



## DRILL STEM TEST REPORT

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

250 N. Water, STE 300,  
Wichita, KS 67202

ATTN: Wes Hansen

### **Focke Unit #1-22**

#### **22-2S.-34W Rawlins,KS**

Start Date: 2017.05.26 @ 12:01:00

End Date: 2017.05.26 @ 19:21:00

Job Ticket #: 61237                      DST #: 1

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

Printed: 2017.05.31 @ 16:19:34



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

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

**22-2S.-34W Rawlins, KS**

**Focke Unit #1-22**

Job Ticket: 61237

**DST#: 1**

Test Start: 2017.05.26 @ 12:01:00

## GENERAL INFORMATION:

Formation: **Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:23:20

Time Test Ended: 19:21:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Martine Salinas

Unit No: 82

**Interval: 3940.00 ft (KB) To 3975.00 ft (KB) (TVD)**

Reference Elevations: 3115.00 ft (KB)

Total Depth: 3975.00 ft (KB) (TVD)

3110.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8322**

**Inside**

Press@RunDepth: 98.63 psig @ 3941.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.05.26

End Date:

2017.05.26

Last Calib.: 2017.05.26

Start Time: 12:01:01

End Time:

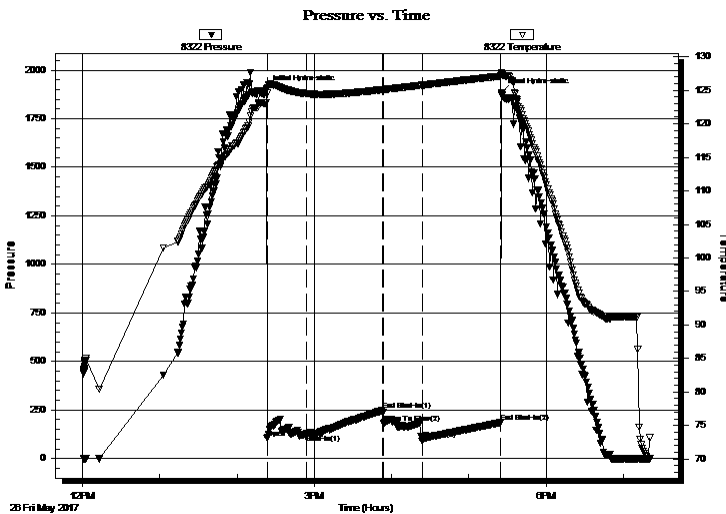
19:21:00

Time On Btm: 2017.05.26 @ 14:22:50

Time Off Btm: 2017.05.26 @ 17:25:30

**TEST COMMENT:** 30-IF-Surface.blow built to 1/4" died @ 19 mins  
60-ISI-No blow  
30-FF-No blow  
60-FSI-No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1901.88	123.17	Initial Hydro-static
1	105.26	124.59	Open To Flow (1)
31	123.64	124.49	Shut-In(1)
91	247.92	125.10	End Shut-In(1)
91	179.85	125.08	Open To Flow (2)
122	98.63	125.76	Shut-In(2)
182	184.92	127.12	End Shut-In(2)
183	1883.61	127.46	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
129.00	100%M	0.63

## Gas Rates

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



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TESTING, INC.

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250 N. Water, STE 300,  
Wichita, KS 67202  
ATTN: Wes Hansen

**22-2S.-34W Rawlins, KS**

**Focke Unit #1-22**

Job Ticket: 61237      **DST#: 1**  
Test Start: 2017.05.26 @ 12:01:00

## GENERAL INFORMATION:

Formation: **Oread**

Deviated: No Whipstock:      ft (KB)

Time Tool Opened: 14:23:20

Time Test Ended: 19:21:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Martine Salinas

Unit No: 82

**Interval: 3940.00 ft (KB) To 3975.00 ft (KB) (TVD)**

Total Depth: 3975.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3115.00 ft (KB)

3110.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8734      Outside**

Press@RunDepth:      psig @ 3941.00 ft (KB)

Start Date: 2017.05.26

End Date:

2017.05.26

Capacity: 8000.00 psig

Last Calib.:

2017.05.26

Start Time: 12:01:01

End Time:

19:21:00

Time On Btm:

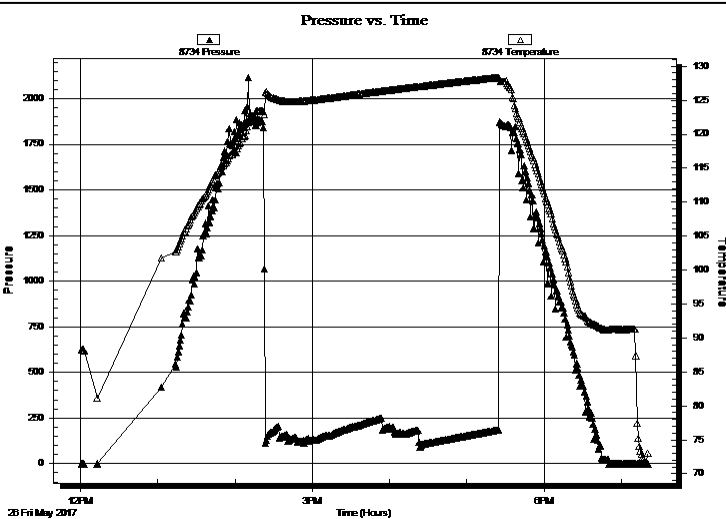
Time Off Btm:

TEST COMMENT: 30-IF-Surface.blow built to 1/4" died @ 19 mins

60-ISI-No blow

30-FF-No blow

60-FSI-No blow



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
129.00	100%M	0.63

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

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

**22-2S.-34W Rawlins, KS**

**Focke Unit #1-22**

Job Ticket: 61237

**DST#: 1**

Test Start: 2017.05.26 @ 12:01:00

## Tool Information

Drill Pipe:	Length: 3739.00 ft	Diameter: 3.80 inches	Volume: 52.45 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 53.36 bbl</u>	Tool Chased 18.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3940.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	63.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Opened tool @ bridge and slid to bottom 18'

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3917.00	
Hydraulic tool	5.00			3922.00	
Jars	5.00			3927.00	
Safety Joint	3.00			3930.00	
Packer	5.00			3935.00	28.00 Bottom Of Top Packer
Packer	5.00			3940.00	
Stubb	1.00			3941.00	
Recorder	0.00	8322	Inside	3941.00	
Recorder	0.00	8734	Outside	3941.00	
Perforations	29.00			3970.00	
Bullnose	5.00			3975.00	35.00 Bottom Packers & Anchor

**Total Tool Length: 63.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc

**22-2S.-34W Rawlins,KS**

250 N. Water,STE 300,  
Wichita,KS 67202

**Focke Unit #1-22**

Job Ticket: 61237

**DST#: 1**

ATTN: Wes Hansen

Test Start: 2017.05.26 @ 12:01:00

## 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: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.95 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
129.00	100%M	0.634

Total Length: 129.00 ft      Total Volume: 0.634 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

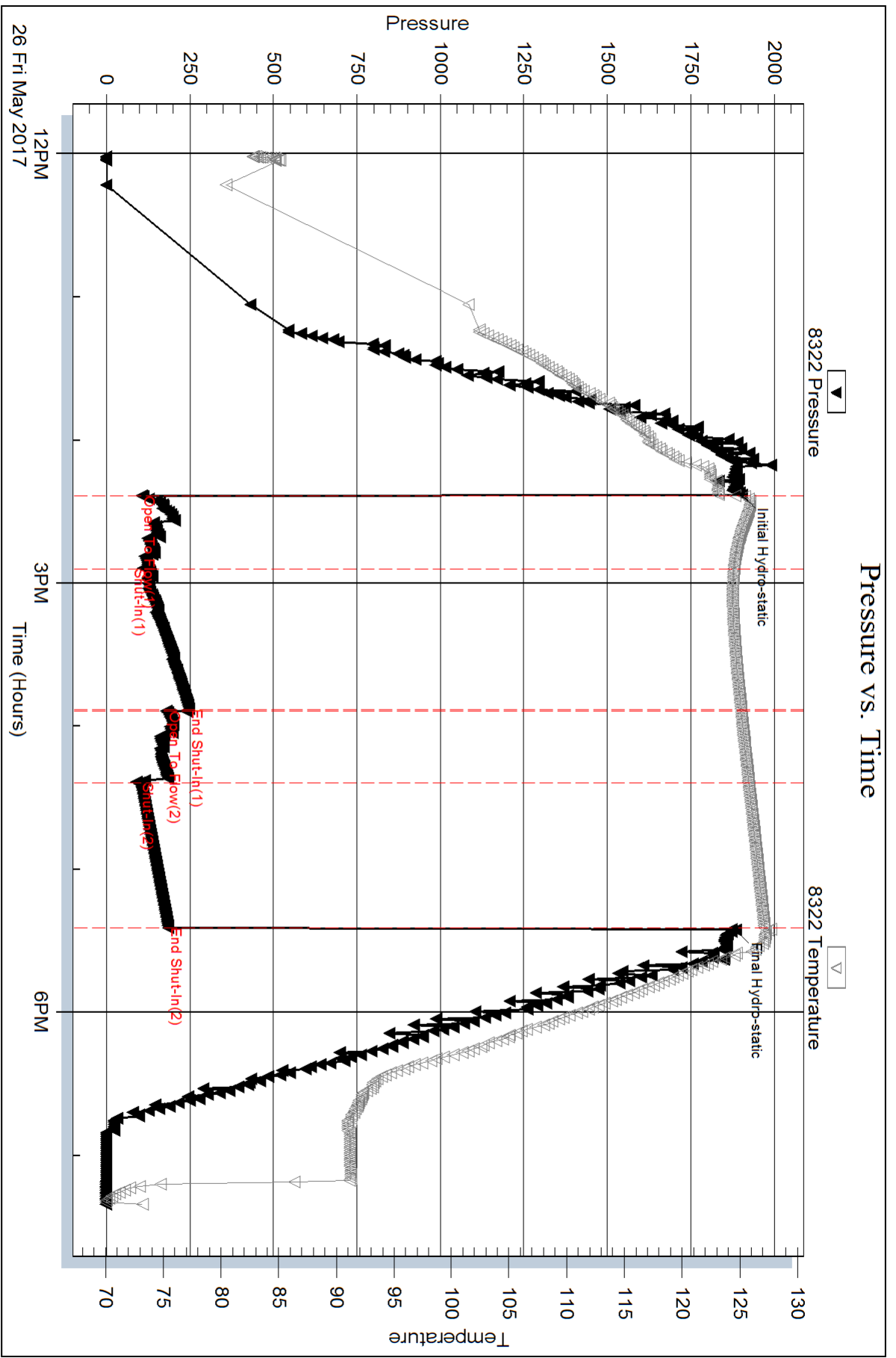
Serial #: 8322

Inside

Murfin Drilling Co. Inc

Focke Unit #1-22

DST Test Number: 1

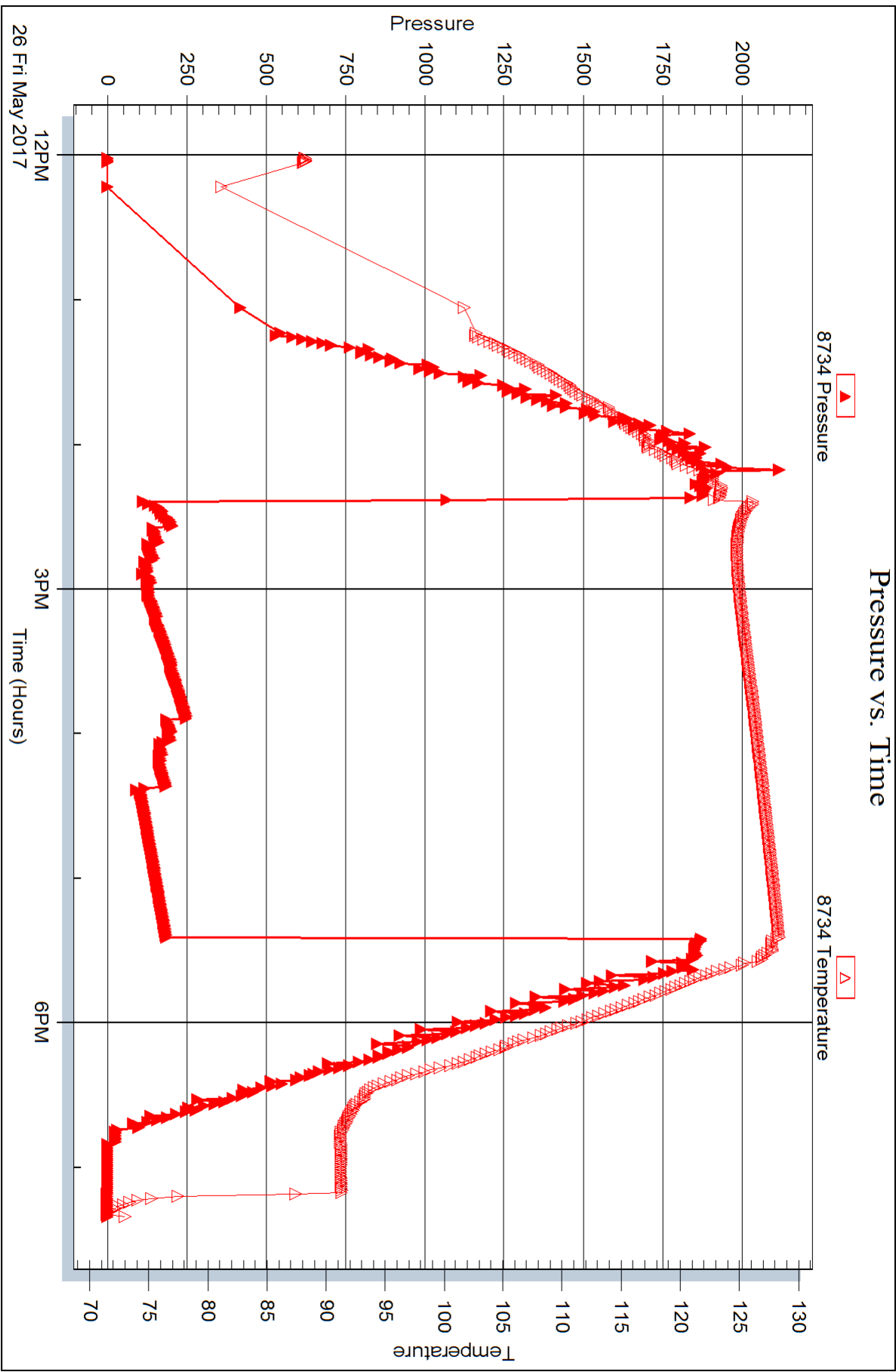


Serial #: 8734

Outside Murfin Drilling Co. Inc

Focke Unit #1-22

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 61237

Printed: 2017.05.31 @ 16:19:35



## DRILL STEM TEST REPORT

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

250 N. Water, STE 300,  
Wichita, KS 67202

ATTN: Wes Hansen

### **Focke Unit #1-22**

#### **22-2S.-34W Rawlins,KS**

Start Date: 2017.05.27 @ 08:46:00

End Date: 2017.05.27 @ 16:51:09

Job Ticket #: 61238                      DST #: 2

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

Printed: 2017.05.31 @ 16:18:31





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**22-2S.-34W Rawlins, KS**

**Focke Unit #1-22**

Job Ticket: 61238 **DST#: 2**

Test Start: 2017.05.27 @ 08:46:00

## GENERAL INFORMATION:

Formation: **Leavenworth - LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:51:50

Time Test Ended: 16:51:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Martine Salinas

Unit No: 82

Interval: **3994.00 ft (KB) To 4060.00 ft (KB) (TVD)**

Total Depth: 4060.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3115.00 ft (KB)

3110.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8322**

**Inside**

Press@RunDepth: 32.77 psig @ 3995.00 ft (KB)

Start Date: 2017.05.27

Start Time: 08:46:01

End Date: 2017.05.27

End Time: 16:51:10

Capacity: 8000.00 psig

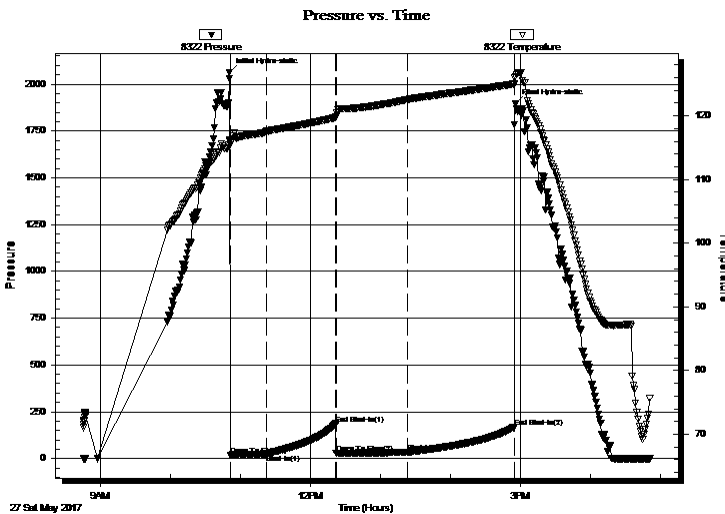
Last Calib.: 2017.05.27

Time On Btm: 2017.05.27 @ 10:51:10

Time Off Btm: 2017.05.27 @ 14:56:00

**TEST COMMENT:** 30-IF-Surface.blow built to 1" @ 15 mins, maintained 1" @ shut in  
 60-ISI-No blow  
 60-FF-Surface.blow built to 1/8"  
 90-FSI-No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2062.38	116.12	Initial Hydro-static
1	19.17	115.48	Open To Flow (1)
32	25.19	117.50	Shut-In(1)
91	186.01	119.71	End Shut-In(1)
92	28.83	119.84	Open To Flow (2)
152	32.77	122.52	Shut-In(2)
244	167.54	124.97	End Shut-In(2)
245	1893.56	126.17	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
40.00	GOCM	0.20

\* Recovery from multiple tests

## Gas Rates

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



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Murfin Drilling Co. Inc  
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Wichita, KS 67202  
ATTN: Wes Hansen

**22-2S.-34W Rawlins, KS**

**Focke Unit #1-22**

Job Ticket: 61238

**DST#: 2**

Test Start: 2017.05.27 @ 08:46:00

## GENERAL INFORMATION:

Formation: **Leavenworth - LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:51:50

Time Test Ended: 16:51:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Martine Salinas

Unit No: 82

**Interval: 3994.00 ft (KB) To 4060.00 ft (KB) (TVD)**

Total Depth: 4060.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3115.00 ft (KB)

3110.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8734 Outside**

Press@RunDepth: psig @ 3995.00 ft (KB)

Start Date: 2017.05.27

End Date: 2017.05.27

Start Time: 08:46:01

End Time: 16:51:10

Capacity: 8000.00 psig

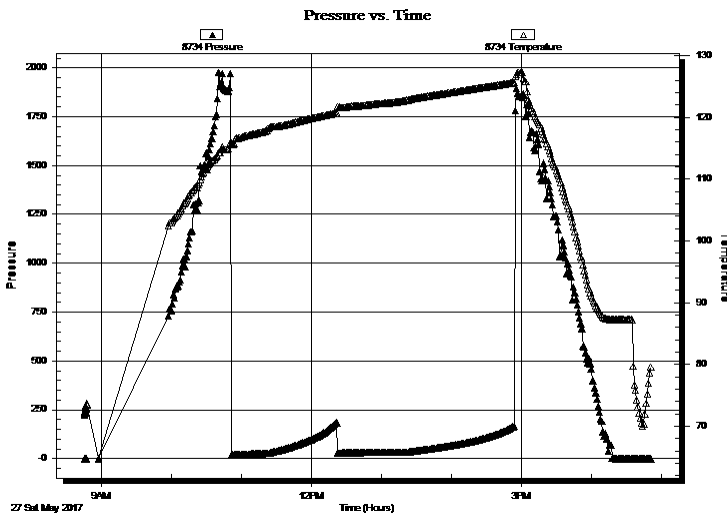
Last Calib.: 1899.12.30

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 30-IF-Surface.blow built to 1" @ 15 mins, maintained 1" @ shut in  
60-ISI-No blow  
60-FF-Surface.blow built to 1/8"  
90-FSI-No blow

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
40.00	GOCM	0.20

## Gas Rates

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

\* Recovery from multiple tests



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# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

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

**22-2S.-34W Rawlins, KS**  
**Focke Unit #1-22**  
Job Ticket: 61238      **DST#: 2**  
Test Start: 2017.05.27 @ 08:46:00

**Tool Information**

Drill Pipe:	Length: 3803.00 ft	Diameter: 3.80 inches	Volume: 53.35 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 54.26 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3994.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	66.00 ft			
Tool Length:	94.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Push through 8' of fill

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Shut In Tool	5.00			3971.00	
Hydraulic tool	5.00			3976.00	
Jars	5.00			3981.00	
Safety Joint	3.00			3984.00	
Packer	5.00			3989.00	28.00      Bottom Of Top Packer
Packer	5.00			3994.00	
Stubb	1.00			3995.00	
Recorder	0.00	8322	Inside	3995.00	
Recorder	0.00	8734	Outside	3995.00	
Perforations	27.00			4022.00	
Change Over Sub	1.00			4023.00	
Drill Pipe	31.00			4054.00	
Change Over Sub	1.00			4055.00	
Bullnose	5.00			4060.00	66.00      Bottom Packers & Anchor

**Total Tool Length: 94.00**



**TRILOBITE  
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**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

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

**22-2S.-34W Rawlins, KS**  
**Focke Unit #1-22**  
Job Ticket: 61238      **DST#: 2**  
Test Start: 2017.05.27 @ 08:46:00

**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: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.96 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: 2.00 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
40.00	GOCM	0.197

Total Length: 40.00 ft      Total Volume: 0.197 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

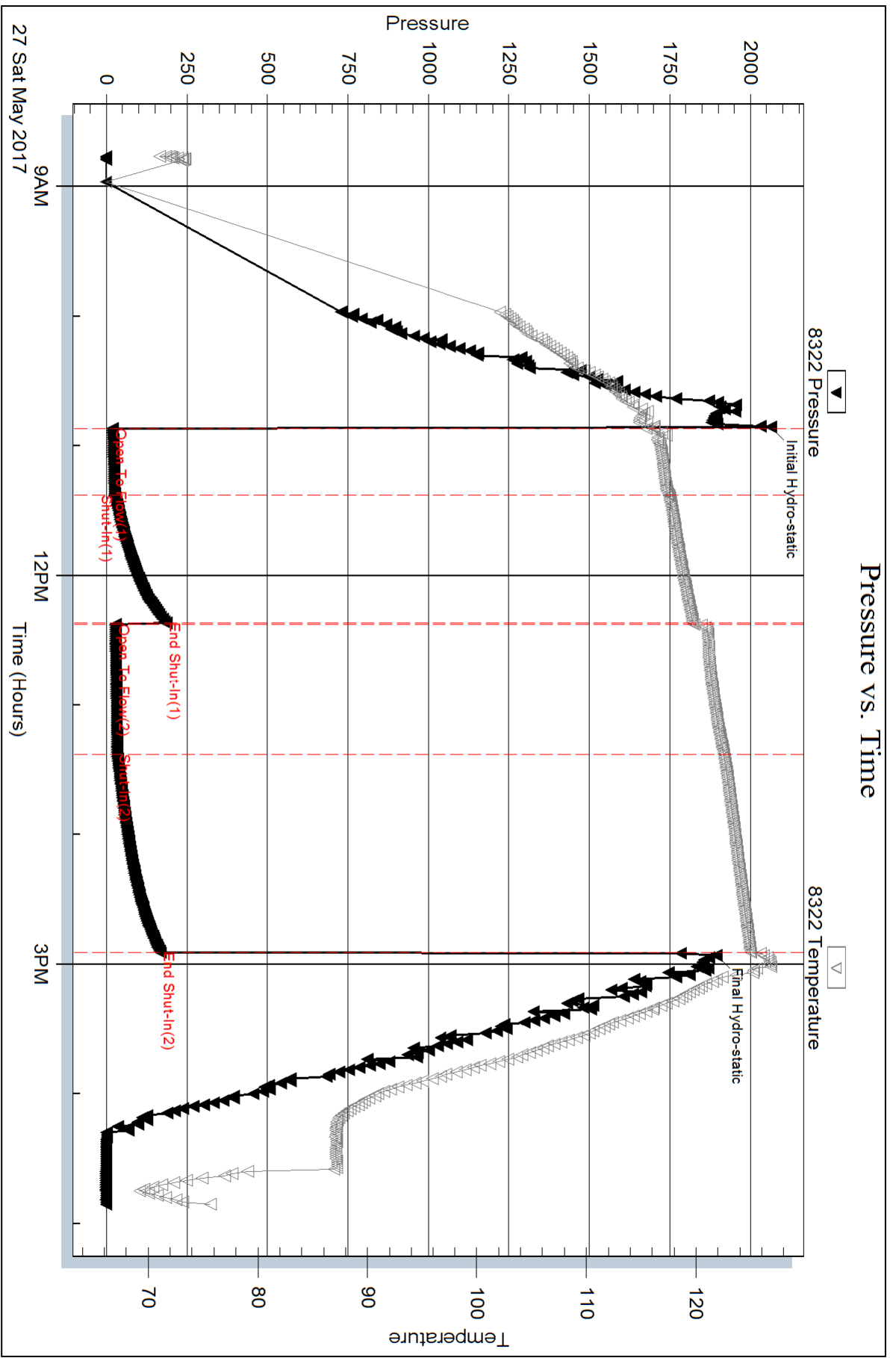
Serial #: 8322

Inside

Murfin Drilling Co. Inc

Focke Unit #1-22

DST Test Number: 2

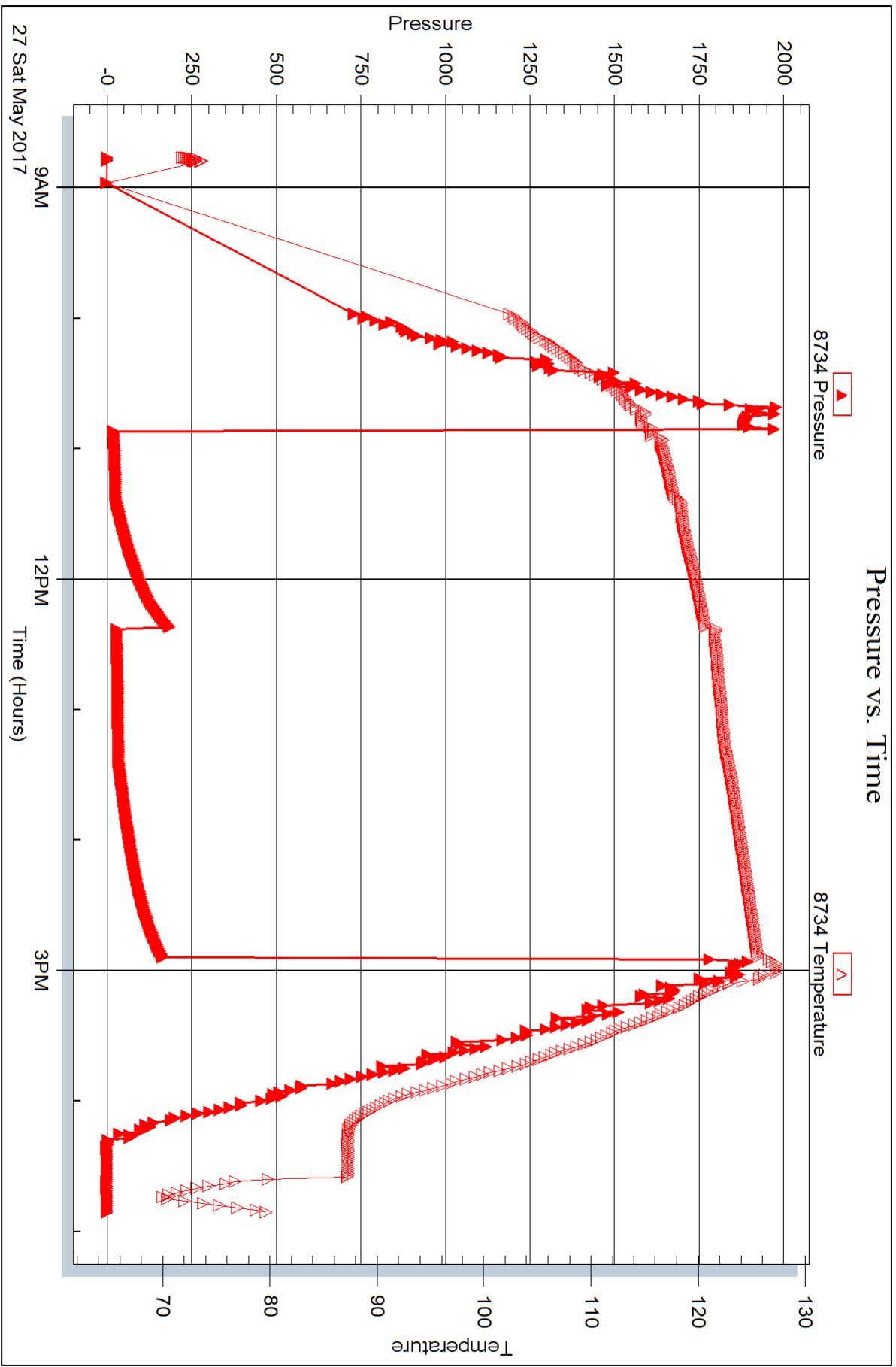


Serial #: 8734

Outside Murfin Drilling Co. Inc

Focke Unit #1-22

DST Test Number: 2





## DRILL STEM TEST REPORT

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

250 N. Water, STE 300,  
Wichita, KS 67202

ATTN: Wes Hansen

### **Focke Unit #1-22**

#### **22-2S.-34W Rawlins,KS**

Start Date: 2017.05.28 @ 02:31:00

End Date: 2017.05.28 @ 12:13:30

Job Ticket #: 61239                      DST #: 3

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

Printed: 2017.05.31 @ 16:17:30



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**22-2S.-34W Rawlins, KS**

**Focke Unit #1-22**

Job Ticket: 61239

**DST#: 3**

Test Start: 2017.05.28 @ 02:31:00

## GENERAL INFORMATION:

Formation: **LKC "D"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 04:53:50  
 Time Test Ended: 12:13:30  
 Interval: **4049.00 ft (KB) To 4110.00 ft (KB) (TVD)**  
 Total Depth: 4110.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Martine Salinas  
 Unit No: 82  
 Reference Elevations: 3115.00 ft (KB)  
 3110.00 ft (CF)  
 KB to GR/CF: 5.00 ft

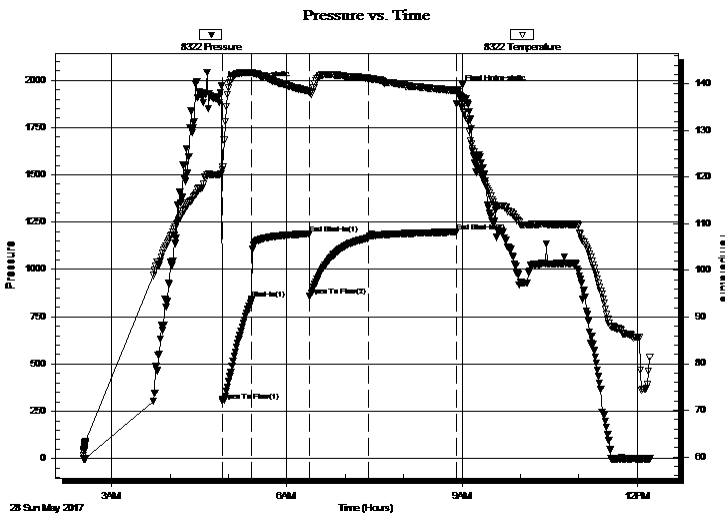
## Serial #: 8322

Inside

Press@RunDepth: 1165.38 psig @ 4050.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.05.28 End Date: 2017.05.28 Last Calib.: 2017.05.28  
 Start Time: 02:31:01 End Time: 12:13:30 Time On Btm: 2017.05.28 @ 04:53:00  
 Time Off Btm: 2017.05.28 @ 08:55:40

TEST COMMENT: 30-IF- BOB @ 3 mins  
 60-ISI-Weak surface.blow diad @ 12 mins  
 60-FF- BOB @ 3 mins  
 90-FSI-No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1969.86	120.73	Initial Hydro-static
1	303.40	121.53	Open To Flow (1)
31	841.53	142.43	Shut-In(1)
91	1189.29	138.41	End Shut-In(1)
91	860.58	138.18	Open To Flow (2)
151	1165.38	141.16	Shut-In(2)
241	1197.30	138.53	End Shut-In(2)
243	1947.96	138.32	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
124.00	SOSWCM 1%O,22%W,77%M	0.61
2124.00	Reversed out	29.23
0.00	SOSMCW 1%O,5%M,94%W @ 10 mins	0.00
0.00	SOSMCW 1%O,10%M,89%W @ 7 1/2 min	0.00
0.00	OSMCW 3%O,35%M,62%W @ 5MINS	0.00
396.00	SOWCM 10%O,41%W,49%M	5.55

\* 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  
250 N. Water, STE 300,  
Wichita, KS 67202  
ATTN: Wes Hansen

**22-2S.-34W Rawlins, KS**

**Focke Unit #1-22**

Job Ticket: 61239

**DST#: 3**

Test Start: 2017.05.28 @ 02:31:00

### Tool Information

Drill Pipe:	Length: 3867.00 ft	Diameter: 3.80 inches	Volume: 54.24 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 55.15 bbl</u>	Tool Chased 6.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4049.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	89.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Opened tool @ bridge and slid to bottom 6'

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4026.00	
Hydraulic tool	5.00			4031.00	
Jars	5.00			4036.00	
Safety Joint	3.00			4039.00	
Packer	5.00			4044.00	28.00 Bottom Of Top Packer
Packer	5.00			4049.00	
Stubb	1.00			4050.00	
Recorder	0.00	8322	Inside	4050.00	
Recorder	0.00	8734	Outside	4050.00	
Perforations	21.00			4071.00	
Change Over Sub	1.00			4072.00	
Drill Pipe	32.00			4104.00	
Change Over Sub	1.00			4105.00	
Bullnose	5.00			4110.00	61.00 Bottom Packers & Anchor

**Total Tool Length: 89.00**



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**22-2S.-34W Rawlins, KS**  
**Focke Unit #1-22**  
Job Ticket: 61239      **DST#: 3**  
Test Start: 2017.05.28 @ 02:31:00

## 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:	19000 ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.35 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: 2.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	SOSWCM 1%O,22%W,77%M	0.610
2124.00	Reversed out	29.229
0.00	SOSMCW 1%O,5%M,94%W @ 10 mins	0.000
0.00	SOSMCW 1%O,10%M,89%W @ 7 1/2 mins	0.000
0.00	OSMCW 3%O,35%M,62%W @ 5MINS	0.000
396.00	SOWCM 10%O,41%W,49%M	5.555

Total Length: 2644.00 ft      Total Volume: 35.394 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: 2124'= Total fluid reversed  
 RW=.27 @ 97.5 degs

Serial #: 8322

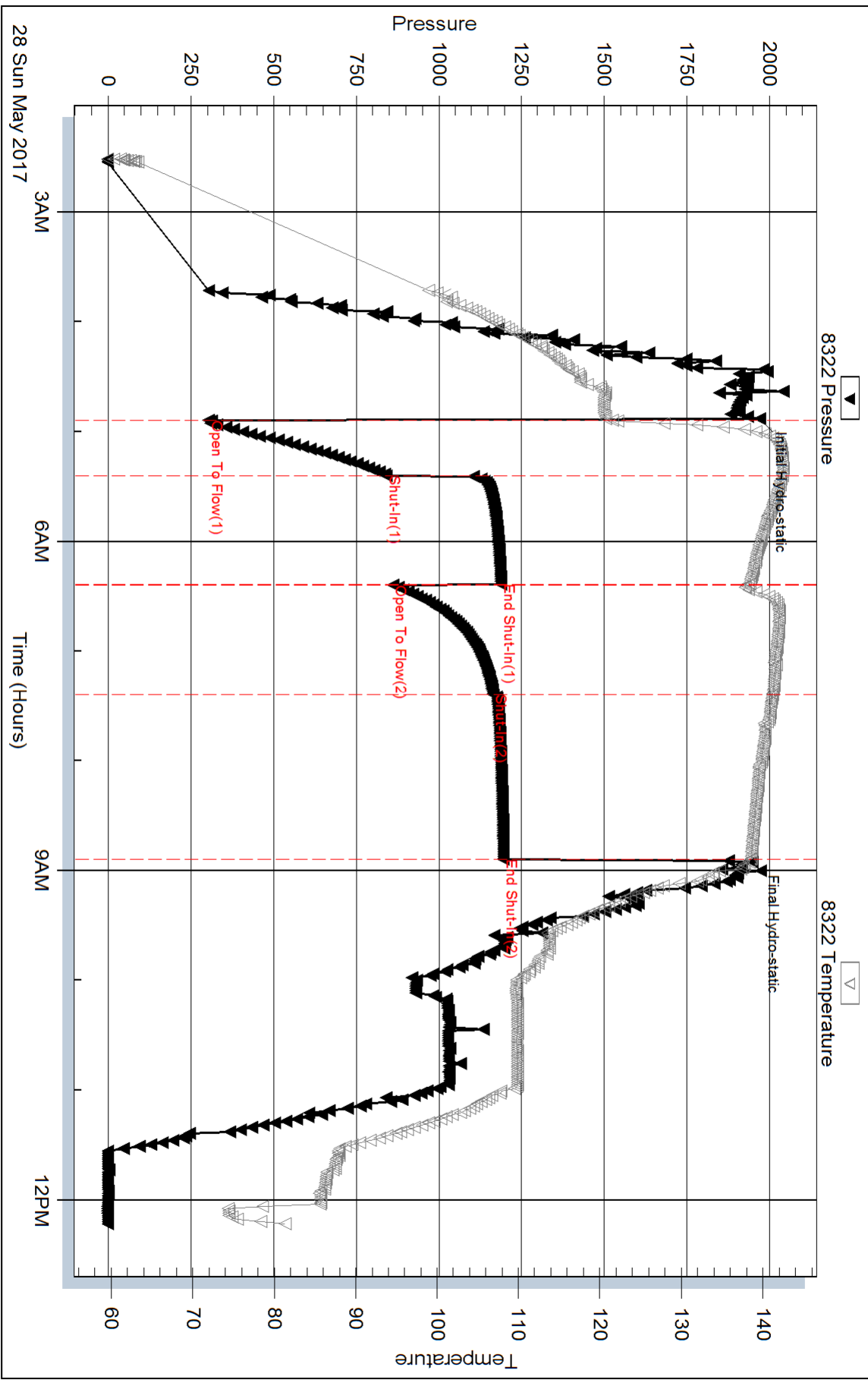
Inside

Murfin Drilling Co. Inc

Focke Unit #1-22

DST Test Number: 3

# Pressure vs. Time

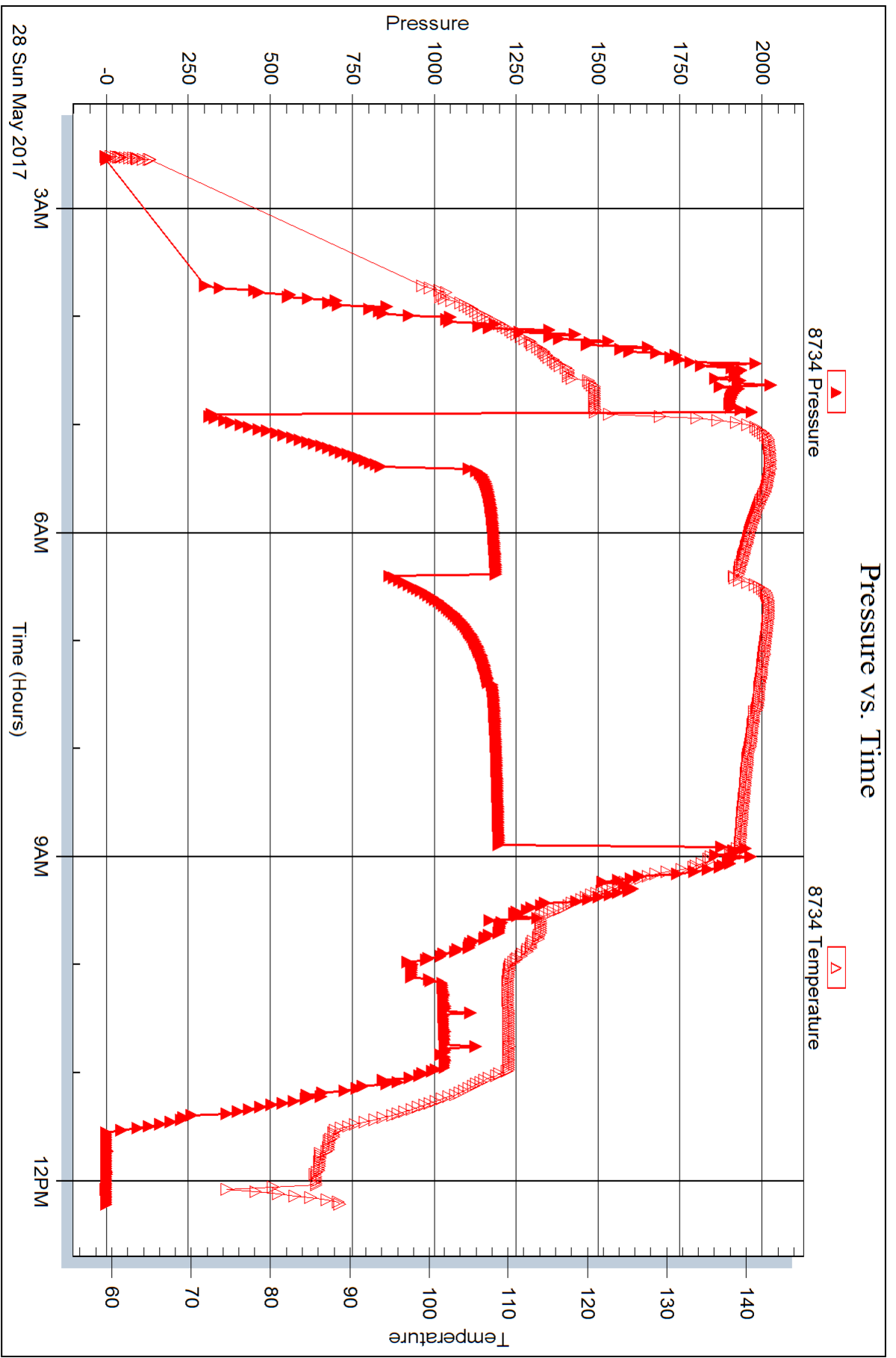


Serial #: 8734

Outside Murfin Drilling Co. Inc

Focke Unit #1-22

DST Test Number: 3





## DRILL STEM TEST REPORT

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

250 N. Water, STE 300,  
Wichita, KS 67202

ATTN: Wes Hansen

### **Focke Unit #1-22**

#### **22-2S.-34W Rawlins,KS**

Start Date: 2017.05.28 @ 20:28:00

End Date: 2017.05.29 @ 04:52:39

Job Ticket #: 61240                      DST #: 4

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

Printed: 2017.05.31 @ 16:16:40



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**22-2S.-34W Rawlins, KS**

**Focke Unit #1-22**

Job Ticket: 61240

**DST#: 4**

Test Start: 2017.05.28 @ 20:28:00

## GENERAL INFORMATION:

Formation: **LKC "G"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 22:41:30  
 Time Test Ended: 04:52:39  
 Interval: **4118.00 ft (KB) To 4150.00 ft (KB) (TVD)**  
 Total Depth: 4150.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Martine Salinas  
 Unit No: 82  
 Reference Elevations: 3115.00 ft (KB)  
 3110.00 ft (CF)  
 KB to GR/CF: 5.00 ft

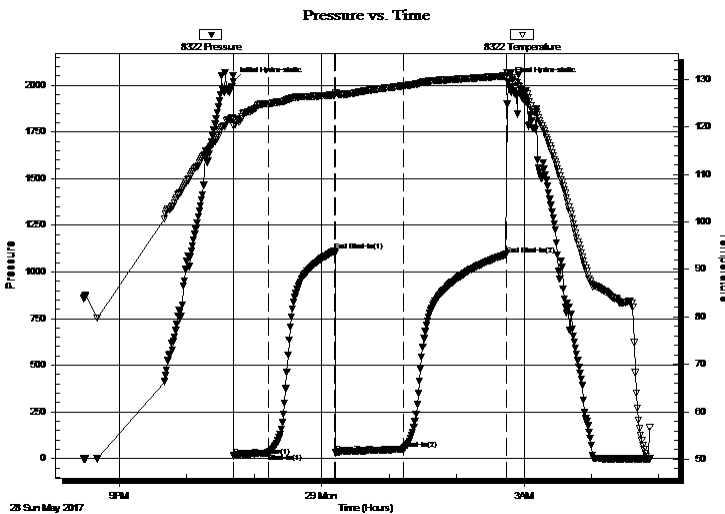
## Serial #: 8322

Inside

Press@RunDepth: 49.49 psig @ 4119.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.05.28 End Date: 2017.05.29 Last Calib.: 2017.05.29  
 Start Time: 20:28:01 End Time: 04:52:40 Time On Btm: 2017.05.28 @ 22:41:20  
 Time Off Btm: 2017.05.29 @ 02:45:50

TEST COMMENT: 30-IF Surface blow built to 2"  
 60-ISI-No blow  
 60-FF-Surface.blow built to 4"  
 90-FSI-No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2020.81	121.45	Initial Hydro-static
1	14.24	120.18	Open To Flow (1)
31	29.99	124.84	Shut-In(1)
91	1112.51	126.76	End Shut-In(1)
92	30.29	127.11	Open To Flow (2)
152	49.49	128.68	Shut-In(2)
243	1093.09	130.75	End Shut-In(2)
245	2019.27	131.44	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	CGO	0.07

\* Recovery from multiple tests

## Gas Rates

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



# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

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

**22-2S.-34W Rawlins, KS**

**Focke Unit #1-22**

Job Ticket: 61240

**DST#: 4**

Test Start: 2017.05.28 @ 20:28:00

### GENERAL INFORMATION:

Formation: **LKC "G"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 22:41:30  
 Time Test Ended: 04:52:39  
**Interval: 4118.00 ft (KB) To 4150.00 ft (KB) (TVD)**  
 Total Depth: 4150.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair

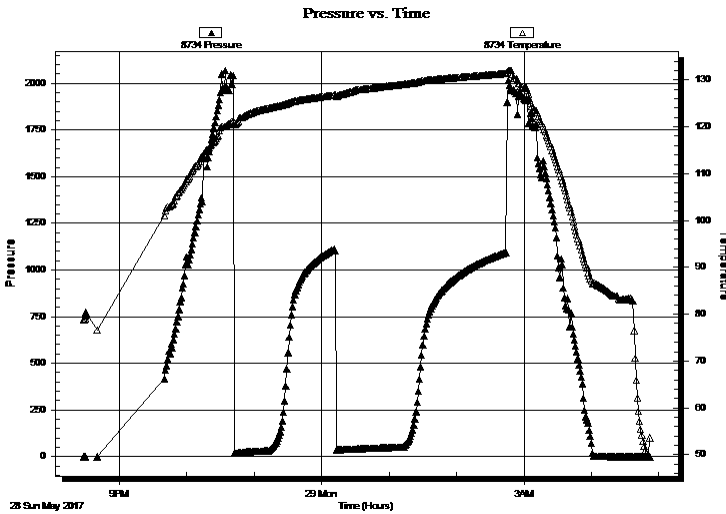
Test Type: Conventional Bottom Hole (Reset)  
 Tester: Martine Salinas  
 Unit No: 82  
 Reference Elevations: 3115.00 ft (KB)  
 3110.00 ft (CF)  
 KB to GR/CF: 5.00 ft

### Serial #: 8734 Outside

Press@RunDepth: psig @ 4119.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.05.28 End Date: 2017.05.29 Last Calib.: 2017.05.29  
 Start Time: 20:28:01 End Time: 04:52:40 Time On Btm:  
 Time Off Btm:

TEST COMMENT: 30-IF Surface blow built to 2"  
 60-ISI-No blow  
 60-FF-Surface.blow built to 4"  
 90-FSI-No blow

### PRESSURE SUMMARY



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

### Recovery

Length (ft)	Description	Volume (bbl)
15.00	CGO	0.07

\* 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  
250 N. Water, STE 300,  
Wichita, KS 67202  
ATTN: Wes Hansen

**22-2S.-34W Rawlins, KS**

**Focke Unit #1-22**

Job Ticket: 61240

**DST#: 4**

Test Start: 2017.05.28 @ 20:28:00

## Tool Information

Drill Pipe:	Length: 3930.00 ft	Diameter: 3.80 inches	Volume: 55.13 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 56.04 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4118.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	60.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4095.00	
Hydraulic tool	5.00			4100.00	
Jars	5.00			4105.00	
Safety Joint	3.00			4108.00	
Packer	5.00			4113.00	28.00 Bottom Of Top Packer
Packer	5.00			4118.00	
Stubb	1.00			4119.00	
Recorder	0.00	8322	Inside	4119.00	
Recorder	0.00	8734	Outside	4119.00	
Perforations	26.00			4145.00	
Bullnose	5.00			4150.00	32.00 Bottom Packers & Anchor

**Total Tool Length: 60.00**



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

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

**22-2S.-34W Rawlins, KS**  
**Focke Unit #1-22**  
Job Ticket: 61240      **DST#: 4**  
Test Start: 2017.05.28 @ 20:28:00

**Mud and Cushion Information**

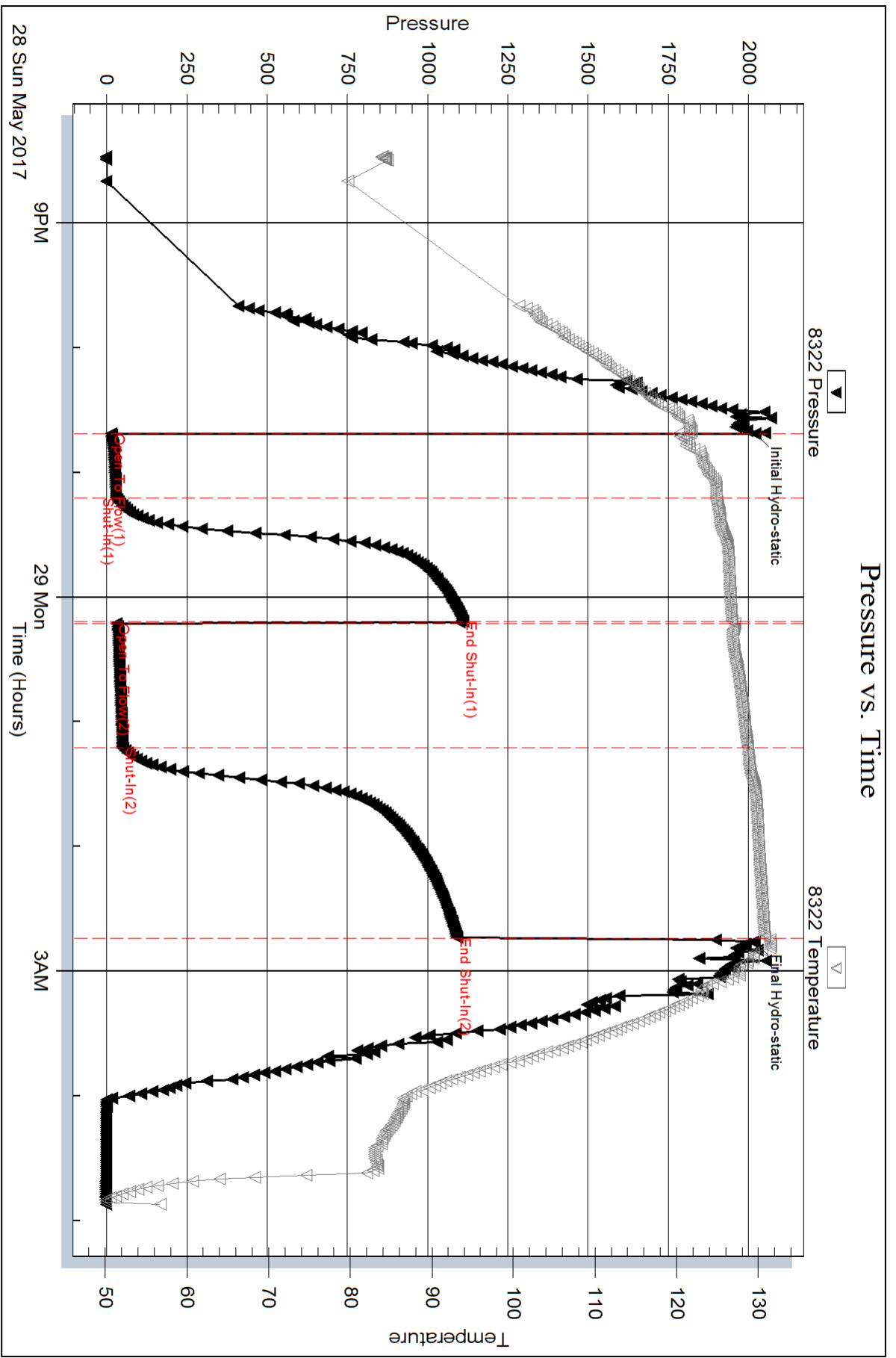
Mud Type: Gel Chem	Cushion Type:	Oil API: 34.3 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.37 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 900.00 ppm		
Filter Cake: 2.00 inches		

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
15.00	CGO	0.074

Total Length:                      ft      Total Volume:                      0.359 bbl  
Num Fluid Samples: 0                      Num Gas Bombs:      0                      Serial #:  
Laboratory Name:                      Laboratory Location:  
Recovery Comments: Oil gravity=34.5 @ 62degs  
   gravity corrected to 34.3

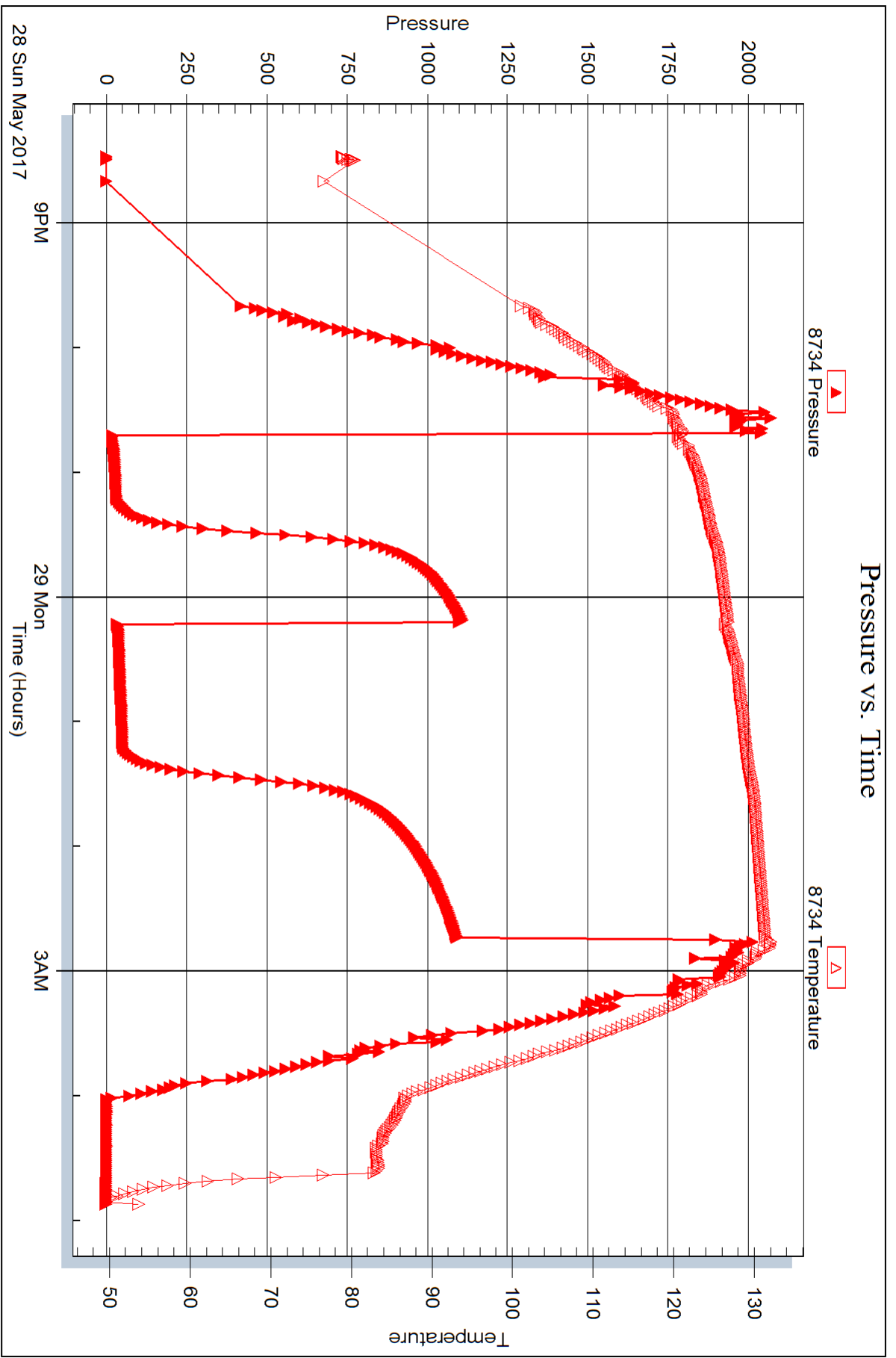


Serial #: 8734

Outside Murfin Drilling Co. Inc

Focke Unit #1-22

DST Test Number: 4





## DRILL STEM TEST REPORT

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

250 N. Water, STE 300,  
Wichita, KS 67202

ATTN: Wes Hansen

### **Focke Unit #1-22**

#### **22-2S.-34W Rawlins,KS**

Start Date: 2017.05.29 @ 17:13:00

End Date: 2017.05.30 @ 01:46:49

Job Ticket #: 61242                      DST #: 5

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

Printed: 2017.05.31 @ 16:14:42



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**22-2S.-34W Rawlins, KS**

**Focke Unit #1-22**

Job Ticket: 61242

**DST#: 5**

Test Start: 2017.05.29 @ 17:13:00

## GENERAL INFORMATION:

Formation: **LKC "H - J"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 19:19:40  
 Time Test Ended: 01:46:49  
 Interval: **4158.00 ft (KB) To 4250.00 ft (KB) (TVD)**  
 Total Depth: 4250.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Martine Salinas  
 Unit No: 82  
 Reference Elevations: 3115.00 ft (KB)  
 3110.00 ft (CF)  
 KB to GR/CF: 5.00 ft

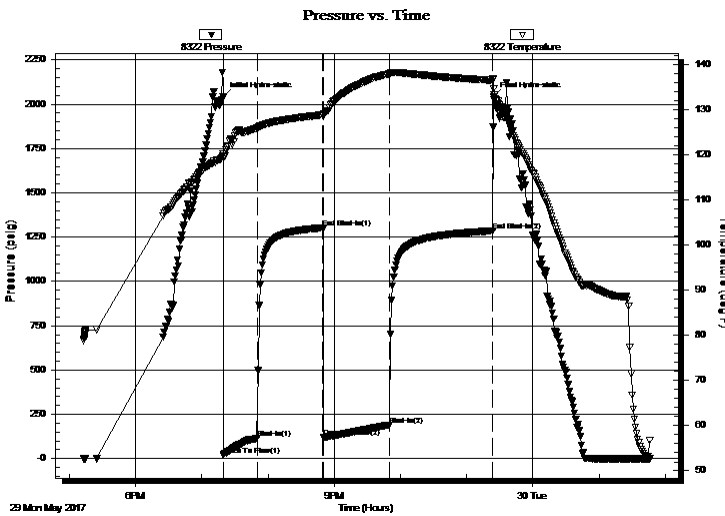
## Serial #: 8322

Inside

Press@RunDepth: 189.57 psig @ 4159.00 ft (KB)  
 Start Date: 2017.05.29 End Date: 2017.05.30  
 Start Time: 17:13:01 End Time: 01:46:49  
 Capacity: 8000.00 psig  
 Last Calib.: 2017.05.30  
 Time On Btm: 2017.05.29 @ 19:19:30  
 Time Off Btm: 2017.05.29 @ 23:24:39

TEST COMMENT: 30-IF-Surface blow built to 9"  
 60-ISI-No blow  
 60-FF-Blow built to BOB @ 56 mins  
 90-FSI-No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2040.28	120.15	Initial Hydro-static
1	19.99	119.52	Open To Flow (1)
31	113.50	125.95	Shut-In(1)
91	1302.44	128.91	End Shut-In(1)
91	119.68	128.62	Open To Flow (2)
151	189.57	137.99	Shut-In(2)
245	1284.60	136.59	End Shut-In(2)
246	2042.26	134.67	Final Hydro-static

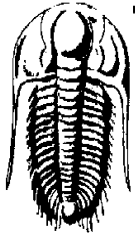
## Recovery

Length (ft)	Description	Volume (bbl)
20.00	HWCM 40%W,60%M	0.10
176.00	MCW 23%M,77%W	0.96
185.00	SOSWCM 1%O,44%W,55%M	2.60

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**22-2S.-34W Rawlins, KS**

**Focke Unit #1-22**

Job Ticket: 61242

**DST#: 5**

Test Start: 2017.05.29 @ 17:13:00

### GENERAL INFORMATION:

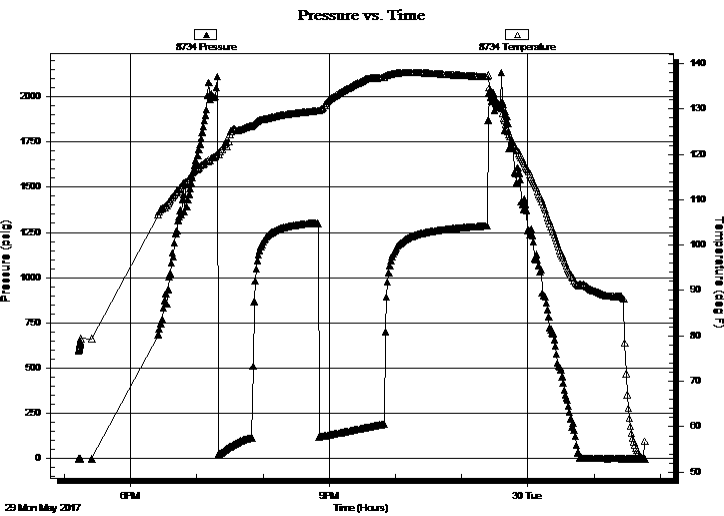
Formation: <b>LKC "H - J"</b>		Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock: ft (KB)		Tester: Martine Salinas
Time Tool Opened: 19:19:40		Unit No: 82
Time Test Ended: 01:46:49		Reference Elevations: 3115.00 ft (KB)
<b>Interval: 4158.00 ft (KB) To 4250.00 ft (KB) (TVD)</b>		3110.00 ft (CF)
Total Depth: 4250.00 ft (KB) (TVD)		KB to GR/CF: 5.00 ft
Hole Diameter: 7.88 inches	Hole Condition: Fair	

**Serial #: 8734**

**Outside**

Press@RunDepth: psig @ 4159.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2017.05.29	End Date: 2017.05.30
Start Time: 17:13:01	End Time: 01:46:49
	Last Calib.: 2017.05.30
	Time On Btm:
	Time Off Btm:

**TEST COMMENT:** 30-IF-Surface blow built to 9"  
 60-ISI-No blow  
 60-FF-Blow built to BOB @ 56 mins  
 90-FSI-No blow



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
20.00	HWCM 40%W,60%M	0.10
176.00	MCW 23%M,77%W	0.96
185.00	SOSWCM 1%O,44%W,55%M	2.60

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

**22-2S.-34W Rawlins, KS**

**Focke Unit #1-22**

Job Ticket: 61242

**DST#: 5**

Test Start: 2017.05.29 @ 17:13:00

## Tool Information

Drill Pipe:	Length: 3962.00 ft	Diameter: 3.80 inches	Volume: 55.58 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 56.49 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4158.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	92.00 ft			
Tool Length:	120.00 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			4135.00	
Hydraulic tool	5.00			4140.00	
Jars	5.00			4145.00	
Safety Joint	3.00			4148.00	
Packer	5.00			4153.00	28.00 Bottom Of Top Packer
Packer	5.00			4158.00	
Stubb	1.00			4159.00	
Recorder	0.00	8322	Inside	4159.00	
Recorder	0.00	8734	Outside	4159.00	
Perforations	21.00			4180.00	
Change Over Sub	1.00			4181.00	
Drill Pipe	63.00			4244.00	
Change Over Sub	1.00			4245.00	
Bullnose	5.00			4250.00	92.00 Bottom Packers & Anchor

**Total Tool Length: 120.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**22-2S.-34W Rawlins, KS**  
**Focke Unit #1-22**  
Job Ticket: 61242      **DST#: 5**  
Test Start: 2017.05.29 @ 17:13:00

## 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:	50000 ppm
Viscosity: 65.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.99 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1300.00 ppm			
Filter Cake: 2.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	HWCM 40%W,60%M	0.098
176.00	MCW 23%M,77%W	0.957
185.00	SOSWCM 1%O,44%W,55%M	2.595

Total Length: 381.00 ft      Total Volume: 3.650 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: RW=.203 @ 55.5degs

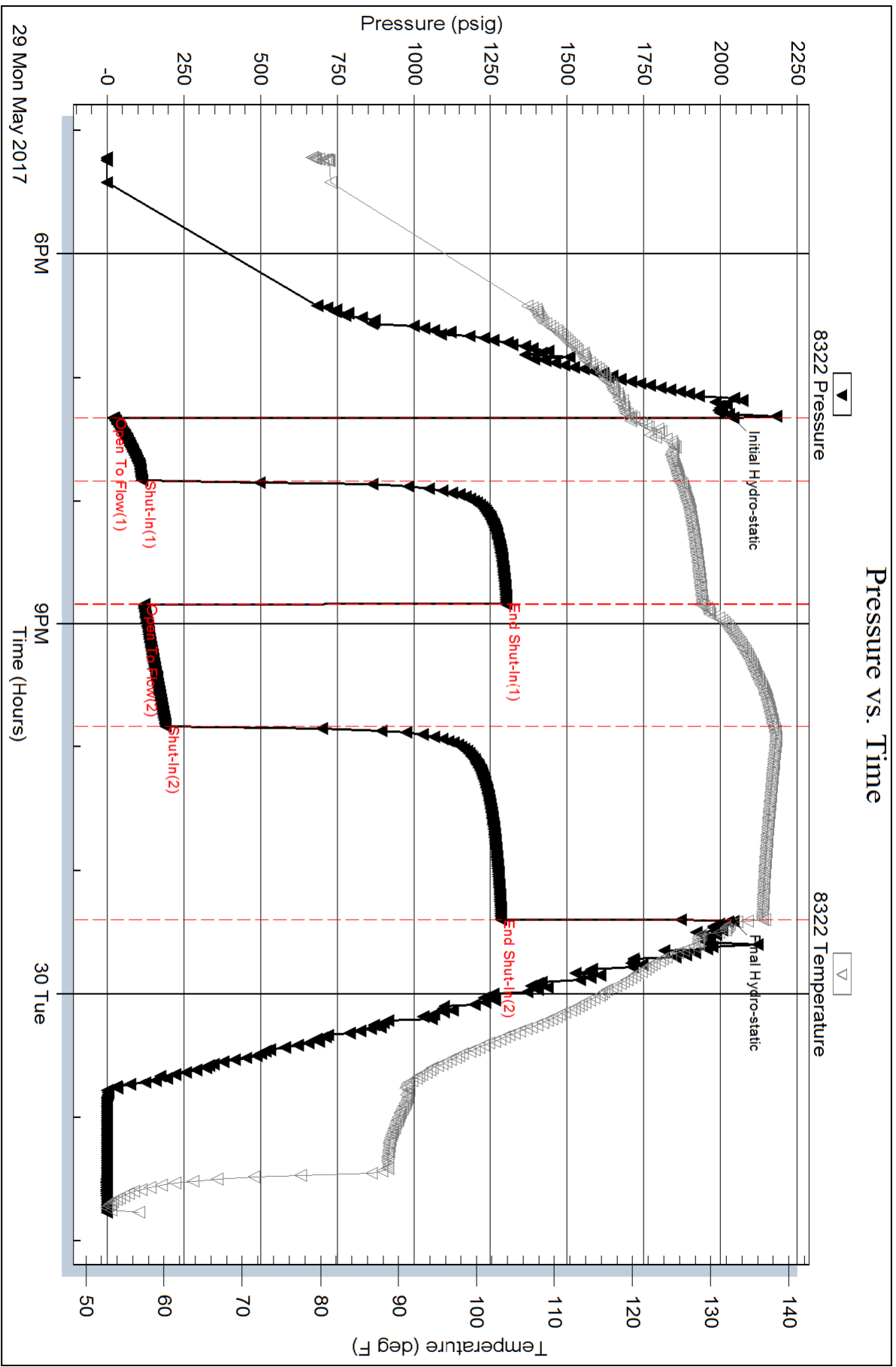
Serial #: 8322

Inside

Murfin Drilling Co. Inc

Focke Unit #1-22

DST Test Number: 5

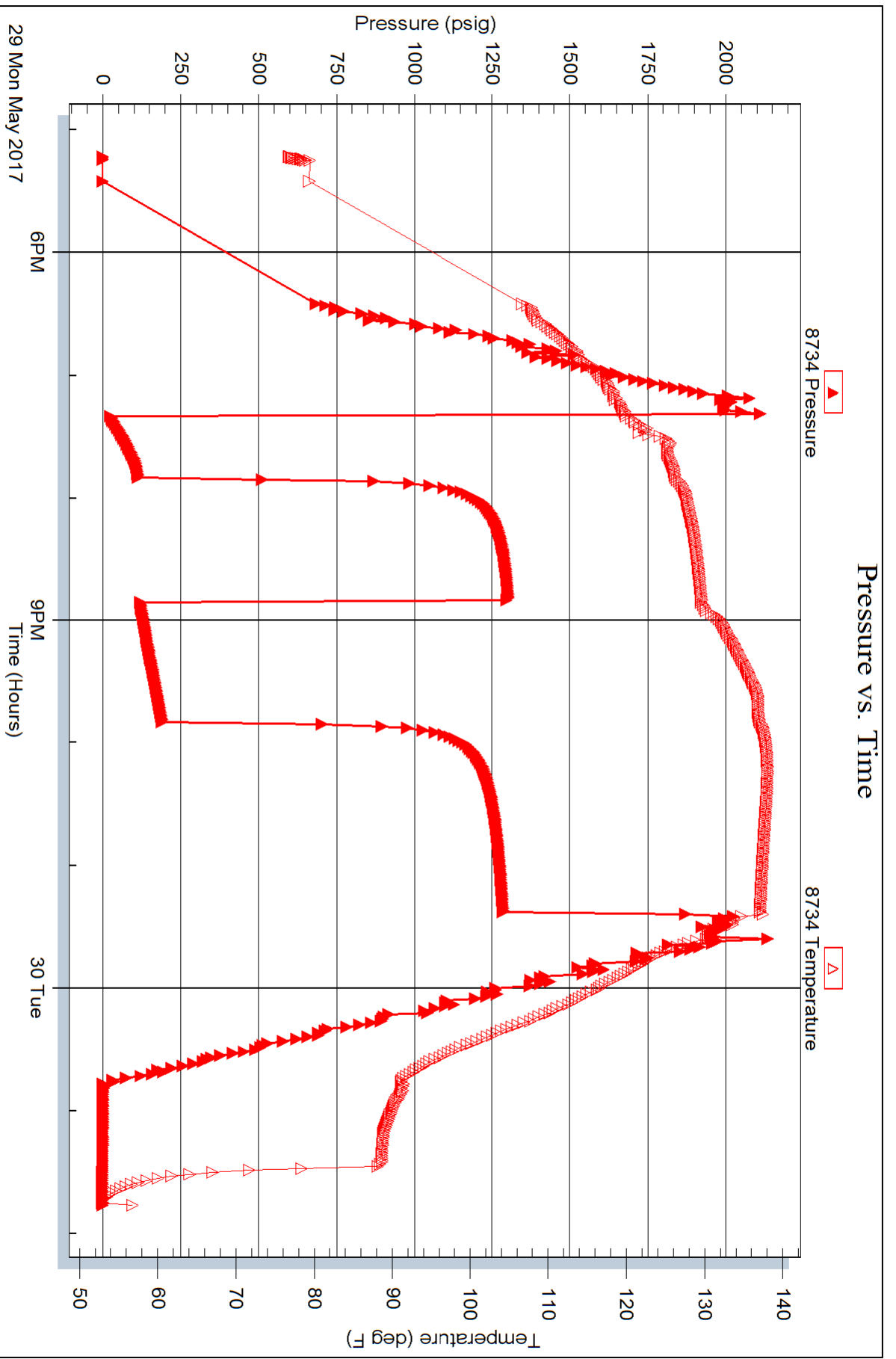


Serial #: 8734

Outside Murfin Drilling Co. Inc

Focke Unit #1-22

DST Test Number: 5





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 61237

4/10

Well Name & No. Focke Unit # 1-22 Test No. 1 Date 5-26-17  
 Company Murfin Drilling Co. Inc. Elevation 3115 KB 3110 GL  
 Address 250 N. Water, STE 300, Wichita, KS 67202  
 Co. Rep / Geo. Wes Hansen Rig Murfin #7  
 Location: Sec. 22 Twp. 2S. Rge. 34W. Co. Rawlins State KS.

Interval Tested 3940 - 3975 Zone Tested Orcad  
 Anchor Length 35' Drill Pipe Run 3939 Mud Wt. 8.8  
 Top Packer Depth 3935 Drill Collars Run 186 Vis 62  
 Bottom Packer Depth 3940 Wt. Pipe Run — WL 6.0  
 Total Depth 3975 Chlorides 1000 ppm System LCM 3#  
 Blow Description IF - S. blow built to 1/4" & died @ 19 mins.  
ISI - No blow  
FF - No blow  
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>129</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 129 BHT 127 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1902  Test 1050 T-On Location 11:00  
 (B) First Initial Flow 105  Jars 250 T-Started 12:01  
 (C) First Final Flow 124  Safety Joint 75 T-Open 14:24  
 (D) Initial Shut-In 248  Circ Sub \_\_\_\_\_ T-Pulled 17:24  
 (E) Second Initial Flow 180  Hourly Standby \_\_\_\_\_ T-Out 19:22  
 (F) Second Final Flow 99  Mileage 77 RT 57.75 Comments \_\_\_\_\_  
 (G) Final Shut-In 185  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1884  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

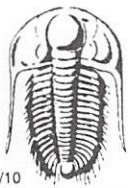
Initial Open 30  
 Initial Shut-In 60  
 Final Flow 30  
 Final Shut-In 60

Sub Total 1432.75

Total 1432.75  
 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. 61238

Well Name & No. Focke unit # 1-22 Test No. 2 Date 5-27-17  
 Company Murfin Drilling Co Inc Elevation 3115 KB 3110 GL  
 Address 250 N. Water, STE 300, Wichita, KS 67202  
 Co. Rep / Geo. Wes Hansen Rig Murfin #7  
 Location: Sec. 22 Twp. 2S. Rge. 34W Co. Rawlins State Ks

Interval Tested 3994-4060 Zone Tested Leavenworth - Lan "A"  
 Anchor Length 66' Drill Pipe Run 3863 Mud Wt. 9.0  
 Top Packer Depth 3989 Drill Collars Run 186 Vis 48  
 Bottom Packer Depth 3994 Wt. Pipe Run — WL 6.0  
 Total Depth 4060 Chlorides 1000 ppm System LCM 2#

Blow Description IF - S. blow built to 1" @ 15 mins, maintained 1" @ shut in  
ISI - No blow  
FF - S. blow built to 1/8"  
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>70CM</u>	<u>5</u>	<u>23</u>	<u>72</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

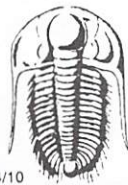
Rec Total 40 BHT 126 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2062  Test 1150 T-On Location 07:15  
 (B) First Initial Flow 19  Jars 250 T-Started 08:46  
 (C) First Final Flow 25  Safety Joint 75 T-Open 10:52  
 (D) Initial Shut-In 186  Circ Sub \_\_\_\_\_ T-Pulled 2:52  
 (E) Second Initial Flow 29  Hourly Standby \_\_\_\_\_ T-Out 16:51  
 (F) Second Final Flow 33  Mileage 77RT 57.75 Comments \_\_\_\_\_  
 (G) Final Shut-In 168  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1894  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1532.75  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1532.75

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **61239**

Well Name & No. Focke Unit #1-22 Test No. 3 Date 5-28-17  
 Company Murfin Drilling Co Inc Elevation 3115 KB 3110 GL  
 Address 250 N Water, STE 300, Wichita, KS 67202  
 Co. Rep / Geo. Wes Hansen Rig Murfin #7  
 Location: Sec. 22 Twp. 25 Rge. 34W Co. Rawlins State KS

Interval Tested 4049 - 4110 Zone Tested Lansing "D"  
 Anchor Length 61' Drill Pipe Run 3867 Mud Wt. 9.0  
 Top Packer Depth 4044 Drill Collars Run 186 Vis 60  
 Bottom Packer Depth 4049 Wt. Pipe Run — WL 6.4  
 Total Depth 4110 Chlorides 1000 ppm System LCM 2#  
 Blow Description IF: S. blow built to B.O.B (12 inches) @ 3mins.  
ISI: Weak S. blow dead @ 12mins.  
FF: S. blow built to B.O.B (12 inches) @ 3mins  
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%m
<u>124</u>	<u>505WCM 1'</u>	<u>1</u>	<u>22</u>	<u>77</u>	<u>%m</u>
<u>0</u>	<u>505MCW @ 10 mins</u>	<u>1</u>	<u>94</u>	<u>5</u>	<u>%m</u>
<u>0</u>	<u>505MCW @ 7 1/2 mins</u>	<u>1</u>	<u>89</u>	<u>10</u>	<u>%m</u>
<u>0</u>	<u>05MCW @ 5 mins</u>	<u>3</u>	<u>62</u>	<u>35</u>	<u>%m</u>
<u>396</u>	<u>50WCM</u>	<u>10</u>	<u>41</u>	<u>49</u>	<u>%m</u>

Rec Total 2644 BHT 138 Gravity \_\_\_\_\_ API RW 0.270 @ 92.5 °F Chlorides 19,000 ppm  
 (A) Initial Hydrostatic 1970  Test 1150 T-On Location 01:54  
 (B) First Initial Flow 303  Jars 250 T-Started 02:31  
 (C) First Final Flow 842  Safety Joint 75 T-Open 04:53  
 (D) Initial Shut-In 1189  Circ Sub 50 T-Pulled 08:53  
 (E) Second Initial Flow 860  Hourly Standby \_\_\_\_\_ T-Out 12:14  
 (F) Second Final Flow 1165  Mileage 77 RT 57.75 Comments \_\_\_\_\_  
 (G) Final Shut-In 1197  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1948  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 60  Day Standby \_\_\_\_\_ Total 1582.75  
 Final Flow 60  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 90 Sub Total 1582.75

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **61240**

4/10

Well Name & No. Focke Unit #1-22 Test No. 4 Date 5-28-17  
 Company Murfin Drilling Co Inc Elevation 3115 KB 3110 GL  
 Address 250 N. Water, STE 300, Wichita, KS 67202  
 Co. Rep / Geo. Wes Hansen Rig Murfin #7  
 Location: Sec. 22 Twp. 25 Rge. 34W Co. Rawlins State KS

Interval Tested 4118 - 4150 Zone Tested Lansing "G"  
 Anchor Length 32' Drill Pipe Run 3930 Mud Wt. 9.0  
 Top Packer Depth 4113 Drill Collars Run 186 Vis 60  
 Bottom Packer Depth 4118 Wt. Pipe Run — WL 6.4  
 Total Depth 4150 Chlorides 900 ppm System LCM 4#  
 Blow Description IF. S. blow built to 2"  
ISI. No blow  
FF. S. blow built to 4"  
FSI. No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>CGO</u>	<u>10</u>	<u>90</u>		
<u>58'</u>	<u>GHOCM</u>	<u>11</u>	<u>41</u>	<u>48</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 73 BHT 131 Gravity 34.3 API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2021  Test 1150 T-On Location 20:10 5-28-17  
 (B) First Initial Flow 14  Jars 250 T-Started 20:28  
 (C) First Final Flow 30  Safety Joint 75 T-Open 22:42  
 (D) Initial Shut-In 1113  Circ Sub — T-Pulled 02:42  
 (E) Second Initial Flow 30  Hourly Standby — T-Out 04:53 5-29-17  
 (F) Second Final Flow 49  Mileage 77RT 57.75 Comments —  
 (G) Final Shut-In 1093  Sampler —  
 (H) Final Hydrostatic 2019  Straddle —  Ruined Shale Packer —  
 Shale Packer —  Ruined Packer —  
 Extra Packer —  Extra Copies —  
 Extra Recorder — Sub Total 0  
 Day Standby — Total 1532.75  
 Accessibility — MP/DST Disc't —  
 Sub Total 1532.75

Approved By — Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 61242

Well Name & No. Focke Unit #1-22 Test No. 5 Date 5-29-17  
 Company Murfin Drilling Co Inc. Elevation 3115 KB 3110 GL  
 Address 250 N Water, STE 300, Wichita, KS 67202  
 Co. Rep / Geo. Wes Hansen Rig Murfin #7  
 Location: Sec. 22 Twp. 25. Rge. 34W Co. Rawlins State KS

Interval Tested 4158 - 4250 Zone Tested Lansing "H-S"  
 Anchor Length 92' Drill Pipe Run 3962 Mud Wt. 8.7  
 Top Packer Depth 4153 Drill Collars Run 186 Vis 65  
 Bottom Packer Depth 4158 Wt. Pipe Run — WL 6.0  
 Total Depth 4250 Chlorides 1300 ppm System LCM 3H  
 Blow Description IF. S. blow built to 9"  
ISI: No blow  
IF. blow built to B.S.B. (12 inches) @ 56 mins.  
FST: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>#1 WCM</u>		<u>40</u>	<u>60</u>	
<u>126</u>	<u>MCM</u>		<u>77</u>	<u>23</u>	
<u>185</u>	<u>SOSWCM</u>		<u>44</u>	<u>55</u>	

Rec Total 381 BHT 135 Gravity \_\_\_\_\_ API RW .203 @ 55.5 °F Chlorides 50,000 ppm

(A) Initial Hydrostatic 2040  Test 1150 T-On Location 16:35  
 (B) First Initial Flow 20  Jars 250 T-Started 17:13  
 (C) First Final Flow 133  Safety Joint 75 T-Open 19:20  
 (D) Initial Shut-In 1302  Circ Sub \_\_\_\_\_ T-Pulled 23:20  
 (E) Second Initial Flow 120  Hourly Standby \_\_\_\_\_ T-Out 01:47  
 (F) Second Final Flow 190  Mileage 77RT X2 115.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 1285  Sampler \_\_\_\_\_ tools loaded 5/31 13:00  
 (H) Final Hydrostatic 2042  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1590.50  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1590.50

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

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