



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Jeff Christian

Wessel #1-18

18-4s-29w Decatur,KS

Start Date: 2012.06.09 @ 12:52:00

End Date: 2012.06.09 @ 20:35:00

Job Ticket #: 48105 DST #: 1

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

Printed: 2012.06.13 @ 15:02:01



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

18-4s-29w Decatur, KS

Wessel #1-18

Job Ticket: 48105

DST#: 1

Test Start: 2012.06.09 @ 12:52:00

GENERAL INFORMATION:

Formation: **LKC "A-B"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:40:30
 Time Test Ended: 20:35:00
 Interval: **3868.00 ft (KB) To 3914.00 ft (KB) (TVD)**
 Total Depth: 3914.00 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: 2758.00 ft (KB)
 2753.00 ft (CF)
 KB to GR/CF: 5.00 ft

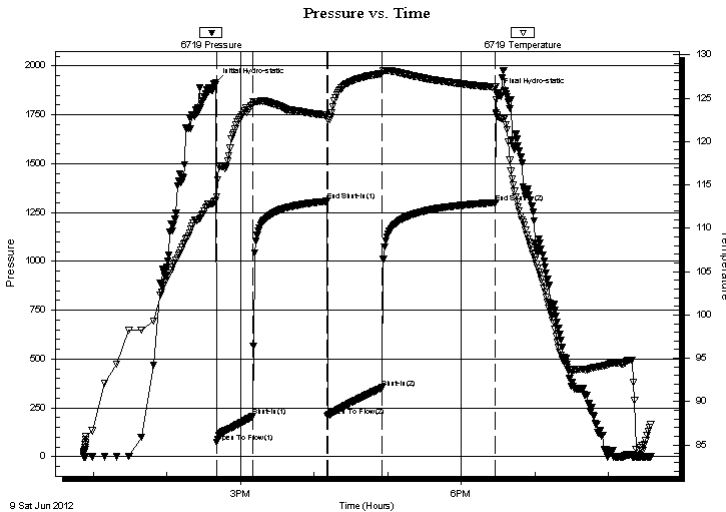
Serial #: 6719

Inside

Press @ Run Depth: 352.36 psig @ 3869.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.06.09 End Date: 2012.06.09 Last Calib.: 2012.06.09
 Start Time: 12:52:05 End Time: 20:34:59 Time On Btm: 2012.06.09 @ 14:40:00
 Time Off Btm: 2012.06.09 @ 18:29:00

TEST COMMENT: 30 - IF: 3" surge blow at open, built to BOB (11") at 8 min.
 60 - IS: Bled off, No blow back
 45 - FF: Blow built to BOB at 14 min.
 90 - FS: Bled off, w eak surface blow back for about 10 min.

PRESSURE SUMMARY



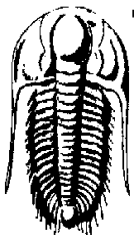
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1915.55	113.17	Initial Hydro-static
1	74.25	113.60	Open To Flow (1)
30	206.48	124.25	Shut-In(1)
91	1307.22	123.03	End Shut-In(1)
91	208.00	122.53	Open To Flow (2)
136	352.36	127.85	Shut-In(2)
228	1300.69	126.27	End Shut-In(2)
229	1861.73	123.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
445.00	Water 96%w , 4% m	4.54
280.00	MCW w/trace Oil 67%w , 33% m	3.93

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

18-4s-29w Decatur, KS

250 N. Water Suite 300
Wichita, KS 67202

Wessel #1-18

Job Ticket: 48105

DST#: 1

ATTN: Jeff Christian

Test Start: 2012.06.09 @ 12:52:00

GENERAL INFORMATION:

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

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: **14:40:30**

Time Test Ended: **20:35:00**

Interval: 3868.00 ft (KB) To 3914.00 ft (KB) (TVD)

Total Depth: **3914.00 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: **2758.00 ft (KB)**

2753.00 ft (CF)

KB to GR/CF: **5.00 ft**

Serial #: 8320 **Outside**

Press @ Run Depth: **psig @ 3869.00 ft (KB)**

Start Date: **2012.06.09** End Date: **2012.06.09**

Start Time: **12:52:05** End Time: **20:33:59**

Capacity: **8000.00 psig**

Last Calib.: **2012.06.09**

Time On Btm:

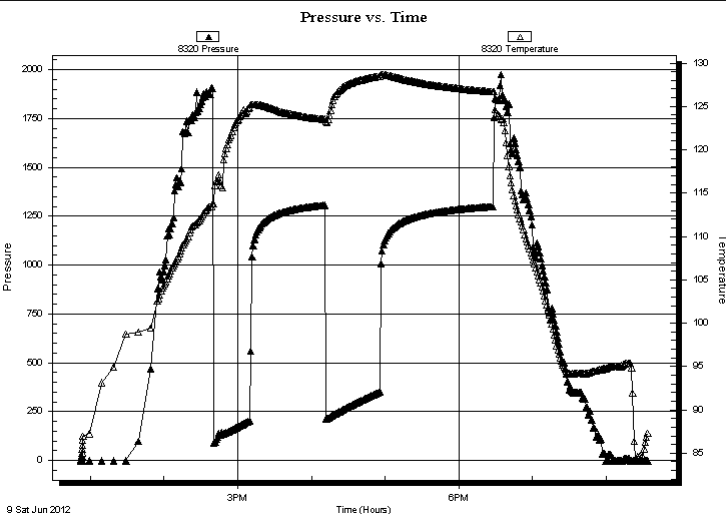
Time Off Btm:

TEST COMMENT: 30 - IF: 3" surge blow at open, built to BOB (11") at 8 min.

60 - IS: Bled off, No blow back

45 - FF: Blow built to BOB at 14 min.

90 - FS: Bled off, w weak surface blow back for about 10 min.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
445.00	Water 96%w , 4% m	4.54
280.00	MCW w /trace Oil 67%w , 33% m	3.93

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

18-4s-29w Decatur,KS

250 N. Water Suite 300
Wichita, KS 67202

Wessel #1-18

Job Ticket: 48105

DST#: 1

ATTN: Jeff Christian

Test Start: 2012.06.09 @ 12:52:00

Tool Information

Drill Pipe:	Length: 3667.00 ft	Diameter: 3.80 inches	Volume: 51.44 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: 187.00 ft	Diameter: 2.25 inches	Volume: 0.92 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 52.36 bbl</u>	Tool Chased 6.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3868.00 ft			Final 62000.00 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 Chased 6' to bottom at open - Mud was down about 15' - 3" surge blow at open

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3845.00	
Hydraulic tool	5.00			3850.00	
Jars	5.00			3855.00	
Safety Joint	3.00			3858.00	
Packer	5.00			3863.00	28.00 Bottom Of Top Packer
Packer	5.00			3868.00	
Stubb	1.00			3869.00	
Recorder	0.00	6719	Inside	3869.00	
Recorder	0.00	8320	Outside	3869.00	
Perforations	9.00			3878.00	
Blank Spacing	33.00			3911.00	
Bullnose	3.00			3914.00	46.00 Bottom Packers & Anchor

Total Tool Length: 74.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

18-4s-29w Decatur,KS

250 N. Water Suite 300
Wichita, KS 67202

Wessel #1-18

Job Ticket: 48105

DST#: 1

ATTN: Jeff Christian

Test Start: 2012.06.09 @ 12:52:00

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:

64000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.18 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
445.00	Water 96%w , 4%m	4.539
280.00	MCW w/trace Oil 67%w , 33%m	3.928

Total Length: 725.00 ft Total Volume: 8.467 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

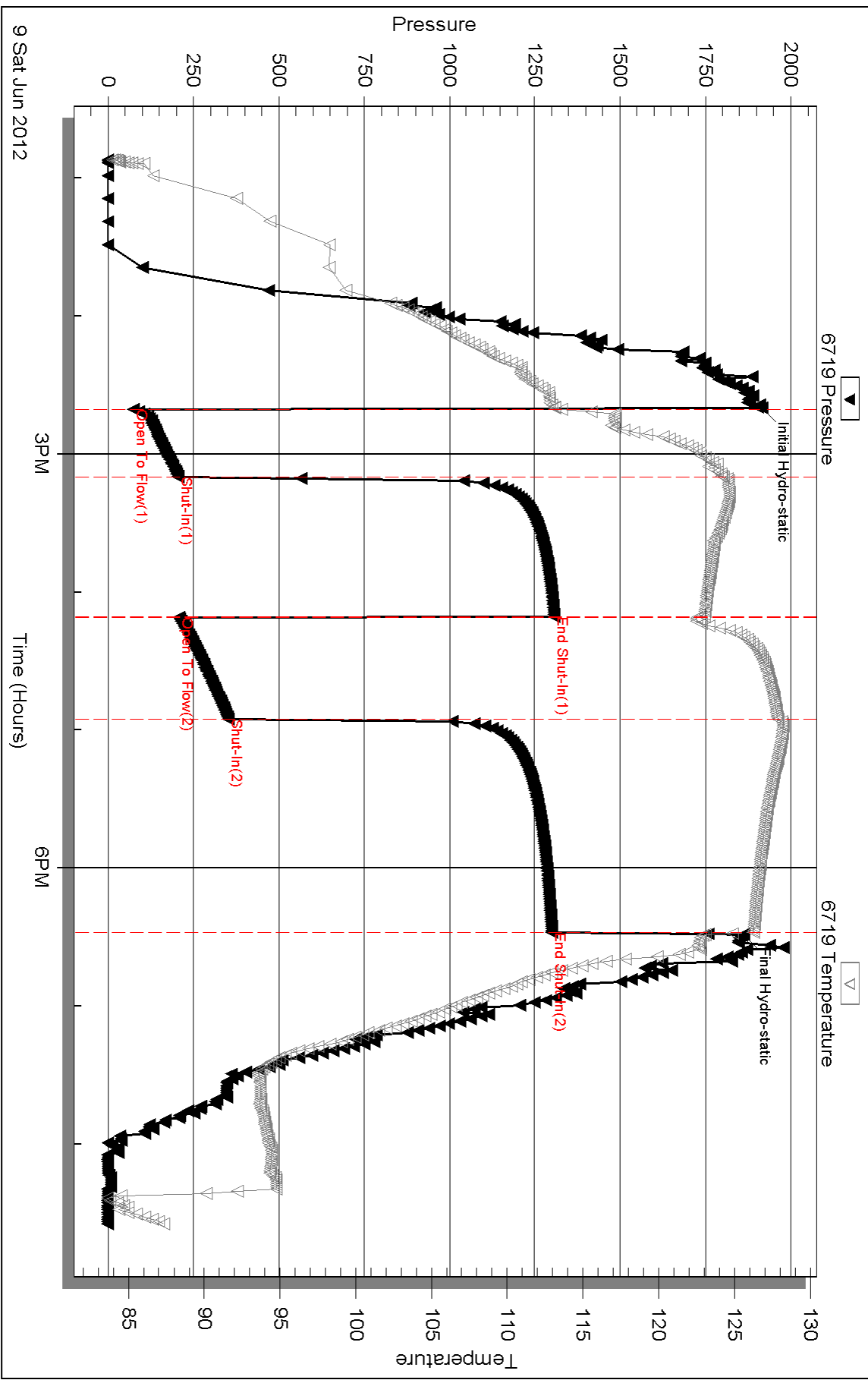
Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .097 ohms @ 86.5 deg F

Chlorides = 64,000 ppm

Pressure vs. Time

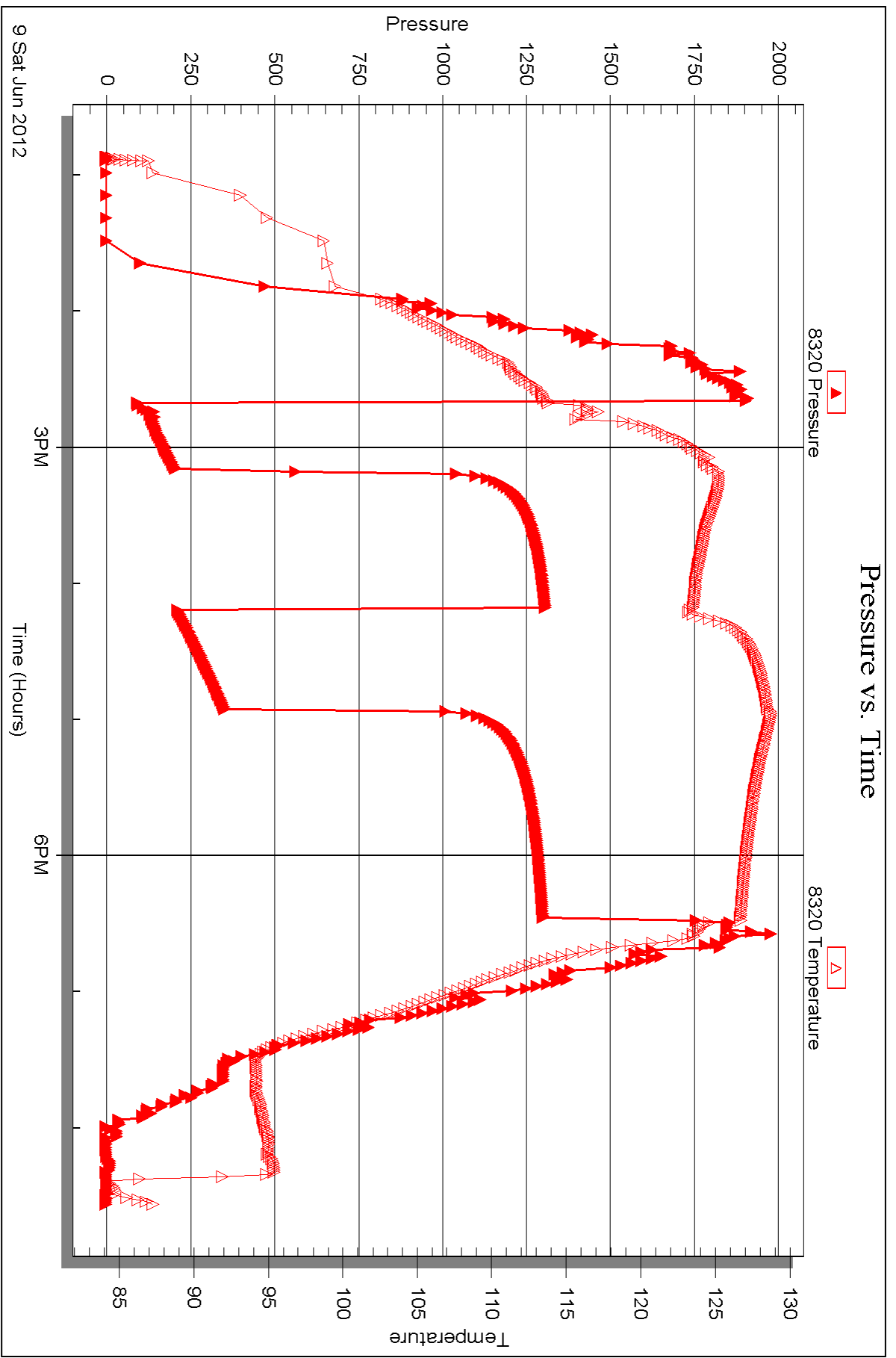


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Messel #1-18

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 48105

Printed: 2012.06.13 @ 15:02:04



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Jeff Christian

Wessel #1-18

18-4s-29w Decatur,KS

Start Date: 2012.06.10 @ 05:52:00

End Date: 2012.06.10 @ 12:50:30

Job Ticket #: 48106 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.06.13 @ 15:01:18



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

18-4s-29w Decatur, KS

Wessel #1-18

Job Ticket: 48106

DST#: 2

Test Start: 2012.06.10 @ 05:52:00

GENERAL INFORMATION:

Formation: **LKC "E-F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:50:00
 Time Test Ended: 12:50:30
 Interval: **3930.00 ft (KB) To 3956.00 ft (KB) (TVD)**
 Total Depth: 3956.00 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: 2758.00 ft (KB)
 2753.00 ft (CF)
 KB to GR/CF: 5.00 ft

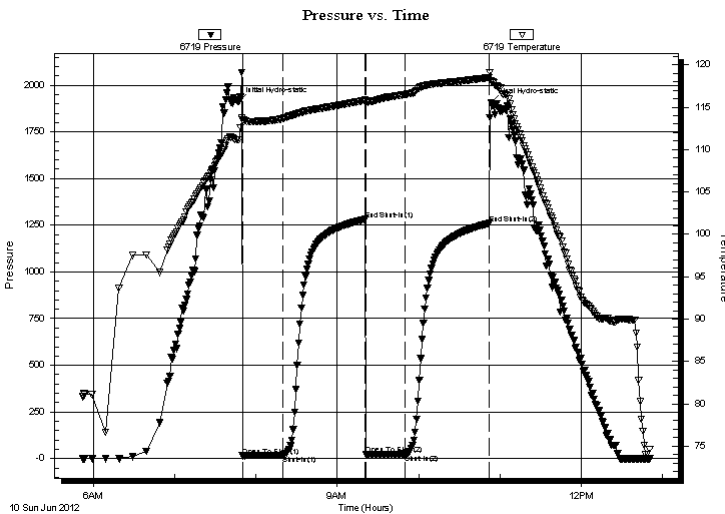
Serial #: 6719

Inside

Press @ Run Depth: 25.43 psig @ 3931.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.06.10 End Date: 2012.06.10 Last Calib.: 2012.06.10
 Start Time: 05:52:05 End Time: 12:50:29 Time On Btm: 2012.06.10 @ 07:47:30
 Time Off Btm: 2012.06.10 @ 10:53:30

TEST COMMENT: 30 - IF: Blow built to 3/4" in 15 min., died back to 1/2" blow at close
 60 - IS: Bled off, No blow back
 30 - FF: No blow
 60 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1913.00	111.13	Initial Hydro-static
3	15.20	113.47	Open To Flow (1)
32	19.34	113.62	Shut-In(1)
93	1280.98	115.81	End Shut-In(1)
94	21.10	115.57	Open To Flow (2)
123	25.43	116.49	Shut-In(2)
185	1259.52	118.48	End Shut-In(2)
186	1906.84	118.07	Final Hydro-static

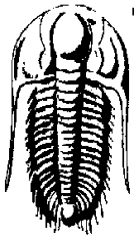
Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud w /trace of Oil 100% m	0.07

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

18-4s-29w Decatur, KS

250 N. Water Suite 300
Wichita, KS 67202

Wessel #1-18

Job Ticket: 48106

DST#: 2

ATTN: Jeff Christian

Test Start: 2012.06.10 @ 05:52:00

GENERAL INFORMATION:

Formation: **LKC "E-F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:50:00

Time Test Ended: 12:50:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 3930.00 ft (KB) To 3956.00 ft (KB) (TVD)

Reference Elevations: 2758.00 ft (KB)

Total Depth: 3956.00 ft (KB) (TVD)

2753.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8671 Outside

Press @ Run Depth: psig @ 3931.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.06.10

End Date:

2012.06.10

Last Calib.:

2012.06.10

Start Time: 05:52:05

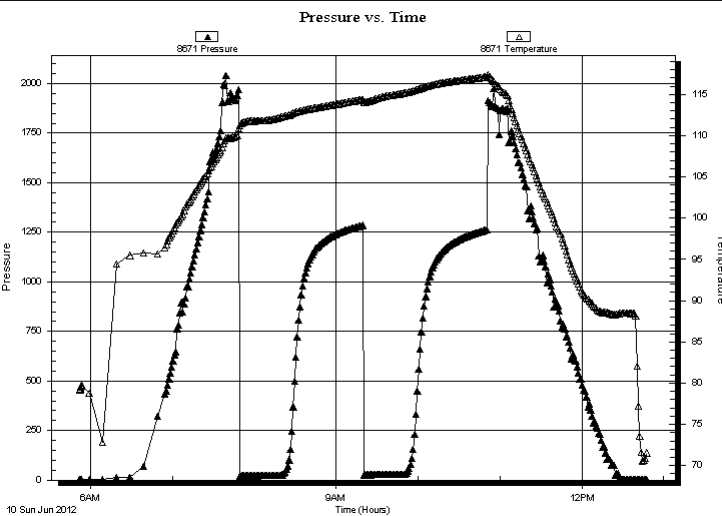
End Time:

12:47:59

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to 3/4" in 15 min., died back to 1/2" blow at close
60 - IS: Bled off, 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)
15.00	Mud w /trace of Oil 100%m	0.07

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

18-4s-29w Decatur,KS

250 N. Water Suite 300
Wichita, KS 67202

Wessel #1-18

Job Ticket: 48106

DST#: 2

ATTN: Jeff Christian

Test Start: 2012.06.10 @ 05:52:00

Tool Information

Drill Pipe:	Length: 3728.00 ft	Diameter: 3.80 inches	Volume: 52.29 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: 187.00 ft	Diameter: 2.25 inches	Volume: 0.92 bbl	Weight to Pull Loose:	66000.00 lb
			<u>Total Volume: 53.21 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	3930.00 ft			Final	56000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	26.00 ft				
Tool Length:	54.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments: Tool slid 3' - 4' to bottom before opening - no mud loss

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

Shut In Tool	5.00			3907.00	
Hydraulic tool	5.00			3912.00	
Jars	5.00			3917.00	
Safety Joint	3.00			3920.00	
Packer	5.00			3925.00	28.00 Bottom Of Top Packer
Packer	5.00			3930.00	
Stubb	1.00			3931.00	
Recorder	0.00	6719	Inside	3931.00	
Recorder	0.00	8671	Outside	3931.00	
Perforations	22.00			3953.00	
Bullnose	3.00			3956.00	26.00 Bottom Packers & Anchor

Total Tool Length: 54.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

18-4s-29w Decatur,KS

250 N. Water Suite 300
Wichita, KS 67202

Wessel #1-18

Job Ticket: 48106

DST#: 2

ATTN: Jeff Christian

Test Start: 2012.06.10 @ 05:52:00

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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud w /trace of Oil 100%m	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

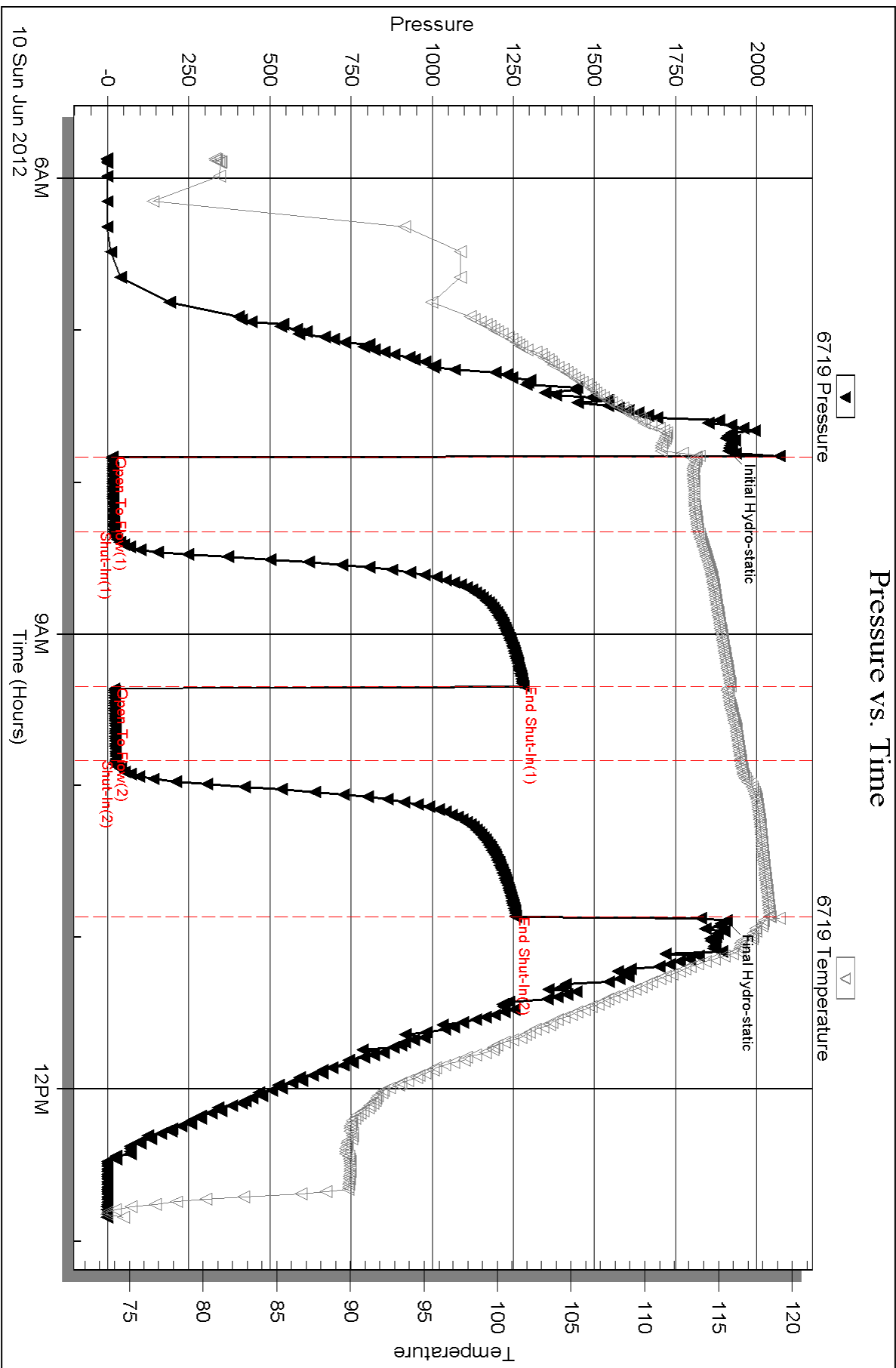
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

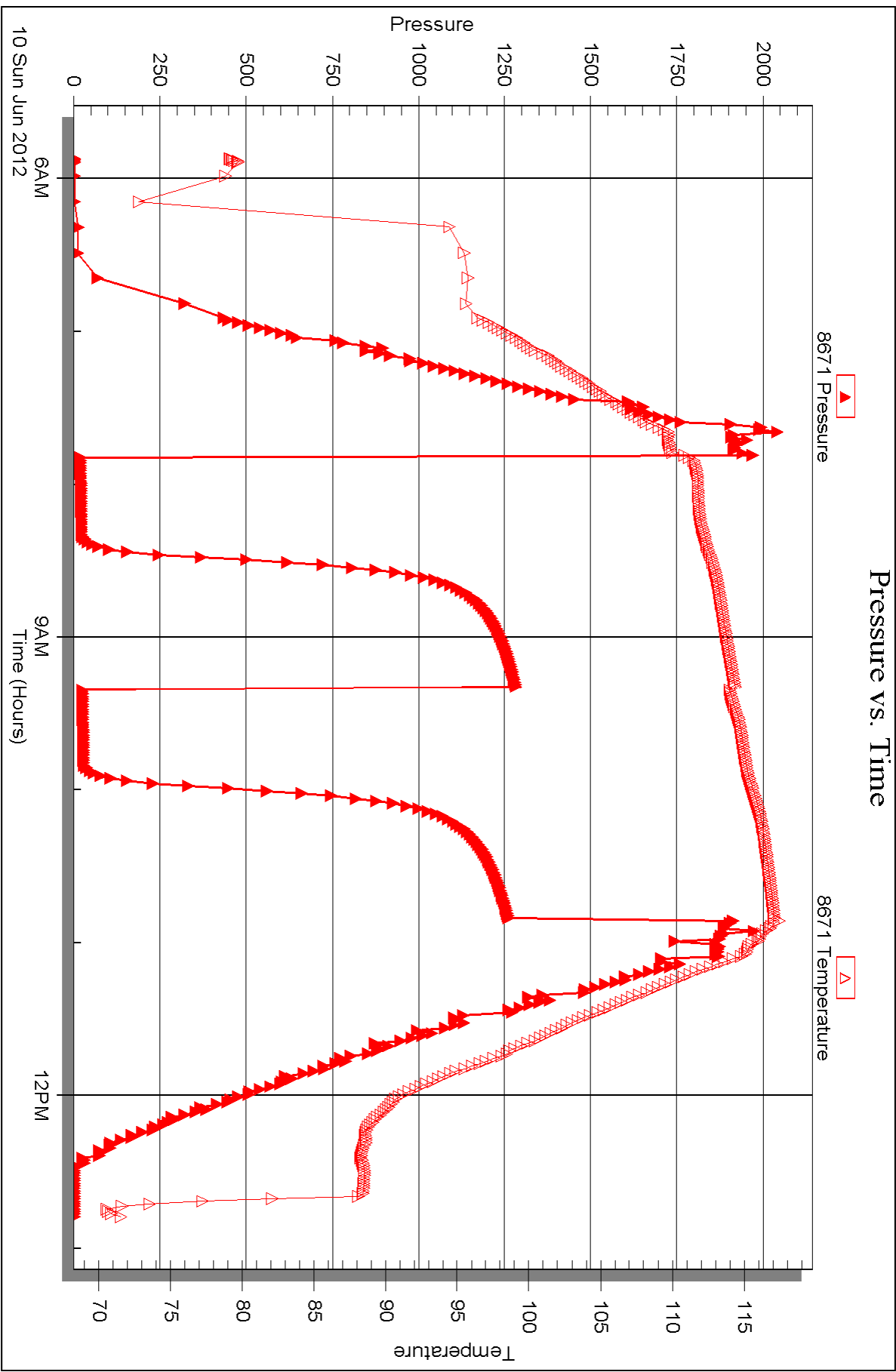


Serial #: 8671

Outside Murfin Drilling Co., Inc.

Wessel #1-18

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

Wessel #1-18

18-4s-29w Decatur,KS

Start Date: 2012.06.11 @ 02:45:00

End Date: 2012.06.11 @ 10:16:00

Job Ticket #: 48107 DST #: 3

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

Printed: 2012.06.13 @ 15:00:14



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

18-4s-29w Decatur, KS
Wessel #1-18
 Job Ticket: 48107 **DST#: 3**
 Test Start: 2012.06.11 @ 02:45:00

GENERAL INFORMATION:

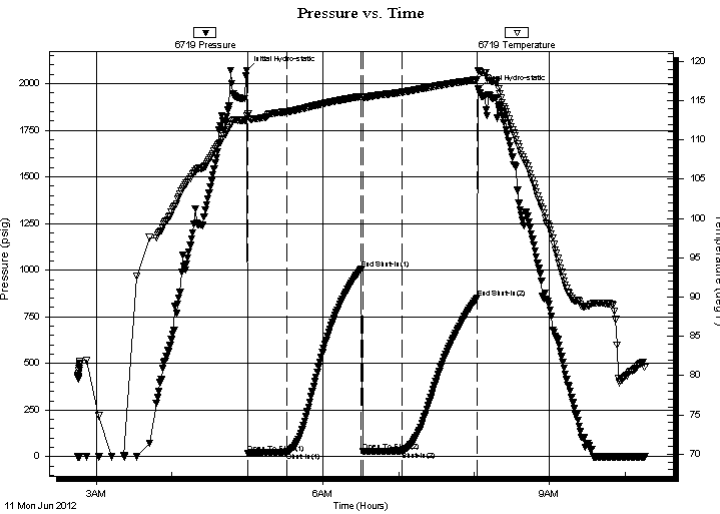
Formation: **LKC "H-K"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:00:30
 Time Test Ended: 10:16:00
 Interval: **3973.00 ft (KB) To 4064.00 ft (KB) (TVD)**
 Total Depth: 4064.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 2758.00 ft (KB)
 2753.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6719

Inside

Press @ Run Depth: 30.74 psig @ 3974.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.06.11 End Date: 2012.06.11 Last Calib.: 2012.06.11
 Start Time: 02:45:05 End Time: 10:15:59 Time On Btm: 2012.06.11 @ 04:59:30
 Time Off Btm: 2012.06.11 @ 08:03:30

TEST COMMENT: 30 - IF: Blow built to 1 1/2"
 60 - IS: Bled off, No blow back
 30 - FF: No blow
 60 - FS: Bled off, No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2071.10	113.08	Initial Hydro-static
1	18.64	113.26	Open To Flow (1)
32	25.06	113.57	Shut-In(1)
91	1008.02	115.54	End Shut-In(1)
92	28.04	115.36	Open To Flow (2)
124	30.74	116.08	Shut-In(2)
183	851.40	117.68	End Shut-In(2)
184	1970.62	118.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud w /Oil spots 97%m, 3%o	0.15

* 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

18-4s-29w Decatur, KS

Wessel #1-18

Job Ticket: 48107

DST#: 3

Test Start: 2012.06.11 @ 02:45:00

GENERAL INFORMATION:

Formation: **LKC "H-K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:00:30

Time Test Ended: 10:16:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 3973.00 ft (KB) To 4064.00 ft (KB) (TVD)

Reference Elevations: 2758.00 ft (KB)

Total Depth: 4064.00 ft (KB) (TVD)

2753.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8671 Outside

Press @ Run Depth: psig @ 3974.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.06.11

End Date: 2012.06.11

Last Calib.: 2012.06.11

Start Time: 02:45:05

End Time: 10:13:29

Time On Btm:

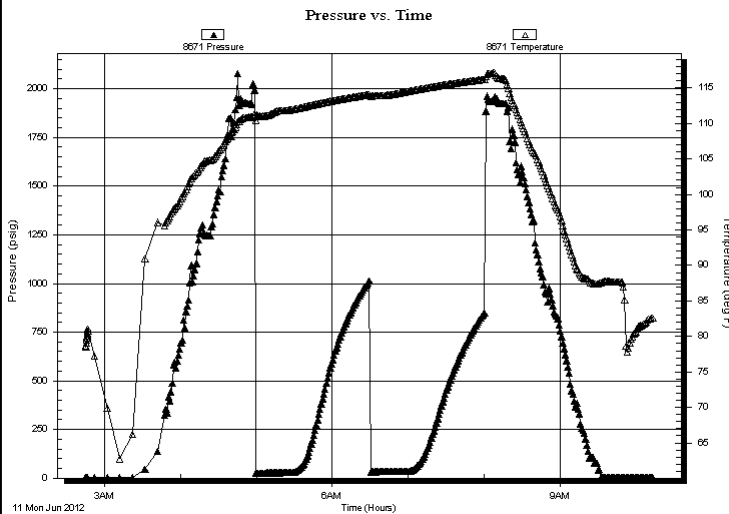
Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to 1 1/2"

60 - IS: Bled off, No blow back

30 - FF: No blow

60 - FS: Bled off, No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud w /Oil spots 97%m, 3%o	0.15

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.

18-4s-29w Decatur,KS

250 N. Water Suite 300
Wichita, KS 67202

Wessel #1-18

Job Ticket: 48107

DST#: 3

ATTN: Jeff Christian

Test Start: 2012.06.11 @ 02:45:00

Tool Information

Drill Pipe:	Length: 3791.00 ft	Diameter: 3.80 inches	Volume: 53.18 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: 187.00 ft	Diameter: 2.25 inches	Volume: 0.92 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 54.10 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3973.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	91.00 ft			
Tool Length:	119.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

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

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

Shut In Tool	5.00			3950.00	
Hydraulic tool	5.00			3955.00	
Jars	5.00			3960.00	
Safety Joint	3.00			3963.00	
Packer	5.00			3968.00	28.00 Bottom Of Top Packer
Packer	5.00			3973.00	
Stubb	1.00			3974.00	
Recorder	0.00	6719	Inside	3974.00	
Recorder	0.00	8671	Outside	3974.00	
Perforations	20.00			3994.00	
Blank Spacing	66.00			4060.00	
Perforations	1.00			4061.00	
Bullnose	3.00			4064.00	91.00 Bottom Packers & Anchor

Total Tool Length: 119.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

18-4s-29w Decatur,KS

250 N. Water Suite 300
Wichita, KS 67202

Wessel #1-18

Job Ticket: 48107

DST#: 3

ATTN: Jeff Christian

Test Start: 2012.06.11 @ 02:45:00

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: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.17 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Mud w /Oil spots 97% _m , 3% _o	0.148

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6719

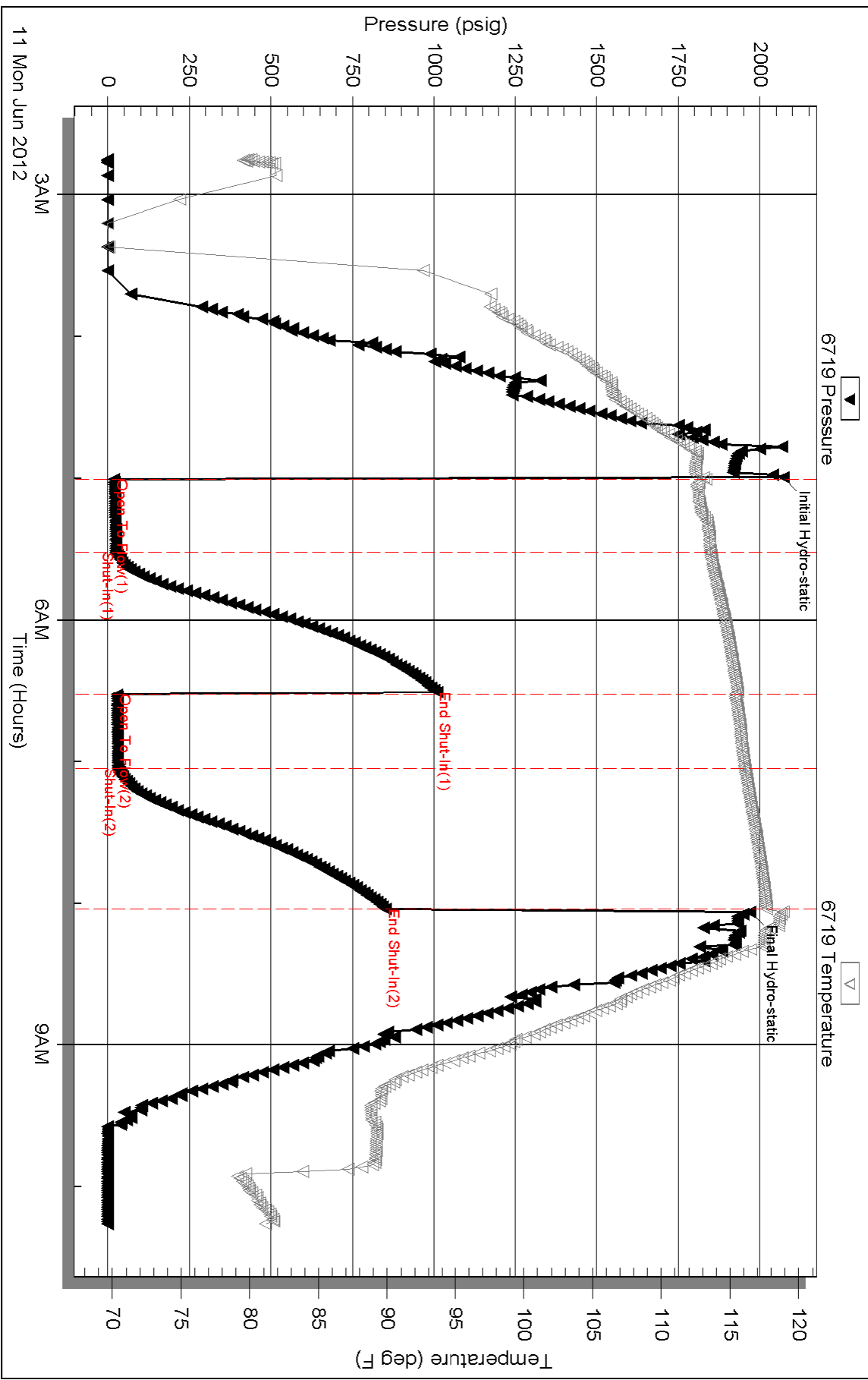
Inside

Murfin Drilling Co., Inc.

Wessel #1-18

DST Test Number: 3

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 48107

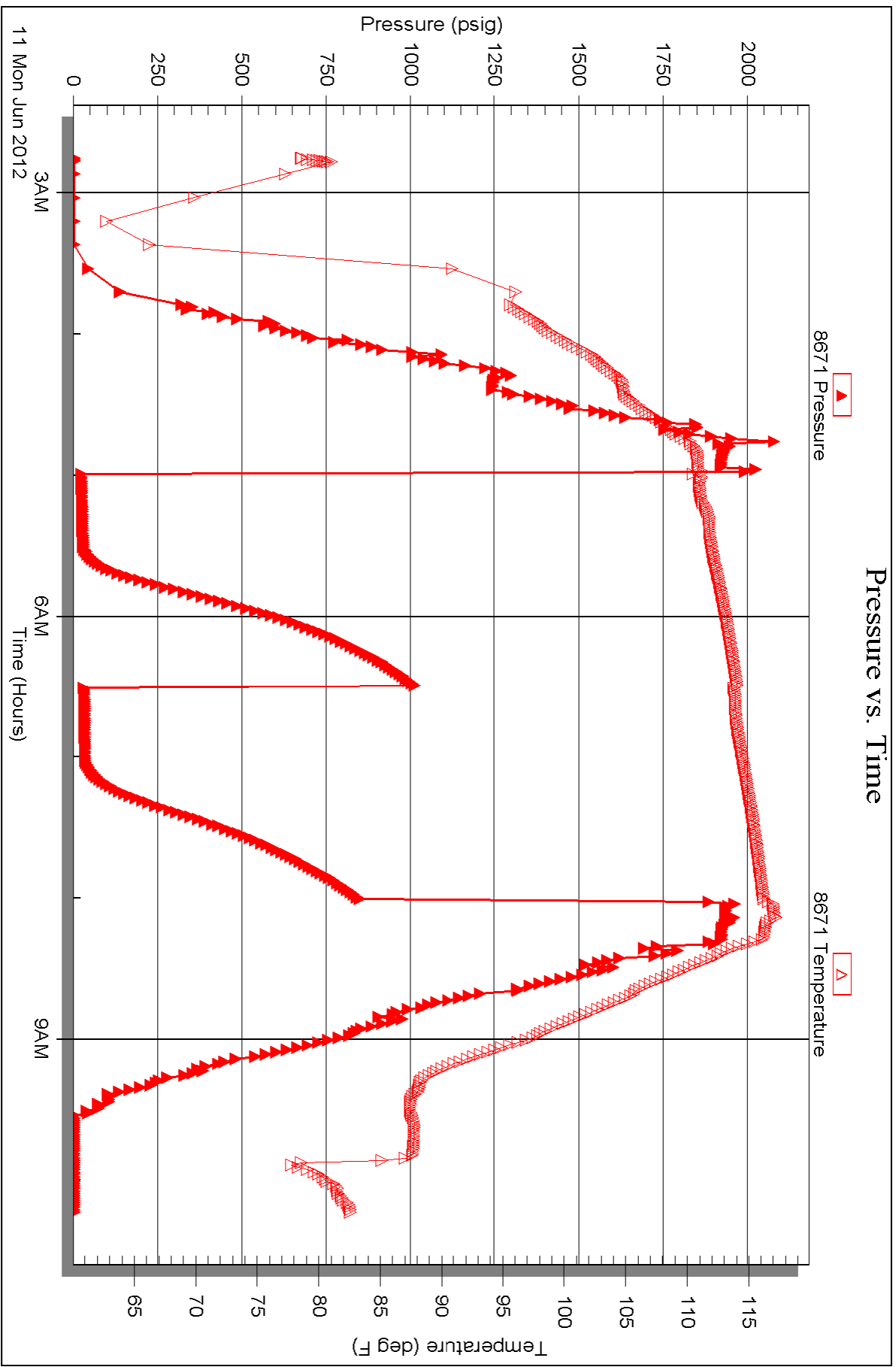
Printed: 2012.06.13 @ 15:00:17

Serial #: 8671

Outside Murfin Drilling Co., Inc.

Messel #1-18

DST Test Number: 3





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48105

Well Name & No. Wessel #1-18 Test No. 1 Date 6-9-12
 Company Murfin Drilling Co. Inc. Elevation 2758 KB 2753 GL
 Address 250 N. Water Suite 300 Wichita KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin #8
 Location: Sec. 18 Twp. 4s Rge. 29w Co. Decatur State KS

Interval Tested 3868 - 3914 Zone Tested LKC "A-B"
 Anchor Length 46 Drill Pipe Run 3667 Mud Wt. 9.1
 Top Packer Depth 3863 Drill Collars Run 187 Vis 59
 Bottom Packer Depth 3868 Wt. Pipe Run - WL 5.2
 Total Depth 3914 Chlorides 1000 ppm System LCM 7

Blow Description IF: 3" surge blow at open, built to BOB (11") at 8 min.
ISI: Bled off, No blowback
FF: Blow built to BOB at 14 min
FSI: Bled off, weak surface blowback for about 10 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>280</u>	<u>MCW w/trace of oil</u>	<u>-</u>	<u>trace</u>	<u>67</u>	<u>33</u>
<u>445</u>	<u>Water</u>			<u>96</u>	<u>4</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 725 BHT 126 Gravity - API RW .097 @ 86.5 °F Chlorides 64,000 ppm

(A) Initial Hydrostatic 1916
 (B) First Initial Flow 74
 (C) First Final Flow 206
 (D) Initial Shut-In 1307
 (E) Second Initial Flow 208
 (F) Second Final Flow 352
 (G) Final Shut-In 1301
 (H) Final Hydrostatic 1862

- Test 1150
- Jars 250
- Safety Joint 75
- Circ Sub XNA
- Hourly Standby
- Mileage 34RT 52.70
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility

T-On Location 12:30
 T-Started 12:52
 T-Open 14:40
 T-Pulled 18:28
 T-Out 20:30

Comments Tool chased 5'-6'
to bottom at open -
mud down around 15'

Ruined Shale Packer
 Ruined Packer

Initial Open 30
 Initial Shut-In 60
 Final Flow 45
 Final Shut-In 90

Sub Total 0

Total 1527.70

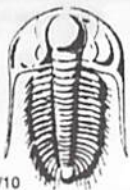
MP/DST Disc't

Sub Total 1527.70

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 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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48106

Well Name & No. Wessel #1-18 Test No. 2 Date 6-10-12
 Company Murfin Drilling Co. Inc. Elevation 2758 KB 2753 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin #8
 Location: Sec. 18 Twp. 4S Rge. 29W Co. Decatur State KS

Interval Tested 3930 - 3956 Zone Tested LKC "E-F"
 Anchor Length 26 Drill Pipe Run 3728 Mud Wt. 9.2
 Top Packer Depth 3925 Drill Collars Run 187 Vis 61
 Bottom Packer Depth 3930 Wt. Pipe Run - WL 6.4
 Total Depth 3956 Chlorides 2500 ppm System LCM 7
 Blow Description IF: Blow built to 3/4" in 15 min., died back to 1/2" blow at close
ISI: Bled off, No blowback
FF: No blow
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</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 15 BHT 118 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>1913</u>	<input type="checkbox"/> Test <u>*</u> 1150	T-On Location <u>5:15</u>
(B) First Initial Flow <u>15</u>	<input type="checkbox"/> Jars <u>*</u> 250	T-Started <u>5:52</u>
(C) First Final Flow <u>19</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>7:50</u>
(D) Initial Shut-In <u>1281</u>	<input checked="" type="checkbox"/> Circ Sub <u>*NA</u>	T-Pulled <u>10:52</u>
(E) Second Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>12:45</u>
(F) Second Final Flow <u>25</u>	<input type="checkbox"/> Mileage <u>34RT</u> 52.70	Comments
(G) Final Shut-In <u>1260</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1907</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer
	<input checked="" type="checkbox"/> Shale Packer	<input checked="" type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>30</u>	<input checked="" type="checkbox"/> Day Standby	Total <u>1527.70</u>
Final Shut-In <u>60</u>	<input checked="" type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1527.70</u>	

Approved By [Signature] Our Representative James Winder
 Trilobite Testing Inc. shall not be liable for damages 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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48107

Well Name & No. Wessel #1-18 Test No. 3 Date 6-11-12
 Company Murfin Drilling Co. Inc Elevation 2758 KB 2753 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin #8
 Location: Sec. 18 Twp. 4S Rge. 29W Co. Decatur State KS

Interval Tested 3973 - 4064 Zone Tested LKC "H - K"
 Anchor Length 91 Drill Pipe Run 3791 Mud Wt. 9.0
 Top Packer Depth 3968 Drill Collars Run 187 Vis 52
 Bottom Packer Depth 3973 Wt. Pipe Run - WL 6.0
 Total Depth 4064 Chlorides 3000 ppm System LCM 5
 Blow Description IF: Blow built to 1 1/2"
ISI: Bled off, No blowback
FF: No Blow
FSI: No Blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>mud w/oil spots</u>	<u>-</u>	<u>3</u>	<u>-</u>	<u>97</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 30 BHT 118 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>2071</u>	<input type="checkbox"/> Test <u>*</u> 1250	T-On Location <u>2:20</u>
(B) First Initial Flow <u>19</u>	<input type="checkbox"/> Jars <u>*</u> 250	T-Started <u>2:45</u>
(C) First Final Flow <u>25</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>5:00</u>
(D) Initial Shut-In <u>1008</u>	<input checked="" type="checkbox"/> Circ Sub <u>*NA</u>	T-Pulled <u>8:02</u>
(E) Second Initial Flow <u>28</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>10:05</u>
(F) Second Final Flow <u>31</u>	<input type="checkbox"/> Mileage <u>34 RTX2</u> 105.40	Comments <u>Tool slid 5' to</u>
(G) Final Shut-In <u>851</u>	<input checked="" type="checkbox"/> Sampler	<u>bottom before open-</u>
(H) Final Hydrostatic <u>1971</u>	<input checked="" type="checkbox"/> Straddle	<u>No mud loss</u>
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>30</u>	<input checked="" type="checkbox"/> Extra Recorder	<input checked="" type="checkbox"/> Extra Copies
Final Shut-In <u>60</u>	<input checked="" type="checkbox"/> Day Standby <u>Called to load tools @ 15:00 6/12</u>	Sub Total <u>800</u>
	<input checked="" type="checkbox"/> Accessibility	Total <u>2480.40</u>
	Sub Total <u>1680.40</u>	MP/DST Disc't

Approved By [Signature] Our Representative James Winker
 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.