00	28.00 Bottom Of Top Packer
Packer	5.00			3500.00	
Stubb	1.00			3501.00	
Recorder	0.00	8791	Inside	3501.00	
Recorder	0.00	8651	Outside	3501.00	
Perforations	1.00			3502.00	
change Over Sub	1.00			3503.00	
Drill Pipe	31.00			3534.00	
Change Over Sub	1.00			3535.00	
Perforations	15.00			3550.00	
Bullnose	3.00			3553.00	53.00 Bottom Packers & Anchor

**Total Tool Length: 81.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling

**25 5s 26w Decatur,KS**

250 N. Water Ste 300  
Wichita KS 67202

**Gassmann #1-25**

Job Ticket: 51135

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2013.06.04 @ 10:20:00

## 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: 5.18 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.09 ohm.m

Gas Cushion Pressure:

psig

Salinity: 90000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
240.00	MCW-10%M 90%W	1.239
120.00	MCW-30%M 70%W	1.755
120.00	WCM- 20%W 80%W	1.755

Total Length: 480.00 ft      Total Volume: 4.749 bbl

Num Fluid Samples: 0

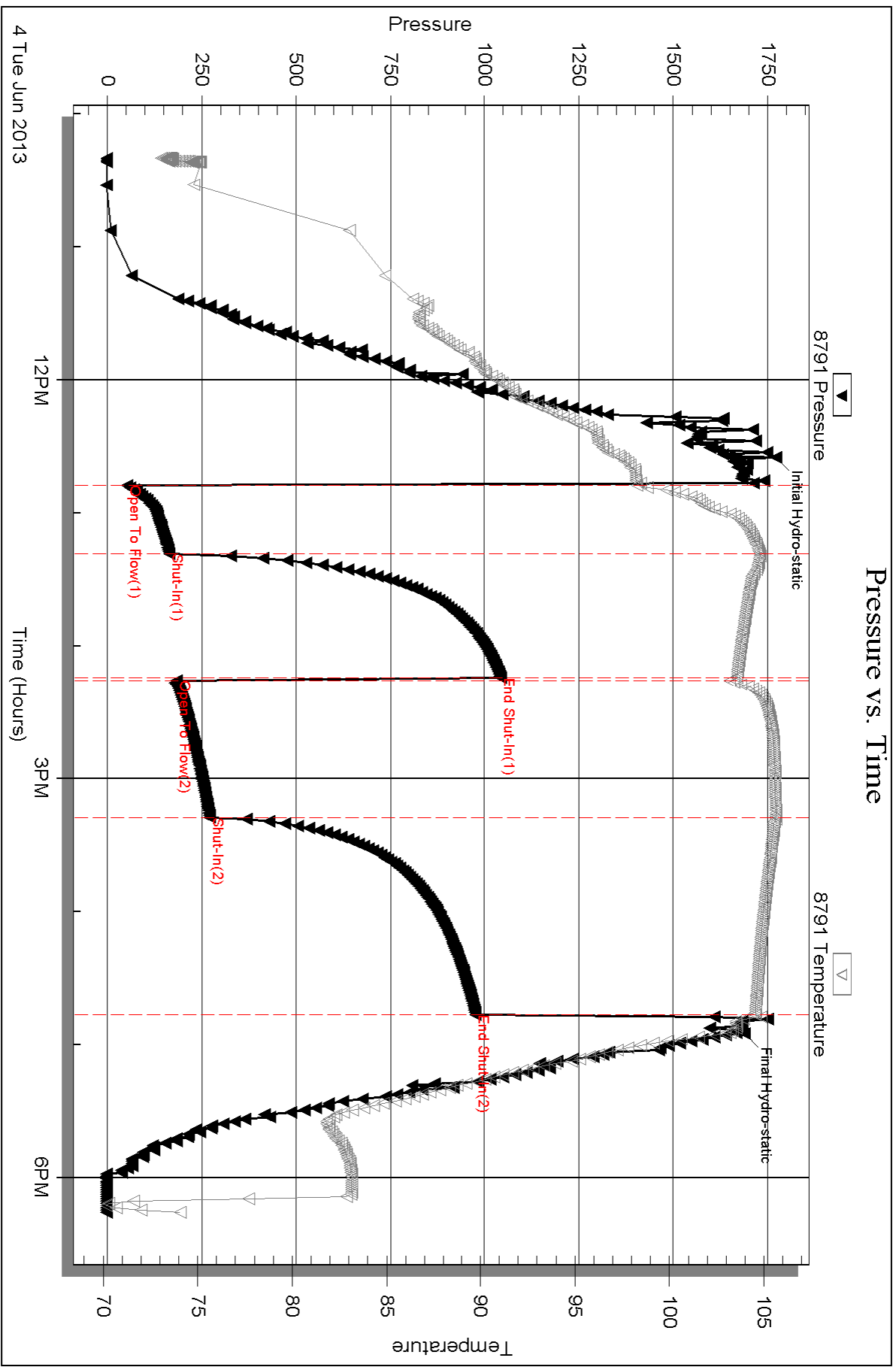
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

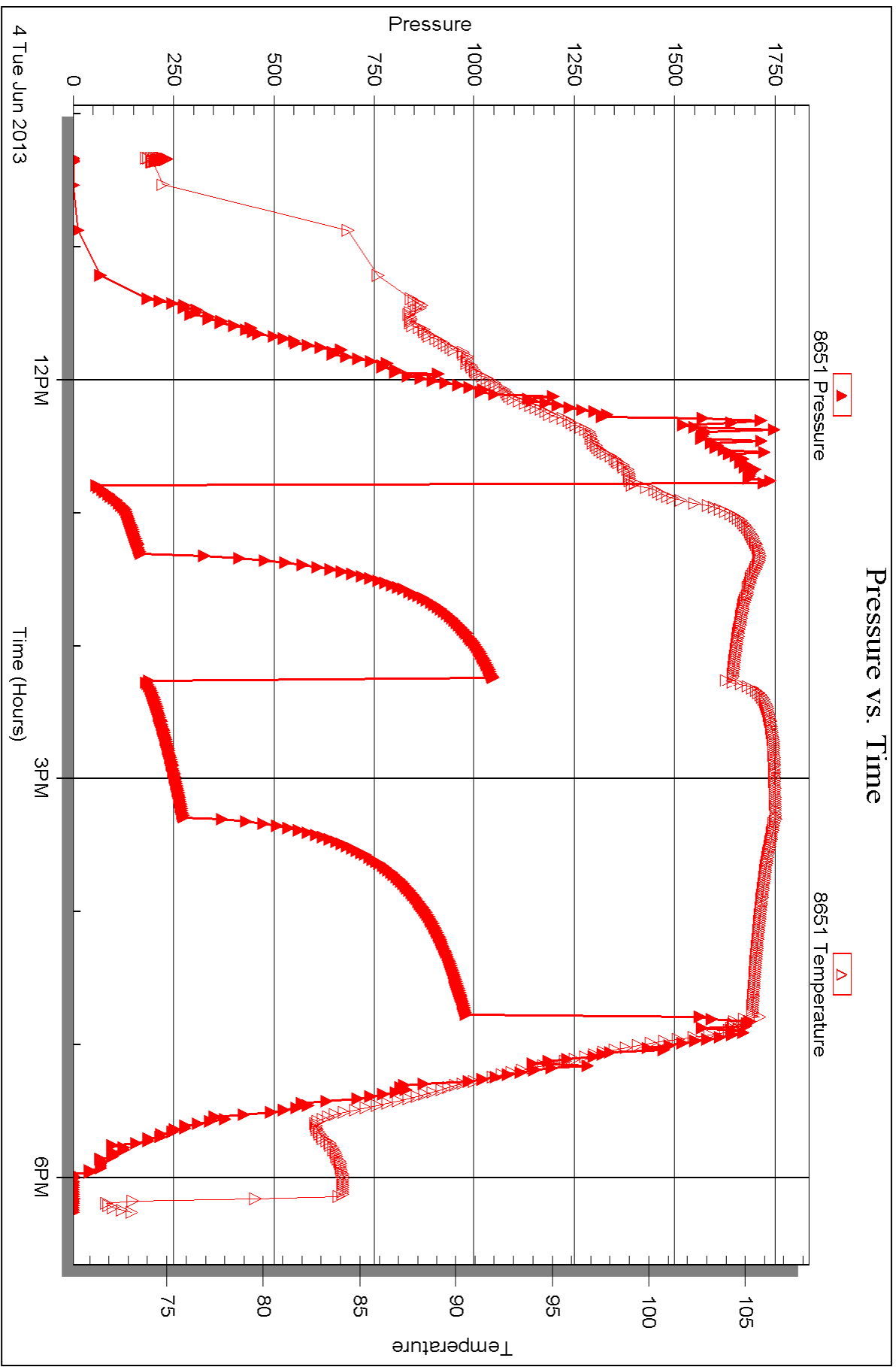


Serial #: 8651

Outside Murfin Drilling

Gassmann #1-25

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling**

250 N. Water Ste 300  
Wichita KS 67202

ATTN: Robert Hendrix

### **Gassmann #1-25**

#### **25 5s 26w Decatur,KS**

Start Date: 2013.06.05 @ 02:22:00

End Date: 2013.06.05 @ 08:50:30

Job Ticket #: 51136                      DST #: 2

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

Printed: 2013.06.11 @ 10:29:42

Murfin Drilling  
25 5s 26w Decatur,KS  
Gassmann #1-25  
DST # 2  
LKC B-D  
2013.06.05



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling  
250 N. Water Ste 300  
Wichita KS 67202  
ATTN: Robert Hendrix

**25 5s 26w Decatur, KS**  
**Gassmann #1-25**  
Job Ticket: 51136      **DST#: 2**  
Test Start: 2013.06.05 @ 02:22:00

## GENERAL INFORMATION:

Formation: **LKC B-D**  
Deviated: No Whipstock:                      ft (KB)  
Time Tool Opened: 04:01:30  
Time Test Ended: 08:50:30  
Interval: **3556.00 ft (KB) To 3587.00 ft (KB) (TVD)**  
Total Depth: 3587.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Chuck Kreuzer Jr.  
Unit No: 61  
Reference Elevations: 2469.00 ft (KB)  
2458.00 ft (CF)  
KB to GR/CF: 11.00 ft

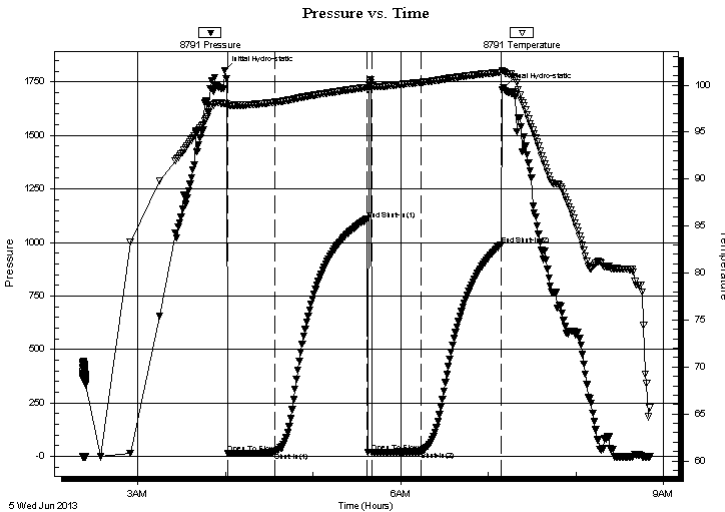
## Serial #: 8791

Inside

Press @ Run Depth: 25.19 psig @ 3557.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2013.06.05      End Date: 2013.06.05      Last Calib.: 2013.06.05  
Start Time: 02:22:01      End Time: 08:50:30      Time On Btm: 2013.06.05 @ 03:59:30  
Time Off Btm: 2013.06.05 @ 07:10:30

TEST COMMENT: IF: Weak blow, Dead in 2 mins.  
ISI: No blow back  
FF: Flushed tool, Weak blow dead in 20 secs.  
FSI No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1804.32	98.06	Initial Hydro-static
2	14.92	97.68	Open To Flow (1)
34	21.61	98.18	Shut-In(1)
97	1107.68	99.75	End Shut-In(1)
101	19.67	99.83	Open To Flow (2)
135	25.19	100.30	Shut-In(2)
189	989.71	101.37	End Shut-In(2)
191	1725.29	101.45	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	mud-100%m	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  
 250 N. Water Ste 300  
 Wichita KS 67202  
 ATTN: Robert Hendrix

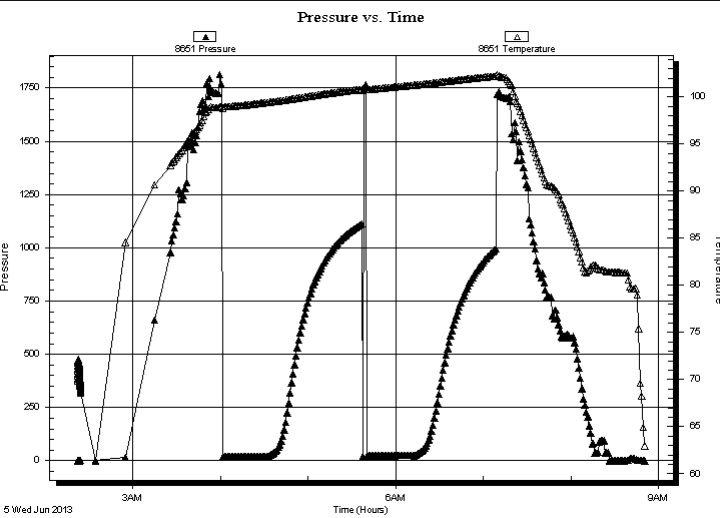
**25 5s 26w Decatur, KS**  
**Gassmann #1-25**  
 Job Ticket: 51136 **DST#: 2**  
 Test Start: 2013.06.05 @ 02:22:00

## GENERAL INFORMATION:

Formation: **LKC B-D**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 04:01:30  
 Time Test Ended: 08:50:30  
 Interval: **3556.00 ft (KB) To 3587.00 ft (KB) (TVD)**  
 Total Depth: 3587.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Kreuzer Jr.  
 Unit No: 61  
 Reference Elevations: 2469.00 ft (KB)  
 2458.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8651 Outside**  
 Press @ Run Depth: psig @ 3557.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.06.05 End Date: 2013.06.05 Last Calib.: 2013.06.05  
 Start Time: 02:22:01 End Time: 08:50:30 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF: Weak blow, Dead in 2 mins.  
 ISI: No blow back  
 FF: Flushed tool, Weak blow dead in 20 secs.  
 FSI No blow back



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	mud-100%m	0.12

## 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

**25 5s 26w Decatur, KS**

250 N. Water Ste 300  
Wichita KS 67202

**Gassmann #1-25**

Job Ticket: 51136

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2013.06.05 @ 02:22:00

## Tool Information

Drill Pipe:	Length: 3310.00 ft	Diameter: 3.88 inches	Volume: 48.41 bbl	Tool Weight: 26000.00 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: 234.00 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 49.56 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3556.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	31.00 ft			
Tool Length:	59.00 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			3533.00	
Hydraulic tool	5.00			3538.00	
Jars	5.00			3543.00	
Safety Joint	3.00			3546.00	
Packer	5.00			3551.00	28.00 Bottom Of Top Packer
Packer	5.00			3556.00	
Stubb	1.00			3557.00	
Recorder	0.00	8791	Inside	3557.00	
Recorder	0.00	8651	Outside	3557.00	
Perforations	1.00			3558.00	
Perforations	26.00			3584.00	
Bullnose	3.00			3587.00	31.00 Bottom Packers & Anchor

**Total Tool Length: 59.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling

**25 5s 26w Decatur,KS**

250 N. Water Ste 300  
Wichita KS 67202

**Gassmann #1-25**

Job Ticket: 51136

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2013.06.05 @ 02:22:00

## 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: 5.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.09 ohm.m

Gas Cushion Pressure:

psig

Salinity: 90000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	mud-100%m	0.123

Total Length: 25.00 ft      Total Volume: 0.123 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

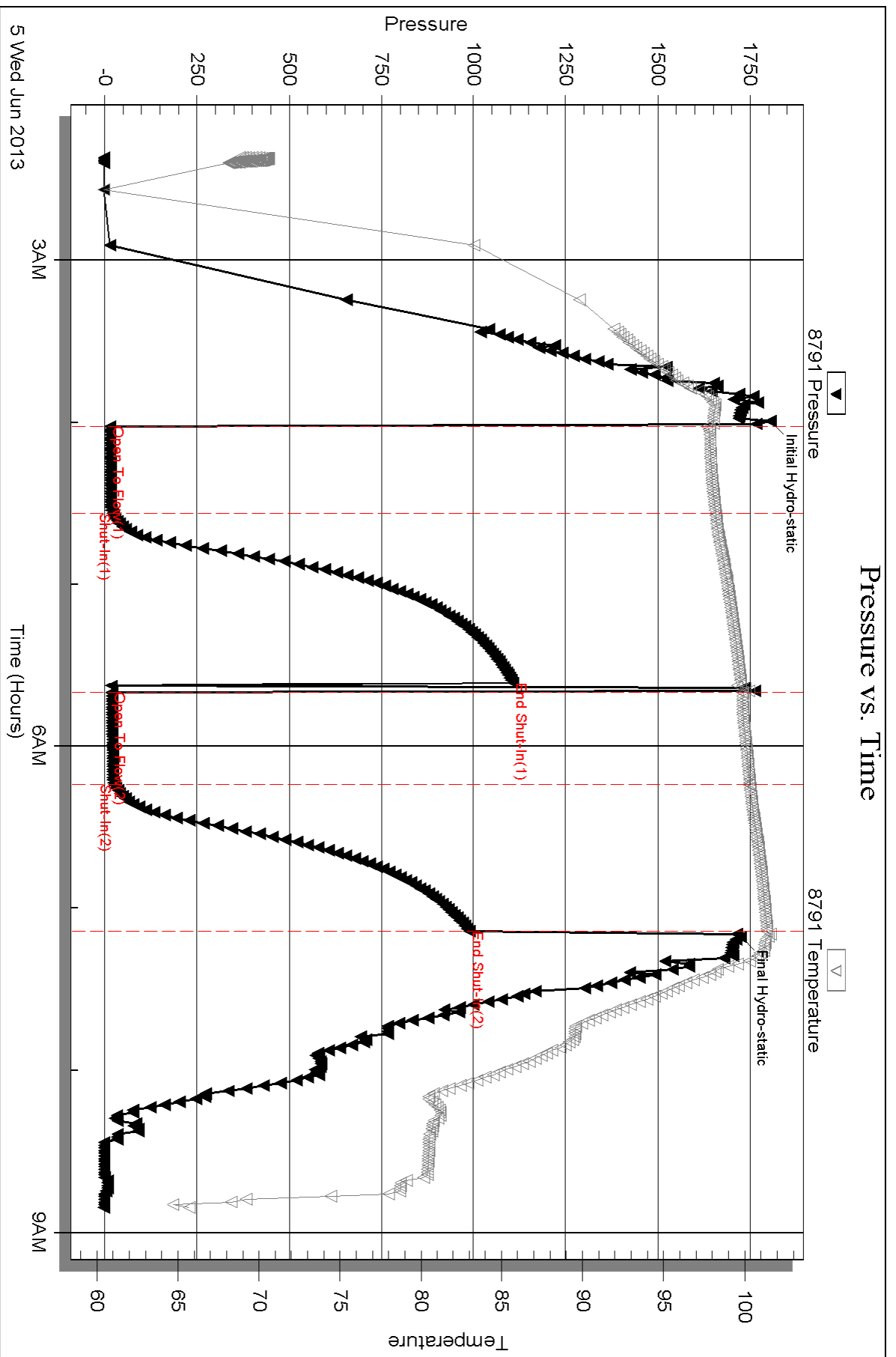
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



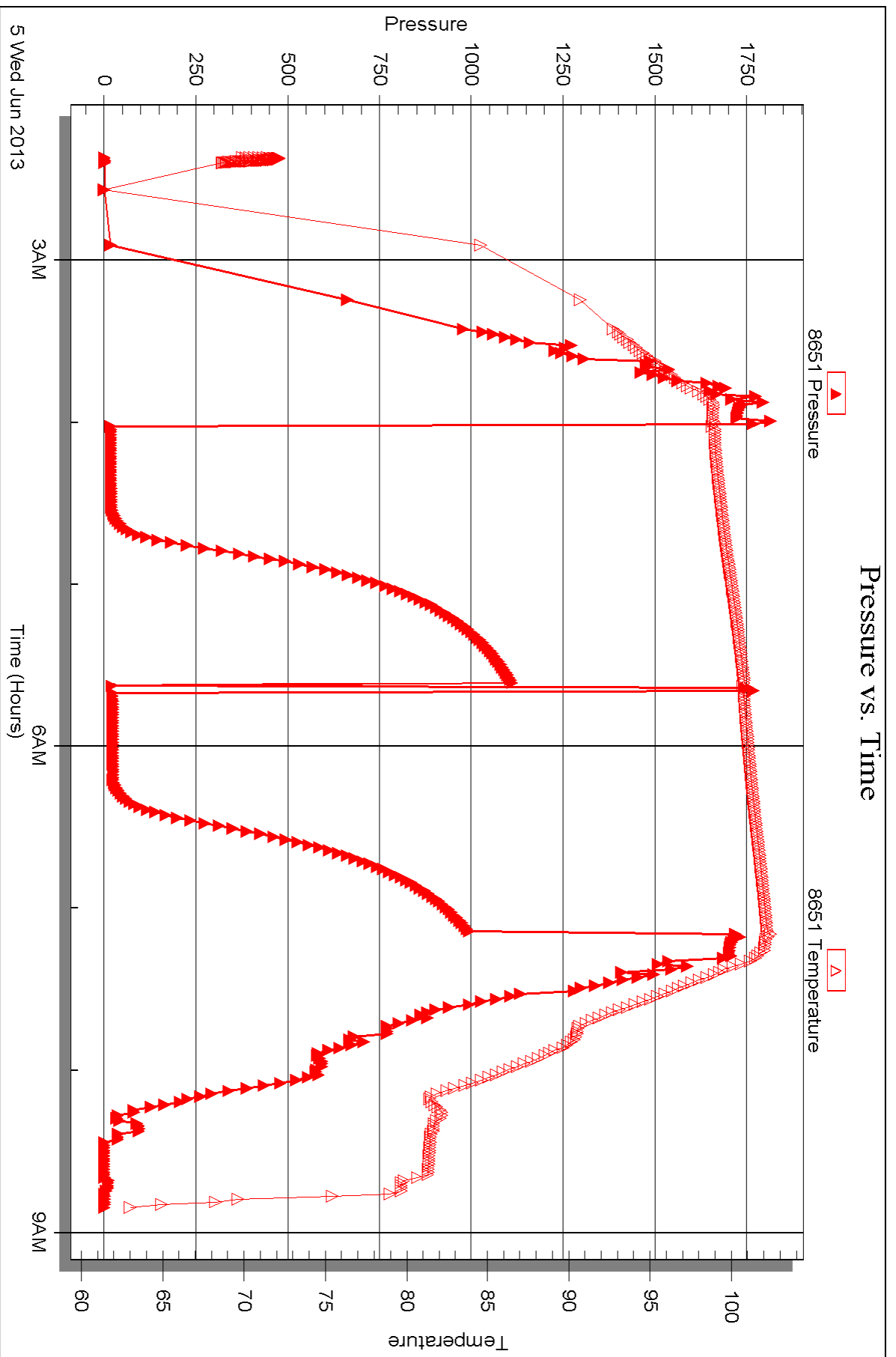


Serial #: 8651

Outside Murfin Drilling

Gassmann #1-25

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling**

250 N. Water Ste 300  
Wichita KS 67202

ATTN: Robert Hendrix

### **Gassmann #1-25**

#### **25 5s 26w Decatur,KS**

Start Date: 2013.06.05 @ 17:20:00

End Date: 2013.06.06 @ 01:06:30

Job Ticket #: 51137                      DST #: 3

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

Printed: 2013.06.11 @ 10:28:53

Murfin Drilling  
25 5s 26w Decatur,KS  
Gassmann #1-25  
DST # 3  
LKC-  
2013.06.05



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Murfin Drilling  
 250 N. Water Ste 300  
 Wichita KS 67202  
 ATTN: Robert Hendrix

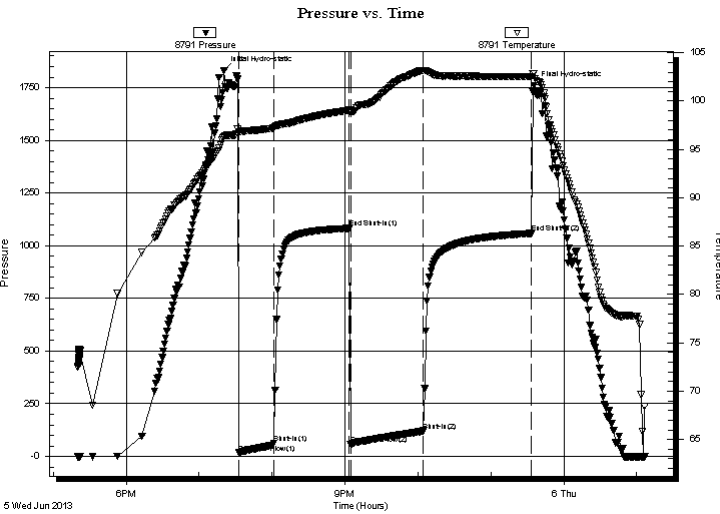
**25 5s 26w Decatur, KS**  
**Gassmann #1-25**  
 Job Ticket: 51137 **DST#: 3**  
 Test Start: 2013.06.05 @ 17:20:00

**GENERAL INFORMATION:**

Formation: **LKC-**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 19:32:30 Tester: Chuck Kreuzer Jr.  
 Time Test Ended: 01:06:30 Unit No: 61  
 Interval: **3593.00 ft (KB) To 3632.00 ft (KB) (TVD)** Reference Elevations: 2469.00 ft (KB)  
 Total Depth: 3632.00 ft (KB) (TVD) 2458.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

**Serial #: 8791 Inside**  
 Press @ Run Depth: 121.10 psig @ 3594.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.06.05 End Date: 2013.06.06 Last Calib.: 2013.06.06  
 Start Time: 17:20:01 End Time: 01:06:30 Time On Btm: 2013.06.05 @ 19:20:30  
 Time Off Btm: 2013.06.05 @ 23:35:30

**TEST COMMENT:** IF: Weak blow , Built to 2 in. over 30 mins.  
 IS: No blow back  
 FF: Weak blow , Built to 5 in. over 60 mins.  
 FS: No blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1832.05	96.33	Initial Hydro-static
12	17.32	96.85	Open To Flow (1)
41	62.31	97.22	Shut-In(1)
103	1083.05	99.06	End Shut-In(1)
104	59.27	98.82	Open To Flow (2)
164	121.10	103.18	Shut-In(2)
253	1059.09	102.55	End Shut-In(2)
255	1760.24	102.84	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
200.00	mud-1`00%m	0.98

\* 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

**25 5s 26w Decatur, KS**

250 N. Water Ste 300  
Wichita KS 67202

**Gassmann #1-25**

Job Ticket: 51137

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2013.06.05 @ 17:20:00

## Tool Information

Drill Pipe:	Length: 3347.00 ft	Diameter: 3.88 inches	Volume: 48.95 bbl	Tool Weight: 26000.00 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: 234.00 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 50.10 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3593.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	67.00 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			3570.00	
Hydraulic tool	5.00			3575.00	
Jars	5.00			3580.00	
Safety Joint	3.00			3583.00	
Packer	5.00			3588.00	28.00 Bottom Of Top Packer
Packer	5.00			3593.00	
Stubb	1.00			3594.00	
Recorder	0.00	8791	Inside	3594.00	
Recorder	0.00	8651	Outside	3594.00	
Perforations	1.00			3595.00	
Perforations	34.00			3629.00	
Bullnose	3.00			3632.00	39.00 Bottom Packers & Anchor

**Total Tool Length: 67.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling

**25 5s 26w Decatur,KS**

250 N. Water Ste 300  
Wichita KS 67202

**Gassmann #1-25**

Job Ticket: 51137

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2013.06.05 @ 17:20:00

## 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: 61.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	mud-1'00% <sub>m</sub>	0.984

Total Length: 200.00 ft      Total Volume: 0.984 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8791

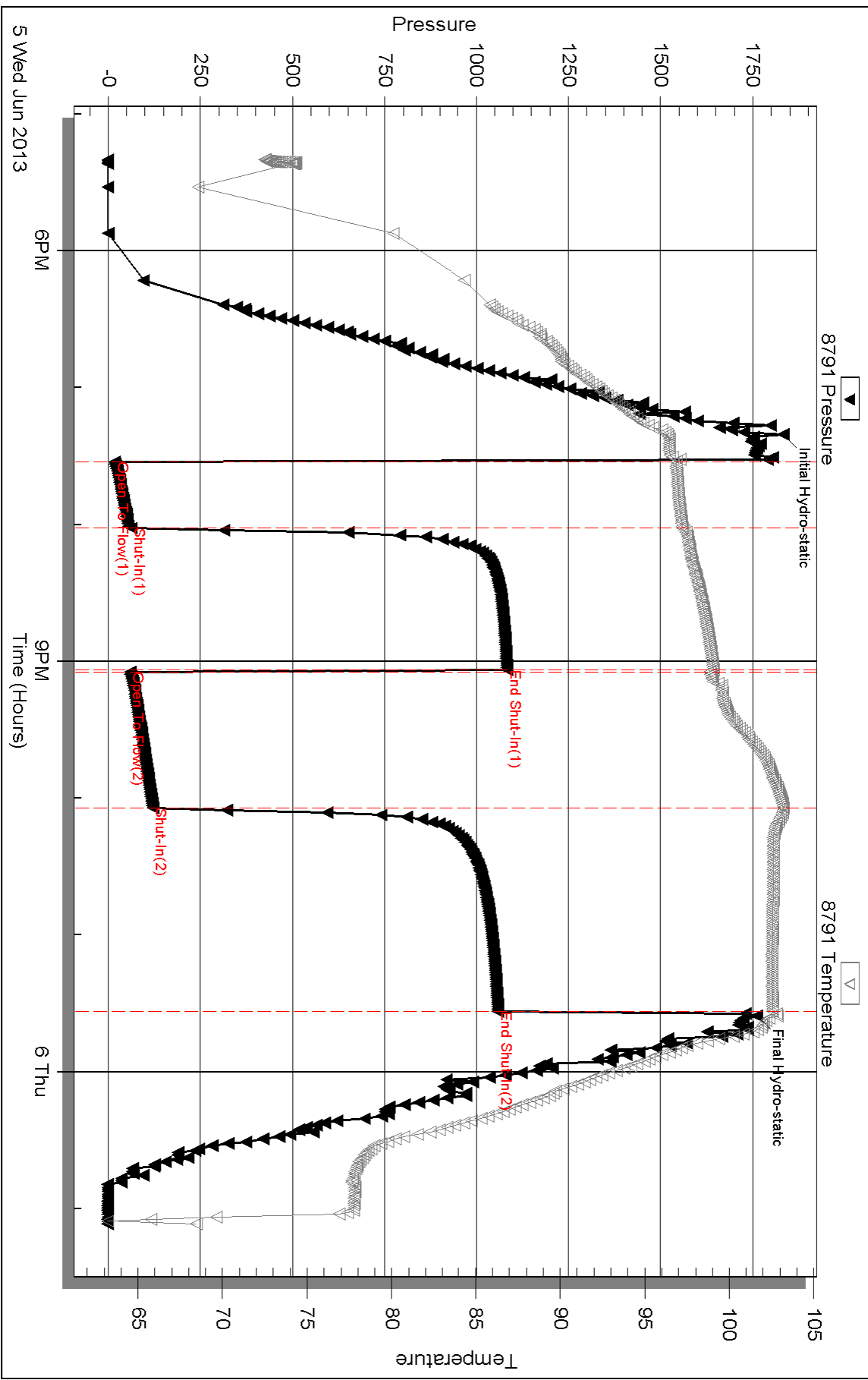
Inside

Murfin Drilling

Gassmann #1-25

DST Test Number: 3

# Pressure vs. Time



Triobite Testing, Inc

Ref. No: 51137

Printed: 2013.06.11 @ 10:28:56



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling**

250 N. Water Ste 300  
Wichita KS 67202

ATTN: Robert Hendrix

### **Gassmann #1-25**

#### **25 5s 26w Decatur,KS**

Start Date: 2013.06.06 @ 12:15:00

End Date: 2013.06.06 @ 18:39:00

Job Ticket #: 51138                      DST #: 4

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

Printed: 2013.06.11 @ 10:05:11





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling  
 250 N. Water Ste 300  
 Wichita KS 67202  
 ATTN: Robert Hendrix

**25 5s 26w Decatur, KS**  
**Gassmann #1-25**  
 Job Ticket: 51138      **DST#: 4**  
 Test Start: 2013.06.06 @ 12:15:00

## GENERAL INFORMATION:

Formation: **LKC-H,K**  
 Deviated: No Whipstock:      ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 14:08:30      Tester: Chuck Kreuzer Jr.  
 Time Test Ended: 18:39:00      Unit No: 61  
 Interval: **3640.00 ft (KB) To 3715.00 ft (KB) (TVD)**      Reference Elevations: 2469.00 ft (KB)  
 Total Depth: 3715.00 ft (KB) (TVD)      2458.00 ft (CF)  
 Hole Diameter: 7.88 inches      Hole Condition: Fair      KB to GR/CF: 11.00 ft

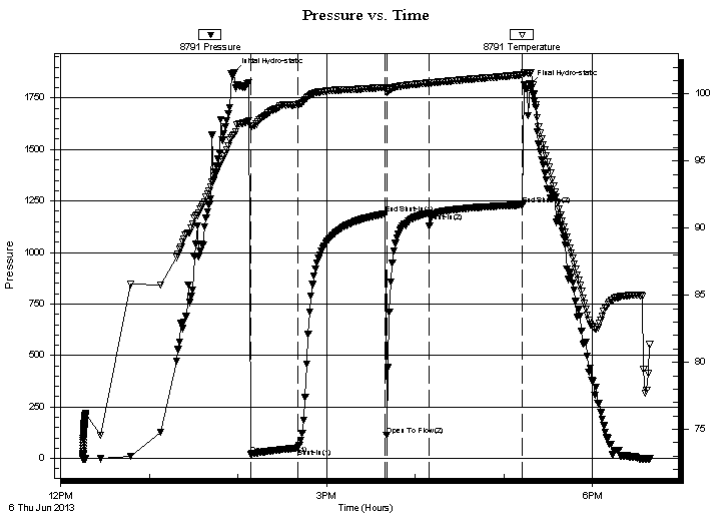
## Serial #: 8791

Inside

Press @ Run Depth: 1191.19 psig @ 3641.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2013.06.06      End Date: 2013.06.06      Last Calib.: 2013.06.06  
 Start Time: 12:15:01      End Time: 18:39:00      Time On Btm: 2013.06.06 @ 13:57:30  
 Time Off Btm: 2013.06.06 @ 17:17:30

**TEST COMMENT:** IF: Weak blow, 3 in. over 30 mins.  
 IS: No blow back  
 FF: Weak blow, Died in 12 mins.  
 FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1874.31	96.99	Initial Hydro-static
11	20.79	97.61	Open To Flow (1)
43	50.84	99.22	Shut-In(1)
102	1187.65	100.51	End Shut-In(1)
103	114.07	100.16	Open To Flow (2)
132	1191.19	100.83	Shut-In(2)
195	1230.91	101.43	End Shut-In(2)
200	1817.24	101.52	Final Hydro-static

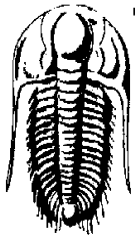
## Recovery

Length (ft)	Description	Volume (bbl)
60.00	10/90 OCM 10% Oil 90% M	0.30
60.00	20/80 OCM 20% O 80% M	0.30

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Murfin Drilling

25 5s 26w Decatur, KS

250 N. Water Ste 300  
Wichita KS 67202

Gassmann #1-25

Job Ticket: 51138

DST#: 4

ATTN: Robert Hendrix

Test Start: 2013.06.06 @ 12:15:00

**GENERAL INFORMATION:**

Formation: LKC-H,K

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:08:30

Time Test Ended: 18:39:00

Interval: 3640.00 ft (KB) To 3715.00 ft (KB) (TVD)

Total Depth: 3715.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Reference Elevations: 2469.00 ft (KB)

2458.00 ft (CF)

KB to GR/CF: 11.00 ft

**Serial #: 8651 Outside**

Press @ RunDepth: psig @ 3641.00 ft (KB)

Start Date: 2013.06.06

End Date:

2013.06.06

Start Time: 12:15:01

End Time:

18:39:00

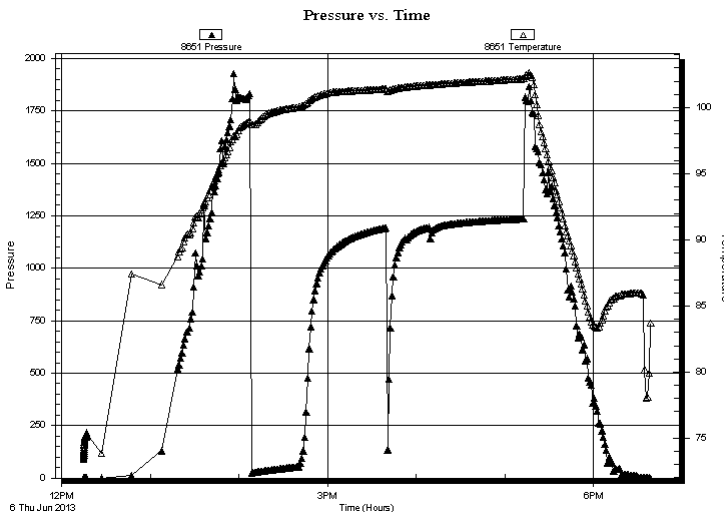
Capacity: 8000.00 psig

Last Calib.: 2013.06.06

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Weak blow , 3 in. over 30 mins.  
IS: No blow back  
FF: Weak blow , Died in 12 mins.  
FS: No blow back



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
60.00	10/90 OCM 10% Oil 90% M	0.30
60.00	20/80 OCM 20% O 80% M	0.30

**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

**25 5s 26w Decatur, KS**

250 N. Water Ste 300  
Wichita KS 67202

**Gassmann #1-25**

Job Ticket: 51138

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2013.06.06 @ 12:15:00

## Tool Information

Drill Pipe:	Length: 3404.00 ft	Diameter: 3.88 inches	Volume: 49.78 bbl	Tool Weight: 26000.00 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: 234.00 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 50.93 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3640.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	75.00 ft			
Tool Length:	103.00 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			3617.00	
Hydraulic tool	5.00			3622.00	
Jars	5.00			3627.00	
Safety Joint	3.00			3630.00	
Packer	5.00			3635.00	28.00 Bottom Of Top Packer
Packer	5.00			3640.00	
Stubb	1.00			3641.00	
Recorder	0.00	8791	Inside	3641.00	
Recorder	0.00	8651	Outside	3641.00	
Perforations	1.00			3642.00	
change Over Sub	1.00			3643.00	
Drill Pipe	31.00			3674.00	
Change Over Sub	1.00			3675.00	
Perforations	37.00			3712.00	
Bullnose	3.00			3715.00	75.00 Bottom Packers & Anchor

**Total Tool Length: 103.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling

**25 5s 26w Decatur,KS**

250 N. Water Ste 300  
Wichita KS 67202

**Gassmann #1-25**

Job Ticket: 51138

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2013.06.06 @ 12:15:00

## 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:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.18 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	10/90 OCM 10% Oil 90% M	0.295
60.00	20/80 OCM 20% O 80% M	0.295

Total Length: 120.00 ft

Total Volume: 0.590 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

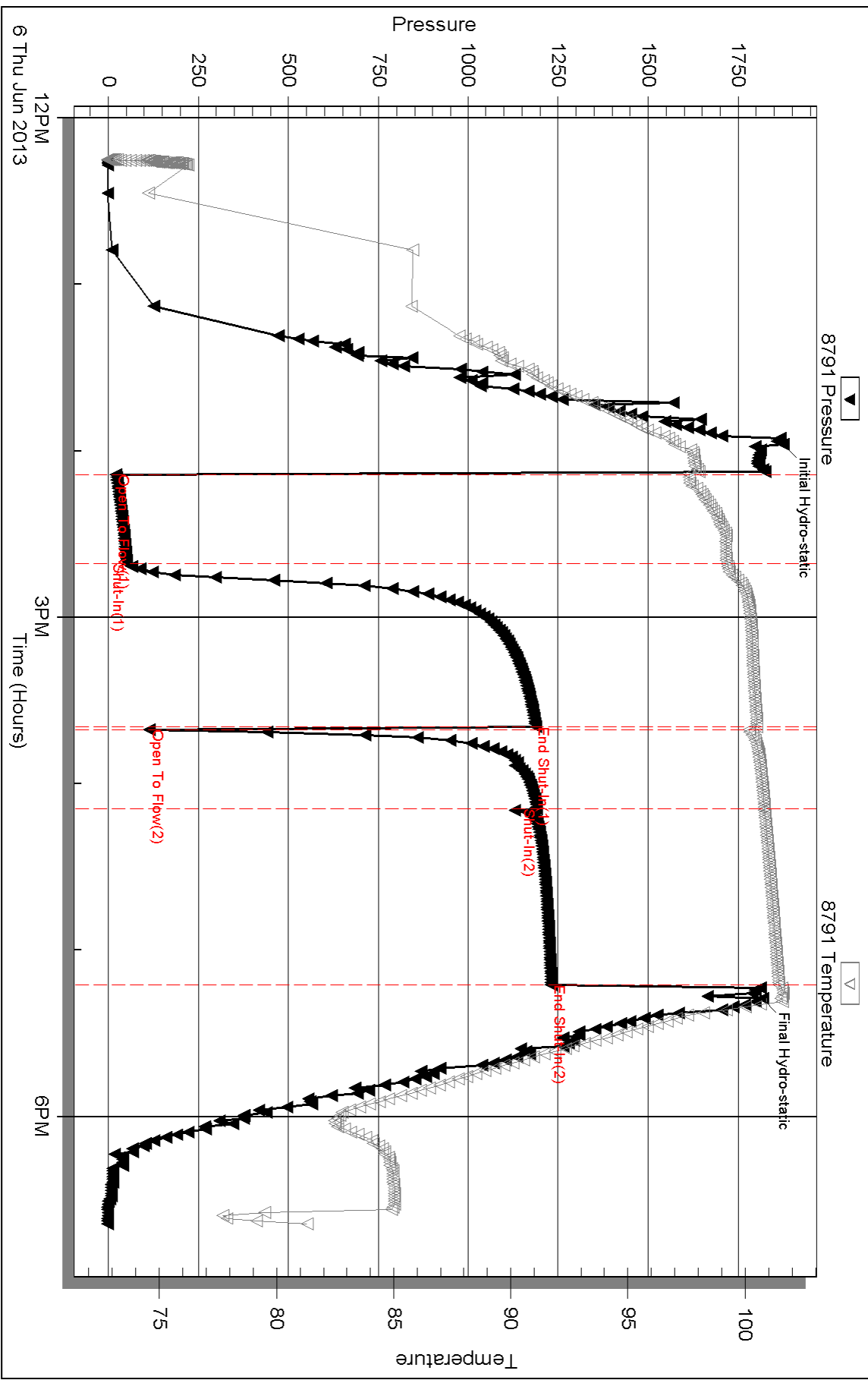
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time

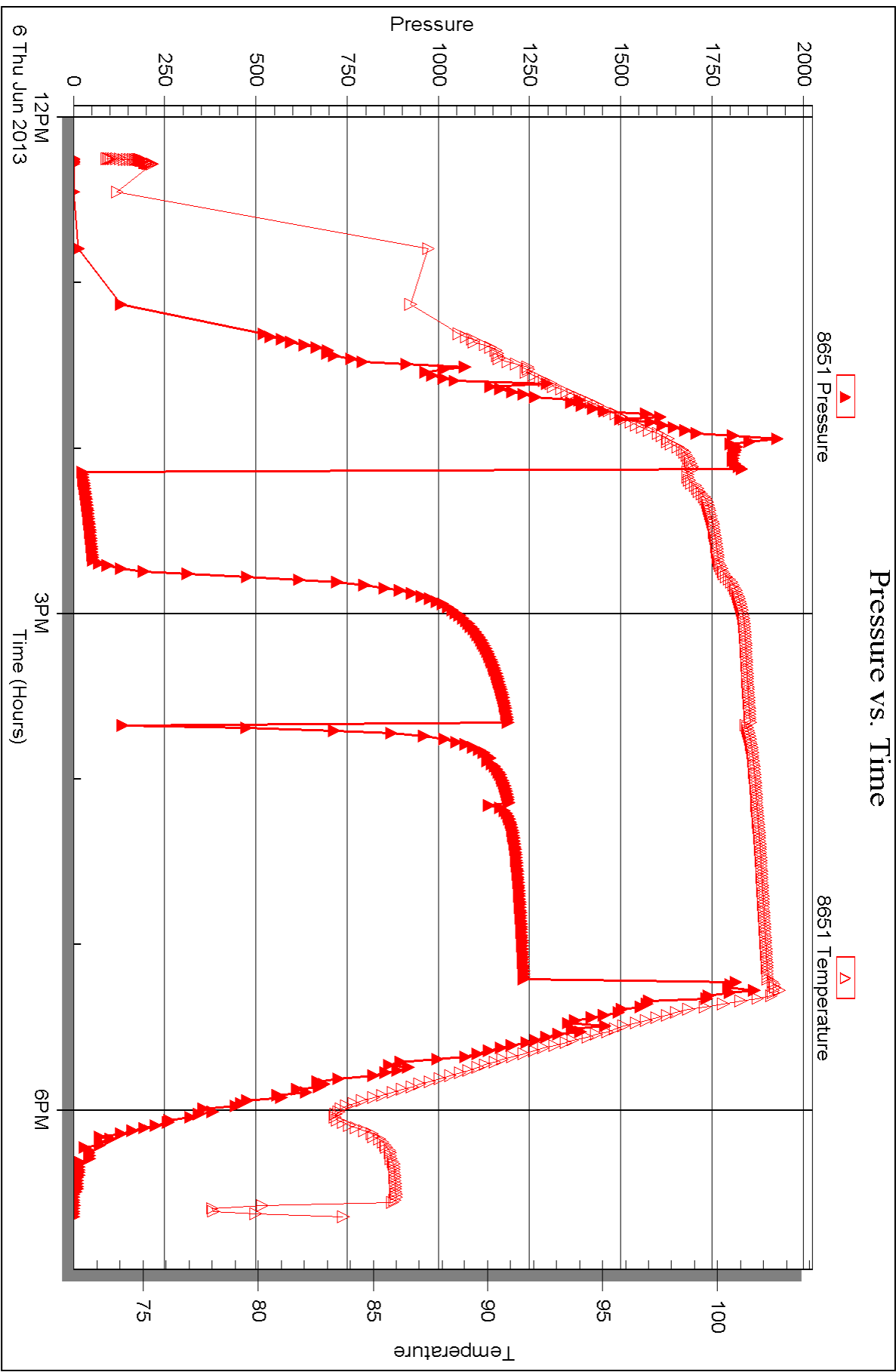


Serial #: 8651

Outside Murfin Drilling

Gassmann #1-25

DST Test Number: 4





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling**

250 N. Water Ste 300  
Wichita KS 67202

ATTN: Robert Hendrix

### **Gassmann #1-25**

#### **25 5s 26w Decatur,KS**

Start Date: 2013.06.07 @ 01:00:00

End Date: 2013.06.07 @ 08:47:00

Job Ticket #: 51139                      DST #: 5

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

Printed: 2013.06.11 @ 10:04:26



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling  
 250 N. Water Ste 300  
 Wichita KS 67202  
 ATTN: Robert Hendrix

**25 5s 26w Decatur, KS**  
**Gassmann #1-25**  
 Job Ticket: 51139 **DST#: 5**  
 Test Start: 2013.06.07 @ 01:00:00

## GENERAL INFORMATION:

Formation: **LKC-K,L**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 02:57:00  
 Time Test Ended: 08:47:00  
 Interval: **3693.00 ft (KB) To 3735.00 ft (KB) (TVD)**  
 Total Depth: 3735.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Kreuzer Jr.  
 Unit No: 61  
 Reference Elevations: 2469.00 ft (KB)  
 2458.00 ft (CF)  
 KB to GR/CF: 11.00 ft

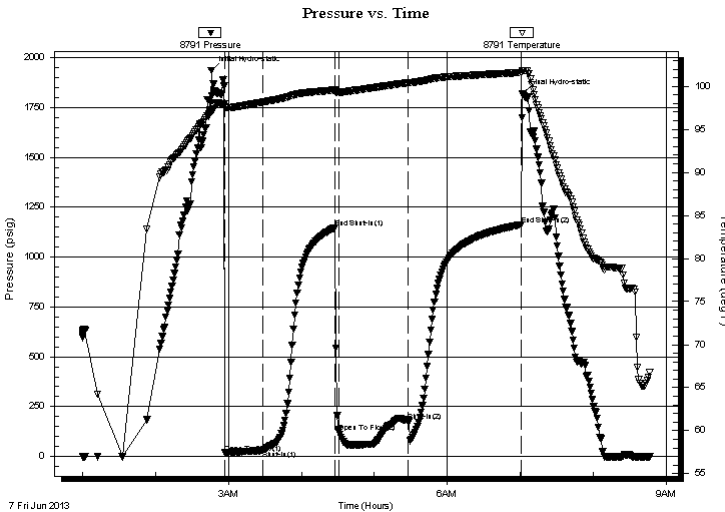
## Serial #: 8791

Inside

Press @ Run Depth: 174.73 psig @ 3694.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.06.07 End Date: 2013.06.07 Last Calib.: 2013.06.07  
 Start Time: 01:00:01 End Time: 08:47:00 Time On Btm: 2013.06.07 @ 02:46:00  
 Time Off Btm: 2013.06.07 @ 07:02:00

**TEST COMMENT:** IF: Weak blow, Surface over 30 mins.  
 IS: No blow back over 60 mins.  
 FF: Weak blow, Built to 1 1/4 in. over 60 mins.  
 FS: No blow back over 90 mins.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1936.32	97.04	Initial Hydro-static
11	18.49	97.47	Open To Flow (1)
42	30.71	98.16	Shut-In(1)
102	1147.64	99.56	End Shut-In(1)
105	121.38	99.29	Open To Flow (2)
162	174.73	100.40	Shut-In(2)
255	1162.60	101.60	End Shut-In(2)
256	1819.96	101.84	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	gw cmo-20%g10%w 20%m50%o	0.59
0.00	180 ft. 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  
250 N. Water Ste 300  
Wichita KS 67202  
ATTN: Robert Hendrix

**25 5s 26w Decatur,KS**

**Gassmann #1-25**

Job Ticket: 51139

**DST#: 5**

Test Start: 2013.06.07 @ 01:00:00

## GENERAL INFORMATION:

Formation: **LKC-K,L**

Deviated: No Whipstock:                       ft (KB)

Time Tool Opened: 02:57:00

Time Test Ended: 08:47:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3693.00 ft (KB) To 3735.00 ft (KB) (TVD)**

Total Depth: 3735.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2469.00 ft (KB)

2458.00 ft (CF)

KB to GR/CF: 11.00 ft

**Serial #: 8651      Outside**

Press @ Run Depth:                       psig @     3694.00 ft (KB)

Start Date:                                 2013.06.07

End Date:                                   2013.06.07

Capacity:                                   8000.00 psig

Last Calib.:                                 2013.06.07

Start Time:                                 01:00:01

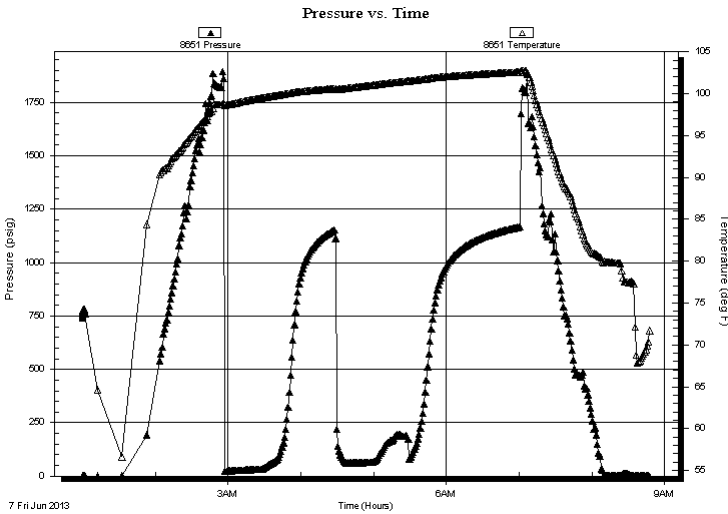
End Time:                                   08:47:30

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF: Weak blow, Surface over 30 mins.  
IS: No blow back over 60 mins.  
FF: Weak blow, Built to 1 1/4 in. over 60 mins.  
FS: No blow back over 90 mins.

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	gw cmo-20%g10%w 20%m50%o	0.59
0.00	180 ft. 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

**25 5s 26w Decatur, KS**

250 N. Water Ste 300  
Wichita KS 67202

**Gassmann #1-25**

Job Ticket: 51139

**DST#: 5**

ATTN: Robert Hendrix

Test Start: 2013.06.07 @ 01:00:00

## Tool Information

Drill Pipe:	Length: 3437.00 ft	Diameter: 3.88 inches	Volume: 50.26 bbl	Tool Weight: 26000.00 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: 234.00 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 51.41 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3693.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	70.00 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			3670.00	
Hydraulic tool	5.00			3675.00	
Jars	5.00			3680.00	
Safety Joint	3.00			3683.00	
Packer	5.00			3688.00	28.00 Bottom Of Top Packer
Packer	5.00			3693.00	
Stubb	1.00			3694.00	
Recorder	0.00	8791	Inside	3694.00	
Recorder	0.00	8651	Outside	3694.00	
Perforations	1.00			3695.00	
Perforations	37.00			3732.00	
Bullnose	3.00			3735.00	42.00 Bottom Packers & Anchor

**Total Tool Length: 70.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling

**25 5s 26w Decatur, KS**

250 N. Water Ste 300  
Wichita KS 67202

**Gassmann #1-25**

Job Ticket: 51139

**DST#: 5**

ATTN: Robert Hendrix

Test Start: 2013.06.07 @ 01:00:00

## 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: 5.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	gw cmo-20%g10%w 20%m50%o	0.590
0.00	180 ft. gas in pipe	0.000

Total Length: 120.00 ft      Total Volume: 0.590 bbl

Num Fluid Samples: 0

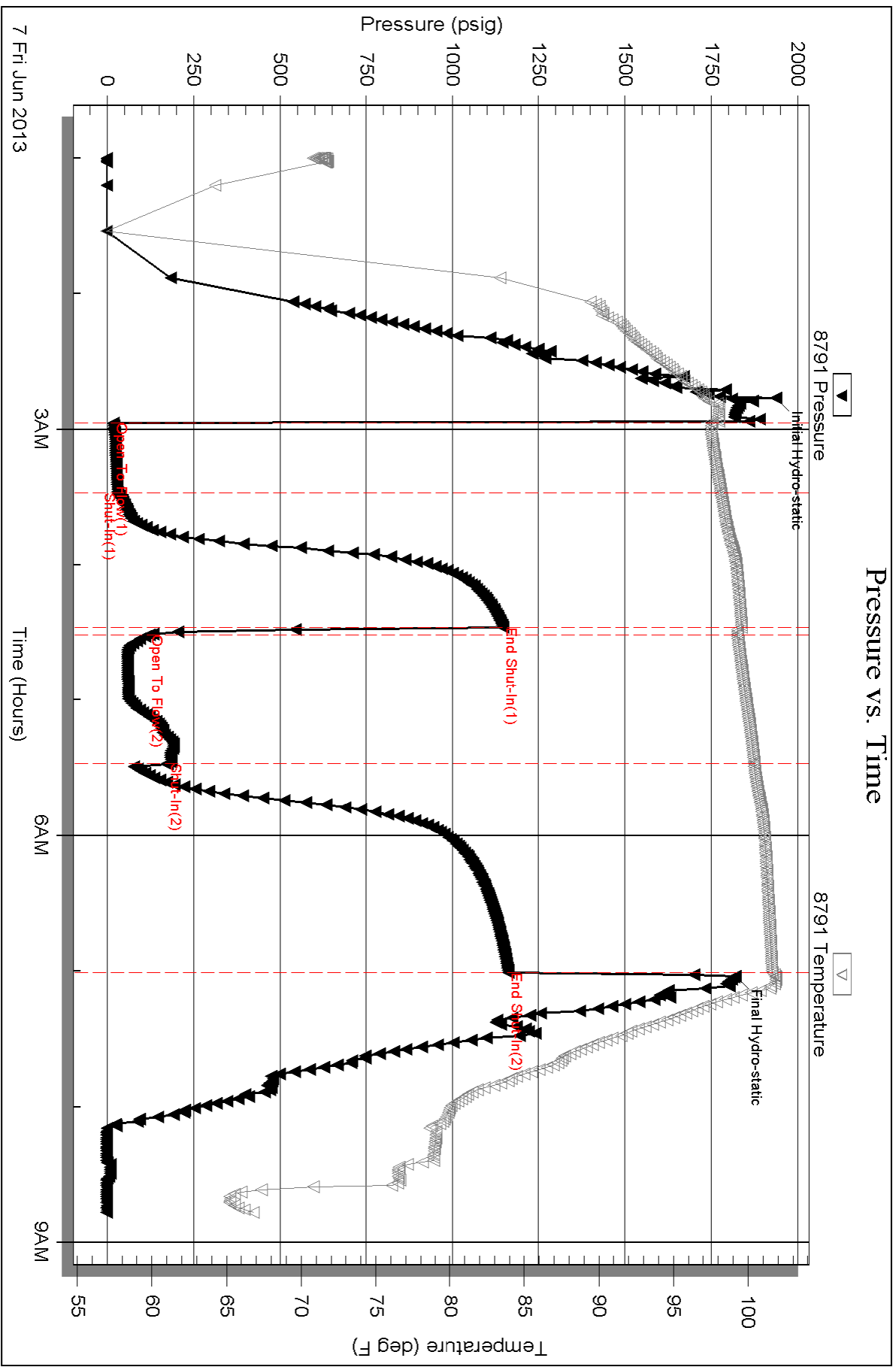
Num Gas Bombs: 0

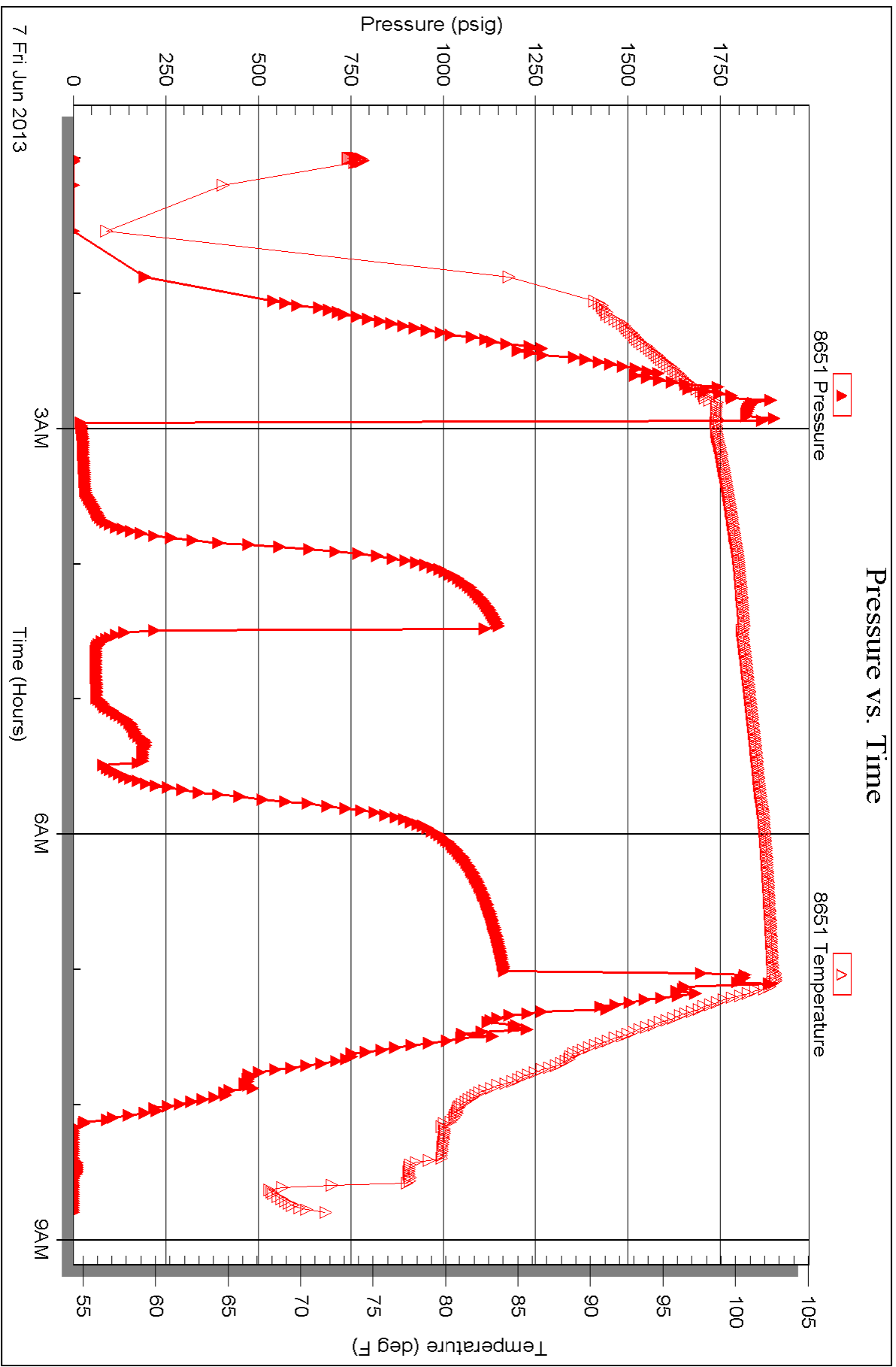
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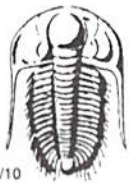
Laboratory Name:

Laboratory Location:

Recovery Comments:







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 51135

Well Name & No. Gassmann # 1-25 Test No. 1 Date 6-4-2013  
 Company MurFin Drilling Co. Elevation 2469 KB 2458 GL  
 Address 250 N. Water Ste 300 Wichita KS  
 Co. Rep / Geo. Robert Hendrix Rig MurFin #2  
 Location: Sec. 25 Twp. 5S Rge. 26W Co. Decatur State KS

Interval Tested 3500 3553 Zone Tested Toronto - LRC-A  
 Anchor Length 53 Drill Pipe Run 3249 Mud Wt. 9.1  
 Top Packer Depth 3495 Drill Collars Run 234 Vis 57  
 Bottom Packer Depth 3500 Wt. Pipe Run -0- WL 5.2  
 Total Depth 3553 Chlorides 800 ppm System LCM 0

Blow Description IF! Fair blow, Built to B.O.B in 10 mins.  
ISF! NO blow back

FF: Fair blow, Built to B.O.B in 15 mins.

FSF! NO blow back

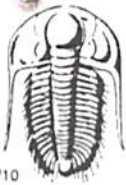
Rec	Feet of	%gas	%oil	%water	%mud
<u>120</u>	<u>WCM</u>			<u>20</u>	<u>80</u>
<u>120</u>	<u>MCW</u>			<u>70</u>	<u>30</u>
<u>240</u>	<u>MCW</u>			<u>90</u>	<u>10</u>

Rec Total 480 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides 90,000 ppm

(A) Initial Hydrostatic <u>1771</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>9:30</u>
(B) First Initial Flow <u>53</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>10:20</u>
(C) First Final Flow <u>164</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>12:47</u>
(D) Initial Shut-In <u>1044</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>16:45</u>
(E) Second Initial Flow <u>783</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>18:16</u>
(F) Second Final Flow <u>271</u>	<input checked="" type="checkbox"/> Mileage <u>50X2 = 100X1.55 = 155</u>	Comments _____
(G) Final Shut-In <u>977</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1689</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby _____	Total <u>1630</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1630</u>	

Approved By \_\_\_\_\_ Our Representative Chuck King

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **51136**

4/10

Well Name & No. Gassmann # 125 Test No. 2 Date 6-5-2013  
 Company Murfin Drilling Co. Elevation 2469 KB 2458 GL  
 Address 250. N. water st. 300 Wichita Ks  
 Co. Rep / Geo. Robert Hadrix Rig Murfin #2  
 Location: Sec. 25 Twp. SS Rge. 26 W Co. Decatur State Ks

Interval Tested 3556 3587 Zone Tested LKC B-0  
 Anchor Length 31 Drill Pipe Run 3310 Mud Wt. 9.1  
 Top Packer Depth 3551 Drill Collars Run 234 Vis 57  
 Bottom Packer Depth 3556 Wt. Pipe Run -0- WL 5.2  
 Total Depth 3587 Chlorides 800 ppm System LCM 0

Blow Description IF: Weak blow 0:ed in 2mts.  
ISI: No blow back  
FF: Flushed tool with Blow Dead in 20secs.  
FSE No blow back

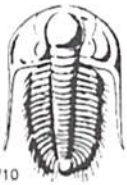
Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>Mud</u>				<u>100</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 25 BHT 160 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1804</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>215</u>
(B) First Initial Flow <u>15</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>222</u>
(C) First Final Flow <u>22</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>4:01</u>
(D) Initial Shut-In <u>1108</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>7:10</u>
(E) Second Initial Flow <u>20</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>8:58</u>
(F) Second Final Flow <u>25</u>	<input checked="" type="checkbox"/> Mileage <u>50x2=100x155</u> 155	Comments _____
(G) Final Shut-In <u>990</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1725</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1630</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1630</u>	

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 51137

4/10

Well Name & No. Gassmann # 1-25 Test No. 3 Date 6-5-2013  
 Company Murfin Drilling Elevation 2469 KB 2458 GL  
 Address 250 N. Water ste 300 Wichita Ks.  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 25 Twp. 5S Rge. 26w Co. DeCATur State KS

Interval Tested 3593 3630 Zone Tested LKC-  
 Anchor Length 39 Drill Pipe Run 3347 Mud Wt. 9.1  
 Top Packer Depth 3588 Drill Collars Run 234 Vis 6.6  
 Bottom Packer Depth 3593 Wt. Pipe Run - 0 WL 6.4  
 Total Depth 3632 Chlorides 2,200 ppm System LCM 4#

Blow Description IF: Weak blow, bit 14 2 in over 30  
FSI: No blow back  
FF: Weak blow 5 in. over 60 mts.  
FSI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>200</u>	<u>mud</u>				

Rec Total 200 BHT 103 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

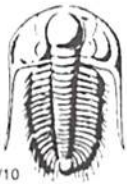
(A) Initial Hydrostatic 1832  Test 1150 T-On Location 17:00  
 (B) First Initial Flow 17  Jars 250 T-Started 17:20  
 (C) First Final Flow 62  Safety Joint 75 T-Open 19:32  
 (D) Initial Shut-In 1083  Circ Sub \_\_\_\_\_ T-Pulled 23:35  
 (E) Second Initial Flow 54  Hourly Standby \_\_\_\_\_ T-Out 1:06  
 (F) Second Final Flow 121  Mileage 50x2 = 100x1.55 155 Comments \_\_\_\_\_  
 (G) Final Shut-In 1054  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1760  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 60  Extra Recorder \_\_\_\_\_ Total 1630  
 Final Flow 60  Day Standby \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 40  Accessibility \_\_\_\_\_  
 Sub Total 1630

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 51138

4/10

Well Name & No. Gassman # 1-25 Test No. 4 Date 6-6-2013  
 Company Murfin Drilling Co. Elevation 2464 KB 2458 GL  
 Address 250 N. water ste. 300 Wichita Ks.  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 25 Twp. 5S Rge. 26W Co. Decatur State Ks.

Interval Tested 3640 3715 Zone Tested LKC-H-K  
 Anchor Length 75 Drill Pipe Run 3404 Mud Wt. 9.1  
 Top Packer Depth 3635 Drill Collars Run 234 Vis 57  
 Bottom Packer Depth 3640 Wt. Pipe Run -0- WL 5.2  
 Total Depth 3715 Chlorides 2,200 ppm System LCM #4

Blow Description IF: Weak blow, Built to 3 in. over 30 mins.

ISF: No blow back

FF: Weak blow Dried in 12 mins

FSF: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>OCM</u>	<u>20</u>	<u>20</u>	<u>80</u>	<u>80</u>
<u>60</u>	<u>OCM</u>	<u>10</u>	<u>10</u>	<u>90</u>	<u>90</u>

Rec Total 120 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1874  Test 950 T-On Location 12:13  
 (B) First Initial Flow 21  Jars 250 T-Started 12:15  
 (C) First Final Flow 51  Safety Joint 75 T-Open 14:08  
 (D) Initial Shut-In 1188  Circ Sub \_\_\_\_\_ T-Pulled 17:20  
 (E) Second Initial Flow 114  Hourly Standby \_\_\_\_\_ T-Out 18:39  
 (F) Second Final Flow 1141  Mileage 50x2 = 100x1.55 = 155 Comments \_\_\_\_\_  
 (G) Final Shut-In 1231  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1817  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 60  Day Standby \_\_\_\_\_ Total 1430  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 1430

Approved By \_\_\_\_\_ Our Representative Chris Skye

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 51139

4/10

Well Name & No. Gassman #1-25 Test No. 5 Date 6-7-2013  
 Company Murfin Drilling Co. Elevation 2469 KB 2458 GL  
 Address 250 N. Water St. 300 Wichita KS.  
 Co. Rep / Geo. Robert Hatrix Rig Murfin #2  
 Location: Sec. 25 Twp. 5S Rge. 26W Co. Decatur State Ks.

Interval Tested 3693 3735 Zone Tested LKC R-2  
 Anchor Length 42 Drill Pipe Run 3437 Mud Wt. 9.1  
 Top Packer Depth 3688 Drill Collars Run 234 Vis 57  
 Bottom Packer Depth 3693 Wt. Pipe Run - 0 - WL 5.2  
 Total Depth 3735 Chlorides 2,200 ppm System LCM 4#

Blow Description IF: Weak blow, Surface over 30 mins.

IS: No blow back

FF: Weak blow after 5 mins Built to 1 1/2 in. over 60 mins.

FSI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>0</u>	<u>180 ft gas in pipe</u>				
<u>120</u>	<u>gwcmo</u>	<u>20</u>	<u>50</u>	<u>10</u>	<u>20</u>

Rec Total 120 BHT 100 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1936  Test 1150 T-On Location 00:40  
 (B) First Initial Flow 18  Jars 250 T-Started 0:00  
 (C) First Final Flow 31  Safety Joint 75 T-Open 2:57  
 (D) Initial Shut-In 1148  Circ Sub \_\_\_\_\_ T-Pulled 7:00  
 (E) Second Initial Flow 121  Hourly Standby \_\_\_\_\_ T-Out 8:47  
 (F) Second Final Flow 175  Mileage 50x2 = 100x1.55 155 Comments \_\_\_\_\_  
 (G) Final Shut-In 1163  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1820  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 60  Day Standby \_\_\_\_\_ Total 1630  
 Final Flow 60  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 90 Sub Total 1630

Approved By \_\_\_\_\_

Our Representative Chad Hays

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# Robert D. Hendrix

## Petroleum Geologist

### GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY **Murfin Drilling Co Inc.**

LEASE **Gassmann #1-25**

FIELD **Wildcat**

LOCATION **1730' fsi & 870' fwl**

SEC **25** TWP **5S** RGE **26W**

COUNTY **Decatur** STATE **Kansas**

CONTRACTOR **Murfin Drilling Co. Rig #2**

SPUD **06/01/2013** COMP **06/07/013**

RTD **3840'** LTD **3840'**

MUD UP **2995'** TYPE MUD **Chemical**

SAMPLES SAVED FROM **3180'** TO **TD**

DRILLING TIME KEPT FROM **3180'** TO **TD**

SAMPLES EXAMINED FROM **3180'** TO **TD**

GEOLOGICAL SUPERVISION FROM **3200'**

GEOLOGIST ON WELL **Robert D. Hendrix**

FORMATION TOPS

ELECTRIC LOG

SAMPLE

Anhydrite

Topoka

Heebner Shale

Toronto

Lansing

Stark Shale

BKC

ELEVATIONS

KB **2469'**

DF

GL **2458'**

Measurements Are All From **Kelly Bushing**

CASING

CONDUCTOR

SURFACE **8.518" at 235'**

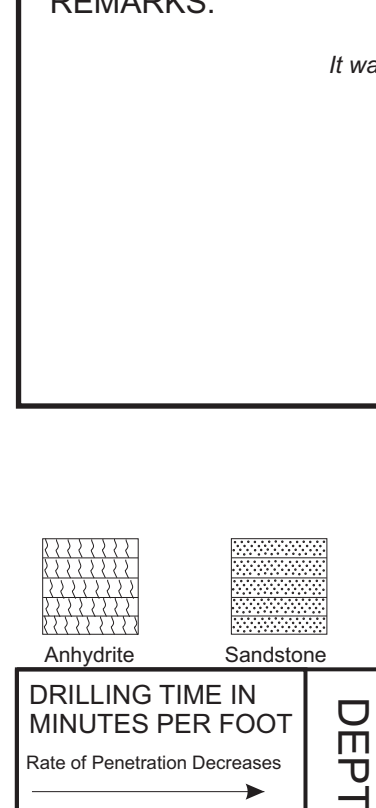
PRODUCTION **5 1/2" @ 3830'**

ELECTRICAL SURVEYS

Boonville/Inducton/MicroSeismic

Pioneer Energy Services

AP# 15-039-21180



REMARKS:

It was determined that casing be run to further test this well in the Lansing K zone.

### LEGEND



DEPTH	LITHOLOGY	SAMPLE DESCRIPTION	REMARKS
2060	Anhydrite		<b>Anhydrite 2071 (+397)</b>
2100	Anhydrite		<b>Base Anhydrite 2105 (+363)</b>
3200	Limestone	Limestone: tan to brown, fxl, silty, fossiliferous, no vis por	Geologist on location at 5:03 pm 6/03/2013 @ 3200'
	Shale	Shale: black, gray, brown, red, silty	
	Limestone	Limestone: tan to gray, fxl, sl chalky, fossiliferous, no vis por, ns	
	Shale	Shale: black, gray, brown, red, silty	
	Limestone	Limestone: white to yellow, fxl, chalky, granular (silty), no vis por	
	Shale	Shale: gray, black, red	
	Limestone	Limestone: tan to lt gray, f-mxl, sl chalky, fossiliferous, no vis por, ns	
	Shale	Shale: gray, red, silty	
	Limestone	Limestone: tan, f-mxl, sl chalky, granular, fossiliferous, no vis por	
	Shale	Shale: red, gray, silty	
3300	Limestone	Limestone: tan to gray, fxl, granular, silty, fossiliferous, no vis por	<b>Topeka 3302 (-833)</b>
	Limestone	Limestone: tan to brown, fxl, sl chalky, granular, fossiliferous, no vis por	
	Shale	Shale: red, gray, silty	
	Limestone	Limestone: tan to gray, fxl, sl chalky, fossiliferous, no vis por	
	Shale	Shale: red, gray, green	
	Limestone	Limestone: tan to white to gray, f-mxl, chalky, granular, fossiliferous, pr interxl por	
	Shale	Shale: red, gray, green	
	Limestone	Limestone: tan to white, mxln, chalky, granular, fossiliferous, no vis por	
	Shale	Shale: gray, green, red	
	Limestone	Limestone: tan to white, mxln, chalky, granular, v-fossiliferous, no vis por	
3400	Limestone	Limestone: tan to white, mxln, chalky, granular, v-fossiliferous, no vis por	DST #1 3500-3553 30-60-60-90 1st open: fair blow bob 10 min 2nd open: fair blow bob 15 min no returns Rec: 120' wcm 20/80 120' mcw 30/70 240' mcw 10/90 hydro: 1771-1684 psi lf: 53-164 psi ff: 83-271 psi sip: 1044-977 psi bht: 105°F chl: 90,000 ppm
	Shale	Shale: red, gray, green	
	Limestone	Limestone: tan, f-trl, sl chalky, fossiliferous, no vis por	
	Shale	Shale: red, gray, green	
	Limestone	Limestone: tan to white, f-mxl, v-chalky, fossiliferous, no vis por	
	Shale	Shale: gray, green, red	
	Limestone	Limestone: tan to lt gray, fxl, v-chalky, fossiliferous, no vis por	
	Limestone	Limestone: tan to lt gray, fxl, v-chalky, mostly dense, sl fossiliferous, sl pp por, ns	
	Shale	Shale: black carbonaceous	
	Limestone	Limestone: tan, fxl, dense, fossiliferous, no vis por	
	Shale	Shale: red, gray, black	
3500	Shale	Shale: red, gray, black	<b>Heebner 3503 (-1034)</b>
	Limestone	Limestone: tan to lt gray, fxl, sl chalky, oolitic, fossiliferous, no vis por, ns	
	Shale	Shale: gray, green, red, soft silty	
	Limestone	Limestone: tan, f-trl, oolitic in part, sl fossiliferous, 50% sample gd oolitic to vug por, lt sat stain, exsfo, gd odor	
	Shale	Shale: red, gray, green	
	Limestone	Limestone: white, fxl, chalky, sl fossiliferous, 4 pieces sl vug por, lt sat stain, slsfo, no odor	
	Shale	Shale: red, gray, green	
	Limestone	Limestone: tan to white, f-mxl, oolitic, fossiliferous, fr oolitic & fossiliferous por, 20% of the sample, gd dark sat stain, frsfo, fair odor	
	Limestone	Limestone: tan to white, f-mxl, fossiliferous, fr fossiliferous to vug por, 25% of the sample, gd dark sat stain, frsfo, fair odor	
	Shale	Shale: red, gray	
3600	Limestone	Limestone: tan to lt gray, fxl, chalky, mostly dense, sl fossiliferous, 6 pieces, sl interxl por, slsfo, no odor	DST #2 3592-3616 30-60-30-60 1st open: wk surf died 2 min 2nd open: flushed, no blow no returns Rec: 25' mud hydro: 1804-1725 psi lf: 15-22 psi ff: 20-25 psi sip: 1108-990 psi bht: 100°F 8:00am, 6/5/2013
	Shale	Shale: red, brown, gray, black	
	Limestone	Limestone: white, mxln, chalky, oolitic, fossiliferous, 5% sample, sl interxl por, lt spotty stain, slsfo on break, no odor, some porosity is barren	
	Limestone	Limestone: white, fxl, cherty, dense, sl pyritic, no vis por	
	Shale	Shale: black, red, gray	
	Limestone	Limestone: brown to gray, f-mxl, dense, fossiliferous, no vis por	
	Shale	Shale: black, red, gray	
	Limestone	Limestone: white to lt gray, f-mxl, sl chalky, fossiliferous, mostly dense, 1% sample, sl interxl por, lt sat stain, nfo, no odor	
	Limestone	Limestone: white to lt gray, fxl, dense, sl fossiliferous, no vis por, ns	
	Shale	Shale: red, gray, silty	
3700	Limestone	Limestone: white, fxl, chalky, dense, no vis por, 8 pieces, black stain, nfo, no odor	8:00am, 6/6/2013 <b>Stark 3695 (-1226)</b> wt 9.2, vis. 67, lcm 4# Morgan Mud, Cade Lines
	Shale	Shale: red, gray, silty, soft	
	Limestone	Limestone: white to tan, fxl, sl chalky, mostly dense, sl pp to interxl por, 3 percent dark spotty stain, slsfo, no odor	
	Limestone	Limestone: white, fxl, chalky, soft, sl fossiliferous, no vis por	
	Shale	Shale: red, gray, black	
	Limestone	Limestone: white to tan (greenish tinted), fxl, chalky, dense, oolitic in part, no vis por, ns	
	Shale	Shale: red, gray, brown	
	Shale	Shale: red, gray, brown	
	Limestone	Limestone: white to tan, fxl, sl chalky, dense, no vis por	
	Shale	Shale: red, gray, silty, muddy	
3800	Shale	Shale: red, brown, silty, muddy	8:00am, 6/7/2013 <b>BKC 3736 (-1267)</b> DST #4 3640-3715 30-60-30-60 1st open: wk blow built to 3" 2nd open: wk surface blow died in 12 min no returns Rec: 60' ocm 20/80 60' ocm 10/90 hydro: 1874-1817 psi lf: 21-51 psi ff: 114-1191 psi sip: 1188-1231 psi bht: 102°F *note* tool failed to stay open on 2nd open which changed to a shut in. wt 9.2, vis. 66, lcm 4# Morgan Mud, Cade Lines
	Limestone	Limestone: tan to brown, fxl, sl chalky, dense, no vis por	
	Shale	Shale: red, brown, silty, sandy, muddy	
	Limestone	Limestone: lt gray, fxl, chalky, sandy, no vis por	
	Shale	Shale: red, brown, silty, sandy, muddy	
	Shale	Shale: red, brown, silty, sandy, muddy	
	Shale	Shale: red, brown, silty, sandy, muddy	
	Shale	Shale: red, brown, silty, sandy, muddy	
	Shale	Shale: red, brown, silty, sandy, muddy	
	Shale	Shale: red, brown, silty, sandy, muddy	
3900	Shale	Shale: red, brown, silty, sandy, muddy	DST #5 3693-3735 30-60-60-90 1st open: wk intermittent surface blow 2nd open: wk surface blow built to 1 1/4" (plugging) no returns Rec: 120' w&gcmo 10/20/20/50 180' gip hydro: 1936-1820 psi lf: 18-31 psi ff: 121-175 psi (plugging) sip: 1148-1163 psi bht: 100°F Geologist off location at 10:00pm, 6/7/2013
	Shale	Shale: red, brown, silty, sandy, muddy	
	Shale	Shale: red, brown, silty, sandy, muddy	
	Shale	Shale: red, brown, silty, sandy, muddy	
	Shale	Shale: red, brown, silty, sandy, muddy	
	Shale	Shale: red, brown, silty, sandy, muddy	
	Shale	Shale: red, brown, silty, sandy, muddy	
	Shale	Shale: red, brown, silty, sandy, muddy	
	Shale	Shale: red, brown, silty, sandy, muddy	
	Shale	Shale: red, brown, silty, sandy, muddy	

Murfin Drilling Co Inc  
Gassmann #1-25  
1730'fsi & 870'fwl  
25-5-26w, Decatur County, Kansas  
KB=2469', GL=2458'  
API: 15-039-21180



PO Box 93999  
Southlake, TX 76092

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

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

# INVOICE

Invoice Number: 136656  
Invoice Date: Jun 1, 2013  
Page: 1

Now Includes:



Customer ID	Field Ticket #	Payment Terms	
Murfin	60790	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Jun 1, 2013	7/1/13

Quantity	Item	Description	Unit Price	Amount
165.00	MAT	Gassman #1-25		
		Class A Common	17.90	2,953.50
6.00	MAT	Chloride	64.00	384.00
175.25	SER	Cubic Feet	2.48	434.62
495.25	SER	Ton Mileage	2.60	1,287.67
1.00	SER	Surface	1,512.25	1,512.25
62.00	SER	Pump Truck Mileage	7.70	477.40
1.00	SER	Manifold Rental	275.00	275.00
62.00	SER	Light Vehicle Mileage	4.40	272.80
1.00	CEMENTER	Alan Ryan		
1.00	EQUIP OPER	Wayne McGhghy		
1.00	OPER ASSIST	Brandon Wilkinson		

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

\$ 2,659.03

ONLY IF PAID ON OR BEFORE  
Jun 26, 2013

Subtotal	7,597.24
Sales Tax	243.64
Total Invoice Amount	7,840.88
Payment/Credit Applied	
<b>TOTAL</b>	<b>7,840.88</b>

# ALLIED OIL & GAS SERVICES, LLC 060790

Federal Tax I.D. # 20-8651475

EMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT

*Oakley, Ky*

DATE <i>6/1/13</i>	SEC <i>25</i>	TWP. <i>5</i>	RANGE <i>26</i>	CALLED OUT	ON LOCATION	JOB START <i>9:30p</i>	JOB FINISH <i>10:00p</i>
WELL # <i>125</i>	LOCATION <i>Allison SE 70c 15 14</i>			COUNTY <i>Rowan</i>	STATE <i>Ky</i>		
WELL OR NEW (Circle one) <input checked="" type="radio"/> <i>NEW</i>				LOCATION <i>1/4m East</i>			

CONTRACTOR *Muc En*  
 TYPE OF JOB *Surface*  
 CEMENT SIZE *10" x 14"* T.D.  
 CASING SIZE *8 1/8"* DEPTH *235'*  
 TUBING SIZE DEPTH  
 RILL PIPE *4 1/2"* DEPTH *235'*  
 CEMENT DEPTH  
 RES. MAX *500* MINIMUM @  
 CEAS. LINE SHOE JOINT  
 CEMENT LEFT IN CSG. *15'*  
 BRFS.  
 DISPLACEMENT *140014*

OWNER *Same*  
 CEMENT AMOUNT ORDERED *165 Com 370 CC*

EQUIPMENT

UMP TRUCK CEMENTER *Alan*  
 HELPER *Woyce*  
 ULK TRUCK DRIVER *Brandon*  
 ULK TRUCK DRIVER

COMMON <i>165</i>	@ <i>17.90</i>	<i>2953.50</i>
POZMIX	@	
GEL	@	
CHLORIDE <i>6</i>	@ <i>64.00</i>	<i>384.00</i>
ASC	@	
	@	
	@	
	@	
	@	
	@	
	@	
HANDLING <i>22.17</i>	@ <i>2</i>	<i>44.34</i>
MILEAGE <i>2.98</i>	@ <i>128.00</i>	<i>381.44</i>
		TOTAL <i>5059.79</i>

REMARKS:  
*2" Lg. Circulate, Mix Cement, Displacement*

*Put in Cement*

*4 1/2" to 6" to RT Shank in place, 12 1/2' Gravel*

CHARGE TO *Muc En Drilling*

CITY STATE ZIP

SERVICE

DEPTH OF JOB		
PUMP TRUCK CHARGE		<i>1512.25</i>
EXTRA FOOTAGE	@	
MILEAGE <i>62</i>	@ <i>7.70</i>	<i>477.40</i>
MANIFOLD	@	<i>235.00</i>
<i>Site Vehicle 62</i>	@ <i>7.40</i>	<i>458.80</i>
		TOTAL <i>2537.45</i>

we 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 *Arro Cabera*  
 SIGNATURE *Arro Cabera*

PLUG & FLOAT EQUIPMENT

TOTAL

SALES TAX (if Any)

TOTAL CHARGES *7,597.24*

DISCOUNT *2,659.03* IF PAID IN 30 DAYS

*4,938.20 Net*



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



Acob -  
cc:boon  
cc:lin  
cc:L-1

# Invoice

DATE	INVOICE #
8/13/2013	24475

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	#1-25	Gassmann	Decatur		Oil	Development	Port Collar	Josh
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				120	Miles	6.00	720.00
576D-D	Pump Charge - Port Collar				1	Job	1,500.00	1,500.00
288	Sand (20/40 Brady)				2	Sack(s)	22.00	44.00T
290	D-Air				2	Gallon(s)	42.00	84.00T
330	Swift Multi-Density Standard (MIDCON II)				200	Sacks	17.00	3,400.00T
276	Flocele				100	Lb(s)	2.00	200.00T
581D	Service Charge Cement				400	Sacks	2.00	800.00
583D	Drayage				2,390.4	Ton Miles	1.00	2,390.40
	Subtotal							9,138.40
	Sales Tax Decatur County						7.15%	266.55
USED FOR <u>IC 103</u> APPROVED <u>SI</u>								
<b>We Appreciate Your Business!</b>							<b>Total</b>	\$9,404.95



CHARGE TO: Murkin  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE, ZIP CODE: \_\_\_\_\_

TICKET No 24475

PAGE 1 OF 1

SERVICE LOCATIONS: Hays ks WELLPROJECT NO. 1.25 LEASE 1.25 COUNTY/PARISH Decatur STATE KS CITY \_\_\_\_\_ DATE 8-13-14 OWNER \_\_\_\_\_  
Ness Combs CONTRACTOR Decatur RIG NAME NO. \_\_\_\_\_ SHIPPED VIA CT DELIVERED TO Decatur ORDER NO. \_\_\_\_\_  
 WELL TYPE Oil WELL CATEGORY Develop JOB PURPOSE Part collar WELL PERMIT NO. \_\_\_\_\_ WELL LOCATION Lenora Well no casing 15 1/2 mi N.E. 1/4

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	LOC	ACCOUNTING		DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
			ACCT	DF							
575		1			MILEAGE # 112	120	mi.			6.00	720.00
576 D		1			Pump Charge Part collar	1	ea			1500.00	1500.00
288		1			Sand	2	sts			22.00	44.00
290		1			O. Air	2	gal			42.00	84.00
330		1			Swift Muth Density	200	sts			17.00	3400.00
276		1			Piocele	100	lbs			2.00	200.00
581		1			Service Charge cement	400	sts			2.00	800.00
583		1			Drayage	2390	yo			1.00	2390.00

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  
 DATE SIGNED 8-13-14 TIME SIGNED 0900  A.M.  P.M.  
 SIGNATURE: [Signature]

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: 9138 AMOUNT: 40  
 TOTAL: 9404 AMOUNT: 95

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







**CONSOLIDATED**  
Oil Well Services, LLC

Accty -  
cc: WF  
cc: Liz  
cc: B.I  
es, LLC  
46

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

**INVOICE**

Invoice # 259403

Invoice Date: 06/10/2013 Terms: 10/10/30,n/30

Page 1

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

GASSMANN 1-25  
39997  
25-56-26  
06-08-2013  
KS

USED FOR 1C 103  
APPROVED JTB

Part Number	Description	Qty	Unit Price	Total
1126	OIL WELL CEMENT	175.00	23.7000	4147.50
1142A	KCL SUB MB6875 CC3107 (1	2.00	41.1000	82.20
1111A	SODIUM METASILICATE	200.00	2.5200	504.00
1102	CALCIUM CHLORIDE (50#)	240.00	.9400	225.60
4104	CEMENT BASKET 5 1/2"	2.00	290.0000	580.00
4136	TURBOLIZER 5 1/2"	15.00	86.0000	1290.00
4159	FLOAT SHOE AFU 5 1/2"	1.00	433.7500	433.75
4285	5 1/2" PORT COLLAR	1.00	2178.7500	2178.75
4315	ROTATING SCRATCHERS	8.00	94.5000	756.00
4310	ROTATING HEAD	1.00	150.0000	150.00
4454	5 1/2" LATCH DOWN PLUG	1.00	318.2500	318.25

Sublet Performed	Description	Total
9996-130	CEMENT MATERIAL DISCOUNT	-1066.61
9995-130	CEMENT EQUIPMENT DISCOUNT	-381.04

Description	Hours	Unit Price	Total
405 SINGLE PUMP	1.00	3175.00	3175.00
405 EQUIPMENT MILEAGE (ONE WAY)	30.00	5.25	157.50
566 TON MILEAGE DELIVERY	1.00	477.90	477.90

Amount Due 15255.07 if paid after 07/10/2013

Parts:	10666.05	Freight:	.00	Tax:	700.76	AR	13729.56
Labor:	.00	Misc:	.00	Total:	13729.56		
Sublt:	-1447.65	Supplies:	.00	Change:	.00		

Signed \_\_\_\_\_

Date \_\_\_\_\_



**CONSOLIDATED**  
Oil Well Services, LLC

259403

TICKET NUMBER 39997  
LOCATION Oakley MS  
FOREMAN Mark Shaw  
Walt O. n Kel

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

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

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
6-8-13	5406	Cassmann #1-25	25	SL	26W	Decatur
CUSTOMER			TRUCK #			
Mailing Address			DRIVER			
CITY			TRUCK #			
STATE			DRIVER			
ZIP CODE			TRUCK #			
			DRIVER			

JOB TYPE long string HOLE SIZE 7 7/8" HOLE DEPTH 3840 CASING SIZE & WEIGHT 5 1/2" 15.5#  
CASING DEPTH 3830.59' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER 3000' (to 2078')  
SLURRY WEIGHT 14.2 SLURRY VOL 1.42 WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING 21.16  
DISPLACEMENT 90 1/2 bbls DISPLACEMENT PSI 80 MIX PSI 1300 RATE \_\_\_\_\_

REMARKS: Safety meeting and Rig upon Murfin Drilling by Platequin and  
turbulizers on joints 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 40. Baskets on bottoms of  
40, 41 Port collar tool on top of 41 @ 2078' Run casing to bottom Circulate  
casing 30 min Pump 5 bbls water Flow check calcium metasilicate flush  
mix 125 sks OWC down casing Shut down clean pump & lines displaced 90 1/2 bbls  
with 600 psi lift Plug landed and held 1300 psi mix 30 sks BH 20 sks MH

Thanks Mark & Crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401C	1	PUMP CHARGE	3175.00	3175.00
5406	30	MILEAGE	5.25	157.50
5407	9.1 Tons	Ton mileage delivery	1.75	477.90
1126	175 sks	OWC	23.70	4147.50
1142A	2 gal	KCL	41.10	82.20
1111A	200 lb	Sodium Metasilicate	2.52	504.00
1102	240 lb	Calcium chloride	.94	225.60
4104	2	5 1/2" Baskets	290.00	580.00
4136	15	5 1/2" Turbulizers	86.00	1290.00
4159	1	5 1/2" AFQ float shoe	433.75	433.75
4285	1	5 1/2" Port collar tool	2178.75	2178.75
4315	8	Rotating Scratchers	94.50	756.00
4310	1	Rotating head	150.00	150.00
4454	1	5 1/2" Latchdown Plug	318.25	318.25
			Subtotal	14476.45
			less 10% discount	14476.65
			Subtotal	13028.90
			SALES TAX	700.76
			ESTIMATED TOTAL	13729.56

**Completed**

Ravin 3737

AUTHORIZATION Alan Nahman TITLE \_\_\_\_\_ DATE 6-8-13

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.