



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Jeff Christian

Doris #1-22

22-4s-31w Rawlins KS

Start Date: 2013.07.16 @ 20:14:00

End Date: 2013.07.17 @ 03:23:30

Job Ticket #: 52765 DST #: 1

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

Printed: 2013.07.22 @ 15:40:58



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

22-4s-31w Rawlins KS

Doris #1-22

Job Ticket: 52765

DST#: 1

Test Start: 2013.07.16 @ 20:14:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "A & B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:33:45

Time Test Ended: 03:23:30

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 57

Interval: 3911.00 ft (KB) To 3995.00 ft (KB) (TVD)

Reference Elevations: 2919.00 ft (KB)

Total Depth: 3995.00 ft (KB) (TVD)

2908.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8671

Inside

Press @ Run Depth: 50.80 psig @ 3912.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.07.16

End Date:

2013.07.17

Last Calib.:

2013.07.17

Start Time: 20:14:05

End Time:

03:23:29

Time On Btm:

2013.07.16 @ 22:33:30

Time Off Btm:

2013.07.17 @ 01:34:15

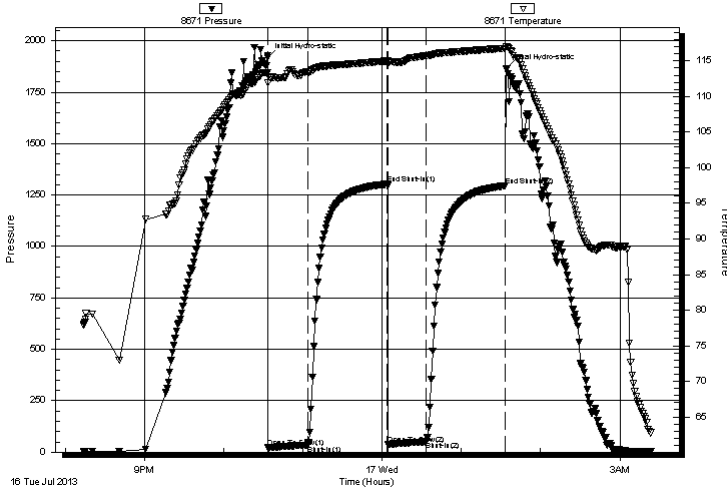
TEST COMMENT: 30 - IF: Blow slowly built to 1 1/4"

60 - IS: No blow back

30 - FF: No blow

60 - FS: No blow back

Pressure vs. Time



PRESSURE SUMMARY

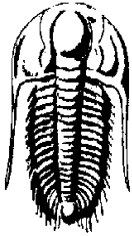
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1918.67	113.35	Initial Hydro-static
1	21.25	112.01	Open To Flow (1)
31	34.47	113.46	Shut-In(1)
91	1303.46	115.02	End Shut-In(1)
91	38.17	114.50	Open To Flow (2)
120	50.80	115.75	Shut-In(2)
180	1294.82	116.79	End Shut-In(2)
181	1862.51	117.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	Mud 100%	0.32

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: Jeff Christian

22-4s-31w Rawlins KS

Doris #1-22

Job Ticket: 52765

DST#: 1

Test Start: 2013.07.16 @ 20:14:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "A & B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:33:45

Time Test Ended: 03:23:30

Interval: 3911.00 ft (KB) To 3995.00 ft (KB) (TVD)

Total Depth: 3995.00 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: 2919.00 ft (KB)

2908.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8320 Outside

Press @ RunDepth: psig @ 3912.00 ft (KB)

Start Date: 2013.07.16 End Date: 2013.07.17

Start Time: 20:14:05 End Time: 03:24:14

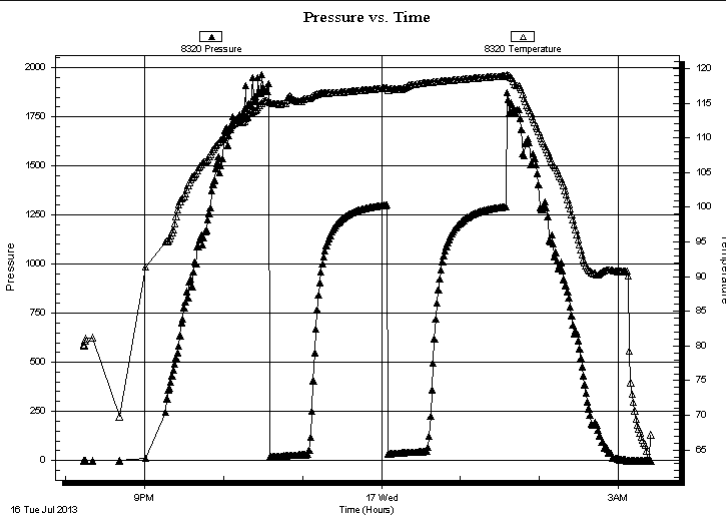
Capacity: 8000.00 psig

Last Calib.: 2013.07.17

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: Blow slowly 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

Recovery

Length (ft)	Description	Volume (bbl)
65.00	Mud 100%	0.32

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52765

DST#: 1

ATTN: Jeff Christian

Test Start: 2013.07.16 @ 20:14:00

Tool Information

Drill Pipe:	Length: 3656.00 ft	Diameter: 3.80 inches	Volume: 51.28 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: 231.00 ft	Diameter: 2.25 inches	Volume: 1.14 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 52.42 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3911.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	84.00 ft			
Tool Length:	112.00 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			3888.00	
Hydraulic tool	5.00			3893.00	
Jars	5.00			3898.00	
Safety Joint	3.00			3901.00	
Packer	5.00			3906.00	28.00 Bottom Of Top Packer
Packer	5.00			3911.00	
Stubb	1.00			3912.00	
Recorder	0.00	8671	Inside	3912.00	
Recorder	0.00	8320	Outside	3912.00	
Perforations	13.00			3925.00	
Blank Spacing	65.00			3990.00	
Perforations	2.00			3992.00	
Bullnose	3.00			3995.00	84.00 Bottom Packers & Anchor

Total Tool Length: 112.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52765

DST#: 1

ATTN: Jeff Christian

Test Start: 2013.07.16 @ 20:14:00

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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.35 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	Mud 100%	0.320

Total Length: 65.00 ft Total Volume: 0.320 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

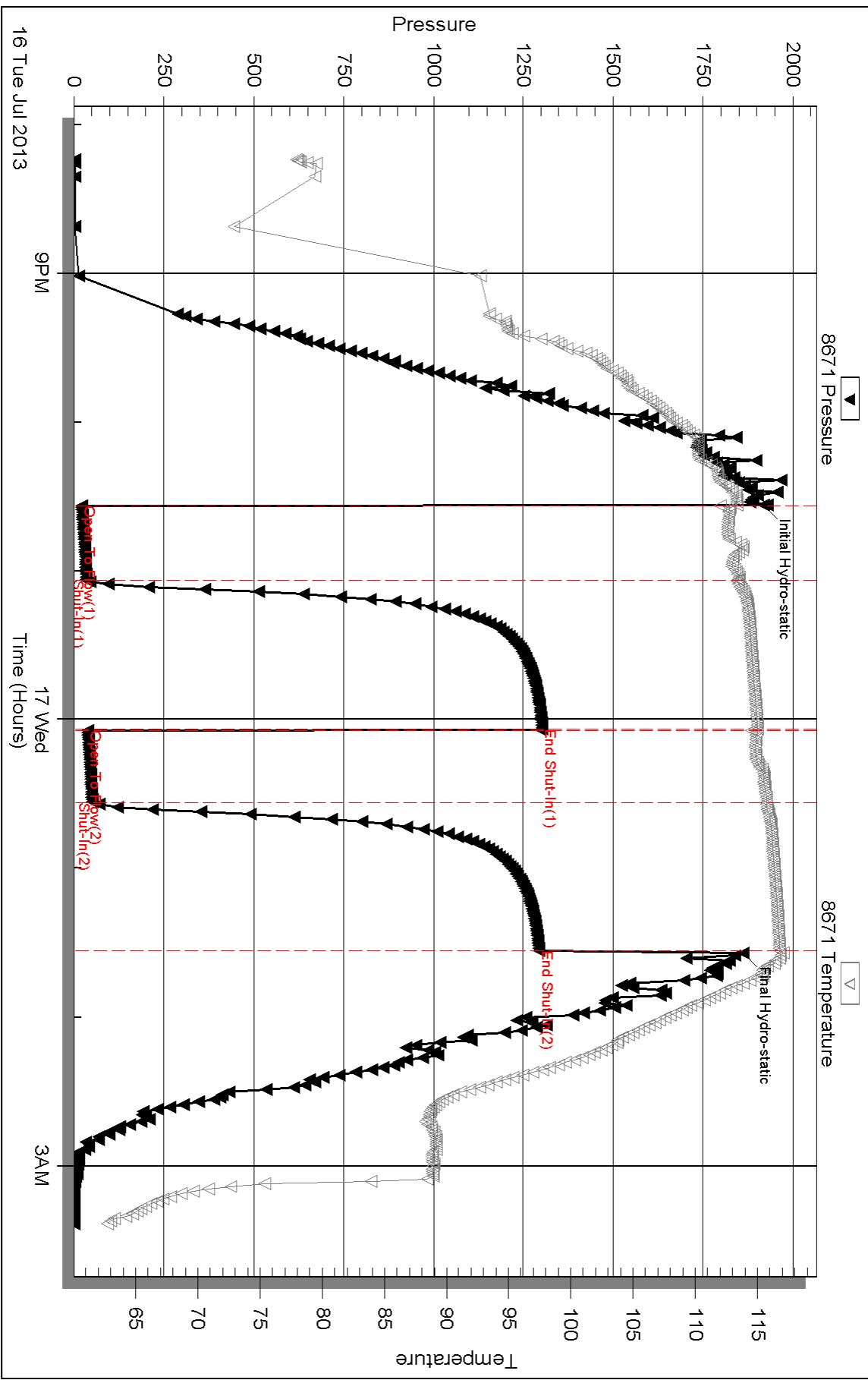
Serial #:

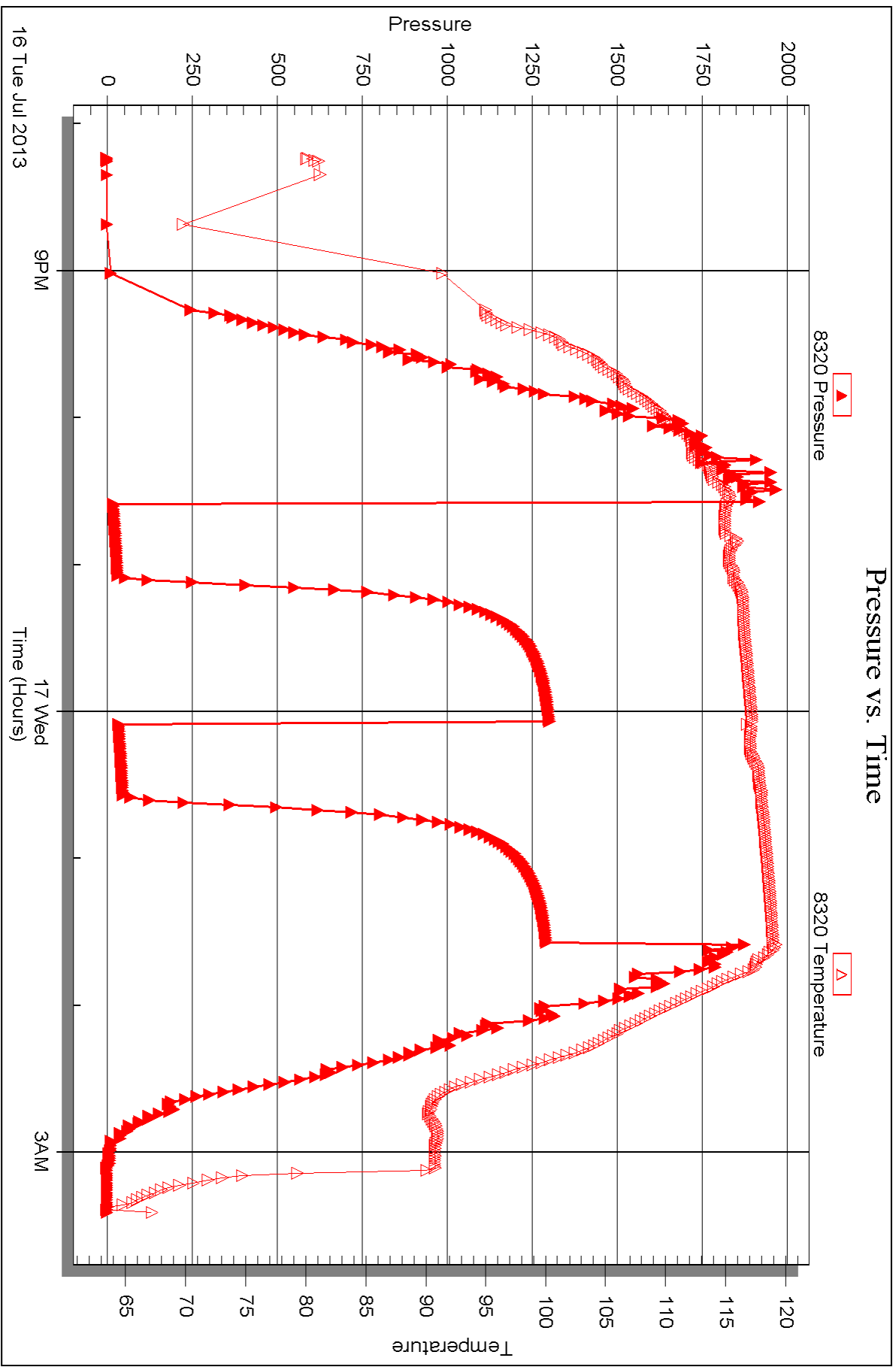
Laboratory Name:

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: Jeff Christian

Doris #1-22

22-4s-31w Rawlins KS

Start Date: 2013.07.17 @ 09:00:00

End Date: 2013.07.17 @ 16:43:00

Job Ticket #: 52766 DST #: 2

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

Printed: 2013.07.22 @ 15:40:11



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

22-4s-31w Rawlins KS

Doris #1-22

Job Ticket: 52766

DST#: 2

Test Start: 2013.07.17 @ 09:00:00

GENERAL INFORMATION:

Formation: **LKC "D"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:03:15
 Time Test Ended: 16:43:00
 Interval: **3992.00 ft (KB) To 4014.00 ft (KB) (TVD)**
 Total Depth: 4014.00 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: 2919.00 ft (KB)
 2908.00 ft (CF)
 KB to GR/CF: 11.00 ft

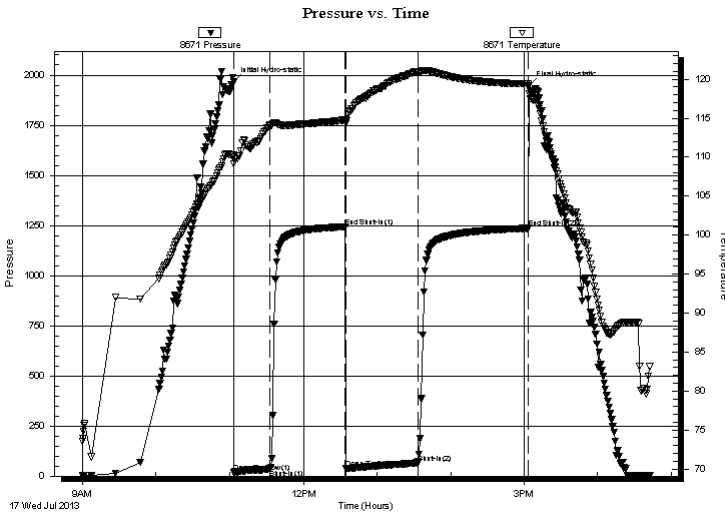
Serial #: 8671

Inside

Press @ Run Depth: 66.51 psig @ 3993.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.07.17 End Date: 2013.07.17 Last Calib.: 2013.07.17
 Start Time: 09:00:05 End Time: 16:42:59 Time On Btm: 2013.07.17 @ 11:03:00
 Time Off Btm: 2013.07.17 @ 15:04:15

TEST COMMENT: 30 - IF: Blow slowly built to 1 1/2"
 60 - IS: No blow back
 60 - FF: Blow started at 13 min., built to 2"
 90 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1965.67	110.30	Initial Hydro-static
1	19.27	109.17	Open To Flow (1)
30	34.94	114.05	Shut-In(1)
92	1244.04	114.82	End Shut-In(1)
92	38.84	114.36	Open To Flow (2)
150	66.51	120.93	Shut-In(2)
241	1236.34	119.39	End Shut-In(2)
242	1948.16	118.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
58.00	Muddy Water w/trace oil 52%w , 48%m	0.29
45.00	WCM w/trace oil 76%m, 22%w , 2%g	0.22

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

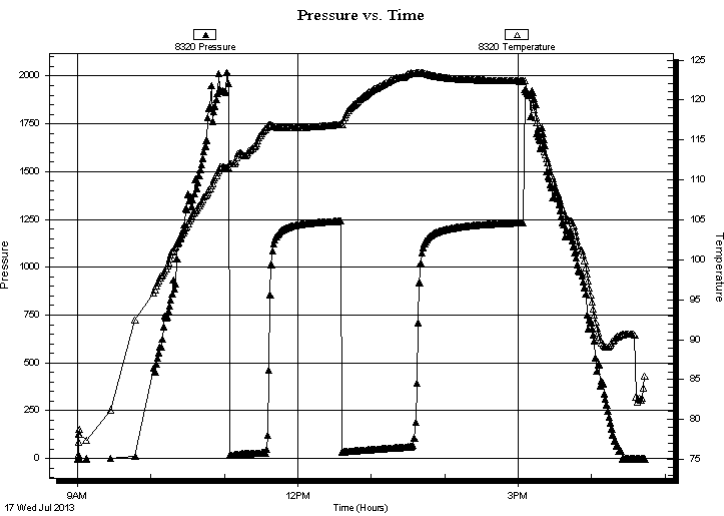
22-4s-31w Rawlins KS
Doris #1-22
 Job Ticket: 52766 **DST#: 2**
 Test Start: 2013.07.17 @ 09:00:00

GENERAL INFORMATION:

Formation: **LKC "D"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 11:03:15 Tester: James Winder
 Time Test Ended: 16:43:00 Unit No: 57
 Interval: **3992.00 ft (KB) To 4014.00 ft (KB) (TVD)** Reference Elevations: 2919.00 ft (KB)
 Total Depth: 4014.00 ft (KB) (TVD) 2908.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

Serial #: 8320 Outside
 Press @ Run Depth: psig @ 3993.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.07.17 End Date: 2013.07.17 Last Calib.: 2013.07.17
 Start Time: 09:00:05 End Time: 16:43:44 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF: Blow slowly built to 1 1/2"
 60 - IS: No blow back
 60 - FF: Blow started at 13 min., built to 2"
 90 - FS: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
58.00	Muddy Water w/trace oil 52%w , 48% m	0.29
45.00	WCM w/trace oil 76% m, 22% w , 2% g	0.22

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.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52766

DST#: 2

ATTN: Jeff Christian

Test Start: 2013.07.17 @ 09:00:00

Tool Information

Drill Pipe:	Length: 3750.00 ft	Diameter: 3.80 inches	Volume: 52.60 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: 231.00 ft	Diameter: 2.25 inches	Volume: 1.14 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 53.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3992.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	50.00 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			3969.00	
Hydraulic tool	5.00			3974.00	
Jars	5.00			3979.00	
Safety Joint	3.00			3982.00	
Packer	5.00			3987.00	28.00 Bottom Of Top Packer
Packer	5.00			3992.00	
Stubb	1.00			3993.00	
Recorder	0.00	8671	Inside	3993.00	
Recorder	0.00	8320	Outside	3993.00	
Perforations	18.00			4011.00	
Bullnose	3.00			4014.00	22.00 Bottom Packers & Anchor

Total Tool Length: 50.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52766

DST#: 2

ATTN: Jeff Christian

Test Start: 2013.07.17 @ 09:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

25000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.35 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
58.00	Muddy Water w/trace oil 52%w , 48%m	0.285
45.00	WCM w/trace oil 76%m, 22%w , 2%g	0.221

Total Length: 103.00 ft Total Volume: 0.506 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

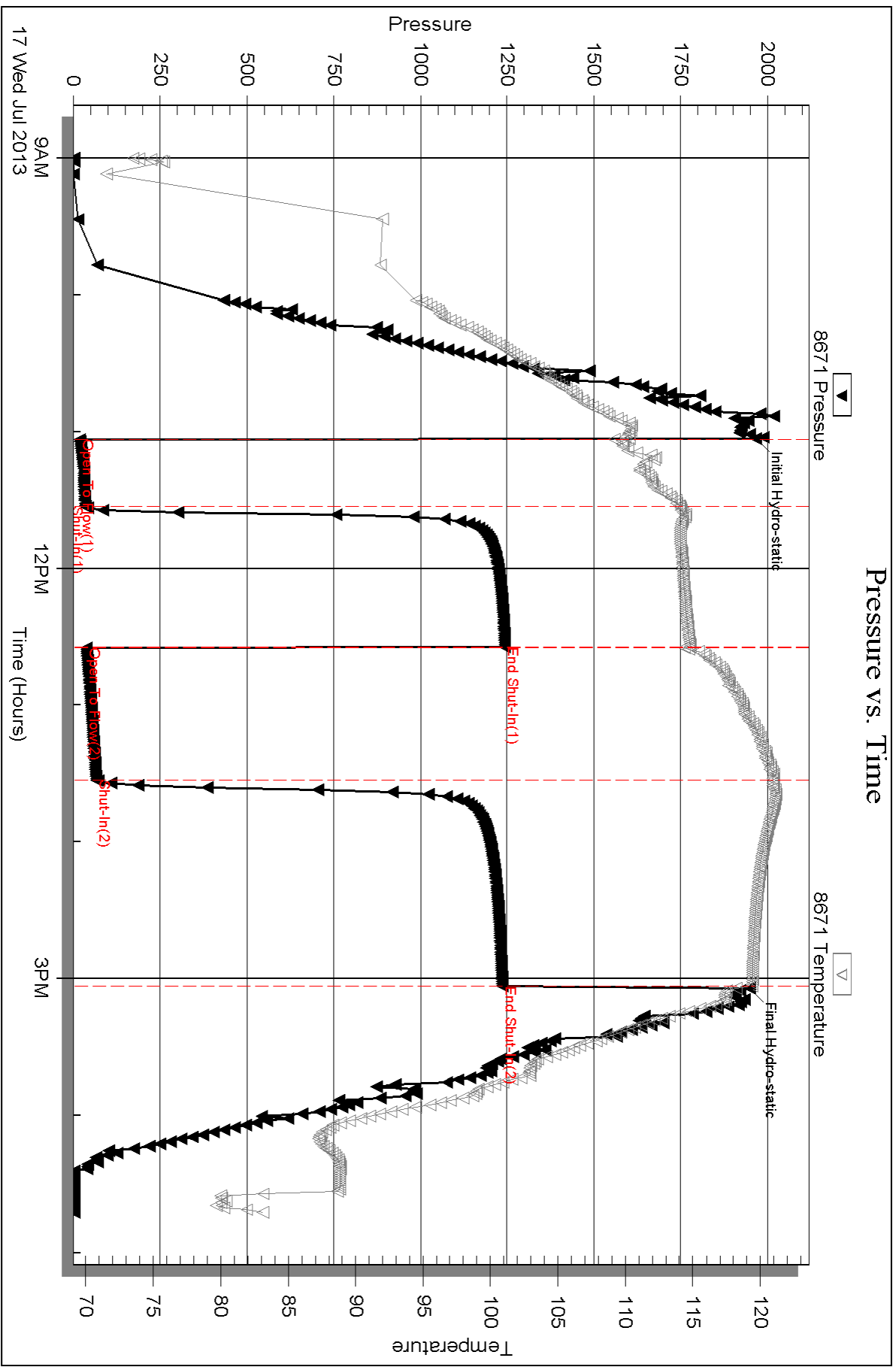
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .205 ohms @ 92.5 deg F

Chlorides = 25,000 ppm

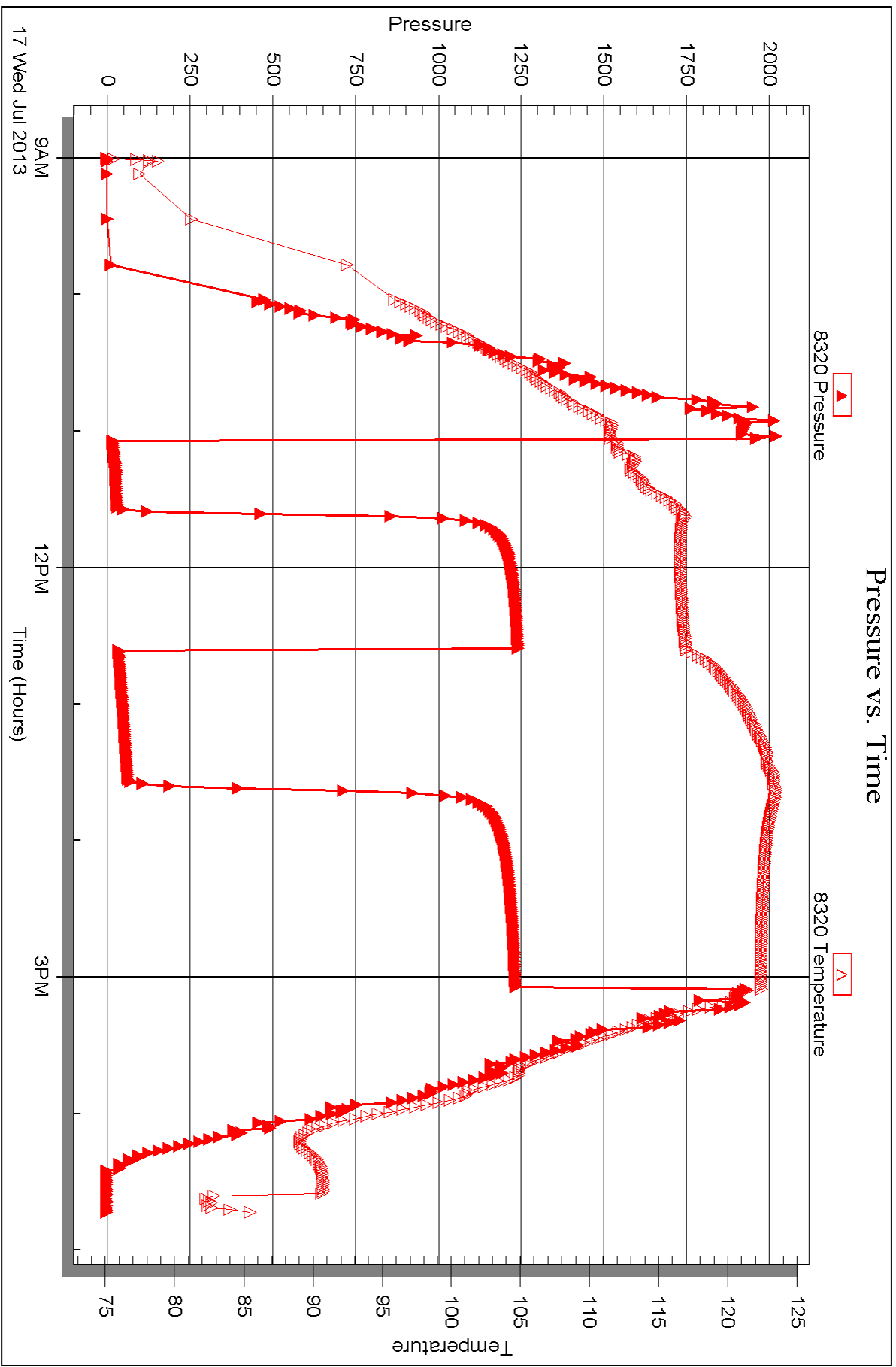


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Doris #1-22

DST Test Number: 2





DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Jeff Christian

Doris #1-22

22-4s-31w Rawlins KS

Start Date: 2013.07.17 @ 23:30:00

End Date: 2013.07.18 @ 06:07:00

Job Ticket #: 52767 DST #: 3

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

Printed: 2013.07.22 @ 15:36:36



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

22-4s-31w Rawlins KS

Doris #1-22

Job Ticket: 52767

DST#: 3

Test Start: 2013.07.17 @ 23:30:00

GENERAL INFORMATION:

Formation: **LKC "F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:25:15
 Time Test Ended: 06:07:00
 Interval: **4011.00 ft (KB) To 4036.00 ft (KB) (TVD)**
 Total Depth: 4036.00 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: 2919.00 ft (KB)
 2908.00 ft (CF)
 KB to GR/CF: 11.00 ft

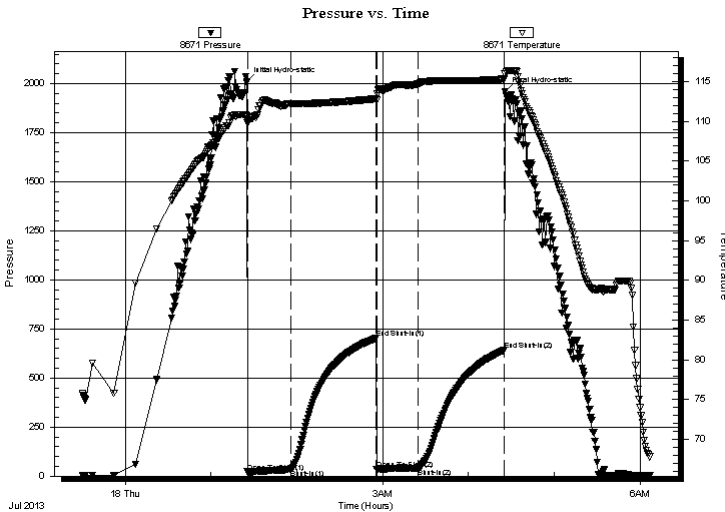
Serial #: 8671

Inside

Press@RunDepth: 39.51 psig @ 4012.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.07.17 End Date: 2013.07.18 Last Calib.: 2013.07.18
 Start Time: 23:30:05 End Time: 06:06:59 Time On Btm: 2013.07.18 @ 01:25:00
 Time Off Btm: 2013.07.18 @ 04:25:30

TEST COMMENT: 30 - IF: Blow slowly 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	2009.00	110.65	Initial Hydro-static
1	21.16	109.79	Open To Flow (1)
31	32.94	112.26	Shut-In(1)
91	701.87	112.86	End Shut-In(1)
91	35.27	112.67	Open To Flow (2)
120	39.51	114.74	Shut-In(2)
180	640.52	115.33	End Shut-In(2)
181	1959.38	115.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	SOCM 97% m, 2% o, 1% g	0.22

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

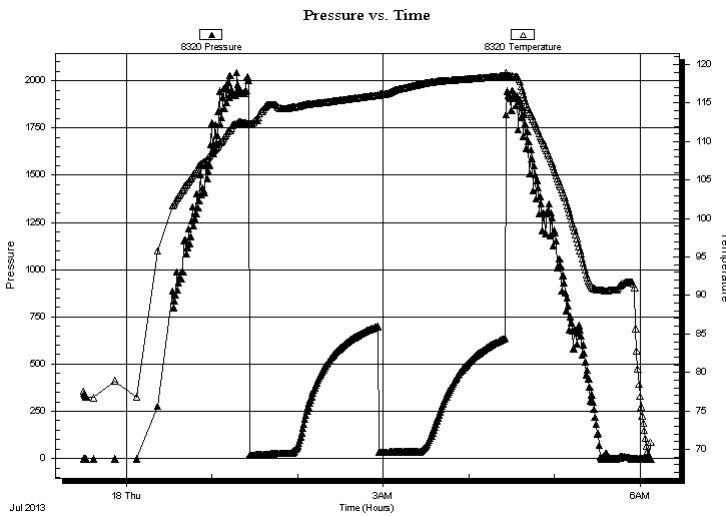
22-4s-31w Rawlins KS
Doris #1-22
 Job Ticket: 52767 **DST#: 3**
 Test Start: 2013.07.17 @ 23:30:00

GENERAL INFORMATION:

Formation: **LKC "F"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 01:25:15 Tester: James Winder
 Time Test Ended: 06:07:00 Unit No: 57
 Interval: **4011.00 ft (KB) To 4036.00 ft (KB) (TVD)**
 Reference Elevations: 2919.00 ft (KB)
 Total Depth: 4036.00 ft (KB) (TVD) 2908.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

Serial #: 8320 Outside
 Press @ Run Depth: psig @ 4012.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.07.17 End Date: 2013.07.18 Last Calib.: 2013.07.18
 Start Time: 23:30:05 End Time: 06:07:29 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF: Blow slowly 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

Recovery

Length (ft)	Description	Volume (bbl)
45.00	SOCM 97% m, 2% o, 1% g	0.22

* 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.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52767

DST#: 3

ATTN: Jeff Christian

Test Start: 2013.07.17 @ 23:30:00

Tool Information

Drill Pipe:	Length: 3782.00 ft	Diameter: 3.80 inches	Volume: 53.05 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: 231.00 ft	Diameter: 2.25 inches	Volume: 1.14 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 54.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4011.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	53.00 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			3988.00	
Hydraulic tool	5.00			3993.00	
Jars	5.00			3998.00	
Safety Joint	3.00			4001.00	
Packer	5.00			4006.00	28.00 Bottom Of Top Packer
Packer	5.00			4011.00	
Stubb	1.00			4012.00	
Recorder	0.00	8671	Inside	4012.00	
Recorder	0.00	8320	Outside	4012.00	
Perforations	21.00			4033.00	
Bullnose	3.00			4036.00	25.00 Bottom Packers & Anchor

Total Tool Length: 53.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52767

DST#: 3

ATTN: Jeff Christian

Test Start: 2013.07.17 @ 23:30:00

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	SOCM 97% <i>m</i> , 2% <i>o</i> , 1% <i>g</i>	0.221

Total Length: 45.00 ft Total Volume: 0.221 bbl

Num Fluid Samples: 0

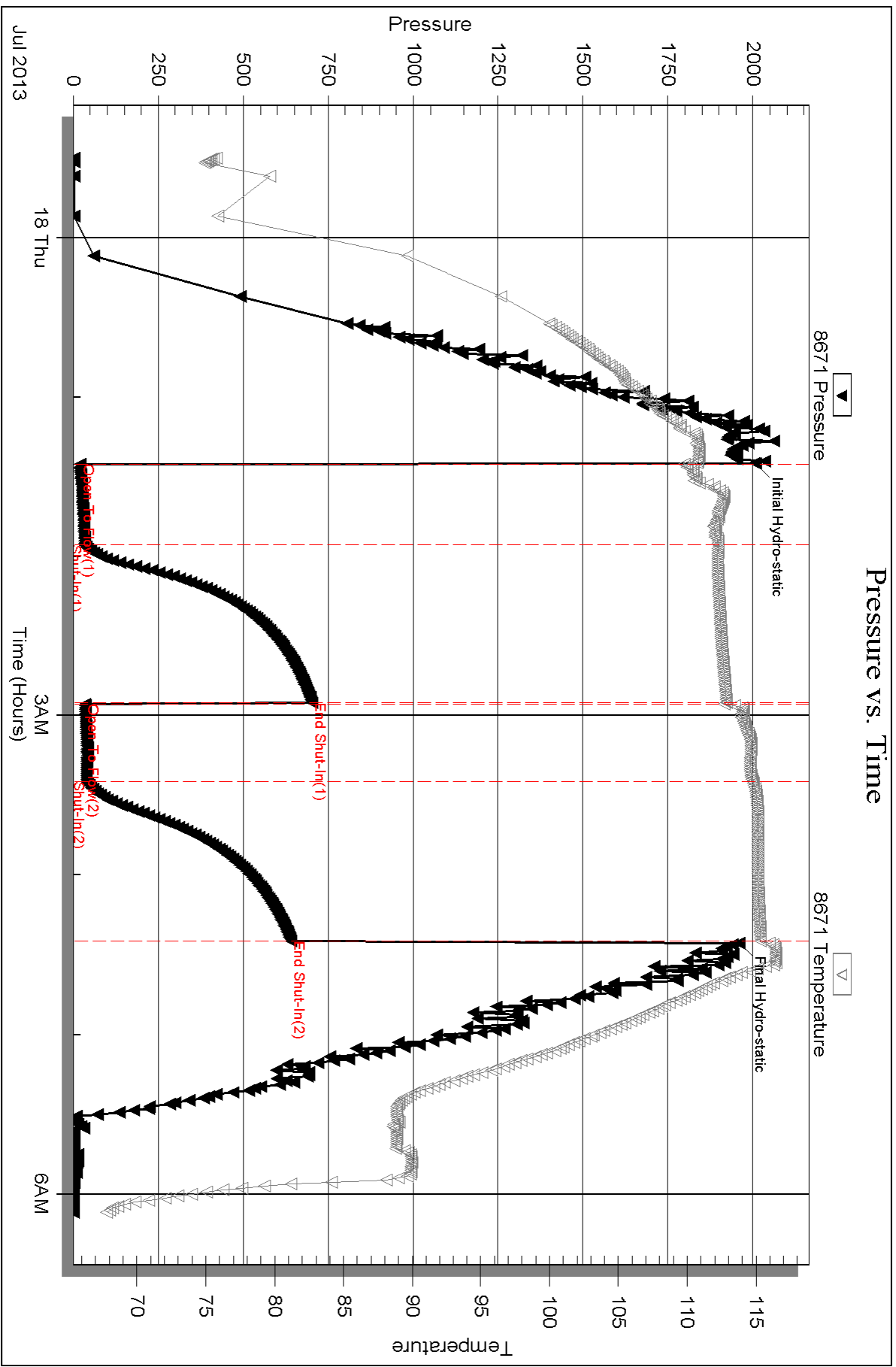
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

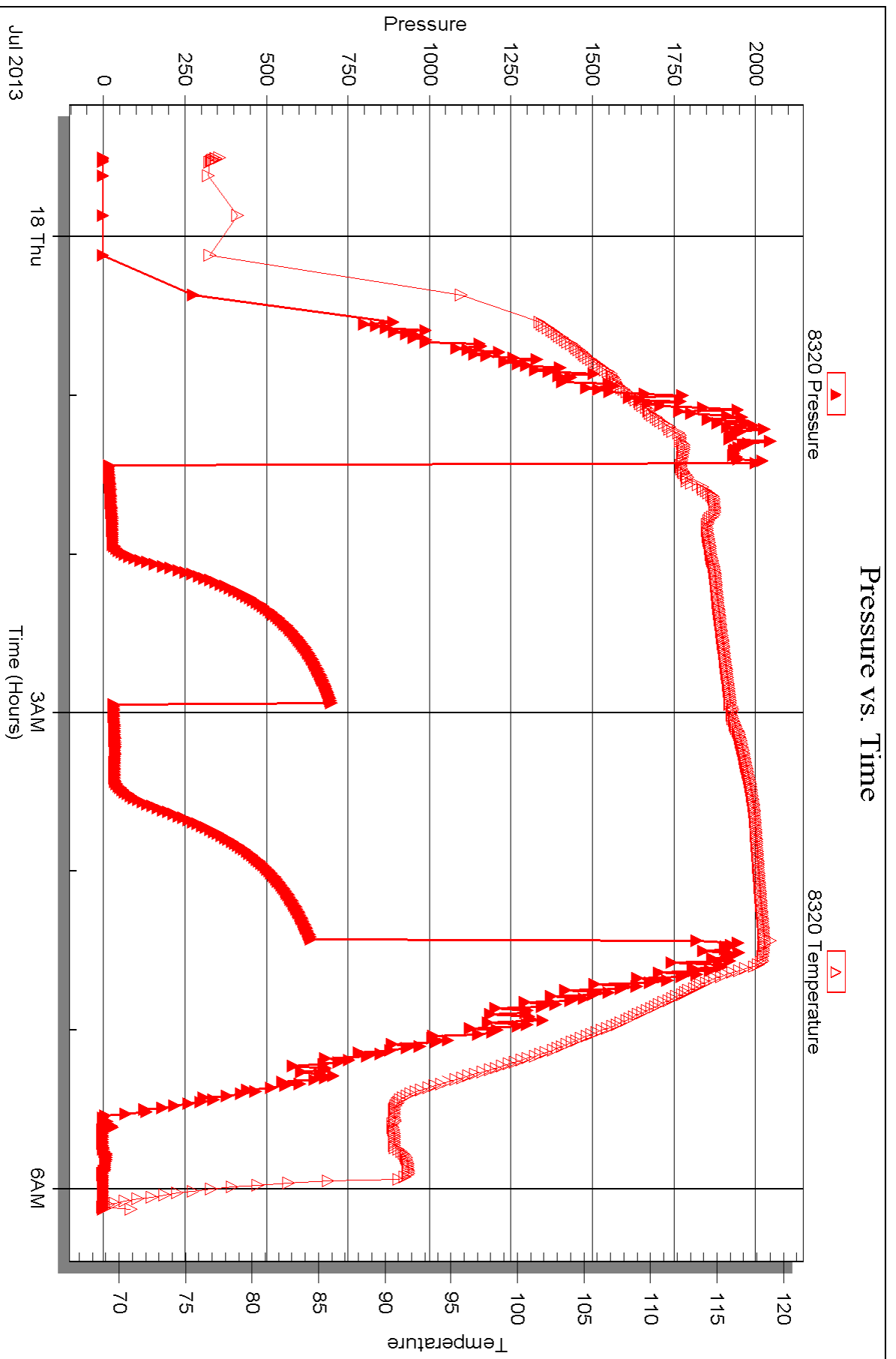


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Doris #1-22

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 52767

Printed: 2013.07.22 @ 15:36:41



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Jeff Christian

Doris #1-22

22-4s-31w Rawlins KS

Start Date: 2013.07.18 @ 13:52:00

End Date: 2013.07.18 @ 22:03:00

Job Ticket #: 52768 DST #: 4

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

Printed: 2013.07.22 @ 15:35:20



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

22-4s-31w Rawlins KS

Doris #1-22

Job Ticket: 52768

DST#: 4

Test Start: 2013.07.18 @ 13:52:00

GENERAL INFORMATION:

Formation: **LKC "G - H"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:21:45
 Time Test Ended: 22:03:00
 Interval: **4030.00 ft (KB) To 4091.00 ft (KB) (TVD)**
 Total Depth: 4091.00 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: 2919.00 ft (KB)
 2908.00 ft (CF)
 KB to GR/CF: 11.00 ft

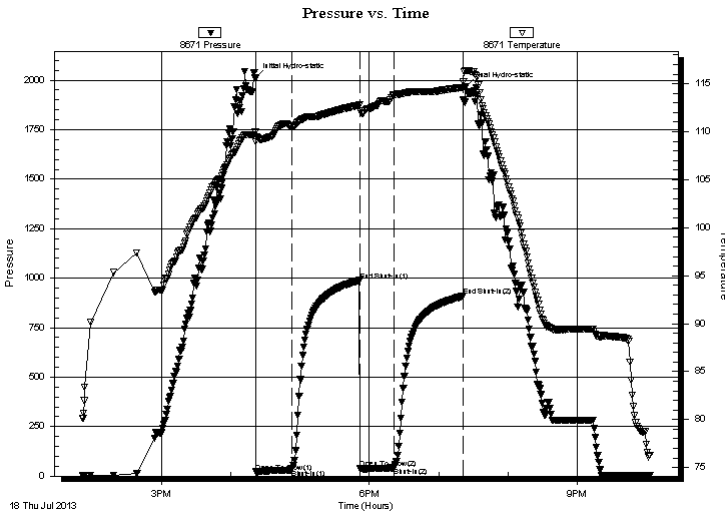
Serial #: 8671

Inside

Press @ Run Depth: 41.83 psig @ 4031.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.07.18 End Date: 2013.07.18 Last Calib.: 2013.07.18
 Start Time: 13:52:05 End Time: 22:02:59 Time On Btm: 2013.07.18 @ 16:21:30
 Time Off Btm: 2013.07.18 @ 19:23:15

TEST COMMENT: 30 - IF: Blow built to 1 3/4"
 60 - IS: No blow back
 30 - FF: Blow started at 12 min., built to 1/4"
 60 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2010.93	109.98	Initial Hydro-static
1	21.31	108.93	Open To Flow (1)
31	32.40	110.50	Shut-In(1)
90	987.74	112.77	End Shut-In(1)
91	37.63	112.21	Open To Flow (2)
120	41.83	113.83	Shut-In(2)
180	908.83	114.63	End Shut-In(2)
182	1968.29	116.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
53.00	SWCM w /trace oil 95%w, 5%w	0.26

* 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.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52768

DST#: 4

ATTN: Jeff Christian

Test Start: 2013.07.18 @ 13:52:00

Tool Information

Drill Pipe:	Length: 3781.00 ft	Diameter: 3.80 inches	Volume: 53.04 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: 231.00 ft	Diameter: 2.25 inches	Volume: 1.14 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 54.18 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4030.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	89.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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			4007.00	
Hydraulic tool	5.00			4012.00	
Jars	5.00			4017.00	
Safety Joint	3.00			4020.00	
Packer	5.00			4025.00	28.00 Bottom Of Top Packer
Packer	5.00			4030.00	
Stubb	1.00			4031.00	
Recorder	0.00	8671	Inside	4031.00	
Recorder	0.00	8320	Outside	4031.00	
Perforations	21.00			4052.00	
Blank Spacing	33.00			4085.00	
Perforations	3.00			4088.00	
Bullnose	3.00			4091.00	61.00 Bottom Packers & Anchor

Total Tool Length: 89.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52768

DST#: 4

ATTN: Jeff Christian

Test Start: 2013.07.18 @ 13:52:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.35 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
53.00	SWCM w/trace oil 95% _m , 5% _w	0.261

Total Length: 53.00 ft Total Volume: 0.261 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8671

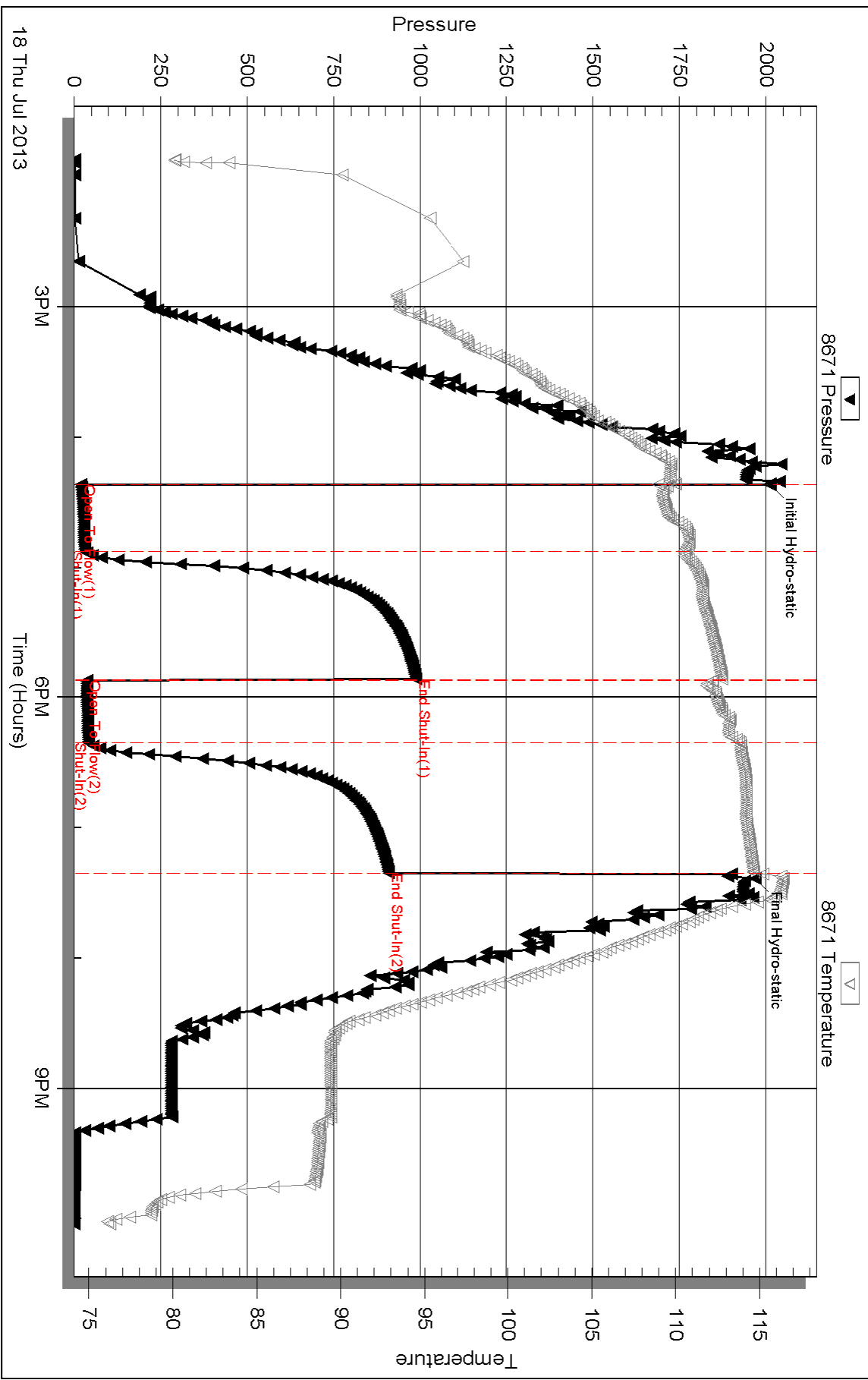
Inside

Murfin Drilling Co., Inc.

Doris #1-22

DST Test Number: 4

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 52768

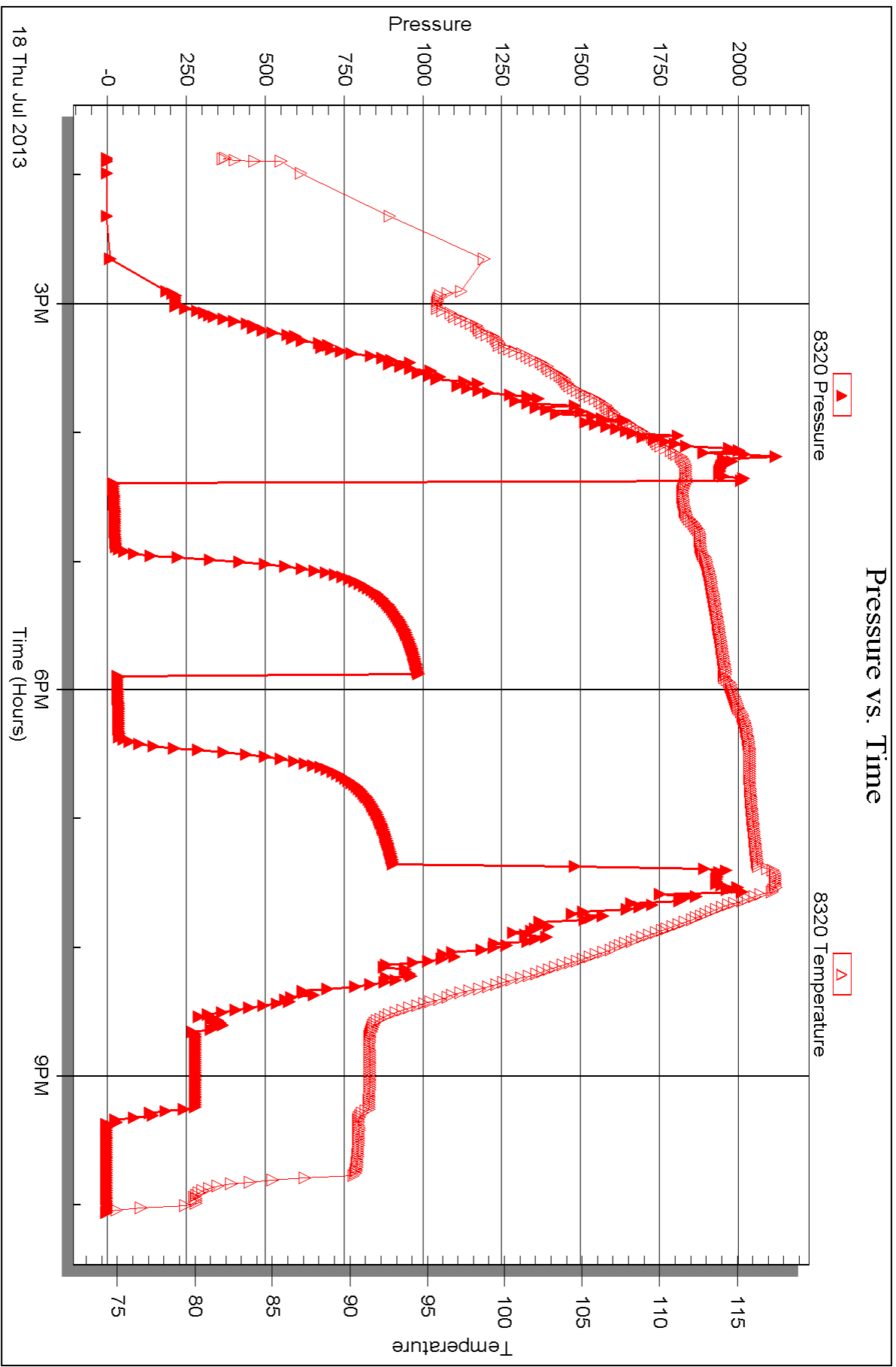
Printed: 2013.07.22 @ 15:35:23

Serial #: 8320

Outside Murfin Drilling Co., Inc.

Doris #1-22

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 52768

Printed: 2013.07.22 @ 15:35:23



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Jeff Christian

Doris #1-22

22-4s-31w Rawlins KS

Start Date: 2013.07.19 @ 08:04:00

End Date: 2013.07.19 @ 15:15:00

Job Ticket #: 53461 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.07.22 @ 15:31:58



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

22-4s-31w Rawlins KS

Doris #1-22

Job Ticket: 53461

DST#: 5

Test Start: 2013.07.19 @ 08:04:00

GENERAL INFORMATION:

Formation: **LKC " H - L "**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 10:12:45
 Tester: Ryan Nichols
 Time Test Ended: 15:15:00
 Unit No: 57
 Interval: **4086.00 ft (KB) To 4180.00 ft (KB) (TVD)**
 Reference Elevations: 2919.00 ft (KB)
 Total Depth: 4180.00 ft (KB) (TVD)
 2908.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 11.00 ft

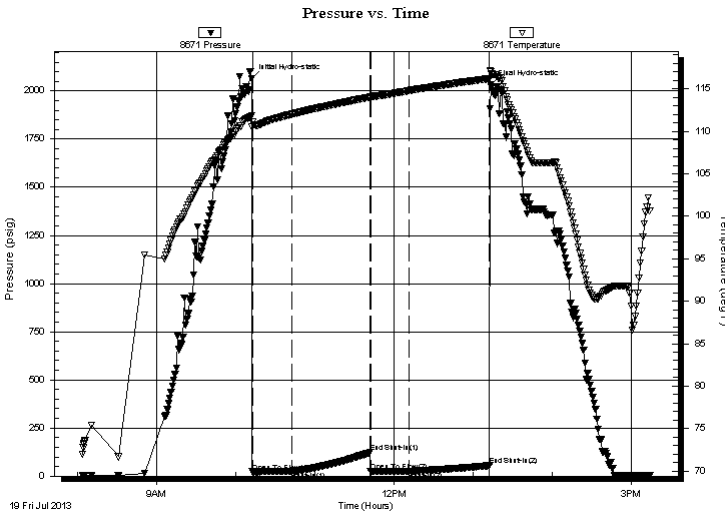
Serial #: 8671

Inside

Press @ Run Depth: 25.69 psig @ 4087.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.07.19 End Date: 2013.07.19 Last Calib.: 2013.07.19
 Start Time: 08:04:05 End Time: 15:14:59 Time On Btm: 2013.07.19 @ 10:12:30
 Time Off Btm: 2013.07.19 @ 13:13:45

TEST COMMENT: 30 IF - Surface blow built to 1/4" @ 3 mins died back to surface blow
 60 ISI - No return
 30 FF - No blow
 60 FSI - No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2064.64	111.85	Initial Hydro-static
1	21.33	110.50	Open To Flow (1)
31	23.91	112.03	Shut-In(1)
90	122.31	114.03	End Shut-In(1)
90	24.77	113.98	Open To Flow (2)
120	25.69	114.80	Shut-In(2)
181	54.29	116.22	End Shut-In(2)
182	2031.49	117.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud - 100%	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.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 53461

DST#: 5

ATTN: Jeff Christian

Test Start: 2013.07.19 @ 08:04:00

Tool Information

Drill Pipe:	Length: 3846.00 ft	Diameter: 3.80 inches	Volume: 53.95 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: 231.00 ft	Diameter: 2.25 inches	Volume: 1.14 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 55.09 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4086.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	94.00 ft			
Tool Length:	122.00 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			4063.00	
Hydraulic tool	5.00			4068.00	
Jars	5.00			4073.00	
Safety Joint	3.00			4076.00	
Packer	5.00			4081.00	28.00 Bottom Of Top Packer
Packer	5.00			4086.00	
Stubb	1.00			4087.00	
Recorder	0.00	8671	Inside	4087.00	
Recorder	0.00	8320	Outside	4087.00	
Perforations	25.00			4112.00	
Change Over Sub	1.00			4113.00	
Blank Spacing	63.00			4176.00	
Change Over Sub	1.00			4177.00	
Bullnose	3.00			4180.00	94.00 Bottom Packers & Anchor

Total Tool Length: 122.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 53461

DST#: 5

ATTN: Jeff Christian

Test Start: 2013.07.19 @ 08:04:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 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 bbl
5.00	Mud - 100%	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

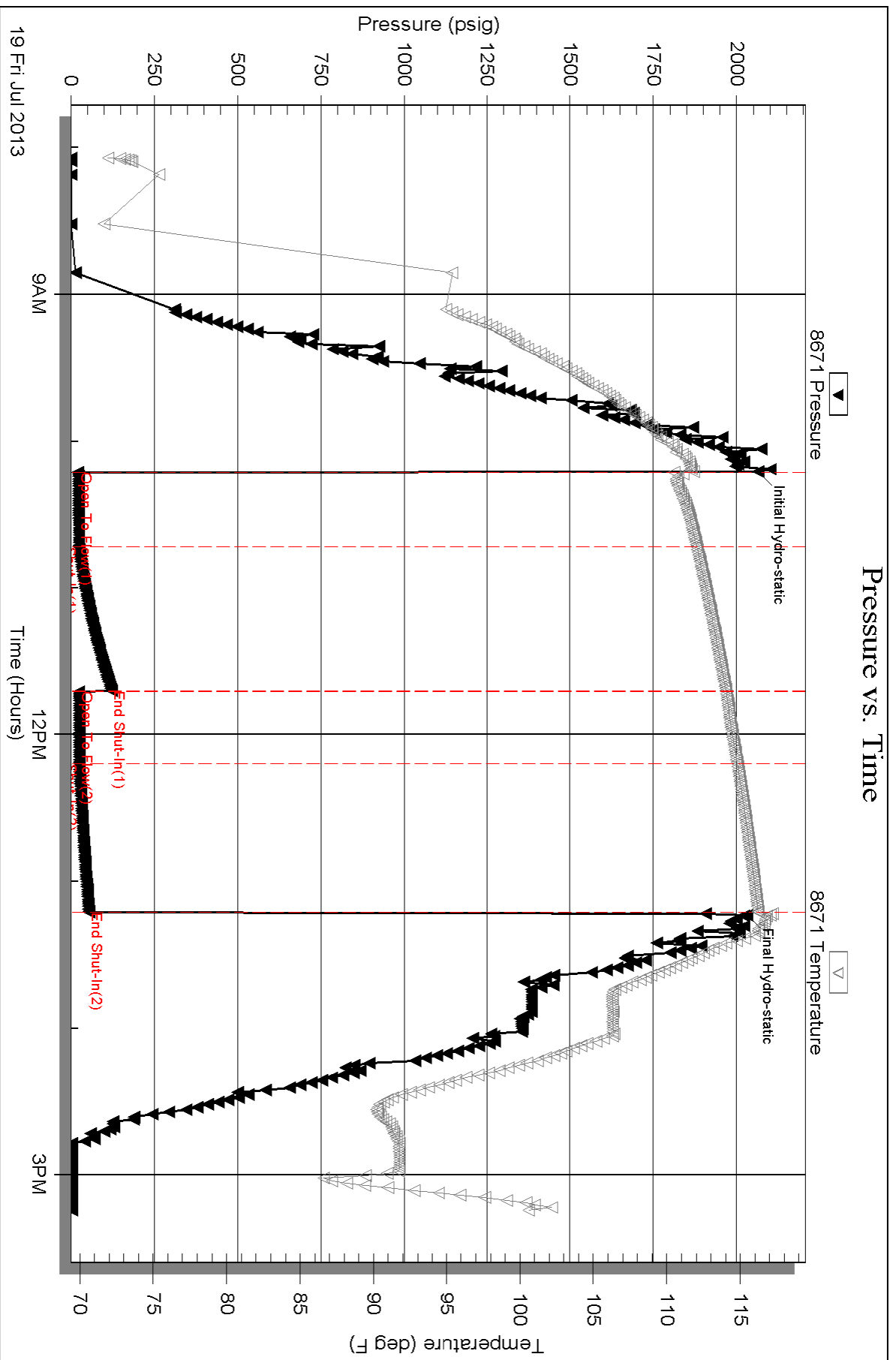
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52765

Well Name & No. Doris #1-22 Test No. 1 Date 7-16-13
 Company Murfin Drilling Co. Inc. Elevation 2919 KB 2908 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin #2
 Location: Sec. 22 Twp. 4s Rge. 31w Co. Rawlins State KS

Interval Tested 3911 - 3995 Zone Tested Toronto - LKC "A4B"
 Anchor Length 84 Drill Pipe Run 3656 Mud Wt. 9.1
 Top Packer Depth 3906 Drill Collars Run 231 Vis 61
 Bottom Packer Depth 3911 Wt. Pipe Run - WL 6.4
 Total Depth 3995 Chlorides 1300 ppm System LCM 4

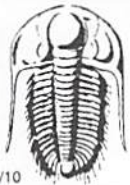
Blow Description IF: Blow built slowly to 1 1/4"
ISI: No blowback
FF: No blow
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>65</u>	<u>mud</u>				<u>100%</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 65 BHT 117 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 1919 Test * 1150 T-On Location 19:30 7/16
 (B) First Initial Flow 21 Jars * 250 T-Started 20:14
 (C) First Final Flow 34 Safety Joint * 75 T-Open 22:33
 (D) Initial Shut-In 1303 Circ Sub ANA T-Pulled 1:33
 (E) Second Initial Flow 38 Hourly Standby T-Out 3:15 7/17
 (F) Second Final Flow 51 Mileage 48RT 74.40 Comments _____
 (G) Final Shut-In 1295 Sampler _____
 (H) Final Hydrostatic 1863 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 1549.40
 Final Flow 30 Accessibility * MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1549.40

Approved By Jeff Christian 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. 52766

Well Name & No. Doris #1-22 Test No. 2 Date 7-17-13
 Company Murfin Drilling Co. Inc. Elevation 2919 KB 2908 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin #2
 Location: Sec. 22 Twp. 4s Rge. 31w Co. Rawlins State KS

Interval Tested 3992 - 4014 Zone Tested LKC "D"
 Anchor Length 22 Drill Pipe Run 3750 Mud Wt. 9.1
 Top Packer Depth 3987 Drill Collars Run 231 Vis 56
 Bottom Packer Depth 3992 Wt. Pipe Run - WL 6.4
 Total Depth 4014 Chlorides 1300 ppm System LCM 5

Blow Description IF: Blow built slowly to 1 1/2"
ISI: No blowback
FF: Blow started at 13 min., built to 2"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>45</u>	<u>wcm w/trace of oil</u>	<u>2</u>	<u>trace</u>	<u>22</u>	<u>76</u>
<u>58</u>	<u>Muddy Water w/trace of oil</u>	<u>-</u>	<u>trace</u>	<u>52</u>	<u>48</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

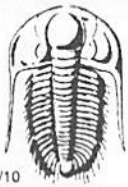
Rec Total 103 BHT 119 Gravity - API RW -205 @ 92.5 °F Chlorides 25000 ppm

(A) Initial Hydrostatic <u>1966</u>	<input type="checkbox"/> Test <u>*</u> 1250	T-On Location <u>8:40</u>
(B) First Initial Flow <u>19</u>	<input type="checkbox"/> Jars <u>*</u> 250	T-Started <u>9:00</u>
(C) First Final Flow <u>35</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>11:03</u>
(D) Initial Shut-In <u>1244</u>	<input checked="" type="checkbox"/> Circ Sub <u>*NA</u>	T-Pulled <u>15:03</u>
(E) Second Initial Flow <u>38</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>16:40</u>
(F) Second Final Flow <u>67</u>	<input type="checkbox"/> Mileage <u>48RT</u> 74.40	Comments
(G) Final Shut-In <u>1236</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1948</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer

Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer	<input checked="" type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Extra Copies
Final Flow <u>60</u>	<input checked="" type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input checked="" type="checkbox"/> Day Standby	Total <u>1649.40</u>
	<input checked="" type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1649.40</u>	

Approved By Jeff Christian 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. 52767

Well Name & No. Doris #1-22 Test No. 3 Date 7-18-13
 Company Murfin Drilling Co. Inc Elevation 2919 KB 2908 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin #2
 Location: Sec. 22 Twp. 4S Rge. 31w Co. Rawlins State KS

Interval Tested 4011 - 4036 Zone Tested LKC "F"
 Anchor Length 25 Drill Pipe Run 3782 Mud Wt. 9.1
 Top Packer Depth 4006 Drill Collars Run 231 Vis 56
 Bottom Packer Depth 4011 Wt. Pipe Run - WL 6.4
 Total Depth 4036 Chlorides 1300 ppm System LCM 5

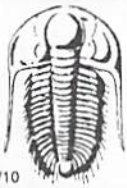
Blow Description IF: Blow built slowly to 1 1/4"
ISI: No blowback
FF: No blow
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
45	50cm	1	2	97	

Rec Total 45 BHT 115 Gravity - API RW - @ - °F Chlorides - ppm
 (A) Initial Hydrostatic 2009 Test * 1250 T-On Location 23:00 7/17
 (B) First Initial Flow 21 Jars * 250 T-Started 23:30
 (C) First Final Flow 33 Safety Joint * 75 T-Open 1:25
 (D) Initial Shut-In 702 Circ Sub *NA T-Pulled 4:24
 (E) Second Initial Flow 35 Hourly Standby T-Out 6:00
 (F) Second Final Flow 40 Mileage 48RT 74.40 Comments _____
 (G) Final Shut-In 641 Sampler _____
 (H) Final Hydrostatic 1959 Straddle _____ Ruined Shale Packer _____

Initial Open 30 Shale Packer _____ Ruined Packer _____
 Initial Shut-In 60 Extra Packer _____ Extra Copies _____
 Final Flow 30 Extra Recorder _____ Sub Total 0
 Final Shut-In 60 Day Standby _____ Total 1649.40
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1649.40

Approved By Jeff Cht 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 of 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. 52768

4/10

Well Name & No. Doris #1-22 Test No. 4 Date 7-18-13
 Company Murfin Drilling Co, Inc. Elevation 2919 KB 2908 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin #2
 Location: Sec. 22 Twp. 4s Rge. 31w Co. Rawlins State KS

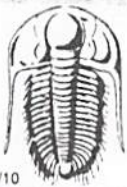
Interval Tested 4030 - 4091 Zone Tested LKC "G-H"
 Anchor Length 61 Drill Pipe Run 3781 Mud Wt. 9.0
 Top Packer Depth 4025 Drill Collars Run 231 Vis 62
 Bottom Packer Depth 4030 Wt. Pipe Run - WL 6.4
 Total Depth 4091 Chlorides 1500 ppm System LCM 5#
 Blow Description IF: Blow built to 1 3/4"
ISI: No blowback
FF: Blow started at 12 min., built to 1/4"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>53</u>	<u>swcm w/trace of oil</u>	<u>-</u>	<u>trace</u>	<u>5</u>	<u>95</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 53 BHT 115 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 2011 Test * 1250 T-On Location 13:30
 (B) First Initial Flow 21 Jars * 250 T-Started 13:52
 (C) First Final Flow 32 Safety Joint * 75 T-Open 16:21
 (D) Initial Shut-In 988 Circ Sub XNA T-Pulled 19:20
 (E) Second Initial Flow 38 Hourly Standby _____ T-Out 22:00
 (F) Second Final Flow 42 Mileage 48RT 74.40 Comments _____
 (G) Final Shut-In 909 Sampler _____
 (H) Final Hydrostatic 1968 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 1649.40
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1649.40

Approved By Jeff Christian 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. 53461

4/10

Well Name & No. Doris #1-22 Test No. 5 Date 7/19/13
 Company Murfin Drilling Co. Elevation 2919 KB 2908 GL
 Address 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Jeff Christianson Rig Murfin #2
 Location: Sec. 22 Twp. 4S Rge. 31W Co. Rawlins State KS

Interval Tested 4086-4180 Zone Tested LKC "H-L"
 Anchor Length 94' Drill Pipe Run 3846' Mud Wt. 9.2
 Top Packer Depth 4081 Drill Collars Run 231' Vis 56
 Bottom Packer Depth 4086 Wt. Pipe Run 0' WL 6.8
 Total Depth 4180 Chlorides 1600 ppm System LCM 5

Blow Description IF - @ Surface blow built to 1/4" @ 3 mins died back to surface
blow
ISI - No return
FF - No blow
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
5'	Mud			100	

Rec Total 5' BHT 116° Gravity — API RW — @ — F Chlorides — ppm

(A) Initial Hydrostatic <u>2065</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>07:30</u>
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>08:04</u>
(C) First Final Flow <u>24</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>10:13</u>
(D) Initial Shut-In <u>122</u>	<input checked="" type="checkbox"/> Circ Sub <u>NL</u>	T-Pulled <u>13:13</u>
(E) Second Initial Flow <u>25</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>15:15</u>
(F) Second Final Flow <u>26</u>	<input checked="" type="checkbox"/> Mileage <u>48 RT x 2</u> 148.80	Comments <u>Loaded tools</u>
(G) Final Shut-In <u>54</u>	<input type="checkbox"/> Sampler	<u>@ 22:15 7/20/13</u>
(H) Final Hydrostatic <u>2031</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Extra Recorder	Sub Total <u>800</u>
	<input type="checkbox"/> Day Standby 1d 7h	Total <u>2523.80</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1723.80</u>	

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

Approved By _____ Our Representative [Signature]

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