



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1217565  
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: \_\_\_\_\_

1217565

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> _____ _____
--	---	---

Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Butler 1-9
Doc ID	1217565

All Electric Logs Run

BHCS
DIL
DUCP
MEL





**QUALITY OILWELL CEMENTING, INC.**  
 PO Box 32 - 740 West Wichita Ave, Russell KS 67665  
 Phone: 785-324-1041 fax: 785-483-1087  
 Email: cementing@ruraltel.net

*acct*  
*Prod-MG*  
 Date: 5/14/2014  
 Invoice # 430  
 P.O.#:  
 Due Date: 6/13/2014  
 Division: Russell

# Invoice

**Contact:**  
 Murfin Drilling Company  
**Address/Job Location:**  
 Murfin Drilling Company  
 P.O. Box 288  
 Russell Ks 67665

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

APPROVED \_\_\_\_\_

**Reference:**  
 BUTLER 1-9

**Description of Work:**  
 SURFACE JOB

**OPERATOR PAY MDC**  
 LEASE: Butler #1-9

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 1,020.55	No				
Common-Class A	150	\$ 2,514.71	Yes				
Bulk Truck Matl-Material Service Charge	158	\$ 353.18	No				
Calcium Chloride	5	\$ 311.04	Yes				
Pump Truck Mileage-Job to Nearest Camp	28	\$ 312.32	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	28	\$ 182.76	No				
Premium Gel (Bentonite)	3	\$ 54.59	Yes				

**Invoice Terms:**

Net 30

SubTotal: \$ 4,749.13  
 Discount Available ONLY if Invoice is Paid & Received  
 within listed terms of invoice: \$ (712.37)

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SubTotal for Taxable Items: \$ 2,448.28  
 SubTotal for Non-Taxable Items: \$ 1,588.48  
 Total: \$ 4,036.76  
 Tax: \$ 150.57

6.15% Rush County Sales Tax

**Thank You For Your Business!**

**Amount Due: \$ 4,187.33**  
**Applied Payments:**  
**Balance Due: \$ 4,187.33**

Past Due Invoices are subject to a service charge (annual rate of 24%)  
 This does not include any applicable taxes unless it is listed.  
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# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

Home Office P.O. Box 32 Russell, KS 67665

No. 430

Cell 785-324-1041

Date	5-14-14	Sec.	9	Twp.	17	Range	19	County	Blsh	State	KS	On Location	5:00pm	Finish	7:30pm					
Lease	Butler		Well No.	1-9		Location	Lieberthal 13 SW to 180													
Contractor	Murfin		16	Owner	3 1/2 S E into															
Type Job	Surface			To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.																
Hole Size	12 1/4		T.D.	218		Charge To	Murfin Drlg.													
Csg.	8 5/8		Depth	218		Street														
Tbg. Size			Depth			City	State													
Tool			Depth			The above was done to satisfaction and supervision of owner agent or contractor.														
Cement Left in Csg.	20ft		Shoe Joint	20ft		Cement Amount Ordered	150 3 1/2 LC 2 1/2													
Meas Line			Displace	12.3/4		gel														
<b>EQUIPMENT</b>						Common	150													
Pumptrk	16	No.	Cement Helper	Jimmie		Poz. Mix	2													
Bulktrk		No.	Driver	Billy		Gel.	3													
Bulktrk	13	No.	Driver	Lorraine		Calcium	5													
<b>JOB SERVICES &amp; REMARKS</b>						Hulls														
Remarks:						Salt														
Rat Hole						Flowseal														
Mouse Hole						Kol-Seal														
Centralizers						Mud CLR 48														
Baskets						CFL-117 or CD110 CAF 38														
D/V or Port Collar						Sand														
<p>Cement did Circulate</p> <p>Thank You</p>						Handling	158													
						Mileage														
						<b>FLOAT EQUIPMENT</b>														
						Guide Shoe														
Centralizer																				
Baskets																				
AFU Inserts																				
Float Shoe																				
Latch Down																				
						Pumptrk Charge	Surface													
						Mileage	28													
						Tax														
						Discount														
						Total Charge														
X Signature	[Signature]																			



**QUALITY OILWELL CEMENTING, INC.**  
 PO Box 32 - 740 West Wichita Ave, Russell KS 67665  
 Phone: 785-324-1041 fax: 785-483-1087  
 Email: cementing@ruraltel.net

Date: 5/21/2014  
 Invoice # 36

P.O.#:

Due Date: 6/20/2014

Division: Russell

*acct  
Prod-MC*

# Invoice

**Contact:**  
 Murfin Drilling Company  
**Address/Job Location:**  
 Murfin Drilling Company  
 P.O. Box 288  
 Russell Ks 67665

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

APPROVED \_\_\_\_\_

**OPERATOR PAY MDC**  
**LEASE:** BM

**Reference:**  
 BUTLER 1-9

**Description of Work:**  
 PLUG JOB

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 1,020.55	Yes				
Common-Class A	162	\$ 2,715.88	Yes				
POZ Mix-Standard	108	\$ 760.45	Yes				
Bulk Truck Matl-Material Service Charge	279	\$ 623.65	Yes				
Pump Truck Mileage-Job to Nearest Camp	28	\$ 312.32	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	28	\$ 182.76	Yes				
Premium Gel (Bentonite)	9	\$ 163.76	Yes				
Flo Seal	67	\$ 149.76	Yes				

**Invoice Terms:**

Net 30

SubTotal: \$ 5,929.12

Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (889.37)

SubTotal for Taxable Items: \$ 5,039.75

SubTotal for Non-Taxable Items: \$ -

Total: \$ 5,039.75

Tax: \$ 309.94

6.15% Ellis County Sales Tax

**Thank You For Your Business!**

**Amount Due: \$ 5,349.69**

**Applied Payments:**

**Balance Due: \$ 5,349.69**

Past Due Invoices are subject to a service charge (annual rate of 24%)  
 This does not include any applicable taxes unless it is listed.  
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# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 036

Date	5-21-14	Sec.	9	Twp.	17	Range	19	County	Rush	State	KS	On Location		Finish	8:00am
Location <i>Lipenthal 15 W to 18 rd 3 1/2 S Bnto</i>															
Lease	Butler			Well No.	1-9			Owner							
Contractor	Martin #16			To Quality Oilwell Cementing, Inc.								You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Type Job	Rotary Avg			Charge To								Martin Drilling			
Hole Size	7 7/8			T.D.	4032			Street							
Csg.				Depth								City			
Tbg. Size				Depth								State			
Tool				The above was done to satisfaction and supervision of owner agent or contractor.											
Cement Left in Csg.				Shoe Joint								Cement Amount Ordered			
<i>270 @ 40 4 1/2 CEL 14 #10</i>															
Meas Line				Displace											
<b>EQUIPMENT</b>															
Pumptrk	No.	Cementer		Common											
	20	Craig		162											
Bulktrk	No.	Helper		Poz. Mix											
		Nick		108											
Bulktrk	No.	Driver		Gel.											
	14	Doug		109											
Bulktrk	No.	Driver		Calcium											
		Doug													
<b>JOB SERVICES &amp; REMARKS</b>															
Remarks:															
Rat Hole <i>30SK</i>															
Mouse Hole <i>20SK</i>															
Centralizers															
Baskets															
D/V or Port Collar															
<i>1st 3930 50SK</i>															
<i>2nd 1350 50SK</i>															
<i>3rd 780 50SK</i>															
<i>4th 270 50SK</i>															
<i>60 20SK</i>															
<b>FLOAT EQUIPMENT</b>															
Guide Shoe															
Centralizer															
Baskets															
AFU Inserts															
Float Shoe															
Latch Down															
Pumptrk Charge <i>plug</i>															
Mileage <i>28</i>															
Tax															
Discount															
Total Charge															
Signature <i>Ay Likel</i>															



Butler #1-9  
 Daily Drilling Report  
 Page Two

5/22/14 RTD: 4030'. CT: 5hrs. Quality plugged 4:30AM – 8:00AM 5/21. RR @ 12:00AM 5/21/14.  
 FINAL REPORT.

MDCI Butler #1-9 2280' FSL 1680' FWL Sec. 9-T17S-R19W 2138' KB							Gear Petr Co Moran – A #1 SW SW SE Sec. 9-T17S-R19W 2132' KB	
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	1332	+806	-8	1331	+807	-7	1318	+814
B/Anhydrite	1369	+770	-10	1368	+771	-9	1352	+780
Topeka	3172	-1034	Flat	3170	-1032	+2	3166	-1034
Heebner	3458	-1320	+3	3456	-1318	+5	3455	-1323
Toronto	3476	-1338	+4	3474	-1336	+6	3474	-1342
Lansing	3502	-1364	+4	3501	-1363	+5	3500	-1368
Stark	3731	-1593	-1	3728	-1590	+2	3724	-1592
BKC	3774	-1636	-1	3770	-1632	+3	3767	-1635
Arbuckle	3923	-1785	-5	3930	-1792	-12	3912	-1780
Reagan	4030							
RTD				4030			3940	
LTD	1332	+806	-8	1331	+807	-7	3936	



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water STE 300  
Wichtia KS 67202

ATTN: Saman Sharifaie

### **Butler #1-9**

### **9-17s-19w Rush,KS**

Start Date: 2014.05.18 @ 09:06:11

End Date: 2014.05.18 @ 16:06:31

Job Ticket #: 58936                      DST #: 1

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

Printed: 2014.05.23 @ 09:16:46



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Company

**9-17s-19w Rush,KS**

250 N Water STE 300  
Wichita KS 67202

**Butler #1-9**

Job Ticket: 58936

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2014.05.18 @ 09:06:11

## GENERAL INFORMATION:

Formation: **LKC "B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:58:31

Time Test Ended: 16:06:31

Test Type: Conventional Bottom Hole (Initial)

Tester: Tate Lang

Unit No: 49

**Interval: 3516.00 ft (KB) To 3540.00 ft (KB) (TVD)**

Reference Elevations: 2138.00 ft (KB)

Total Depth: 3540.00 ft (KB) (TVD)

2133.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8898 Outside**

Press@RunDepth: 62.70 psig @ 3517.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.18

End Date:

2014.05.18

Last Calib.:

2014.05.18

Start Time: 09:06:12

End Time:

16:06:31

Time On Btm:

2014.05.18 @ 10:58:21

Time Off Btm:

2014.05.18 @ 14:58:11

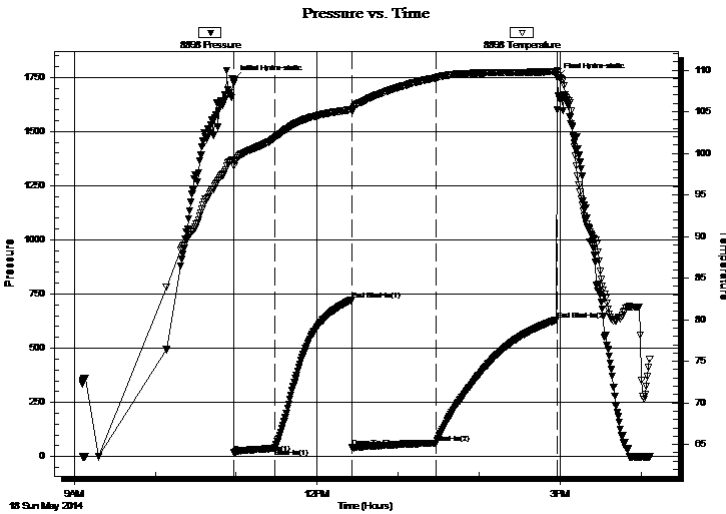
TEST COMMENT: Fair blow built to 4 1/2"

Dead no blow back

Good blow built to 8"

Dead no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1737.18	99.27	Initial Hydro-static
1	17.39	98.48	Open To Flow (1)
30	38.14	101.82	Shut-In(1)
88	723.18	105.25	End Shut-In(1)
88	44.67	105.06	Open To Flow (2)
150	62.70	109.07	Shut-In(2)
240	631.68	109.81	End Shut-In(2)
240	1747.39	109.81	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
115.00	MCW 30%M 70%W	1.36
5.00	Free Oil 100%O	0.07

## Gas Rates

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



# TRILOBITE TESTING, INC

## DRILL STEM TEST REPORT

Murfin Drilling Company

**9-17s-19w Rush, KS**

250 N Water STE 300  
Wichita KS 67202

**Butler #1-9**

Job Ticket: 58936

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2014.05.18 @ 09:06:11

**GENERAL INFORMATION:**

Formation: **LKC "B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:58:31

Time Test Ended: 16:06:31

Test Type: Conventional Bottom Hole (Initial)

Tester: Tate Lang

Unit No: 49

**Interval: 3516.00 ft (KB) To 3540.00 ft (KB) (TVD)**

Reference Elevations: 2138.00 ft (KB)

Total Depth: 3540.00 ft (KB) (TVD)

2133.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8897** **Inside**

Press@RunDepth: psig @ 3517.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.18

End Date:

2014.05.18

Last Calib.:

2014.05.18

Start Time: 09:06:08

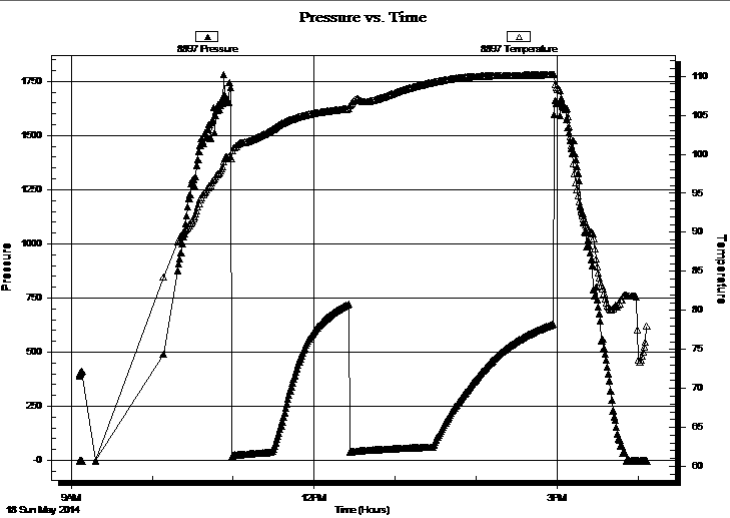
End Time:

16:06:27

Time On Btm:

Time Off Btm:

**TEST COMMENT:** Fair blow built to 4 1/2"  
Dead no blow back  
Good blow built to 8"  
Dead no blow back



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

Recovery		
Length (ft)	Description	Volume (bbl)
115.00	MCW 30%M 70%W	1.36
5.00	Free Oil 100%O	0.07

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Company

**9-17s-19w Rush,KS**

250 N Water STE 300  
Wichita KS 67202

**Butler #1-9**

Job Ticket: 58936

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2014.05.18 @ 09:06:11

## Tool Information

Drill Pipe:	Length: 3483.00 ft	Diameter: 3.80 inches	Volume: 48.86 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 28.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose:	lb
			<u>Total Volume: 49.00 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial	51000.00 lb
Depth to Top Packer:	3516.00 ft			Final	lb
Depth to Bottom Packer:	ft				
Interval between Packers:	24.00 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
Shut In Tool	5.00			3499.00	
Hydraulic tool	5.00			3504.00	
Safety Joint	2.00			3506.00	
Packer	5.00			3511.00	22.00 Bottom Of Top Packer
Packer	5.00			3516.00	
Stubb	1.00			3517.00	
Recorder	0.00	8897	Inside	3517.00	
Recorder	0.00	8898	Outside	3517.00	
Perforations	20.00			3537.00	
Bullnose	3.00			3540.00	24.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>46.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Company

**9-17s-19w Rush,KS**

250 N Water STE 300  
Wichita KS 67202

**Butler #1-9**

Job Ticket: 58936

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2014.05.18 @ 09:06:11

### 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:

40000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
115.00	MCW 30%M 70%W	1.358
5.00	Free Oil 100%O	0.070

Total Length: 120.00 ft

Total Volume: 1.428 bbl

Num Fluid Samples: 0

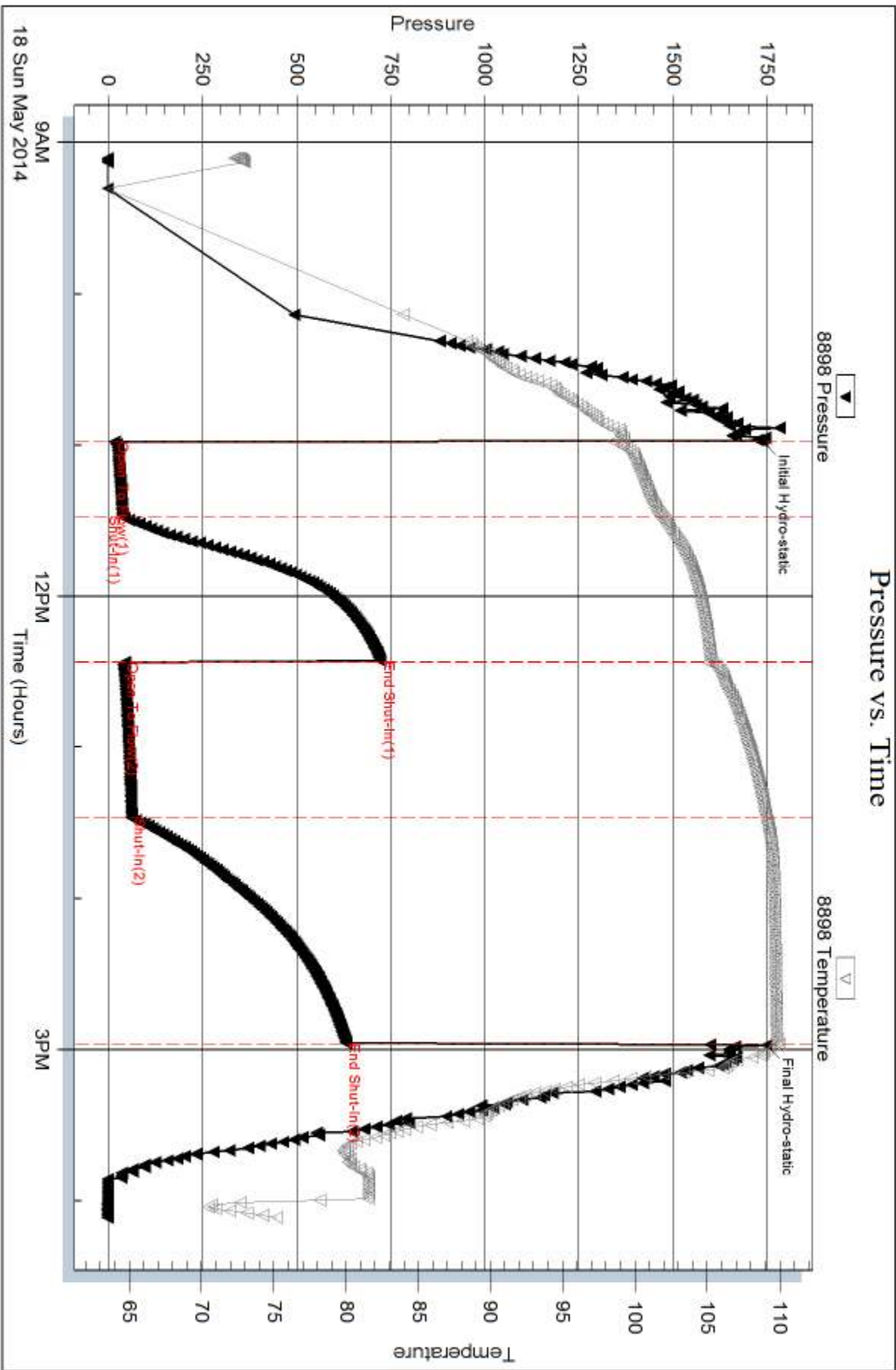
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



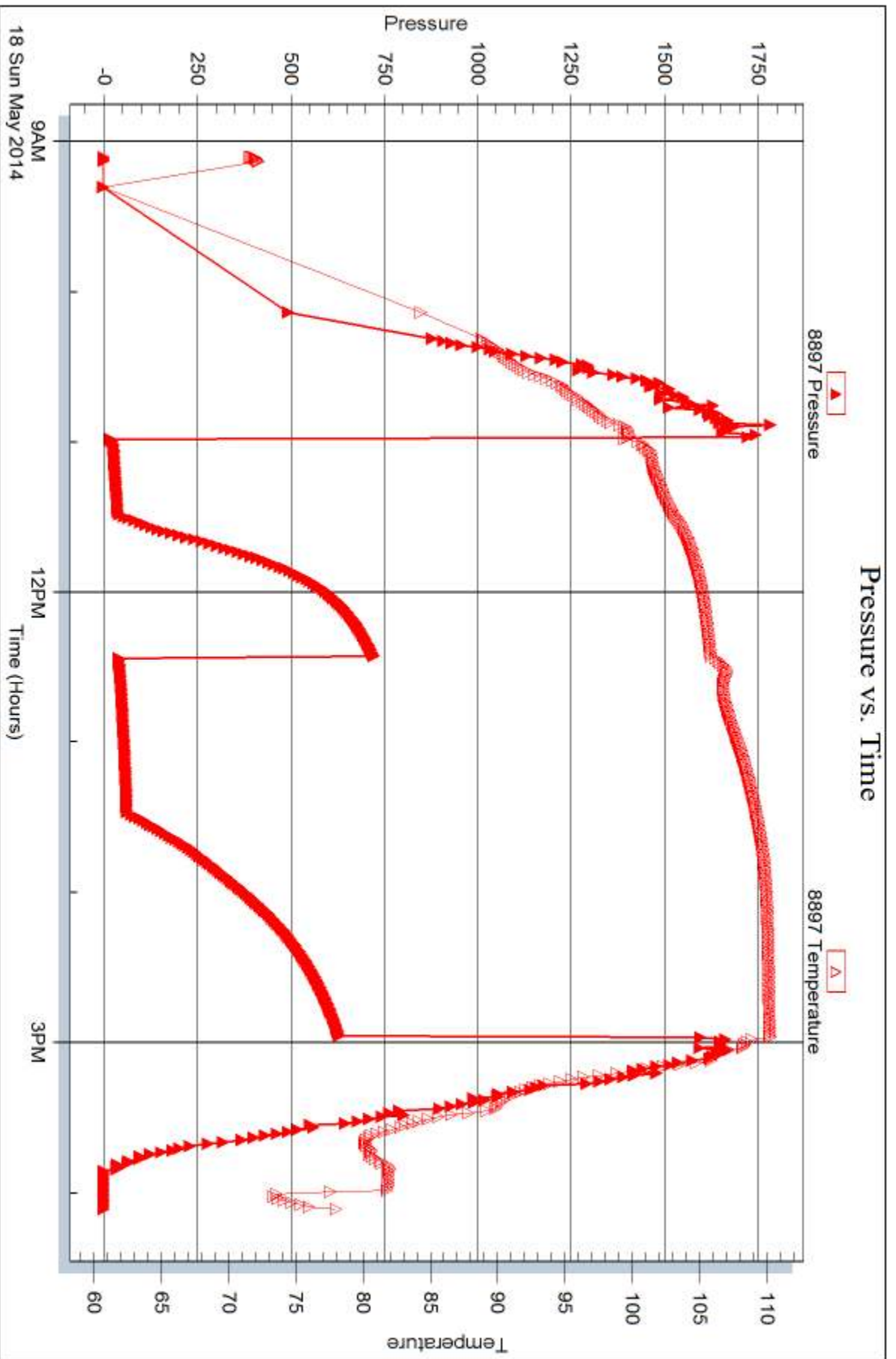
Serial #: 8897

Inside

Murfin Drilling Company

Butler #1-9

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 58936

Printed: 2014.05.23 @ 09:16:47





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water STE 300  
Wichtia KS 67202

ATTN: Saman Sharifaie

### **Butler #1-9**

### **9-17s-19w Rush,KS**

Start Date: 2014.05.19 @ 21:45:02

End Date: 2014.05.20 @ 06:44:32

Job Ticket #: 58937                      DST #: 2

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

Printed: 2014.05.23 @ 09:16:23



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Company

**9-17s-19w Rush,KS**

250 N Water STE 300  
Wichita KS 67202

**Butler #1-9**

Job Ticket: 58937

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2014.05.19 @ 21:45:02

## GENERAL INFORMATION:

Formation: **Cong. Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:26:32

Time Test Ended: 06:44:32

Test Type: Conventional Bottom Hole (Reset)

Tester: Tate Lang

Unit No: 49

**Interval: 3858.00 ft (KB) To 3910.00 ft (KB) (TVD)**

Reference Elevations: 2138.00 ft (KB)

Total Depth: 3910.00 ft (KB) (TVD)

2133.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8898 Outside**

Press@RunDepth: 992.15 psig @ 3859.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.19

End Date:

2014.05.20

Last Calib.:

2014.05.20

Start Time: 21:45:03

End Time:

06:44:32

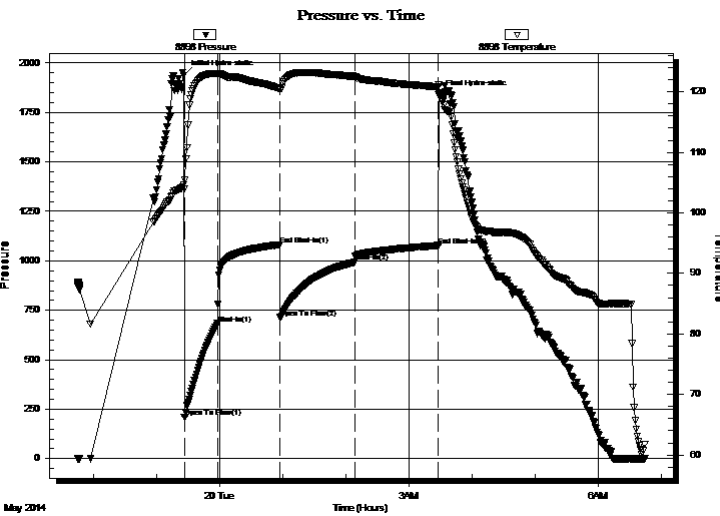
Time On Btm:

2014.05.19 @ 23:26:22

Time Off Btm:

2014.05.20 @ 03:28:11

TEST COMMENT: B.O.B. In 2 mins  
Dead no blow back  
B.O.B. In 2 mins  
Dead no blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1939.53	104.67	Initial Hydro-static
1	209.17	103.97	Open To Flow (1)
32	682.45	122.98	Shut-In(1)
91	1081.92	120.50	End Shut-In(1)
92	713.49	120.33	Open To Flow (2)
162	992.15	122.55	Shut-In(2)
242	1075.24	120.83	End Shut-In(2)
242	1839.11	121.24	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
868.00	Water 100%W	11.92
930.00	OMCW 10%O 80%W 10%M	13.05
335.00	OCMW 10%O 50%W 40%M	4.70
10.00	Free Oil 100%O	0.14

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Company

**9-17s-19w Rush,KS**

250 N Water STE 300  
Wichita KS 67202

**Butler #1-9**

Job Ticket: 58937

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2014.05.19 @ 21:45:02

## GENERAL INFORMATION:

Formation: **Cong. Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:26:32

Time Test Ended: 06:44:32

Test Type: Conventional Bottom Hole (Reset)

Tester: Tate Lang

Unit No: 49

**Interval: 3858.00 ft (KB) To 3910.00 ft (KB) (TVD)**

Total Depth: 3910.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2138.00 ft (KB)

2133.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8897** Inside

Press@RunDepth: psig @ 3859.00 ft (KB)

Start Date: 2014.05.19

End Date: 2014.05.20

Capacity: 8000.00 psig

Last Calib.: 2014.05.20

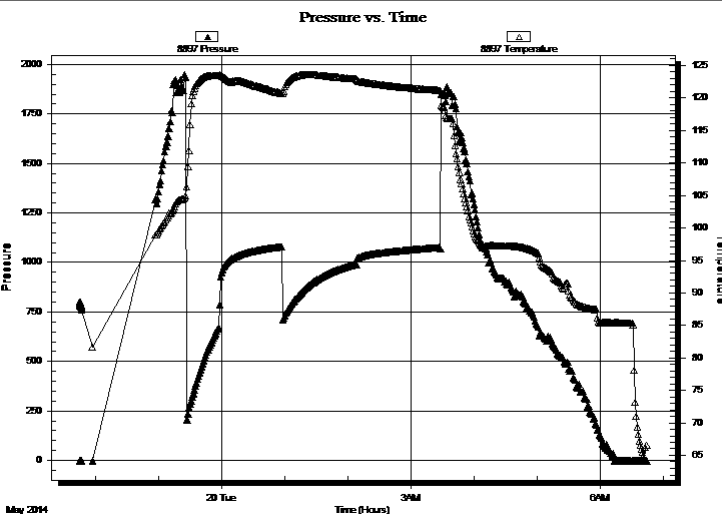
Start Time: 21:45:09

End Time: 06:44:38

Time On Btm:

Time Off Btm:

TEST COMMENT: B.O.B. In 2 mins  
Dead no blow back  
B.O.B. In 2 mins  
Dead no blow back



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
868.00	Water 100%W	11.92
930.00	OMCW 10%O 80%W 10%M	13.05
335.00	OCMW 10%O 50%W 40%M	4.70
10.00	Free Oil 100%O	0.14

## 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

**9-17s-19w Rush,KS**

250 N Water STE 300  
Wichita KS 67202

**Butler #1-9**

Job Ticket: 58937

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2014.05.19 @ 21:45:02

## Tool Information

Drill Pipe:	Length: 3832.00 ft	Diameter: 3.80 inches	Volume: 53.75 bbl	Tool Weight: 2000.00 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: 28.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 53.89 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3858.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	74.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3841.00	
Hydraulic tool	5.00			3846.00	
Safety Joint	2.00			3848.00	
Packer	5.00			3853.00	22.00 Bottom Of Top Packer
Packer	5.00			3858.00	
Stubb	1.00			3859.00	
Recorder	0.00	8897	Inside	3859.00	
Recorder	0.00	8898	Outside	3859.00	
Perforations	15.00			3874.00	
Change Over Sub	1.00			3875.00	
Drill Pipe	31.00			3906.00	
Change Over Sub	1.00			3907.00	
Bullnose	3.00			3910.00	52.00 Bottom Packers & Anchor

**Total Tool Length: 74.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Company

**9-17s-19w Rush,KS**

250 N Water STE 300  
Wichita KS 67202

**Butler #1-9**

Job Ticket: 58937

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2014.05.19 @ 21:45:02

### 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:

45000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
868.00	Water 100%W	11.921
930.00	OMCW 10%O 80%W 10%M	13.045
335.00	OCMW 10%O 50%W 40%M	4.699
10.00	Free Oil 100%O	0.140

Total Length: 2143.00 ft

Total Volume: 29.805 bbl

Num Fluid Samples: 0

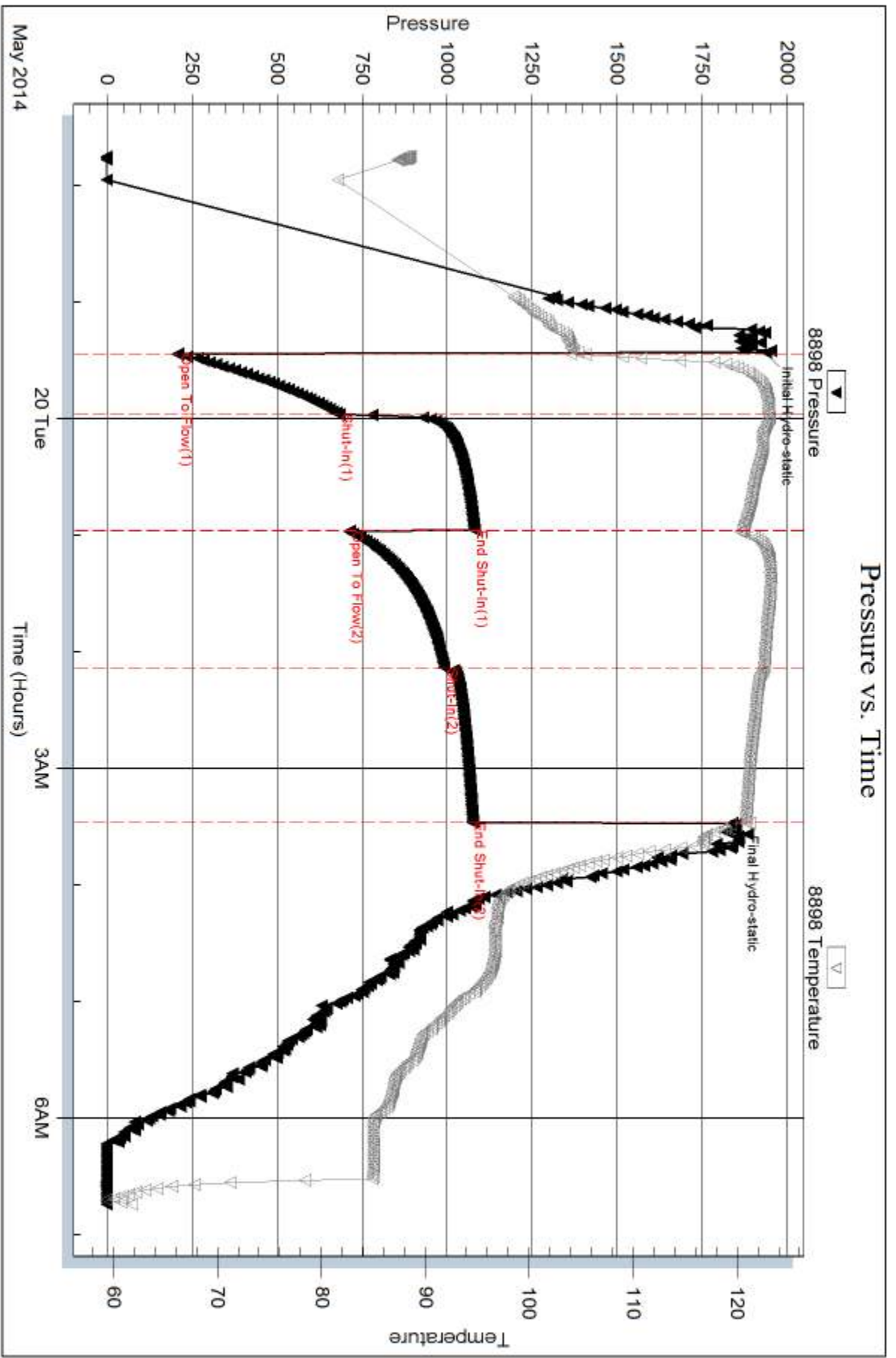
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



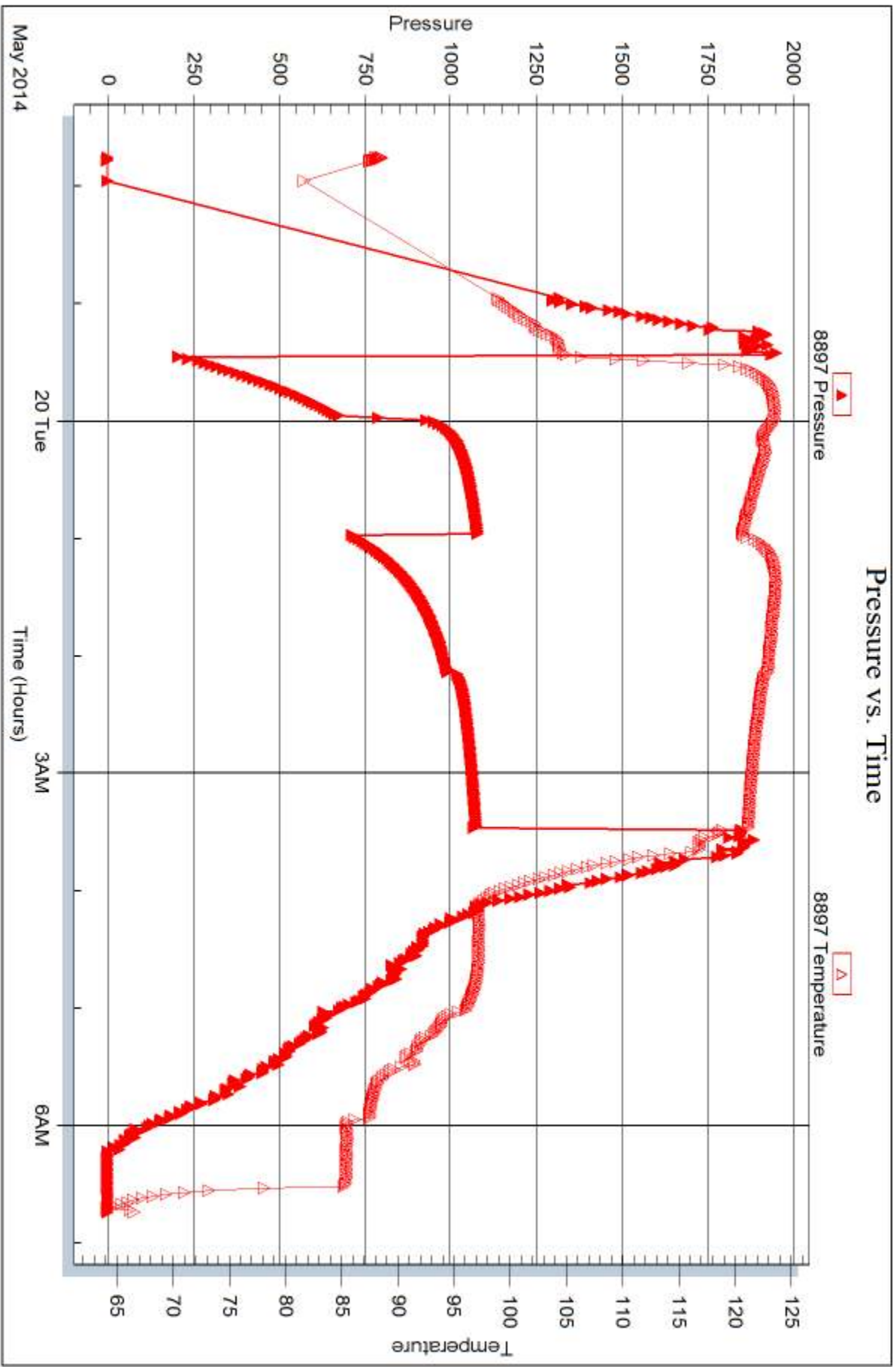
Serial #: 8897

Inside

Murfin Drilling Company

Butler #1-9

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 58937

Printed: 2014.05.23 @ 09:16:24



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 58936

Well Name & No. Butler #1-9 Test No. 1 Date 5-18-14  
 Company Murfin Drilling Company Elevation 2138 KB 2133 GL  
 Address 250 N Water STE 300 Wichita KS 67202  
 Co. Rep / Geo. Saman Sharifaire Rig Murfin #16  
 Location: Sec. 9 Twp. 17S Rge. 19W Co. Rush State KS

Interval Tested 3516 : 3540 Zone Tested LHC "B" 4  
 Anchor Length \_\_\_\_\_ Drill Pipe Run 3483 Mud Wt. 8.9  
 Top Packer Depth 3511 Drill Collars Run 28 Vis 53  
 Bottom Packer Depth 3516 Wt. Pipe Run 0 WL 8.0  
 Total Depth 3540 Chlorides .4000 ppm System LCM 1 1/2 #

Blow Description Fair blow built to 4 1/2 in  
Dead no blow back  
Good blow built to 8 in  
Dead no blow back

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>115</u>	Feet of <u>mcw</u>			<u>70</u> %water	<u>30</u> %mud
Rec <u>5</u>	Feet of <u>Free Oil</u>		<u>100</u> %oil		
Rec _____	Feet of _____				
Rec _____	Feet of _____				

Rec Total 120 BHT 139 Gravity \_\_\_\_\_ API RW .161 @ 80 ° F Chlorides 40000 ppm

(A) Initial Hydrostatic 1737  Test 1150 T-On Location 07:55  
 (B) First Initial Flow 17  Jars \_\_\_\_\_ T-Started 09:06  
 (C) First Final Flow 38  Safety Joint 75 T-Open 10:58  
 (D) Initial Shut-In 723  Circ Sub \_\_\_\_\_ T-Pulled 14:58  
 (E) Second Initial Flow 45  Hourly Standby \_\_\_\_\_ T-Out 16:06  
 (F) Second Final Flow 63  Mileage 60 R/H 93 Comments \_\_\_\_\_  
 (G) Final Shut-In 632  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1747  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90

Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Sub Total 1318  
 Total 1318  
 MP/DST Disc't \_\_\_\_\_

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

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





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 58937

Well Name & No. Butler # 1-9 Test No. 1 Date 5-19-14  
 Company Murfin Drilling Company Elevation 2138 KB 2133 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Samar Sharif Faie Rig Murfin #11c  
 Location: Sec. 9 Twp. 17S Rge. 19W Co. Rush State KS

Interval Tested 3858 3910 Zone Tested Conq. Sand  
 Anchor Length \_\_\_\_\_ Drill Pipe Run 3832 Mud Wt. 9.1  
 Top Packer Depth 3853 Drill Collars Run 28 Vis 53  
 Bottom Packer Depth 3858 Wt. Pipe Run 9 WL 9.6  
 Total Depth 3910 Chlorides 2000 ppm System LCM 1#

Blow Description B.O.B. IN 2 mins  
Dead No blow back  
B.O.B. IN 2 mins  
Dead No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>868</u>	<u>Water</u>			<u>100</u>	
<u>930</u>	<u>OCMW</u>	<u>10</u>	<u>80</u>	<u>10</u>	<u>10</u>
<u>335</u>	<u>OCMW</u>	<u>10</u>	<u>50</u>	<u>40</u>	<u>40</u>
<u>10</u>	<u>Clear Oil</u>	<u>100</u>			

Rec Total 2143 BHT 122 Gravity \_\_\_\_\_ API RW 169 @ 70 ° F Chlorides 45 ppm

(A) Initial Hydrostatic 1940  Test 1150 T-On Location 21:40  
 (B) First Initial Flow 209  Jars \_\_\_\_\_ T-Started 21:45  
 (C) First Final Flow 682  Safety Joint 75 T-Open 22:28  
 (D) Initial Shut-In 1682  Circ Sub \_\_\_\_\_ T-Pulled 03:28  
 (E) Second Initial Flow 713  Hourly Standby \_\_\_\_\_ T-Out 06:44  
 (F) Second Final Flow 992  Mileage 186 Comments \_\_\_\_\_  
 (G) Final Shut-In 1675  Sampler \_\_\_\_\_ loaded 3/21 3:40  
 (H) Final Hydrostatic 1839  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_  
 Initial Shut-In 60  Extra Recorder \_\_\_\_\_  
 Final Flow 60  Day Standby \$57/hrs Sub Total 183.33  
 Final Shut-In 90  Accessibility \_\_\_\_\_ Total 1594.33  
 Sub Total 1411 MP/DST Disc't \_\_\_\_\_

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

# Saman Sharifaie

## Petroleum Geologist

### GEOLOGIST'S REPORT

#### DRILLING TIME AND SAMPLE LOG

COMPANY: **Murfin Drilling Co., Inc.**  
 LEASE: **Butler #1-9**

FIELD: **Wildcat**  
 LOCATION: **2280 FSL & 1650 FWL**  
 SEC: **9 TWP 17S RGE 19W**  
 COUNTY: **Rush STATE Kansas**  
 CONTRACTOR: **Murfin Drilling #16**

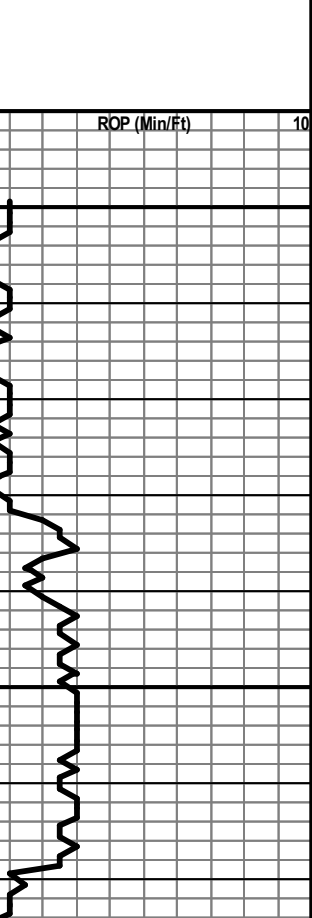
RTD: **05/14/14 COMP 4021/14**  
 SPUD: **05/14/14 LTD 4030'**  
 MUD UP: **2900' TYPE MUD Chemical**

SAMPLES SAVED FROM: **3070' TO RTD**  
 DRILLING TIME KEPT FROM: **3070' TO RTD**  
 SAMPLES EXAMINED FROM: **3070' TO RTD**

GEOLOGICAL SUPERVISION FROM: **2770'**  
 REFERENCE WELL: **Gear Petro - Moran - A #1**

CDP: **D.L. MEL; SAIRC**  
 PLOTTER: **Hydrelite**

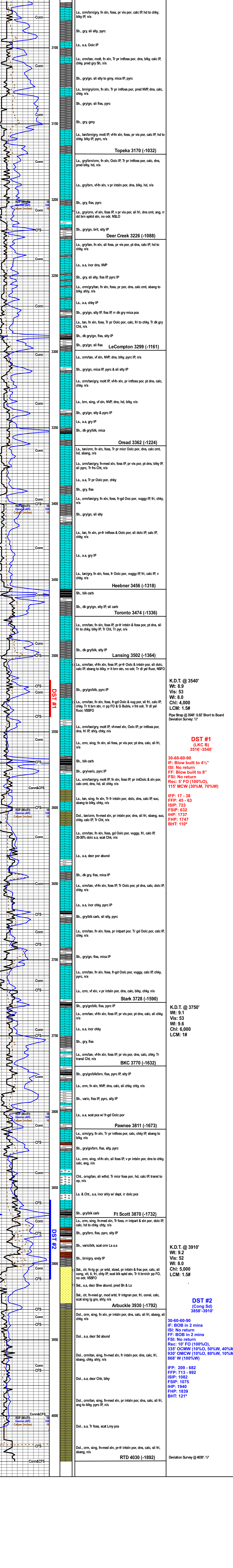
Formation	Sample Tops	E-log Tops	Strat Pos.
Anhydrite	1332 (+806)	1331 (+807)	-7
Base Anhydrite	1369 (+769)	1368 (+770)	-9
Togusa	3172 (+1034)	3170 (+1032)	-4-2
Hedberg	3455 (+1230)	3456 (+1318)	-4-5
Laramie	3476 (+1338)	3472 (+1337)	-4-6
Laramie	3502 (+1364)	3501 (+1365)	-4-5
SARIC	3731 (+1593)	3728 (+1593)	-4-3
BKC	3774 (+1636)	3770 (+1632)	-4-3
Arbuckle	3923 (+1785)	3930 (+1792)	-1-2



REMARKS: Due to poor shows of oil in multiple potential pay zones and negative DST results, it is recommended and agreed upon by all parties that this well be plugged and abandoned.

Respectfully Submitted,  
 API #15-165-22072  
 Saman Sharifaie  
 Petroleum Geologist

\*Tops have been adjusted to electric logs



Deviation Survey @ 4030': 1/2"