

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

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

Gas  DH  EOR

OG  GSW

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 EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

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  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

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](mailto: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 Geologist Report / Mud Logs <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				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	YOUNGMEYER 'A' 1-11
Doc ID	1363421

All Electric Logs Run

DIL
DUCP
MEL
BHCS



**TREATMENT REPORT**



**HURRICANE SERVICES INC**

Customer: <b>MURFIN</b>	Date: <b>6/17/2017</b>	Ticket No.: <b>50994</b>
Field Rep: <b>DUKE</b>		
Address:		
City, State:		
County, Zip:		

Field Order No.:		Open Hole:	<b>7 7/8</b>	Perf Depths (ft)		Perfs	
Well Name:	<b>YOUNGMAYER A 1-11</b>	Casing Depth:	<b>474</b>				
Location:	<b>BEAUMONT, KS</b>	Casing Size:	<b>8 5/8</b>				
Formation:		Tubing Depth:					
Type of Service:	<b>RTA</b>	Tubing Size:					
Well Type:	<b>OIL</b>	Liner Depth:					
Age of Well:	<b>NEW</b>	Liner Size:					
Packer Type:		Liner Top:					
Packer Depth:		Liner Bottom:					
Treatment Via:	<b>DRILL PIPE</b>	Total Depth:					
						<b>Total Perfs</b>	<b>0</b>

TIME	INJECTION RATE		PRESSURE		REMARKS	PROP (lbs)	HCL (gls)	FLUID (bbls)
	FLUID	N2/CO2	STP	ANNULUS				
6:30 PM					ON LOACTION SAFETY MEETING SPOT IN AND RIG UP			
					BREAK CIRCULATION WITH RIG PIPE AT 3220'			
	4.0		300.0		PUMP WATER			8.50
	4.0		300.0		MIX AND PUMP CEMENT			5.00
	4.0		300.0		PUMP WATER			3.00
	10.0				PUMP MUD			37.00
					BREAK CIRCULATION WITH RIG PIPE AT 2200'			
	4.0		300.0		PUMP WATER			8.50
	4.0		300.0		MIX AND PUMP CEMENT			5.00
	4.0		300.0		PUMP WATER			3.00
	10.0				PUMP MUD			27.00
					BREAK CIRCULATION WITH RIG PIPE AT 1810			
	4.0		250.0		PUMP WATER			8.50
	4.0		250.0		MIX AND PUMP CEMENT			5.00
	4.0		250.0		PUMP WATER			3.00
	10.0				PUMP MUD			21.00
<b>TOTAL:</b>						<b>-</b>	<b>-</b>	<b>181.70</b>

**SUMMARY**

Max Fl. Rate	Avg Fl. Rate	Max PSI	Avg PSI
10.0	5.0	300.0	245.8

**PRODUCTS USED**

250 SACKS 60:40:4% GEL

Treater: JAKE HEARD

Customer: DUKE

**TREATMENT REPORT**



**HURRICANE SERVICES INC**

Customer:	MURFIN	Date:	6/9/2017	Ticket No.:	50990
Field Rep:	DUKE				
Address:					
City, State:					
County, Zip:					

Field Order No.:		Open Hole:	12 1/4 471'	Perf Depths (ft)	Perfs
Well Name:	YOUNGMEYER A 1-11	Casing Depth:	417'		
Location:	BEAUMONT, KS	Casing Size:	8 5/8 24#		
Formation:		Tubing Depth:			
Type of Service:	SURFACE	Tubing Size:			
Well Type:	OIL	Liner Depth:			
Age of Well:	NEW	Liner Size:			
Packer Type:		Liner Top:			
Packer Depth:		Liner Bottom:			
Treatment Via:	CASING	Total Depth:			
				<b>Total Perfs</b>	<b>0</b>

TIME	INJECTION RATE		PRESSURE		REMARKS	PROP (lbs)	HCL (gls)	FLUID (bbls)
	FLUID	N2/CO2	STP	ANNULUS				
8:45 PM					ON LOCATION WAIT ON RIG			
					SPOT IN AND RIG UP			
					HOOK UP TO CASING			5.00
	4.5		150.0		BREAK CIRCULATION			5.00
	4.5		200.0		MIX AND PUMP CEMENT			61.00
					STOP			
					RELEASE PLUG			
	3.0		250.0		DISPLACE			28.50
11:50 PM			250.0		SHUT IN WELL			
					CEMENT CIRCULATED TO THE PIT 6 BBL			
<b>TOTAL:</b>								<b>99.50</b>

**SUMMARY**

Max Fl. Rate	Avg Fl. Rate	Max PSI	Avg PSI
4.5	4.0	250.0	212.5

**PRODUCTS USED**

Treater: \_\_\_\_\_

Customer: \_\_\_\_\_

MDCI  
 Youngmeyer 'A' #1-11  
 2050 FNL 2200 FEL  
 Sec. 11-T29S-R8E  
 1548' KB

Formation	Sample tops	Datum	Ref	Log Tops	Datum	Ref
Heebner	1285	+263	-34	1284	+264	-33
Lansing	1700	-152	-25	1753	-205	-78
Kansas City	2018	-470	-28	2016	-468	-26
BKC	2233	-685	-29	2228	-680	-24
Altamont	2347	-799	-28	2345	-797	-26
Pawnee	2435	-887	-27	2434	-886	-26
Ft Scott	2475	-927	-27	2473	-925	-25
Excello	2513	-965	-29	2512	-964	-28
Oakley	2584	-1036	-26	2583	-1035	-25
Mississippi	2803	-1255	-23	2798	-1250	-18
Arbuckle	3143	-1595	-21	31545	-1597	-23
RTD	3220					
LTD				3220		



## DRILL STEM TEST REPORT

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

250 North Water Suite 300  
Wichita, KS 67202

ATTN: Shauna Gunzelman//Je

### **Youngmeyer A #1-11**

#### **11-29S-8E Elk,KS**

Start Date: 2017.06.12 @ 15:59:00

End Date: 2017.06.12 @ 23:40:50

Job Ticket #: 63577                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.06.20 @ 09:18:28

Murfin Drilling Co. Inc. 11-29S-8E Elk,KS Youngmeyer A #1-11 DST # 1 Hertha 2017.06.12





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

**11-29S-8E EIk, KS**

250 North Water Suite 300  
Wichita, KS 67202

**Youngmeyer A #1-11**

Job Ticket: 63577

**DST#: 1**

ATTN: Shauna Gunzelman//Je

Test Start: 2017.06.12 @ 15:59:00

## GENERAL INFORMATION:

Formation: **Hertha**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:16:10

Time Test Ended: 23:40:50

Test Type: Conventional Bottom Hole (Initial)

Tester: Jimmy Ricketts

Unit No: 80

**Interval: 2192.00 ft (KB) To 2203.00 ft (KB) (TVD)**

Reference Elevations: 1548.00 ft (KB)

Total Depth: 2203.00 ft (KB) (TVD)

1539.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

**Serial #: 9124**

**Inside**

Press@RunDepth: 285.85 psig @ 2193.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.06.12

End Date: 2017.06.12

Last Calib.: 1899.12.30

Start Time: 15:59:05

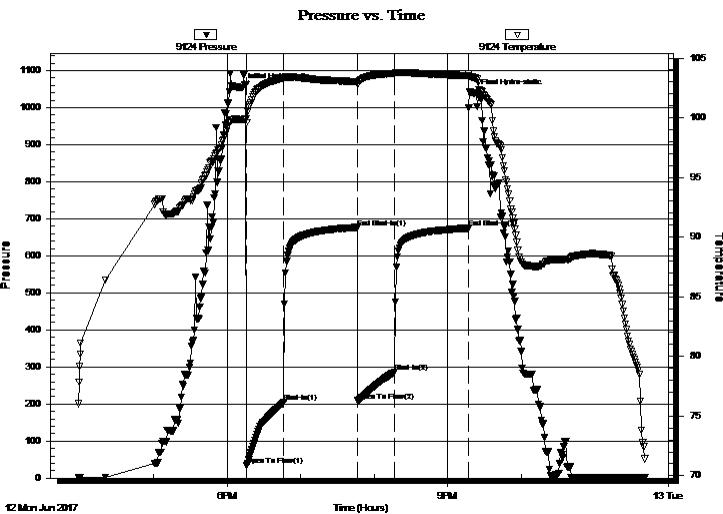
End Time: 23:40:50

Time On Btm: 2017.06.12 @ 18:11:50

Time Off Btm: 2017.06.12 @ 21:21:50

TEST COMMENT: IF - Weak blow built to 9"

FF - Weak blow building to strong blow in 11 minutes



## PRESSURE SUMMARY

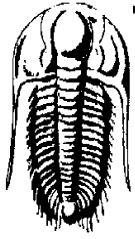
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1054.08	99.83	Initial Hydro-static
5	34.10	99.57	Open To Flow (1)
35	204.61	103.30	Shut-In(1)
95	676.78	103.05	End Shut-In(1)
95	208.85	102.81	Open To Flow (2)
125	285.85	103.70	Shut-In(2)
185	674.65	103.53	End Shut-In(2)
191	1038.70	103.32	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
560.00	Mud cut water 85% W & 15% M	5.35
15.00	Oil & heavy mud cut water 4%O 68%W	20.214

## Gas Rates

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Murfin Drilling Co. Inc.  
 250 North Water Suite 300  
 Wichita, KS 67202  
 ATTN: Shauna Gunzelman//Je

**11-29S-8E EIk, KS**  
**Youngmeyer A #1-11**  
 Job Ticket: 63577                      **DST#: 1**  
 Test Start: 2017.06.12 @ 15:59:00

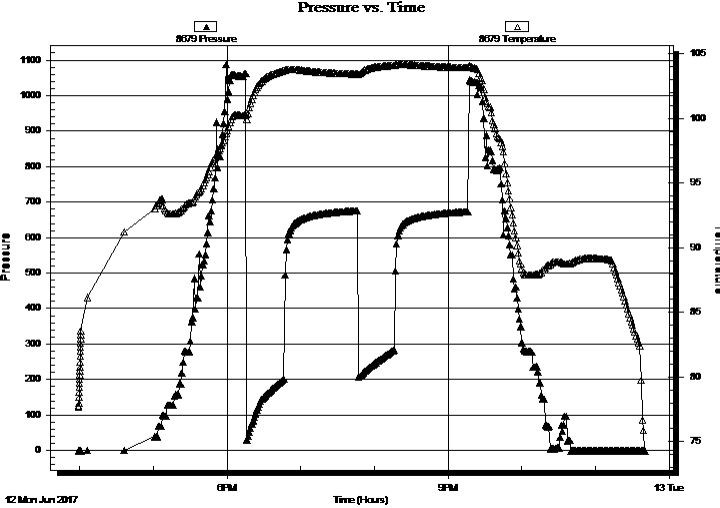
**GENERAL INFORMATION:**

Formation: **Hertha**  
 Deviated: No Whipstock:                      ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 18:16:10                      Tester: Jimmy Ricketts  
 Time Test Ended: 23:40:50                      Unit No: 80  
**Interval: 2192.00 ft (KB) To 2203.00 ft (KB) (TVD)**  
 Reference Elevations:                      1548.00 ft (KB)  
 Total Depth: 2203.00 ft (KB) (TVD)                      1539.00 ft (CF)  
 Hole Diameter: 7.88 inches                      Hole Condition: Fair                      KB to GR/CF: 9.00 ft

**Serial #: 8679 Outside**

Press@RunDepth:	psig @ 2193.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2017.06.12                      End Date: 2017.06.12	Last Calib.:	1899.12.30
Start Time:	15:59:01                      End Time: 23:41:00	Time On Btm:	
		Time Off Btm:	

TEST COMMENT: IF - Weak blow built to 9"  
 FF - Weak blow building to strong blow in 11 minutes



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

Recovery		
Length (ft)	Description	Volume (bbl)
560.00	Mud cut water 85% W & 15% M	5.35
15.00	Oil & heavy mud cut w ater 4%O 68%W	20.211

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co. Inc.

**11-29S-8E EIk,KS**

250 North Water Suite 300  
Wichita, KS 67202

**Youngmeyer A #1-11**

Job Ticket: 63577

**DST#: 1**

ATTN: Shauna Gunzelman//Je

Test Start: 2017.06.12 @ 15:59:00

## Tool Information

Drill Pipe:	Length: 1915.00 ft	Diameter: 3.80 inches	Volume: 26.86 bbl	Tool Weight: 2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 275.00 ft	Diameter: 2.25 inches	Volume: 1.35 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 28.21 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	2192.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	11.00 ft			
Tool Length:	39.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			2165.00	
Shut In Tool	5.00			2170.00	
Hydraulic tool	5.00			2175.00	
Jars	5.00			2180.00	
Safety Joint	3.00			2183.00	
Packer	4.00			2187.00	28.00 Bottom Of Top Packer
Packer	5.00			2192.00	
Stubb	1.00			2193.00	
Recorder	0.00	8679	Outside	2193.00	
Recorder	0.00	9124	Inside	2193.00	
Perforations	5.00			2198.00	
Bullnose	5.00			2203.00	11.00 Bottom Packers & Anchor

**Total Tool Length: 39.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc.

**11-29S-8E EIk,KS**

250 North Water Suite 300  
Wichita, KS 67202

**Youngmeyer A #1-11**

Job Ticket: 63577

**DST#: 1**

ATTN: Shauna Gunzelman//Je

Test Start: 2017.06.12 @ 15:59:00

## 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:

155000 ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
560.00	Mud cut w ater 85% W & 15% M	5.350
15.00	Oil & heavy mud cut w ater 4%O 68%W 28%I	0.210

Total Length: 575.00 ft

Total Volume: 5.560 bbl

Num Fluid Samples: 0

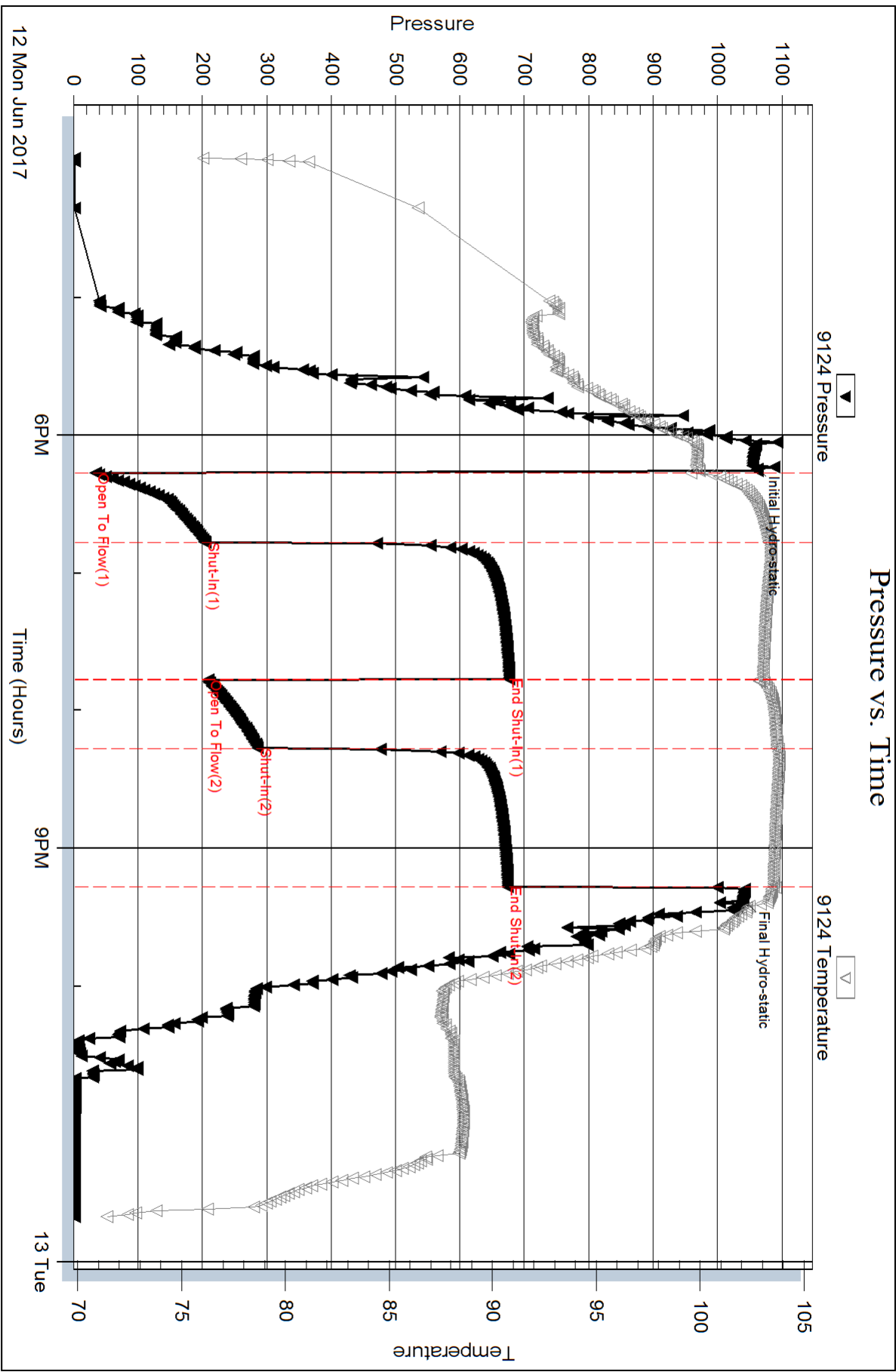
Num Gas Bombs: 0

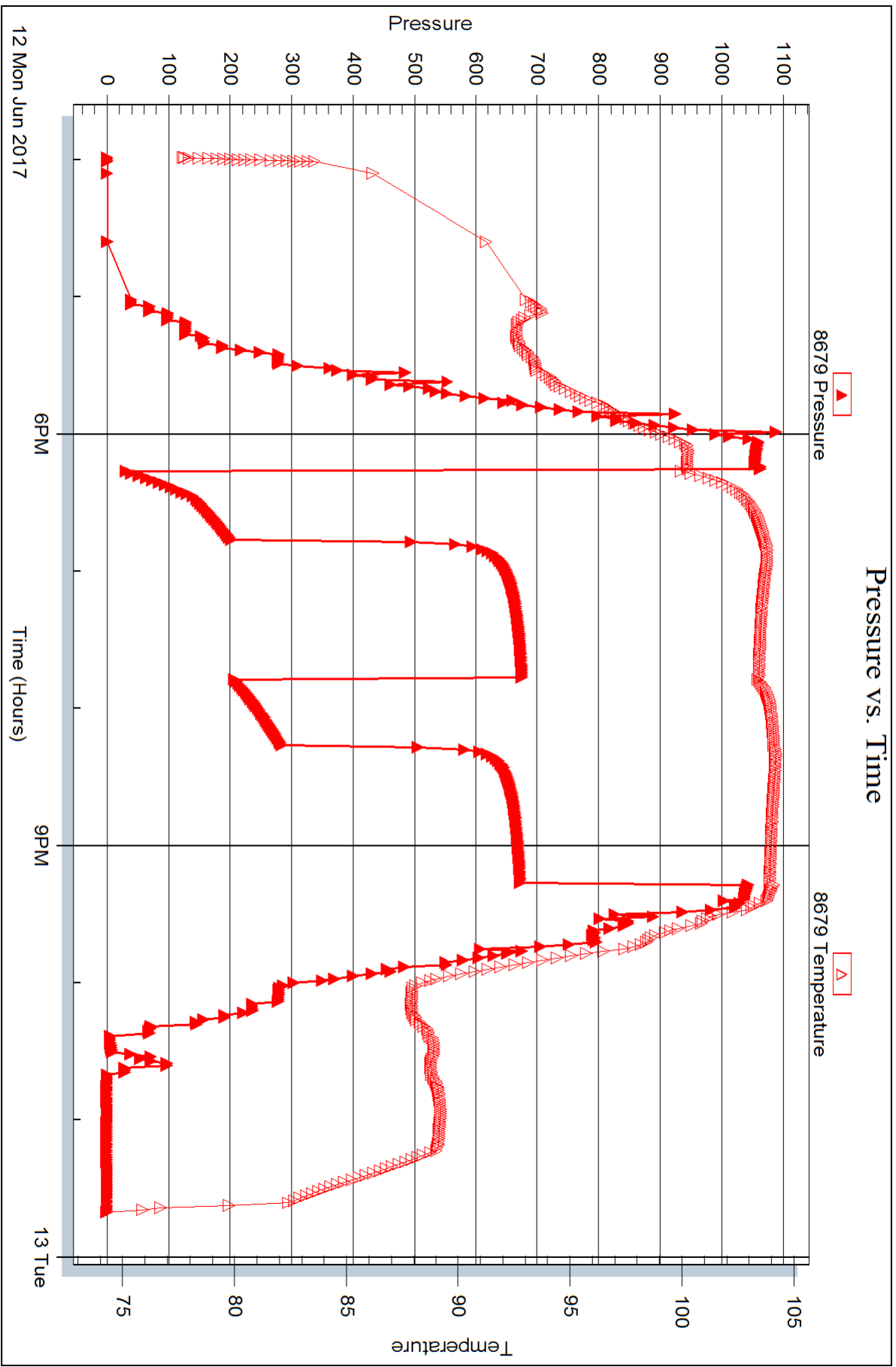
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

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

250 North Water Suite 300  
Wichita, KS 67202

ATTN: Shauna Gunzelman//Je

**Youngmeyer A #1-11**

**11-29S-8E Elk,KS**

Start Date: 2017.06.15 @ 12:20:00

End Date: 2017.06.15 @ 22:42:30

Job Ticket #: 63578                      DST #: 2

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.06.20 @ 08:37:41



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

**11-29S-8E EIk,KS**

250 North Water Suite 300  
Wichita, KS 67202

**Youngmeyer A #1-11**

Job Ticket: 63578

**DST#: 2**

ATTN: Shauna Gunzelman//Je

Test Start: 2017.06.15 @ 12:20:00

## GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:22:00

Time Test Ended: 22:42:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jimmy Ricketts

Unit No: 80

**Interval: 2952.00 ft (KB) To 2980.00 ft (KB) (TVD)**

Reference Elevations: 1548.00 ft (KB)

Total Depth: 2980.00 ft (KB) (TVD)

1539.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

**Serial #: 9124 Inside**

Press@RunDepth: 94.78 psig @ 2953.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.06.15

End Date:

2017.06.15

Last Calib.:

1899.12.30

Start Time: 12:20:05

End Time:

22:42:30

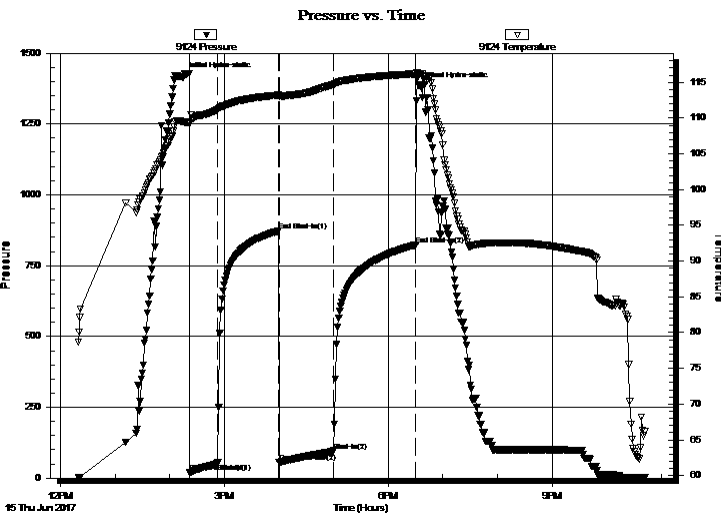
Time On Btm:

2017.06.15 @ 14:14:10

Time Off Btm:

2017.06.15 @ 18:35:30

TEST COMMENT: IF - Weak blow built to 4"  
FF - Weak blow built to 3"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1415.38	109.50	Initial Hydro-static
8	20.98	109.16	Open To Flow (1)
39	50.95	111.15	Shut-In(1)
106	871.97	113.20	End Shut-In(1)
106	55.57	113.01	Open To Flow (2)
166	94.78	114.68	Shut-In(2)
257	822.74	116.17	End Shut-In(2)
262	1383.15	116.23	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
175.00	Slightly oil specked mud TR O 100% M	0.86

## Gas Rates

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





**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
250 North Water Suite 300  
Wichita, KS 67202

ATTN: Shauna Gunzelman//Je

**11-29S-8E EIk, KS**

**Youngmeyer A #1-11**

Job Ticket: 63578 **DST#: 2**

Test Start: 2017.06.15 @ 12:20:00

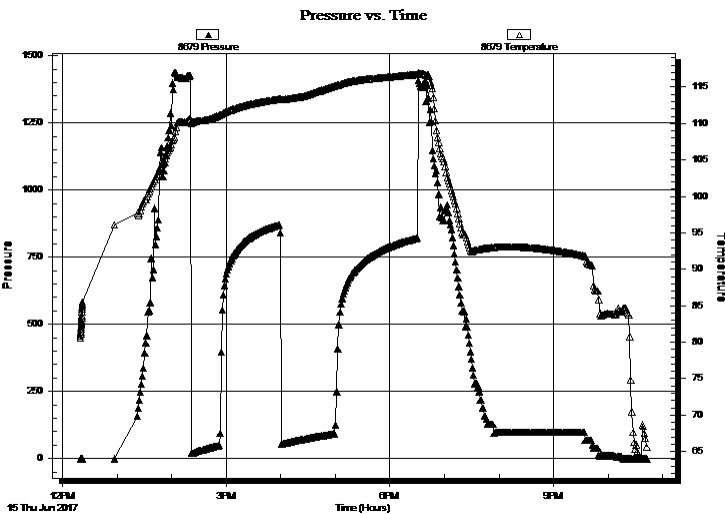
### GENERAL INFORMATION:

Formation:	<b>Mississippian</b>			Test Type:	Conventional Bottom Hole (Initial)
Deviated:	No	Whipstock:	ft (KB)	Tester:	Jimmy Ricketts
Time Tool Opened:	14:22:00			Unit No:	80
Time Test Ended:	22:42:30				
<b>Interval:</b>	<b>2952.00 ft (KB) To 2980.00 ft (KB) (TVD)</b>			Reference Elevations:	1548.00 ft (KB)
Total Depth:	2980.00 ft (KB) (TVD)				1539.00 ft (CF)
Hole Diameter:	7.88 inches	Hole Condition:	Fair	KB to GR/CF:	9.00 ft

**Serial #: 8679**      **Outside**

Press@RunDepth:	psig @ 2953.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2017.06.15	End Date:	2017.06.15
Start Time:	12:20:01	End Time:	22:42:40
		Last Calib.:	1899.12.30
		Time On Btm:	
		Time Off Btm:	

TEST COMMENT: IF - Weak blow built to 4"  
FF - Weak blow built to 3"



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
175.00	Slightly oil specked mud TR O 100% M	0.86

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co. Inc.

**11-29S-8E EIK,KS**

250 North Water Suite 300  
Wichita, KS 67202

**Youngmeyer A #1-11**

Job Ticket: 63578

**DST#: 2**

ATTN: Shauna Gunzelman//Je

Test Start: 2017.06.15 @ 12:20:00

## Tool Information

Drill Pipe:	Length: 2671.00 ft	Diameter: 3.80 inches	Volume: 37.47 bbl	Tool Weight: 2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 275.00 ft	Diameter: 2.25 inches	Volume: 1.35 bbl	Weight to Pull Loose: 63000.00 lb
			<u>Total Volume: 38.82 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	2952.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			2925.00	
Shut In Tool	5.00			2930.00	
Hydraulic tool	5.00			2935.00	
Jars	5.00			2940.00	
Safety Joint	3.00			2943.00	
Packer	4.00			2947.00	28.00 Bottom Of Top Packer
Packer	5.00			2952.00	
Stubb	1.00			2953.00	
Recorder	0.00	8679	Outside	2953.00	
Recorder	0.00	9124	Inside	2953.00	
Perforations	22.00			2975.00	
Bullnose	5.00			2980.00	28.00 Bottom Packers & Anchor

**Total Tool Length: 56.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc.

**11-29S-8E EIk,KS**

250 North Water Suite 300  
Wichita, KS 67202

**Youngmeyer A #1-11**

Job Ticket: 63578

**DST#: 2**

ATTN: Shauna Gunzelman//Je

Test Start: 2017.06.15 @ 12:20:00

## 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: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
175.00	Slightly oil specked mud TRO 100% M	0.861

Total Length: 175.00 ft      Total Volume: 0.861 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 9124

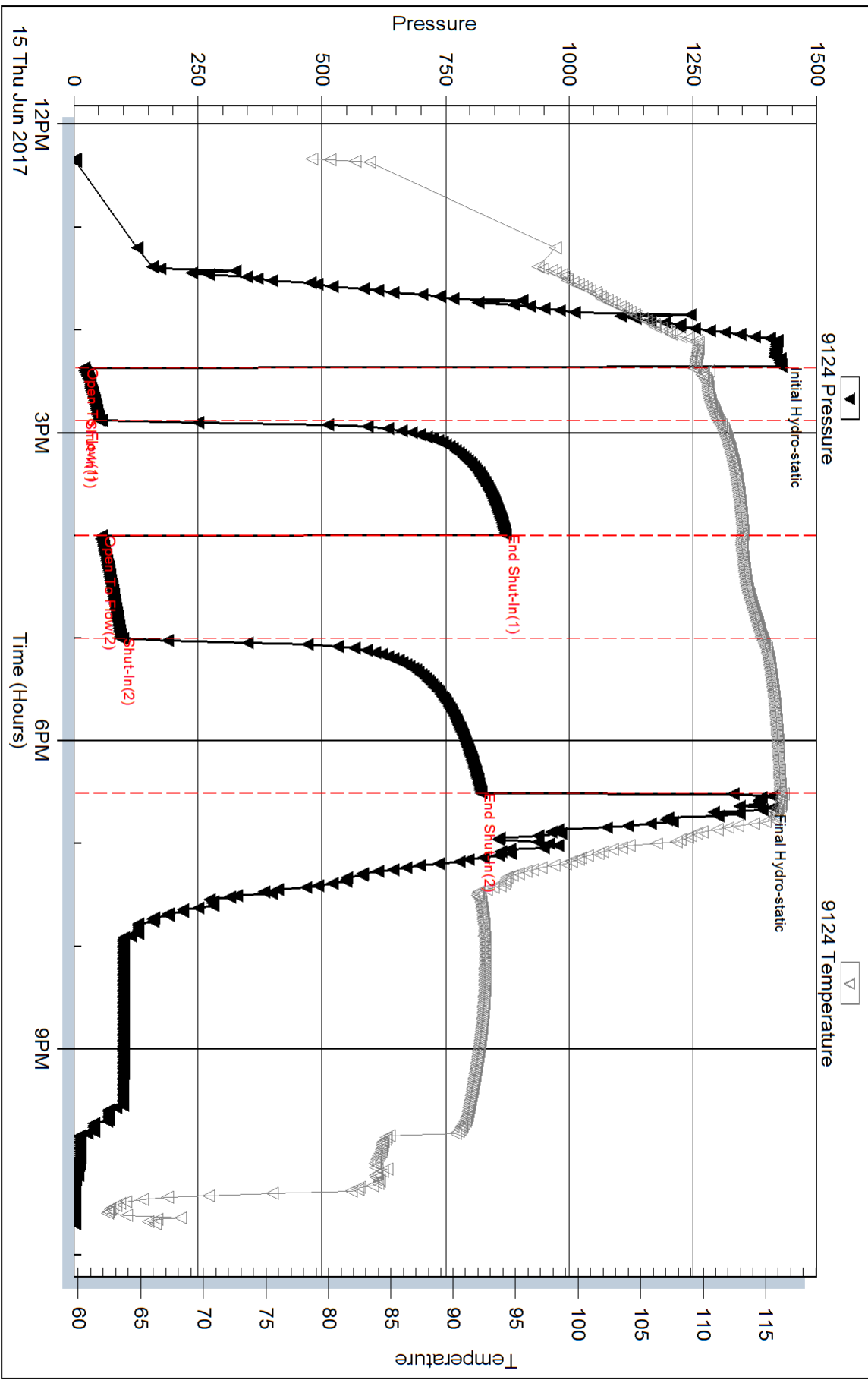
Inside

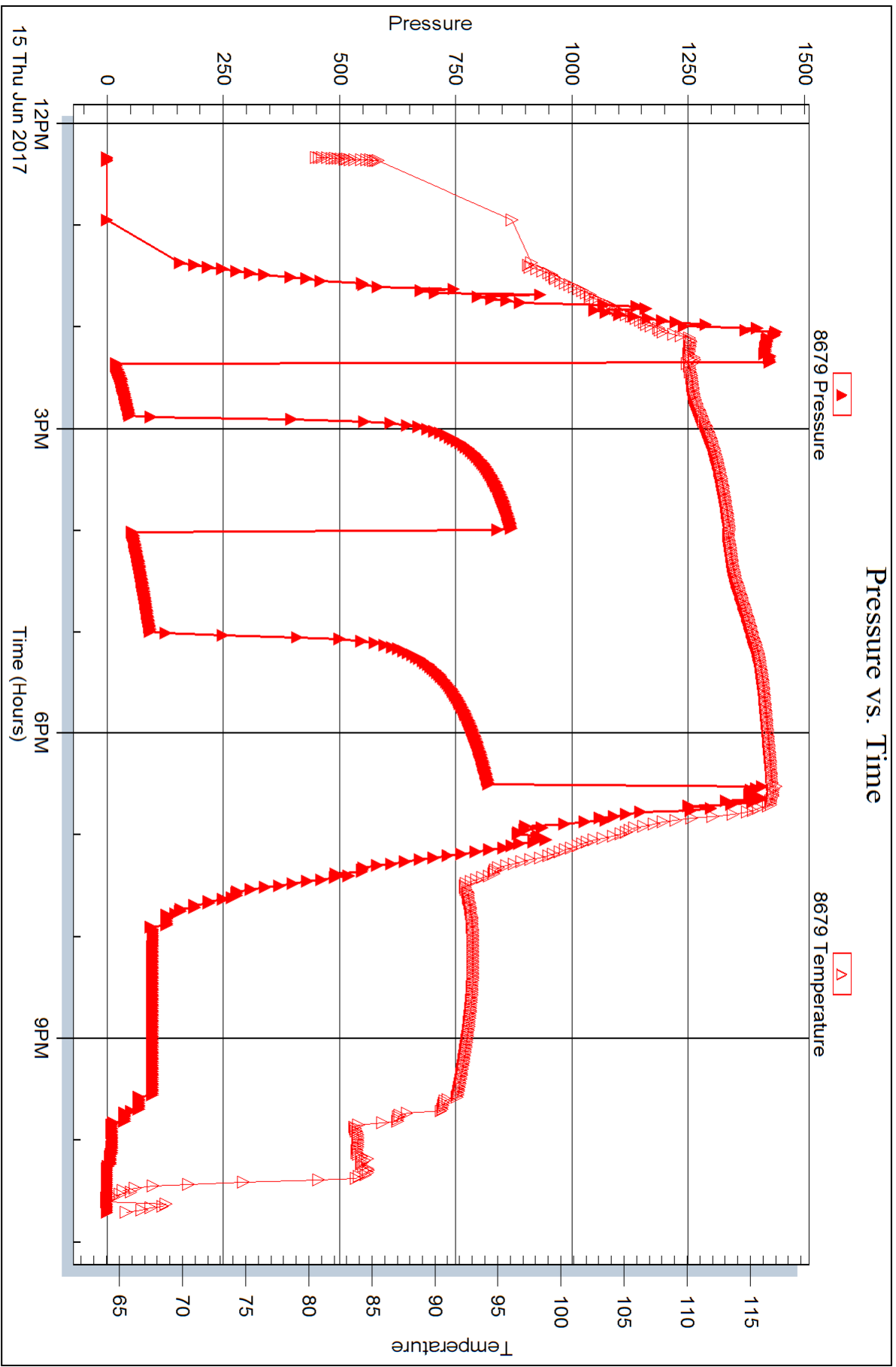
Murfin Drilling Co. Inc.

Youngmeyer A #1-11

DST Test Number: 2

### Pressure vs. Time







## DRILL STEM TEST REPORT

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

250 North Water Suite 300  
Wichita, KS 67202

ATTN: Shauna Gunzelman//Je

### **Youngmeyer A #1-11**

#### **11-29S-8E Elk,KS**

Start Date: 2017.06.16 @ 15:51:00

End Date: 2017.06.17 @ 00:19:39

Job Ticket #: 63579                      DST #: 3

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.06.20 @ 08:36:22



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
 250 North Water Suite 300  
 Wichita, KS 67202  
 ATTN: Shauna Gunzelman//Je

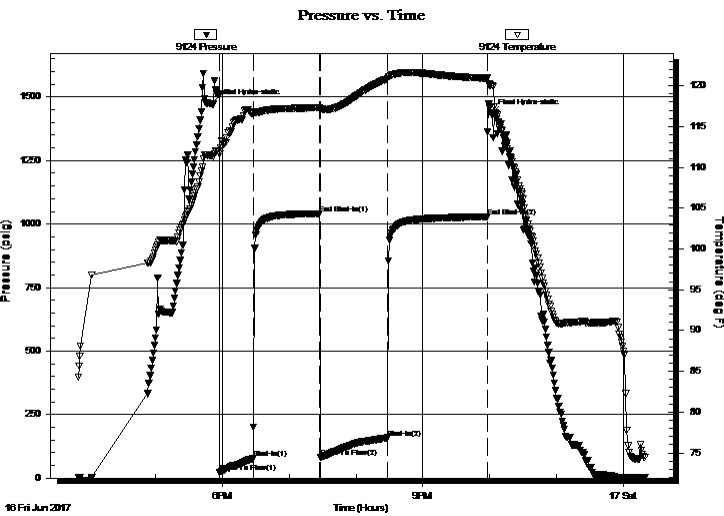
**11-29S-8E EIk,KS**  
**Youngmeyer A #1-11**  
 Job Ticket: 63579 **DST#: 3**  
 Test Start: 2017.06.16 @ 15:51:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 17:57:50 Tester: Jimmy Ricketts  
 Time Test Ended: 00:19:39 Unit No: 80  
 Interval: **3127.00 ft (KB) To 3155.00 ft (KB) (TVD)** Reference Elevations: 1548.00 ft (KB)  
 Total Depth: 3155.00 ft (KB) (TVD) 1539.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 9.00 ft

**Serial #: 9124 Inside**  
 Press@RunDepth: 158.40 psig @ 3128.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.06.16 End Date: 2017.06.17 Last Calib.: 2017.06.16  
 Start Time: 15:51:05 End Time: 00:19:40 Time On Btm: 2017.06.16 @ 17:50:20  
 Time Off Btm: 2017.06.16 @ 22:01:30

TEST COMMENT: IF - Weak blow building to 6"  
 FF - Weak blow building to 10"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1472.50	111.42	Initial Hydro-static
8	22.52	111.64	Open To Flow (1)
38	77.77	116.53	Shut-In(1)
98	1040.98	117.32	End Shut-In(1)
98	81.55	117.08	Open To Flow (2)
158	158.40	120.84	Shut-In(2)
248	1028.58	120.91	End Shut-In(2)
252	1432.84	120.01	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
315.00	Heavy water cut mud 51% M 49% W	1.91

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

**11-29S-8E EIk,KS**

250 North Water Suite 300  
Wichita, KS 67202

**Youngmeyer A #1-11**

Job Ticket: 63579

**DST#: 3**

ATTN: Shauna Gunzelman//Je

Test Start: 2017.06.16 @ 15:51:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:57:50

Time Test Ended: 00:19:39

Test Type: Conventional Bottom Hole (Initial)

Tester: Jimmy Ricketts

Unit No: 80

**Interval: 3127.00 ft (KB) To 3155.00 ft (KB) (TVD)**

Reference Elevations: 1548.00 ft (KB)

Total Depth: 3155.00 ft (KB) (TVD)

1539.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

**Serial #: 8679 Outside**

Press@RunDepth: psig @ 3128.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.06.16

End Date:

2017.06.17

Last Calib.:

1899.12.30

Start Time: 15:51:01

End Time:

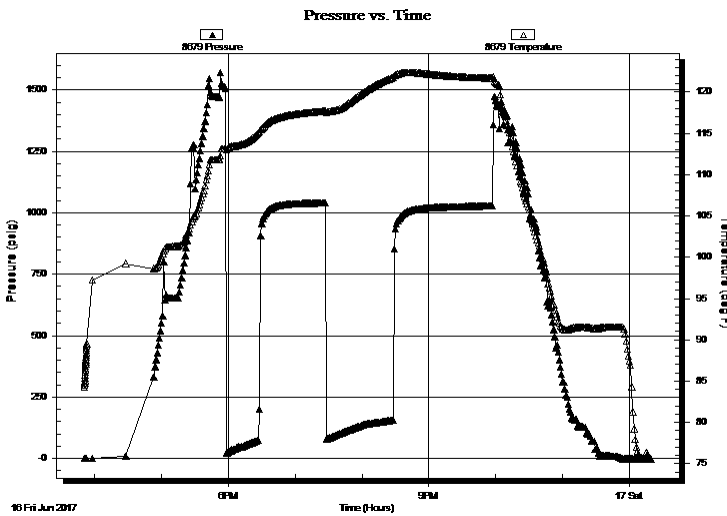
00:19:40

Time On Btm:

Time Off Btm:

TEST COMMENT: IF - Weak blow building to 6"  
FF - Weak blow building to 10"

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
315.00	Heavy water cut mud 51% M 49% W	1.91

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co. Inc.

**11-29S-8E EIk,KS**

250 North Water Suite 300  
Wichita, KS 67202

**Youngmeyer A #1-11**

Job Ticket: 63579

**DST#: 3**

ATTN: Shauna Gunzelman//Je

Test Start: 2017.06.16 @ 15:51:00

## Tool Information

Drill Pipe:	Length: 2829.00 ft	Diameter: 3.80 inches	Volume: 39.68 bbl	Tool Weight: 2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 275.00 ft	Diameter: 2.25 inches	Volume: 1.35 bbl	Weight to Pull Loose: 67000.00 lb
			<u>Total Volume: 41.03 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3127.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3100.00	
Shut In Tool	5.00			3105.00	
Hydraulic tool	5.00			3110.00	
Jars	5.00			3115.00	
Safety Joint	3.00			3118.00	
Packer	4.00			3122.00	28.00 Bottom Of Top Packer
Packer	5.00			3127.00	
Stubb	1.00			3128.00	
Recorder	0.00	8679	Outside	3128.00	
Recorder	0.00	9124	Inside	3128.00	
Perforations	22.00			3150.00	
Bullnose	5.00			3155.00	28.00 Bottom Packers & Anchor

**Total Tool Length: 56.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc.

**11-29S-8E EIk,KS**

250 North Water Suite 300  
Wichita, KS 67202

**Youngmeyer A #1-11**

Job Ticket: 63579

**DST#: 3**

ATTN: Shauna Gunzelman//Je

Test Start: 2017.06.16 @ 15:51:00

## 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:

32000 ppm

Viscosity: 41.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
315.00	Heavy water cut mud 51% M 49% W	1.914

Total Length: 315.00 ft

Total Volume: 1.914 bbl

Num Fluid Samples: 0

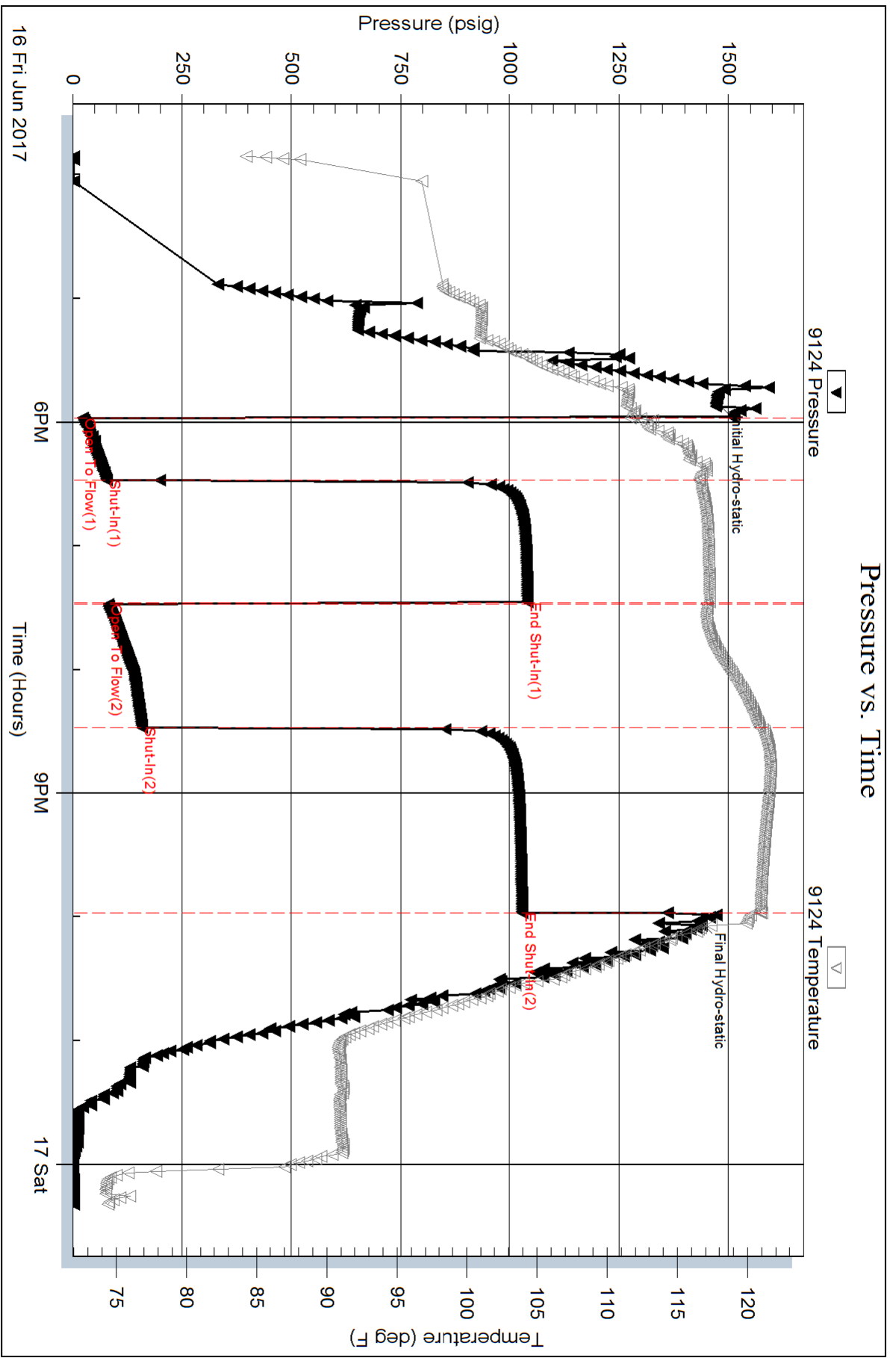
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

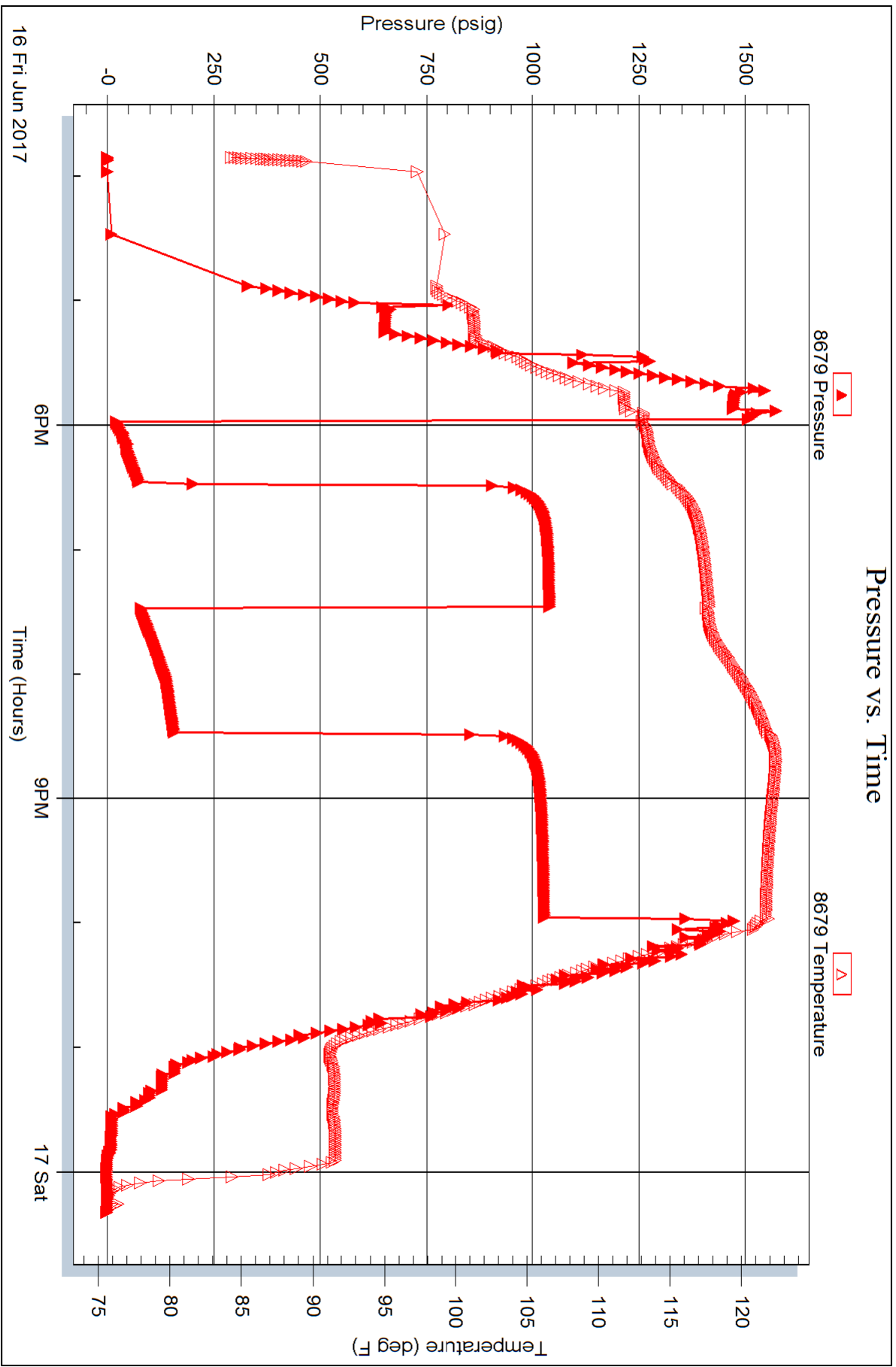


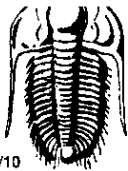
Serial #: 8679

Outside Murfin Drilling Co. Inc.

Youngmeyer A #1-11

DST Test Number: 3





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## tax 785-625-8620 Test Ticket

NO. 63577

Well Name & No. Youngmeyer 'A' # 1-11 Test No. 1 Date 6-12-17  
 Company Martin Drilling Co. Inc. Elevation 1548 KB 1539 GL  
 Address 250 North Water Suite 300 Wichita, KS. 67202  
 Co. Rep / Geo. Jeff Christian / Shauna Gunzelman Rig C+G #2  
 Location: Sec. 11 Twp. 29 S Rge. 8 E Co. EIK State KS.

Interval Tested 2192-2203 Zone Tested Heartha  
 Anchor Length 11' Drill Pipe Run 1915 Mud Wt. 8.9  
 Top Packer Depth 2187 Drill Collars Run 275 Vis 44  
 Bottom Packer Depth 2192 Wt. Pipe Run 0 WL 9.2  
 Total Depth 2203 Chlorides 400 ppm System LCM  
 Blow Description IF-weak blow building to 9 inches IFP  
FF-weak blow building to strong blow 11 minutes into FF1

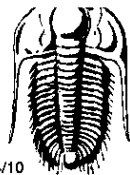
Rec	Feet of	%gas	%oil	%water	%mud
<u>560</u>	<u>Mad cut water</u>			<u>85</u>	<u>15</u>
<u>15</u>	<u>Oil + Heavy mad cut water</u>		<u>4</u>	<u>68</u>	<u>28</u>

Rec Total 575 BHT 104 Gravity API RW0.060 @ 72 °F Chlorides 155000 ppm

(A) Initial Hydrostatic <u>1054</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>1415</u>
(B) First Initial Flow <u>34</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1559</u>
(C) First Final Flow <u>205</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1816</u>
(D) Initial Shut-In <u>677</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>2116</u>
(E) Second Initial Flow <u>209</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>2325</u>
(F) Second Final Flow <u>286</u>	<input checked="" type="checkbox"/> Mileage <u>90</u> <u>RT 120</u>	Comments
(G) Final Shut-In <u>675</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1039</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1465</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1465</u>	

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements of 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. 63578

Well Name & No. Youngmeyer "A" #1-11 Test No. 2 Date 6-15-17  
 Company Martin Drilling Co., Inc. Elevation 1548 KB 1539 GL  
 Address 250 North Water Suite 300 Wichita, KS. 67202  
 Co. Rep / Geo. Shauna Gunzelman / Jeff Christian Rig C# 6 #2  
 Location: Sec. 11 Twp. 29 S Rge. 8 E Co. Elk State KS

Interval Tested 2952-2980 Zone Tested Mississippian  
 Anchor Length 28' Drill Pipe Run 2671 Mud Wt. 9.3  
 Top Packer Depth 2947 Drill Collars Run 275 Vis 59  
 Bottom Packer Depth 2952 Wt. Pipe Run 0 WL 8.4  
 Total Depth 2980 Chlorides 800 ppm System LCM  
 Blow Description IF-weak blow building to 4 inches -IFP  
FF-weak blow building to 3 inches -FFP

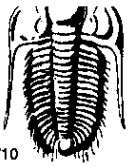
Rec	Feet of	%gas	%oil	%water	%mud
<u>175</u>	<u>Very slightly oil spotted mud</u>	<u>TR</u>			<u>100%</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 175 BHT 116 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1415</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>1115</u>
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1220</u>
(C) First Final Flow <u>51</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1422</u>
(D) Initial Shut-In <u>872</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>1830</u>
(E) Second Initial Flow <u>56</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>2230</u>
(F) Second Final Flow <u>95</u>	<input checked="" type="checkbox"/> Mileage <u>90 RT 120</u>	Comments _____
(G) Final Shut-In <u>823</u>	<input type="checkbox"/> Sampler _____	<input type="checkbox"/> Ruined Shale Packer _____
(H) Final Hydrostatic <u>1383</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>66</u>	<input type="checkbox"/> Extra Packer _____	Sub Total <u>791.67</u>
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Total <u>2256.67</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby <u>1.5d 23.75h</u>	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility _____	
	Sub Total <u>1465</u>	

Approved By [Signature] Our Representative [Signature]

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



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63579

Well Name & No. Youngmeyer "A" #1-11 Test No. 3 Date 6-16-17  
 Company Murfin Drilling Co. Inc. Elevation 1548 KB 1539 GL  
 Address 250 North Water Suite 300 Wichita KS, 67202  
 Co. Rep / Geo Ghauna Gunzelma / Jeff Christian Rig C+G #2  
 Location: Sec. 11 Twp. 29 S Rge. 8E Co. EIK State KS

Interval Tested 3127-3155 Zone Tested Arbuckle  
 Anchor Length 28' Drill Pipe Run 2860 Mud Wt. 9.0  
 Top Packer Depth 3122 Drill Collars Run 275 Vis 41  
 Bottom Packer Depth 3127 Wt. Pipe Run 10 WL 7.6  
 Total Depth 3155 Chlorides 800 ppm System LCM  
 Blow Description IF - weak blow building to 6 inches IEP  
FF - weak blow building to 10 inches FFP

Rec	Feet of	%gas	%oil	%water	%mud
<u>315</u>	<u>Heavy water cut mud</u>		<u>49</u>	<u>51</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 315 BHT 121 Gravity API RW .221 @ 77 °F Chlorides 32,000 ppm

(A) Initial Hydrostatic <u>1472</u>	<input checked="" type="checkbox"/> Test 1050	T-On Location <u>1510</u>
(B) First Initial Flow <u>23</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>1551</u>
(C) First Final Flow <u>78</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>1750</u>
(D) Initial Shut-In <u>1041</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>2158</u>
(E) Second Initial Flow <u>82</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0030</u>
(F) Second Final Flow <u>158</u>	<input checked="" type="checkbox"/> Mileage <u>90 RT 120</u>	Comments
(G) Final Shut-In <u>1029</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>1433</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Extra Copies
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Total <u>1715</u>
Final Flow <u>60</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't
Final Shut-In <u>90</u>	<input type="checkbox"/> Accessibility	
	Sub Total <u>1715</u>	

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements of 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.

# Jeff Christian

PETROLEUM GEOLOGIST  
Wichita, Kansas

**GEOLOGICAL REPORT**  
DRIELINS TIME AND SAMPLE LOGS

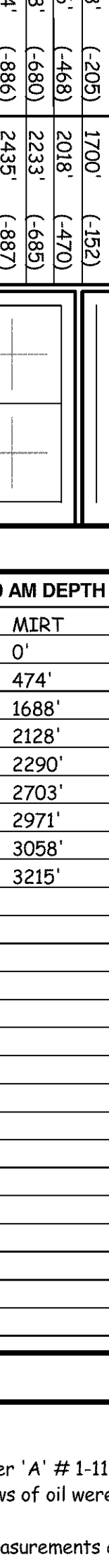
**ELEVATIONS**  
OPERATOR: MURKIN DRILLING COMPANY  
LEASE: YOUNGMAYER 'A' # 1-11  
LOCATION: 2050 FINL 4 2000 FEL  
Elev: 1548'  
Elev: 1539'

SEC. 11 TWP. 29 S. R1G. 8 E  
COUNTY: ELK STATE: KANSAS  
FIELD: WILDCAIT  
DATE: 15 049 22610 00 00  
CONTRACTOR: C & B  
DRIELINS STARTED: 06/09/2017  
DRIELINS LAMER: 9000  
DRIELINS TIME FROM: 1000'  
DRIELINS TIME FROM: 1000'  
DRIELINS TIME FROM: 1000'  
DRIELINS TIME FROM: 1000'  
DRIELINS TIME FROM: 1000'

MEASUREMENTS FROM 18  
CASING RECORD  
CONDUCTOR NAME  
DATE: 8/25 @ 4:14  
DATE: 8/25 @ 4:14  
DATE: 8/25 @ 4:14  
DATE: 8/25 @ 4:14  
DATE: 8/25 @ 4:14

**ELECTRICAL SURVES:**  
ELECTRICAL SURVEY  
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ELECTRICAL SURVEY  
ELECTRICAL SURVEY

**FORMATION**  
NAME TOP DATE TIME FOR SAMPLE  
HEEBNER 1284' (-2434) 1285' (-2463)  
LANCASTER 1753' (-2095) 1700' (-1952)  
KANSAS CITY 2016' (-1480) 2018' (-1480)  
BKC 2230' (-1680) 2233' (-1687)  
POKERIE 2435' (-1680) 2438' (-1687)  
FARMERS 2538' (-1680) 2541' (-1687)  
MIDWESTERN 2803' (-1680) 2806' (-1687)  
KANSAS CITY 3000' (-1680) 3003' (-1687)  
KANSAS CITY 3195' (-1672) 3143' (-1583)  
KANSAS CITY 3220' (-1672) 3220' (-1672)



DATE	7:00 AM DEPTH	REMARKS
6/8/17	0'	Spud 7:20 am
6/9/17	474'	WOC dev. 1/4 deg.
6/10/17	1688'	brlg.
6/11/17	2128'	brlg. dev. 3/4 deg. @ 2203'
6/12/17	2290'	brlg. dev. 7/8 deg. @ 2980'
6/14/17	2703'	brlg.
6/15/17	2971'	brlg. dev. 7/8 deg. @ 2980'
6/16/17	3058'	brlg.
6/17/17	3215'	brlg. RTD 3220' @ 7:30 am dev. 1 deg. Finish Logging @ 4:00 pm

**Remarks**  
The Youngmeyer 'A' # 1-11 was declared dry and abandoned.  
All sample shows of oil were drill stem tested and condemned.  
Electric log measurements correlate about 1' to 2' high compared to rotary measurements.  
Samples delivered to the Kansas Geological Survey in Wichita.  
Respectfully Submitted,  
*Jeff Christian*  
Jeff Christian

