



## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Wes Hansen

### **Culwell 'JT' #1-11**

#### **11-1s-37w Cheyenne KS**

Start Date: 2014.03.04 @ 14:00:00

End Date: 2014.03.04 @ 23:32:30

Job Ticket #: 53491                      DST #: 1

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

Printed: 2014.03.11 @ 10:48:56

Murfin Drilling Co., Inc.

11-1s-37w Cheyenne KS

Culwell 'JT' #1-11

DST # 1

LKC "D"

2014.03.04



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N. Water STE 300  
Wichita, KS 67202  
ATTN: Wes Hansen

**11-1s-37w Cheyenne KS**

**Culwell 'JT' #1-11**

Job Ticket: 53491      **DST#: 1**  
Test Start: 2014.03.04 @ 14:00:00

## GENERAL INFORMATION:

Formation: **LKC "D"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 16:40:45  
Time Test Ended: 23:32:30  
Interval: **4100.00 ft (KB) To 4160.00 ft (KB) (TVD)**  
Total Depth: 4160.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: James Winder  
Unit No: 57  
Reference Elevations: 3134.00 ft (KB)  
3121.00 ft (CF)  
KB to GR/CF: 13.00 ft

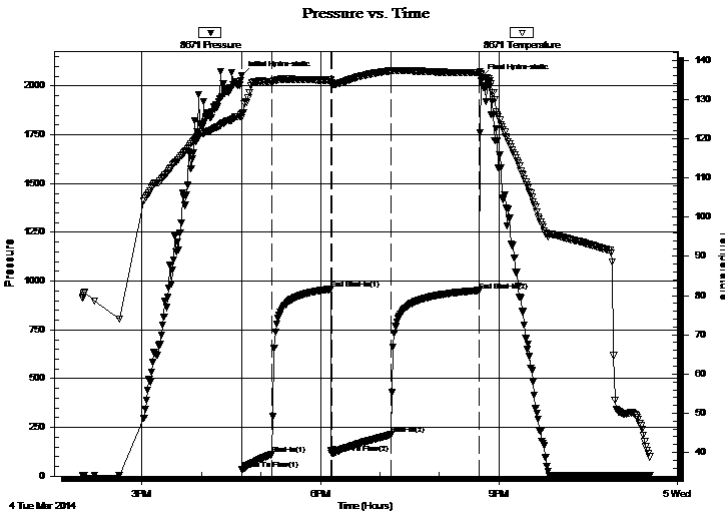
## Serial #: 8671

Inside

Press@RunDepth: 212.27 psig @ 4101.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2014.03.04 End Date: 2014.03.04 Last Calib.: 2014.03.05  
Start Time: 14:00:05 End Time: 23:32:30 Time On Btm: 2014.03.04 @ 16:40:30  
Time Off Btm: 2014.03.04 @ 20:41:45

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 9 1/2 min.  
60 - IS: Blow back built to 1"  
60 - FF: Blow built to BOB at 12 min.  
90 - FS: Blow back built to 4"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2052.52	126.24	Initial Hydro-static
1	32.61	125.42	Open To Flow (1)
31	111.78	134.57	Shut-In(1)
90	958.95	134.92	End Shut-In(1)
91	117.55	134.19	Open To Flow (2)
151	212.27	137.27	Shut-In(2)
240	952.16	136.76	End Shut-In(2)
242	2040.99	136.67	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
190.00	GWCM w/Oil spots 57% <sub>m</sub> , 27% <sub>w</sub> , 13% <sub>g</sub>	2.67
45.00	GOCM 66% <sub>m</sub> , 18% <sub>o</sub> , 16% <sub>g</sub>	0.63
230.00	CGO 77% <sub>o</sub> , 21% <sub>g</sub> , 2% <sub>m</sub>	3.23
0.00	GIP = 475'	0.00

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**11-1s-37w Cheyenne KS**

250 N. Water STE 300  
Wichita, KS 67202

**Culwell 'JT' #1-11**

Job Ticket: 53491

**DST#: 1**

ATTN: Wes Hansen

Test Start: 2014.03.04 @ 14:00:00

## Tool Information

Drill Pipe:	Length: 4081.00 ft	Diameter: 3.80 inches	Volume: 57.25 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 57.25 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	4100.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	88.00 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			4077.00	
Hydraulic tool	5.00			4082.00	
Jars	5.00			4087.00	
Safety Joint	3.00			4090.00	
Packer	5.00			4095.00	28.00 Bottom Of Top Packer
Packer	5.00			4100.00	
Stubb	1.00			4101.00	
Recorder	0.00	8671	Inside	4101.00	
Recorder	0.00	8320	Outside	4101.00	
Perforations	22.00			4123.00	
Blank Spacing	33.00			4156.00	
Perforations	1.00			4157.00	
Bullnose	3.00			4160.00	60.00 Bottom Packers & Anchor

**Total Tool Length: 88.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**11-1s-37w Cheyenne KS**

250 N. Water STE 300  
Wichita, KS 67202

**Culwell 'JT' #1-11**

Job Ticket: 53491

**DST#: 1**

ATTN: Wes Hansen

Test Start: 2014.03.04 @ 14:00:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

26 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

48000 ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
190.00	GWCM w /Oil spots 57%m, 27%w , 13%g, 3%	2.665
45.00	GOCM 66%m, 18%o, 16%g	0.631
230.00	CGO 77%o, 21%g, 2%m	3.226
0.00	GIP = 475'	0.000

Total Length: 465.00 ft

Total Volume: 6.522 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 24 api @ 40 deg F Corrected Gravity = 26 api

RW = .248 ohms @ 45 deg F Chlorides = 48,000 ppm

Serial #: 8671

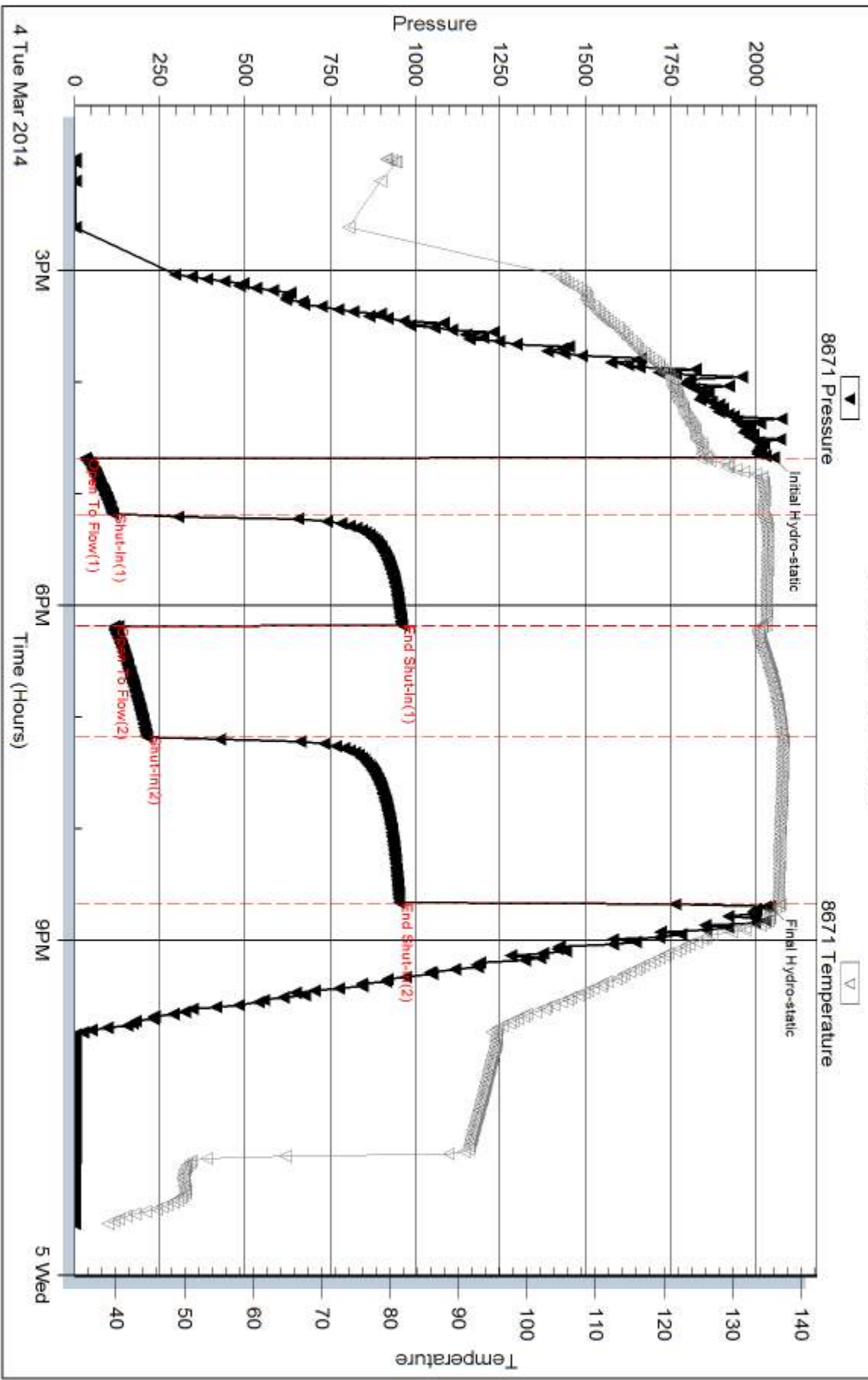
Inside

Murfin Drilling Co., Inc.

Oilwell UT #1-11

DST Test Number: 1

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 53491

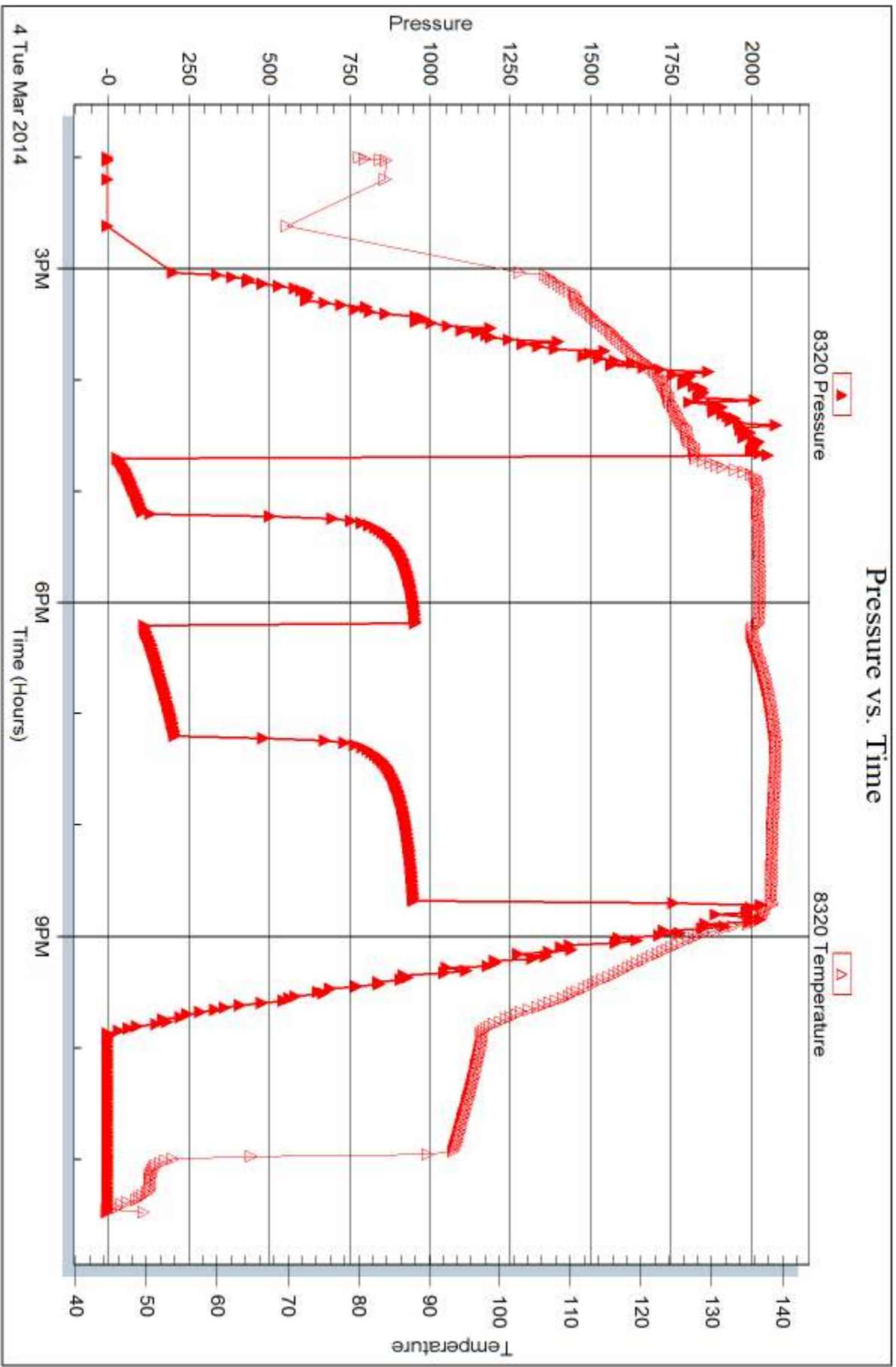
Printed: 2014.03.11 @ 10:48:58

Serial #: 8320

Outside Murfin Drilling Co., Inc.

Oilwell UT #1-11

DST Test Number: 1





## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Wes Hansen

### **Culwell 'JT' #1-11**

#### **11-1s-37w Cheyenne KS**

Start Date: 2014.03.05 @ 12:00:00

End Date: 2014.03.05 @ 20:04:00

Job Ticket #: 53492                      DST #: 2

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

Printed: 2014.03.11 @ 10:47:30

Murfin Drilling Co., Inc.

11-1s-37w Cheyenne KS

Culwell 'JT' #1-11

DST # 2

LKC "G"

2014.03.05





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N. Water STE 300  
Wichita, KS 67202  
ATTN: Wes Hansen

**11-1s-37w Cheyenne KS**  
**Culwell 'JT' #1-11**  
Job Ticket: 53492      **DST#: 2**  
Test Start: 2014.03.05 @ 12:00:00

## GENERAL INFORMATION:

Formation: **LKC "G"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 14:42:30  
Time Test Ended: 20:04:00  
Interval: **4169.00 ft (KB) To 4210.00 ft (KB) (TVD)**  
Total Depth: 4210.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Reset)  
Tester: James Winder  
Unit No: 57  
Reference Elevations: 3134.00 ft (KB)  
3121.00 ft (CF)  
KB to GR/CF: 13.00 ft

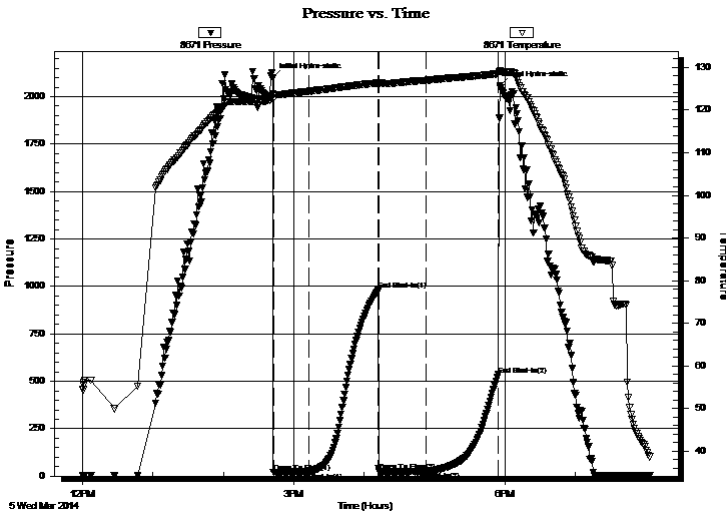
## Serial #: 8671

Inside

Press@RunDepth: 23.61 psig @ 4170.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2014.03.05 End Date: 2014.03.05 Last Calib.: 2014.03.05  
Start Time: 12:00:05 End Time: 20:03:59 Time On Btm: 2014.03.05 @ 14:42:15  
Time Off Btm: 2014.03.05 @ 17:55:45

TEST COMMENT: 30 - IF: Blow built to 1/4", died back, dead at 20 min.  
60 - IS: No blow back  
30 - FF: No blow  
60 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2098.36	123.79	Initial Hydro-static
1	18.71	122.42	Open To Flow (1)
31	22.27	124.34	Shut-In(1)
90	978.75	126.31	End Shut-In(1)
91	23.26	126.14	Open To Flow (2)
131	23.61	126.96	Shut-In(2)
192	534.25	128.50	End Shut-In(2)
194	2058.02	129.27	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud w /Oil spots 94%m, 4%o, 2%g	0.14

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**11-1s-37w Cheyenne KS**

250 N. Water STE 300  
Wichita, KS 67202

**Culwell 'JT' #1-11**

Job Ticket: 53492

**DST#: 2**

ATTN: Wes Hansen

Test Start: 2014.03.05 @ 12:00:00

## Tool Information

Drill Pipe:	Length: 4148.00 ft	Diameter: 3.80 inches	Volume: 58.19 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 58.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4169.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	41.00 ft			
Tool Length:	69.00 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			4146.00	
Hydraulic tool	5.00			4151.00	
Jars	5.00			4156.00	
Safety Joint	3.00			4159.00	
Packer	5.00			4164.00	28.00 Bottom Of Top Packer
Packer	5.00			4169.00	
Stubb	1.00			4170.00	
Recorder	0.00	8671	Inside	4170.00	
Recorder	0.00	8320	Outside	4170.00	
Perforations	37.00			4207.00	
Bullnose	3.00			4210.00	41.00 Bottom Packers & Anchor

**Total Tool Length: 69.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**11-1s-37w Cheyenne KS**

250 N. Water STE 300  
Wichita, KS 67202

**Culwell 'JT' #1-11**

Job Ticket: 53492

**DST#: 2**

ATTN: Wes Hansen

Test Start: 2014.03.05 @ 12:00:00

## 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: 58.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
10.00	Mud w /Oil spots 94%m, 4%o, 2%g	0.140

Total Length: 10.00 ft      Total Volume: 0.140 bbf

Num Fluid Samples: 0

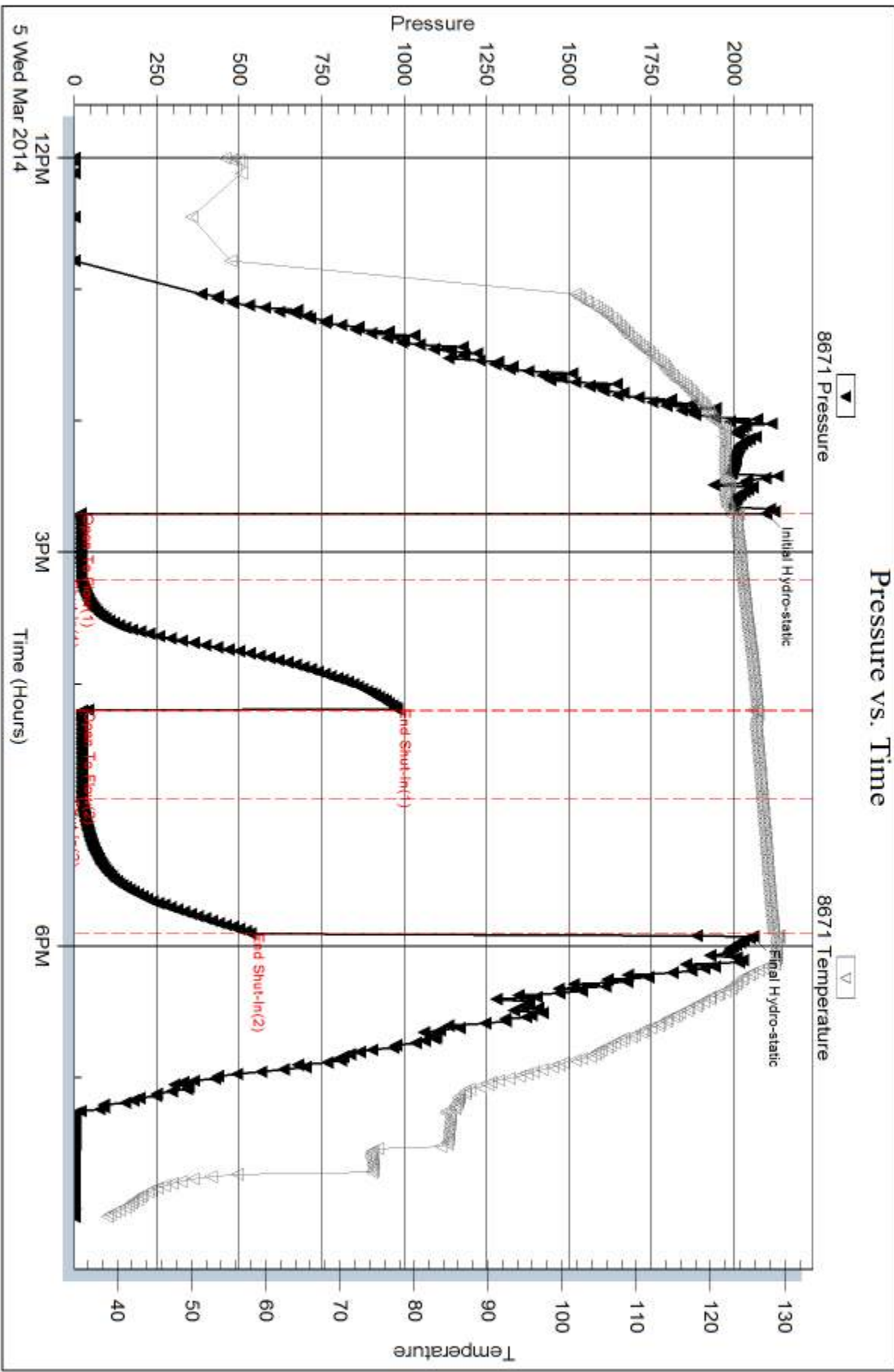
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

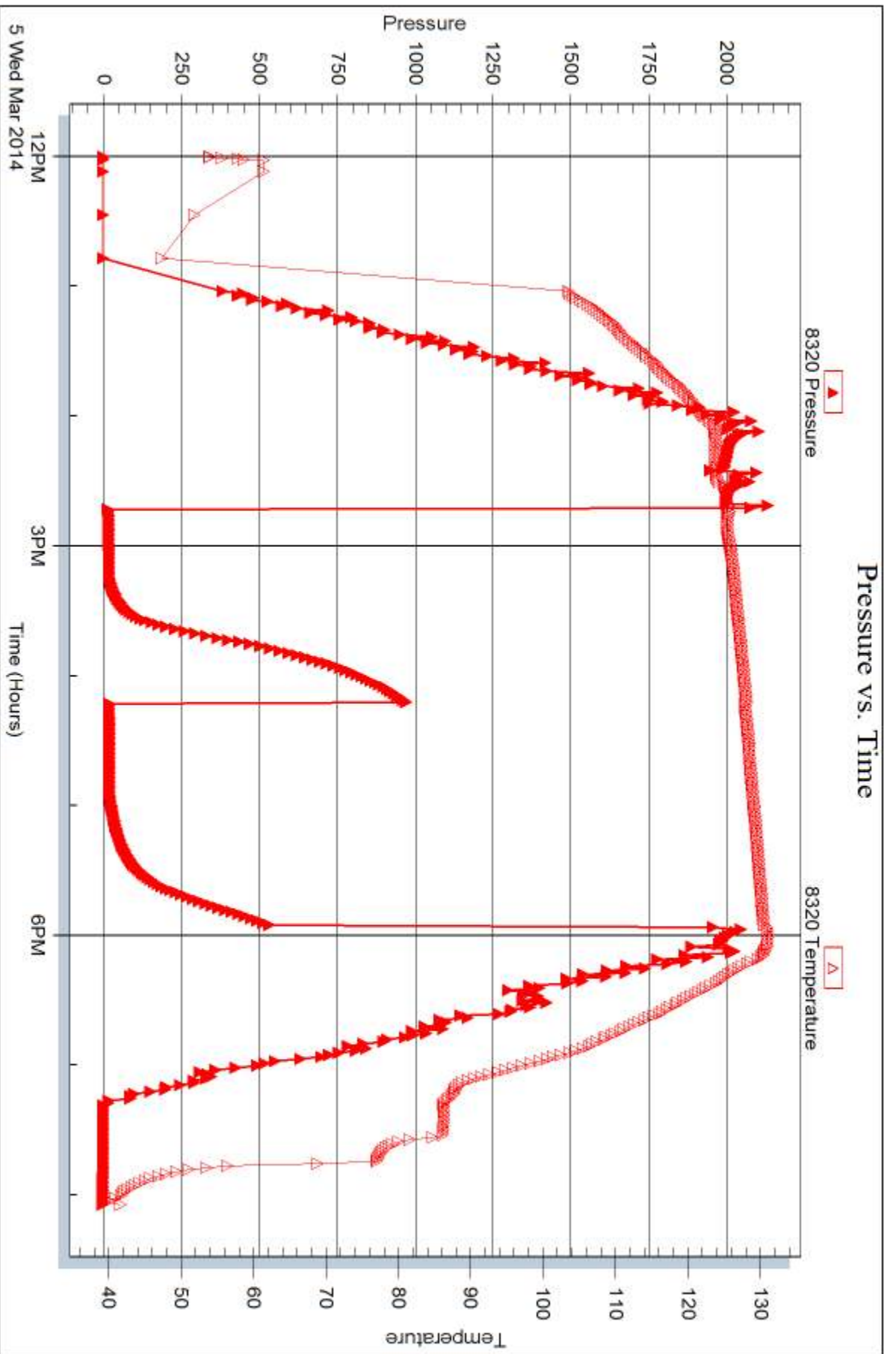


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Oilwell UT #1-11

DST Test Number: 2



Tribble Testing, Inc

Ref. No: 53492

Printed: 2014.03.11 @ 10:47:32



## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Wes Hansen

### **Culwell 'JT' #1-11**

#### **11-1s-37w Cheyenne KS**

Start Date: 2014.03.07 @ 10:20:00

End Date: 2014.03.07 @ 18:23:45

Job Ticket #: 53493                      DST #: 3

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

Printed: 2014.03.11 @ 10:46:43



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N. Water STE 300  
Wichita, KS 67202  
ATTN: Wes Hansen

**11-1s-37w Cheyenne KS**

**Culwell 'JT' #1-11**

Job Ticket: 53493

**DST#: 3**

Test Start: 2014.03.07 @ 10:20:00

## GENERAL INFORMATION:

Formation: **Pawnee**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 12:23:30  
 Time Test Ended: 18:23:45  
 Interval: **4450.00 ft (KB) To 4500.00 ft (KB) (TVD)**  
 Total Depth: 4500.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 57  
 Reference Elevations: 3134.00 ft (KB)  
 3121.00 ft (CF)  
 KB to GR/CF: 13.00 ft

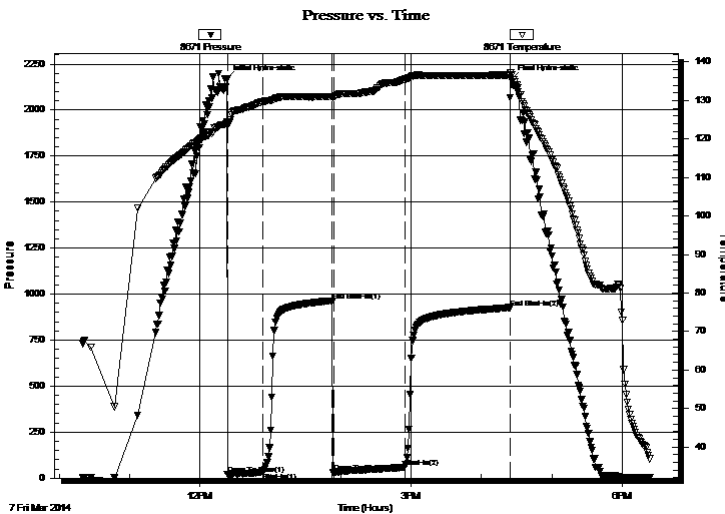
## Serial #: 8671

Inside

Press@RunDepth: 58.63 psig @ 4451.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.03.07 End Date: 2014.03.07 Last Calib.: 2014.03.07  
 Start Time: 10:20:05 End Time: 18:23:44 Time On Btm: 2014.03.07 @ 12:23:15  
 Time Off Btm: 2014.03.07 @ 16:25:15

TEST COMMENT: 30 - IF: Blow built to 9 1/4"  
 60 - IS: No blow back  
 60 - FF: Blow built to BOB (11") at 25 min.  
 90 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2168.43	124.49	Initial Hydro-static
1	19.64	123.46	Open To Flow (1)
31	31.70	129.70	Shut-In(1)
90	964.51	131.03	End Shut-In(1)
91	29.28	130.94	Open To Flow (2)
152	58.63	135.50	Shut-In(2)
241	927.14	136.62	End Shut-In(2)
242	2165.06	137.31	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	OCM 70% m, 23% o, 7% g	0.28
85.00	CO 96% o, 2% g, 2% m	1.19
0.00	GIP = 380'	0.00

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**11-1s-37w Cheyenne KS**

250 N. Water STE 300  
Wichita, KS 67202

**Culwell 'JT' #1-11**

Job Ticket: 53493

**DST#: 3**

ATTN: Wes Hansen

Test Start: 2014.03.07 @ 10:20:00

## Tool Information

Drill Pipe:	Length: 4427.00 ft	Diameter: 3.80 inches	Volume: 62.10 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 62.10 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4450.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	78.00 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			4427.00	
Hydraulic tool	5.00			4432.00	
Jars	5.00			4437.00	
Safety Joint	3.00			4440.00	
Packer	5.00			4445.00	28.00 Bottom Of Top Packer
Packer	5.00			4450.00	
Stubb	1.00			4451.00	
Recorder	0.00	8671	Inside	4451.00	
Recorder	0.00	8320	Outside	4451.00	
Perforations	13.00			4464.00	
Blank Spacing	33.00			4497.00	
Bullnose	3.00			4500.00	50.00 Bottom Packers & Anchor

**Total Tool Length: 78.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**11-1s-37w Cheyenne KS**

250 N. Water STE 300  
Wichita, KS 67202

**Culwell 'JT' #1-11**

Job Ticket: 53493

**DST#: 3**

ATTN: Wes Hansen

Test Start: 2014.03.07 @ 10:20:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36.2 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.18 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	OCM 70% <sub>m</sub> , 23% <sub>o</sub> , 7% <sub>g</sub>	0.281
85.00	CO 96% <sub>o</sub> , 2% <sub>g</sub> , 2% <sub>m</sub>	1.192
0.00	GIP = 380'	0.000

Total Length: 105.00 ft      Total Volume: 1.473 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 33.8 api @ 36 deg F

Corrected Gravity = 36.2 api

Serial #: 8671

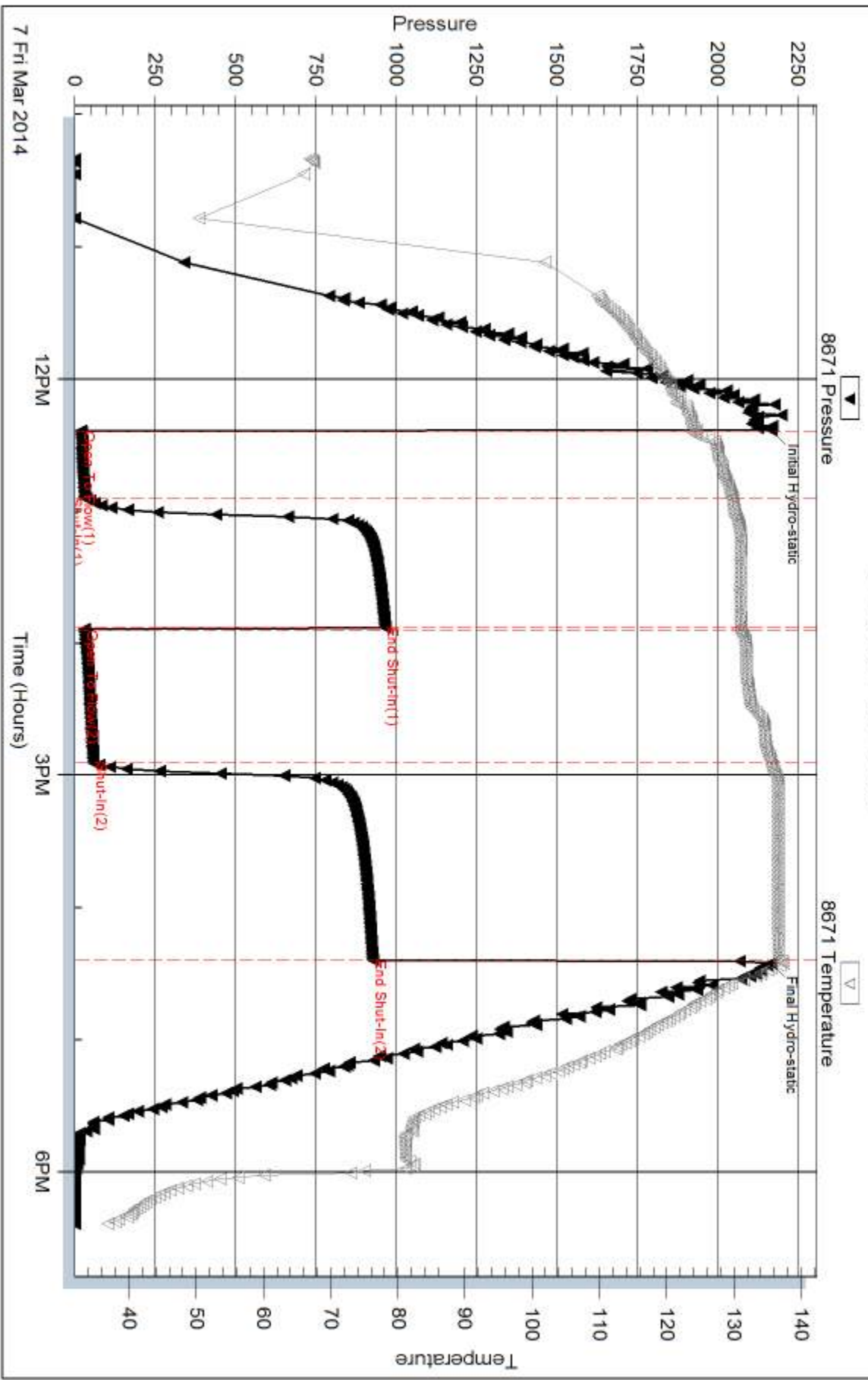
Inside

Murfin Drilling Co., Inc.

Oilwell UT #1-11

DST Test Number: 3

### Pressure vs. Time

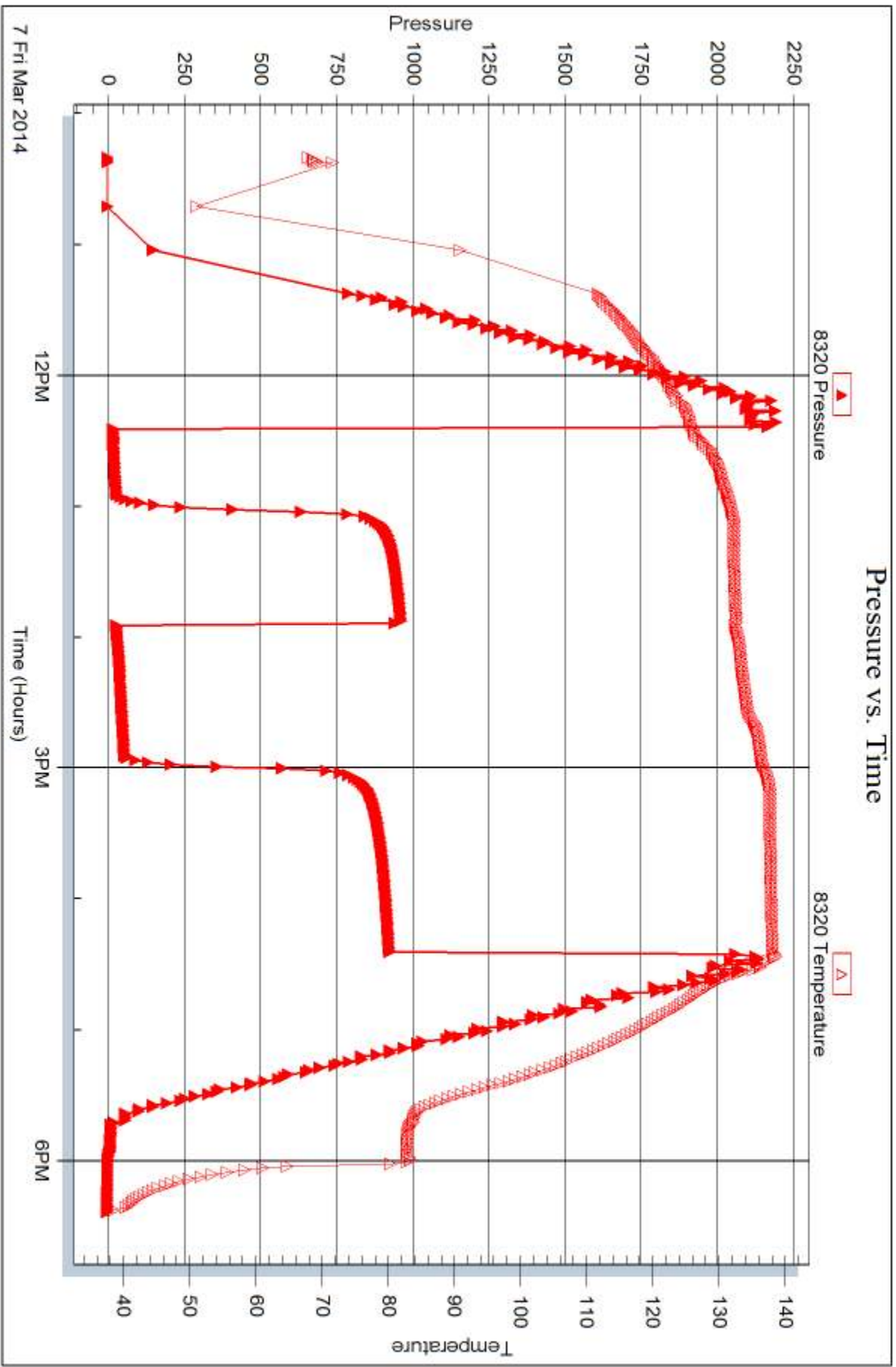


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Oilwell UT #1-11

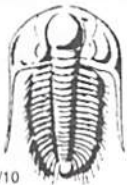
DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 53493

Printed: 2014.03.11 @ 10:46:45



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53491

Well Name & No. Culwell "JT" #1-11 Test No. 1 Date 3-4-14  
 Company Murfin Drilling Co., Inc. Elevation 3134 KB 3121 GL  
 Address 250 N. Water Suite 300 Wichita KS 67202  
 Co. Rep / Geo. Wes Hansen Rig Murfin #25  
 Location: Sec. 11 Twp. 1s Rge. 37w Co. Cheyenne State KS

Interval Tested 4100 - 4160 Zone Tested Lans. "D"  
 Anchor Length 60 Drill Pipe Run 4081 Mud Wt. 9.5  
 Top Packer Depth 4095 Drill Collars Run 0 Vis 65  
 Bottom Packer Depth 4100 Wt. Pipe Run - WL 6.0  
 Total Depth 4160 Chlorides 700 ppm System LCM 4

Blow Description IF: Blow built to BOB (11") at 9 1/2 min.  
ISI: Blowback built to 1"  
FF: Blow built to BOB at 12 min.  
FSI: Blowback built to 4"

Rec	Feet of	%gas	%oil	%water	%mud
230	C60	21	77	-	2
45	60cm	16	18	-	66
190	6Wcm w/oil spots	13	3	27	57
	6IP=475'				
		%gas	%oil	%water	%mud
		%gas	%oil	%water	%mud

Rec Total 465 BHT 137 Gravity 26 API RW .248 @ 45 ° F Chlorides 48,000 ppm

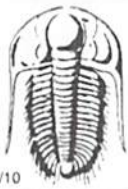
(A) Initial Hydrostatic 2053  Test \* 1250 T-On Location 12:30  
 (B) First Initial Flow 33  Jars \* 250 T-Started 14:00  
 (C) First Final Flow 112  Safety Joint \* 75 T-Open 16:40  
 (D) Initial Shut-In 959  Circ Sub T-Pulled 20:40  
 (E) Second Initial Flow 118  Hourly Standby T-Out ~~20:40~~ 23:15  
 (F) Second Final Flow 212  Mileage 126 RT 195.30 Comments Told On Bank at  
 (G) Final Shut-In 952  Sampler 1:30  
 (H) Final Hydrostatic 2041  Straddle  Ruined Shale Packer

Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder Sub Total 0  
 Day Standby Total 1770.30  
 Accessibility MP/DST Disc't  
 Sub Total 1770.30

Approved By Wesley Hansen Our Representative James Winder

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. 53492

Well Name & No. Culwell 'JT' #1-11 Test No. 2 Date 3-5-14  
 Company Murfin Drilling Co., Inc. Elevation 3134 KB 3121 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Wes Hansen Rig Murfin #25  
 Location: Sec. 11 Twp. 1s Rge. 37W Co. Cheyenne State KS

Interval Tested 4169 - 4210 Zone Tested Lans. "6"  
 Anchor Length 41 Drill Pipe Run 4148 Mud Wt. 9.4  
 Top Packer Depth 4164 Drill Collars Run - Vis 58  
 Bottom Packer Depth 4169 Wt. Pipe Run - WL 6.2  
 Total Depth 4210 Chlorides 800 ppm System LCM 4  
 Blow Description IF: Blow built to 1/4", died back, dead at 20 min.  
ISI: No blowback  
FF: No blow  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud w/oil spot</u>	<u>2</u>	<u>4</u>	<u>-</u>	<u>94</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT 129 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 2098  Test \* 1250 T-On Location 11:15  
 (B) First Initial Flow 19  Jars \* 250 T-Started 12:00  
 (C) First Final Flow 22  Safety Joint \* 75 T-Open ~~14:42~~  
 (D) Initial Shut-In 979  Circ Sub \_\_\_\_\_ T-Pulled 17:54  
 (E) Second Initial Flow 23  Hourly Standby \_\_\_\_\_ T-Out ~~20:00~~  
 (F) Second Final Flow 24  Mileage 126 RT 195.30 Comments \_\_\_\_\_  
 (G) Final Shut-In 534  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2058  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1770.30  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1770.30

Initial Open 30  
 Initial Shut-In 60  
 Final Flow ~~30~~ 40 (I was late turning tool)  
 Final Shut-In 60  
 Approved By Wes Hansen Our Representative James Winder

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53493

Well Name & No. Culwell 'JT' #1-11 Test No. 3 Date 3-7-14  
 Company Murfin Drilling Co., Inc. Elevation 3134 KB 3121 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Wes Hansen Rig Murfin #25  
 Location: Sec. 11 Twp. 1S Rge. 37W Co. Cheyenne State KS

Interval Tested 4450 - 4500 Zone Tested Pawnee  
 Anchor Length 40 50 Drill Pipe Run 4427 Mud Wt. 8.9  
 Top Packer Depth 4445 Drill Collars Run - Vis 65  
 Bottom Packer Depth 4450 Wt. Pipe Run - WL 6.2  
 Total Depth 4500 Chlorides 600 ppm System LCM 4

Blow Description IF: Blow built to 9 1/4"  
ISI: No blowback  
FF: Blow built to BOB<sup>(11")</sup> at 25 min.  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>85</u>	<u>CO</u>	<u>2</u>	<u>96</u>	<u>2</u>	<u>2</u>
<u>20</u>	<u>OCM</u>	<u>7</u>	<u>23</u>	<u>-</u>	<u>70</u>
<u>    </u>	<u>GIP=380'</u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

Rec Total 105 BHT 137 Gravity 36.2 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>2168</u>	<input type="checkbox"/> Test <u>★</u> 1250	T-On Location <u>9:30</u>
(B) First Initial Flow <u>20</u>	<input type="checkbox"/> Jars <u>★</u> 250	T-Started <u>10:20</u>
(C) First Final Flow <u>32</u>	<input type="checkbox"/> Safety Joint <u>★</u> 75	T-Open <u>12:23</u>
(D) Initial Shut-In <u>965</u>	<input checked="" type="checkbox"/> Circ Sub	T-Pulled <u>16:24</u>
(E) Second Initial Flow <u>29</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>18:20</u>
(F) Second Final Flow <u>59</u>	<input type="checkbox"/> Mileage <u>126RT</u> 195.30	Comments
(G) Final Shut-In <u>927</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2165</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer	<input checked="" type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Extra Copies
Final Flow <u>60</u>	<input checked="" type="checkbox"/> Extra Recorder	Sub Total <u>450</u>
Final Shut-In <u>90</u>	<input checked="" type="checkbox"/> Day Standby <u>★</u> 1d 13.5h	Total <u>2220.30</u>
	<input checked="" type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1770.30</u>	

Approved By Wesley Hansen Our Representative James Winder

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