



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Robert Hendrix

Thiele #1-8

8-2s-24w Norton,KS

Start Date: 2012.02.15 @ 07:34:00

End Date: 2012.02.15 @ 15:30:30

Job Ticket #: 45570 DST #: 1

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

Printed: 2012.02.24 @ 11:52:38



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

8-2s-24w Norton, KS

Thiele #1-8

Job Ticket: 45570

DST#: 1

Test Start: 2012.02.15 @ 07:34:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "G"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:32:30
 Time Test Ended: 15:30:30
 Interval: **3439.00 ft (KB) To 3582.00 ft (KB) (TVD)**
 Total Depth: 3582.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 2545.00 ft (KB)
 2534.00 ft (CF)
 KB to GR/CF: 11.00 ft

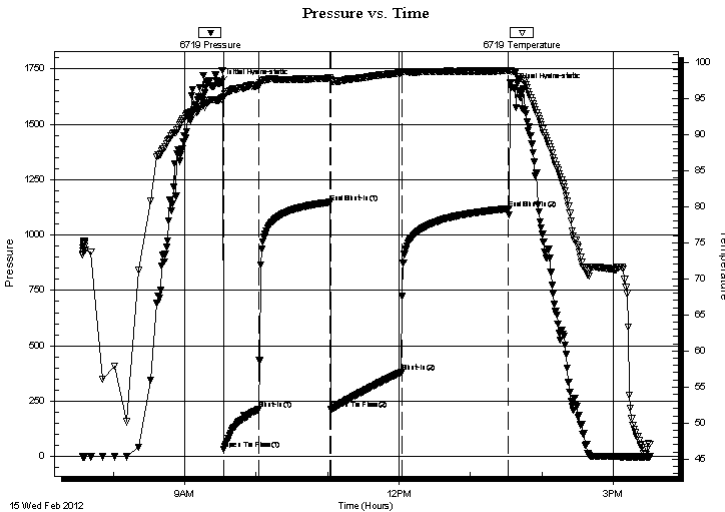
Serial #: 6719

Inside

Press @ Run Depth: 380.93 psig @ 3440.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.02.15 End Date: 2012.02.15 Last Calib.: 2012.02.15
 Start Time: 07:34:05 End Time: 15:30:29 Time On Btm: 2012.02.15 @ 09:29:30
 Time Off Btm: 2012.02.15 @ 13:35:30

TEST COMMENT: 30 - IF: Blow built to BOB (11") in 9 1/2 min.
 60 - IS: Bled off, No blow back
 60 - FF: Blow built to BOB in 10 1/2 min.
 90 - FS: Bled off, No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1683.98	94.77	Initial Hydro-static
3	31.11	95.14	Open To Flow (1)
33	213.44	96.77	Shut-In(1)
92	1147.66	97.77	End Shut-In(1)
93	211.55	97.54	Open To Flow (2)
153	380.93	98.51	Shut-In(2)
243	1119.15	98.80	End Shut-In(2)
246	1665.26	98.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
370.00	MCW 88%w, 12%m	3.28
250.00	Muddy Water 53%w, 47%m	3.51
155.00	Mud 100%	2.17

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Robert Hendrix

8-2s-24w Norton,KS

Thiele #1-8

Job Ticket: 45570

DST#: 1

Test Start: 2012.02.15 @ 07:34:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:32:30

Time Test Ended: 15:30:30

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 57

Interval: 3439.00 ft (KB) To 3582.00 ft (KB) (TVD)

Total Depth: 3582.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2545.00 ft (KB)

2534.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8320 Outside

Press @ Run Depth: psig @ 3440.00 ft (KB)

Start Date: 2012.02.15

End Date:

2012.02.15

Capacity: 8000.00 psig

Last Calib.:

2012.02.15

Start Time: 07:34:05

End Time:

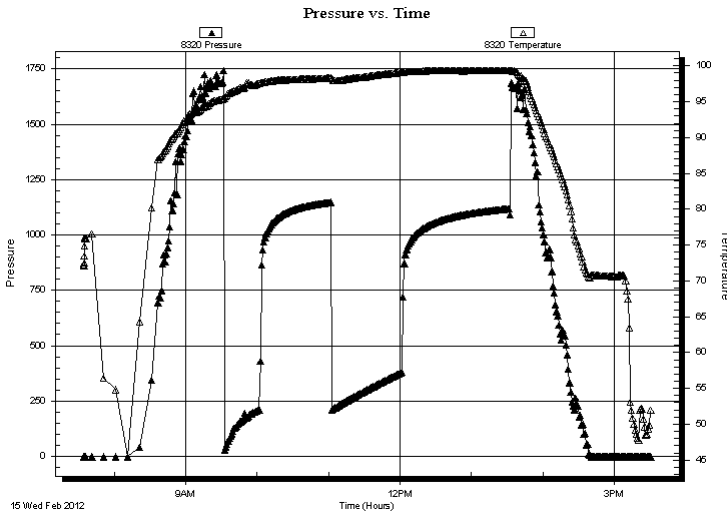
15:30:29

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to BOB (11") in 9 1/2 min.
60 - IS: Bled off, No blow back
60 - FF: Blow built to BOB in 10 1/2 min.
90 - FS: Bled off, No blow back

PRESSURE SUMMARY



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

Length (ft)	Description	Volume (bbl)
370.00	MCW 88%w, 12%m	3.28
250.00	Muddy Water 53%w, 47%m	3.51
155.00	Mud 100%	2.17

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

8-2s-24w Norton,KS

250 N. Water Suite 300
Wichita, KS 67202

Thiele #1-8

Job Ticket: 45570

DST#: 1

ATTN: Robert Hendrix

Test Start: 2012.02.15 @ 07:34:00

Tool Information

Drill Pipe:	Length: 3234.00 ft	Diameter: 3.80 inches	Volume: 45.36 bbl	Tool Weight: 4000.00 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: 210.00 ft	Diameter: 2.25 inches	Volume: 1.03 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 46.39 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3439.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	143.00 ft			
Tool Length:	171.00 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			3416.00	
Hydraulic tool	5.00			3421.00	
Jars	5.00			3426.00	
Safety Joint	3.00			3429.00	
Packer	5.00			3434.00	28.00 Bottom Of Top Packer
Packer	5.00			3439.00	
Stubb	1.00			3440.00	
Recorder	0.00	6719	Inside	3440.00	
Recorder	0.00	8320	Outside	3440.00	
Perforations	11.00			3451.00	
Blank Spacing	128.00			3579.00	
Bullnose	3.00			3582.00	143.00 Bottom Packers & Anchor

Total Tool Length: 171.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

8-2s-24w Norton,KS

250 N. Water Suite 300
Wichita, KS 67202

Thiele #1-8

Job Ticket: 45570

DST#: 1

ATTN: Robert Hendrix

Test Start: 2012.02.15 @ 07:34:00

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:

40000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.36 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
370.00	MCW 88%w , 12%m	3.277
250.00	Muddy Water 53%w , 47%m	3.507
155.00	Mud 100%	2.174

Total Length: 775.00 ft Total Volume: 8.958 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

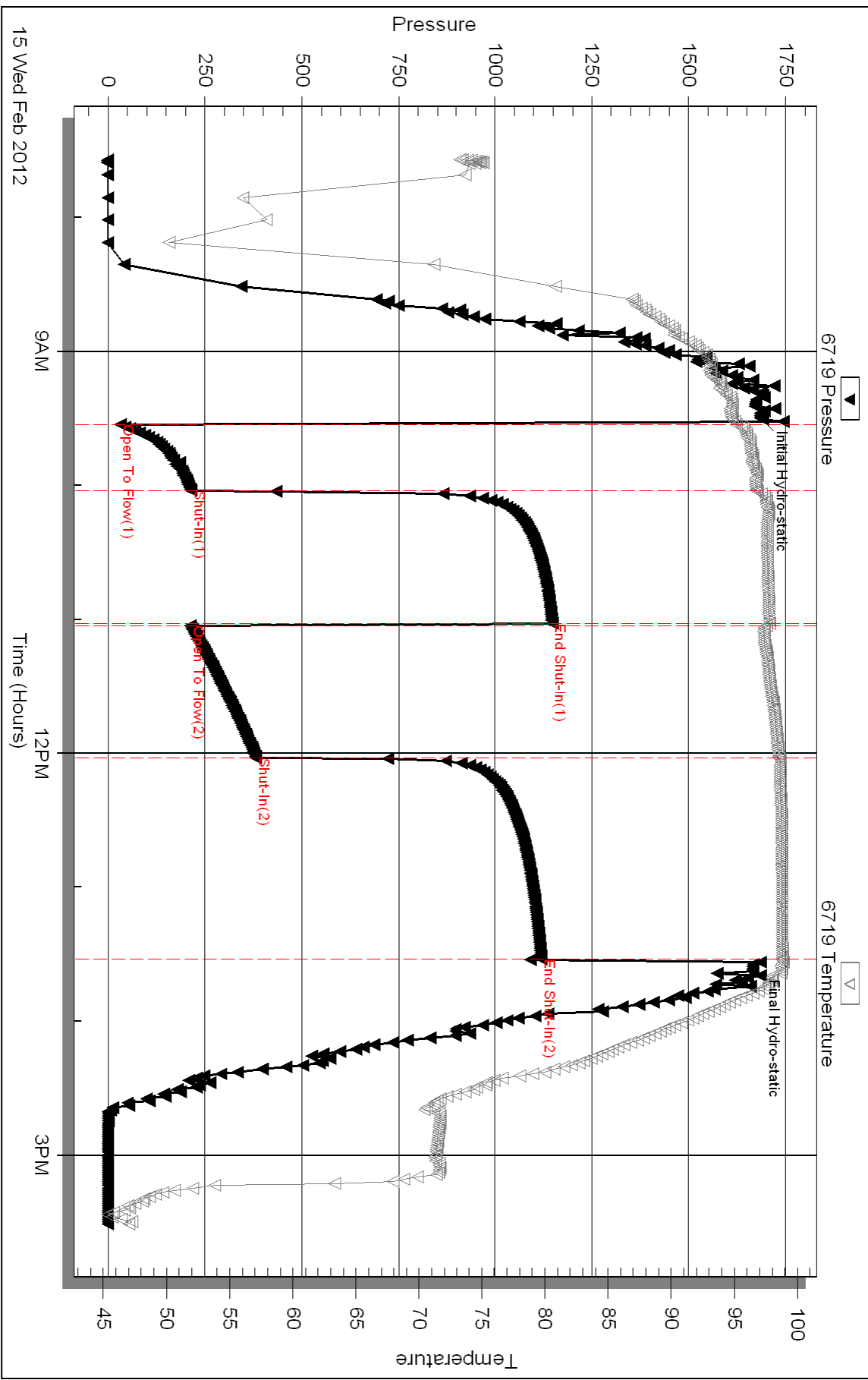
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .264 ohms @ 49 deg F

Pressure vs. Time

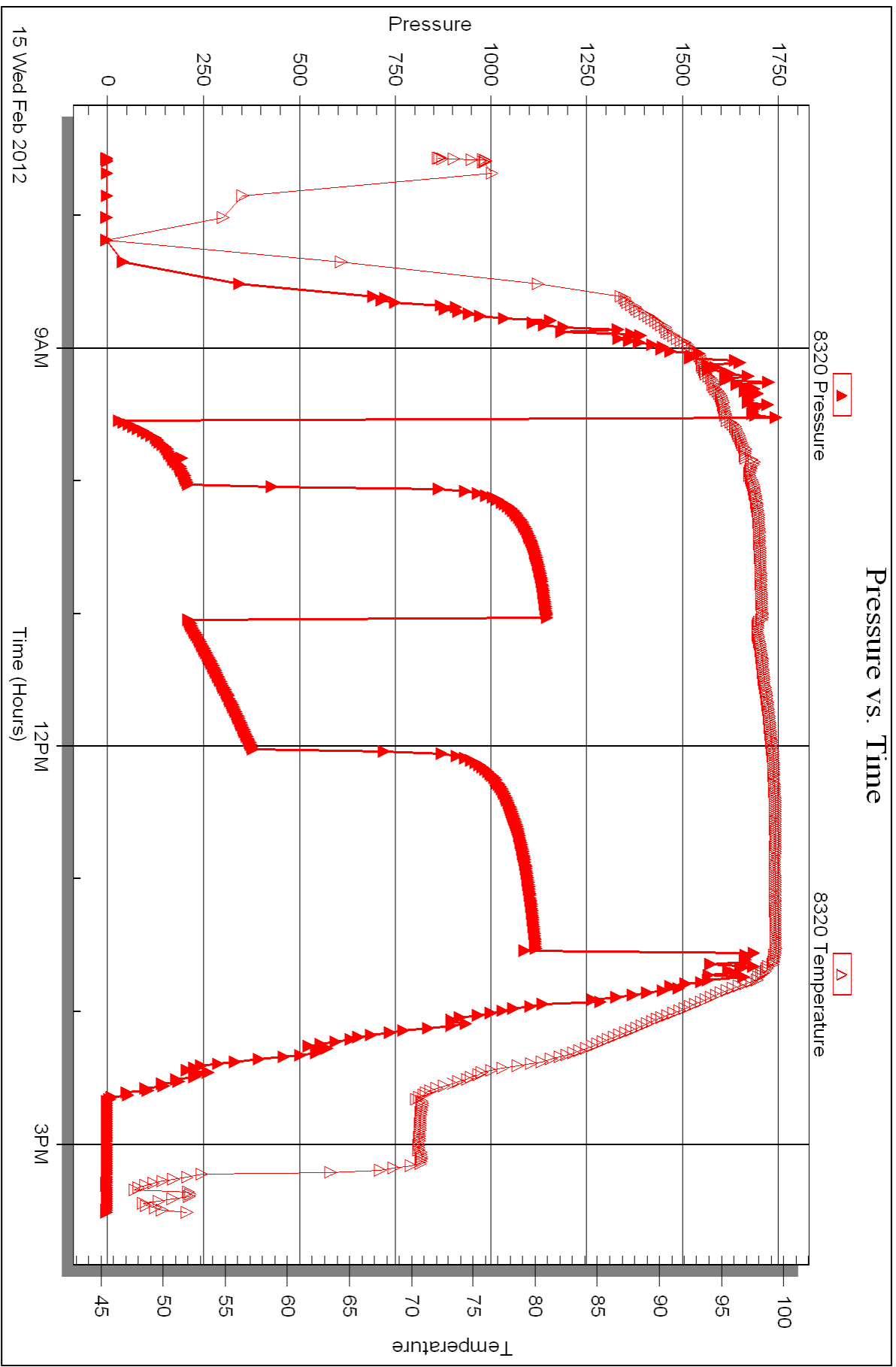


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Thiele #1-8

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 45570

Printed: 2012.02.24 @ 11:52:40



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Robert Hendrix

Thiele #1-8

8-2s-24w Norton,KS

Start Date: 2012.02.16 @ 05:22:00

End Date: 2012.02.16 @ 09:30:00

Job Ticket #: 45571 DST #: 2

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

Printed: 2012.02.24 @ 11:51:55



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

8-2s-24w Norton, KS

Thiele #1-8

Job Ticket: 45571

DST#: 2

Test Start: 2012.02.16 @ 05:22:00

GENERAL INFORMATION:

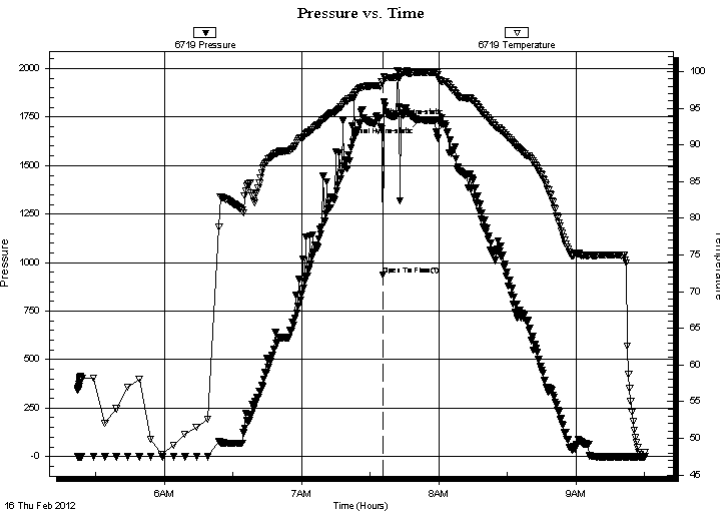
Formation: **LKC "H - L"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:35:30
 Time Test Ended: 09:30:00
 Interval: **3595.00 ft (KB) To 3678.00 ft (KB) (TVD)**
 Total Depth: 3678.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 2545.00 ft (KB)
 2534.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 6719

Inside

Press @ Run Depth: psig @ 3596.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.02.16 End Date: 2012.02.16 Last Calib.: 2012.02.16
 Start Time: 05:22:05 End Time: 09:30:00 Time On Btm: 2012.02.16 @ 07:32:00
 Time Off Btm: 2012.02.16 @ 07:52:00

TEST COMMENT: Hit tight spot about 8' before getting to Bottom
 Pulled up to 90K to get loose (string weighing 56K)
 Went to bottom clean after coming up
 Packer Failure - Reset Tool - Packer Failure - Pulled Tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1715.52	98.06	Initial Hydro-static
4	935.90	98.56	Open To Flow (1)
20	1736.11	99.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
245.00	Mud 100%	1.52

* 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.

8-2s-24w Norton,KS

250 N. Water Suite 300
Wichita, KS 67202

Thiele #1-8

Job Ticket: 45571

DST#: 2

ATTN: Robert Hendrix

Test Start: 2012.02.16 @ 05:22:00

GENERAL INFORMATION:

Formation: **LKC "H - L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:35:30

Time Test Ended: 09:30:00

Interval: 3595.00 ft (KB) To 3678.00 ft (KB) (TVD)

Total Depth: 3678.00 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: 2545.00 ft (KB)

2534.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8320

Outside

Press @ Run Depth: psig @ 3596.00 ft (KB)

Start Date: 2012.02.16 End Date: 2012.02.16

Start Time: 05:22:05 End Time: 09:29:30

Capacity: 8000.00 psig

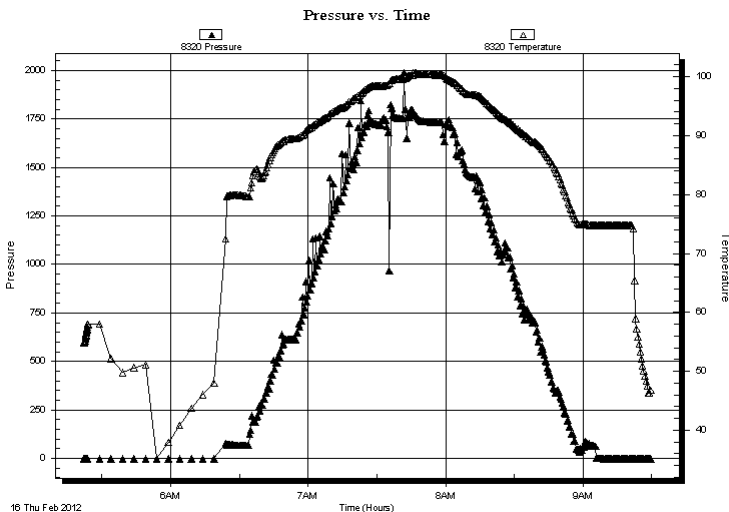
Last Calib.: 2012.02.16

Time On Btm:

Time Off Btm:

TEST COMMENT: Hit tight spot about 8' before getting to Bottom
Pulled up to 90K to get loose (string weighing 56K)
Went to bottom clean after coming up
Packer Failure - Reset Tool - Packer Failure - Pulled Tool

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
245.00	Mud 100%	1.52

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.

8-2s-24w Norton,KS

250 N. Water Suite 300
Wichita, KS 67202

Thiele #1-8

Job Ticket: 45571

DST#: 2

ATTN: Robert Hendrix

Test Start: 2012.02.16 @ 05:22:00

Tool Information

Drill Pipe:	Length: 3393.00 ft	Diameter: 3.80 inches	Volume: 47.59 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:	56000.00 lb
Drill Collar:	Length: 210.00 ft	Diameter: 2.25 inches	Volume: 1.03 bbl	Weight to Pull Loose:	58000.00 lb
			<u>Total Volume: 48.62 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	3595.00 ft			Final	57000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	83.00 ft				
Tool Length:	106.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments: Pulled 90K to get free from tight spot 8' above bottom before setting tool

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3577.00	
Hydraulic tool	5.00			3582.00	
Safety Joint	3.00			3585.00	
Packer	5.00			3590.00	23.00 Bottom Of Top Packer
Packer	5.00			3595.00	
Stubb	1.00			3596.00	
Recorder	0.00	6719	Inside	3596.00	
Recorder	0.00	8320	Outside	3596.00	
Perforations	15.00			3611.00	
Blank Spacing	64.00			3675.00	
Bullnose	3.00			3678.00	83.00 Bottom Packers & Anchor

Total Tool Length: 106.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

8-2s-24w Norton,KS

250 N. Water Suite 300
Wichita, KS 67202

Thiele #1-8

Job Ticket: 45571

DST#: 2

ATTN: Robert Hendrix

Test Start: 2012.02.16 @ 05:22:00

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: 5.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
245.00	Mud 100%	1.524

Total Length: 245.00 ft Total Volume: 1.524 bbl

Num Fluid Samples: 0

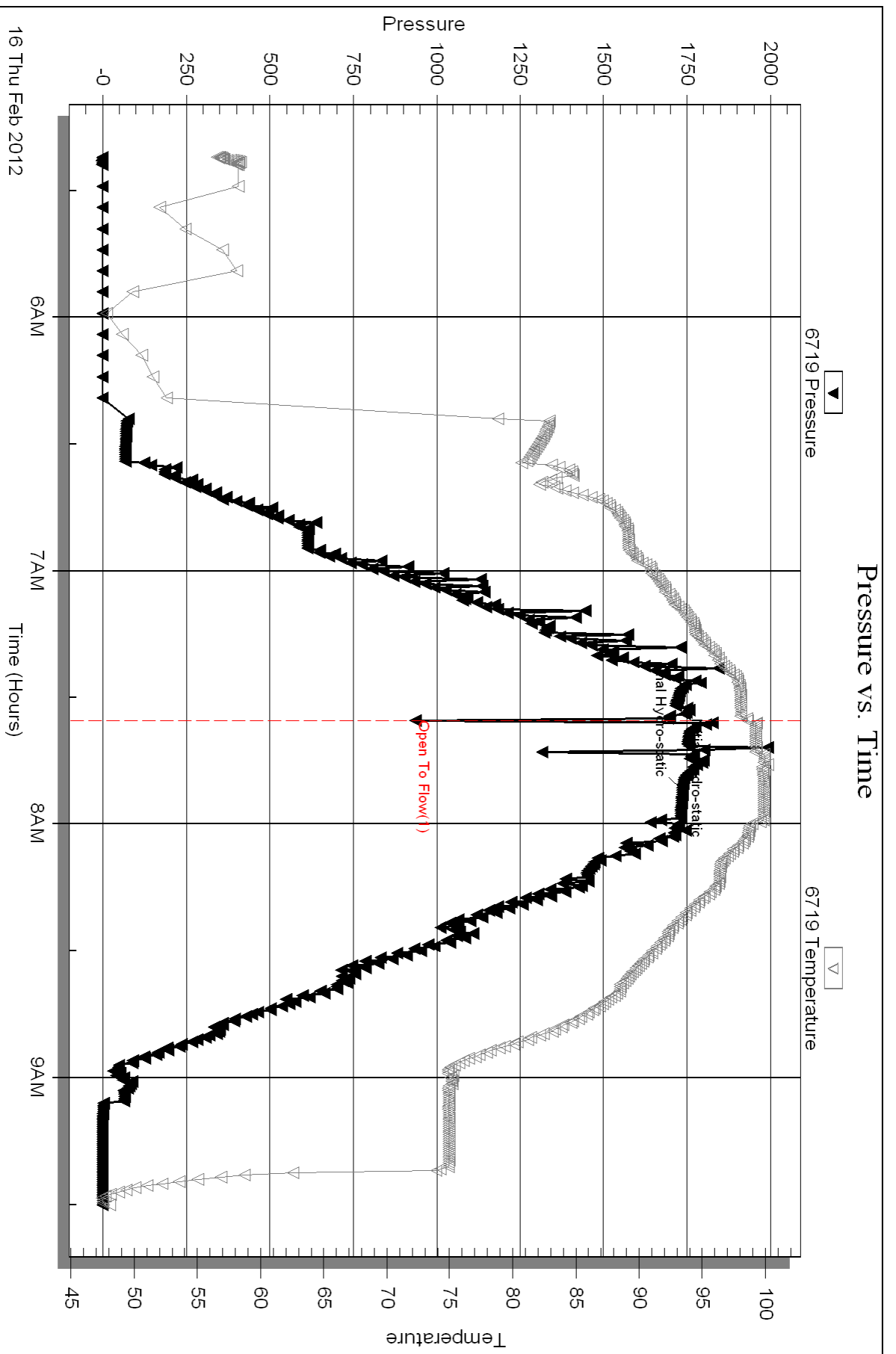
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

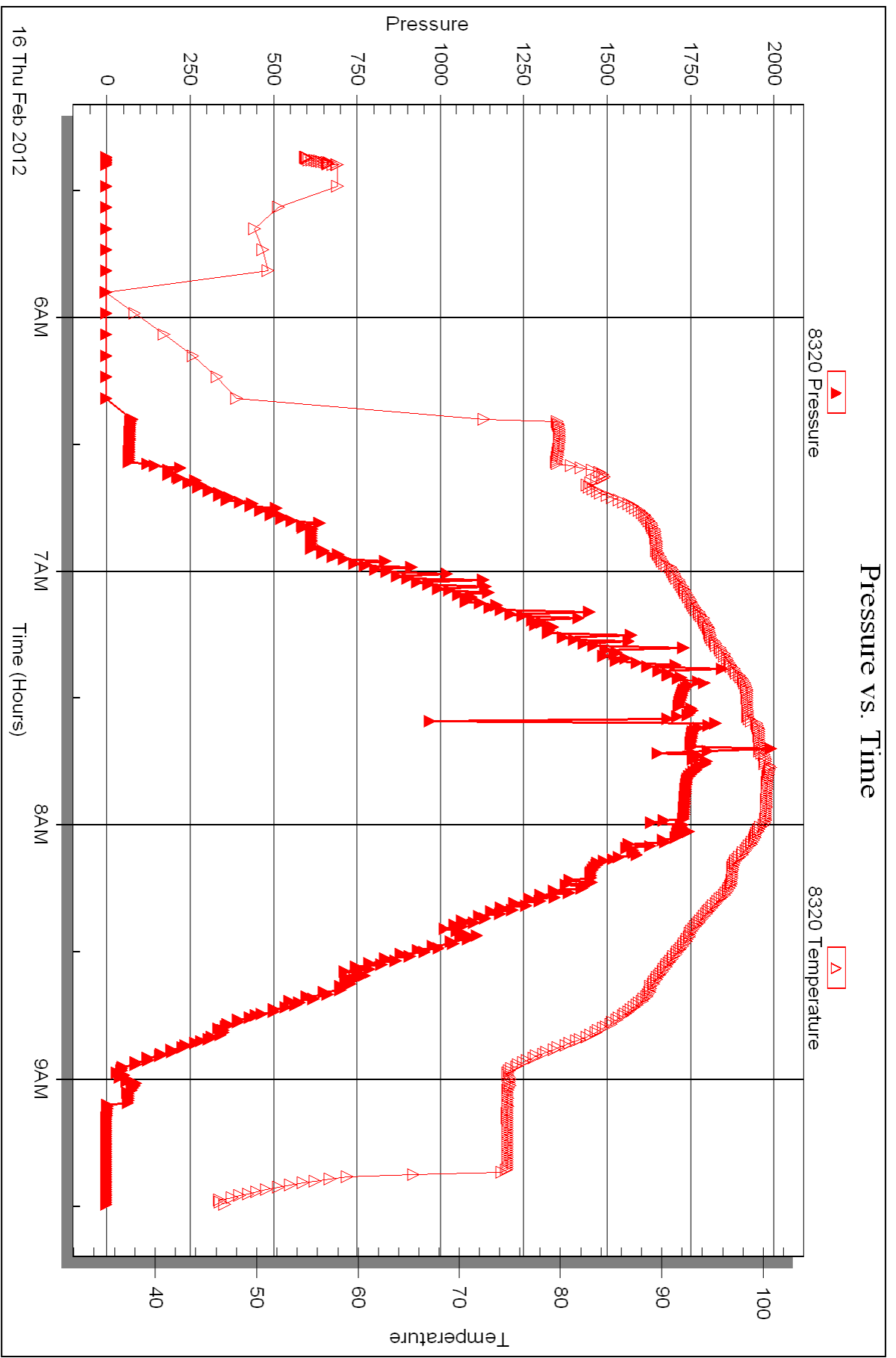


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Thiele #1-8

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 45571

Printed: 2012.02.24 @ 11:51:57



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Robert Hendrix

Thiele #1-8

8-2s-24w Norton,KS

Start Date: 2012.02.16 @ 09:56:00

End Date: 2012.02.16 @ 17:34:30

Job Ticket #: 45572 DST #: 3

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

Printed: 2012.02.24 @ 11:50:45



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

8-2s-24w Norton, KS

Thiele #1-8

Job Ticket: 45572

DST#: 3

Test Start: 2012.02.16 @ 09:56:00

GENERAL INFORMATION:

Formation: **LKC "G - L"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:43:30
 Time Test Ended: 17:34:30
 Interval: **3577.00 ft (KB) To 3678.00 ft (KB) (TVD)**
 Total Depth: 3567.00 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: 2545.00 ft (KB)
 2534.00 ft (CF)
 KB to GR/CF: 11.00 ft

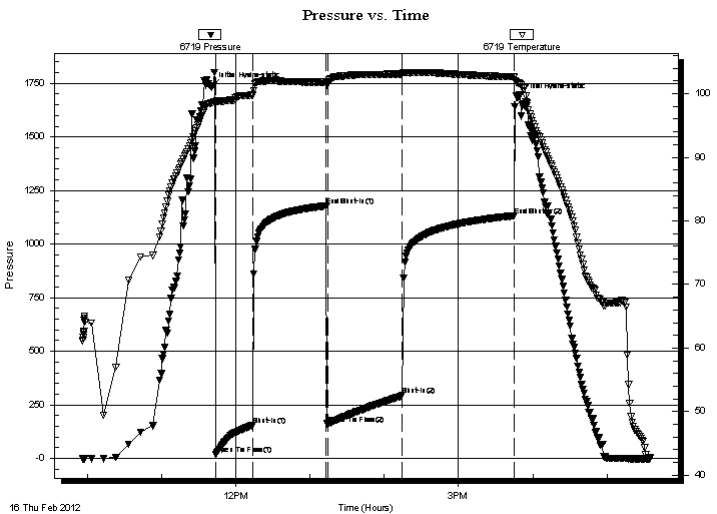
Serial #: 6719

Inside

Press @ Run Depth: 293.81 psig @ 3578.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.02.16 End Date: 2012.02.16 Last Calib.: 2012.02.16
 Start Time: 09:56:05 End Time: 17:34:29 Time On Btm: 2012.02.16 @ 11:40:30
 Time Off Btm: 2012.02.16 @ 15:48:00

TEST COMMENT: 30 - IF: Blow built to BOB (11") in 27 min. (Slow due to loose hammer union)
 60 - IS: Bled off, No blow back
 60 - FF: Blow built to BOB in 17 min.
 90 - FS: Bled off, No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1732.36	98.56	Initial Hydro-static
3	21.06	98.57	Open To Flow (1)
33	155.23	99.78	Shut-In(1)
93	1178.35	101.81	End Shut-In(1)
94	160.70	101.49	Open To Flow (2)
154	293.81	103.08	Shut-In(2)
245	1132.07	102.63	End Shut-In(2)
248	1683.63	101.68	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MCW 69%w , 31%m	0.30
515.00	Water 96%w , 4%m	5.86

* 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.

8-2s-24w Norton, KS

250 N. Water Suite 300
Wichita, KS 67202

Thiele #1-8

Job Ticket: 45572

DST#: 3

ATTN: Robert Hendrix

Test Start: 2012.02.16 @ 09:56:00

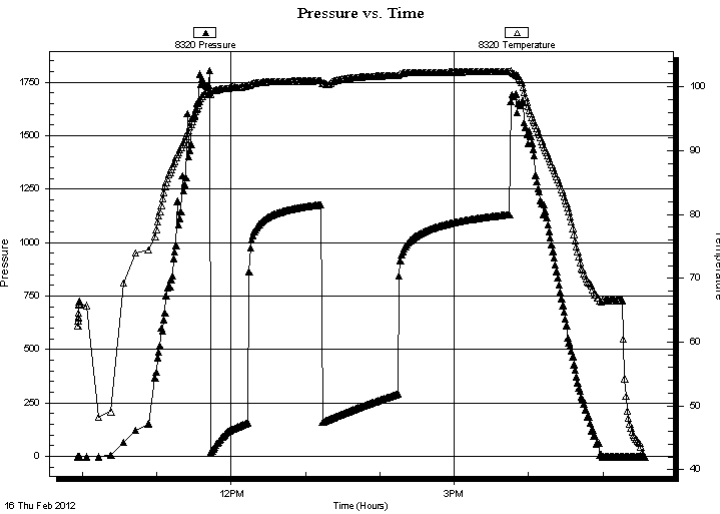
GENERAL INFORMATION:

Formation: **LKC "G - L"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:43:30
 Time Test Ended: 17:34:30
 Interval: **3577.00 ft (KB) To 3678.00 ft (KB) (TVD)**
 Total Depth: 3567.00 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: 2545.00 ft (KB)
 2534.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8320 Outside

Press @ Run Depth: psig @ 3578.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.02.16 End Date: 2012.02.16 Last Calib.: 2012.02.16
 Start Time: 09:56:05 End Time: 17:33:59 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to BOB (11") in 27 min. (Slow due to loose hammer union)
 60 - IS: Bled off, No blow back
 60 - FF: Blow built to BOB in 17 min.
 90 - FS: Bled off, No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MCW 69%w , 31%m	0.30
515.00	Water 96%w , 4%m	5.86

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.

8-2s-24w Norton,KS

250 N. Water Suite 300
Wichita, KS 67202

Thiele #1-8

Job Ticket: 45572

DST#: 3

ATTN: Robert Hendrix

Test Start: 2012.02.16 @ 09:56:00

Tool Information

Drill Pipe:	Length: 3362.00 ft	Diameter: 3.80 inches	Volume: 47.16 bbl	Tool Weight: 4000.00 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: 210.00 ft	Diameter: 2.25 inches	Volume: 1.03 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 48.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3577.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	101.00 ft			
Tool Length:	124.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Loose hammer union on manifold - found and tightened around 10 min. during initial flow

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3559.00	
Hydraulic tool	5.00			3564.00	
Safety Joint	3.00			3567.00	
Packer	5.00			3572.00	23.00 Bottom Of Top Packer
Packer	5.00			3577.00	
Stubb	1.00			3578.00	
Recorder	0.00	6719	Inside	3578.00	
Recorder	0.00	8320	Outside	3578.00	
Perforations	33.00			3611.00	
Blank Spacing	64.00			3675.00	
Bullnose	3.00			3678.00	101.00 Bottom Packers & Anchor

Total Tool Length: 124.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

8-2s-24w Norton,KS

250 N. Water Suite 300
Wichita, KS 67202

Thiele #1-8

Job Ticket: 45572

DST#: 3

ATTN: Robert Hendrix

Test Start: 2012.02.16 @ 09:56:00

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:

60000 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: 1500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	MCW 69%w , 31%m	0.295
515.00	Water 96%w , 4%m	5.858

Total Length: 575.00 ft Total Volume: 6.153 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

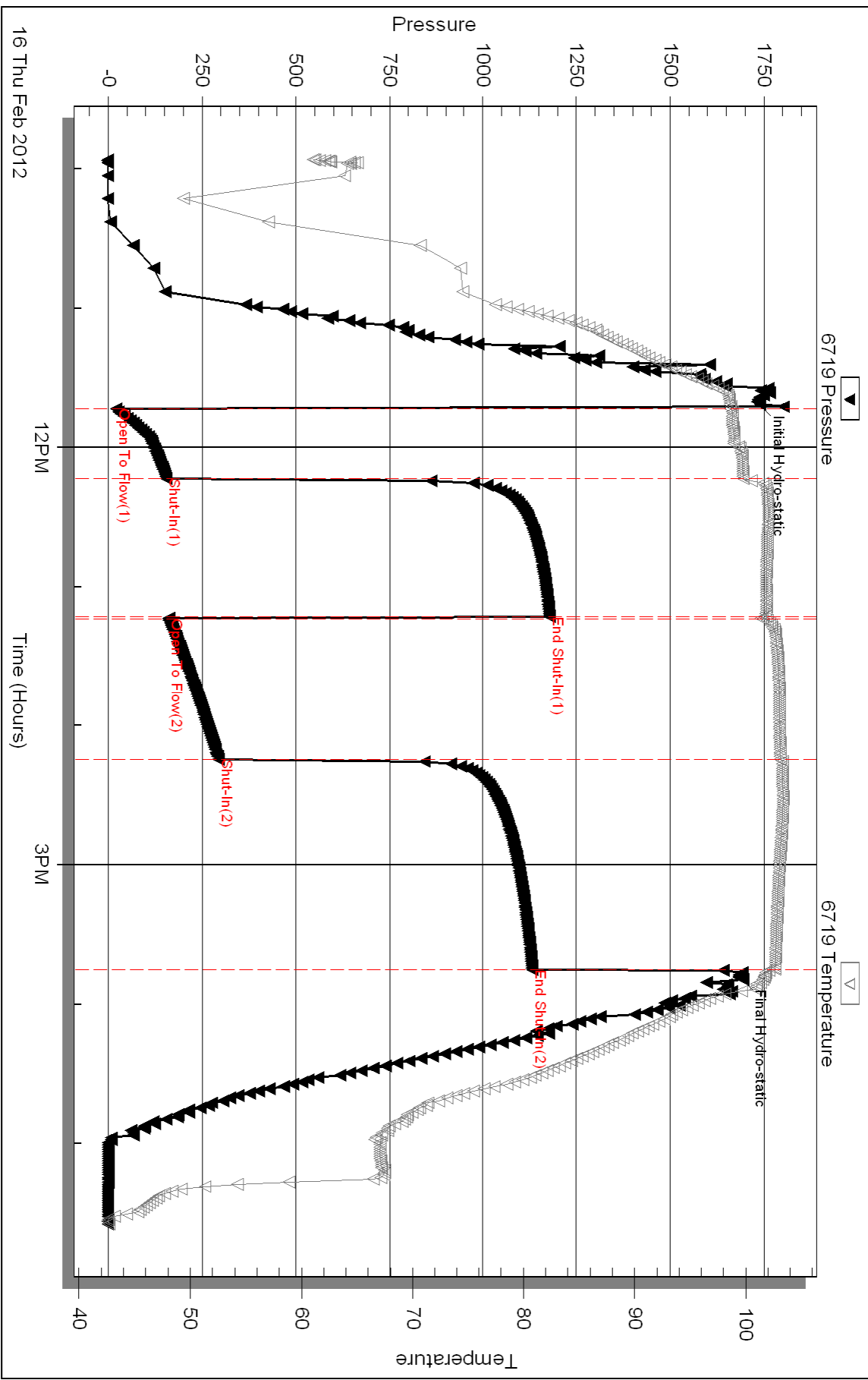
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .178 ohms @ 50.2 deg F

Pressure vs. Time

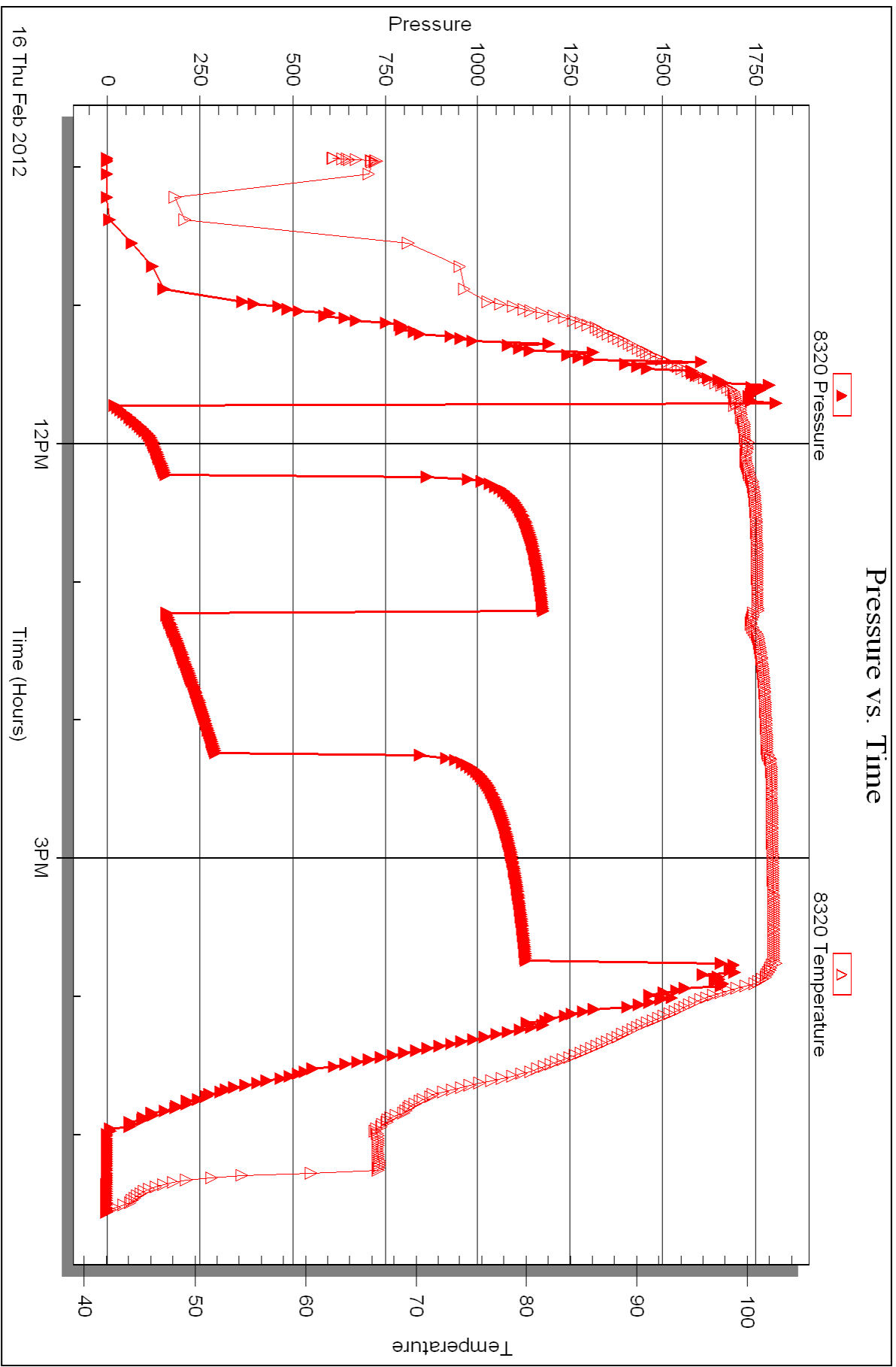


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Thiele #1-8

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 45572

Printed: 2012.02.24 @ 11:50:48



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Robert Hendrix

Thiele #1-8

8-2s-24w Norton,KS

Start Date: 2012.02.17 @ 06:03:00

End Date: 2012.02.17 @ 12:37:00

Job Ticket #: 45573 DST #: 4

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

Printed: 2012.02.24 @ 11:50:08



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

8-2s-24w Norton, KS

Thiele #1-8

Job Ticket: 45573

DST#: 4

Test Start: 2012.02.17 @ 06:03:00

GENERAL INFORMATION:

Formation: **Lower Pawnee**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:44:30
 Time Test Ended: 12:37:00
 Interval: **3720.00 ft (KB) To 3765.00 ft (KB) (TVD)**
 Total Depth: 3765.00 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: 2545.00 ft (KB)
 2534.00 ft (CF)
 KB to GR/CF: 11.00 ft

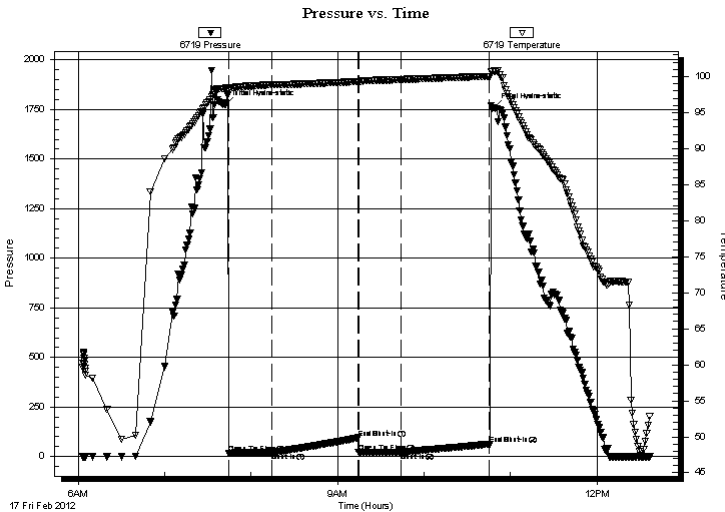
Serial #: 6719

Inside

Press @ Run Depth: 21.75 psig @ 3721.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.02.17 End Date: 2012.02.17 Last Calib.: 2012.02.17
 Start Time: 06:03:05 End Time: 12:36:59 Time On Btm: 2012.02.17 @ 07:42:00
 Time Off Btm: 2012.02.17 @ 10:48:30

TEST COMMENT: 30 - IF: 1/4" Blow at open, Built to 1/2" in 8 min., dead at 23 min.
 60 - IS: No blow back
 30 - FF: No blow
 60 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1773.05	98.37	Initial Hydro-static
3	16.84	98.21	Open To Flow (1)
33	19.34	98.87	Shut-In(1)
92	94.46	99.30	End Shut-In(1)
93	20.25	99.28	Open To Flow (2)
122	21.75	99.59	Shut-In(2)
183	62.74	100.04	End Shut-In(2)
187	1757.63	100.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
8.00	Mud w /trace of Oil 100% m	0.04

* 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.

8-2s-24w Norton, KS

250 N. Water Suite 300
Wichita, KS 67202

Thiele #1-8

Job Ticket: 45573

DST#: 4

ATTN: Robert Hendrix

Test Start: 2012.02.17 @ 06:03:00

GENERAL INFORMATION:

Formation: **Lower Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:44:30

Time Test Ended: 12:37:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 3720.00 ft (KB) To 3765.00 ft (KB) (TVD)

Reference Elevations: 2545.00 ft (KB)

Total Depth: 3765.00 ft (KB) (TVD)

2534.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8320 Outside

Press @ Run Depth: psig @ 3721.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.17 End Date: 2012.02.17

Last Calib.: 2012.02.17

Start Time: 06:03:05 End Time: 12:36:29

Time On Btm:

Time Off Btm:

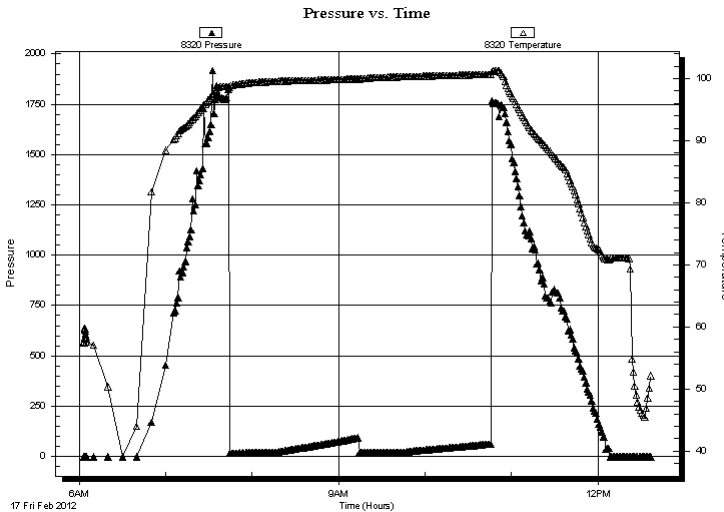
TEST COMMENT: 30 - IF: 1/4" Blow at open, Built to 1/2" in 8 min., dead at 23 min.

60 - IS: No blow back

30 - FF: No blow

60 - FS: No blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
8.00	Mud w /trace of Oil 100% m	0.04

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.

8-2s-24w Norton,KS

250 N. Water Suite 300
Wichita, KS 67202

Thiele #1-8

Job Ticket: 45573

DST#: 4

ATTN: Robert Hendrix

Test Start: 2012.02.17 @ 06:03:00

Tool Information

Drill Pipe:	Length: 3518.00 ft	Diameter: 3.80 inches	Volume: 49.35 bbl	Tool Weight: 2000.00 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: 210.00 ft	Diameter: 2.25 inches	Volume: 1.03 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 50.38 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	3720.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	68.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			3702.00	
Hydraulic tool	5.00			3707.00	
Safety Joint	3.00			3710.00	
Packer	5.00			3715.00	23.00 Bottom Of Top Packer
Packer	5.00			3720.00	
Stubb	1.00			3721.00	
Recorder	0.00	6719	Inside	3721.00	
Recorder	0.00	8320	Outside	3721.00	
Perforations	8.00			3729.00	
Blank Spacing	33.00			3762.00	
Bullnose	3.00			3765.00	45.00 Bottom Packers & Anchor

Total Tool Length: 68.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

8-2s-24w Norton,KS

250 N. Water Suite 300
Wichita, KS 67202

Thiele #1-8

Job Ticket: 45573

DST#: 4

ATTN: Robert Hendrix

Test Start: 2012.02.17 @ 06:03:00

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
8.00	Mud w /trace of Oil 100%m	0.039

Total Length: 8.00 ft Total Volume: 0.039 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

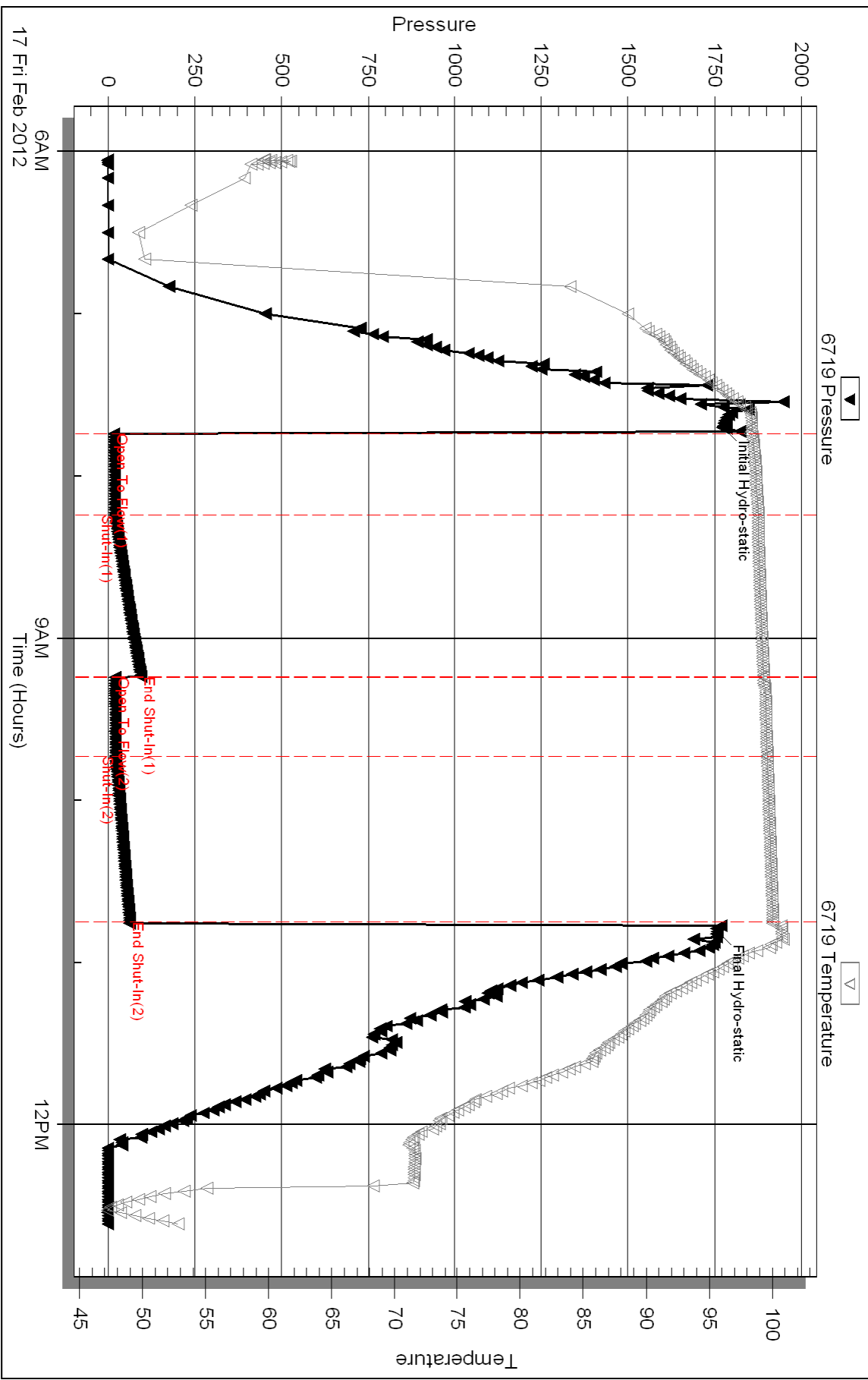
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

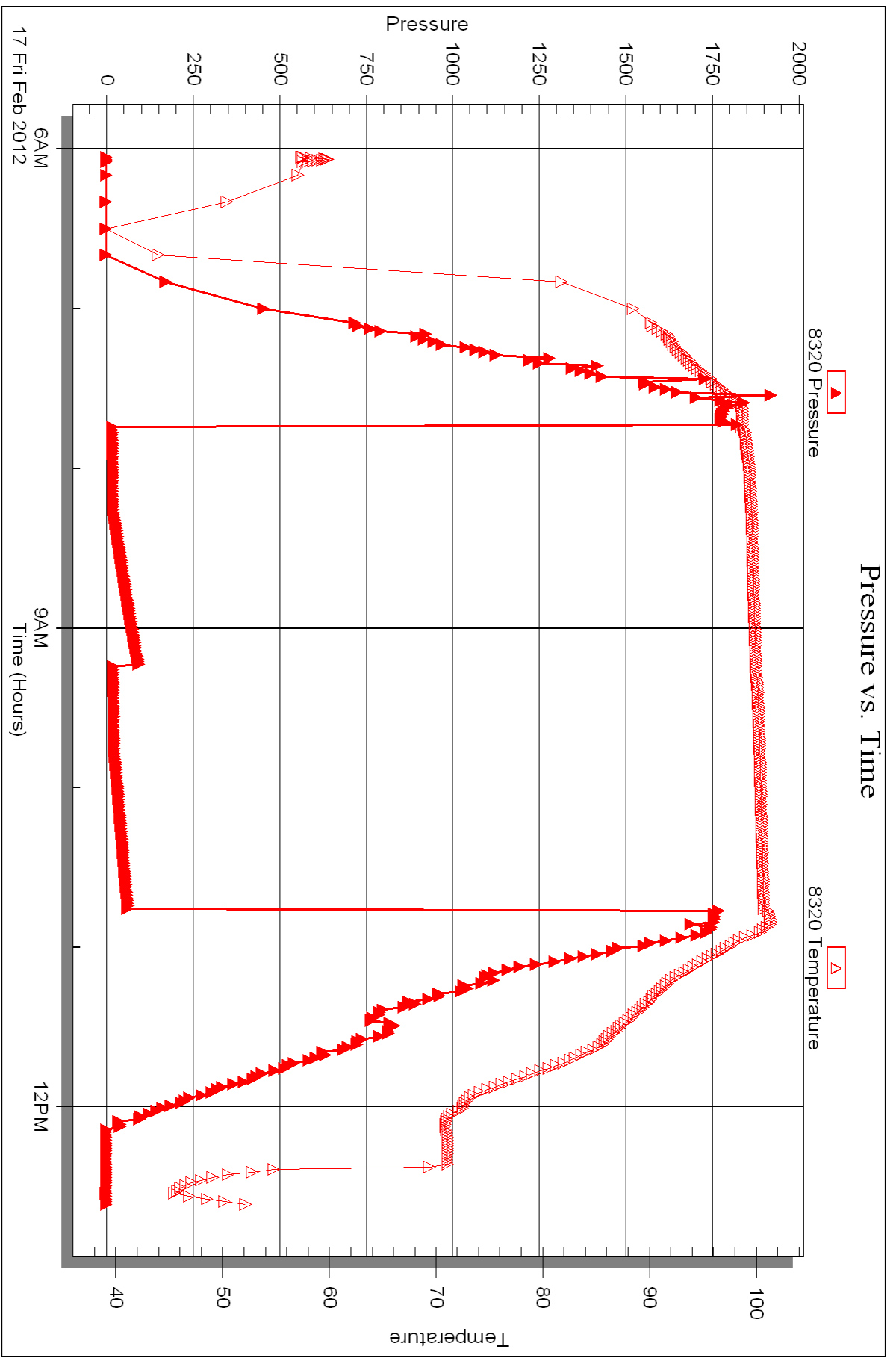


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Thiele #1-8

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 45573

Printed: 2012.02.24 @ 11:50:11



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Robert Hendrix

Thiele #1-8

8-2s-24w Norton,KS

Start Date: 2012.02.17 @ 20:20:00

End Date: 2012.02.18 @ 03:59:00

Job Ticket #: 45574 DST #: 5

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

Printed: 2012.02.24 @ 11:49:27



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

8-2s-24w Norton, KS

Thiele #1-8

Job Ticket: 45574

DST#: 5

Test Start: 2012.02.17 @ 20:20:00

GENERAL INFORMATION:

Formation: **Reagan Sand/Granite**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:04:00

Time Test Ended: 03:59:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 3760.00 ft (KB) To 3800.00 ft (KB) (TVD)

Reference Elevations: 2545.00 ft (KB)

Total Depth: 3800.00 ft (KB) (TVD)

2534.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 6719

Inside

Press @ Run Depth: 159.59 psig @ 3761.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.17

End Date:

2012.02.18

Last Calib.:

2012.02.18

Start Time: 20:20:05

End Time:

03:58:59

Time On Btm:

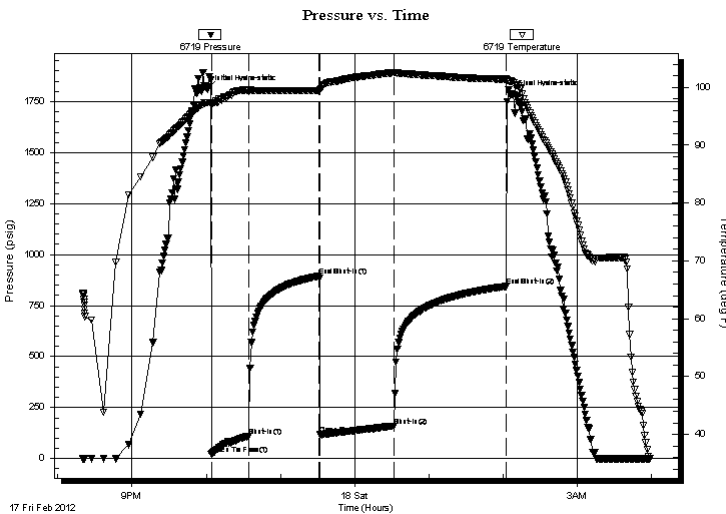
2012.02.17 @ 22:01:00

Time Off Btm:

2012.02.18 @ 02:06:30

TEST COMMENT: 30 - IF: Blow built to 8"
 60 - IS: Bled off, No blow back
 60 - FF: Blow built to BOB (11") at 60 min.
 90 - FS: Bled off, No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1811.18	97.33	Initial Hydro-static
3	20.85	96.98	Open To Flow (1)
34	109.24	99.43	Shut-In(1)
90	894.48	99.48	End Shut-In(1)
91	117.48	99.53	Open To Flow (2)
151	159.59	102.55	Shut-In(2)
242	844.42	101.41	End Shut-In(2)
246	1786.85	101.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	MCW 85%w, 15%m	0.89
60.00	MW 60%w, 40%m	0.57
80.00	WCM w /trace oil 67%m, 33%w	1.12

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.
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Robert Hendrix

8-2s-24w Norton, KS
Thiele #1-8
Job Ticket: 45574 **DST#: 5**
Test Start: 2012.02.17 @ 20:20:00

GENERAL INFORMATION:

Formation: **Reagan Sand/Granite**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:04:00

Time Test Ended: 03:59:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 3760.00 ft (KB) To 3800.00 ft (KB) (TVD)

Reference Elevations: 2545.00 ft (KB)

Total Depth: 3800.00 ft (KB) (TVD)

2534.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8320

Outside

Press @RunDepth: psig @ 3761.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.17

End Date: 2012.02.18

Last Calib.: 2012.02.18

Start Time: 20:20:05

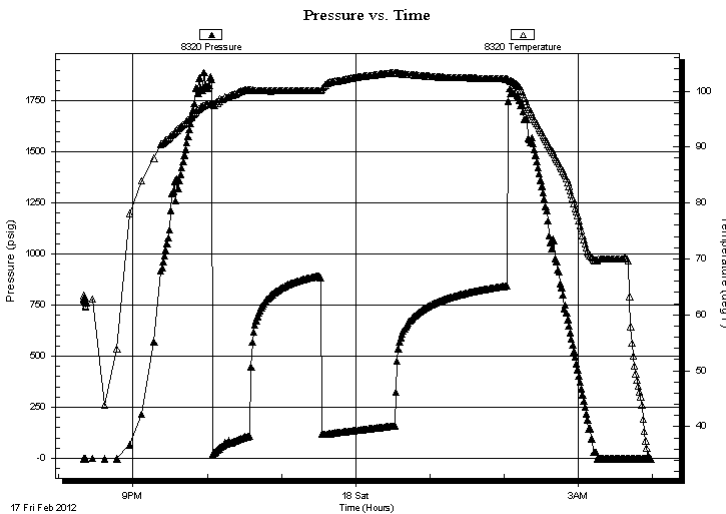
End Time: 03:58:29

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to 8"
60 - IS: Bled off, No blow back
60 - FF: Blow built to BOB (11") at 60 min.
90 - FS: Bled off, No blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
180.00	MCW 85%w , 15%m	0.89
60.00	MW 60%w , 40%m	0.57
80.00	WCM w /trace oil 67%m, 33%w	1.12

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.

8-2s-24w Norton,KS

250 N. Water Suite 300
Wichita, KS 67202

Thiele #1-8

Job Ticket: 45574

DST#: 5

ATTN: Robert Hendrix

Test Start: 2012.02.17 @ 20:20:00

Tool Information

Drill Pipe:	Length: 3547.00 ft	Diameter: 3.80 inches	Volume: 49.76 bbl	Tool Weight:	2000.00 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: 210.00 ft	Diameter: 2.25 inches	Volume: 1.03 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 50.79 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	3760.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	40.00 ft				
Tool Length:	63.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

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

Shut In Tool	5.00			3742.00	
Hydraulic tool	5.00			3747.00	
Safety Joint	3.00			3750.00	
Packer	5.00			3755.00	23.00 Bottom Of Top Packer
Packer	5.00			3760.00	
Stubb	1.00			3761.00	
Recorder	0.00	6719	Inside	3761.00	
Recorder	0.00	8320	Outside	3761.00	
Perforations	36.00			3797.00	
Bullnose	3.00			3800.00	40.00 Bottom Packers & Anchor
Total Tool Length:	63.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

8-2s-24w Norton,KS

250 N. Water Suite 300
Wichita, KS 67202

Thiele #1-8

Job Ticket: 45574

DST#: 5

ATTN: Robert Hendrix

Test Start: 2012.02.17 @ 20:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

52000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	MCW 85%w , 15%m	0.885
60.00	MW 60%w , 40%m	0.568
80.00	WCM w/trace oil 67%m, 33%w	1.122

Total Length: 320.00 ft Total Volume: 2.575 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .244 ohms @ 42 deg F

Serial #: 6719

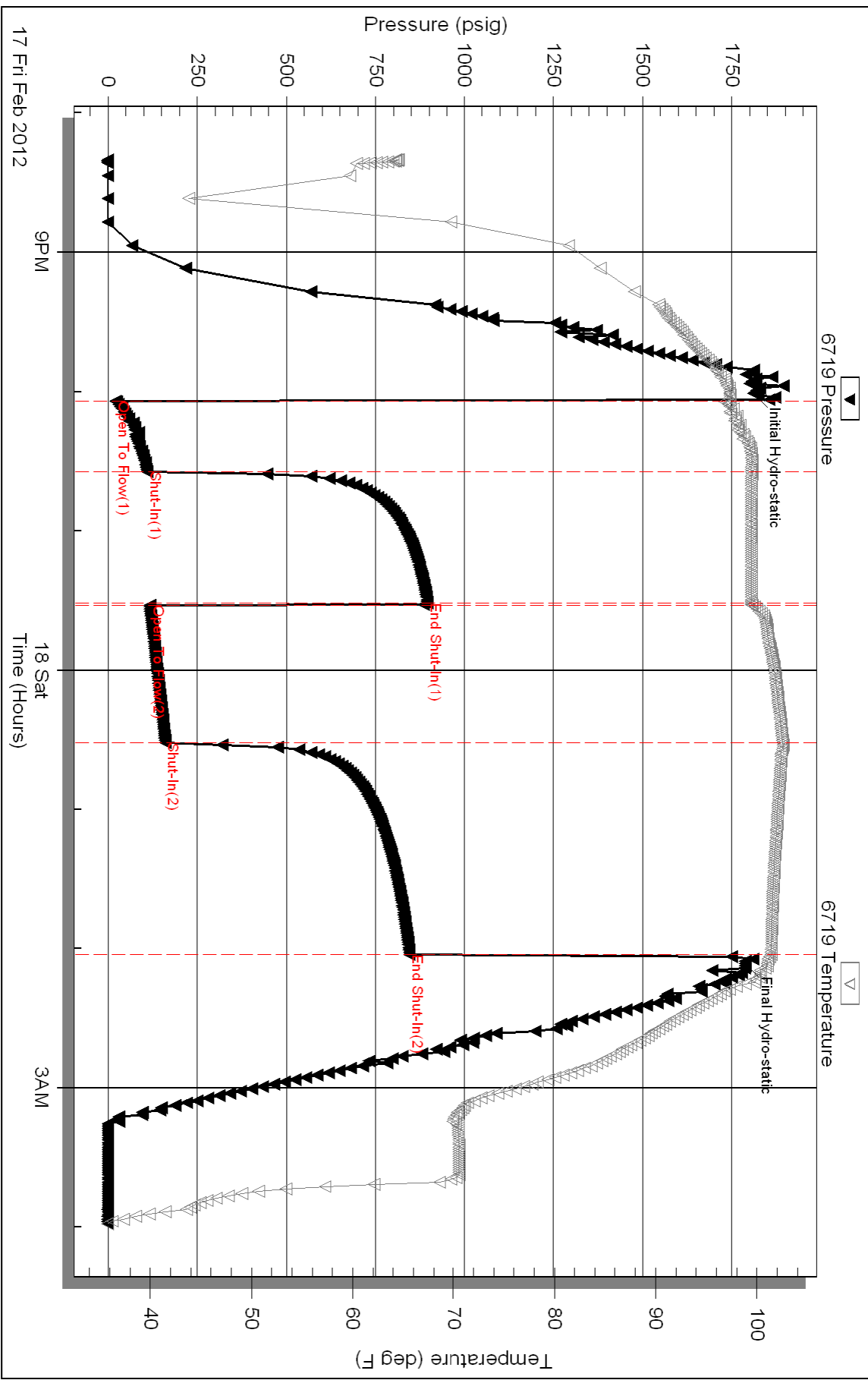
Inside

Murfin Drilling Co., Inc.

Thiele #1-8

DST Test Number: 5

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 45574

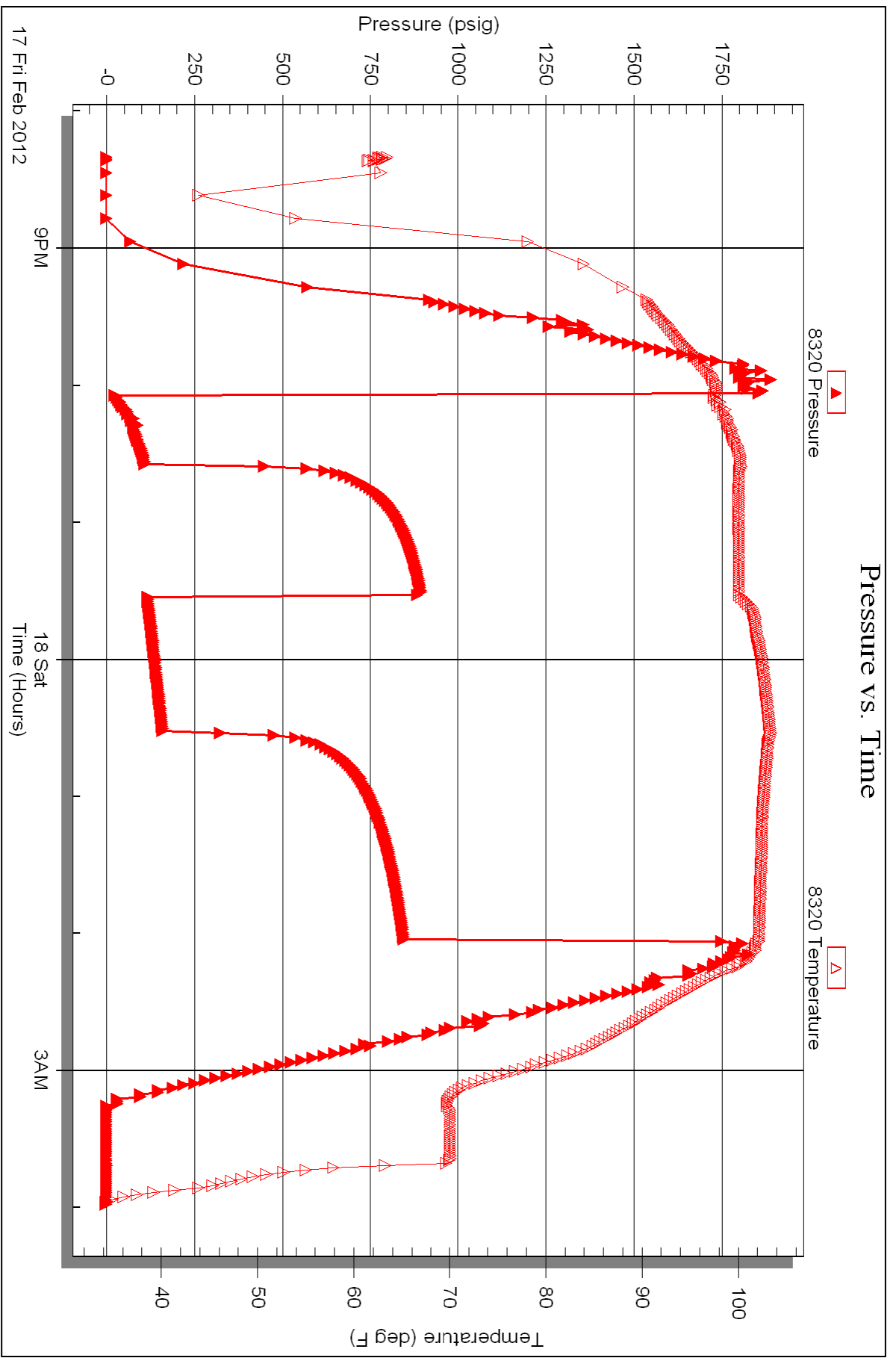
Printed: 2012.02.24 @ 11:49:29

Serial #: 8320

Outside Murfin Drilling Co., Inc.

Thiele #1-8

DST Test Number: 5



Triobite Testing, Inc

Ref. No: 45574

Printed: 2012.02.24 @ 11:49:30



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
FEB 23 2012

Test Ticket

NO. 45570

4/10

BY: _____

Well Name & No. Thiele #1-8 Test No. 1 Date 2-15-12
 Company Murfin Drilling Co. Inc. Elevation 2545 KB 2534 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #21
 Location: Sec. 8 Twp. 25 Rge. 24W Co. Norton State KS

Interval Tested 3439 ~~2479~~ - 3582 Zone Tested Toronto - LKC "E"
 Anchor Length 143 Drill Pipe Run 3234 Mud Wt. 9.3
 Top Packer Depth ~~2479~~ 3434 Drill Collars Run 210 Vis 54
 Bottom Packer Depth ~~2479~~ 3439 Wt. Pipe Run - WL 6.4
 Total Depth 3582 Chlorides 1600 ppm System LCM -

Blow Description IF: Blow built to BOB (11") in 9 1/2 min.
ISI: Bled off, No blowback
FF: Blow built to BOB in 10 1/2 min.
FSI: Bled off, No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>155</u>	<u>Mud</u>			<u>100</u>	
<u>250</u>	<u>Muddy Water</u>		<u>53</u>	<u>47</u>	
<u>370</u>	<u>MCW</u>		<u>88</u>	<u>12</u>	
Rec Total <u>775</u>	BHT <u>99</u>	Gravity <u>-</u>	API RW <u>.264</u>	@ <u>49</u> °F	Chlorides <u>40,000</u> ppm

(A) Initial Hydrostatic 1684 Test * 1125' T-On Location 5:15
 (B) First Initial Flow 31 Jars * 250' T-Started 7:34
 (C) First Final Flow 213 Safety Joint * 75' T-Open 9:32
 (D) Initial Shut-In 1148 Circ Sub *NA T-Pulled 13:32
 (E) Second Initial Flow 212 Hourly Standby 1hr 100' T-Out 3:20 15:20
 (F) Second Final Flow 381 Mileage 60RT 84' Comments _____
 (G) Final Shut-In 1119 Sampler _____
 (H) Final Hydrostatic 1665 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 1634'
 Final Flow 60 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 90 Sub Total 1634'

Approved By [Signature] Our Representative [Signature]

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



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
FEB 23 2012
BY: _____

Test Ticket

NO. 45571

Well Name & No. Thiele #1-8 Test No. 2 Date 2-16-12
 Company Murfin Drilling Co. Inc. Elevation 2545 KB 2534 GL
 Address 250 N. Water Suite 300 Wichita KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #21
 Location: Sec. 8 Twp. 2s Rge. 24w Co. Norton State KS

Interval Tested 3595-3678 Zone Tested LKC "H-L"
 Anchor Length 83 Drill Pipe Run 3393 Mud Wt. 9.3
 Top Packer Depth 3590 Drill Collars Run 210 Vis 52
 Bottom Packer Depth 3595 Wt. Pipe Run - WL 6.0
 Total Depth 3678 Chlorides 1500 ppm System LCM -

Blow Description Hit tight spot about 8' before getting to Bottom
Pulled up to 90K to get loose (String weighing 56K)
Went to Bottom clean after coming up
Packer Failure - Reset Tool - Packer Failure - Pulled Tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>245</u>	<u>mud</u>	<u>-</u>	<u>-</u>	<u>100</u>	<u>0</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 _____ BHT _____ Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic _____ Test * 925' T-On Location 5:00
 (B) First Initial Flow _____ Jars _____ T-Started 5:22
 (C) First Final Flow _____ Safety Joint * 75' T-Open 7:35
 (D) Initial Shut-In _____ Circ Sub * NA T-Pulled 7:43
 (E) Second Initial Flow _____ Hourly Standby _____ T-Out 9:25
 (F) Second Final Flow _____ Mileage 60 RT 84' Comments _____
 (G) Final Shut-In _____ Sampler _____ Ruined Shale Packer _____
 (H) Final Hydrostatic _____ Straddle _____ Ruined Packer _____
 Initial Open _____ Shale Packer _____ Extra Copies _____
 Initial Shut-In _____ Extra Packer _____ Sub Total 0
 Final Flow _____ Extra Recorder _____ Total 1084'
 Final Shut-In _____ Day Standby _____ MP/DST Disc't _____
 Sub Total 1084' Accessibility _____

Approved By R. D. Whig 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.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
FEB 23 2012

Test Ticket

NO. 45572

4/10

BY: _____

Well Name & No. Thiele #1-8 Test No. 3 Date 2-16-12

Company Murfin Drilling Co. Inc Elevation 2545 KB 2534 GL _____

Address 250 N. Water Suite 300 Wichita KS 67202

Co. Rep / Geo. Robert Hendrix Rig Murfin #21

Location: Sec. 8 Twp. 2s Rge. 24w Co. Norton State KS

Interval Tested 3577 - 3678 Zone Tested LKC "H#6-L"

Anchor Length 101 Drill Pipe Run 3362 Mud Wt. 9.3

Top Packer Depth 3572 Drill Collars Run 210 Vis 52

Bottom Packer Depth 3577 Wt. Pipe Run - WL 6.0

Total Depth 3678 Chlorides 1500 ppm System LCM -

Blow Description IF: Blow built to BOB (11") in 27 min. (slow due to loose hammer union)
ISI: Bled off, No Blowback
FF: Blow built to BOB in 17 min.
FSI: Bled off, No Blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>515</u>	<u>Water</u>	<u>-</u>	<u>-</u>	<u>96</u>	<u>4</u>
<u>60</u>	<u>MCW</u>	<u>-</u>	<u>-</u>	<u>69</u>	<u>31</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 575 BHT 103 Gravity - API RW .178 @ 50.2 °F Chlorides 60,000 ppm

(A) Initial Hydrostatic 1732 Test * 1125- T-On Location 9:30

(B) First Initial Flow 21 Jars _____ T-Started 9:56

(C) First Final Flow 155 Safety Joint * 75- T-Open 11:43

(D) Initial Shut-In 1178 Circ Sub *NA T-Pulled 15:45

(E) Second Initial Flow 161 Hourly Standby _____ T-Out 17:30

(F) Second Final Flow 294 Mileage _____ Comments loose hammer union
Retightened around 10 min
on IF.

(G) Final Shut-In 1132 Sampler _____ Ruined Shale Packer _____

(H) Final Hydrostatic 1684 Straddle _____ Ruined Packer _____

Initial Open 30 Shale Packer _____ Extra Copies _____

Initial Shut-In 60 Extra Packer _____ Sub Total 0

Final Flow 60 Extra Recorder _____ Total 1200-

Final Shut-In 90 Day Standby _____ MP/DST Disc't _____

Accessibility _____ Sub Total 1200-

Approved By [Signature] Our Representative [Signature]

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



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
FEB 23 2012

Test Ticket

NO. 45573

4/10

BY: _____

Well Name & No. Thiele #1-8 Test No. 4 Date 2-17-12
 Company Murfin Drilling Co. Inc. Elevation 2545 KB 2534 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #21
 Location: Sec. 8 Twp. 2s Rge. 24W Co. Norton State KS

Interval Tested 3720 - 3765 Zone Tested Lower Pawnee
 Anchor Length 45 Drill Pipe Run 3518 Mud Wt. 9.2
 Top Packer Depth 3715 Drill Collars Run 210 Vis 51
 Bottom Packer Depth 3720 Wt. Pipe Run - WL 6.0
 Total Depth 3765 Chlorides 1900 ppm System LCM -
 Blow Description IF: 1/4" Blow at open, built to 1/2" at 8min., dead at 23 min.
ISI: No Blowback
FF: No Blow
FSI: No Blowback

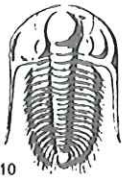
Rec	Feet of	%gas	%oil	%water	%mud
<u>8</u>	<u>Mud w/trace of oil</u>	<u>-</u>	<u>trace</u>	<u>-</u>	<u>100</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 8 BHT 100 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1773 Test * 1125' T-On Location 5:40
 (B) First Initial Flow 17 Jars T-Started 6:03
 (C) First Final Flow 19 Safety Joint * 75' T-Open 7:44
 (D) Initial Shut-In 94 Circ Sub *NA T-Pulled 10:45
 (E) Second Initial Flow 20 Hourly Standby T-Out 12:30
 (F) Second Final Flow 22 Mileage GORT 84' Comments _____
 (G) Final Shut-In 63 Sampler _____
 (H) Final Hydrostatic 1758 Straddle Ruined Shale Packer _____
 Shale Packer Ruined Packer _____
 Extra Packer Extra Copies _____
 Extra Recorder Sub Total 0
 Day Standby Total 1284
 Accessibility MP/DST Disc't _____
 Sub Total 1284

Approved By [Signature] Our Representative [Signature]

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P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
FEB 23 2012

Test Ticket

NO. 45574

4/10

BY: _____

Well Name & No. Thiele #1-8 Test No. 5 Date 2-17-12
 Company Murfin Drilling Co. Inc. Elevation 2545 KB 2534 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #21
 Location: Sec. 8 Twp. 2s Rge. 24w Co. Norton State KS

Interval Tested 3760 - 3800 Zone Tested Reagan Sand / Granite wash
 Anchor Length 40 Drill Pipe Run 3547 Mud Wt. 9.2
 Top Packer Depth 3755 Drill Collars Run 210 Vis 56
 Bottom Packer Depth 3760 Wt. Pipe Run - WL 6.0
 Total Depth 3800 Chlorides 1800 ppm System LCM 2#

Blow Description IF: Blow built to 8"
ISI: Bled off, No Blowback
FF: Blow built to BOB (11") at 60 min.
FSI: Bled off, No Blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>80</u>	<u>wcm w/trace of Oil</u>	<u>-</u>	<u>trace</u>	<u>33</u>	<u>67</u>
<u>60</u>	<u>MW</u>	<u>-</u>	<u>-</u>	<u>60</u>	<u>40</u>
<u>180</u>	<u>MCW</u>	<u>-</u>	<u>-</u>	<u>85</u>	<u>15</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 320 BHT 101 Gravity - API RW .244 @ 42 ° F Chlorides 52,000 ppm

(A) Initial Hydrostatic 1811 Test * 1125' T-On Location 19:35
 (B) First Initial Flow 21 Jars T-Started 20:20
 (C) First Final Flow 109 Safety Joint * 75' T-Open 22:04
 (D) Initial Shut-In 894 Circ Sub * N/A T-Pulled 2:02
 (E) Second Initial Flow 117 Hourly Standby T-Out 3:50
 (F) Second Final Flow 160 Mileage 60RTX2 1168' Comments loaded Tools
 (G) Final Shut-In 844 Sampler after log
 (H) Final Hydrostatic 1787 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 1368'
 Final Flow 60 Accessibility MP/DST Disc't
 Final Shut-In 90 Sub Total 1368'

Approved By [Signature] Our Representative Jane Winters

Tribolite 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.