



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Rocky Milford

Frisbie Inc. #1-24

24-2s-36w Rawlins KS

Start Date: 2013.12.31 @ 01:34:00

End Date: 2013.12.31 @ 10:24:45

Job Ticket #: 55883 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.01.08 @ 08:35:46



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

24-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Frisbie Inc. #1-24

Job Ticket: 55883

DST#: 1

ATTN: Rocky Milford

Test Start: 2013.12.31 @ 01:34:00

Tool Information

Drill Pipe:	Length: 3912.00 ft	Diameter: 3.80 inches	Volume: 54.88 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 46000.00 lb
			<u>Total Volume: 55.79 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	4103.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	90.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Tool slid 5' to bottom before open - No mud loss

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4080.00	
Hydraulic tool	5.00			4085.00	
Jars	5.00			4090.00	
Safety Joint	3.00			4093.00	
Packer	5.00			4098.00	28.00 Bottom Of Top Packer
Packer	5.00			4103.00	
Stubb	1.00			4104.00	
Recorder	0.00	8671	Inside	4104.00	
Recorder	0.00	8320	Outside	4104.00	
Perforations	25.00			4129.00	
Blank Spacing	33.00			4162.00	
Bullnose	3.00			4165.00	62.00 Bottom Packers & Anchor

Total Tool Length: 90.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

24-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Frisbie Inc. #1-24

Job Ticket: 55883

DST#: 1

ATTN: Rocky Milford

Test Start: 2013.12.31 @ 01:34:00

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: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.16 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
125.00	Mud	0.615
0.00	a few oil spots in tool	0.000

Total Length: 125.00 ft

Total Volume: 0.615 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8671

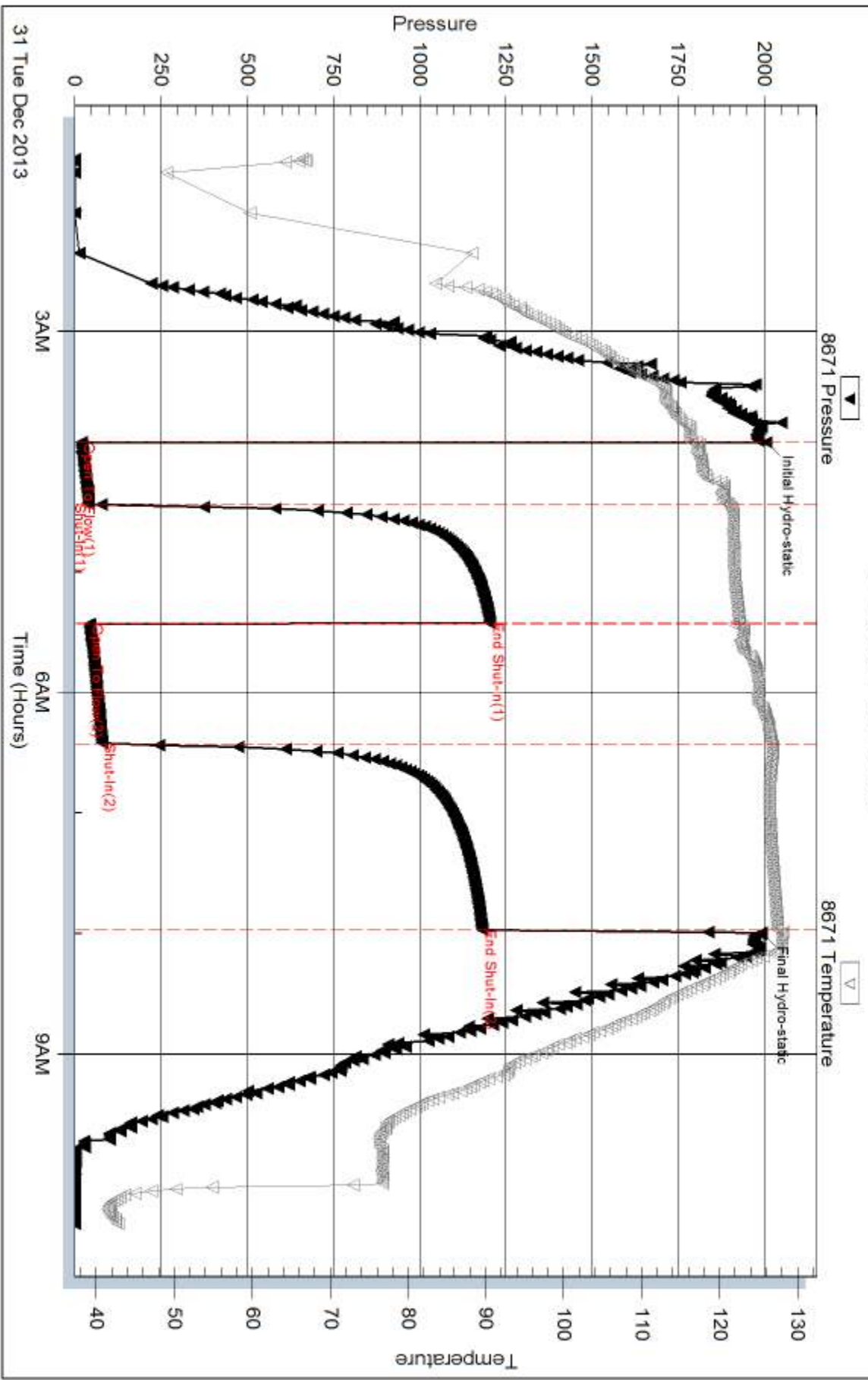
Inside

Murfin Drilling Co., Inc.

Friskie Inc. #1-24

DST Test Number: 1

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 55883

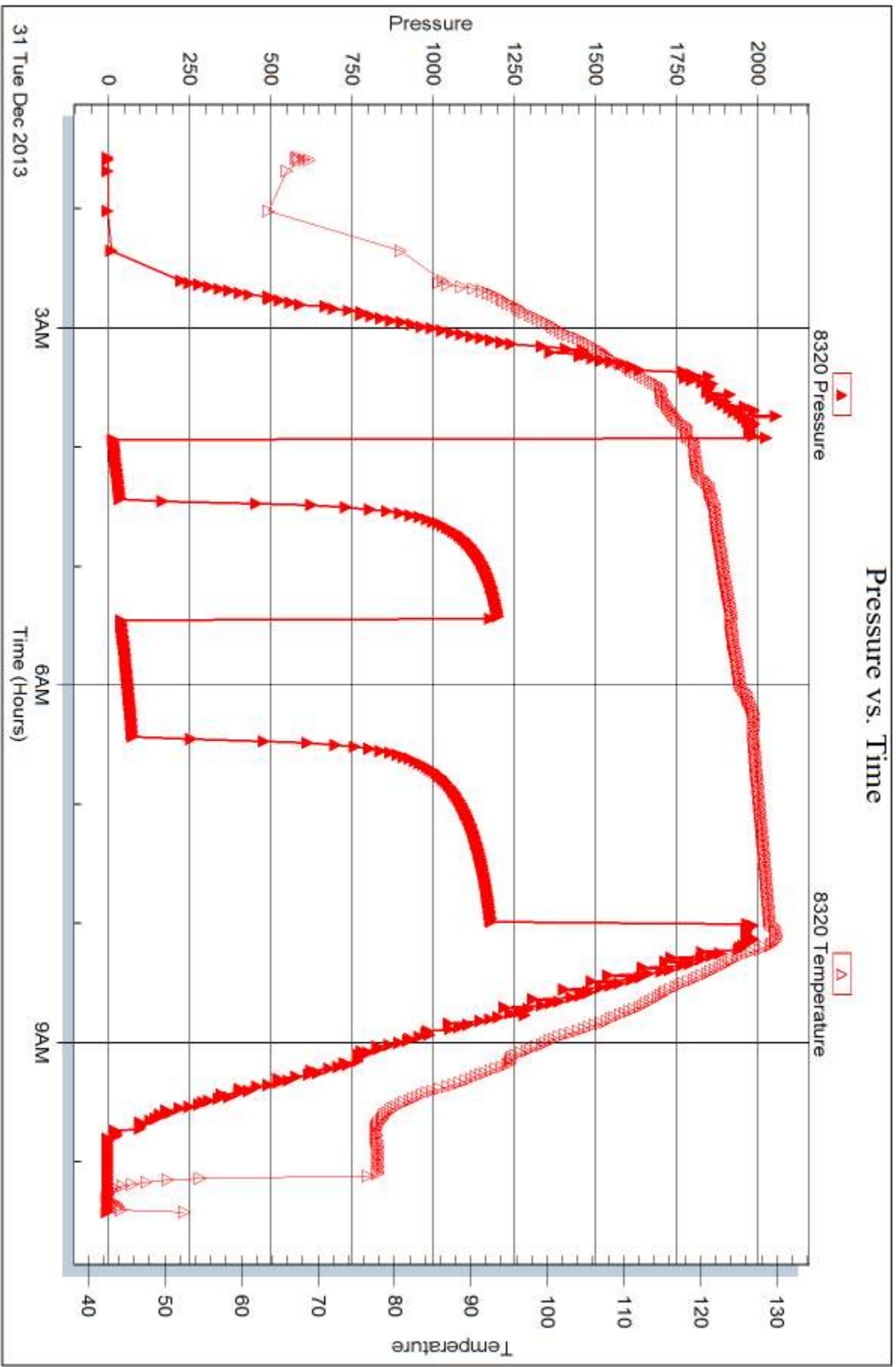
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Serial #: 8320

Outside Murfin Drilling Co., Inc.

Friskie Inc. #1-24

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 55883

Printed: 2014.01.08 @ 08:35:49



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Rocky Milford

Frisbie Inc. #1-24

24-2s-36w Rawlins KS

Start Date: 2013.12.31 @ 21:40:00

End Date: 2014.01.01 @ 06:39:00

Job Ticket #: 55884 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.01.08 @ 08:35:16



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Rocky Milford

24-2s-36w Rawlins KS

Frisbie Inc. #1-24

Job Ticket: 55884

DST#: 2

Test Start: 2013.12.31 @ 21:40:00

GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:47:45

Time Test Ended: 06:39:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 4183.00 ft (KB) To 4285.00 ft (KB) (TVD)

Reference Elevations: 3308.00 ft (KB)

Total Depth: 4285.00 ft (KB) (TVD)

3303.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8671

Inside

Press@RunDepth: 217.41 psig @ 4184.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.12.31

End Date:

2014.01.01

Last Calib.:

2014.01.01

Start Time: 21:40:05

End Time:

06:39:00

Time On Btm:

2013.12.31 @ 23:47:30

Time Off Btm:

2014.01.01 @ 03:52:00

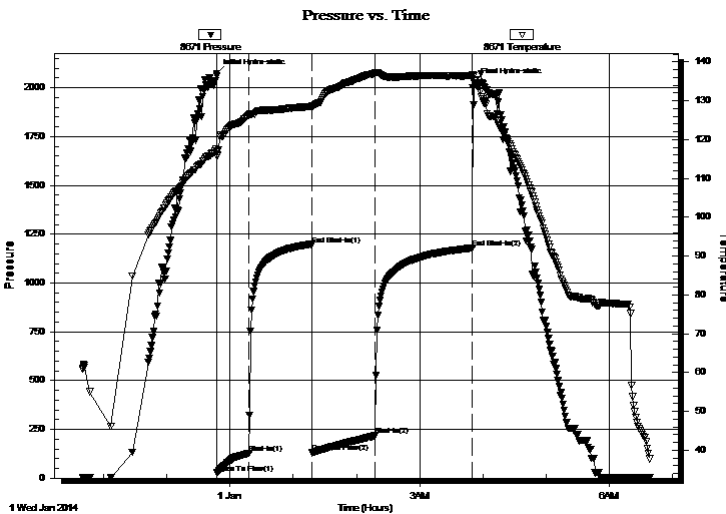
TEST COMMENT: 30 - IF: 1" Blow at open, built to BOB (11") in 22 min. (Diesel in bucket)

60 - IS: No blow back

60 - FF: Blow built to BOB in 30 min.

90 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2072.65	116.76	Initial Hydro-static
1	26.28	115.72	Open To Flow (1)
31	126.78	126.31	Shut-In(1)
90	1197.48	128.46	End Shut-In(1)
91	130.85	128.08	Open To Flow (2)
151	217.41	137.08	Shut-In(2)
243	1179.26	136.42	End Shut-In(2)
245	2025.54	135.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
248.00	MCW 85%w, 15%m	1.78
190.00	WM 58%m, 42%w	2.67

* 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.

24-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Frisbie Inc. #1-24

Job Ticket: 55884

DST#: 2

ATTN: Rocky Milford

Test Start: 2013.12.31 @ 21:40:00

Tool Information

Drill Pipe:	Length: 3975.00 ft	Diameter: 3.80 inches	Volume: 55.76 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 56.67 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4183.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	102.00 ft			
Tool Length:	130.00 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			4160.00	
Hydraulic tool	5.00			4165.00	
Jars	5.00			4170.00	
Safety Joint	3.00			4173.00	
Packer	5.00			4178.00	28.00 Bottom Of Top Packer
Packer	5.00			4183.00	
Stubb	1.00			4184.00	
Recorder	0.00	8671	Inside	4184.00	
Recorder	0.00	8320	Outside	4184.00	
Perforations	32.00			4216.00	
Blank Spacing	64.00			4280.00	
Perforations	2.00			4282.00	
Bullnose	3.00			4285.00	102.00 Bottom Packers & Anchor

Total Tool Length: 130.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

24-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Frisbie Inc. #1-24

Job Ticket: 55884

DST#: 2

ATTN: Rocky Milford

Test Start: 2013.12.31 @ 21:40:00

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:

38000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.96 in³

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
248.00	MCW 85%w, 15%m	1.784
190.00	WM 58%m, 42%w	2.665

Total Length: 438.00 ft Total Volume: 4.449 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

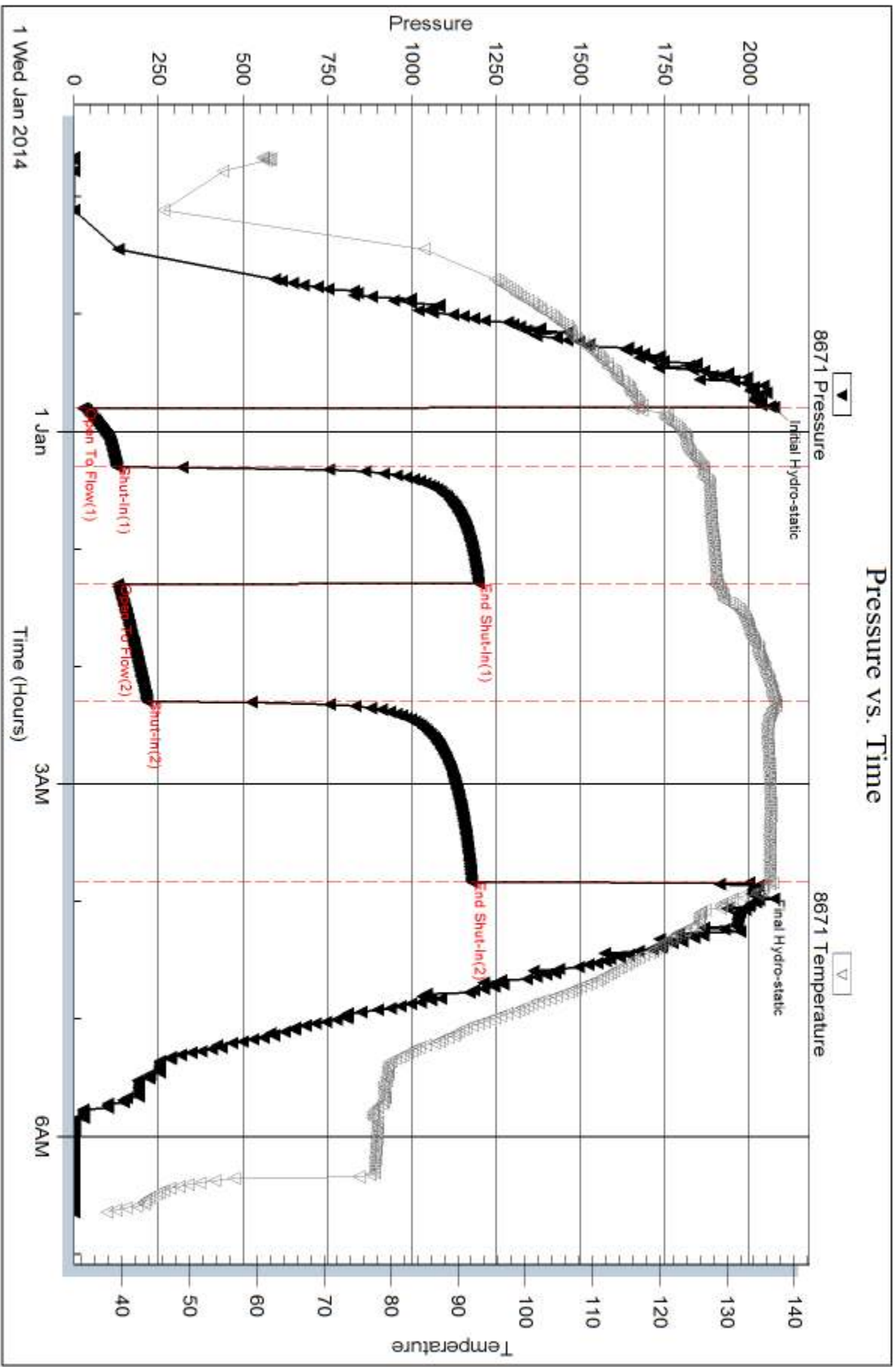
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .195 ohms @ 69.7 deg F

Chlorides = 38,000 ppm

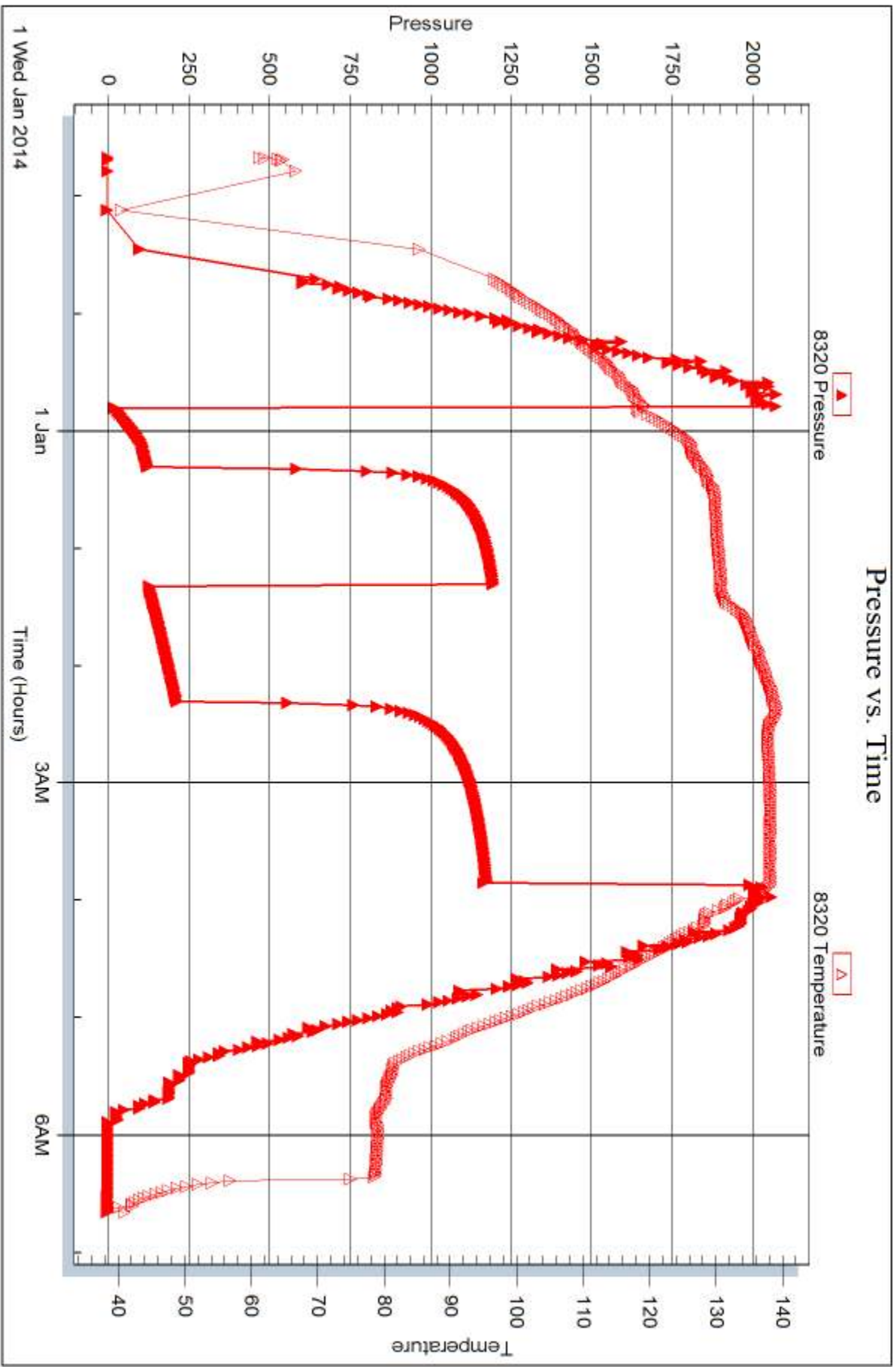


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Friskie Inc. #1-24

DST Test Number: 2





DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Rocky Milford

Frisbie Inc. #1-24

24-2s-36w Rawlins KS

Start Date: 2014.01.01 @ 15:40:00

End Date: 2014.01.02 @ 00:22:45

Job Ticket #: 55885 DST #: 3

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

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TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N. Water Suite 300
 Wichita, KS 67202
 ATTN: Rocky Milford

24-2s-36w Rawlins KS

Frisbie Inc. #1-24

Job Ticket: 55885 **DST#: 3**
 Test Start: 2014.01.01 @ 15:40:00

GENERAL INFORMATION:

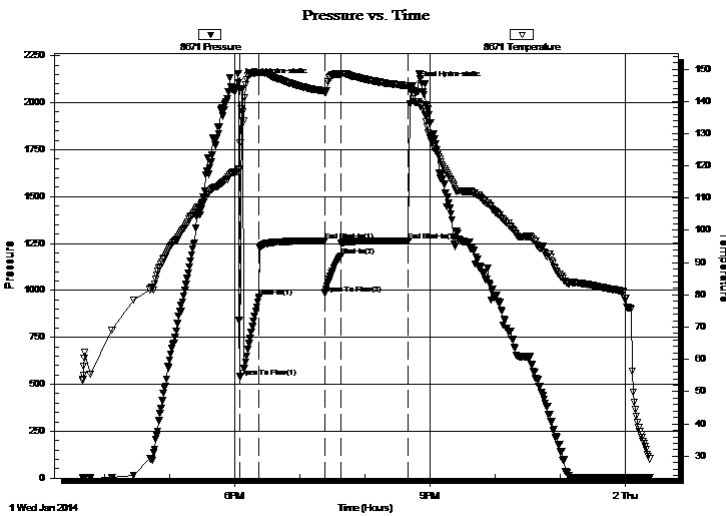
Formation: **LKC "D"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 18:05:15
 Tester: James Winder
 Time Test Ended: 00:22:45
 Unit No: 57
 Interval: **4266.00 ft (KB) To 4328.00 ft (KB) (TVD)**
 Reference Elevations: 3308.00 ft (KB)
 Total Depth: 4328.00 ft (KB) (TVD) 3303.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 8671

Inside

Press@RunDepth: 1184.95 psig @ 4267.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.01.01 End Date: 2014.01.02 Last Calib.: 2014.01.02
 Start Time: 15:40:05 End Time: 00:22:45 Time On Btm: 2014.01.01 @ 18:04:00
 Time Off Btm: 2014.01.01 @ 20:44:15

TEST COMMENT: 15 - IF: Blow built to BOB (11") in 40 sec. / Reset tool - BOB in 1 min. (Diesel in Bucket)
 60 - IS!: No blow back
 15 - FF: Blow built to BOB in 1 min.
 60 - FS!: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2109.27	119.15	Initial Hydro-static
2	539.73	127.15	Open To Flow (1)
19	964.77	148.78	Shut-In(1)
79	1265.18	143.15	End Shut-In(1)
79	983.92	142.95	Open To Flow (2)
94	1184.95	148.41	Shut-In(2)
156	1265.87	144.69	End Shut-In(2)
161	2090.56	140.75	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1918.00	Water 99%w, 1%m	25.21
125.00	MCW 87%w, 13%m	1.75
375.00	WCM 62%m, 38%w	5.26
200.00	SWCM 96%m, 4%w	2.81

* 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.

24-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Frisbie Inc. #1-24

Job Ticket: 55885

DST#: 3

ATTN: Rocky Milford

Test Start: 2014.01.01 @ 15:40:00

Tool Information

Drill Pipe:	Length: 4069.00 ft	Diameter: 3.80 inches	Volume: 57.08 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 57.99 bbl</u>	Tool Chased	5.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	4266.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	62.00 ft				
Tool Length:	90.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments: Tool slid 3' - 4' before opening - Chased 5' to bottom - mud down 6' after checking blow rechecked mud and was out of sight so we pulled tool closed and refilled hole (wasn't down much was just too foggy to see down hole) reset and started time over

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			4243.00	
Hydraulic tool	5.00			4248.00	
Jars	5.00			4253.00	
Safety Joint	3.00			4256.00	
Packer	5.00			4261.00	28.00 Bottom Of Top Packer
Packer	5.00			4266.00	
Stubb	1.00			4267.00	
Recorder	0.00	8671	Inside	4267.00	
Recorder	0.00	8320	Outside	4267.00	
Perforations	25.00			4292.00	
Blank Spacing	33.00			4325.00	
Bullnose	3.00			4328.00	62.00 Bottom Packers & Anchor

Total Tool Length: 90.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

24-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Frisbie Inc. #1-24

Job Ticket: 55885

DST#: 3

ATTN: Rocky Milford

Test Start: 2014.01.01 @ 15:40:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 73.00 sec/qt
Water Loss: 5.58 in³
Resistivity: ohm.m
Salinity: 1000.00 ppm
Filter Cake: 2.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: 20000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1918.00	Water 99%w, 1%m	25.210
125.00	MCW 87%w, 13%m	1.753
375.00	WCM 62%m, 38%w	5.260
200.00	SWCM 96%m, 4%w	2.805

Total Length: 2618.00 ft Total Volume: 35.028 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

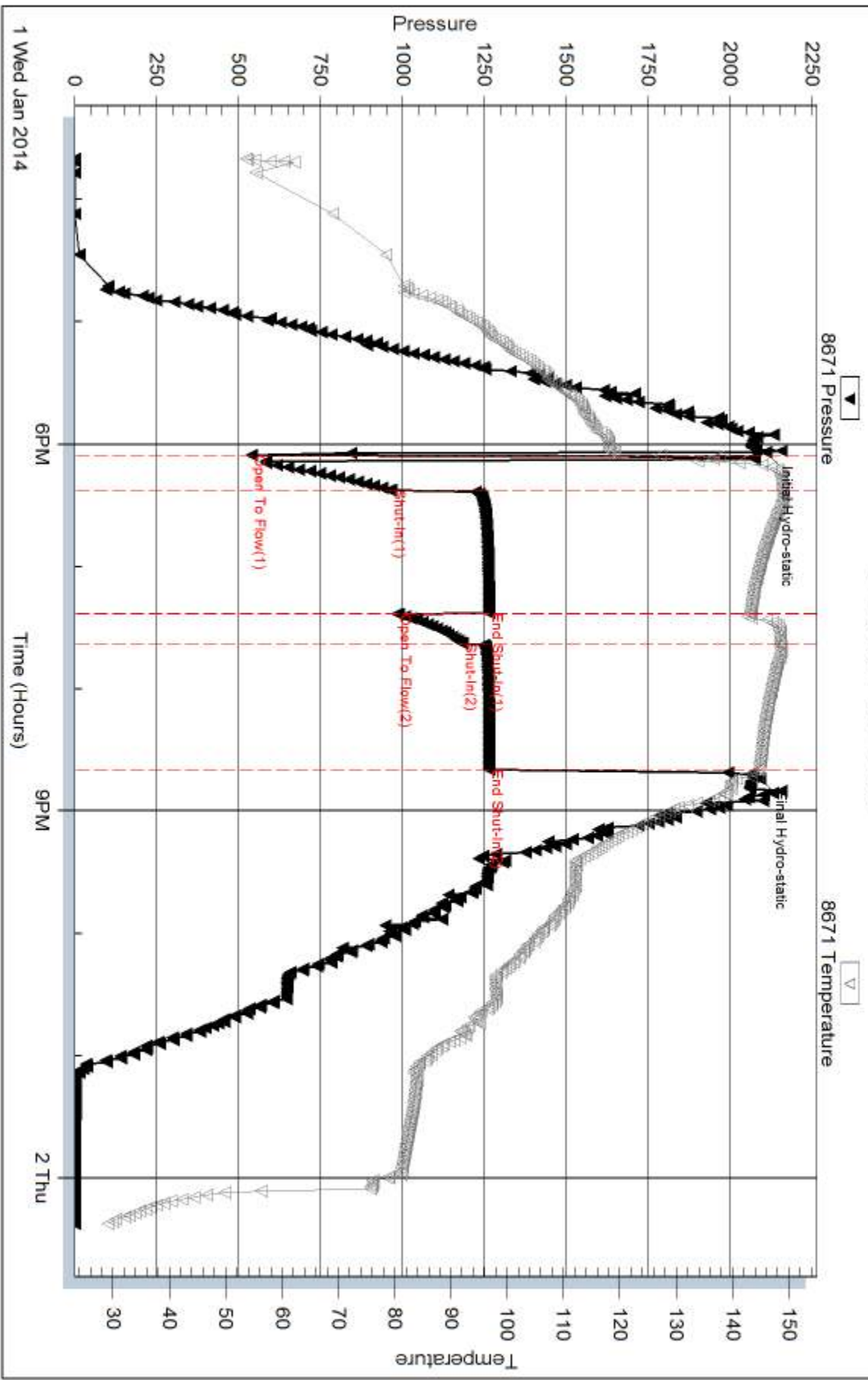
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .355 ohms @ 67.7 deg F

Pressure vs. Time





DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Rocky Milford

Frisbie Inc. #1-24

24-2s-36w Rawlins KS

Start Date: 2014.01.02 @ 10:55:00

End Date: 2014.01.02 @ 18:16:15

Job Ticket #: 55886 DST #: 4

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

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Rocky Milford

24-2s-36w Rawlins KS

Frisbie Inc. #1-24

Job Ticket: 55886

DST#: 4

Test Start: 2014.01.02 @ 10:55:00

GENERAL INFORMATION:

Formation: **LKC "E - G"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:21:15
 Time Test Ended: 18:16:15
 Interval: **4326.00 ft (KB) To 4372.00 ft (KB) (TVD)**
 Total Depth: 4372.00 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: 3308.00 ft (KB)
 3303.00 ft (CF)
 KB to GR/CF: 5.00 ft

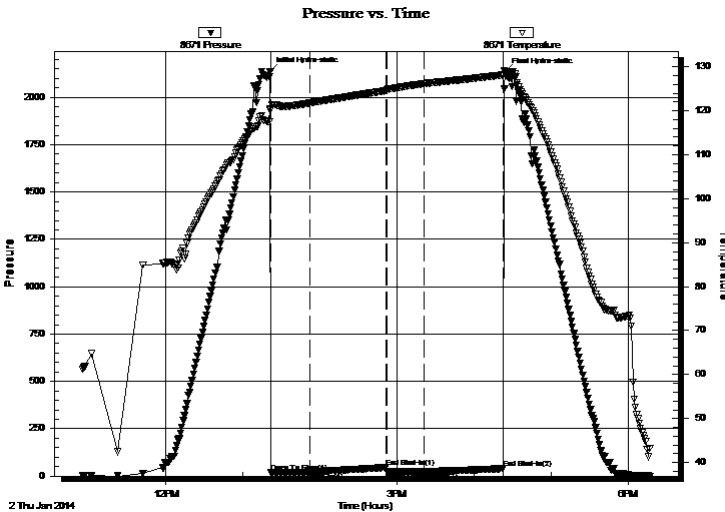
Serial #: 8671

Inside

Press@RunDepth: 23.50 psig @ 4327.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.01.02 End Date: 2014.01.02 Last Calib.: 2014.01.02
 Start Time: 10:55:05 End Time: 18:16:14 Time On Btm: 2014.01.02 @ 13:21:00
 Time Off Btm: 2014.01.02 @ 16:24:00

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 1 1/4"
 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	2135.89	120.19	Initial Hydro-static
1	18.79	120.32	Open To Flow (1)
31	21.24	121.75	Shut-In(1)
91	46.32	124.55	End Shut-In(1)
91	22.09	124.62	Open To Flow (2)
120	23.50	126.15	Shut-In(2)
182	40.25	128.12	End Shut-In(2)
183	2133.74	128.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud w /trace of oil 100%m	0.01

* 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.

24-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Frisbie Inc. #1-24

Job Ticket: 55886

DST#: 4

ATTN: Rocky Milford

Test Start: 2014.01.02 @ 10:55:00

Tool Information

Drill Pipe:	Length: 4133.00 ft	Diameter: 3.80 inches	Volume: 57.98 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 58.89 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4326.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.00 ft			
Tool Length:	74.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Tool slid 8' to bottom before open - no mud loss

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4303.00	
Hydraulic tool	5.00			4308.00	
Jars	5.00			4313.00	
Safety Joint	3.00			4316.00	
Packer	5.00			4321.00	28.00 Bottom Of Top Packer
Packer	5.00			4326.00	
Packer - Shale	0.00			4326.00	
Stubb	1.00			4327.00	
Recorder	0.00	8671	Inside	4327.00	
Recorder	0.00	8320	Outside	4327.00	
Perforations	9.00			4336.00	
Blank Spacing	33.00			4369.00	
Bullnose	3.00			4372.00	46.00 Bottom Packers & Anchor

Total Tool Length: 74.00



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250 N. Water Suite 300
Wichita, KS 67202

Frisbie Inc. #1-24

Job Ticket: 55886

DST#: 4

ATTN: Rocky Milford

Test Start: 2014.01.02 @ 10:55:00

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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Mud w /trace of oil 100%m	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

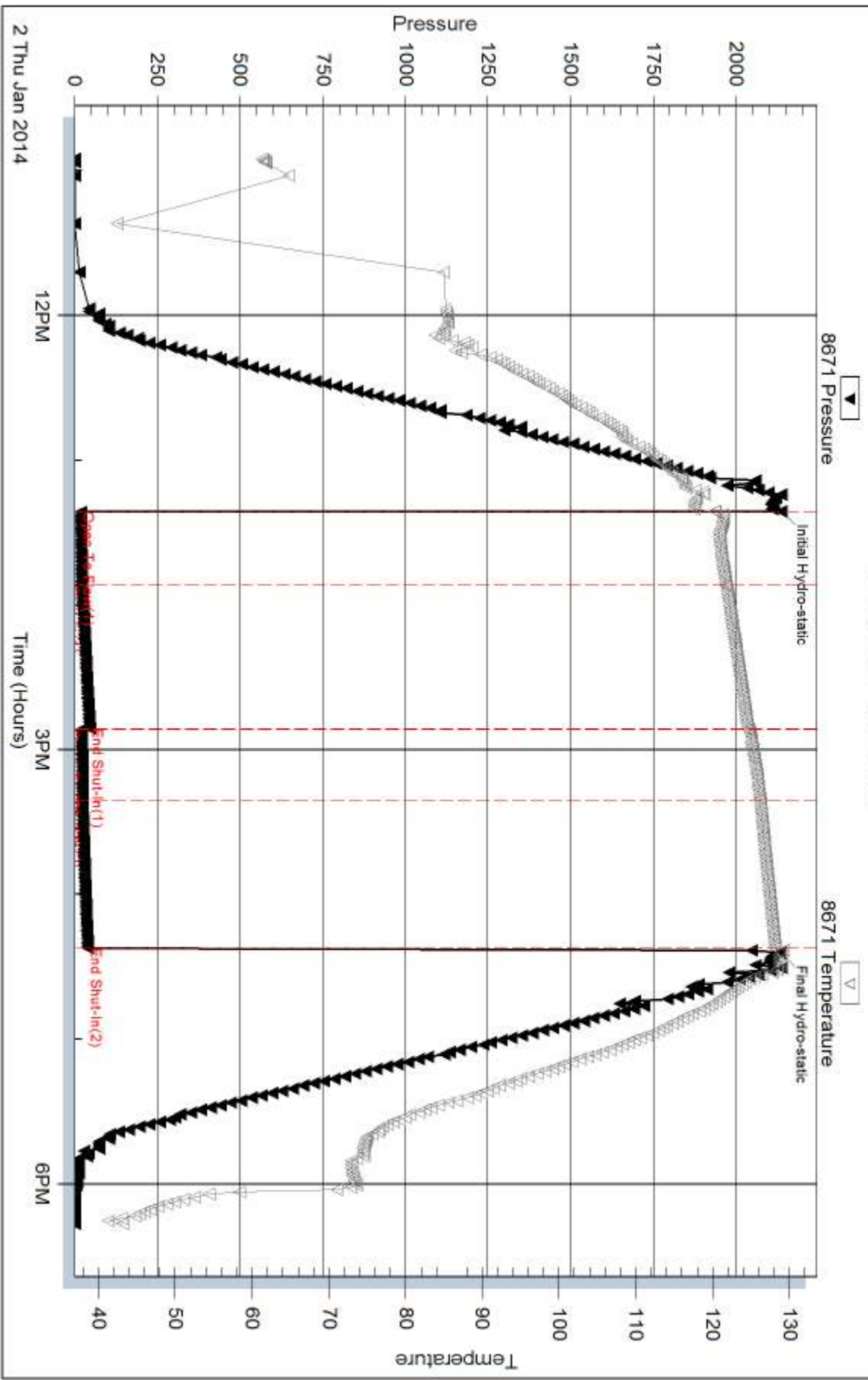
Serial #:

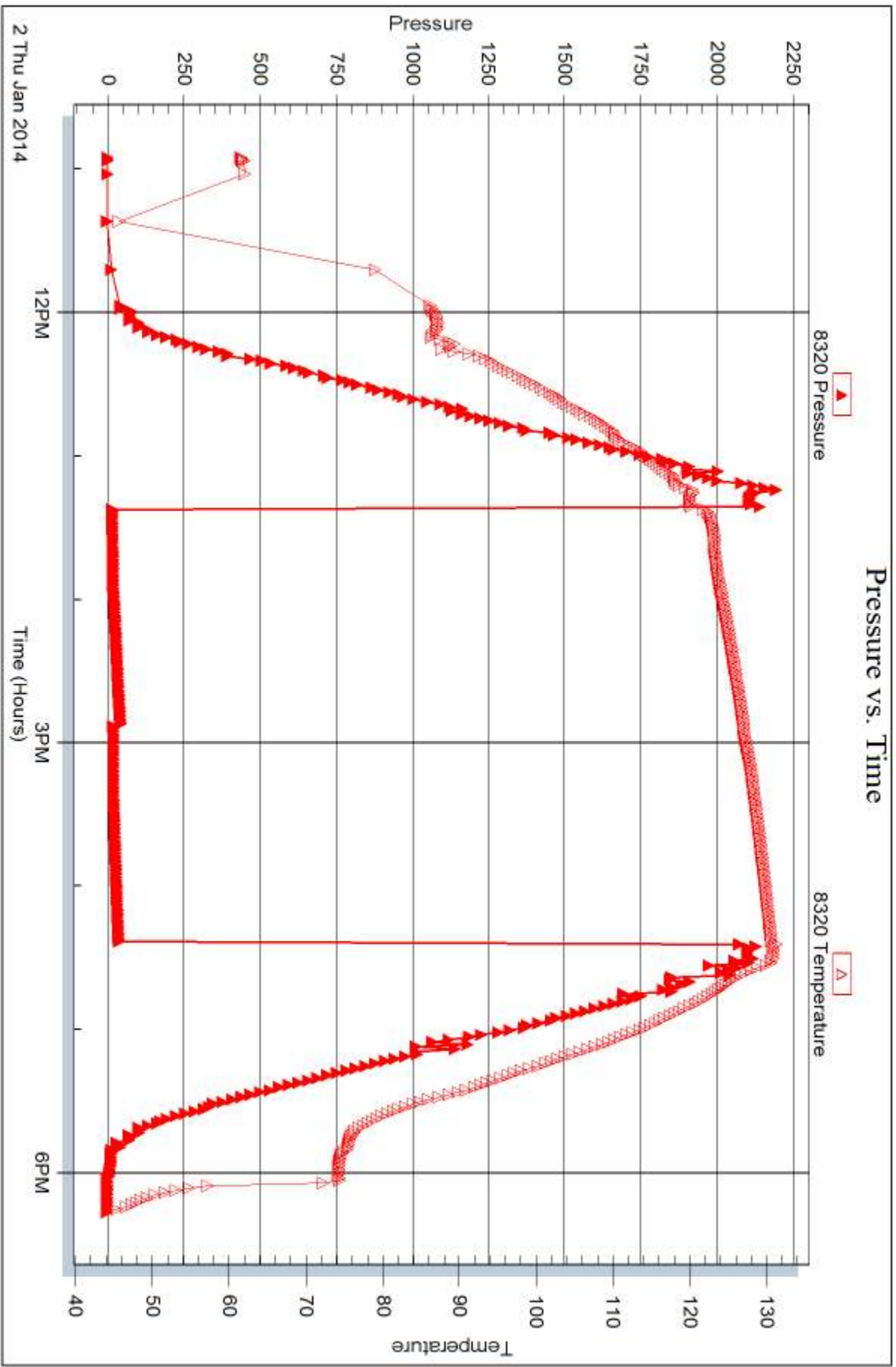
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Rocky Milford

Frisbie Inc. #1-24

24-2s-36w Rawlins KS

Start Date: 2014.01.03 @ 05:44:00

End Date: 2014.01.03 @ 14:00:30

Job Ticket #: 55887 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.01.08 @ 08:32:56



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N. Water Suite 300
 Wichita, KS 67202
 ATTN: Rocky Milford

24-2s-36w Rawlins KS

Frisbie Inc. #1-24

Job Ticket: 55887

DST#: 5

Test Start: 2014.01.03 @ 05:44:00

GENERAL INFORMATION:

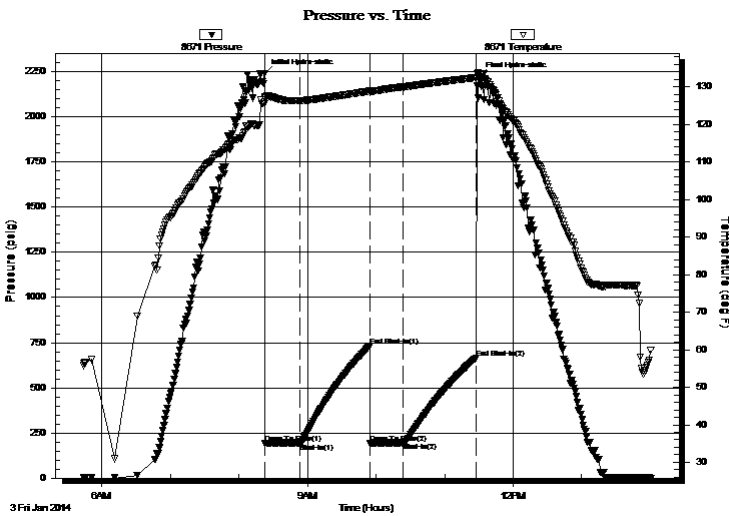
Formation: **LKC "E"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:23:00
 Time Test Ended: 14:00:30
 Interval: **4421.00 ft (KB) To 4468.00 ft (KB) (TVD)**
 Total Depth: 4468.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 3308.00 ft (KB)
 3303.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8671

Inside

Press@RunDepth: 195.84 psig @ 4422.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.01.03 End Date: 2014.01.03 Last Calib.: 2014.01.03
 Start Time: 05:44:05 End Time: 14:00:29 Time On Btm: 2014.01.03 @ 08:22:30
 Time Off Btm: 2014.01.03 @ 11:29:45

TEST COMMENT: 30 - IF: 4" Blow at open, bled off at 5 min., surface blow from 9 min. till close (Diesel in bucket)
 60 - IS: Some weak surface blow back?
 30 - FF: Surface blow at 9 min., built slightly
 60 - FS: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2241.04	126.02	Initial Hydro-static
1	191.66	127.09	Open To Flow (1)
31	195.57	126.27	Shut-In(1)
92	730.41	128.85	End Shut-In(1)
92	190.81	128.54	Open To Flow (2)
121	195.84	129.97	Shut-In(2)
185	664.79	132.45	End Shut-In(2)
188	2224.00	133.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
331.00	Mud 100%	2.95

* 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.

24-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Frisbie Inc. #1-24

Job Ticket: 55887

DST#: 5

ATTN: Rocky Milford

Test Start: 2014.01.03 @ 05:44:00

Tool Information

Drill Pipe:	Length: 4227.00 ft	Diameter: 3.80 inches	Volume: 59.29 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 60.20 bbl</u>	Tool Chased 7.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	4421.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	75.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Tool sat on bridge. Had them pick up (a few feet) and thought we were off bottom according to weight indicator. Tool opened as I went in to double check my figures - lost 30'+ of mud. Bled off and reset tool. On second attempt tool opened on bridge again and chased 6' -7' to bottom - lost another 10' of mud - had 4" blow at open.

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4398.00	
Hydraulic tool	5.00			4403.00	
Jars	5.00			4408.00	
Safety Joint	3.00			4411.00	
Packer	5.00			4416.00	28.00 Bottom Of Top Packer
Packer	5.00			4421.00	
Packer - Shale	0.00			4421.00	
Stubb	1.00			4422.00	
Recorder	0.00	8671	Inside	4422.00	
Recorder	0.00	8320	Outside	4422.00	
Perforations	9.00			4431.00	
Blank Spacing	33.00			4464.00	
Perforations	1.00			4465.00	
Bullnose	3.00			4468.00	47.00 Bottom Packers & Anchor

Total Tool Length: 75.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

24-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Frisbie Inc. #1-24

Job Ticket: 55887

DST#: 5

ATTN: Rocky Milford

Test Start: 2014.01.03 @ 05:44:00

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: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
331.00	Mud 100%	2.949

Total Length: 331.00 ft Total Volume: 2.949 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8671

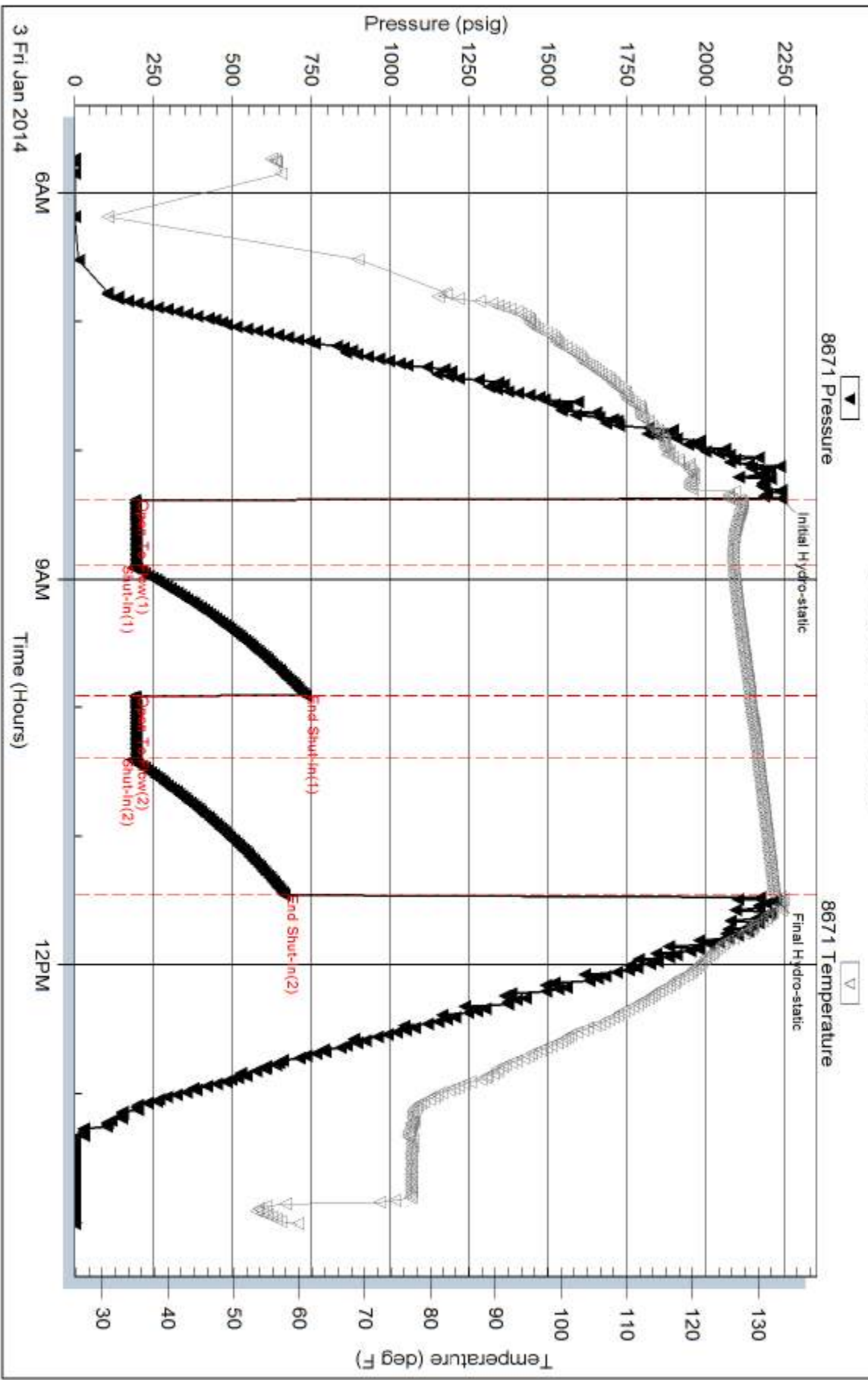
Inside

Murfin Drilling Co., Inc.

Friskie Inc. #1-24

DST Test Number: 5

Pressure vs. Time

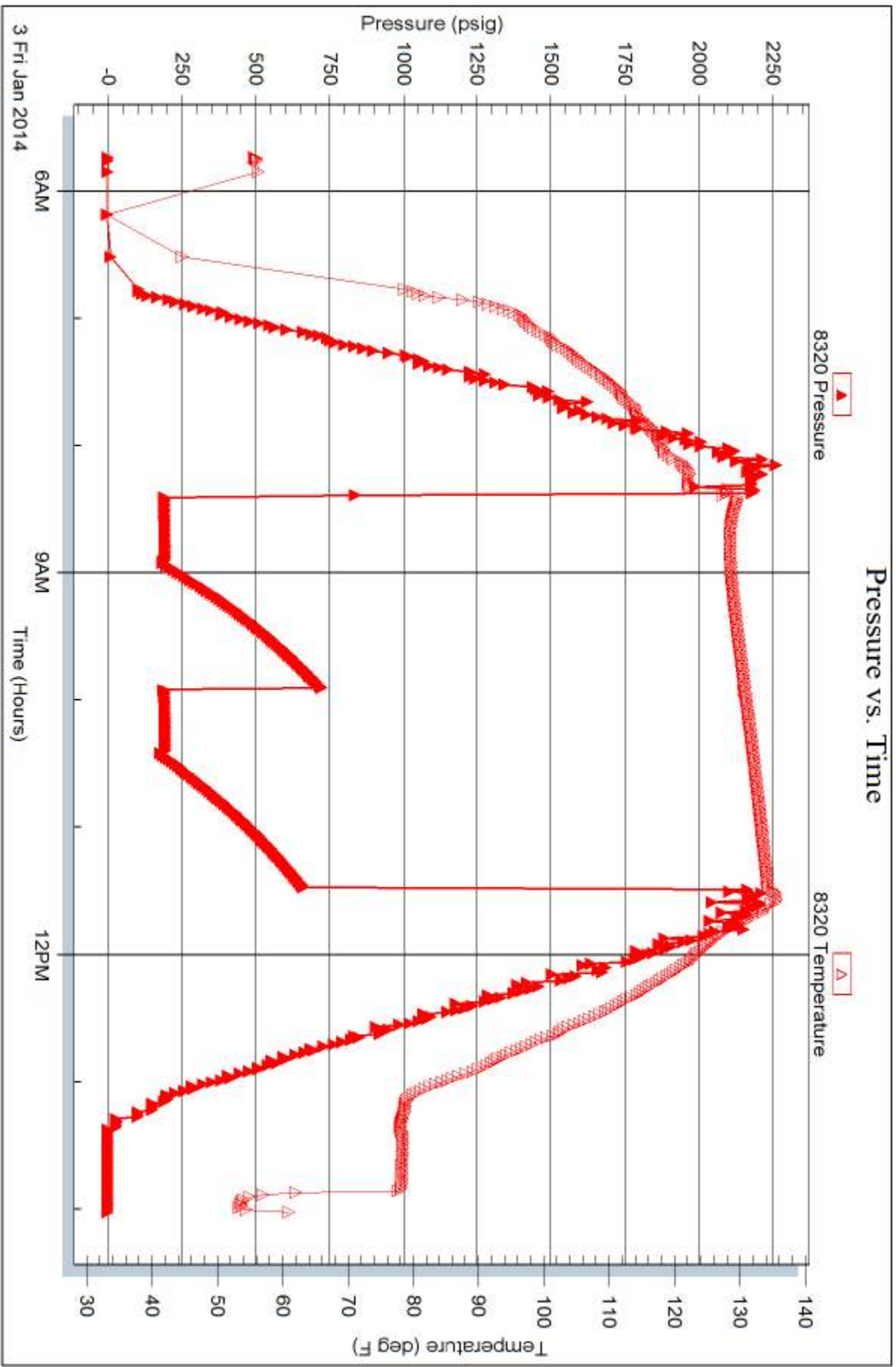


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Friskie Inc. #1-24

DST Test Number: 5



Tribble Testing, Inc

Ref. No: 55887

Printed: 2014.01.08 @ 08:32:58



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55883**

4/10

Well Name & No. Frisbie Inc #1-24 Test No. 1 Date 12-31-13
 Company Murfin Drilling Co. Inc Elevation 3308 KB 3303 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #8
 Location: Sec. 24 Twp. 2S Rge. 36w Co. Rawlins State KS

Interval Tested 4103 - 4164 Zone Tested Oread
 Anchor Length 61 Drill Pipe Run 3912 Mud Wt. 8.8
 Top Packer Depth 4098 Drill Collars Run 186 Vis 54
 Bottom Packer Depth 4103 Wt. Pipe Run - WL 7.2
 Total Depth 4164 Chlorides 1200 ppm System LCM 2

Blow Description IF: 1/4" Blow at open built to 3 1/4" (Diesel in bucket)
ISI: No blowback
FF: Blow built to 3 1/2"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>125</u>	<u>mud</u>			<u>100</u>	
	<u>a few oil spots in tool</u>				

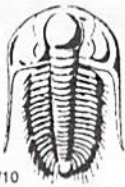
Rec Total 125 BHT 127 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2006</u>	<input type="checkbox"/> Test <u>*</u> 1250	T-On Location <u>00:45</u>
(B) First Initial Flow <u>20</u>	<input type="checkbox"/> Jars <u>*</u> 250	T-Started <u>1:34</u>
(C) First Final Flow <u>41</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>3:55</u>
(D) Initial Shut-In <u>1206</u>	<input checked="" type="checkbox"/> Circ Sub <u>*NA</u>	T-Pulled <u>7:58</u>
(E) Second Initial Flow <u>44</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>10:15</u>
(F) Second Final Flow <u>80</u>	<input type="checkbox"/> Mileage <u>96 RT</u> 148.80	Comments <u>Tool slid 5' to bottom</u>
(G) Final Shut-In <u>1183</u>	<input checked="" type="checkbox"/> Sampler	<u>before open - No mud loss</u>
(H) Final Hydrostatic <u>1992</u>	<input checked="" type="checkbox"/> Straddle	

Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer	<input checked="" type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Ruined Packer
Final Flow <u>60</u>	<input checked="" type="checkbox"/> Extra Recorder	<input checked="" type="checkbox"/> Extra Copies
Final Shut-In <u>90</u>	<input checked="" type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input checked="" type="checkbox"/> Accessibility	Total <u>1723.80</u>
	Sub Total <u>1723.80</u>	MP/DST Disc't _____

Approved By Rocky Milford 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. **55884**

4/10

Well Name & No. Frisbie Inc. #1-24 Test No. 2 Date 12-31-13
 Company Murfin Drilling Co. Inc Elevation 3308 KB 3303 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #8
 Location: Sec. 24 Twp. 2s Rge. 36w Co. Rawlins State KS

Interval Tested 4183 - 4285 Zone Tested Leavenworth - LKC "A"
 Anchor Length 102 Drill Pipe Run 3975 Mud Wt. 9.0
 Top Packer Depth 4178 Drill Collars Run 186 Vis 56
 Bottom Packer Depth 4183 Wt. Pipe Run - WL 6.0
 Total Depth 4285 Chlorides 1000 ppm System LCM 3

Blow Description IF: 1" Blow at open, built to BOB (11") in 22 min. (Diesel in bucket)
ISI: No blowback
FF: Blow built to BOB in 30 min.
FSI:

Rec	Feet of	%gas	%oil	%water	%mud
<u>190</u>	<u>WM</u>	-	-	<u>42</u>	<u>58</u>
<u>248</u>	<u>MCW</u>	-	-	<u>85</u>	<u>15</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 438 BHT 136 Gravity - API RW .195 @ 69.7 °F Chlorides 38000 ppm
 (A) Initial Hydrostatic 2073 Test * 1250 T-On Location 20:30 12/31
 (B) First Initial Flow 26 Jars * 250 T-Started 21:40
 (C) First Final Flow 127 Safety Joint * 75 T-Open 23:47
 (D) Initial Shut-In 1197 Circ Sub *NA T-Pulled 3:50
 (E) Second Initial Flow 131 Hourly Standby _____ T-Out 6:30 1/1
 (F) Second Final Flow 217 Mileage 96 RT 148.80 Comments _____
 (G) Final Shut-In 1179 Sampler _____
 (H) Final Hydrostatic 2026 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1723.80
 Accessibility _____ MP/DST Disc't _____

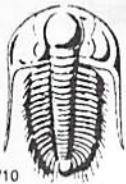
Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90

Sub Total 1723.80

Approved By Rocky Milford

Our Representative James Winder

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55885**

4/10

Well Name & No. Frisbie Inc. #1-24 Test No. 3 Date 1-1-14
 Company Murfin Drilling Co. Inc. Elevation 3308 KB 3303 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #8
 Location: Sec. 24 Twp. 2s Rge. 36w Co. Rawlins State KS

Interval Tested 4266- 4328 Zone Tested LKC "D"
 Anchor Length 62 Drill Pipe Run 4069 Mud Wt. 9.1
 Top Packer Depth 4261 Drill Collars Run 186 Vis 73
 Bottom Packer Depth 4266 Wt. Pipe Run - WL 5.6
 Total Depth 4328 Chlorides 1000 ppm System LCM 3

Blow Description IF: BOB (41") in 40sec/Reset tool - BOB in 1min (Diesel in Bucket)
ISI: No blowback
FF: Blow built to BOB in 1 min.
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>200</u>	<u>swcm</u>	-	-	<u>4</u>	<u>96</u>
<u>375</u>	<u>wcm</u>	-	-	<u>38</u>	<u>62</u>
<u>125</u>	<u>mcw</u>	-	-	<u>87</u>	<u>13</u>
<u>1918</u>	<u>water</u>	-	-	<u>99</u>	<u>1</u>
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 2618 BHT 145 Gravity _____ API RW .355 @ 67.7 °F Chlorides 20,000 ppm

(A) Initial Hydrostatic 2109 Test * 1250 T-On Location 14:40 1/2
 (B) First Initial Flow 540 Jars * 250 T-Started 15:40
 (C) First Final Flow 965 Safety Joint * 75 T-Open 18:05
 (D) Initial Shut-In 1265 Circ Sub * NA T-Pulled 20:40
 (E) Second Initial Flow 984 Hourly Standby _____ T-Out 00:20 1/2
 (F) Second Final Flow 1185 Mileage 96 RT 148.80
 (G) Final Shut-In 1266 Sampler _____
 (H) Final Hydrostatic 2091 Straddle _____

Comments Slid 3-4' before open -
Chased 5' to bottom at open -
lost 6' mud - mud got out of sight
pulled/Reset tool
 Ruined Shale Packer _____

Initial Open 15 Ruined Packer _____
 Initial Shut-In 60 Extra Copies _____
 Final Flow 15 Extra Recorder _____
 Final Shut-In 60 Day Standby _____
 Accessibility _____
 Sub Total 1723.80 MP/DST Disc't _____

Approved By Rocky Milford Our Representative James Winder

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55886**

4/10

Well Name & No. Frisbie Inc #1-24 Test No. 4 Date 1-2-14
 Company Murfin Drilling Co. Inc. Elevation 3308 KB 3303 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky milford Rig Murfin #8
 Location: Sec. 24 Twp. 2s Rge. 36w Co. Rawlins State KS

Interval Tested 4326-4372 Zone Tested LKC "E-6"
 Anchor Length 46 Drill Pipe Run 4133 Mud Wt. 9.1
 Top Packer Depth 4321 Drill Collars Run 186 Vis 52
 Bottom Packer Depth 4326 (shale) Wt. Pipe Run - WL 6.0
 Total Depth 4372 Chlorides 1200 ppm System LCM 2

Blow Description IF: 1/4" Blow at open, built to 1 1/4" (Diesel in bucket)
ISI: No blowback
FF: No blow
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Mud w/trace of oil</u>	<u>trace</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 2 BHT 128 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2136 Test * 1250 T-On Location 9:45
 (B) First Initial Flow 19 Jars * 250 T-Started 10:55
 (C) First Final Flow 21 Safety Joint * 75 T-Open 13:21
 (D) Initial Shut-In 46 Circ Sub *NA T-Pulled 16:22
 (E) Second Initial Flow 22 Hourly Standby T-Out 18:15
 (F) Second Final Flow 24 Mileage 96 RT 148.80
 (G) Final Shut-In 40 Sampler
 (H) Final Hydrostatic 2134 Straddle
 Shale Packer * 250

Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1973.80
 MP/DST Disc't

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

Sub Total 1973.80

Approved By Rocky Milford Our Representative James Winder
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55887

Well Name & No. Frisbie Inc. #1-24 Test No. 5 Date 1-3-14
 Company Murfin Drilling Co. Inc. Elevation 3308 KB 3303 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #8
 Location: Sec. 24 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4421 - 4468 Zone Tested LKC "J"
 Anchor Length 47 Drill Pipe Run 4227 Mud Wt. 9.3
 Top Packer Depth 4416 Drill Collars Run 186 Vis 49
 Bottom Packer Depth 4421 (shale) Wt. Pipe Run - WL 6.8
 Total Depth 4468 Chlorides 1200 ppm System LCM 2

Blow Description IF: 4" Blow at open, Bled off at 5 min., surface blow from 9 min till close
ISI: ~~ISI~~ some weak surface blowback?
FF: Surface blow at 9 min., built slightly
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
331	Mud			100	
Rec Total	331	BHT	132	Gravity	-
				API RW	-
				@	-
				F	-
				Chlorides	-
				ppm	

(A) Initial Hydrostatic 2241 Test 1250 T-On Location 4:30
 (B) First Initial Flow 192 Jars 250 T-Started 5:44
 (C) First Final Flow 196 Safety Joint 75 T-Open 8:23
 (D) Initial Shut-In 730 Circ Sub * T-Pulled 11:27
 (E) Second Initial Flow 191 Hourly Standby _____ T-Out 14:00
 (F) Second Final Flow 196 Mileage 96 RTX2 297.60
 (G) Final Shut-In 665 Sampler _____
 (H) Final Hydrostatic 2224 Straddle _____

Shale Packer 250 Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 2122.60
 Accessibility _____ MP/DST Disc't _____
 Sub Total 2122.60

Approved By Robert Milford Our Representative James Winder
 Trilobite Testing Inc. shall not be liable for damaged or 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.