



DRILL STEM TEST REPORT

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

250 N Water Ste 300
Wichita, KS 67202

ATTN: Saman Sharifaie

DKN #1-4

4-1s-38w Cheyenne,KS

Start Date: 2015.10.16 @ 19:45:26

End Date: 2015.10.17 @ 03:35:56

Job Ticket #: 64828 DST #: 1

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

Printed: 2015.10.22 @ 09:28:06

Murfin Drilling Co., Inc. 4-1s-38w Cheyenne,KS DKN #1-4 DST # 1 LKC "A" 2015.10.16



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64828

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2015.10.16 @ 19:45:26

GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:33:56

Time Test Ended: 03:35:56

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 62

Interval: 3951.00 ft (KB) To 4028.00 ft (KB) (TVD)

Reference Elevations: 3038.00 ft (KB)

Total Depth: 4028.00 ft (KB) (TVD)

3033.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6839 Outside

Press@RunDepth: 38.41 psig @ 3962.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.10.16

End Date:

2015.10.17

Last Calib.: 2015.10.17

Start Time: 19:45:27

End Time:

03:35:56

Time On Btm: 2015.10.16 @ 22:28:56

Time Off Btm: 2015.10.17 @ 01:31:26

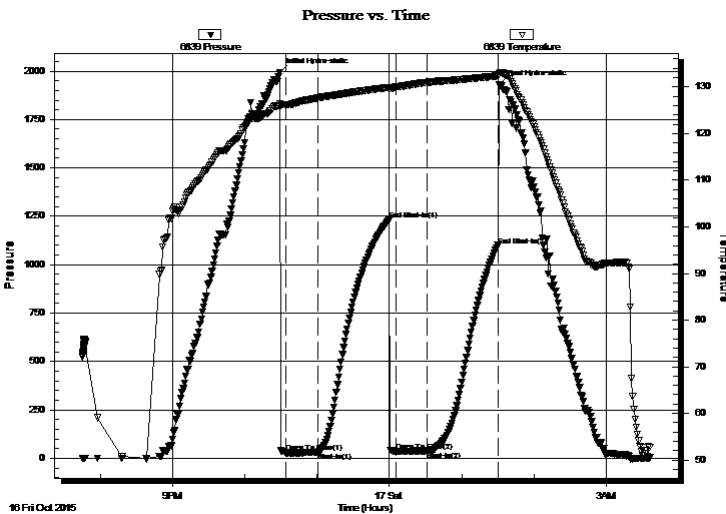
TEST COMMENT: 30- IF- 1" blow throughout

60- IS- No blow

30- FF- No blow

60- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1993.18	126.44	Initial Hydro-static
5	28.70	126.16	Open To Flow (1)
32	31.48	127.67	Shut-In(1)
91	1233.64	129.92	End Shut-In(1)
97	35.49	129.99	Open To Flow (2)
123	38.41	130.97	Shut-In(2)
181	1099.33	132.34	End Shut-In(2)
183	1930.55	132.92	Final Hydro-static

Recovery

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

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64828

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2015.10.16 @ 19:45:26

Tool Information

Drill Pipe:	Length: 3808.00 ft	Diameter: 3.82 inches	Volume: 53.98 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose:	52000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
				String Weight: Initial	50000.00 lb
Drill Pipe Above KB:	3.00 ft			Final	50000.00 lb
Depth to Top Packer:	3951.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	77.00 ft				
Tool Length:	104.00 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			3925.00	
Shut In Tool	5.00			3930.00	
Hydraulic tool	5.00			3935.00	
Jars	5.00			3940.00	
Safety Joint	2.00			3942.00	
Packer	5.00			3947.00	27.00 Bottom Of Top Packer
Packer	4.00			3951.00	
Stubb	1.00			3952.00	
Perforations	9.00			3961.00	
Change Over Sub	1.00			3962.00	
Recorder	0.00	6651	Inside	3962.00	
Recorder	0.00	6839	Outside	3962.00	
Drill Pipe	62.00			4024.00	
Change Over Sub	1.00			4025.00	
Bullnose	3.00			4028.00	77.00 Bottom Packers & Anchor

Total Tool Length: 104.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64828

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2015.10.16 @ 19:45:26

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	OSM	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

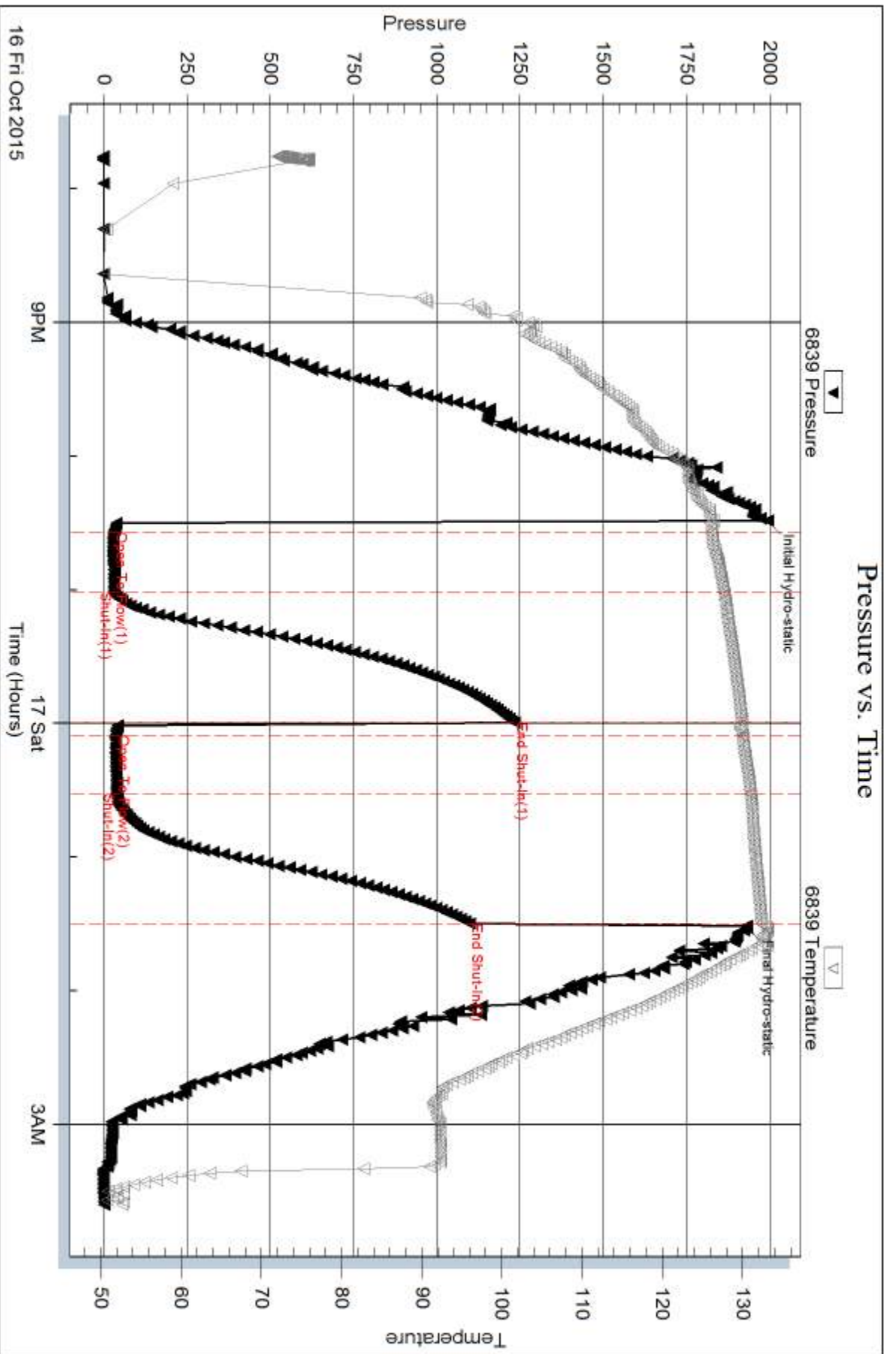
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



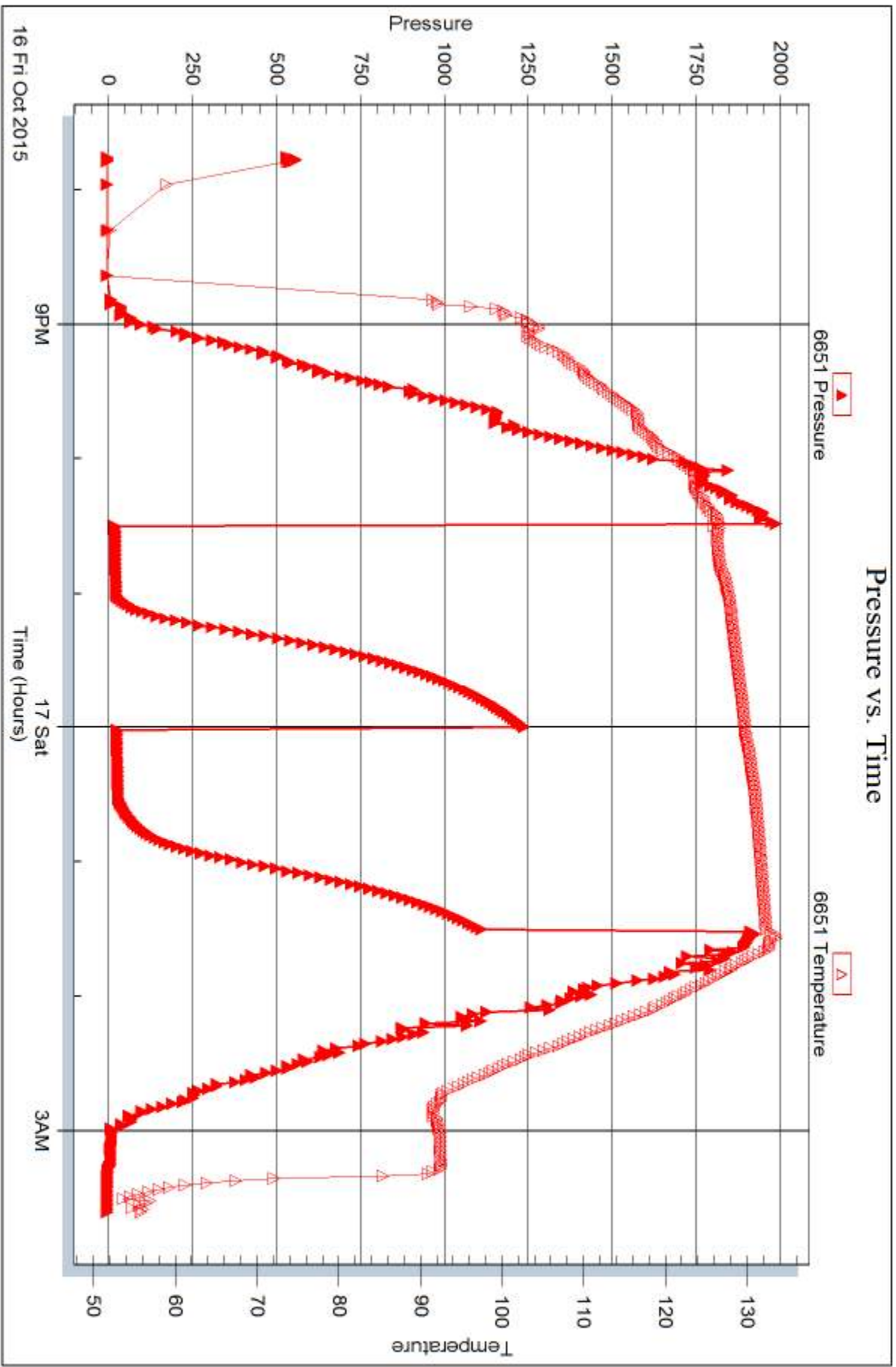
Serial #: 6651

Inside

Murfin Drilling Co., Inc.

DKN#1-4

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 64828

Printed: 2015.10.22 @ 09:28:07



DRILL STEM TEST REPORT

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

250 N Water Ste 300
Wichita, KS 67202

ATTN: Saman Sharifaie

DKN #1-4

4-1s-38w Cheyenne,KS

Start Date: 2015.10.17 @ 12:06:32

End Date: 2015.10.17 @ 21:53:02

Job Ticket #: 64829 DST #: 2

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

Printed: 2015.10.22 @ 09:18:04



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64829

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2015.10.17 @ 12:06:32

GENERAL INFORMATION:

Formation: **LKC "B-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:18:02

Time Test Ended: 21:53:02

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 62

Interval: 4020.00 ft (KB) To 4084.00 ft (KB) (TVD)

Reference Elevations: 3038.00 ft (KB)

Total Depth: 4084.00 ft (KB) (TVD)

3033.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6651

Inside

Press@RunDepth: 41.18 psig @ 4049.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.10.17

End Date:

2015.10.17

Last Calib.:

2015.10.17

Start Time:

12:06:33

End Time:

21:53:02

Time On Btm:

2015.10.17 @ 16:17:32

Time Off Btm:

2015.10.17 @ 19:19:32

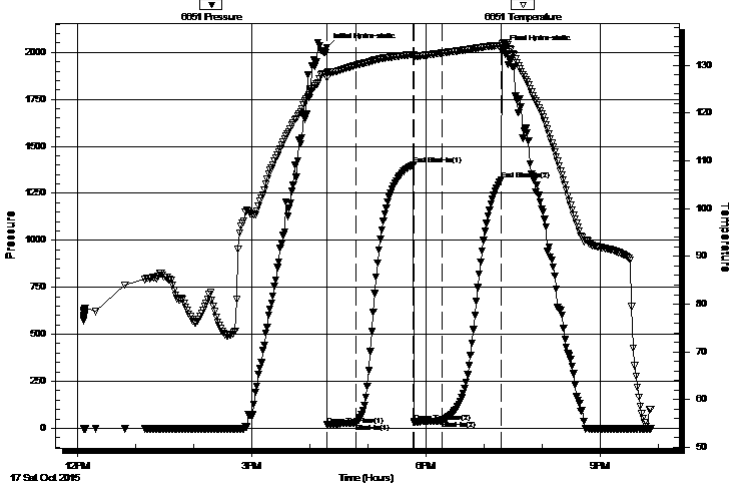
TEST COMMENT: 30- IF- Surface blow built very slowly to 1"

60- IS- No blow

30- FF- No blow

60- FSI- No blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2024.65	128.44	Initial Hydro-static
1	18.71	127.47	Open To Flow (1)
30	28.66	130.01	Shut-In(1)
90	1399.81	132.30	End Shut-In(1)
91	33.32	131.86	Open To Flow (2)
120	41.18	132.61	Shut-In(2)
180	1320.52	134.20	End Shut-In(2)
182	2015.02	134.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	SOCM, 5%O 95%M	0.12
5.00	CO	0.02

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64829

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2015.10.17 @ 12:06:32

GENERAL INFORMATION:

Formation: LKC "B-D"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:18:02

Time Test Ended: 21:53:02

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 62

Interval: 4020.00 ft (KB) To 4084.00 ft (KB) (TVD)

Total Depth: 4084.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3038.00 ft (KB)

3033.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6839 Outside

Press@RunDepth: psig @ 4049.00 ft (KB)

Start Date: 2015.10.17

End Date:

2015.10.17

Start Time: 12:06:33

End Time:

21:53:02

Capacity: 8000.00 psig

Last Calib.:

2015.10.17

Time On Btm:

Time Off Btm:

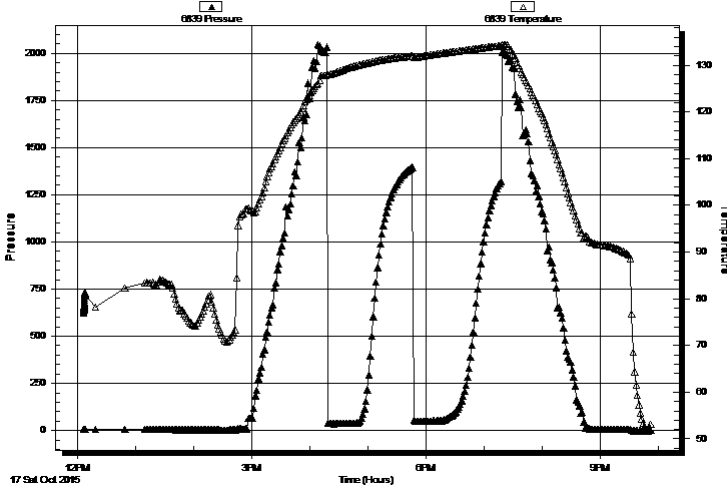
TEST COMMENT: 30- IF- Surface blow built very slowly to 1"

60- IS- No blow

30- FF- No blow

60- FSI- No blow

Pressure vs. Time



PRESSURE SUMMARY

Table with 4 columns: Time (Min.), Pressure (psig), Temp (deg F), Annotation. The table is currently empty.

Recovery

Table with 3 columns: Length (ft), Description, Volume (bbl). Contains two rows of recovery data.

Gas Rates

Table with 4 columns: Choke (inches), Pressure (psig), Gas Rate (Mcf/d). The table is currently empty.

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64829

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2015.10.17 @ 12:06:32

Tool Information

Drill Pipe:	Length: 3838.00 ft	Diameter: 3.82 inches	Volume: 54.41 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 179.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose:	68000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	4020.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	64.00 ft				
Tool Length:	91.00 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			3994.00	
Shut In Tool	5.00			3999.00	
Hydraulic tool	5.00			4004.00	
Jars	5.00			4009.00	
Safety Joint	2.00			4011.00	
Packer	5.00			4016.00	27.00 Bottom Of Top Packer
Packer	4.00			4020.00	
Stubb	1.00			4021.00	
Perforations	27.00			4048.00	
Change Over Sub	1.00			4049.00	
Recorder	0.00	6651	Inside	4049.00	
Recorder	0.00	6839	Outside	4049.00	
Drill Pipe	31.00			4080.00	
Change Over Sub	1.00			4081.00	
Bullnose	3.00			4084.00	64.00 Bottom Packers & Anchor

Total Tool Length: 91.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64829

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2015.10.17 @ 12:06:32

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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	SOCM, 5%O 95%M	0.123
5.00	CO	0.025

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

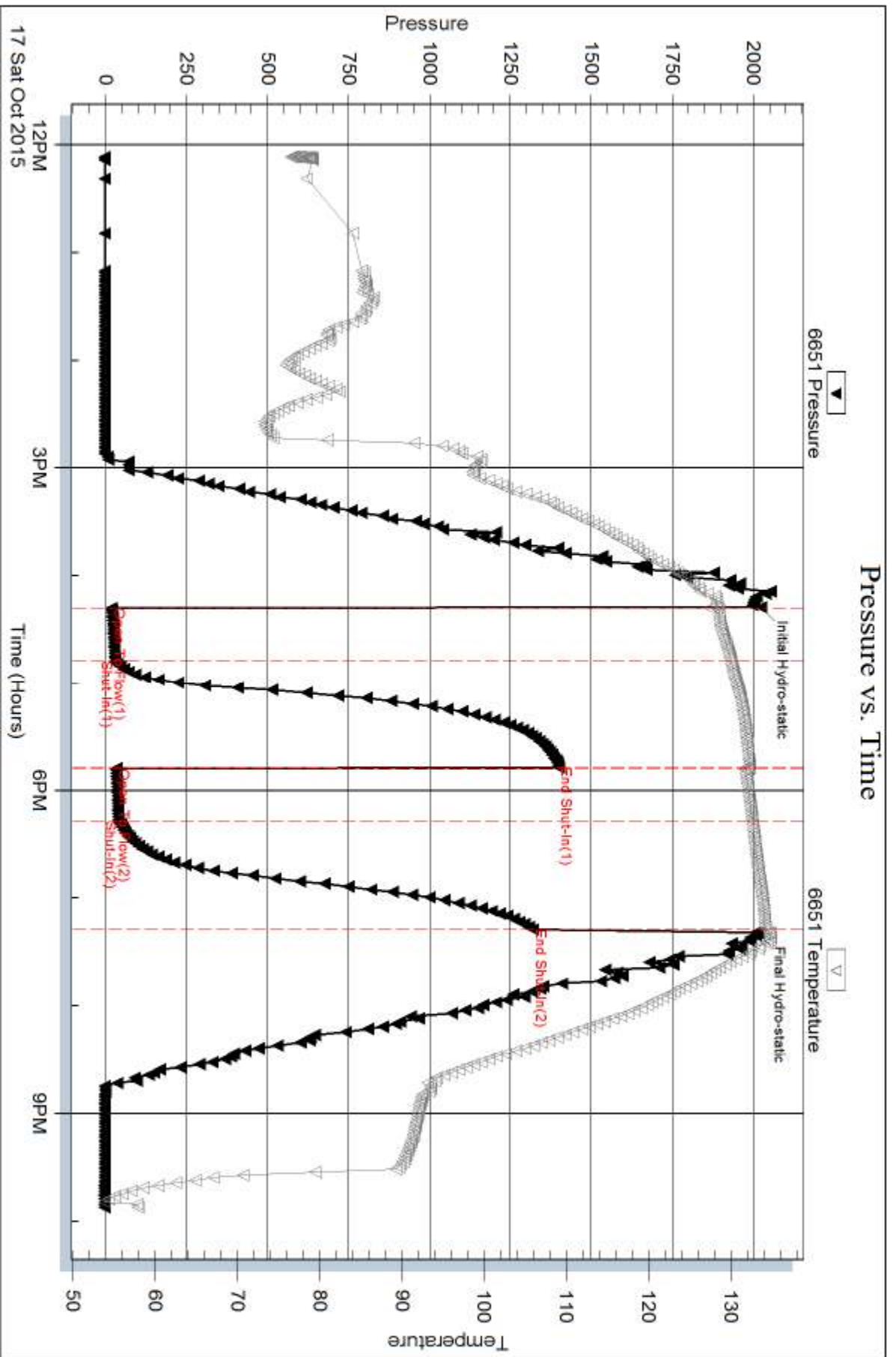
Num Gas Bombs: 0

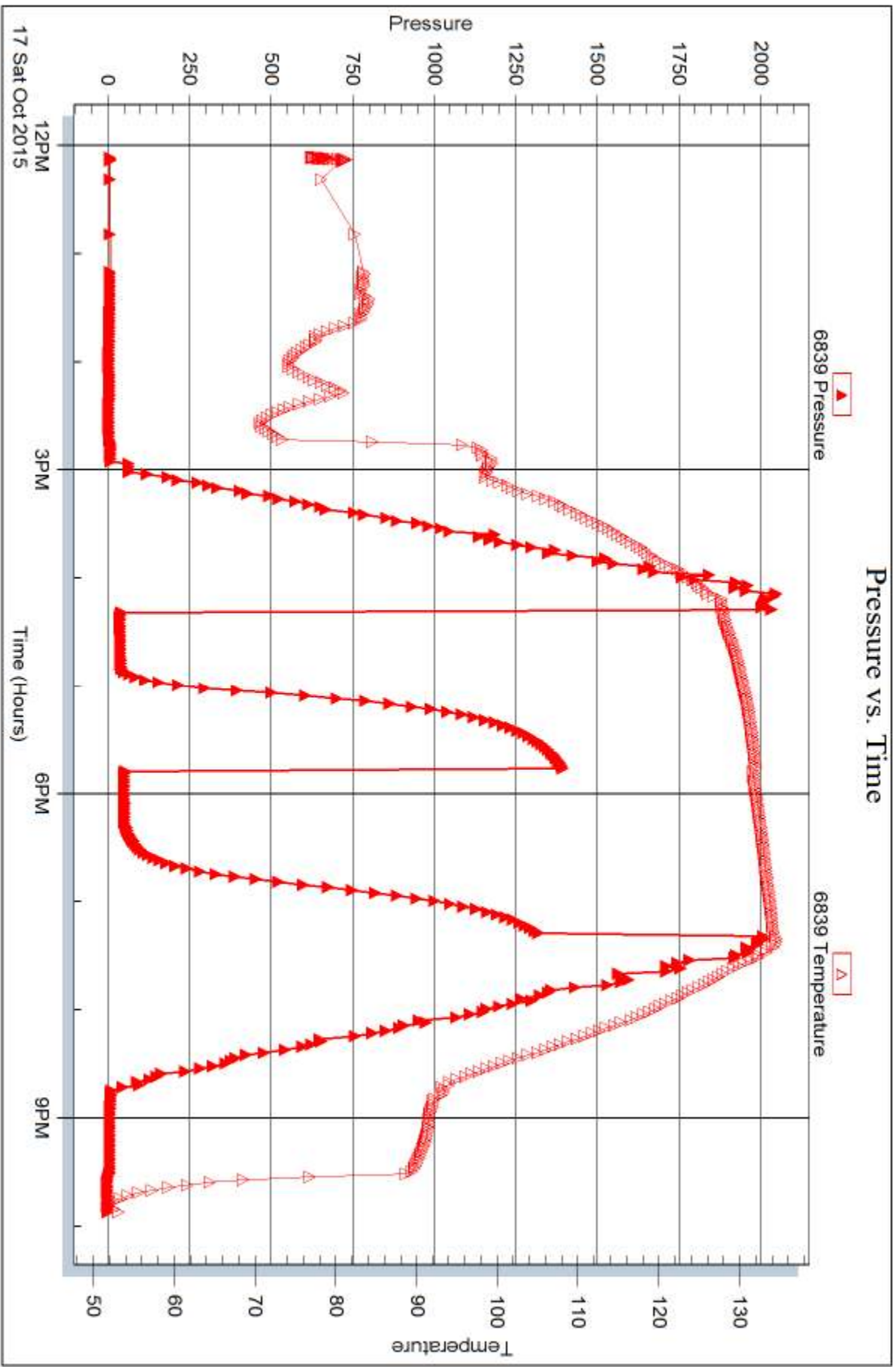
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

250 N Water Ste 300
Wichita, KS 67202

ATTN: Saman Sharifaie

DKN #1-4

4-1s-38w Cheyenne,KS

Start Date: 2015.10.18 @ 10:46:53

End Date: 2015.10.18 @ 18:13:23

Job Ticket #: 64830 DST #: 3

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

Printed: 2015.10.22 @ 09:17:43



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64830

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2015.10.18 @ 10:46:53

GENERAL INFORMATION:

Formation: **LKC "G-H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:03:23

Time Test Ended: 18:13:23

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 62

Interval: 4084.00 ft (KB) To 4170.00 ft (KB) (TVD)

Reference Elevations: 3038.00 ft (KB)

Total Depth: 4170.00 ft (KB) (TVD)

3033.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6651

Inside

Press@RunDepth: 24.94 psig @ 4104.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.10.18

End Date:

2015.10.18

Last Calib.: 2015.10.18

Start Time: 10:46:54

End Time:

18:13:23

Time On Btm: 2015.10.18 @ 13:02:53

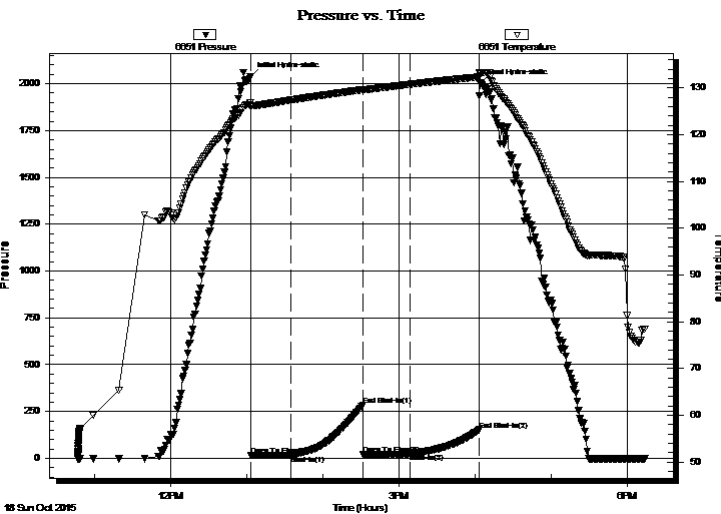
Time Off Btm: 2015.10.18 @ 16:03:53

TEST COMMENT: 30- IF- Slowly built to 3/4"

60- IS- No blow

30- FF- No blow

60- FS- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2038.22	126.81	Initial Hydro-static
1	15.65	126.05	Open To Flow (1)
32	18.01	127.39	Shut-In(1)
89	282.93	129.62	End Shut-In(1)
89	18.90	129.43	Open To Flow (2)
126	24.94	130.79	Shut-In(2)
180	151.83	132.36	End Shut-In(2)
181	2002.02	133.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM	0.02

* 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.

4-1s-38w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64830

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2015.10.18 @ 10:46:53

GENERAL INFORMATION:

Formation: **LKC "G-H"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:03:23
 Time Test Ended: 18:13:23
Interval: 4084.00 ft (KB) To 4170.00 ft (KB) (TVD)
 Total Depth: 4170.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brannan Lonsdale
 Unit No: 62
 Reference Elevations: 3038.00 ft (KB)
 3033.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6839

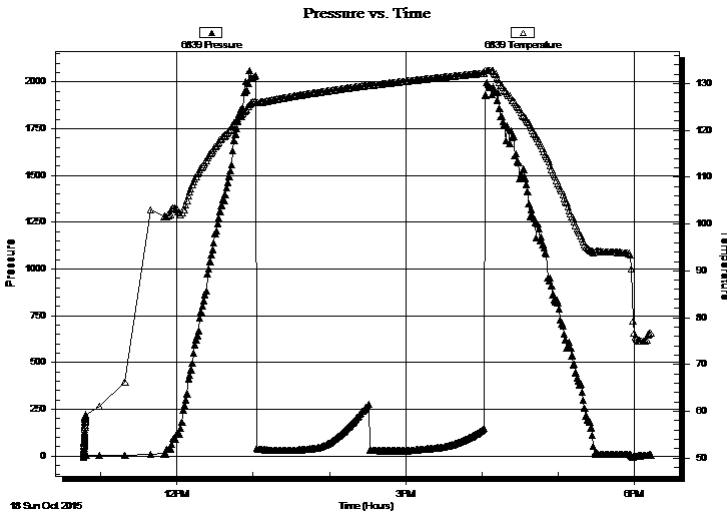
Outside

Press@RunDepth: psig @ 4104.00 ft (KB)
 Start Date: 2015.10.18 End Date: 2015.10.18
 Start Time: 10:46:23 End Time: 18:12:52

Capacity: 8000.00 psig
 Last Calib.: 2015.10.18
 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30- IF- Slowly built to 3/4"
 60- IS- No blow
 30- FF- No blow
 60- FS- No blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM	0.02

* 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.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64830

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2015.10.18 @ 10:46:53

Tool Information

Drill Pipe:	Length: 3896.00 ft	Diameter: 3.82 inches	Volume: 55.23 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 179.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 59000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4084.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	86.00 ft			
Tool Length:	113.00 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			4058.00	
Shut In Tool	5.00			4063.00	
Hydraulic tool	5.00			4068.00	
Jars	5.00			4073.00	
Safety Joint	2.00			4075.00	
Packer	5.00			4080.00	27.00 Bottom Of Top Packer
Packer	4.00			4084.00	
Stubb	1.00			4085.00	
Perforations	18.00			4103.00	
Change Over Sub	1.00			4104.00	
Recorder	0.00	6651	Inside	4104.00	
Recorder	0.00	6839	Outside	4104.00	
Drill Pipe	62.00			4166.00	
Change Over Sub	1.00			4167.00	
Bullnose	3.00			4170.00	86.00 Bottom Packers & Anchor

Total Tool Length: 113.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64830

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2015.10.18 @ 10:46:53

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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

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
5.00	OSM	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

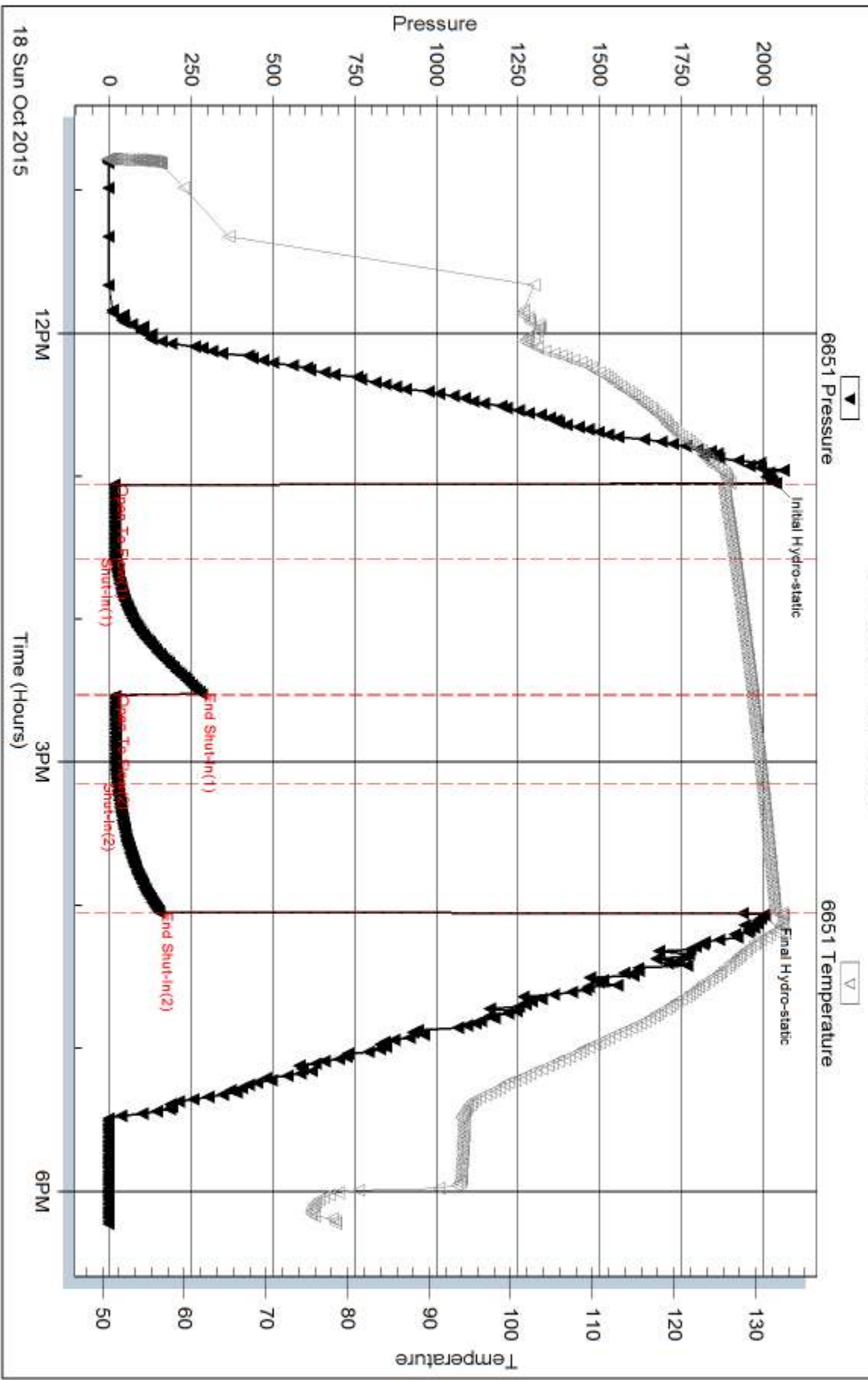
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

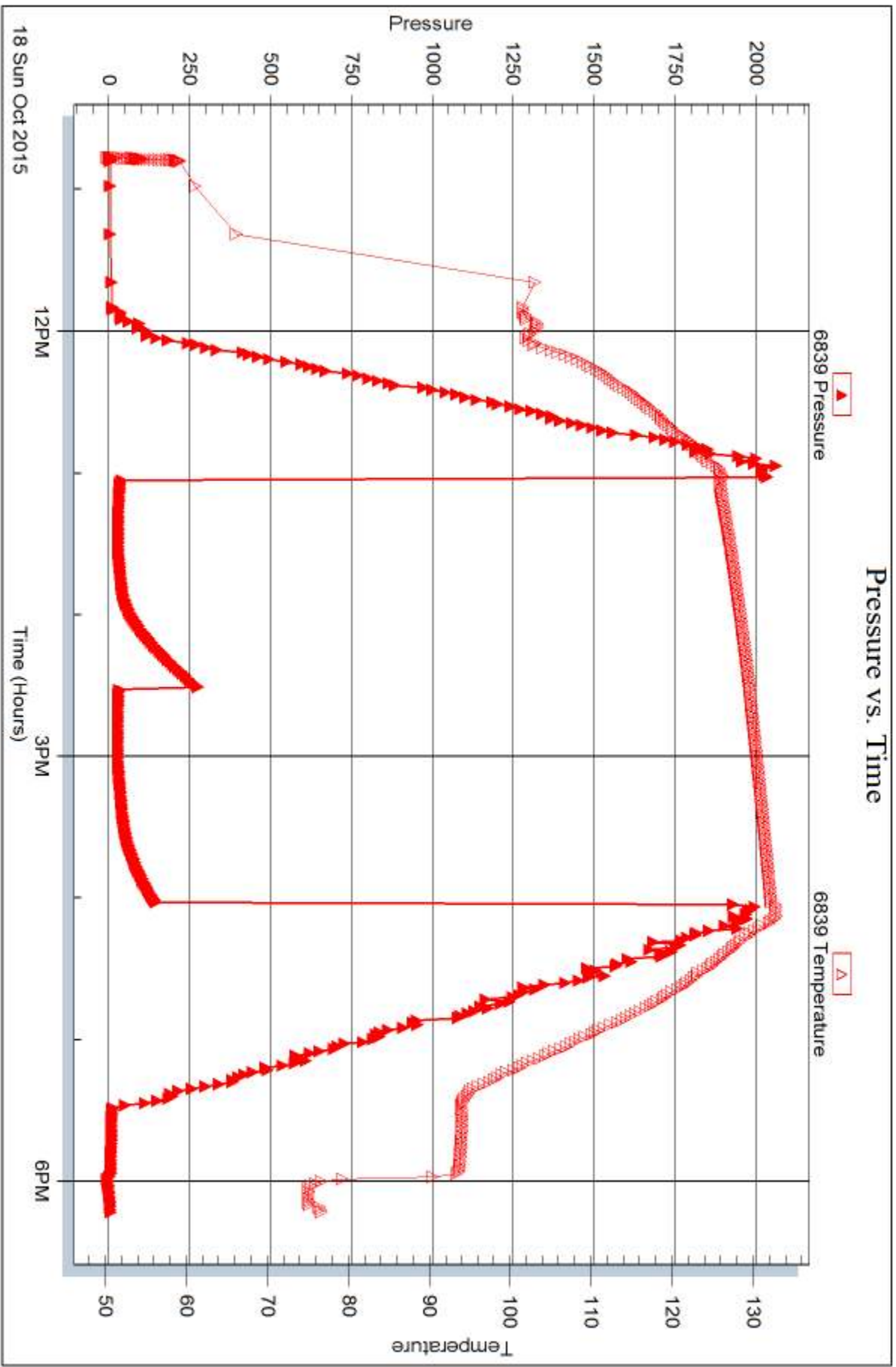


Serial #: 6839

Outside Murfin Drilling Co., Inc.

DKN#1-4

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 64830

Printed: 2015.10.22 @ 09:17:45



DRILL STEM TEST REPORT

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

250 N Water Ste 300
Wichita, KS 67202

ATTN: Saman Sharifaie

DKN #1-4

4-1s-38w Cheyenne,KS

Start Date: 2015.10.19 @ 03:02:32

End Date: 2015.10.19 @ 10:40:32

Job Ticket #: 64831 DST #: 4

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

Printed: 2015.10.22 @ 09:16:24



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64831

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2015.10.19 @ 03:02:32

GENERAL INFORMATION:

Formation: **LKC "J"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 05:33:02
 Tester: Brannan Lonsdale
 Time Test Ended: 10:40:32
 Unit No: 62
Interval: 4163.00 ft (KB) To 4221.00 ft (KB) (TVD)
 Reference Elevations: 3038.00 ft (KB)
 Total Depth: 4221.00 ft (KB) (TVD)
 3033.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

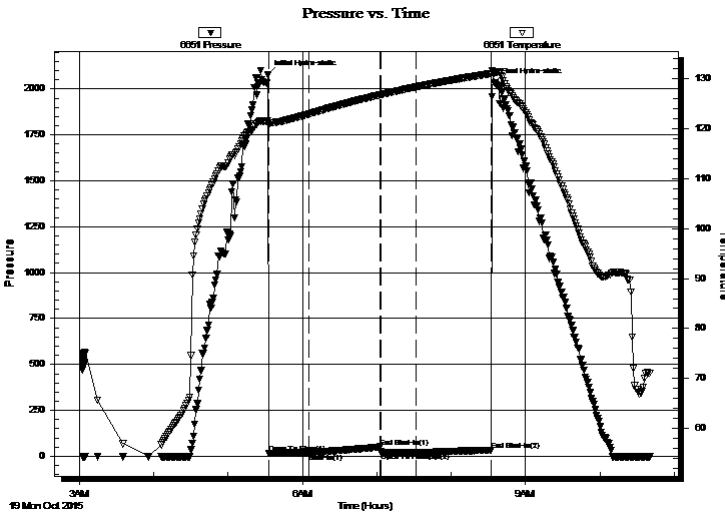
Serial #: 6651

Inside

Press@RunDepth: 19.89 psig @ 4186.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.10.19 End Date: 2015.10.19 Last Calib.: 2015.10.19
 Start Time: 03:02:33 End Time: 10:40:32 Time On Btm: 2015.10.19 @ 05:32:02
 Time Off Btm: 2015.10.19 @ 08:34:32

TEST COMMENT: 30- IF- 1/2" blow
 60- IS- No blow
 30- FF- No blow
 60- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2075.32	121.67	Initial Hydro-static
1	17.42	120.80	Open To Flow (1)
33	18.64	122.96	Shut-In(1)
91	51.17	126.81	End Shut-In(1)
92	19.17	126.85	Open To Flow (2)
120	19.89	128.38	Shut-In(2)
180	34.31	131.09	End Shut-In(2)
183	2034.16	131.17	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	M	0.01

* 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.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64831

DST#: 4

ATTN: Saman Sharifaie

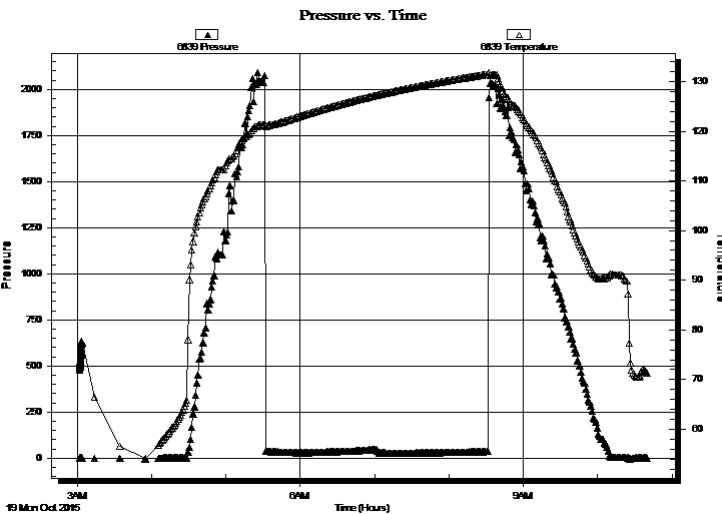
Test Start: 2015.10.19 @ 03:02:32

GENERAL INFORMATION:

Formation: **LKC "J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:33:02
 Time Test Ended: 10:40:32
 Interval: **4163.00 ft (KB) To 4221.00 ft (KB) (TVD)**
 Total Depth: 4221.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brannan Lonsdale
 Unit No: 62
 Reference Elevations: 3038.00 ft (KB)
 3033.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6839 **Outside**
 Press@RunDepth: psig @ 4186.00 ft (KB)
 Start Date: 2015.10.19 End Date: 2015.10.19
 Start Time: 03:02:05 End Time: 10:40:04
 Capacity: 8000.00 psig
 Last Calib.: 2015.10.19
 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30- IF- 1/2" blow
 60- IS- No blow
 30- FF- No blow
 60- FS- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
2.00	M	0.01

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.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64831

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2015.10.19 @ 03:02:32

Tool Information

Drill Pipe:	Length: 3958.00 ft	Diameter: 3.82 inches	Volume: 56.11 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 179.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 53000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	1.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	4163.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	85.00 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			4137.00	
Shut In Tool	5.00			4142.00	
Hydraulic tool	5.00			4147.00	
Jars	5.00			4152.00	
Safety Joint	2.00			4154.00	
Packer	5.00			4159.00	27.00 Bottom Of Top Packer
Packer	4.00			4163.00	
Stubb	1.00			4164.00	
Perforations	21.00			4185.00	
Change Over Sub	1.00			4186.00	
Recorder	0.00	6651	Inside	4186.00	
Recorder	0.00	6839	Outside	4186.00	
Drill Pipe	31.00			4217.00	
Change Over Sub	1.00			4218.00	
Bullnose	3.00			4221.00	58.00 Bottom Packers & Anchor

Total Tool Length: 85.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64831

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2015.10.19 @ 03:02:32

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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

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
2.00	M	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

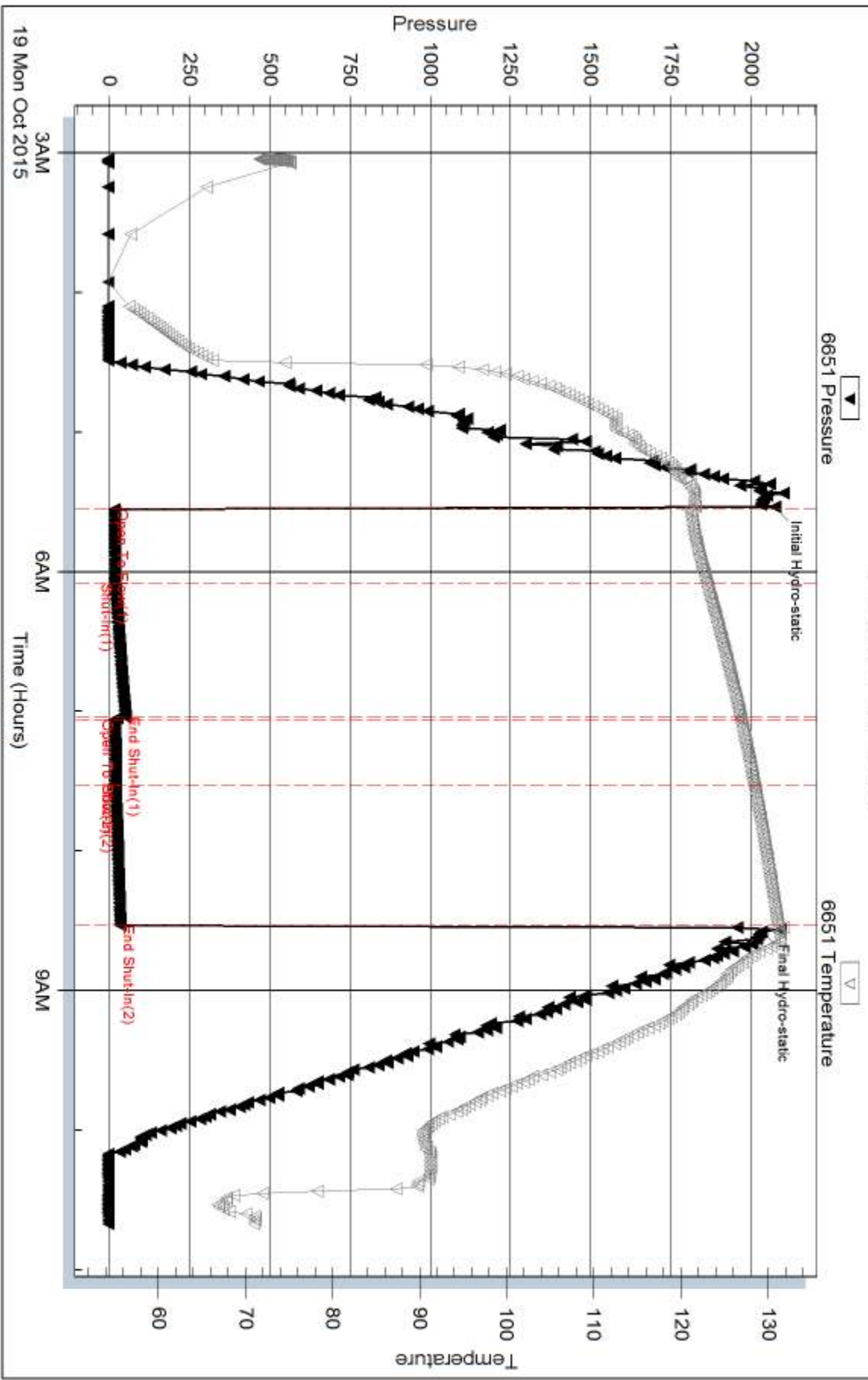
Serial #:

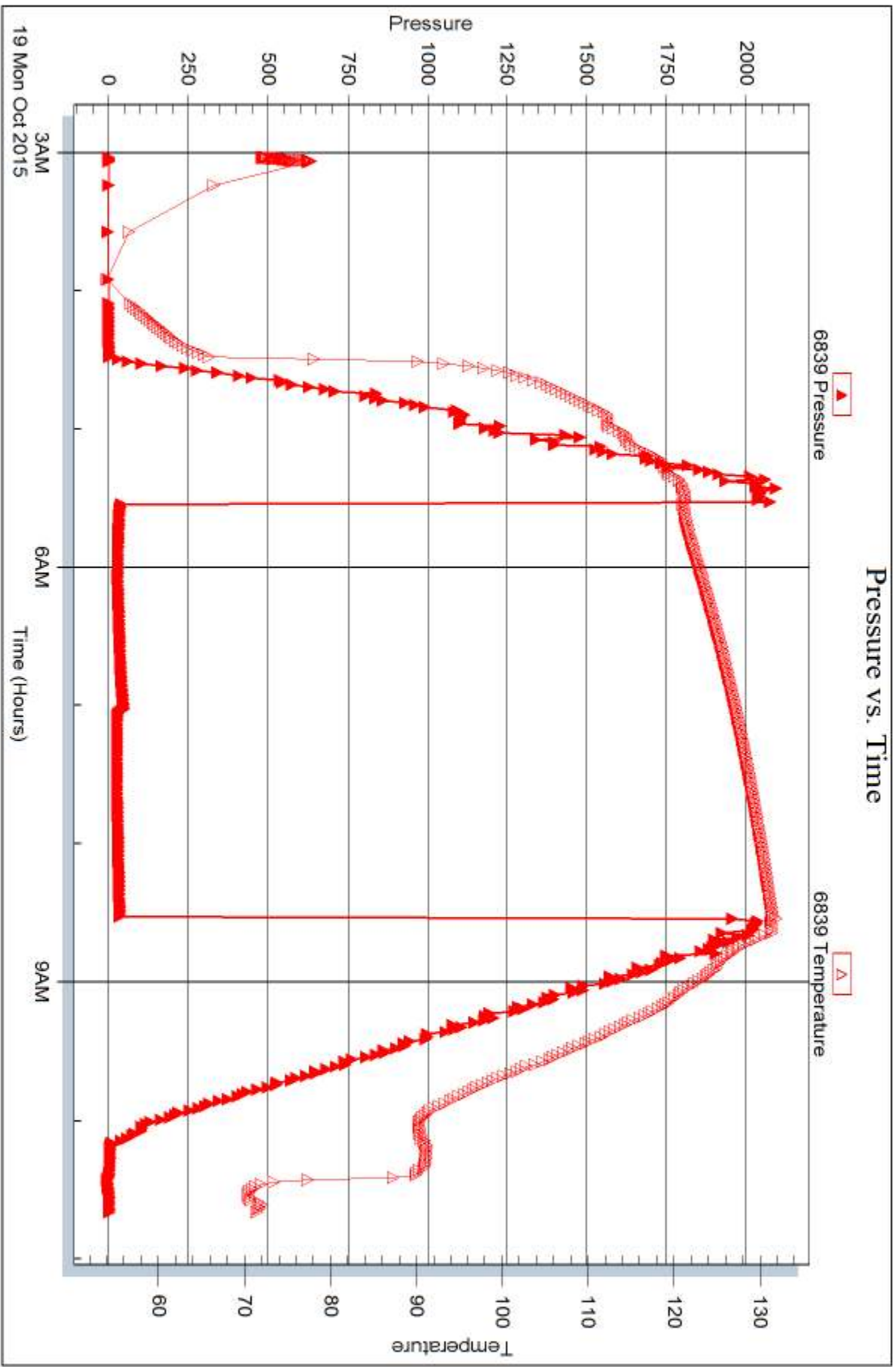
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

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

250 N Water Ste 300
Wichita, KS 67202

ATTN: Saman Sharifaie

DKN #1-4

4-1s-38w Cheyenne,KS

Start Date: 2015.10.20 @ 03:46:45

End Date: 2015.10.20 @ 11:42:15

Job Ticket #: 64832 DST #: 5

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

Printed: 2015.10.22 @ 09:15:48



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

250 N Water Ste 300
Wichita, KS 67202

ATTN: Saman Sharifaie

4-1s-38w Cheyenne,KS

DKN #1-4

Job Ticket: 64832

DST#: 5

Test Start: 2015.10.20 @ 03:46:45

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:33:15

Time Test Ended: 11:42:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 62

Interval: 4373.00 ft (KB) To 4420.00 ft (KB) (TVD)

Reference Elevations: 3038.00 ft (KB)

Total Depth: 4420.00 ft (KB) (TVD)

3033.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6651

Inside

Press@RunDepth: 21.73 psig @ 4385.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.10.20

End Date:

2015.10.20

Last Calib.: 2015.10.20

Start Time: 03:46:46

End Time:

11:42:15

Time On Btm: 2015.10.20 @ 06:32:45

Time Off Btm: 2015.10.20 @ 09:34:15

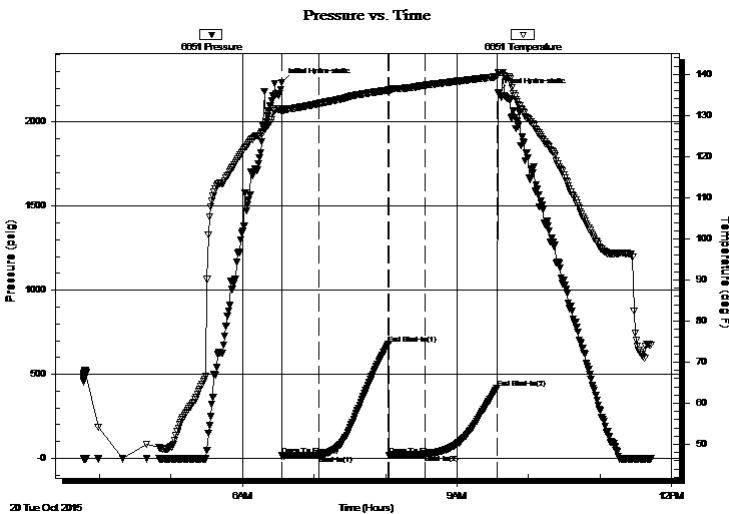
TEST COMMENT: 30- IF- Slowly built to 1"

60- IS- No blow

30- FF- No blow

60- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2236.58	131.18	Initial Hydro-static
1	15.06	130.88	Open To Flow (1)
31	19.14	132.90	Shut-In(1)
90	680.41	136.18	End Shut-In(1)
90	19.31	135.64	Open To Flow (2)
121	21.73	137.36	Shut-In(2)
181	417.46	139.44	End Shut-In(2)
182	2175.90	140.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	M	0.02

* 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.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

ATTN: Saman Sharifaie

Job Ticket: 64832

DST#: 5

Test Start: 2015.10.20 @ 03:46:45

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:33:15

Time Test Ended: 11:42:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 62

Interval: **4373.00 ft (KB) To 4420.00 ft (KB) (TVD)**

Reference Elevations: 3038.00 ft (KB)

Total Depth: 4420.00 ft (KB) (TVD)

3033.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6839 Outside

Press@RunDepth: psig @ 4385.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.10.20 End Date: 2015.10.20

Last Calib.: 2015.10.20

Start Time: 03:46:43 End Time: 11:42:12

Time On Btm:

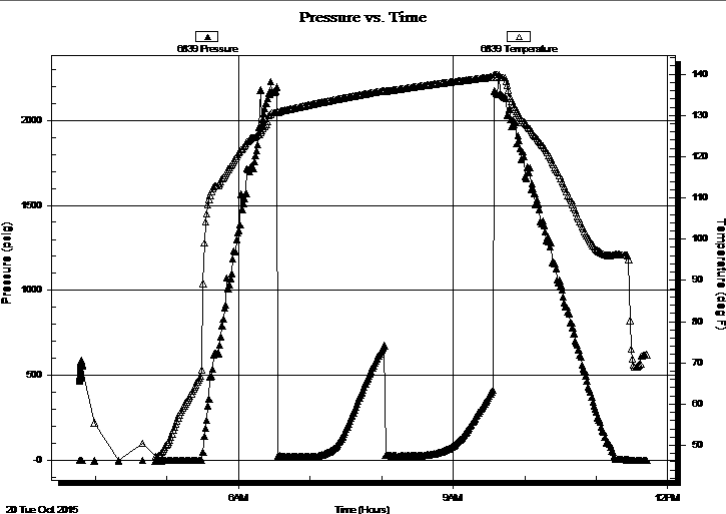
Time Off Btm:

TEST COMMENT: 30- IF- Slowly built to 1"

60- IS- 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)
5.00	M	0.02

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.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64832

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2015.10.20 @ 03:46:45

Tool Information

Drill Pipe:	Length: 4177.00 ft	Diameter: 3.82 inches	Volume: 59.21 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 179.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose:	56000.00 lb
			Total Volume: - bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	4373.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	47.00 ft				
Tool Length:	74.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4347.00	
Shut In Tool	5.00			4352.00	
Hydraulic tool	5.00			4357.00	
Jars	5.00			4362.00	
Safety Joint	2.00			4364.00	
Packer	5.00			4369.00	27.00 Bottom Of Top Packer
Packer	4.00			4373.00	
Stubb	1.00			4374.00	
Perforations	10.00			4384.00	
Change Over Sub	1.00			4385.00	
Recorder	0.00	6651	Inside	4385.00	
Recorder	0.00	6839	Outside	4385.00	
Drill Pipe	31.00			4416.00	
Change Over Sub	1.00			4417.00	
Bullnose	3.00			4420.00	47.00 Bottom Packers & Anchor

Total Tool Length: 74.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

4-1s-38w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

DKN #1-4

Job Ticket: 64832

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2015.10.20 @ 03:46:45

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

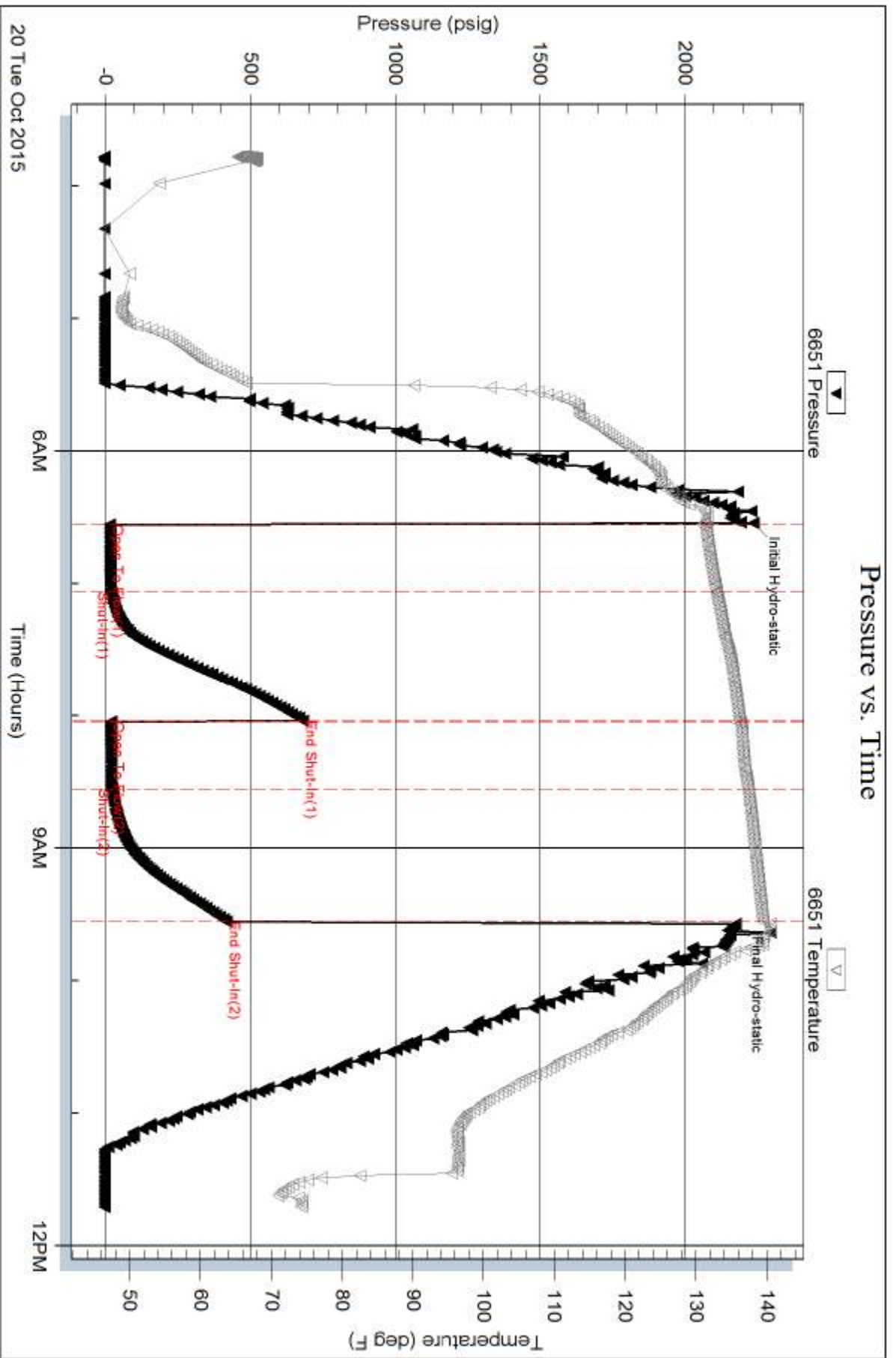
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

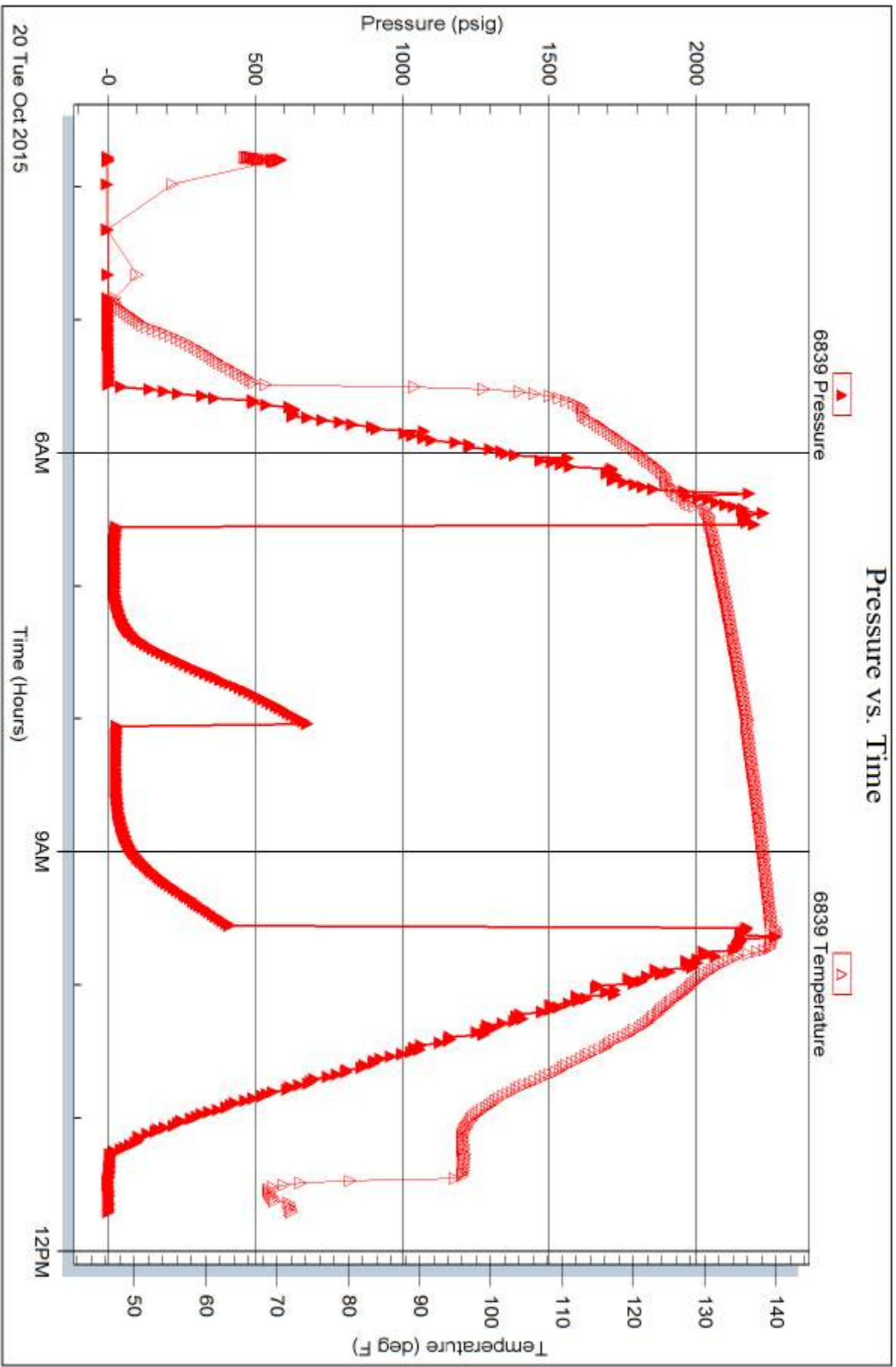


Serial #: 6839

Outside Murfin Drilling Co., Inc.

DKN#1-4

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 64832

Printed: 2015.10.22 @ 09:15:49



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64828**

Well Name & No. DKN #1-4 Test No. 1 Date 10/16/15
 Company Martin Drilling Co, Inc. Elevation 3038 KB 3033GL
 Address 250 N. Water Ste. 300 Wichita, KS 67202
 Co. Rep / Geo. Suman Shari Fare Rig Martin #3
 Location: Sec. 4 Twp. 1 S Rge. 38 W Co. Cherokee State KS

Interval Tested 3951-4028 Zone Tested LKC "A"
 Anchor Length 77' Drill Pipe Run 3808 Mud Wt. 9.1
 Top Packer Depth 3946 Drill Collars Run 119 Vis 56
 Bottom Packer Depth 3951 Wt. Pipe Run — WL 6.0
 Total Depth 4028 Chlorides 900 ppm System LCM 3#

Blow Description IF - 1" blow throughout
ISI - No blow
FF - No blow
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>OSM</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 15' BHT 132° Gravity 1150 API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1993</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1940</u>
(B) First Initial Flow <u>29</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1945</u>
(C) First Final Flow <u>31</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2229</u>
(D) Initial Shut-In <u>1234</u>	<input type="checkbox"/> Circ Sub <u>—</u>	T-Pulled <u>10/17</u> <u>0129</u>
(E) Second Initial Flow <u>35</u>	<input type="checkbox"/> Hourly Standby <u>—</u>	T-Out <u>0335</u>
(F) Second Final Flow <u>38</u>	<input checked="" type="checkbox"/> Mileage <u>424 RT</u> <u>147rt</u>	Comments <u>—</u>
(G) Final Shut-In <u>1099</u>	<input type="checkbox"/> Sampler <u>—</u>	
(H) Final Hydrostatic <u>1931</u>	<input type="checkbox"/> Straddle <u>—</u>	
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u>—</u>	<input type="checkbox"/> Ruined Shale Packer <u>—</u>
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer <u>—</u>	<input type="checkbox"/> Ruined Packer <u>—</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder <u>—</u>	<input type="checkbox"/> Extra Copies <u>—</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby <u>—</u>	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility <u>—</u>	Total <u>1622</u>
	Sub Total <u>1622</u>	MP/DST Disc't <u>—</u>

Approved By _____ Our Representative Brennan Lonsdale

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. **64829**

Well Name & No. DKN #1-4 Test No. 2 Date 10/17/15
 Company Murkin Drilling Co, Inc. Elevation 3038 KB 3033 GL
 Address 205 N. Water Ste. 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifade Rig Murkin #3
 Location: Sec. 4 Twp. 1 S Rge. 38 W Co. Cheyenne State KS

Interval Tested 4020-4284 Zone Tested LKC "B-D"
 Anchor Length 64' Drill Pipe Run 3838 Mud Wt. 9.3
 Top Packer Depth 4015 Drill Collars Run 179 Vis 50
 Bottom Packer Depth 4020 Wt. Pipe Run — WL 6.4
 Total Depth 4084 Chlorides 900 ppm System LCM 1 1/2"

Blow Description IF- Surface blow built very slowly to 1"
2ST- No blow
FF- No blow
FST- No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>25'</u>	<u>SOCM</u>		<u>5</u>		<u>95</u>
<u>5</u>	<u>CO</u>				

Rec Total 30 BHT 134° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2025 Test 1150 T-On Location 1200
 (B) First Initial Flow 19 Jars 250 T-Started 1206
 (C) First Final Flow 29 Safety Joint 75 T-Open 1617
 (D) Initial Shut-In 1400 Circ Sub _____ T-Pulled 1917
 (E) Second Initial Flow 33 Hourly Standby _____ T-Out 2153
 (F) Second Final Flow 41 Mileage 424 RT 147rt Comments _____
 (G) Final Shut-In 1321 Sampler _____
 (H) Final Hydrostatic 2015 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 1622
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1622

Approved By _____ Our Representative Bryan Lonsdale
 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. **64830**

Well Name & No. DKN #1-4 Test No. 3 Date 10/18/15
 Company Martin Drilling Co, Inc. Elevation 3038 KB 3033 GL
 Address 250 N. Water Ste. 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaire Rig Martin #3
 Location: Sec. 4 Twp. 1 S Rge. 38 W Co. Cherokee State KS

Interval Tested 4084 - 4170 Zone Tested LKC "G+H"
 Anchor Length 86' Drill Pipe Run 3896 Mud Wt. 9.1
 Top Packer Depth 4029 Drill Collars Run 179 Vis 52
 Bottom Packer Depth 4084 Wt. Pipe Run — WL 6.0
 Total Depth 4170 Chlorides 800 ppm System LCM 1#

Blow Description IF - slowly built to 3/4"
ISI - No blow
PF - No blow
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>OSM</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 5' BHT 132° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2038</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>0940</u>
(B) First Initial Flow <u>16</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0946</u>
(C) First Final Flow <u>18</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1202</u>
(D) Initial Shut-In <u>283</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>1502</u>
(E) Second Initial Flow <u>19</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1713</u>
(F) Second Final Flow <u>25</u>	<input checked="" type="checkbox"/> Mileage <u>424 RT</u> 147	Comments _____
(G) Final Shut-In <u>152</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2002</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1622</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1622</u>	

Approved By _____ Our Representative Brannan Lonsdale

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. **64831**

Well Name & No. DKN #1-4 Test No. 4 Date 10/14/15
 Company Murfin Drilling Co, Inc Elevation 3038 KB 3033 GL
 Address 205 N. Water Ste 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifate Rig Murfin #3
 Location: Sec. 4 Twp. 1 S Rge. 38 W Co. Cheyenne State KS

Interval Tested 4163-4221 Zone Tested LSC "5"
 Anchor Length 38' Drill Pipe Run 3958 Mud Wt. 9.1
 Top Packer Depth 4158 Drill Collars Run 179 Vis 52
 Bottom Packer Depth 4163 Wt. Pipe Run --- WL 6.0
 Total Depth 4221 Chlorides 800 ppm System LCM 1A

Blow Description IF - 1/2" blow
ISF - No blow
FF - No blow
FSF - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>M</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 2' BHT 1310 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2075 Test 1150 T-On Location 0200
 (B) First Initial Flow 17 Jars 250 T-Started 0202
 (C) First Final Flow 19 Safety Joint 75 T-Open 0432
 (D) Initial Shut-In 51 Circ Sub _____ T-Pulled 0732
 (E) Second Initial Flow 19 Hourly Standby _____ T-Out 0939
 (F) Second Final Flow 20 Mileage 424 RT 147 Comments _____
 (G) Final Shut-In 34 Sampler _____
 (H) Final Hydrostatic 2034 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 1622
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 _____
 Sub Total 1622

Approved By _____ Our Representative Brennan Lonsdale

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. **64832**

Well Name & No. DKN #1-4 Test No. 5 Date 10/20/15
 Company Murfin Drilling Co. Inc. Elevation 3038 KB 3033 GL
 Address 205 N. Water Ste. 300 Wichita, KS 67202
 Co. Rep / Geo. Suman Sharifpale Rig Murfin #3
 Location: Sec. 4 Twp. 1 S Rge. 38 W Co. Cheyenne State KS

Interval Tested 4373-4420 Zone Tested Pawnee
 Anchor Length 47' Drill Pipe Run 4177 Mud Wt. 9.2
 Top Packer Depth 4368 Drill Collars Run 179 Vis 55
 Bottom Packer Depth 4373 Wt. Pipe Run — WL 5.6
 Total Depth 4420 Chlorides 200 ppm System LCM 2#
 Blow Description IF - slowly built to 1"
ISI - No blow
FF - No blow
PSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>M</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 5' BHT 1390 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2237</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>0243</u>
(B) First Initial Flow <u>15</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0246</u>
(C) First Final Flow <u>19</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0532</u>
(D) Initial Shut-In <u>680</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>0832</u>
(E) Second Initial Flow <u>19</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1041</u>
(F) Second Final Flow <u>22</u>	<input checked="" type="checkbox"/> Mileage <u>424 RT 147+147</u>	Comments <u>Loaded tools</u>
(G) Final Shut-In <u>417</u>	<input type="checkbox"/> Sampler _____	<u>10/22 @ 0030</u>
(H) Final Hydrostatic <u>2176</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>800</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby <u>1.5d 1.75h</u>	Total <u>2569</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1769</u>	

Approved By _____ Our Representative Brennan Lonsdale

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